

Parliamentary Standing Committee on Public Works

REPORT

relating to the

DEVELOPMENT OF TERMINAL AREA, TOWNSVILLE AIRPORT

(Third Report of 1985)

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

R E P O R T

relating to the

DEVELOPMENT OF TERMINAL AREA,
TOWNVILLE AIRPORT

(Third Report of 1985)

Canberra 1985

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MEMBERS OF THE PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS
(Twenty-Eight Committee)

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Senate

House of Representatives

Senator Gerry Norman Jones	John Neil Andrew, Esq., M.P.
Senator Dr Glenister Sheil	Robert George Halverson, Esq., O.B.E., M.P. Colin Hollis, Esq., M.P. Leonard Joseph Keogh, Esq., M.P. Keith Webb Wright, Esq., M.P.

EXTRACT FROM THE
VOTES AND PROCEEDINGS OF THE HOUSE OF REPRESENTATIVES
NO. 17 DATED 18 APRIL 1985

- 16 PUBLIC WORKS COMMITTEE - REFERENCE OF WORK - TERMINAL AREA DEVELOPMENT - TOWNSVILLE AIRPORT: Mr West (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: Development of terminal area, Townsville Airport.

Mr West presented plans in connection with the proposed work.

Debate ensued.

Question - put and passed.

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PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS

REDEVELOPMENT OF TERMINAL AREA

TOWNSVILLE AIRPORT

R E P O R T

By resolution on 18 April 1985 the House of Representatives referred to the Parliamentary Standing Committee on Public Works for consideration and report the proposed redevelopment of terminal area, Townsville Airport.

The Committee has the honour to report as follows:

THE REFERENCE

1. The proposal is to redevelop the terminal area at Townsville Airport. The redevelopment comprises the following elements:

- a new air conditioned common user domestic passenger terminal building integrated with the existing international terminal building;
- demolition of the existing domestic terminal building;
- strengthening, rehabilitation and extension of aircraft movement area pavements and the domestic aircraft apron;
- widening of apron approach taxiways and fillets to accommodate wide bodied aircraft;

- support facilities and services including modification of the internal airport road system, additional car parking, a new central emergency power house and alterations and extensions to drainage, power supply, fire and other services.
2. The estimated cost of the proposed work when referred to the Committee was \$14.7 million at March 1985 prices.

THE COMMITTEE'S INVESTIGATION

3. The Former Committee The reference is identical in terms of its scope to a proposal which was referred by the House of Representatives to the former Committee on 3 October 1984. The former Committee carried out a site inspection and conducted a public hearing into the proposal in Townsville on 24-25 October 1984.
4. At the public hearing the Department of Aviation (Aviation) and the Department of Housing and Construction (DHC) presented written submissions upon which their representatives were questioned. The former Committee also received written submissions and took evidence from representatives of the major airlines, local government and a number of groups with an interest in the development of the airport. The House of Representatives was dissolved on 26 October 1984, the day following the public hearing, and the Committee was not able to present a report on the reference which consequently lapsed.
5. The Present Committee In anticipation of the proposal being referred to the Committee it was resolved that pursuant to sub-section 10(1) of the Public Works Committee Act 1969 to appoint a Sectional Committee to consider the evidence taken by the former Committee with the objective of presenting a report as soon as possible. To that end Members of the Sectional Committee

familiarised themselves with the location of various elements of the proposal during an inspection of Townsville Airport on 2 April 1985. Following the proposal being referred and a review of the evidence taken by the former Committee it was decided to re-open the inquiry to enable further evidence from Departments to be received and to enable the major airlines with a direct interest in the proposal to present final submissions. As a consequence a public hearing was held in Brisbane on 24 April 1985 at which representatives of Aviation, DHC, Ansett Airlines of Australia, Trans Australia Airlines and Air Queensland, presented written submissions and gave evidence. Further written responses to questions taken on notice by representatives from Aviation and Ansett were received subsequent to the public hearing.

6. A list of witnesses who appeared before the former and present Committees is at Appendix A. A list of exhibits is at Appendix B.

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

BACKGROUND

8. The City of Townsville The City of Townsville, together with adjacent urban areas of Thuringowa Shire, is the largest urban centre in tropical Australia. The city's economic strength as the regional commercial and distribution centre is derived from its transport infrastructure, connection with primary industries, as an educational centre, the location of a major defence base and as a tourist destination.

9. In the period 1961/82 the resident population of Townsville and Thuringowa Shire grew from 54,000 to 102,000. By the year 2000 the population is expected to be 176,000 people.

10. Air Travel The importance of air travel to the region is reflected in Townsville Airport being the ninth busiest airport in Australia. A survey of the importance of air travel to the tourist industry indicates that in 1982/83 17.4 per cent of visits to the region from other parts of Australia involved air travel. This would mean about 96,000 visitors arriving by air.

11. Regular trunk services by Ansett, TAA and Air Queensland connect Townsville to Brisbane and Sydney, provincial centres and hinterland towns. An extensive commuter network services coastal towns, off-shore islands and inland centres. Scheduled international services to Townsville commenced in 1981. At present QANTAS operates weekly services from Townsville to Auckland and via Darwin to Singapore.

12. Townsville Airport Townsville Airport is located five kilometres west of the Central Business District between the town common and the suburbs of Garbutt and Belgian Gardens (see Locality Plan C-1). The airport was developed by the City of Townsville in February 1939. The RAAF established a base at the airport in December 1939, formally acquired the land in 1940 and has retained control ever since. The airport is therefore owned by the Commonwealth and has been used by Aviation under a joint-user agreement with the Department of Defence.

13. Residential suburbs are adjacent to the eastern and south eastern boundaries. The area to the south west is zoned for industrial use. The remaining boundaries about the town common.

14. The main 01/19 runway was constructed in 1958 and has a pavement width of 45 metres and length of 2378 metres. The runway is served by a parallel taxiway (taxiway A) which is suitable for B727 and smaller aircraft for most of its length. Larger B747 aircraft when landing to the north are consequently required to backtrack along the runway to the international apron.

15. The 07/25 secondary runway is available for general aviation and heavy aircraft up to F27 (Fokker Friendship) size.

16. RAAF Base Townsville is located to the south of the main runway. The civil aviation passenger terminals and associated support facilities are located south-east of the runway. RAAF Base Townsville comprises a base squadron and two active squadrons - No. 35 Squadron, equipped with Caribou transport aircraft and Iroquois helicopters and a reserve squadron. The transport squadron is mainly involved in a supporting role to Army operations in North Queensland. RAAF Base Townsville also supports exercises and operations conducted by RAAF squadrons based at other centres.

17. The civil aviation terminals and support facilities are located on a 42 hectares site south-east of the main runway (see Townsville Building Area, Plan C-2). Of relevance to this report are the locations of the following facilities:

- (a) the Aviation operations building immediately to the east of the domestic terminal;
- (b) the joint user hydrant installation (JUHI) adjacent to the operations building;
- (c) the 'cul de sac' apron immediately north of the domestic terminal;
- (d) the Aviation workshop located on the north-western side of the cul de sac apron;
- (e) a general aviation apron on the northern side of the hangars and workshops; and

- (f) the cement concrete apron serving the international terminal and the flexible pavement apron serving the domestic terminal.

18. Ground Access and Car Parks Access to the airport is via Halifax Street and other adjacent suburban streets to Bundock Street and Ingham Road.

19. There are 55 metered and sealed car parking spaces adjacent to the domestic terminal with a further 183 unsealed spaces available for the public using the domestic and international terminals.

20. International Terminal The international terminal, located adjacent to the domestic terminal, was constructed in 1981 as part of a number of elements required to enable international aircraft to operate from Townsville. The works were exempted from scrutiny of the Public Works Committee on the grounds of urgency on 9 September 1980. The Minister for Housing and Construction stated that the urgency was related to the purchase, by QANTAS, of a B747SP aircraft which was planned to operate on the New Zealand - Brisbane - Townsville and Townsville - Honolulu - Los Angeles route and the need to put the aircraft into service as soon as possible.

21. The Minister described the works as follows:

- (a) widening the runway by providing 7.5 metre shoulders for its full length;
- (b) the provision of a 23 metre wide taxiway link between the runway and the airport apron;
- (c) extending the aircraft parking apron;

- (d) the provision of a new international terminal building incorporating health, customs, immigration and security screening facilities; and
- (e) the construction of associated engineering services, roads and car parks.

22. The Minister stated the estimated cost of this work was \$5 million.

23. The extreme urgency of the construction timetable, aimed towards the commencement of international operations in February 1981, is revealed in the adoption of fast track design and construction procedures. The Minister stated that tenders involving runway, taxiway and apron works were to be called in mid-September and tenders for site works and the building shell were to be called on 20 September 1980. In the event, the first scheduled international B747 flight took place on 10 February 1981 and the terminal was officially opened on 30 June 1982.

24. Master Planning of Civil Aviation Area A number of feasibility studies and planning reports on the development of the civil aviation area were undertaken during the past decade. In 1974 a Master Plan prepared by an Interdepartmental Committee concluded that the existing facilities at Townsville had a limited potential for future development and that a new terminal and runway alignment 05/23 would be necessary to overcome operational constraints.

