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THE PARLIAMENT OF THE COMMONWEALTH OF AUSTRALIA

PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS

REPORT

relating to the proposed provision of

BUILDINGSAND SERVICES TO TERMINAL COMPLEX, CONTROL AND EQUIPMENT BUILDING, D.C.A. MAINTENANCE AREA, FIRE STATION, ETC.

at

MELBOURNE (TULLAMARINE) AIRPORT

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PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS

PROVISION OF BUILDINGS AND SERVICES TO TERMINAL COMPLEX, CONTROL AND EQUIPMENT BUILDING, D.C.A. MAINTENANCE AREA, FIRE STATION, ETC. AT MELBOURNE (TULLAMARINE) AIRPORT.

REPORT

By resolution on 18th May, 1965 the House of Representatives referred to the Parliamentary Standing Committee on Public Works for investigation and separate report on each work, the following proposed works at Melbourne (Tullamarine) Airport:-

(a) provision of additional aprons, vehicular pavements, electricity, sewerage, water supply, roads and instrument landing system;

(b) provision of buildings and services to the terminal complex, control and equipment building, Department of Civil Aviation maintenance area, fire station, etc.

The Committee have the honour to report as follows on the second of these references.

DEVELOPMENT OF AIRPORT AT TULLAMARINE

1. In a report tabled in the House of Representatives in August, 1963 the Public Works Committee recommended the proposed construction of airfield pavements at Tullamarine. That report dealt with the unsuitability of Essendon airport for further development as the principal airport for Melbourne, the choice of Tullamarine as the site for the new airport and the design and construction of the two primary runways and taxiways as the first stage of development.

2. The Committee's report on the first of the present references was presented on 25th August, 1965. It related to:-

(a) aprons and taxiways not included in the 1963 reference;

(b) instrument landing systems for the two runways;

(c) the link road between the D.C.A. maintenance and the airline maintenance areas, the perimeter road and the

access road between Sharps Road south of the airport and the terminal area through the airline maintenance area, and perimeter fencing;

(d) the main electricity supply to the terminal area and reticulation through that area, supply to the oil companies' area and Department of Civil Aviation facilities and flood lighting and supply to the aprons;

(e) reticulation of water supply in the airport area from the elevated storage;

(f) the sewerage system for the airport as an extension of the Melbourne and Metropolitan Board of Works service.

3. The proposals submitted were recommended by the Committee and on 2nd September, 1965 the House of Representatives carried a motion that it is expedient for the work to be carried out.

4. There are two planning aspects of the previous reference which relate to work in the current reference. The Committee's recommendations in respect of these were -

"1. The Committee are agreed that the proposed layout of the terminal, airline maintenance, Department of Civil Aviation and oil companies' areas is satisfactory and believe that the space provided is adequate for present and future needs.

2. The Committee endorses the proposed layout of the aprons, taxiways and vehicular pavements and recommends the construction of additional aprons and pavements included in this reference."

5. We also recommended that steps be taken to hasten the completion of the terminal and other functional buildings and facilities.

6. The work in the present reference includes the construction of the domestic and international passenger terminals and loading concourses, a services building, the control tower, fire station and other buildings to be used by the Department of Civil Aviation, access roads to and from the Tullamarine Freeway, internal roads adjacent to the terminals, and car parking areas.

THE COMMITTEE'S INVESTIGATIONS

7. We received submissions and drawings of the present proposals from the Departments of Works and Civil Aviation and studied the model of the terminal building. We inspected the work currently being undertaken on the runway and taxiway pavements and the sites of the various works in this reference. Evidence was taken in Melbourne from representatives of the Departments of Works and Civil Aviation, airline operators and other interested organisations.

SUBMISSION OF REFERENCES TO THE COMMITTEE

8. Six proposed works were referred to the Committee on 18th May, 1965 for investigation and report - two at Melbourne (Tullamarine) Airport, and four at Sydney (Kingsford-Smith) Airport. At a total value of about £25 million, these works are probably the most important and costly group ever referred to the Public Works Committee or to be constructed for the Department of Civil Aviation in the one period. The terminal building at Tullamarine Airport was described by a Department of Works representative as "... the largest and most important terminal to be constructed in Australia and ... one of the largest single building projects to be undertaken by my Department".

9. The Committee's basic function is to investigate and report on proposed works valued over £250,000 in order that Parliament can determine whether it is expedient for the works to be carried out. Submissions to the Committee, therefore, usually take place after basic planning decisions have been made and when the project is reaching the preliminary design stage.

10. There were clear signs in several of the projects in the present group, including the present reference, that some fundamental planning decisions had not been taken, basic discussions with State authorities had not been completed, or not enough of the preliminary design had been finished to inform the Committee in the detail we are entitled to receive.

11. The Committee appreciate that in the case of the present airports works, there has been a limited time available for detailed planning between the Government's decision to proceed and the target date for commencement. We consider that if more time had been permitted in the investigation and planning period, a better understanding of the works in the departments concerned would have resulted and we could have been more informative in our reports to Parliament.

12. Because of the character of the projects before the Committee and the amount of public money involved, we are of the opinion that this is a major deficiency. While noting assurances from departmental representatives that acceptable results will be obtained, we feel bound to place on record our concern at these omissions.

LAYOUT OF TULLAMARINE

13. The Site The site on which the airport is being developed covers 5,300 acres and is in an area between the Maribyrnong River and Moonee Ponds Creek, 12 miles north-west of Melbourne. It is on a gently sloping plateau varying between 300 and 500 feet above sea level.

14. As a result of the airport development, Lancefield Road which formerly ran through the eastern part of the site has been diverted. The Commonwealth contributed towards the cost of the diversion on the basis of the provision of a pavement equivalent to that which existed when the airport work was started.

15. The Runways The aircraft pavements now under construction comprise a main runway 8,500 ft. long orientated roughly north and south. The second pavement running east and west will be 7,500 ft. in length. Both can be extended.

16. Airport Buildings The terminal complex of buildings and the airline maintenance areas at Tullamarine are to be located south-east of the primary runway system and west of the Lancefield Road diversion (now known as the Tullamarine Freeway). Vehicular access to the airport will be from the freeway or from Sharps Road in the south in the case of the airline maintenance area.

17. The site of the terminal complex was chosen with the aim of serving the primary runway system to the best advantage. The apron area adjacent to the terminal has been planned for at least 76 aircraft positions. An area of about 200 acres behind the building line can accommodate cargo and freight handling facilities, ancillary buildings for airline operators, hotel or motel accommodation as well as the roads and car parks required for the terminal and associated activities.

