MOORABBIN AIRPORT

MASTER PLAN

submitted to:

DEPARTMENT OF TRANSPORT & REGIONAL SERVICES

prepared by:

MOORABBIN AIRPORT CORPORATION

MOORABBIN AIRPORT CORPORATION

JUNE 1999

FOREWORD

Moorabbin Airport Corporation (MAC) has purchased a long-term lease over Moorabbin Airport in Melbourne from the Australian Federal Government. MAC is 94% owned by Goodman Holdings Pty. Ltd. with Mainland Properties Limited holding the balance of shares. MAC views the Airport as a strategic long-term investment in Melbourne.

The purchase was completed in June 1998. It is a requirement of the purchase that the owners of privatised Airports prepare a Master Plan for the development of the Airport over the first 20 years of the lease.

Goodman Holdings is a private investment company with interests in a number of public and private companies in Australia and New Zealand and is responsible for over $500 million of commercial property. Two of their senior executives have been appointed to the board of MAC - Mr. Patrick Goodman, who is Managing Director of Goodman Holdings and Mr. Richard Hughes, who is head of Property Development for Goodman Holdings. Mainland has an active portfolio of developments in Victoria. Mr. Brian Rule from Mainland, is also a director of MAC.

MAC has entered into the ownership of the Airport with the strategy to create a high quality investment over the term of the lease. Mr Phil McConnell, an aviation executive with over 25 years international experience in aviation management has been appointed as Airport General Manager. The MAC Board has appointed a group of eminent international and Australian consultants to advise on the development of the Aviation business, Land Planning, Landscaping and Building Design.

Our Vision is to develop an efficient and fully functioning Airport of Regional and State significance, enhanced by quality industrial and business development, which will significantly contribute to and improve the economic and social base of South-Eastern metropolitan Melbourne, particularly its local community.

Our challenge is to accomplish this in the context of a highly urbanised location and with full regard to the environmental consideration of our neighbouring commercial and residential areas.

We believe that Moorabbin Airport has an exciting future as a centre of aviation excellence, it will be maintained as Victoria's premier location for pilot training, servicing of General Aviation aircraft and a base for recreational pilots. In addition it has the ability to offer more convenient and user friendly transportation options to both business and leisure travellers. The development of both aviation and other commercial businesses will significantly contribute to the future employment and economic success of both South-East Melbourne and the State of Victoria.

Richard P. Hughes
Managing Director
Moorabbin Airport Corporation Pty Limited

MOORABBIN AIRPORT MASTER PLAN

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The Moorabbin Airport Master Plan consists of three documents which include:
- Moorabbin Airport Master Plan
- Moorabbin Airport Land Use Plan
- Moorabbin Airport Environmental Strategy

All three documents are available for purchase from the Moorabbin Airport Corporation.

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Taylors Engineers Pty Ltd
Denton Corker Marshall Architects Pty Ltd
Kinhills Pty Ltd
Alpine Service Pty Ltd