25. In 1976 the Bureau of Transport Economics (BTE) favoured retention of the existing runway system and proposed the establishment of international terminal facilities north of the present civil area. The then Department of Transport recognised that irrespective of the eventual provision of international facilities, the building area at the existing civil aviation area should be given master planning consideration to ensure its

optimum development. Accordingly, a provisional master plan of the existing civil area was issued in 1979 to complement the 1974 document.

26. The extreme urgency and limited budget of the international terminal project precluded siting the terminal as recommended by previous studies. This in turn has reduced future development options in the area; for example, the Aviation operations building and the JUHI are now considered as constraints on the more rational development of the area between the international terminal and the domestic terminal. These constraints impose foreseeable and now unavoidable compromises on future traffic flow and car parking arrangements.

27. The siting of the international terminal and its impact on any improvements or extensions to the domestic terminal prompted Aviation in August 1984 to release for public discussion a further provisional master plan. This plan provides for the expansion of facilities within the existing civil building area and attempts to allocate available developable land for future uses. It seems to the Committee that the semblance of rationality inherent in previous master plans was significantly negated by unwise and hurried decisions on the siting of significant development previously not considered in the master plans. Nevertheless, there is now a significant investment by the Commonwealth, the airlines and other organisations in buildings in the civil aviation area.

THE NEED

28. It was put to the Committee by many witnesses that the domestic terminal is significantly deficient in terms of the standard of service provided and in terms of its capacity to handle present and forecast peak hour passenger and aircraft traffic. Aviation also indicated that the continued deferment of certain works associated with the provision of the international

terminal has aggravated existing problems of capacity and the level of services offered to passengers and the non-travelling public. Deferred works include improvements to the road system, replacement of car park areas lost by location of the international terminal, replacement of apron space and the provision of essential power generating capacity.

29. Domestic Terminal The domestic terminal, originally constructed as a RAAF building during the Second World War, is a concrete pier, timber framed structure with a corrugated iron roof and asbestos cement cladding. As such its external appearance is to say the least unimpressive for an airport catering for tourism. The building provided an area of 441 square metres for passengers and the non-travelling public when taken over from the RAAF as a passenger terminal. It has been modified and extended on a number of occasions. During 1969/70 a 453 square metre extension was added to the southern end to provide more space for handling domestic traffic and to allow for processing of international arrivals from non-scheduled flights. The major domestic airlines have provided extensions to the northern end and, as a stop-gap measure, have sited prefabricated structures adjacent to the building.

30. Available Space The overall area of the terminal is 1600 square metres made up as shown in Table 1 below:

Table 1
Existing Terminal Space Availability
Townsville Airport

	square metres
Public lounge/concourse	441
Gate lounge	169
Toilets and other public areas	133
Cocktail lounge and bar	97
Airline administration and service areas	<u>760</u>
	<u>1600</u>

31. There is also a baggage collection area outside the building.

32. The current peak hour generates four domestic jet aircraft movements in addition to commuter aircraft movements.

33. Table 2, below, illustrates the amount of space required to handle the peak hour traffic:

Table 2
Public Space Requirements
Domestic Terminal, Townsville, 1984

Aircraft Type	Movements	Load Factor %	No. of Passengers	No. of Visitors	Area Required m ²
B737	2	80	180	180	405
B727	2	80	250	250	562
15 seat	2	80	20	20	45
			TOTAL		1012

34. Load factors of 80 per cent of aircraft seating capacity, a visitor to passenger ratio of 1:1, 1.25 square metres per passenger and 1 square metre per visitor space allocations were used to compile the total space requirement of 1012 square metres. With 610 square metres of public space currently available, there is a need for about 410 square metres of additional space to enable the terminal to adequately cope with current peak hour demands.

35. Peak Hour Passenger Forecasts Forecasts of peak hour domestic passenger numbers, prepared by Aviation, are set out in Table 3 below:

Table 3
Peak Hour Domestic and Commuter Passenger Forecasts
Townsville, 1985/2010

	1981	1990	1995	2000	2005	2010
Domestic	450	550	650	750	850	1000
Commuter	30	40	50	50	60	70
Total	480	590	700	800	910	1070

36. These forecasts reinforce the view by Aviation that by 1987 the overall space deficiency in the existing terminal would be about 730 square metres and 750 square metres by 1990 if no new facilities are provided. Aviation suggested that extension of the existing building is not possible due to age, structural deterioration and the inability of the building to meet modern building code requirements. The Committee agrees with this view.

37. Terminal Functionality The deficiency in space available for peak hour passengers and the non-travelling public is reflected in the way the terminal functions. For example, counter areas available for passenger check-in and baggage handling are restricted in length. There is little queueing space at airline counters. Overcrowding is compounded as the arrivals entry is adjacent to the passenger check-in area. There are no clearly defined exits and entrances which causes an undesirable two-way passenger flow. The baggage claim area, at the land side of the terminal, consists of a small waiting area and a collection area of 124 square metres. The available space does not permit more than one arrival to be attended to at a time. To serve current peak hour demands a collection area of about 500 square metres would be desirable.

38. Aircraft Apron Before the introduction of international services, the aircraft apron had sufficient capacity for four domestic aircraft; two B727 aircraft operating without restriction on the concrete apron, and two DC9 aircraft using the flexible asphalt apron immediately adjacent to the domestic terminal on a pavement concession basis.

39. Construction of the aerobridge serving the international terminal has reduced apron capacity of the concrete apron to one B727 and one DC9/B737. The location of the position for the DC9/B737 aircraft presents refuelling difficulties and inefficiencies thereby making the position unattractive to the airlines. Apron capacity for domestic aircraft therefore comprises three positions with an additional position available for DC9/B737 aircraft. An agreement between QANTAS and the domestic airlines requires unscheduled international aircraft to park on the nearby RAAF apron if domestic operations require use of the international position. It is understood that this arrangement is not acceptable to the RAAF on a long term basis.

40. Peak Hour Aircraft Movement Forecasts Peak hour aircraft movement forecasts for Townsville, prepared by Aviation, are set out in Table 4 below:

Table 4
Peak Hour Aircraft Movement Forecasts
Townsville, 1981/2010

	1985	1990	1995	2000	2005	2010
Peak Hour						
Movements ¹	2-B727	3-B727	1-A300	2-A300	2-A300	2-A300
(Domestic)	2-B737	2-B737	4-B727	3-B727	3-B727	4-B727
Commuter ²	3-B15*	4-15*	4-18*	4-18*	4-25*	4-25*
International ³	2-B747	2-B767	2-B767	2-B767	2-B767	2-B767

* ASC - Average Seating Capacity

1. Aircraft designated are indicative of type and size.
2. Aircraft types not specified - designed by Average Seating Capacity (ASC).
3. Not coincident with domestic peak hour.

41. Based on these forecasts there is an immediate requirement for four domestic aircraft positions with a requirement for five positions by 1990 and four narrow body and one wide body aircraft positions by 1995. By 1990 two positions for B767 international aircraft will be required.

42. Taxiways Taxiways and fillets were widened as part of the international terminal project but international aircraft landing to the north need to back track along the full length of the runway. One solution to reduce runway occupancy time entails widening taxiway D and providing additional fillets. To satisfy an operational requirement of 44 metres overall width, 10.5 metre shoulders are necessary to the widened taxiway and fillets. Widening of taxiway D would also provide access to both ends of the apron for large aircraft.

43. Car Parks and Access Road Construction of the international terminal also reduced car parking capacity. The terminal was built partly on the existing car park site. Temporary additional car parking space was provided to offset this loss. As mentioned above, there are 55 metered and sealed parking spaces available adjacent to the domestic terminal with a further 183 unsealed spaces. It was put to the Committee that existing car parking capacity and the standard of car parking that is available is inadequate and requires major upgrading and expansion.

44. Aviation stated that although the internal road system is of sealed, two-lane standard, it has never been subject to comprehensive design and is therefore poorly aligned giving cause to traffic hazards and congestion at a number of locations.

45. Emergency Power Supply The generating equipment in the existing emergency powerhouse was described to the Committee as ancient, lacking in capacity and unsuited for upgrading. Emergency power is required for the international terminal and would also be required for a new domestic terminal. The existing generator has a capacity of 62kVA.

46. Aircraft Toilet and Waste Disposal Building The existing facility, located north-east of the domestic terminal, was designed to handle liquid waste discharge from Electra and Viscount type aircraft and is not suitable for current aircraft or ground handling equipment.

47. Summary The existing terminal is inadequate for current peak hour passenger traffic. Further extensions to the building would be unwise due to its age, structural deterioration and its inability to meet modern safety code requirements. There is insufficient flexibility in the present taxiway capacity for international aircraft to vacate the main runway quickly.

Domestic aircraft parking space has been limited by the location of the international aerobridge and its use by larger domestic aircraft is now constrained. The internal road system is poorly aligned giving rise to traffic congestion at a number of locations. There is a deficiency in the number of car parking spaces available. The emergency powerhouse and aircraft toilet and waste disposal building are inadequate and should be replaced.