18. South of the terminal and connected to it by taxiway 7,000 ft. long, a large area has been set aside for aircraft maintenance bases for airline operators. It is expected that the two domestic operators will each have an ultimate space requirement for aircraft maintenance purposes of 100 acres. About 50 acres will be made available to each in the first instance and the remaining area will be held on short term agricultural lease for allocation when required. The area also includes about 55 acres for the maintenance bases of international and other operators who might require these facilities at Tullamarine.

19. The area at the airport to be used by the Department of Civil Aviation is located on the western boundary adjacent to McNabbs Road. It will contain the control tower, the operations centre and the workshops and stores associated with the maintenance of the airport and its facilities.

20. East of the terminal buildings, an area of 12 acres is set aside for the oil companies for bulk storage purposes.

AIRCRAFT APRONS

21. During consideration of the reference relating to the additional aprons, vehicular pavements, engineering services and roads for Tullamarine, the Committee investigated the design and layout of the aircraft aprons and the method of handling aircraft on them. These are critical factors in the design of the terminal buildings and loading concourses.

22. At Tullamarine it is proposed to erect passenger loading concourses which extend across the apron from the terminal and which

have holding rooms at about the same level as the cabin of the aircraft. Aircraft approach the terminal under their own power and bring the nose to about 25 ft. from the loading concourse and the front door to about six feet from the side of the holding room. When the aircraft stops a covered walkway is extended to the front door from the concourse so that passengers can walk directly into the holding room before passing through the concourse to the terminal. The reverse takes place for departing passengers. Passengers are thus protected from the weather at all times.

23. When an aircraft is ready to depart, a tug pushes it clear of the building to a point from which it can move away under its own power.

24. The layout of the terminal area at Tullamarine is designed to ultimately provide 16 positions for international aircraft and 30 positions for each of the two domestic operators and other users, a total of 76 positions. Some additional positions can be provided if required. Initially, however, only 32 positions are expected to be needed, eight for international flights, ten each for the two domestic operators and four standby positions. The under-cover loading arrangement will be provided at the outset for four international aircraft and at two positions at each domestic section of the terminal. This is so because some of the aircraft at present in service are not suited to unloading by covered walkway and also because the operators, for the time being, wish to preserve the possibility of moving some aircraft from the terminal completely under their own power in the departure phase. The covered loading system can be installed at all positions in the future when required.

25. Each of the domestic airline operators suggested that the provision of only 10 aircraft parking positions for each operator would barely meet requirements when the terminals first come into use. Having regard to the relative ease with which additional apron space can be provided and noting that the 10 positions proposed can all

accommodate aircraft of the size of the Boeing 727, we concluded that an increase in the proposed provision of aircraft parking positions for domestic operators is not warranted at this stage.

THE TERMINAL BUILDING AND LOADING CONCOURSES

26. The terminal building will be a reinforced concrete framed building with the central or international section measuring 320 ft. by 260 ft. connected on either side to the domestic blocks each 200 ft. by 160 ft. The building will be of three storeys containing about 488,000 sq. ft. of enclosed space and 45,000 sq. ft. of open observation deck. Each section of the terminal will be joined by a passageway over the service road to their respective loading concourses.

27. Ground Floor The ground floor of the international section will accommodate facilities and the Commonwealth departments associated with the clearance of arriving passengers and an Arrivals Hall where passengers can meet their friends. The domestic airlines will have offices here to handle passengers trans-shipping from international flights. The remaining areas in the section will be mainly for baggage sorting, concessionaires' stores and mail handling.

28. On the ground floor of the domestic sections will be baggage sorting accommodation and facilities including a reclaiming area, arrivals halls and docks for airline buses. Accommodation will also be provided for cabin catering and servicing units of the airline operators.

29. Mezzanine Floor The mezzanine floor of the domestic sections will provide a farewelling and greeting area for passengers and friends.

30. First Floor This floor will accommodate passenger lounges in all sections, airline counters, outwards clearance facilities in the international section, business concessions and observation decks.

31. Second Floor The second floor will provide space for a dining room, cocktail lounge, reception rooms, airport administration, pilot briefing, airlines offices, aircraft crew rooms and plant rooms.

32. Loading Concourses The international loading concourse is an enclosed structure of two floors raised above the apron on columns so that the lower floor is 10 ft. above the apron. The concourse is basically two passageways, one each at first and second floor levels with holding rooms at the first floor level adjacent to the aircraft parking positions. The first floor will be supervised by the Departments of Health, Immigration and Customs. The area above the holding rooms on the second floor will be used by departing passengers as an assembly and farewelling area. The area beneath the holding rooms will be partly occupied by mechanical plant rooms and by the airline companies' apron and aircraft servicing units. The areas beneath the passageways of the concourse will be trafficable by baggage trains, aircraft tugs and other apron vehicles.

33. The domestic loading concourses are also enclosed structures but of one storey only because there is no requirement to separate arriving and departing domestic passengers and the public who may be in the domestic sections of the terminals. As with the international loading concourse, the domestic concourses will be raised above the apron to about the same level as the cabin of the aircraft and will have assembly rooms adjacent to each aircraft parking position. The concourses will function as passageways between the domestic arrivals and departureslobby and aircraft parking positions. Airline operators will check the tickets of passengers before allowing them to enter the assembly rooms. The areas below the assembly rooms will be used for the installation of plant and by airline operators for aircraft servicing activities.

34. Expansion The terminal building and loading concourses are designed so that they can be extended to meet the needs of increasing traffic without interfering with the use of existing facilities.

35. Capacity of International Terminal Facilities The design of the international section of the terminal is based on the need

for space generated by passengers and others associated with 12 large international aircraft on the apron at one time, the average time of occupation of an apron position being assumed as one hour. With a traffic peak of this order it has been estimated that the Departure Lounge and associated areas will need space for 3,000 to 4,000 passengers, friends and onlookers at one time and that the Arrivals Hall will need capacity for 1,500 per hour.

36. Additional capacity is required in the Departure Lounge because departing passengers generally arrive at the airport with their friends some time before the aircraft leaves. They may be in the terminal for a considerable time, much of which will be spent in the Departure Lounge. Arriving passengers on the other hand only spend a short time in the Arrivals Hall. They meet their friends there, after being cleared through inwards passenger formalities and usually leave shortly afterwards. Transitting passengers would use the Departure Lounge and not the Arrivals Hall while they are in the terminal.

37. Onlookers and the public generally are expected to use the first floor of the terminal and the Departure Lounge rather than the ground floor and the Arrivals Hall. Departure areas will be adjacent to the observation decks overlooking the aprons.