Glossary

Act:	Airports Act 1996 and accompanying Regulations
AEO1:	Airport Environs Overlay 1
AEO2:	Airport Environs Overlay 2
ALC:	Airport Lessee Company
ANEC:	Australian Noise Exposure Contour
ANEF:	Australian Noise Exposure Forecast
ANEI:	Australian Noise Exposure Inex
AOC:	Air Operator's Certificate
Airservices Australia	Government owned enterprise responsible for the safe and efficient management of air traffic over Australia
AS2021:	AS 2021-1994: Acoustics – Aircraft noise intrusion – Building siting and construction
ATC:	Air Traffic Control
BAe:	British Aerospace
BTCE:	Bureau of Transport and Communications Economics
CASA:	Civil Aviation Safety Authority
DME:	Distance Measuring Equipment
DoTRS:	Department of Transport and Regional Services
EMS:	Environmental Management System
EPA:	Environment Protection Authority
FAC:	Federal Airports Corporation
feet:	Feet above ground level
GA:	General Aviation
GAAP:	General Aviation Airport Procedures
GAIT:	General Aviation Infrastructure Tariff
GFA:	Gross Floor Area
GPS:	Global Positioning System
ha:	Hectares
IMC:	Instrument Meterological Conditions
IATA:	International Air Transport Association
L:	Left
m^2, sq.m.	Square metres
MAC:	Moorabbin Airport Corporation
Master Plan:	Moorabbin Airport Master Plan
MSS:	Municipal Strategic Statement
NDB:	Non Directional Radio Beacon
OLS:	Obstacle Limitation Surface
PANS-OPS:	Procedures for Air Navigation Services – Aircraft Operations
PAPI:	Precision Approach Path Indicator
R:	Right
RPA:	Rules and Practices for Aerodromes
RPT:	Regular Public Transport
SUZ:	Special Use Zone
VMC:	Visual Meterological Conditions
VOR:	VHF Omni-directional Radio Range (OMNI)
VPP:	Victoria Planning Provisions

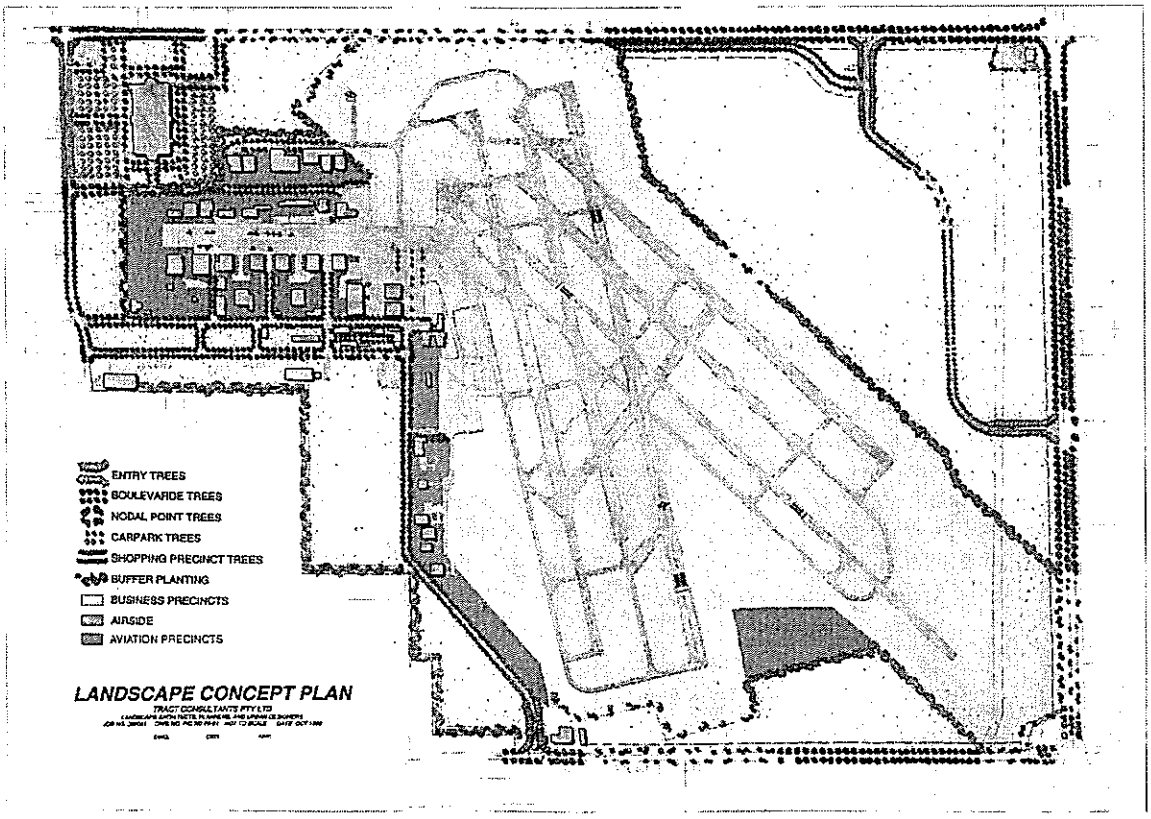
CORPORATE VISION

Moorabbin Airport Corporation has a vision to develop a high quality aviation and commercial environment at Moorabbin Airport. MAC recognises the need to enhance the regional role of Moorabbin Airport, whilst respecting the needs of nearby industrial and residential land uses.