48. Committee's Conclusion There is a need for a new domestic terminal, the bituminous concrete apron to be strengthened and enlarged. Deficiencies identified in associated areas, including access roads and car parking, should be rectified in accordance with the master plan.

THE PROPOSAL

49. The proposal put to the former Committee involved the construction of a common user terminal to be integrated with the existing international terminal, extensions to, and resurfacing of the aircraft apron and the rectification of a number of other areas of deficiency such as car parking and vehicle circulation.

50. The following paragraphs describe the various elements of the proposal, the reactions of various organisations to them and the Committee's consideration of the issues raised.

DOMESTIC TERMINAL AND APRON

51. Original Proposal (Option 1) A plan of the common user domestic terminal and apron referred to the previous Committee is at Plan C-3. It provides for common use of gate lounges, domestic baggage handling, public concourse and concession areas. The plan provides separate areas for the airlines for passenger and baggage check-in, airline offices, passenger clubs

and staff amenities. Some re-arrangement of functional areas within the international terminal will be necessary to achieve the maximum benefits of integrating the two buildings. The northern wall of the international terminal will be removed and the new terminal will extend in a northerly direction to the southern edge of the cul de sac apron.

52. Features of the design of the terminal and the apron and taxiway works include:

- a peak hour design capacity of 1200 people (600 passengers and 600 members of the non-travelling public);
- kerbside road with set-down and pick-up area along the landside, making a right-angle turn adjacent to the Aviation operations building and the terminal entrances and exits;
- arriving and departing passengers entering or leaving the terminal through separate doors adjacent to the "corner" created by the sharp right-angle turn mentioned above;
- commuter or regional airline passengers proceeding from the commuter lounge located in north-eastern corner to aircraft parked on the cul de sac apron;
- airline passenger and baggage check-in desks located opposite the terminal entrance;
- baggage make-up and break-down areas located between the arrivals entrance and the airline offices;
- public concourse extending from the entrance to the international area, flanked by a food and liquor concession and domestic gate lounge area.

53. Aircraft Apron and Taxiways The proposed rehabilitation of new aprons and taxiways will comprise the following:

- tug strength pavement along the airside of the domestic terminal;
- rigid cement concrete pads for four aircraft parking positions;
- pavement overlay over the cul de sac apron and part of the main apron;
- high strength pavement over the remainder;
- high strength pavement and shoulder widening along taxiways A and D.

54. New high strength pavement will be constructed generally of bituminous concrete surfacing on crushed rock and will range in thickness up to 1250 millimetres for the heavy jet aircraft.

55. Shape correction and strengthening to existing high strength pavement will be in bituminous concrete overlay. Tar concrete surfacing will be provided in specified areas to protect the bituminous concrete from possible damage caused by fuel spillage.

56. Reactions to the Proposal There was considerable adverse reaction to the proposal at the public hearing held in October 1984. Adverse reactions related to the functionality of the terminal and to the adoption of the common user principle. Examples of criticism of the functionality of the terminal are as follows:

- the access road requiring vehicles to make a right-angle turn in the area of passenger and non-passenger concentration during peak hours;
- insufficient space being allowed for the common user baggage make-up and break-down area;
- a potential hazard caused by baggage vehicles requiring to cross the path of passengers walking along the covered walkway on the air-side;
- regional and commuter airline passengers having to traverse an active cul de sac apron which is frequently occupied by more than one aircraft.

57. The second area of criticism related to the type of terminal proposed. Aviation indicated the adoption of the common user design is in accordance with Government policy. Common user or "shared use" terminals are available for use by two or more airlines and provide facilities which may be used by any of the aircraft operators. The advantages of common user terminals are they avoid duplication of facilities such as baggage handling, but more importantly they maximise the use of space and ensure flexibility in operation. Common user terminals permit additional airlines to be accommodated without considerable re-arrangement of functional areas. The disadvantages of common user terminals relate mainly to the degree of competition permitted by shared use of baggage handling, gate lounges and so on. According to Ansett these deficiencies are overcome in joint user terminals because airlines have control over dedicated aircraft parking positions, baggage handling, gate lounges and internal furnishings. This control, it was argued, enables an airline to compete more effectively than is possible in a common user terminal. The disadvantages of joint user terminals are they require additional floor area and cannot be easily adapted to enable third or fourth airlines to operate in their own right.

58. At the October 1984 public hearing TAA representatives agreed with the adoption of a common user principle and with the justification for a new terminal building. Representatives of Ansett were critical of the manner in which constraints such as the Aviation operations building and the JUHI had caused significant compromises to the optimal development of the site. These constraints, they argued, unnecessarily compromise the route of the access road. If the design were adopted the constraints would contribute towards the set-down and pick-up area becoming congested during peak periods. Ansett also questioned the amount of space that had been made available for the common user baggage make-up and break-down area. Aviation stated at the public hearing in October 1984 that problems of constraints and functionality were recognised and where possible would be the subject of "fine tuning" during the detail design stage. Aviation also gave an undertaking to conduct trials at Brisbane Airport to validate the dimensions of the baggage make-up and break-down area.

59. In view of the lack of consensus between the major airlines on the acceptability of the proposed terminal, Aviation were asked to prepare a plan of a joint user terminal acceptable to both airlines.

60. Option 2 Aviation presented revised plans of the original proposal at the public hearing held in Brisbane in April 1985. The revised plan, (illustrated at Plan C-4) called Option 2 for convenience attempts to overcome much of the criticism of the original proposal but retaining the same building envelope and access route. Significant changes are as follows:

- the passenger arrivals area has been relocated towards the centre of the building reducing the hazards from baggage vehicles to passengers moving along the air-side walkway;

- the baggage make-up and break-down area has been increased in size, following validation trials at Brisbane Airport, and is now located at the northern corner of the building, taking in what was previously planned as the passenger arrival entrance;
- passenger entrances and exits on the landside have been separated to more evenly distribute traffic along the terminal front to reduce the possibility of congestion in the set-down and pick-up area. This separation has been achieved by relocating the concessions area and domestic departure lounge to a more central area;
- space allocated for concessions has been reduced by 200 square metres;
- since the October 1984 public hearing Air Queensland has become associated with TAA and East West Airlines has applied for accommodation in the terminal and the two airlines can be accommodated without difficulty;
- relocation of the public lounge area, formerly adjacent to the international check-in counter and domestic gate lounge area to a more centrally located position.

61. Departments reiterated at the April 1985 public hearing that the Option 2 proposal has been adopted by them because it meets both policy and briefed needs in an economic manner.

62. Option 3, Joint User Terminal The design of a joint user terminal requested from Aviation was presented at the April 1985 public hearing and is illustrated in Plan C-5. It is not supported by departments and was provided in response to the request. The design provides a narrower, more elongated building which extends across the cul de sac apron with consequent impacts

on apron space, but it permits road access along the entire land-side front of the terminal without the need for vehicles to make a sharp right-hand turn in the area of maximum vehicle concentration during peak periods. The access road would be routed between the Aviation operations building and JUHI and the narrower but longer terminal building.

63. Option 4, Common User Terminal The Option 4 terminal plan, illustrated at Plan C-6, is a common user variant of Option 3, with the internal arrangement of functional areas in keeping with common user principles. It is not supported by Departments.

64. Option 5, Pier - Joint User A further option presented at the April 1985 public hearing is Option 5, which comprises a joint user terminal of two levels with a pier extending across the apron to service nose-in aircraft parking. This option is also not supported by Departments.

65. Views of the Airlines The major airlines were given the opportunity of presenting final submissions to the Committee at the April 1985 public hearing. Ansett stated that they preferred Option 3 although the design had not been discussed in any detail with Departments. According to Ansett, Option 3 provides a more balanced facility. The kerb-side through road enables the passenger pick-up and set-down functions to be distributed along the entire land-side front of the terminal without the potential of congestion which is caused by the sharp right hand turn as would be the case with Option 2. Development of the cul de sac apron is a more efficient use of the space available.

66. TAA advised that although Option 2 is an improvement on Option 1 in several respects, it is inferior to Options 3 and 4 due to the restrictions on vehicular and passenger movement. Option 4, whilst a common user terminal, will require passengers to walk longer distances. In giving qualified support to

Option 3, TAA stated it would be prepared to give further consideration to a joint user concept provided that TAA is located at the southern end adjacent to the international facilities.

67. Air Queensland pointed out that Options 3 and 4 would require relocation of the Aviation workshop and Search and Rescue store and the replacement of these facilities with an aircraft apron. A covered walkway, to provide weather protection, would be necessary to connect the terminal to the more remote parking positions. In addition, Air Queensland indicated a requirement for an additional departure lounge at the northern end of the terminal to serve regional and commuter airlines.