38. The Departure Lounge is to be 320 ft. by 134 ft. wide with concourses 28 ft. wide on each side leading to the domestic lounges. Although some of this area is to be used by airline counters, clearance channels and concessions, there will be ample space for 700 people seated and 1000 standing. There will also be space for about 1200 others in the farewelling areas on the loading concourse. The cocktail lounge, reception rooms and restaurants on the second floor will accommodate another 1200. There is thus under cover space for over 4000 people, apart from the observation decks which can hold another 2400.

39. The Arrivals Hall, measuring 320 ft. x 44 ft. is expected to meet the needs of arriving passengers and welcoming friends, at the rate of 1500 per hour.

40. Capacity of Domestic Terminal Facilities The design of the domestic terminal facilities has the same basis as that for the international section of the building. In this case allowance has been made for the passengers and others associated with 28 domestic aircraft on the apron simultaneously, the average standing time being assumed as 45 minutes. The domestic lounges are each designed to handle 1500 passengers, friends and onlookers at the one time and each arrivals and departures lobby 2000 to 2500 per hour. Each arrivals hall is designed to handle 2000 persons per hour. The total capacity of the domestic terminal facilities is thus about 12,000 persons per hour.

41. Each domestic lounge is to be 200 ft. by 100 ft. wide with a concourse 28 ft. wide on one side leading to the international Departure Lounge. Some of this area is to be occupied by airline counters and concessions, but there is ample space for 500 persons seated and 700 standing. Another 300 persons can be accommodated in the adjacent quick service restaurants and bars.

42. The domestic arrivals and departures lobbies at mezzanine floor level are each to be 120 ft. long by 60 ft. with annexes of 25 ft. by 20 ft. on either side. Arriving passengers will meet their friends in this area and then proceed to the ground floor to reclaim baggage. Departing passengers and their friends proceeding to the passenger assembly areas on the loading concourse will also pass through the lobby.

43. Each of the domestic arrivals halls will be 120 ft. long by 50 ft. with annexes of 60 ft. by 20 ft. and 50 ft. by 40 ft. Arriving passengers will pass through this area on their way out of the terminal.

FLOW OF PASSENGER TRAFFIC

44. Arriving International Passengers An international aircraft arriving at the terminal will stop with its front door opposite and at about the same level as the aerobridge connected to the loading concourse. When the bridge is extended to the aircraft, passengers will disembark through it, entering a holding room designed for 150 passengers. Adjacent to each holding room will be health clearance facilities and passengers not already cleared medically in Australia or New Zealand, will pass the checking point. Passengers cleared before reaching Melbourne will pass directly through the concourse to the terminal.

45. After health clearance, passengers will proceed to the terminal, descending by a ramp to the arrivals floor at ground level where they will pass firstly through the barrier of immigration clearance channels. Eighteen channels will be provided, three or four being manned for each arriving aircraft.

46. After immigration clearance, transit passengers will proceed through a transit area and by escalator to the Departure Lounge on the first floor. Other passengers will then submit customs declarations on their baggage. Eighteen declaration channels are to be provided. Passengers will then claim their baggage from the nearby revolving baggage platform or carrousel. Whilst passengers are disembarking and passing through health and immigration clearances, baggage will have been unloaded from the aircraft and fed on to a conveyor belt originating in the inwards baggage area at ground level for delivery to the carrousels.

47. From the carrousels passengers will take their baggage to baggage inspection counters. Provision will be made for 24 baggage inspection channels, five or six channels being used for each arriving aircraft. Each channel will comprise a 24 ft. bench with a conveyor belt running the full length of the top. Each bench will be long enough to handle three passengers simultaneously - one opening

baggage, one being inspected and the other closing baggage after inspection. Inspecting officers would activate the conveyor belt to bring each passenger's baggage in front of him for inspection.

48. Passengers terminating in Melbourne would carry their baggage a short distance after clearance, to the Arrivals Hall on their way out of the building. Migrants travelling under assisted passage would be taken, after baggage inspection, to a reception area provided for the Department of Immigration. After baggage inspection, passengers trans-shipping would reconsign their baggage at the appropriate nearby airline counter.

49. The channels for passport inspection and customs declaration and facilities for claiming and inspecting baggage, have been designed to allow passengers to proceed in a direct line through the Customs Hall from the loading concourse to the Arrivals Hall.

50. The Arrivals Hall will be accessible from ground level through automatic doors. The Departure Lounge will be accessible from the Arrivals Hall by lift, escalator or stairway.

51. Offices for hire car, taxi, valet parking and car rental services will be provided in the Arrivals Hall. Space will also be provided for a news stand, a hotel booking bureau, banks and tourist services. Domestic and international airline companies will have traffic offices in the Arrivals Hall for onwards bookings and information purposes.

52. Departing International Passengers Passengers arriving at the terminal for embarkation on an overseas flight would come in one of three ways, viz:-

(a) passengers originating in Melbourne would arrive at the terminal either by elevated roadway in front of the Departure Lounge, or through the car park at ground level. In the latter case they would cross the access road at ground level, ascending to the Departure Lounge by escalator, lift or stairway.

(b) passengers arriving at the terminal by domestic aircraft would claim their baggage in the appropriate domestic arrivals hall at ground floor level. The domestic airlines companies concerned would then assist passengers to transfer baggage to the international Departure Lounge.

(c) passengers in transit between international flights would disembark from the first aircraft with other arriving passengers. After clearance through health and immigration formalities, they would by-pass customs inspection and proceed to the transit area and thence by escalator to the Departure Lounge.

53. Originating passengers, and those trans-shipping from a domestic service will check tickets and consign their baggage at the airline counters in the Departure Lounge. Baggage will be sent by conveyor to the baggage sorting area. Passengers will then proceed to the outwards customs and immigration area for clearance. They will then be free to rejoin their friends and either proceed to the farewell areas in the concourse, or wait in the Departure Lounge until their aircraft is ready. Concessions such as the duty free shop, paper and book kiosk, confectionery, chemist, gift and specialty shops and hairdressers will be in this lounge area. The traffic flow will not be interrupted by the concessions but the most frequently patronised concessions will be closest to the route to the loading areas.

54. When the aircraft is ready for loading, passengers will move through the farewelling areas in the loading concourse to the holding room on the floor below by stairway.

55. Arriving Domestic Passengers A domestic aircraft arriving at the loading concourse will either stop in a nose-in position with the front door of the aircraft opposite an aerobridge connected to a passenger assembly room, or in a position adjacent to the passenger

assembly room ready to unload in the conventional way. Passengers will either disembark from the front door of the aircraft through the aerobridge and the assembly room or walk down the steps at the aircraft, across the apron and by stairway to the assembly room. They will then proceed along the concourse to the terminal.