MAC is committed to strengthening the current Airport operations by improving Airport management, attracting new aviation business and increasing revenues by selective development of land not required for aviation purposes. The company will provide a management structure to attract quality commercial tenants and will implement a comprehensive land use framework to ensure the creation of a quality business environment, quality landscaping, prominent entry statements, broad boulevards and a management structure to ensure that these high standards are maintained.

The vision for the Moorabbin Airport is to ensure an efficient and fully functioning Airport of regional and state significance which contributes to and improves the regional economic and social base of South-Eastern metropolitan Melbourne.

We intend to build the Airport into a centre of aviation excellence in Australia. The primary purpose of the Master Plan is to articulate a clear vision for the ultimate development of the Airport so that the potential of the Airport site is optimised to satisfy long-term aviation needs and provide for complementary commercial developments. MAC is confident that the Master Plan provides a sound and strategically oriented framework to guide the ongoing development of the Airport into the 21st century.



EXECUTIVE SUMMARY

Moorabbin Airport Master Plan

The Moorabbin Airport Master Plan has been prepared by the Moorabbin Airport Corporation Pty Ltd as part of the requirements of the Airports Act 1996, which guides the continued operations of aviation at Moorabbin Airport in the deregulated market environment.

The Draft Moorabbin Airport Master Plan was approved by the Federal Minister for Transport and Regional Services under Section 81 of the Airports Act 1996, on 21st May, 1999. A Final Master Plan is defined in the Act as a Draft Master Plan that has been approved by the Minister. **This MASTER PLAN is now a Final Master Plan as defined by the Act.**

The Act provides a system of separating the Airport Lessee Company (ALC), being the Airport operator, and the Airport regulator roles. In the case of Moorabbin Airport, the regulator role will continue to be provided by the Department of Transport and Regional Services (DoTRS) and the Civil Aviation and Safety Authority (CASA). Moorabbin Airport Corporation will conduct the Airport operator-lessee role.

This Final Master Plan is a refinement of the Preliminary Draft Master Plan which was publicly exhibited from 26th October 1998 to 23rd January 1999 over a period of three months. A total of twelve (12) submissions were received in response to the exhibition of the Preliminary Draft Master Plan, covering a wide range of issues associated with the development and implementation of the Master Plan. A number of modifications to the Preliminary Draft Master Plan have now been incorporated into this **MASTER PLAN** in direct response to matters raised in submissions.

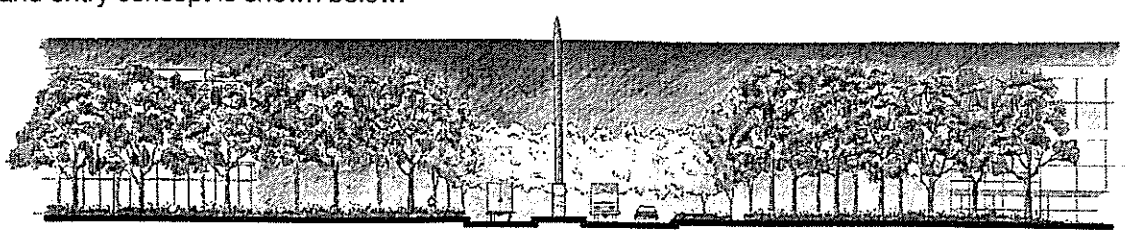
This Master Plan relates to a total planning period of 20 years. The Airport Master Plan remains in force for 5 years or until a fresh Master Plan is approved by the Minister. For convenience, where the term "Master Plan" is used, this refers to the "Moorabbin Airport Master Plan".