68. A Question of Costs A summary of the cost comparisons for the five options is given in Tables 5 and 6 below:

Table 5
Terminal Building Options
Areas and Costs

Option	Fully Enclosed Covered Area m ²	Unenclosed Covered Area m ²	Gross Floor Area m ²	Terminal Limit of Cost Estimate \$M
1	10,255	1,965	12,220	8.3
2	9,490	2,176	11,666	8.6
3	11,251	2,526	13,777	10.1
4	9,642	2,422	12,064	9.0
5	15,262	1,357	16,619	15.7

Table 6
Project Cost for each Terminal Option

Option	Terminal Building	Airside Pavement	Landside Pavement	Engineering Services	Project Limit of Cost Estimate
	\$M	\$M	\$M	\$M	\$M
1	8.3	4.2	0.6	1.2	14.3
2	8.6	4.2	0.6	1.2	14.6
3	10.1	4.8	0.7	1.2	17.6*
4	9.0	4.8	0.7	1.2	16.5*
5	15.7	4.5	0.7	1.2	22.1

* Includes \$800,000 for displacement of Aviation workshop and Search and Rescue Store.

69. Aircraft Apron The original Option 1 proposal placed before the former Committee provided for the following aircraft parking positions:

- four free-moving domestic jet aircraft (one of which may be wide-body) plus two F27 type aircraft; or
- one existing international wide-body aircraft plus five nose-in parked domestic jet aircraft (two of which may be wide-body) plus two F27 type aircraft.

70. Similar arrangements and capacities, illustrated in Plan C-7, would apply to Option 2.

71. According to apron layout plans presented at the April 1985 public hearing, the aircraft parking capacities for Options 3 and 4 remain unchanged, except that two F27 positions, formerly in the cul de sac apron, would need to be relocated to an apron area adjacent to the Aviation workshop and Search and Rescue store. Revised arrangements are illustrated in Plan C-8.

72. At the October 1984 public hearing TAA indicated a requirement of two B727 positions and a stand-off position for one F27. It was pointed out that the fourth free-moving apron position would not be available when the international aerobridge position is occupied. It was asserted that international arrivals are unpredictable and there may be clashes in demand for apron space between the international operator and the domestic operators.

73. Ansett stated the apron should be sufficiently large to accommodate five domestic jets in addition to the international position. Two of the domestic positions should be able to accommodate domestic wide-body aircraft. Capacity for five aircraft is provided in the proposal but the two airlines are

opposed to nose-in/push-out parking. They maintained that such arrangements require the provision of special equipment and additional staff, leading to increased operating costs with no distinct advantages to them or their paying passengers. Ansett advised the Committee, following the April 1985 public hearing, that the capital cost of providing push-out equipment is \$160,000 and the annual operating cost is \$200,000. It can be assumed that similar cost penalties would need to be borne by TAA.

74. Consideration The Committee is rarely in the invidious position of being required to arbitrate in circumstances of apparent conflict. The proposal re-referred to the Committee, Option 2, even with an internal reconfiguration, was criticised by TAA and Ansett as not being the best solution. Options 3 and 4, which are not supported by Departments, are preferable to them, and in the final analysis and in the face of considerable equivocation by one airline, it is clear that both airlines have a strong preference for Option 3.

75. It should be emphasised here, lest there are any doubts about the Committee's terms of reference in this regard, that sub-section 17(2) of the Public Works Committee Act 1969 provides that:

The Committee may, in its report on a public work, recommend any alterations to the proposals for the work that, in its opinion, are necessary or desirable to ensure that the most effective use is made of the moneys to be expended on the work.

76. A Question of Terminal Type The first matter to be resolved in considering the merits of the four options under consideration involves the type of terminal to be constructed at Townsville.

77. Aviation witnesses stated their reasons, and what they believed to be the Government's policy, for the adherence to the common user policy in a significantly more cogent manner at the April 1985 public hearing than at the public hearing held in Townsville in October 1984. In April 1985 Aviation representatives stated that the Department has a responsibility, in designing terminals, to produce a facility which is as efficient as possible, which provides a maximum return to the Commonwealth, which has the flexibility to cope with such things as market share and participating companies. The Department is required to act upon Government policy to maximise the commercial return on airports and believes the provision of a common user terminal is the best way in which this can be achieved. Aviation also indicated that an enquiry into the two airline policy is now underway. Without wishing to anticipate the results of the inquiry, it is both prudent and ultimately necessary to provide for flexibility in terminal arrangements.

78. It was disputed that the present Government supports the common user policy. The new domestic terminal at Brisbane Airport, which is currently under construction, is a departure from the common user policy. It was revamped to operate as a joint user terminal. The Committee does not wish to canvass the entire background to the decision to adopt a joint user design at Brisbane. The Committee merely makes the observation that adoption of the joint user design at Brisbane was gone so at the Government's behest, in conjunction with the airlines. The situation at Townsville is somewhat different. Ansett and TAA came before the former Committee in October 1984 with differing views on the common user policy. With the benefit of hindsight, it would have been more prudent and certainly less of a burden on everyone concerned for these differences to have been resolved before the public hearing in October 1984. If any doubts existed in the minds of the three organisations involved concerning the Government's policy on common user terminals, these doubts should

have been resolved at the highest level. Aviation was requested by the Committee at the public hearing held in April 1985, to seek a reaffirmation or otherwise from the Government of the status of the common user policy. The Committee has since been advised that the matter is still under consideration.

79. Nevertheless, the significantly more cogent arguments advanced by Aviation and DHC at the April 1985 public hearing and the current review of the two airline agreement, are sufficiently compelling for the Committee to agree that the new domestic terminal at Townsville Airport should operate as a common user terminal.

80. Committee's Conclusion The new domestic terminal at Townsville airport should be designed to operate as a common user terminal.

81. A Question of Options It now remains to consider the merits of the two common user options - Options 2 and 4.

82. Option 2, with its potential access problems, is the less expensive, but it seems to be a compromise which tends to perpetuate present arrangements.

83. Option 4 is also a compromise. Whilst overcoming the access problems, its narrower lateral dimensions would restrict circulation areas more than is considered desirable. Nevertheless, the Committee believes there are advantages in adopting Option 4 as a basis for further planning because it has the following advantages:

- accommodation of F27 and commuter airline passengers in a much more convenient way - the need for a covered walkway, walking distances from the terminal to aircraft and the potential hazard of aircraft and passenger conflict, all inherent in Option 2, would be either eliminated or substantially reduced;
- elimination of the potentially severe traffic congestion, associated with Option 2, by enabling the circulation road along the terminal kerb-side to be extended along the entire length of the terminal - the sharp right-hand turn is eliminated;
- utilisation of valuable apron space, currently used as a workshop for non-apron related activities in a more rational and purpose-related manner - Option 2 perpetuates existing arrangements;
- retention of the Aviation operations building and the JUHI at their present location in the longer term;
- it provides an additional car parking area suitable for longer term parking on the northern side of the JUHI, within easy walking distance of the terminal.

84. The Committee understands there are differences in the lateral dimensions of Options 3 and 4. Option 3, it is understood, has a length of 207.5 metres compared with 183.5 metres for Option 4. Option 4 will therefore not extend across the entire length of the cul de sac apron. The unused space of about 24 metres provides scope for lateral expansion.

85. The difference in costs between the two options amounts to \$1.9 million (\$14.6 million for Option 2 as against \$16.5 million for Option 4). The higher cost of Option 4 comprises

\$0.4 million for the terminal building, \$0.6 million for airside pavements, and \$0.8 million for the construction of replacement facilities for the Aviation workshop and Search and Rescue store. There is an additional \$0.1 million required for landside pavement.

86. A significant component of the \$0.4 million increase in terminal building costs can be attributed to the long baggage conveyor system from the passenger check-in area to the baggage make-up area. The Committee believes that whilst the common user principle, the building envelope and access road system are acceptable, there is considerable scope for improvements in the layout and location of various functional areas in the terminal. It is apparent, following the significant improvements to the layout of functional areas of Option 1 over Option 2, that further improvements to the layout of functional areas in Option 4 could reduce the need for a lengthy baggage conveyor system and provide improved access from the terminal for commuter and regional airline passengers using the F27 apron.

87. The additional cost of airside pavements (\$0.6 million) can in part be attributed to the construction of two F27 parking positions adjacent to the Aviation workshop and Search and Rescue store. The airlines indicated that under Options 1 and 2 operations from the cul de sac apron could be potentially hazardous to passengers traversing an active apron. It was suggested by the airlines that a covered walkway be constructed to provide weather protection and increased safety to passengers. The cost of providing such a walkway was estimated as \$1,200 - \$1,500 per metre. The terminal building proposed under Option 2 would reach its design peak hour capacity of 1200 people by 1990, and as lateral extension is envisaged in the short term as the most convenient form of expansion, the cul de sac apron will be supplanted by terminal extensions. The cost of the covered walkway, whilst not provided for in the departmental

submissions would also be negated. It is the view of the Committee, therefore that the \$0.6 million increase to provide F27 parking is really a question of deferred expenditure. Funds will need to be provided eventually to construct extensions to the cul de sac apron.

