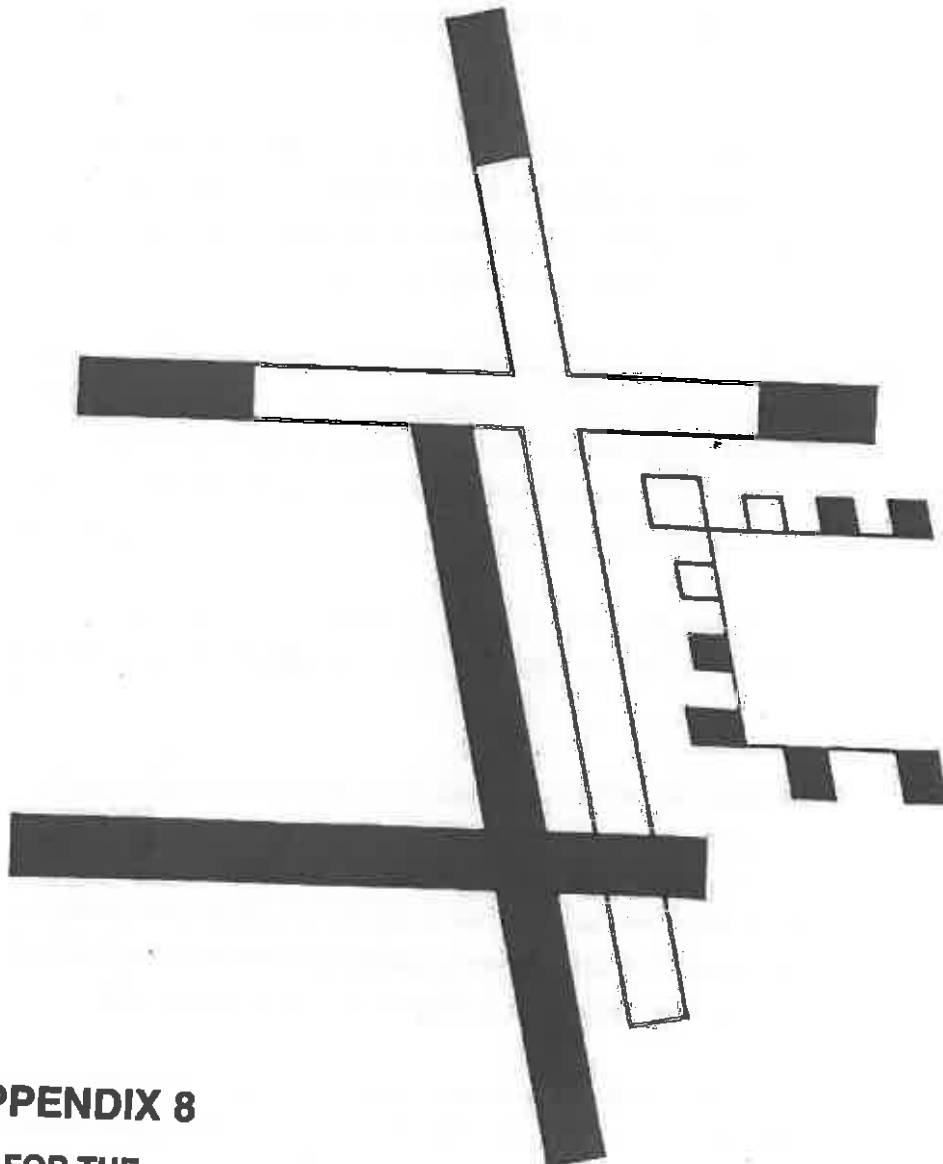


**STATE GOVERNMENT
OF VICTORIA**

Melbourne Airport



MELBOURNE AIRPORT STRATEGY



**APPENDIX 8
FOR THE
DRAFT ENVIRONMENTAL
IMPACT STATEMENT
MELBOURNE AIRPORT**

 **DAMES & MOORE**

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MELBOURNE AIRPORT STRATEGY

EXECUTIVE SUMMARY

INTRODUCTION

The Melbourne Airport Strategy has been prepared jointly by the Federal Airports Corporation and the Victorian State Government. The strategy encompasses a number of separate studies including a Runway Strategy, a Landside Strategy, a Land Use Strategy, a Surface Access Strategy and an Economic Benefits Study.

On conclusion of the public exhibition of the strategy document and the draft environmental impact statement and subsequent adoption by both the Federal Airports Corporation and the Victorian Government, it will provide the foundation and the guidelines for the planning of all aviation activity and related surface access and land use development through to the middle of the next century.