Moorabbin Airport is located approximately 21 kilometres South-East of the Melbourne Central Activities District in Melbourne's 'bayside suburbs'. It is bounded by Centre Dandenong Road to the North, Boundary Road to the East, Lower Dandenong Road to the South and Grange Road and Bundora Parade to the West.

The Airport comprises 294 hectares of relatively flat, open land used for a variety of aviation and related uses and also a range of non-aviation uses. Moorabbin Airport has a significant role in the Australian aviation industry, being one of the busiest light aircraft Airports in Australia.

A range of planning criteria have been assessed to determine the objectives for development of the Airport land, including the strategic policy context of the Airport and its environs, and the long term role of the Airport in contributing to metropolitan growth and development objectives. The opportunities and strengths of the region have also been examined and integrated into the strategic directions of the Master Plan.

The landscape character of the Airport includes expansive open areas, great viewscapes and other landscape features. The landscape vision for Moorabbin Airport seeks to maintain the open feel of the land with three-fifths of the land utilised in aviation related areas. A typical landscape treatment and entry concept is shown below:



EXECUTIVE SUMMARY

Final Master Plan

The Moorabbin Airport Preliminary Draft Master Plan was prepared and exhibited from 26th October, 1998 to 23rd January, 1999. This Final Master Plan has been substantially refined in response to the concerns and suggested improvements raised in submissions. The approved Master Plan modifies the exhibited version in the following key areas:

- Incorporation of a revised Airport Strategic Statement which provides clear and strategically sound objectives to guide future land use development on the Airport land.
- Modified Precinct Development Plan to provide greater clarity and direction in respect to desired land use outcomes within each precinct.
- Commitment to the development of a comprehensive 'Fly Friendly Policy' by MAC in partnership with the Airport Consultative Committee, to advocate for continual improvements to environmental management of aviation operations.
- Changes to Land Use zoning framework to clarify preferred development objectives and outcomes for the development of non aviation land in particular.
- Incorporation of a substantially revised Environmental Management Strategy.
- Incorporation of a Protocol for Land Use Decision Making which:
  - Outlines the process for assessment and consideration of development proposals by the MAC.
  - Idenitifies the circumstances in which applications will be referred to authorities.
  - Explains the respective roles of the MAC, the Planning Review Committee, Council, State authorities and community groups in the assessment of development proposals.

These modifications provide a comprehensive response to the issues arising from the exhibition of the Preliminary Draft Master Plan.

A substantially revised Draft Master Plan was submitted by MAC to the Federal Minister for Transport and Regional Services on 4th March, 1999, requesting final approval of the Master Plan under the requirements of the Act.

This Final Master Plan was formally approved on the 21st May, 1999 with the Minister's endorsement that the Master Plan *"provides a strategic management tool for the future development of the Airport."*

Strategic Planning Context

Moorabbin Airport is located in an urban area of south-east Melbourne, with the Northern boundary of the Airport defining a hard edge to the non-urban area. This region is one of the most important industrial and manufacturing areas in Melbourne, closely linked to neighbouring industrial land located to the East, South, West and North-West.

Extensive transport infrastructure, both existing and planned, surrounds the Airport. Reservations for the proposed Mornington Peninsula and Dingley Freeways are located within 500 metres of the Airport. Centre Dandenong, Boundary and Lower Dandenong Roads provide arterial connections to the Nepean Highway, Warrigal Road and the South Eastern Freeway. Rail infrastructure is provided nearby from the Frankston and Dandenong railways.

Moorabbin Airport has a significant role in the regional and state economy, aviation in the Port Phillip region, and to Melbourne's continued industrial and commercial development. This is supported by a range of recent aviation, planning and economic studies.