88. The Committee was surprised to learn that non-apron related activities such as the maintenance of motor vehicles and equipment are carried out in the Aviation workshop. The Committee believes that the building occupies an area which should be used for apron-related activities. The partial use as a search and rescue store is not questioned; this function is clearly related to its location immediately adjacent to the apron. Whilst the building is old and may require repairs and maintenance, it is of solid construction and the Committee believes there is a case for Aviation to undertake a study of the requirement for workshop facilities at Townsville Airport. The practicalities and cost of converting the workshop area into a facility for other apron-related activities, consistent with F27 operations from the apron should be investigated. The Committee believes the convenience and revenue-earning potential of such arrangements would outweigh the cost of the relocation of non-apron related activities currently carried out in the building.

89. Option 4 also provides for the retention of the JUHI and Aviation operations building. Eventual relocation of both facilities to provide additional car parking areas are envisaged in the master plan. It was pointed out by Aviation that under Option 4 bridging tankers may experience difficulties in gaining access to the JUHI during peak periods. The Committee recognises this may be a problem which should be discussed with the oil companies involved.

90. The Committee notes that an observation area is not provided under Option 4. Congestion in the arrivals area and the public concourse area adjacent to the check-in and gate lounge area may arise during peak periods. It is therefore recommended that an observation deck be provided on the roof of the terminal to reduce potential congestion and to provide for later expansion of public areas.

91. Committee's Conclusion Option 4 offers considerable advantages over Option 2. Whilst Option 4 is more expensive, the added costs are offset by the benefits of a less potentially hazardous F27 apron and the use of the Aviation workshop for apron-related activities. An observation deck should be provided.

92. Apron Space The amount of apron space to be provided remains unchanged with Option 4, although the F27 positions will be located adjacent to the Aviation workshop.

93. Forecasts of peak hour apron occupancy, shown in Table 4, indicate that by 1990 there will be a requirement for five narrow body jet aircraft parking positions; by 1995, one of the five positions will be required for wide-body aircraft. The proposal provides for the five positions (including two wide-body position) but in the nose-in/push-out configuration.

94. It was pointed out at both public hearings by representatives of Air Queensland that because of the high percentage of passengers connecting to or from trunk carriers, it is essential to the effectiveness of regional and commuter airline operations that regional aircraft be able to arrive and depart at times corresponding to trunk airline movements. According to Air Queensland, the current peak usage would be one 40-seat aircraft and three 20-seat aircraft, but based on the

company's projections it is believed there will be a requirement for five twin-turbo aircraft in addition to the two F27 positions.

95. The cost of providing an additional fifth free-moving position was given as \$300,000. It seems to the Committee, from an examination of plans and aerial photographs provided, that the amount of air-side terminal frontage available for apron development is severely restricted. Additional apron space is available to the north, but this would supplant the F27 positions and development further to the north would interfere with the General Aviation area. Further development to the south would encroach Defence property. It is noted that a fuel installation is located south of the international apron.

96. Given these factors, which largely derive from existing constraints and not necessarily a reluctance to provide additional funds to lessen the impact of nose-in/push-out costs on the airlines and the travelling public the major Airlines should consider the practicalities of extending the duration of the domestic peak hour. The Committee agrees that nose-in parking at Townsville is undesirable due to establishment and recurrent costs to airlines. If there are inflexibilities in extending the peak hour, the feasibility of using the F27 apron for domestic jet (free moving) and transferring F27 and 20-seat aircraft parking to the southern cement concrete apron, should be assessed by the airlines and Aviation. The Airlines and Aviation should further consider the need for features such as concrete pads and tug strength aprons which are designed for nose-in/push-out parking.

97. Committee's Conclusion Nose-in/push-out aircraft parking proposed at Townsville is undesirable due to high establishment and recurrent costs which must be met by the Airlines. The duration of the domestic peak hour should be extended to avoid

excessive demand for space for free-moving aircraft parking. The practicalities of re-arranging designated free moving parking positions within the extent of Option 4 apron space should be assessed, with a view to providing sufficient space for commuter airline aircraft.

98. Apron Material At the October 1984 public hearing TAA suggested that the apron be constructed of cement concrete and not bituminous concrete as is proposed. Cement concrete would prevent the development of surface indentations with which TAA's baggage handling equipment experiences operational difficulties.

99. Expert witnesses from DHC indicated the following comparative costs:

- Cement concrete - 400 millimetres concrete, 150 millimetres compacted crushed rock on prepared sub-grade - \$100 per square metre;
- Bituminous concrete - 50 millimetres bituminous concrete (or 25 millimetres tar concrete on 25 millimetres bituminous concrete for that part of the apron subject to fuel spillage) on 950 millimetres sub-base crushed rock on prepared sub-grade - \$80 per square metre;
- Strengthening of existing flexible pavement with pavement overlay of bituminous or tar concrete - \$50 per square metre.

100. The Committee believes there is a marginal case for providing cement concrete aprons at Townsville but in agreeing to the proposal as submitted, has been guided by experts who have indicated that in the face of added cost penalties, a cement concrete apron cannot be justified.

101. Committee's Conclusion The Committee agrees with the proposed apron and taxiway works as submitted for Option 4.

OTHER COMPONENTS OF THE PROPOSAL

102. Access Roads and Car Parks The extent and location of proposed access road and car park areas are illustrated in Plan C-9. It should be noted that they relate to the Options 3 and 4 terminals.

103. Access road works involve retaining the Halifax Street route which will continue to have dual carriageways, single lane in each direction with provision for widening with an additional lane in each direction.

104. The terminal access road will provide for vehicle traffic in a one-way direction past the terminal complex. The kerbside set down and pick-up areas will be located along the land-side front of the building.

105. The Committee believes that during the detail design of the roadworks departments should consider the merits of providing more direct access to the southern (main) car parking area by the provision of direct interconnection between the set-down area and the car park.

106. The car park will cater for:

- 300 vehicle public car parking;
- 22 vehicle staff car parking at the operations building;
- 15 taxi storage lane;
- 30 vehicle authorised and rental cars;
- queueing lanes at entrances and exits of designated car parking.

107. A number of these features relate to the car park contained in the original proposal. A number of changes may result from the adoption of Option 4. One benefit is the opening of additional car parking space to the north of the JUHI.

108. Townsville City Council requested provision be made in providing car parking for an area to be set aside for longer term parking. The Committee agrees that this should be investigated, notwithstanding Aviation's stated policy of not being responsible for the provision of free-parking at airports.

109. Landscaping The proposal originally submitted was for landscaping to be confined to the border surrounding the car park. Townsville City Council drew attention to their requirement of one shade tree for every three parking spaces. DHC advised that the proposal could be changed at no extra cost to accord with Council requirements but the number of trees around the perimeter of the car park would need to be reduced. The Committee believes the Council's standard, which has no doubt been influenced more by climatic than aesthetic factors, should be applied in this case.

110. A number of local interest groups sought to have funding for landscaping increased, and an assurance that plant species suited to the Townsville climate would be selected. The Committee believes the level of funding allocated for landscaping, which is included in the overall cost of the redevelopment, is adequate. The Committee agrees that Aviation and DHC should seek advice from Council officers and appropriate public organisations on the selection of plant species and the design of landscaping. Given the nature of apron operations and the potential hazards of bird-strikes, the final decision must, however, rest with Aviation.

111. Access Road Townsville City Council was concerned about adverse effects on the residential areas of Garbutt expected from continued use of existing airport access routes. The Council urged that the alternative access route to northern, western and central business district areas, involving linking the airport site to Bundock Street, be completed by 1989. The Council, for

its part, plans to upgrade part of Bundock Street to four lanes. The first stage of the upgrading, between Marshall and Bishop Streets, has been completed; other stages, which are planned to terminate at the Old Common Road, were being considered with a view to completion by 1986/87.

112. Aviation stated that the amount of traffic which would use the Bundock Street alternative route would not justify its provision. The Queensland Government Department of Main Roads had advised Aviation that in a traffic engineering sense the present road system is adequate.

113. The Committee is sympathetic to the possible adverse effects of increased traffic on the residential areas of Garbutt. Primary responsibility for the development and funding of the alternative route rests with state and local government. Nevertheless, consultations between the three parties on the alignment and release of road easements and an acceptable formula for funding construction of the road should take place.

114. Central Emergency Powerhouse A new central emergency powerhouse comprising a single storey metal clad building located in accordance with the master plan will be provided. It will house two 200kVA diesel driven alternators and will replace the existing facility.

115. Waste Disposal Building A steel framed and metal sheeted building containing a dump pit for toilet waste vehicle discharge, washing and screening facilities and pumping equipment to dispose of liquid waste from aircraft to the Townsville City Council sewerage system will be provided. It will be located adjacent to the international terminal aerobridge position.

116. Committee's Conclusions The capacity of the proposed car park is adequate and additional parking spaces are provided north of the JUHI under Option 4. The car park should be landscaped in accordance with the policy of Townsville City Council. Urgent discussions should be held between the Commonwealth, State and Townsville City Council on the alignment and funding of the Bundock Street alternative access road. The location and design of the Central Emergency Powerhouse and Waste Disposal Building are satisfactory.