The Melbourne Airport Strategy represents the drawing together of all of the components of the most comprehensive and collaborative study undertaken for any airport in Australia. It will provide the Federal Airports Corporation, the Victorian Government and the aviation industry with the confidence and security to plan their business expansion on the airport and in its vicinity, knowing that the ramifications and context of the future have been embodied in the Strategy.

With this security, Melbourne Airport, the airlines and other business enterprises involved, can develop marketing and business plans to take full advantage of the areas identified for future development both on and off the airport.

In its turn, the State Government can monitor projected growth of this important component of the Victorian economy and plan to ensure that the airport remains viable and competitive in its initiatives in tourism and export activities and in the development of aviation related commerce, industry and technology. It can plan also to ensure that access to the airport by rail and road for private and public transport is maintained at an efficient and effective level of service and that land use patterns of urban and industrial development remain compatible and supportive to the role of the airport.

The completion of this strategy places Melbourne Airport in a position of strength in that it is now able to proceed with short and mid term developments in line with an optimum strategy which will provide

clear guidelines for growth at Melbourne Airport. It provides a focus and guidelines for investment for not only the FAC and the aviation industry, but also for the tourism industry and relevant State Agencies. The strategy complements the Victorian Government's Economic Strategy.

It is intended that a formal strategy review process will be instituted to provide for continuing and ongoing consultation with all interested parties to ensure that future changes are monitored and that the Strategy remains a vital and comprehensive statement.

MELBOURNE AIRPORT

Melbourne Airport was commissioned in 1970, replacing Essendon Airport as the major international airport and a year later as the domestic airport for Victoria. Melbourne Airport is currently used by 19 international airlines, two major domestic airlines and a number of commuter services. Its primary function is to cater for both international and domestic Regular Public Transport, air freight and aircraft maintenance. Other categories of aviation defined broadly as General Aviation operate from Essendon, Moorabbin and other airports in the region.

Melbourne Airport serves as the international gateway for 3.5 million people in Victoria. The airport processed 7.9 million passenger movements and 191,000 tonnes of air freight in 1988 via 114,000 aircraft movements. This throughput is the second highest in Australasia. The airport provides a world standard facility in respect of its terminal facilities, 24-hour operation, available runway capacity and ready access to the City of Melbourne and is of great economic importance to Victoria.

Melbourne and Essendon Airports jointly provide 11,490 jobs directly, 5,745 jobs indirectly and another 17,235 jobs as a result of flow-on effects. The combined economic output of the airports is \$1.5 billion per annum which is 2 percent of the gross domestic product of Victoria.

FUTURE GROWTH

Forecasts of growth in all categories of air traffic have been derived by the Joint Airport Planning Team from a range of sources which include the Department of Transport and Communications, the Bureau of Transport Economics, the Federal Airports Corporation and various consultants. Forecasts have been developed through to the strategy horizon of 2050.

Passenger Forecasts

The strategy has forecast five times the current number of international passenger movements and four times the number of domestic passenger movements through to the strategy horizon.

International passenger movements are expected to increase from 1.8 million in 1988 to ten million by 2050.

Movements of Domestic passengers per annum will increase from 5.9 million in 1988 to 11 million in 2010 and to 27 million by 2050.

Aircraft Forecasts

Aircraft movements at Melbourne are forecast to increase from 114,000 in 1988 to 320,000 in 2050.

International aircraft movements are forecast to grow from 14,500 in 1988 to 63,000 in 2050.

Domestic aircraft movements are forecast to grow from 64,900 to 216,000 for the same period.

Freight Forecasts

International Airfreight services for the period 1988 - 2010 are forecast to increase from 103,369 tonnes to 430,000 tonnes.

Domestic Air freight will increase from 87,359 tonnes to 230,000 tonnes in the same period.

THE MELBOURNE AIRPORT STRATEGY

The Melbourne Airport Strategy will enhance the competitive advantages of Melbourne Airport and embodies:-

- o a runway layout which will provide aircraft movement capacity to meet demands to the middle of the next century by protecting locations for two additional runways
- o a landside development strategy which provides for domestic and international passenger facilities to be developed in an integrated manner
- o scope for domestic and international airline freight facilities to be located in the South Eastern Section close to their respective passenger operations as part of a 'freight city' complex