56. Terminating passengers will pass through the arrivals and departures lobby and then descend by escalator, lift or stairway to the domestic arrivals hall, claim their baggage and prepare to leave the terminal.

57. Passengers trans-shipping to an international flight will also claim their baggage in the arrivals hall and then proceed to the international Departure Lounge to check tickets and reconsign baggage.

58. Passengers in transit on domestic routes will ascend from the arrivals and departures lobby by escalator, lift or stairway to the domestic lounge to await the departure of their aircraft.

59. The arrivals hall will be located adjacent to the access roadway at ground level. In the arrivals hall there will be escalators, lifts and stairways to the arrivals and departures lobby at mezzanine floor level and to the lounge at first floor level.

60. Bureaus for the various ground transportation services, newspaper and confectionery kiosks and a hotel booking office will be located in the domestic arrivals halls.

61. Departing Domestic Passengers Passengers arriving at the terminal for embarkation on a domestic aircraft will arrive in one of three ways, viz :-

(a) passengers originating in Melbourne would arrive at the terminal either via the elevated roadway in front of the appropriate domestic lounge or through the car park at ground level. In the latter case they would cross the access road and ascend to the lounge by escalator, lift or stairway.

(b) those arriving at the airport by international flight for trans-shipping to domestic aircraft would disembark with other passengers. After clearance through health, immigration and customs formalities, they would reconsign their baggage at the office of the appropriate domestic operator located in the international Arrivals Hall. From there they would proceed through the international Departure Lounge at first floor level to the lounge of the internal airline.

(c) passengers in transit from other domestic airports would arrive at the domestic loading concourse and proceed to the domestic lounge at first floor level.

62. All departing passengers would check their tickets and consign their baggage at the airline counters in the lounge on the first floor. They would then be free to proceed to the assembly rooms in the loading concourse or wait in the lounge until their aircraft is ready for departure. From the airline counters, baggage would be sent by conveyor to the sorting area on the ground floor.

63. A newspaper and book kiosk, confectionery, gift, toy and specialty shops, quick service restaurant, club bars and milk bars will be located close to the domestic passenger lounges.

64. When aircraft are ready for departure, passengers will move through the appropriate assembly area and board their aircraft either through an aerobridge or by descending the stairway to apron level and boarding by the aircraft's steps.

65. Facilities for the Physically Handicapped The terminal building is designed so that people in wheel chairs and elderly and physically handicapped people will be able to move to and about the building with freedom. Movement between floors by lift will be possible and changes in floor level will be by easily graded ramps. Ramps will be provided at appropriate points to allow people in wheel chairs to have easy access from the car park to the terminal.

Appropriate toilet facilities will be provided at all floor levels for physically handicapped people.

66. A lift in the international loading concourse will permit passengers not able to use stairs from the farewelling areas to the holding rooms to descend by lift to the latter level and then proceed to the holding room and the aircraft. A lift will also be provided in each of the domestic loading concourses so that passengers boarding the aircraft by normal methods and who are not able to use the stairs from the assembly rooms to the apron, will be able to descend by lift.

67. Mothers Rooms and Ladies Rest Rooms Rooms will be provided adjacent to the international Arrivals Hall and the various lounges at first floor level for use by mothers with children and by ladies who wish to rest.

ACCOMMODATION FOR TERMINAL USERS

68. Commonwealth Department of Health The Department of Health will have facilities for quarantine clearance of passengers at each unloading point in the international concourse. They will comprise a counter for the doctor and his assistant to examine the health documents of passengers, an isolation room and a doctor's room for the examination and vaccination of passengers. Facilities for the disinfection of quarantinable clothing and goods will be adjacent to the baggage inspection counters.

69. Department of Immigration Passport examination desks will be located at ground floor level in the international section of the terminal. These desks will form a barrier between the loading concourse and the Customs Hall for arriving passengers. Offices and interrogation rooms will be provided adjacent to the passport examination channels.

70. An assembly room of 2,200 sq. ft. will be provided for the reception of assisted migrants. It will hold an aircraft load of migrants and their baggage and will be readily accessible from the Customs Hall.

71. Facilities will be provided in the Departure Lounge for the immigration clearance of departing international passengers.

72. Department of Customs and Excise The Customs Hall on the ground floor of the international section will be an area of 27,000 sq. ft. providing, in addition to the passport inspection channels, a barrier of 18 customs declaration channels, four automatically revolving baggage carrousels and 24 baggage inspection channels. Each carrousel will be large enough to hold the baggage from one large international aircraft.

73. Interrogation and search rooms will be provided to assist the Department in its preventive activities. In addition to two positions for duty collection, storage for detained goods, office space and space for dealing with public enquiries will be provided. A room will also be made available at ground floor level for the examination, when necessary, of baggage of outwards bound passengers and aircraft crew. Amenities, including locker and change rooms, lunch room and female rest rooms, will be provided for the staff of the Departments of Immigration, and Customs and Excise.

74. Accommodation for outwards customs clearance will be combined in the international Departure Lounge with that for outwards immigration formalities.

75. The release of goods purchased by departing international passengers at the duty free shop will be under the control of the Department of Customs and Excise. A store for this shop will be located on the first floor of the loading concourse to facilitate delivery of goods to passengers at the point of embarkation on the same floor while being kept entirely under customs control.

76. Postmaster-General's Department This department will establish a depot on the ground floor for the receipt, sorting and despatch of mail. The area will open directly to a loading dock and the service road on the apron side of the building.

77. A telephone exchange for the building will be located on the second floor. Telephone, postal and telegraph facilities will be provided in the public areas.

78. Department of the Interior The Meteorological Bureau will have space on the second floor for pilot briefing, weather forecasting and communications facilities.

79. Department of Civil Aviation Space will be provided on the second floor for briefing pilots prior to departure and for associated radio equipment. The pilot briefing unit will include facilities for international and domestic pilot documentation and accommodation for air traffic control briefing and rescue co-ordination.

80. About 2,000 sq. ft. of office space will be provided on the second floor for airport administration. Accommodation for control staff and workshops and stores for minor repairs and maintenance of the terminal building will be provided on the ground floor.

81. Victorian State Government Departments Space will be provided in the international Arrivals Hall and the international Departure Lounge for the Victorian Government Tourist Bureau. The reception area of the Commonwealth Department of Immigration will also be used by the Victorian Department of Immigration. An area will be provided for police and for the safe custody of escorted persons and the Department of Agriculture will have an area of 240 sq. ft. for fruit quarantine purposes.

82. Airline Companies - International Section

Ground Floor An area of 12,000 sq. ft. for baggage handling will be provided on the apron side of the terminal building. This will be a communal area for use by international airlines. Both domestic airlines will have space in the Arrivals Hall for the convenience of passengers trans-shipping to domestic routes. International operators will be able to establish information centres in the Arrivals Hall.