CONSTRUCTION DETAILS

117. The following details of the structure and finishes, mechanical and electrical services, and fitout were provided by DHC as part of the description of the Option 2 terminal. The Committee believes that they cover adequately the nature of the Option 4 building.

118. Terminal Structure and Finishes The structure will generally be steel frame on bored pier foundations similar to the international terminal. Floors will comprise concrete slabs. The elevated plant room floor will be concrete slab on beams supported on columns. External cladding will be pre-finished metal of similar profile to the international terminal.

119. Glazed walls will be of tinted glass and external walls and the roof will be insulated for thermal and acoustic control.

120. Internal walls will be finished in painted plasterboard, with impervious panelling to wet areas and painted masonry in the baggage handling areas.

121. Floor finishes will comprise:

- carpet in gate lounge and public areas;
- ceramic tiles in all wet areas;

- studded rubber in interior public areas of high density traffic;
- concrete in baggage handling areas, external walkways, plant room and sub-station.

122. Mechanical Services Comfort conditions will be maintained throughout public areas of the terminal by a ducted air conditioning system. Airline and concessionaire air handling plants will be provided with chilled water from single point boundary connections. Domestic hot water will be provided by electric storage water heaters. Toilet areas will be mechanically ventilated.

123. Provision has been made for baggage conveyors, for baggage transfer from check-in to make-up areas and for race-track units to service baggage reclaim and make-up areas.

124. Electrical Services The existing high voltage system will be extended to provide power.

125. Emergency power will be provided to the combined international/domestic terminal building.

126. Lighting Lighting will be a combination of bay lighting in high ceiling areas of the terminal and normal commercial lighting elsewhere.

127. Illuminated signs, a public address system and flight information boards will be provided. Emergency evacuation lighting will be installed.

128. Fire Protection A sprinkler system will provide fire protection throughout the building. Fire hose reels and portable extinguishers will be located throughout the terminal. Deluge fire protection to the fixed section of the international terminal aerobridge position will be provided to comply with current fire protection requirements.

129. A ring-main, installed at the time of the international terminal project, will be suitable for the domestic terminal and apron areas. A second source of supply will be provided by installation of an in-ground storage tank with booster pump.

130. Fitout by Airlines Airlines will be responsible for providing company identification signs in public areas, departure and arrivals concourse.

131. Airlines and concessionaires will be responsible for providing the following items in their respective areas:

- floor finishes;
- partition walls;
- ceiling installation;
- light and power from single point boundary connection;
- plumbing and drainage as required from single point boundary connection;
- guest lounge installation;
- furniture and fittings;
- air handling plant and associated duct work utilising chilled water from single point boundary connection.

INTERNATIONAL TERMINAL

132. Option 4, as with other Options, will be integrated with the international terminal. Although many of the areas and facilities in the international terminal will be required specifically for international traffic, and will not be available for use by domestic passengers, the Committee was advised that the international gate lounge could be used for supplementary domestic purposes.

133. Some re-arrangement of discrete areas within the international terminal, involving relocating the international baggage make-up area and QANTAS offices, will be necessary. The Committee was assured by DHC that the area provided for QANTAS under Option 2 is increased over the existing area and to an equivalent standard.

134. Committee's Recommendation The amount of leased space to be made available to QANTAS under Option 4 should match that presently occupied in the existing international terminal and that provided for under Option 2.

COST RECOVERY AND BUSINESS CONCESSIONS

135. Government Policy Government policy is for costs arising from the provision, operation and maintenance of facilities and services required for the safe, efficient and economic operation of air transport to be attributed to the aviation industry for cost recovery purposes.

136. The Committee understands that the current policy was recently reviewed by the Independent Inquiry into Aviation Cost Recovery, and while it has been decided to separate airport and airway charges, the recommendations of the report of the inquiry are under consideration by the Government.

137. Aviation advised that the costs arising from the proposed capital expenditure on the proposal will be attributed for cost recovery as soon as the facilities become operational and will be in the form of annual interest and depreciation charges.

138. Terminal rentals for dedicated airline occupied areas will be based on market rental of comparable areas off the airport.

139. Airlines will be also required to pay a percentage of running expenditure including maintenance, security, cleaning, electricity and power generation and rates for dedicated lease and common user airline areas. The expenditure will be apportioned to tenants on the basis of the amount of lease area each tenant occupies.

140. Business Concessions The design of the terminal and adjacent areas allows for the following business concessions:

- food and liquor services;
- car park;
- newsagency and gifts;
- tourist services;
- car rental desks.

AIRCRAFT FUELLING FACILITIES

141. International, domestic and most commuter aircraft are refuelled from hydrant points located on the aircraft aprons. Jet fuel is supplied by underground pipelines from the JUHI which is owned and operated jointly by two oil companies.

142. Prior to the introduction of international services, all four domestic jet parking positions were served by fuel hydrants. The hydrant system was modified to cater for international aircraft thereby losing flexibility in fuelling arrangements for domestic aircraft.

143. It is proposed that hydrant positions be provided for the new domestic parking positions and to cater for future apron expansion and changes in future aircraft parking configurations.

144. The work involved in improving the fuelling system will be undertaken by the oil companies concerned at their own expense.

ENVIRONMENTAL CONSIDERATIONS

145. Aviation prepared a Provisional Master Plan, incorporating an environmental impact assessment, on the Townsville Airport in August 1984.

146. Aviation advised that the work proposed in this reference was referred to the then Department of Home Affairs and Environment in accordance with the Administrative Procedures made pursuant to the Environment Protection (Impact of Proposals) Act 1974.

147. The Committee was advised that the preparation of an Environmental Impact Statement on the proposal was not required.

CONSTRUCTION PROGRAM

148. The construction of building and car parks will be phased to provide temporary accommodation for airline companies transferred from the existing building. The existing terminal will then be demolished leaving a clear site for the construction of the domestic terminal works.

149. The Committee was advised at the April 1985 public hearing that subject to works program status, works on the project would commence in early 1986 with completion planned for early 1988.

150. Committee's Recommendation Bearing in mind that construction activity will be disruptive to normal terminal operations, the Government is urged to provide funds enabling an early completion of the building.

LIMIT OF COST

151. When referred to the former Committee the estimated cost of the work was \$14.3 million in September 1984 prices. The estimated cost of the same proposal (Option 1), when re-referred to the Committee on 18 April 1985, was stated by the Minister for Housing and Construction as \$14.7 million in March 1985 prices; the increase in costs being due to cost increases over the period as measured by the DHC building price index.

152. At the April 1985 public hearing the Committee was advised that the cost of Option 2, which is a derivative of Option 1 and which is the Option favoured by Departments, is \$15.2 million at April 1985 prices. The cost differences being due to an additional \$0.3 million required for longer baggage conveyors.

153. The estimated cost of an Option 4 terminal building and associated work is \$16.5 million at September 1984 prices, comprising the following elements:

	\$m
Terminal building	9.0
Airside pavement	4.8
Landside pavements	0.7
Engineering services	1.2
Aviation workshop and Search and Rescue Store	<u>0.8</u>
	<u>16.5</u>

154. The Committee has stated that it may not be necessary to replace the Aviation workshop and that replacement costs should not be attributed to the proposal hence the reduction of \$0.8 million.

155. Committee's Recommendation The Committee recommends the construction of an Option 4, Common User Terminal and associated works at Townsville Airport at a cost of \$15.7 million at September 1984 prices.

RECOMMENDATIONS AND CONCLUSIONS

156. The recommendations and conclusions of the Committee and the paragraph in the report to which each refers are set out below:

Paragraph

1. THERE IS A NEED FOR A NEW DOMESTIC TERMINAL, THE BITUMINOUS CONCRETE APRON TO BE STRENGTHENED AND ENLARGED. DEFICIENCIES IDENTIFIED IN ASSOCIATED AREAS, INCLUDING ACCESS ROADS AND CAR PARKING, SHOULD BE RECTIFIED IN ACCORDANCE WITH THE MASTER PLAN. 48

2. THE NEW DOMESTIC TERMINAL AT TOWNSVILLE AIRPORT SHOULD BE DESIGNED TO OPERATE AS A COMMON USER TERMINAL. 80

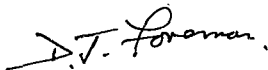
3. OPTION 4 OFFERS CONSIDERABLE ADVANTAGES OVER OPTION 2. WHILST OPTION 4 IS MORE EXPENSIVE, THE ADDED COSTS ARE OFFSET BY THE BENEFITS OF A LESS POTENTIALLY HAZARDOUS F27 APRON AND THE USE OF THE AVIATION WORKSHOP FOR APRON-RELATED ACTIVITIES. AN OBSERVATION DECK SHOULD BE PROVIDED. 91