- o *scope for significant expansion of maintenance facilities adjacent to the existing domestic maintenance bases*
- o *plans for a rail reservation to provide flexibility for a future public transport link between Melbourne Airport and the City*
- o *plans for the upgrading of existing arterial roads and establishment of new reservations to match the forecast traffic demand generated by the airport*
- o *a land use strategy which protects the approaches to four runways and recommends amendments to the planning scheme to provide complementary commercial areas off-airport adjacent to similar on-airport areas*
- o *a basis for understanding and enhancement of the competitive advantages of the airport and the value of the airport to the Melbourne/Victorian economy*
- o *a requirement to acquire land strategically important to secure the long term development of the airport*
- o *the assumption that Essendon Airport continues to operate but that a proportion of performance compatible traffic will transfer to Melbourne on operational or commercial grounds.*

The strategy has identified a number of competitive advantages that are present at Melbourne Airport:

- o Operations are available 24 hours a day
- o The airport can be expanded in a planned, effective manner to meet foreseeable runway, terminal building and aviation servicing requirements well into the next century
- o The airport is in an ideal geographic location and has significant land available on and adjacent to the airport suitable for promoting the airport as the major freight hub of Australia
- o The expansion of the airport is not significantly constrained by external land use.

The Melbourne Airport Strategy consists of four principal elements:

- o The Runway Strategy
- o The Landside Strategy
- o The Surface Access Strategy
- o The Land Use Strategy

THE RUNWAY STRATEGY

The Joint Airport Planning team has recommended adoption of a four runway layout to provide aircraft capacity through to the middle of the 21st century. This runway strategy has evolved from a detailed analysis of six options and is considered to be a firm basis on which to plan for the next 50-60 years for all airport functions.

The layout comprises two wide spaced parallel east west runways and two close spaced parallel north south runways. The wide spaced east-west runways provide the capability for independent simultaneous

term leases granted to the two present Domestic Airlines. These leases constrain lateral expansion of the existing International Terminal. However, broad options were identified for both domestic and international facilities with alternative siting and staging.

With regard to international facilities, options ranged from immediate development of new relocated international facilities with the conversion of the existing terminal to domestic use, through options of split international terminals, to continuing to develop only the existing international terminal.

Analysis of these options show a need to construct a new international terminal after at least one major expansion of the existing facility.

A development concept estimated at \$170 million has been prepared by the FAC, which provides the flexibility for the existing terminal to be expanded incrementally to meet growth in traffic during the next 10-15 years. Construction is scheduled to commence in January 1990. International operations can therefore operate out of the existing site until a transfer to the southern freight area is commercially opportune.

Consideration of many factors have led to a conclusion that new international facilities should be south of the existing Ansett terminal and that air freight facilities are best developed in a separate area in the south-east sector of the airport. The proposed new International Terminal facilities will displace existing freight facilities.

The layout of terminal facilities in the strategy permits options for convenient surface access to the airport by road and retains an option for a convenient rail service and land use allocation near the terminals for support facilities such as car parks.

SURFACE ACCESS STRATEGY

A number of surface access improvements will be needed to cater for the expected expansion in the scope and level of operations at Melbourne Airport. The current 45,000 vehicle trips per day related to the airport are expected to rise to 180,000 vehicle trips per day in 2050. The surface access strategy demonstrates how sufficient access capacity can be provided.

It is recommended that this increase in vehicle trips be catered for through improvements in road infrastructure and increased efficiencies in its use, coupled with improved public transport service to the airport. An increase in the public transport's mode share from the current 6 percent can limit or delay the need for major roadworks and contain the proportion of costs for such works attributable to airport related traffic.

A key element in improved public transport service to the airport is an express rail service between Melbourne and the airport, by construction of a new heavy rail link between the airport and the

operations which is of critical importance during periods of peak hour runway demands. The runway locations and lengths are shown in an attachment to this executive summary.

In response to concerns regarding the level of noise impact over the residential areas east of the airport and input from consultants commissioned by the adjacent municipalities, it was determined that arrivals from the east on the future additional east-west runway will generally only occur during peak periods. In other words, except for emergencies, it is likely that there would be no landings from the east on this runway from say 8.00pm at night to 6.00am in the morning.

The use of this runway in this way coupled with the use of a displaced threshold when landing from the east, significantly reduces the anticipated noise impact over residential areas east of the airport whilst still providing a capacity sufficient to provide longevity for Melbourne Airport.

The four runway layout will provide an ultimate yearly runway capacity of 320,000 movements and hourly capacities of 85 movements and 63 movements for good and bad weather respectively. Current hourly rates possible with the existing two runway layout are 54 and 41 movements respectively.

The planned runway length for the new wide spaced east-west runway will allow the integrated passenger terminal area to be efficiently connected to the freight and maintenance areas. This will provide increased commercial flexibility for both the industry and the FAC.