First Floor Space will be provided in the Departure Lounge for airline companies, for baggage receipt, ticket checking and information purposes. Each unit will be served by a conveyor to the baggage handling area.

Second Floor A space of 12,000 sq. ft. will be available to international operators to establish offices and reception rooms.

Loading Concourse At apron level space will be available beneath holding rooms for airline companies to establish aircraft servicing units, stores and staff rooms.

83. Airline Companies - Domestic Sections

Ground Floor Each domestic section of the terminal will have an area of 3,600 sq. ft. adjoining the apron for baggage handling and 4,000 sq. ft. for baggage reclamation. The operators will provide conveyors, carrousels and other baggage handling equipment at their own expense. There will also be space in each domestic terminal for aircraft cabin catering and servicing and covered accommodation for the loading of airline buses.

First Floor Lounges will be provided at this level and in each section space will be available for baggage receipt, ticket checking, offices and reception rooms.

Second Floor Space will be available for each domestic airline in which to establish offices.

Loading Concourses At apron level, space will be available under each assembly room in which the operators can accommodate aircraft servicing units, stores and staff rooms. At assembly room level space will be provided for domestic operators to provide facilities for ticket checking and the receipt of the baggage of late passengers.

84. Accommodation for Press Representatives Provision will be made to accommodate press, television and radio representatives. Rooms adjacent to the international Arrivals Hall have been planned for this purpose including space fitted out for interviews and storage of equipment.

85. Business Concessions Space will be made available in the international Arrivals Hall for a newspaper kiosk, banks, tourist agencies, ground transportation services and a hotel booking bureau. Each domestic arrivals hall will have space for ground transportation services, a newspaper kiosk, a hotel booking bureau and baggage lockers. An area is also being reserved on the ground floor for a medical centre or a professional suite. Stores for concessionaires located on the first and second floors will be provided near the loading docks on the apron side of the building.

86. On the first floor of the international section, space will be available for a duty free shop, a newspaper and book kiosk, confectionery shop and gift shop. Each domestic lounge will have space for newspaper and book kiosks, confectionery shops and gift shops. It is proposed to provide space for the establishment of a quick service restaurant, a club bar and a milk bar in the concourses connecting the international and domestic terminals at first floor level. In the same area will be accommodation for chemist, tourist and sports goods, photographic supplies, toy, jewellery, millinery and furriers shops as well as a ladies boutique and hairdressers. On the loading concourse a store is to be provided for the duty free shop.

87. Concessions on the second floor will include a high class dining room to seat 500 people and a cocktail lounge for 450. Four reception rooms capable of holding a total of 250 persons are to be provided between the dining room and the cocktail lounge.

88. All concessions, except the island concessions in the lounges on the first floor, will be provided in an unfinished condition.

Concessionaires will be required to finish the floors, walls and ceilings according to their own needs and at their own expense. They are also to provide their own ventilating systems, lighting and any special equipment which will be connected to the services provided. We were assured that although the concessionaires will be required to finish their own areas, control will be exercised over designs to ensure that they are integrated with the designs of other concessions and the building as a whole.

THE TERMINAL BUILDING PROPOSALS

89. General The Committee recommended in the report on the previous reference relating to this airport that urgent steps be taken to hasten the completion of the terminal and the other functional buildings and facilities. We again emphasize the need for the commencement of operations at Tullamarine in order that Melbourne may again enjoy international airline services and so that relief will be gained from the other operational disadvantages of Essendon Airport.

90. We believe that the proposals in this reference will satisfy the requirements of the Commonwealth and State Departments, airline operators and other organisations who are required to operate in the terminal and the adjoining area and will provide comfortable standards of accommodation for the travelling public.

91. Adequate provision has been made so that the facilities can be extended without undue interruption to the existing services when the growth of passenger traffic makes this necessary. Subject to the qualifications which follow, the Committee therefore recommend the construction of the works in this reference.

92. Design Although the Department of Works spent some nine months before the reference of the work to the Committee on the development of solutions to the design problems associated with the planning of the terminal building, final briefing was received only

a short time before the Committee's investigation took place. The proposals presented to the Committee were thus only in a formative stage of design. We were told, however, that although a stage in design had not been reached when a work is customarily referred to the Committee, sufficient work had been done for an assurance to be given that the final result will be a complex of buildings with the qualities befitting Melbourne's major airport.

93. Materials and Finishes Due to the short time available, the schedule of finishes and materials submitted to the Committee had not been completed. However, those materials nominated were indicative of a good, but not extravagant, quality of finish. Their most notable characteristics were of durability and ease of maintenance and are of a standard comparable with those used in recent times in the Perth and Essendon terminals.

94. Externally, extensive use will be made of selected face bricks in the walls between columns as well as pre-cast concrete panels with polished exposed aggregate surfaces. Glass will be used liberally in the main facades and framed in anodised aluminium.

95. Wall finishes internally will vary with the use of the particular area, from hard plaster to face bricks, tiles or terrazzo in toilet areas and vinyl finishes. The main ceiling finishes proposed are hard plaster, fibrous plaster and acoustic timber.

96. There will be considerable variety in flooring material, special attention being paid to the function of the area. Vinyl tiles will be used extensively in public areas while terrazzo will be used in toilets and in stair treads. Areas such as the plant rooms, concessions and those to be finished by airline operators, will be finished in granolithic. Observation decks will be covered in pre-cast concrete slabs.

97. Roofs will generally be covered in ribbed steel carried on steel purlins and main trusses. The roof will be insulated.

98. The loading concourse will be steel framed with concrete floors and ribbed steel roof decking. Cladding will be vinyl coated steel sheeting. At ground level face brickwork will enclose plant rooms and airlines accommodation.

99. Engineering Services

Structural Having regard to economy, speed of erection, the size of the project and the uniformity of layout, it has been decided, for the terminal building, to use pre-stressed, pre-cast concrete building frames and floors. Long span, wide flange floor members spanning 50 ft. will be used. They will be supported on main beams or edge beams spanning either 20 or 40 ft.

Air ducts and other engineering services and suspended ceilings will be supported from floors. Generally floors will be designed to carry a live load of 100 lbs. per sq. ft. Columns will be in one length with projecting haunches for beam support. The roof will be carried on steel roof trusses supported by the columns. The building is to be supported on spread footings founded on decomposed basalt and stiff basaltic clay.

The suspended floors of the passenger concourses will be constructed with steel beams and reinforced concrete floor slabs. Supporting columns will be exposed mild steel and roofs will be framed with steel open web joists supporting steel purlins.