Existing Aviation

Moorabbin Airport was opened in 1949 following a decision to develop a secondary Airport for Melbourne. The Airport began as a grass field and asphalt runways were constructed during the 1960s to establish all weather runways. During 1983-87, the runway layout was modified to its current layout to accommodate General Aviation Airport Procedures.

Moorabbin Airport is used for a variety of aviation uses including commercial aviation, training and recreational flights. Five runways service the Airport as shown in **figure 6.** Existing runways and associated lengths are as follows:

- 17L/35R: 1335 metres
- 17R/35L: 1240 metres
- 13L/31R: 1150 metres
- 13R/31L: 1060 metres
- 04/22: 814 metres

The Airport has a substantial network of taxiways and aprons serving several hangar and building areas. Over 300 aircraft are based at the Airport. These range from light single engine aircraft and sophisticated twin engine aircraft through to smaller executive jets. Up to 150 weekly services are scheduled to the Bass Strait Islands, Northern Tasmania and Merimbula. The Airport is also a base for emergency services.

Development Objectives:

- Establishing a long term plan for the development of the Airport to enhance the economic role of the Airport to the South-East region of Melbourne and the State of Victoria.
- Establishing a positive perception of the Airport within the local community.
- Consolidating and expanding the specialist aviation role of the Airport and improving facilities for passengers and operators in accordance with the Port Phillip Strategy.
- Maintenance of land required for aviation movement areas.
- Compliance with prescribed airspace requirements.
- Support of aviation activities through development of non-airside land for commercial, industrial, office and limited retailing uses, including aviation related industries seeking to optimise synergies with airside activities.
- Progressive development of land surplus to aviation needs into high quality industry and business parks.
- To maintain the open feel of the land with three-fifths of the land utilised in aviation related areas and enhanced landscape quality.
- Improved traffic and surface access arrangements for the Airport.

Future Aviation Development

The Moorabbin Airport Corporation has undertaken a comprehensive review of the Airport's forward planning.

Airport capacity is constrained by environmental considerations, particularly the need to preserve the existing compatibility and balance between Airport noise impacts and nearby residential areas. The Master Plan adopts a likely ceiling of 452,500 annual aircraft movements to respect the amenity of the area. This ceiling represents about 80% of the practical capacity of the existing runway system. On present indications this ceiling will be reached in 20 years.

While Moorabbin will retain its role as Australia's premier flying training Airport, subsequent growth in commercial aviation is likely to mean a gradual change in the mix of aircraft operations. The Master Plan proposes an Airport design which balances the airside and landside operations and allows for this gradual re-adjustment in aviation activities.

MAC has made realistic forecasts over the 20 year planning period of the Master Plan, based on extrapolation of a 1.5% growth rate in aircraft movements. Whilst there is little change in the ANEF forecasts for 523,000 aviation movements, a ceiling of 452,500 aircraft movements has been adopted for a range of environmental and other considerations.

Moorabbin Airport is strategically well located to attract the corporate aviation sector, and to expand its regular public transport (RPT) and freight services. At this time it is difficult to do more than speculate about the potential scope of these activities. Therefore, the Master Plan needs to have sufficient short-term flexibility ("the first five years") to allow reassessment of spatial allocation in response to actual industry demands.

This will be achieved by:

- Making provision for future runway extensions to suit modern regional jet aircraft commonly engaged in Regular Public Transport (RPT) operations.
- Designating a future passenger terminal precinct. The Master Plan designates the most likely location for a terminal, which is the site of the current management offices. However, an airline operator may require an alternate site and this must be allowed for in future planning.
- Providing for corporate aviation and aerospace industry hangars and facilities, and ancillary development.
- Proposing to separate fixed and rotary wing operations and proposing revised arrangements for helicopter training activity; while
- Continuing to accommodate a mix of general aviation aircraft and activities.

The Master Plan proposes several options for future runway developments in keeping with its strategies for aviation growth.