On consideration of the adopted forecasts it is likely that a third runway at Melbourne Airport will be required about the year 2010. The fourth runway will be required about the year 2030. The precise timings for runway provision will need to be determined taking into account actual growth rates and financial viability considerations including delay costs to the industry.

The next runway to be built is expected to be the wide-spaced east-west runway.

LANDSIDE STRATEGY

This strategy is concerned principally with the location of passenger and freight terminals and aircraft maintenance facilities and the sequencing of development to meet level of service objectives, commercial objectives and to provide an optimum investment programme.

The landside strategy's theme is that all domestic and international passenger activity be located in the central eastern sector of the airport and major freight activity be located in the south eastern sector of the airport.

A further element of the landside strategy is the location and timing of new International Terminal facilities. The development of new domestic terminal facilities have been fundamentally fixed by the long

Broadmeadows railway line: Land for such a link is soon to be reserved. It is expected that demand for a heavy rail link sufficient to render it commercially viable, would not be achieved until after the turn of the century.

Bus services to the airport could be improved through the establishment of a larger number of pick-up and set-down points around the metropolitan area. The introduction of bus priority measures, particularly on the Tullamarine Freeway is also recommended. The accessibility of the airport by metropolitan buses and buses from provincial centres would be improved through major road works that would benefit all road users.

The Tullamarine Freeway currently provides the major point of access to the airport. By 2050, a total of six access lanes will be required both in and out of the airport. For traffic management reasons, it is important that access to the airport be achievable at a number of points. The strategy allows for such spreading of the access points. Both the internal and external road systems can be developed to accommodate efficiently the need for access from a variety of directions whilst maintaining segregation of air passenger and air freight related vehicles.

Proposed roadworks that will improve the airport's accessibility include construction of the Metropolitan Ring Road, which will ultimately provide more direct connections from the airport to the Princes, Calder and Hume Freeways and large parts of the Melbourne metropolitan area, upgrading of the Tullamarine Freeway and construction of the Western Bypass of the Central Business District.

The need for access developments in the future, as outlined by the strategy, will be anticipated by the continuing monitoring of demand by the joint State/FAC "Surface Access Monitoring Committee".

THE LAND USE STRATEGY

Land around Melbourne Airport that needs to be looked at in regard to changes in land use can be divided into three categories:

- o Lands generally on the runway approaches in which land use controls should provide for compatible land use so that the capacity of the airport is not impaired.
- o Lands on which noise impacts of aircraft may exceed recommended limits for residential and other noise sensitive occupancies.
- o Lands adjoining the airport which through zoning amendments are or could become compatible for airport related industries.

The runway strategy has been developed taking account of these aspects, particularly in the limitation of noise impacts.

There will, however, be some effects on established residential areas, a matter addressed in detail in the body of this report and in the draft Environmental Impact Statement accompanying this Melbourne Airport Strategy.

An important aspect of land use zoning is to ensure sufficient land is available adjacent to Melbourne Airport suitable for airport-related purposes and airport compatible industrial use.

Estimates were made of long term land needs, and areas which would meet the needs were identified. Monitoring processes are proposed to ensure growth envisaged in the Victorian Economic Strategy can be accommodated.

STRATEGY ISSUES

Aircraft Noise

The Australian Noise Exposure Forecasts (ANEF) system was adapted from the USA NEF system after extensive testing by the Australian National Acoustic laboratory. This has been used to establish noise contours to describe the noise impact of aircraft operations on the approaches to the existing and future runway layouts.

The Melbourne Airport Strategy contains a sequence of noise contours ranging from the actual noise experienced in 1988 through to the predicted noise impact for the ultimate runway layout in 2050.

Dwelling counts undertaken using these contours show a marked decline in noise exposure over the next 40 years and that the overall impact of the ultimate four runway utilisation is only marginally greater than the existing impacts associated with the two runway layout.

The relatively small increase in impact is due to the anticipated introduction of quieter aircraft over the study period coupled with the use of the future wide spaced east-west runway.

Essendon and Regional Airports

The Melbourne Airport Strategy has allowed in the aircraft forecasts for a proportion of aircraft to transfer to Melbourne from 1990, based on operational and commercial grounds.

The aircraft to transfer would need to have performance characteristics compatible with the major uses of the Melbourne airspace.

In addition, it is proposed that the Federal Airports Corporation and the State Government of Victoria will undertake a study of Port Phillip Region Airports to establish a long-term strategy for regional airports.

development. This study will complement this strategy for Melbourne Airport and determine the future role of Essendon Airport.