Paragraph

4. NOSE-IN/PUSH-OUT AIRCRAFT PARKING PROPOSED AT TOWNSVILLE IS UNDESIRABLE DUE TO HIGH ESTABLISHMENT AND RECURRENT COSTS WHICH MUST BE MET BY THE AIRLINES. THE DURATION OF THE DOMESTIC PEAK HOUR SHOULD BE EXTENDED TO AVOID EXCESSIVE DEMAND FOR SPACE FOR FREE-MOVING AIRCRAFT PARKING. THE PRACTICALITIES OF RE-ARRANGING DESIGNATED FREE-MOVING PARKING POSITIONS WITHIN THE EXTENT OF OPTION 4 APRON SPACE SHOULD BE ASSESSED, WITH A VIEW TO PROVIDING SUFFICIENT SPACE FOR COMMUTER AIRLINE AIRCRAFT. 97
5. THE COMMITTEE AGREES WITH THE PROPOSED APRON AND TAXIWAY WORKS AS SUBMITTED FOR OPTION 4. 101
6. THE CAPACITY OF THE PROPOSED CAR PARK IS ADEQUATE AND ADDITIONAL PARKING SPACES ARE PROVIDED NORTH OF THE JUHI UNDER OPTION 4. THE CAR PARK SHOULD BE LANDSCAPED IN ACCORDANCE WITH THE POLICY OF TOWNSVILLE CITY COUNCIL. URGENT DISCUSSIONS SHOULD BE HELD BETWEEN THE COMMONWEALTH, STATE AND TOWNSVILLE CITY COUNCIL ON THE ALIGNMENT AND FUNDING OF THE BUNDOCK STREET ALTERNATIVE ACCESS ROAD. THE LOCATION AND DESIGN OF THE CENTRAL EMERGENCY POWERHOUSE AND WASTE DISPOSAL BUILDING ARE SATISFACTORY. 116

Paragraph

7. THE AMOUNT OF LEASED SPACE TO BE MADE AVAILABLE TO QANTAS UNDER OPTION 4 SHOULD MATCH THAT PRESENTLY OCCUPIED IN THE EXISTING INTERNATIONAL TERMINAL AND THAT PROVIDED FOR UNDER OPTION 2. 134
8. BEARING IN MIND THAT CONSTRUCTION ACTIVITY WILL BE DISRUPTIVE TO NORMAL TERMINAL OPERATIONS, THE GOVERNMENT IS URGED TO PROVIDE FUNDS ENABLING AN EARLY COMPLETION OF THE BUILDING. 150
9. THE COMMITTEE RECOMMENDS THE CONSTRUCTION OF AN OPTION 4, COMMON USER TERMINAL AND ASSOCIATED WORKS AT TOWNSVILLE AIRPORT AT A COST OF \$15.7 MILLION AT SEPTEMBER 1984 PRICES. 155



(D.J. FOREMAN)
Chairman

Parliamentary Standing Committee
on Public Works
Parliament House
CANBERRA A.C.T. 2600

16 May 1985

APPENDIX A

LIST OF WITNESSES

- Baker, B.C., Esq., Spokesman for the Townsville Airport Workers Committee, Box 306, Aitkenvale, Townsville, Queensland.
- Barrell, T.F., Esq., Associate Director (Projects), Department of Housing and Construction, Brisbane, Queensland.
- Brazier, K.D., Esq., Chairman, Townsville Airport Committee, 34 Stanton Terrace, North Terrace, North Ward, Townsville, Queensland.
- Brown, E.C., Esq., Chief (Aerodrome and Road) Engineer, Department of Housing and Construction, Canberra, Australian Capital Territory.
- Cox, M.J.A., Esq., Manager, Property Development and Administration, QANTAS Airways Ltd, QANTAS International Centre, Sydney, New South Wales.
- Davies, R.C., Esq., Acting Regional Director, Queensland Region, Department of Aviation, P.O. Box 600, Fortitude Valley, Queensland.
- Dawson, J.R., Esq., Project Manager, Defence and General, Department of Housing and Construction, 145 Eagle Street, Brisbane, Queensland.
- Derbyshire, D.L., Esq., Chairman, Royal Australian Institute of Architects, North Queensland Division, 164-186 Stanley Street, Townsville, Queensland.
- Elliott, D.J., Esq., Manager, Advanced Planning and Systems, Engineering Division, Ansett Airlines of Australia, Engineering Base, Melbourne Airport, Victoria.
- Fox, P.W., Esq., Townsville Airport Workers Committee, Box 306, Aitkenvale, Townsville, Queensland.
- Hatton, P.C.R., Esq., Assistant Aviation Manager, Shell Company of Australia Ltd, 155 William Street, Melbourne, Victoria.
- Krolke, E., Esq., Manager, Fleet Planning and Scheduling, QANTAS Airways Ltd, QANTAS International Centre, Sydney, New South Wales.

Lawry, O.W., Esq., Regional Director, Queensland Region,
Department of Aviation, Fortitude Valley,
Queensland.

Mayston, H.R., Esq., City Engineer, Townsville City
Council, Civic Administration Building,
Walker Street, Townsville, Queensland.

O'Sullivan, R.D., Esq., 82 Mitchell Street, North Ward,
Townsville, Queensland.

Phelan, P.D., Esq., Special Projects Manager,
Air Queensland Flight Centre, Cairns Airport,
Cairns, Queensland.

Plant, S.A., Esq., Project Director, Townsville Airport
Terminal Area Redevelopment Project, Queensland
Region, Department of Aviation, Fortitude Valley,
Queensland.

Redrup, J.E., Esq., Director, Forecasting Section,
Domestic Policy Division, Department of Aviation,
Canberra, Australian Capital Territory.

Reed, P.J., Esq., Divisional Airports Engineer,
Townsville, Queensland Region, Department of
Aviation, Townsville Airport, Queensland.

Richards, J.A., Esq., Leading Engineer, Airport
Development, Ansett Airlines of Australia,
P.O. Box 727, Melbourne, Victoria.

Ryan, P.R., Esq., Manager, Trans Australia Airlines,
Townsville, Queensland.

Shillabeer, F.A., Esq., Acting Chief Technical Officer,
Brisbane Region, Department of Aviation,
P.O. Box 600, Fortitude Valley, Queensland.

Smith, C.O., Esq., Assistant Regional Director, Airports,
Queensland Region, Department of Aviation,
P.O. Box 600, Fortitude Valley, Queensland.

Soulsby, E.J., Esq., Ground Services Manager, Trans
Australia Airlines, Head Office, 50 Franklin
Street, Melbourne, Victoria.

Sullivan, R.E., Esq., Acting Principal Airports Engineer,
Major Airports Project Branch, Airports Division,
Department of Aviation, Canberra, Australian
Capital Territory.

Truskin, G., Esq., Property Manager, Trans Australia
Airlines, Head Office, 50 Franklin Street,
Melbourne, Victoria.

Vardon, R.G., Esq., Manager, North Queensland,
QANTAS Airways Ltd, 280 Flinders Mall,
Townsville, Queensland.

Vines, R.D., Manager, Building Projects, Ansett Airlines
of Australia, 501 Swanston Street, Melbourne,
Victoria.

White, D.W.E., Esq., Engineer Class 4, Department of
Housing and Construction, Brisbane, Queensland.

Whittaker, R.M., Esq., Superintendent, Aviation
Operations, Caltex Oil (Australia) Pty Ltd,
167-187 Kent Street, Sydney, New South Wales.

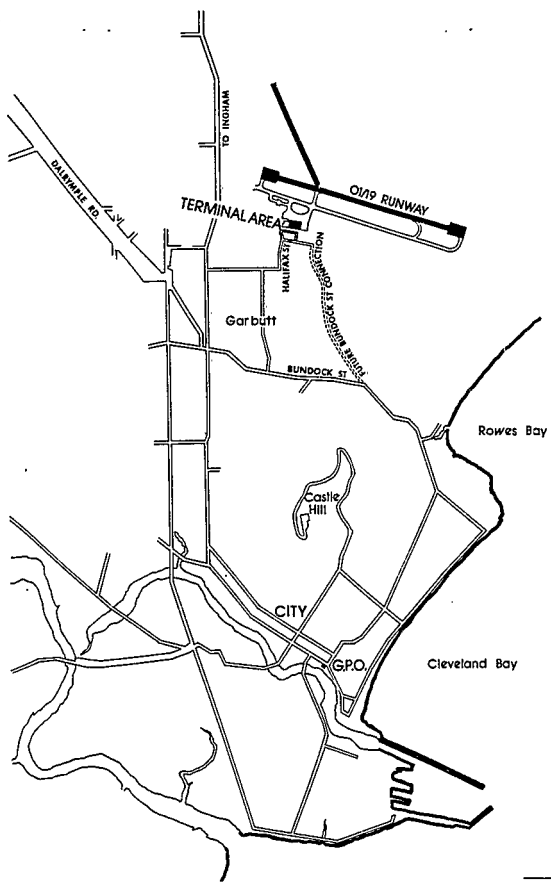
APPENDIX B

LIST OF EXHIBITS

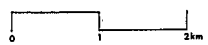
<u>Exhibit</u> <u>No.</u>	<u>T i t l e</u>
1.	Department of Aviation: Townsville Airport, Queensland, Provisional Master Plan, Incorporating an Environmental Impact Assessment, Civil Area, Garbutt RAAF Base, August 1984.
2.	Townsville Airport - Traffic and Terminal Studies, L.C. Wadhwa, Department of Civil and Systems Engineering, James Cook University of North Queensland, 1982.