The Master Plan proposes as Option 1 a new 'North-East/South-West' runway alignment of 042º Magnetic, with a slight Southerly shift from the existing runway location. This has the dual advantage of providing increased useability for light aircraft and an aggregated area in the North-East sector of the Airport for commercial development opportunities.

A second option is put forward by the Master Plan which proposes a partial closure of the North-East/South–West runway in its current position. This option would preserve safe landing capability for all current light training aircraft but would restrict the take-off ability of some aircraft on occasional days with direct crosswinds to the other runways. Importantly this option maintains the safety levels for Moorabbin Airport, removes expensive relocation costs, will reduce ANEFs on residential areas and provides for a more efficient land use in the North-East corner of the Airport.

These options will be the subject of further review and investigation by MAC. Consideration of these options has arisen from further refinement of the Airport's aviation strategy and from the assessment of submissions to the Preliminary Draft Master Plan. It is premature at this stage to identify a preferred option given that further assessment is required by MAC to fully explore the detailed technical issues associated with each proposed option. The Master Plan therefore preserves flexibility in relation to the final configuration of this runway and allows for either option to be carried forward.

MAC also proposes to extend the existing main runway 13R/31L to provide for RPT regional jet operations and corporate jets.

The Master Plan allows a further 0.6 hectares for additional helicopter parking and 1.2 hectares for circulation within the Southern area which is designated for helicopter operations. The Plans provide for potential relocation of existing helicopter facilities and this additional area for expansion. A further 2.9 hectares is provided for aircraft circulation, ie. taxilanes providing access to hangars and aircraft parking areas. The Potential Aviation Development Plan shown in **figure 9** provides an indication of the airport's expected long term requirements for aviation facilities, hangars and aircraft parking.

Moorabbin Airport Adopted ANEF

The Airport's previous owner (FAC) produced an Australian Noise Exposure Forecast (ANEF) in 1998. This adopted ANEF has been endorsed by Airservices Australia and endorsed by the City of Kingston as the basis of land use planning controls in the Airport environs.

This policy objective has been implemented by incorporating into the exhibited Kingston Planning Scheme:

- An Airport Environs Overlay (AEO1) control over areas above the 25 ANEF contour.
- An Airport Environs Policy covering those areas between the 20 and 25 ANEF contours.

In AEO1, regardless of the zone provisions, land must not be used for noise sensitive uses such as a childcare centre, school or hospital. A permit is required for a number of nominated uses including a dwelling, hotel, office and residential hotel. All applications to use land within this overlay must be referred to the Airport owner and would only be approved if the building design incorporates appropriate noise attenuation measures.

The Moorabbin Airport Environs Policy lists a range of sensitive uses and provides for new developments to meet AS2021 standards. The policy requires Council to consider the present and future operations of Moorabbin Airport taking into account the views of the Department of Transport and Regional Services. Rate notices are used to advise property owners if they are subject to this policy.

The recommendations from an Independent Panel have endorsed the AEO1 and Moorabbin Airport Environs Policy for incorporation into the 'new format Kingston Planning Scheme. It is envisaged that the new Kingston Planning Scheme will be considered by the Victorian Minister for Planning and Local Government in mid 1999.

Moorabbin Airport Alternative ANECs

The Master Plan has considered two options regarding the provision of runway 04/22, based on a relocation of the runway to the South and a partial closure of the runway in its existing position. The Master Plan also proposes changes to helicopter operations, including relocation of the main North-South arrival and departure routes to a more centrally located helicopter landing site (HLS) and adoption of clearly defined helicopter training lanes East of, and immediately adjoining, the 13L/31R and 17L/35R runway strips.

MAC has prepared several ANECs relating to the options for relocation or partial closure of the 04/22 runway, which illustrate the increased or reduced forecast noise exposure which would result from each of the proposed changes in flight tracks. The ANECs also reflect the proposed changes in rotary wing operations. In all other respects the assumptions of the original ANEF model remain unchanged. The two alternative ANECs are shown in **figures 13-A** and **13-B**.