The elevated roadway will run one way at first floor level past all sections of the terminal, access and egress being obtained by ramps at either end. The elevated section of the road will be 32 ft. wide between kerbs to provide two lanes of traffic and a parking lane. There will be an 8 ft. footway at this level adjacent to the building. On the ramps the roadway will be 24 ft. between kerbs and the footway 4 ft. wide.

The superstructure will be pre-stressed concrete girders over concrete piers with joints at changes of direction. Spans will generally be 80 and 120 ft. to suitably locate piers in relation to the building grid. The girders will be pre-cast concrete units about 10 ft. long placed end to end and pre-stressed. The outer portions of the road and footway slabs will be concrete cast insitu. The piers will be of reinforced concrete cast insitu founded on decomposed basalt at a depth of about 8 ft. Special attention will be given to the surface treatment of concrete in the elevated roadway structure in order that it will be compatible with the materials to be used in the building.

100. Mechanical Services

Air Treatment Most areas in the terminal and passenger loading concourse will be mechanically ventilated and heated and a number of minor areas will be air conditioned by the Commonwealth. Other areas such as the dining room and bars will be air conditioned by the concessionaires at their own cost. Chilled and hot water will be piped to air conditioning and ventilation plants from the services building. Toilets in public areas and under departmental control will be mechanically ventilated.

Operational units including pilot briefing, meteorological, radio equipment and space for the Departments of Civil Aviation, Customs and Excise, and Immigration, V.I.P., rest, television and interview rooms, will be air conditioned.

The provision of mechanical ventilation and heating to most areas and the air conditioning of only selected functional areas follows, the Committee were told, the practice adopted in recently constructed major terminals overseas in climatic conditions similar to those experienced in Melbourne. Having regard to the relatively short time

the public are in the terminal and the few occasions when conditions of discomfort are likely to be experienced, the proposals seem reasonable. We noted that the capital cost of fully air conditioning the building would exceed the cost of the proposals in this reference by about £670,000 and that additional running costs would be of the order of £18,000 per annum.

Central Plant The services building will house chiller, boiler and emergency generating plant to serve the essential areas of the terminals with chilled and hot water and with electricity in the case of mains supply failure.

Chilled and hot water will be supplied to a series of air handling plants serving public and departmental areas in the terminals. The supply will terminate in suitable positions to enable the use of chilled and hot water by airline companies and concessionaires.

Other Mechanical Equipment Provision is made for baggage conveying equipment in the terminal and for telescopic passenger loading bridges at eight of the loading positions in the concourses.

Domestic hot water will be available at sinks, basins, etc. in public toilets and those under departmental control. In the terminal, supply will come through calorifiers connected to the main hot water lines. In the concourse, electric storage systems are proposed. The airline companies and concessionaires will be able to connect their domestic hot water supply calorifiers to the main hot water lines. Cool drinking water will be provided in public areas.

101. Electricity Supply and Services Electricity supply for the airport will be taken at high voltage from the State Electricity Commission at a bulk metering point on the eastern boundary.

A 22,000 volt feeder will run from this point to a high voltage switchboard in the services building and thence to 15 stepdown sub-stations at various points in the airport.

102. Emergency generating plant to be installed in the services building will be connected to the high voltage switchboard to provide standby power to essential loads in the terminal area. In the event of normal supply failure, non-essential loads will be disconnected.

103. Lighting will generally be fluorescent with incandescent units where required for functional or architectural reasons. General purpose power outlets will be provided for portable equipment and direct wiring will be arranged for fixed equipment. Public address and electrically operated clock systems will be installed.

104. The proposals submitted to the Committee provide for the installation by the Commonwealth of nine lifts and 11 escalators. Space is also to be provided for three goods/passenger lifts to be installed by concessionaires and for the future installation of four passenger lifts and two escalators. The lifts will connect with all floors. The initial installation includes one lift capable of accommodating wheel chairs and stretcher cases in each of the loading concourses, two passenger and two goods/passenger lifts in the international terminal and one stretcher/passenger lift in each of the domestic terminals. Escalators will connect the ground and first floors in the international terminal and the ground, mezzanine and first floors in the international terminal and the ground, mezzanine and first floors in each of the domestic terminals.

105. In the proposals submitted to the Committee, all escalators were to be 48" wide, except one set in the international terminal connecting the ground and first floors. These were to be 32" wide. Having regard to the volume of the expected traffic and as a large proportion of persons using the escalators will be carrying baggage, it is the Committee's view that all escalators should be at least 48" wide.

106. The location of the wheel chair lifts in the loading concourses was considered by the Committee. Rather than install them some distance along the concourse from the terminal, we concluded that it would be more appropriate to locate them near the loading positions closest to the terminals.

107. Hydraulic Services The water supply and sewerage systems were part of the work in the reference relating to "Additional Aprons, Vehicular Pavements, Engineering Services, Roads and Instrument Landing System" on which the Committee reported to Parliament in August, 1965.

108. Fire Protection A system of thermal detectors is to be installed in most parts of the terminal and other buildings in this reference. However, automatic sprinklers will protect some areas, principally catering and concession areas, and smoke detectors will be used where electronic and similar equipment is to be installed. Portable extinguishers will be available at strategic points.

109. The detector and sprinkler systems will be connected to the central fire alarm control panel at the fire station.

110. Landscaping The area adjacent to the terminal buildings and roadways will be planted with lawns, shrubs and trees with garden surround in the vicinity of the building. A garden area is proposed at the entrance to the international terminal at the first floor level.

OTHER BUILDINGS PROPOSED

111. The Services Building This building will be part of the terminal complex and is to be located about 500 ft. south-east of the southern domestic terminal. The equipment in the building will include generators for emergency power and the boilers and chillers for the hot water system and air conditioning for the terminals. A tunnel passing beneath the access road will carry engineering services from the building to the terminal.

112. The services building will be of rigid frame construction supporting steel purlins. Much of the perimeter walls will be glazed so that equipment can be viewed by visitors to the airport. Materials will be in harmony with the terminal building.

113. The Control Tower The control tower will be located west of the runway system near the recently completed operations building which adjoins McNabbs Road. The operations building serves a large area based on Melbourne and its functions cover Melbourne Area Control and Melbourne Approach Control. The Tullamarine airport control functions will be carried out from the control tower.

114. The tower proposed will be built 150 ft. above ground level to enable air traffic controllers to obtain a clear view of the aircraft operating area whilst looking eastwards away from the setting sun and the direction of the prevailing weather. It will be joined to the operations building by passageways at ground and first floor levels. The duties of the air traffic controllers in both buildings are essentially the same and by co-siting the buildings the staff can work closely together sharing the same working conditions, amenities and training facilities.