Land Acquisition

The location and noise impact of the future wide spaced east west runway requires approximately 450ha of land to be purchased in the McNabs/Barbiston road area to the immediate west of Melbourne Airport. The area comprises approximately 26 properties with the majority of those sited along Barbiston Road, which is on the alignment of the proposed east-west runway.

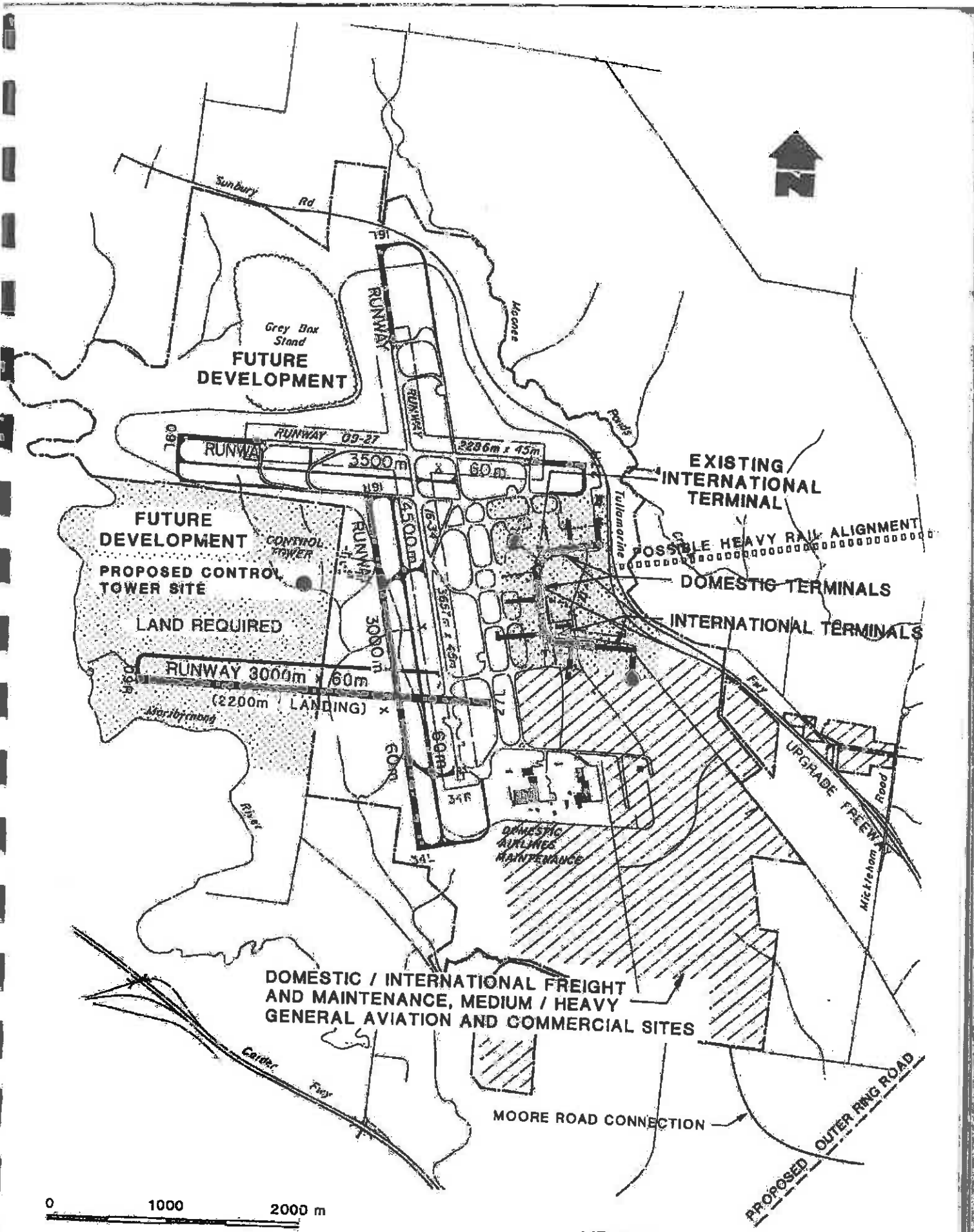
NEXT STEPS

This strategy, along with the Environmental Impact Statement has been released for a period of public and industry comment.

The Federal Airports Corporation will conduct a public information programme during this period when displays and summary information sheets will be provided to all areas around the airport.

All stages in the publication and display of information will be advertised widely in the local press.

Following analysis, debate and acceptance of this strategy, the industry, Local and State Governments will have clear guidelines for future investment on and around Melbourne Airport.



MELBOURNE AIRPORT STRATEGY

MELBOURNE AIRPORT
PROPOSED DEVELOPMENTS