APPENDIX C

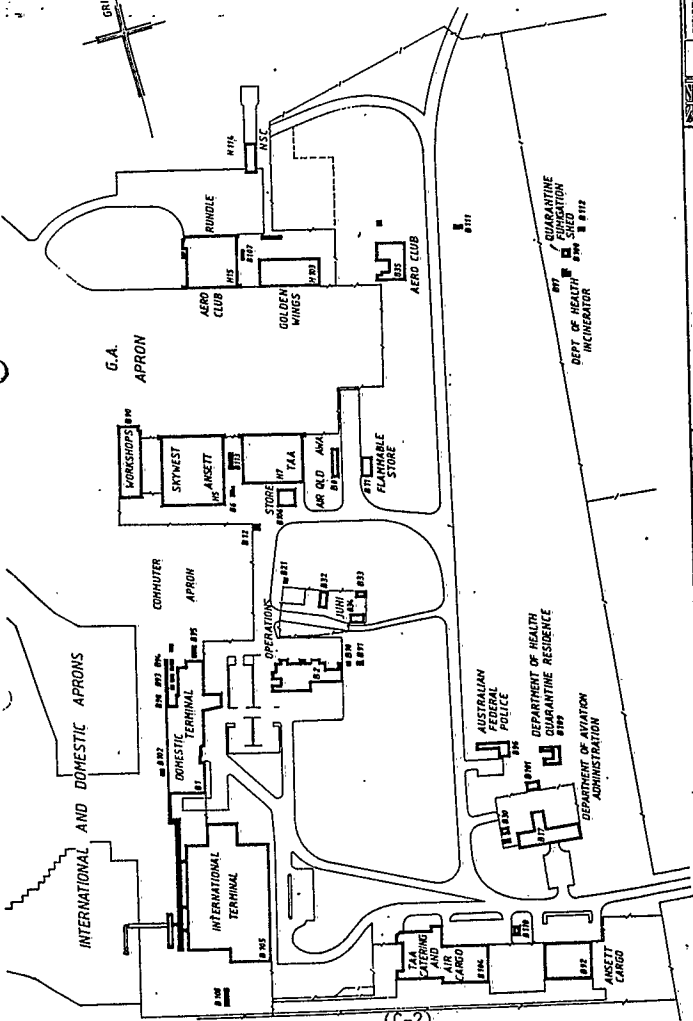
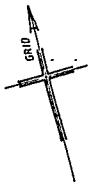
PLANS



Locality Plan

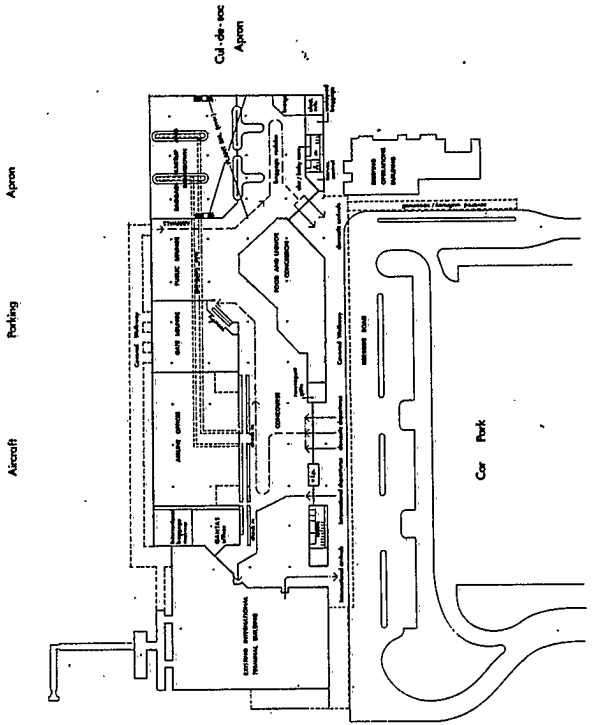


(C-1)



(C-2)

		DEPARTMENT OF Aviation	
BS 12388		SHEET _____	
SCALE 1: 2000		DATE _____	
TOWNSVILLE BUILDING AREA			
464	R.P.H.	6 304	3
463	AM	2 3084	2
315	AM	P.J.S.	200583
ORDER	DIAGN	CMSD	AMENDMENTS
			STAND APPD DATE M.
			GENERAL UPDATE
			ADDITION OF HANGAR 114



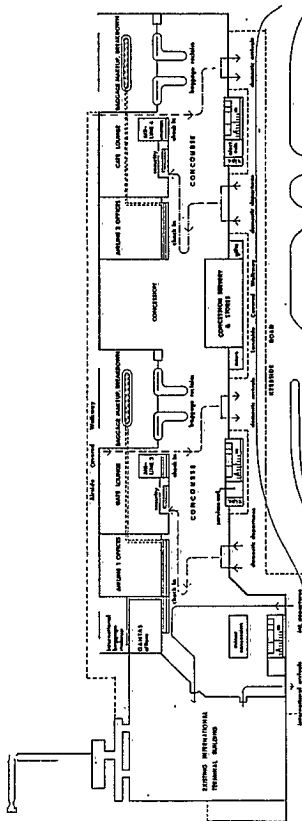
Terminal Building

**Floor Plan
Option 2**



Department of Housing and Construction

Aircraft Parking Apron



Terminal Building Floor Plan Option 3

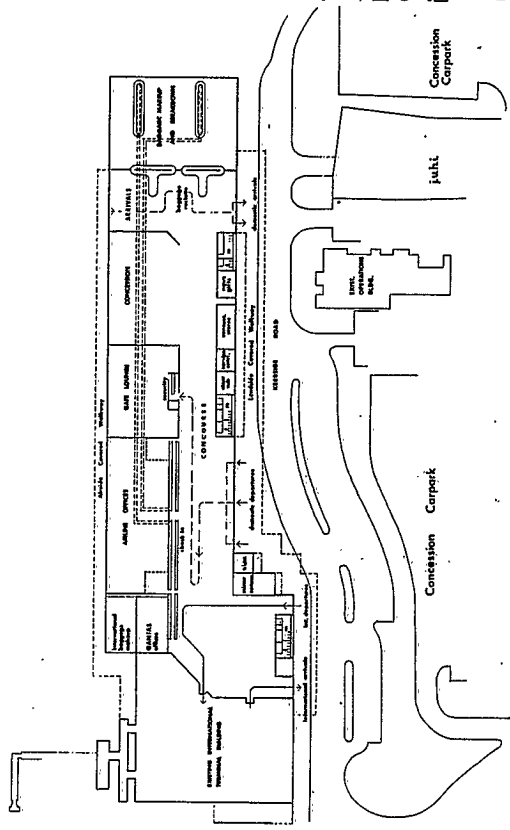


Concession
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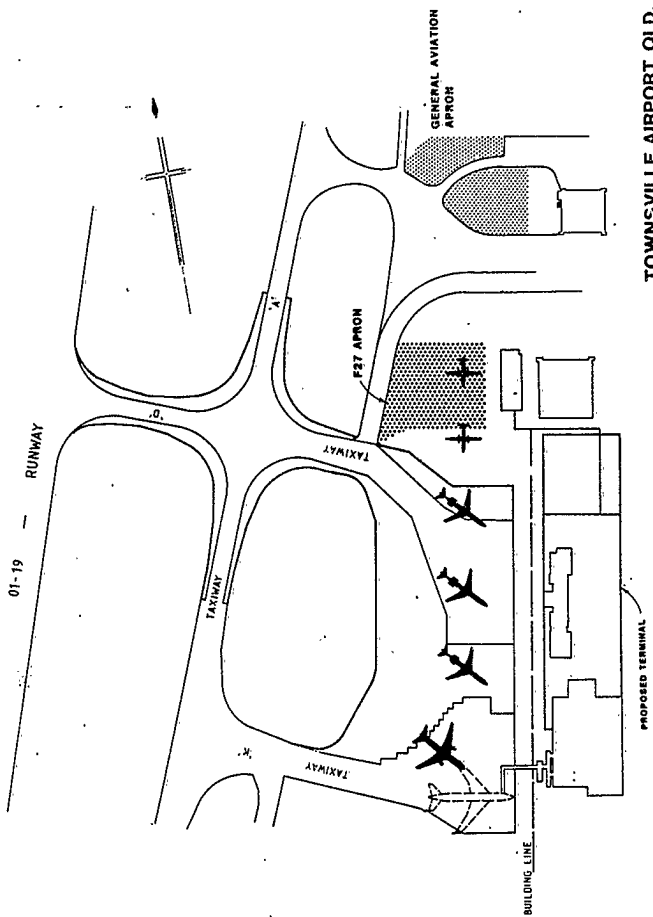
Aircraft Parking Apron



Terminal Building Floor Plan Option 4



Prepared by: [illegible] and [illegible]



TOWNSVILLE AIRPORT OLD.
 PROPOSED AIRCRAFT APRONS
 Options 3 and 4.