115. The control cabin will be an eight-sided glass structure. The two floors beneath will accommodate mechanical, electrical and radio equipment, an office for meteorological staff and amenities. Access from ground level to the cabin will be by stairway and a six passenger lift capable of transporting equipment.

116. The shaft of the tower will be of reinforced concrete left with a natural concrete finish. The control cabin will be framed in structural steel to minimise obstruction of the view. The roof will be constructed of concrete for acoustic reasons. Internal finishes will include laminated plaster boards on the walls, ceilings finished in hard plaster, and floors in granolithic or vinyl tiles according to use. Special precautions to reduce noise will be taken in the control cabin where windows will be double glazed and sound absorbing ceiling materials used. The cabin will be air conditioned.

117. The Fire Station The visual requirements in the selection of the site for the control tower apply in some degree to the fire station and in the case of Tullamarine they are also met by building the fire station west of the runway system. The building is to be located 900 ft. west of the north/south runway and 580 ft. south of the east/west runway. It will thus be clear of the runways but well placed for quick vehicular access to them and for good all-round vision.

118. The station will be manned continuously by permanent staff supported by auxilliary firemen from departmental and airline company staffs. Auxilliary firemen receive regular training and the station, as well as providing for the working requirements and amenities of the permanent staff, will also provide accommodation and facilities for the auxilliary firemen and for the training of recruits.

119. The fire station consists basically of a fire apparatus room for six fire fighting vehicles, maintenance workshop facilities, an equipment room, an elevated watch room, facilities for hose washing and drying and storage areas. It will be of rigid frame construction, with concrete block infill walls, aluminium windows and coloured asbestos spandrel panels. The roof will be insulated low pitch metal trough cladding. Floors will be reinforced concrete slabs finished in granolithic or vinyl tiles according to use. Heating will be installed in the areas occupied by staff and the watch room will be air conditioned.

120. Department of Civil Aviation Maintenance Area The Department of Civil Aviation has a requirement for permanent accommodation for the activities associated with the operation and maintenance of the airport. This includes accommodation for airport ground and building maintenance staff, for technicians maintaining mechanical, electrical, radio communications, and navigational aid equipment and for the storage of spare parts, materials and equipment.

121. The maintenance area is to be located on the western side of the airport close to McNabbs Road and the operations building and control tower. In this position it will be conveniently located in relation to the runway pavements and to the various technical installations.

122. The proposed buildings are -

	Floor Area
Radio and electrical maintenance	4,800 sq.ft.
Mechanical maintenance	3,200 "
Lines and installation	2,000 "
Airport and building maintenance	7,300 "
Materials stores, spare parts and inflammable liquids	6,800 "
Vehicle and maintenance equipment	20,000 "
Amenities, including lunch rooms, lockers, canteen and toilets	2,700 "
Storage for airport maintenance equipment and materials	3,500 "

123. Site planning provides convenient vehicular access and parking and allows for future expansion of individual units. The smaller buildings will be of load bearing wall construction with supporting steel roofing members. Larger buildings will be of rigid frame construction supporting steel roofing purlins. Walls will generally be concrete blocks, with aluminium windows and coloured asbestos spandrel panels. Roofs will be of low pitch metal trough cladding insulated against heat gain. The inflammable liquids store will be roofed with a reinforced concrete slab.

124. Floors will be reinforced concrete slabs, finished with granolithic paving or vinyl tiles according to use. Staff occupied areas will be heated.

125. The internal roads in the maintenance area will be two lane 24 ft. pavements widened as necessary to provide loading bays

to buildings. Water and power reticulation will be from service mains on which the Committee has already reported. The sewerage system already installed for the operations building will also serve the maintenance area.

126. Aircraft Surveyors Building It is proposed to erect a building of 4,000 sq. ft. in the airlines maintenance area to accommodate departmental aircraft surveyors and engineers. These officers are responsible for liaison with airline companies, supervision of aircraft maintenance and the examination and licensing of airline companies' engineers engaged on maintenance and overhauls. The location of the building will be determined when the airline companies have further developed proposals for their maintenance areas. The building will include offices, a technical library and an examination room.

VEHICULAR ACCESS AND ROAD WORKS

127. Access Between the Tullamarine Freeway and the Terminal Area The diversion of Lancefield Road is being incorporated in the four lane Tullamarine Freeway planned by the Victorian Government to run from Melbourne past the airport. The diversion road is already in use and the State Government is currently building a further 1½ miles of freeway south-east towards Melbourne. This will eventually connect with the future freeway system in the city area.

128. The Commonwealth contributed to the cost of diverting Lancefield Road on the basis of providing a pavement of similar standard to that which existed before the airport development took place. The access roads from the freeway to the terminal area are part of the present reference.

129. The terminal area road complex may be divided into four elements with secondary cross connections one with the other. They are -

(a) a one-way main access road leading from the northbound carriageway of the freeway past the terminal and returning to the southbound carriageway leading towards Melbourne.

(b) a connection with the freeway north of the building area to give access to and from the airport for traffic from points north of the airport and also from land east of the freeway in which the oil companies will have fuel storages.

(c) a service road on the apron side of the terminal building.

(d) a north-south connecting road running through the terminal area.

130. The Main Access Road After leaving the northbound carriageway of the freeway, the access road to the terminal building will divide before reaching it. The left branch of the road will become a ramp and elevated roadway to the first floor of the domestic and international sections of the terminal. The right hand road will continue at ground level providing turn-offs into the car parking area before reaching the ground floor sections of the terminal.

131. After the elevated roadway passes the terminal building it will return by a ramp to ground level to join the southbound carriageway of the freeway passing firstly over the northbound carriageway. The ramps will be 24 ft. wide increasing to 32 ft. over the elevated section to provide a parking lane. Roadside footpaths will be four feet wide on the ramps and eight feet wide along the elevated sections.

132. The road at ground level will join the elevated road at the foot of the down ramp to become part of the main exit road. This road will also be generally 24 ft. wide and 48 ft. wide adjacent to the building.

133. The access road will be constructed to the same standard as the freeway with a 24 ft. wide bitumen surface and 8 ft. shoulders. The egress road will overpass the northern carriageway of the freeway by means of a continuous pre-stressed concrete bridge of three spans. The overpass and about two miles of access road will be designed and constructed by the Victorian Government on behalf of the Commonwealth.

134. Northern Connection to the Freeway The connection to the freeway for traffic travelling to or from the north will be by way of a north/south connecting road. There is to be a merging road on the northbound carriageway of the freeway and a connection from the southbound carriageway by way of an underpass beneath the freeway. The system will also give access to the oil companies' storage areas and the quarry east of the airport.

135. The Service Road The service road will provide access to the terminal building and the apron for traffic other than passengers and sightseers including the delivery of supplies for airline catering services, concessionaires, airlines and oil company vehicles, and for the transfer of baggage and freight between the domestic and international sections of the terminal. The service road will be a 32 ft. concrete pavement for two lanes of traffic and a parking lane.

136. The North/South Connecting Road This will be a multi-purpose two-way road running through the terminal area. It will join the ends of the link road and the airport perimeter road which were dealt with in the previous reference and will complete the service access between all parts of the airport. The traffic on it will be able to by-pass the roads immediately adjacent to the terminal building. Spur roads from the connecting road will service such facilities as the services building and the water supply installation. It will be a 24 ft. concrete pavement.

137. Car Parking Area The car park will be located between the access roads serving the terminal building and the north/south connecting road. It will be bitumen paved, initially providing space for 1,200 cars in addition to taxi ranks and hire and valet car areas. As more car parking is required, the paved area can be extended laterally, the ultimate capacity being in the vicinity of 5,000 cars.

ESTIMATES OF COST

138. The estimated cost of the proposals referred to the Committee is £9,348,262 made up as follows -

	£	£
International Terminal Building:		
Building Work	1,723,382	
Mechanical Services	542,000	
Electrical Services	179,000	2,444,382
International Loading Concourse:		
Building Work	444,850	
Mechanical Services	181,500	
Electrical Services	24,000	650,350
Ansett-A.N.A. Domestic Terminal:		
Building Work	800,750	
Mechanical Services	150,000	
Electrical Services	111,000	1,061,750
Ansett-A.N.A. Concourse:		
Building Work	498,150	
Mechanical Services	132,500	
Electrical Services	29,000	659,650
T.A.A. Domestic Terminal:		
Building Work	803,825	
Mechanical Services	127,000	
Electrical Services	111,000	1,041,825
T.A.A. Concourse:		
Building Work	498,150	
Mechanical Services	132,500	
Electrical Services	29,000	659,650
Services Building		621,525
Services and Pavements, etc. to Terminal Buildings and Concourses		154,000

	£
Elevated Road	630,000
Blast Fences	25,000
Roads, Car Parks, Lighting	718,500
Hydraulic Services and Roads to International Freight Area	40,000
Landscaping and Planting	100,000
Control Tower	132,850
Fire Station	86,700
D.C.A. Maintenance Area	281,750
Aircraft Surveyors Building	32,700
Groundsmens Depot	7,630
	9,348,262

CONSTRUCTION PROGRAMME

139. Eighteen months will be required to complete all working drawings and tender documents. However, because of the urgent need to commence commercial use of the runways which will be completed in 1967, it is proposed to call tenders progressively for various sections of the work.

140. Priority is to be given to the international section of the terminal and its support facilities and this section is expected to be operating late in 1968. The remaining components are due for completion about 12 months later.

STAFF AMENITIES

141. The scale and nature of amenities for staff working at Tullamarine have not yet been clearly defined because at this stage the proposals have not yet been developed in this detail. We were assured, however, that the requirements of amenities codes and awards of staff employed in the various buildings will be satisfied.

142. Consideration had not been given to the provision of space or to the operation of a cafeteria and light refreshment service

for staff working in the area in the proposals submitted to the Committee. We believe that in view of the considerable numbers involved and the irregular hours worked, staff employed at the airport should be able to purchase simple hot meals and light refreshments at low cost in facilities operated separately from the public dining areas in the terminals, and subsidised by employers if necessary. The Committee therefore recommend that the Department of Civil Aviation confer with other employers of staff at the airport with a view to the provision of a hot meal and refreshment service for employees.

PROVISION OF AIRPORT FACILITIES

143. In the report presented recently on the proposals to erect the international terminal building at Sydney (Kingsford-Smith) Airport, the Committee, whilst agreeing with the scale of facilities to be provided and noting that future expansion of the proposed building was readily possible, stated " ... that by spreading the use of terminals more evenly the time when extensions are required would be deferred". The Committee's views arose from the observation that airport passenger terminals provided by the Commonwealth generally lie idle for considerable periods during the day.

144. As with the Sydney proposals, the Committee agree that it is proper to construct the terminal to the scale proposed, because to build to a lesser scale would be short sighted and future expansion could be prejudiced. Otherwise the comments in the previous paragraph apply equally in relation to the Tullamarine proposals.

145. We repeat the conclusion put forward when reporting on the Sydney proposals, that we believe there is strong evidence of the need for a searching enquiry into the possibility of planning commercial airline operations in Australia to reduce the peak loading of airport facilities to produce a more economic utilisation of installations and staff.

RECOMMENDATIONS AND CONCLUSIONS

146. The summary of recommendations and conclusions of the Committee is set out below. Alongside each is the paragraph in the report to which it refers.

		Paragraph
1.	AN INCREASE IN THE PROPOSED PROVISION OF AIRCRAFT PARKING POSITIONS FOR DOMESTIC OPERATORS IS NOT WARRANTED AT THIS STAGE.	25
2.	THERE IS AN URGENT NEED FOR THE COMMENCEMENT OF AIRLINE OPERATIONS AT TULLAMARINE.	89
3.	SUBJECT TO THE QUALIFICATIONS WHICH FOLLOW, THE COMMITTEE RECOMMEND THE CONSTRUCTION OF THE WORKS IN THIS REFERENCE.	91
4.	ALL ESCALATORS SHOULD BE AT LEAST 48" WIDE.	105
5.	IT WOULD BE APPROPRIATE TO LOCATE THE WHEEL CHAIR LIFTS IN THE LOADING CONCOURSES NEAR THE LOADING POSITIONS CLOSEST TO THE TERMINALS.	106
6.	THE ESTIMATED COST OF THE PROPOSALS REFERRED TO THE COMMITTEE IS £9,348,262.	138
7.	THE DEPARTMENT OF CIVIL AVIATION SHOULD CONFER WITH OTHER EMPLOYERS OF STAFF AT THE AIRPORT WITH A VIEW TO THE PROVISION OF A HOT MEAL AND REFRESHMENT SERVICE FOR EMPLOYEES.	142
8.	THERE IS NEED FOR A SEARCHING ENQUIRY INTO THE POSSIBILITY OF PLANNING COMMERCIAL AIRLINE OPERATIONS IN AUSTRALIA TO REDUCE THE PEAK LOADING OF AIRPORT FACILITIES TO PRODUCE A MORE ECONOMIC UTILIZATION OF INSTALLATIONS AND STAFF.	145

W. J. Brimblecombe
Chairman

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

9th November, 1965.