In general terms each of the ANECs provide for decreases in noise exposure in residential areas, with any minor increases in noise exposure confined to rural and industrial/commercial zonings. The adopted ANEF has been established on a "worst case scenario" basis of the maximum adopted capacity and each of the ANECs are calculated on the same basis.

It is premature at this stage to put forward either of the ANECs for approval as an ANEF until further investigations are completed by MAC. The existing approved ANEF will therefore continue to represent the model for growth upon which the Master Plan is based. Any future approval of a revised ANEF will require minor adjustment to the areas covered by the AEO1 controls and Airport Environs Policy in the Kingston Planning Scheme.

Moorabbin Airport Planning Controls

The strategic planning approach utilised for this Master Plan has resulted in dividing the Airport into a range of aviation, business and industrial park, and limited retailing precincts. Development areas relating to the land use plan are represented in the Precinct Development Plan, which has evolved from the Master Planning process. The designation of land for non airside development has also been strongly influenced by the Potential Aviation Development Plan shown in **figure 9**, which provides an indication of the airport's expected long term requirements for aviation facilities, hangars and parking areas. The need to provide adequate areas to accommodate future aviation growth and development on the site is foremost in the MAC's long term planning for the Airport.

Airport Precincts

Zoning of the precincts has adopted the Special Use Zone (SUZ) from the Victoria Planning Provisions.

Precinct Development Plan - Implementation

The Precinct Development Plan is sufficiently broad to enable development flexibility in response to market conditions. Flexibility is also required in response to the unique opportunities presented by the Airport site for direct integration between land-side and air-side activities. Where possible clear direction has been provided in respect to the desired mix and combination of land uses to be contemplated in each precinct. As part of the overall Master Plan, this Precinct Development Plan provides a strategic direction for the Airport for the next twenty years. It will be reviewed after five years.

The Airport precincts are as follows:

- ***Precinct A:*** ***Airside Precinct***
- ***Precinct B:*** ***Commercial Aviation and Landside Precinct***
- ***Precinct C:*** ***Non Traditional Retailing Precinct***
- ***Precinct D:*** ***Business and Industrial Precinct***
- ***Precinct E:*** ***Office, Commercial, Hotel and Restaurant Precinct***
- ***Precinct F:*** ***Industrial Precinct***
- ***Precinct G:*** ***Commercial, Light Industrial and Convenience Retailing Precinct***

The Moorabbin Airport Corporation is committed to establishing a clear and transparent process for land use decision making. MAC has now prepared a detailed 'Protocol for Land Use Decision Making' which is included as a reference document in the Land Use Plan. The protocol outlines the process for decision making by MAC and explains the roles of Council, the State Government, public authorities and community groups in viewing land use proposals, as part of the MAC's commitment to ongoing consultation.

Moorabbin Airport Corporation (MAC) has also established a Planning Review Committee to oversee the strategic and statutory requirements of the land use plan and Master Plan and to provide advice to MAC on individual use and development proposals (see section 7.8.3).

This committee will operate in a manner which is broadly consistent with established Victorian Planning procedures and will make an assessment of applications against the requirements of the Land Use Plan, the objectives of the Airport Strategic Statement and the 'Moorabbin Airport Urban Design and Landscape Guidelines.' The committee will include representation from the Moorabbin Airport Corporation as well as specialist planning, architectural and engineering advice. The planning role will be undertaken by Tract Consultants Pty Ltd, the architectural/ urban design role will be undertaken by Denton Corker Marshall, and engineering advice from Kinhills Pty Ltd. Consultations will occur with State Government departments, ultility providers, Kingston City Council and the community as appropriate for specific uses and developments.

Consultation

An open process of community consultation has underpinned the preparation, development, exhibition and subsequent refinement of the Moorabbin Airport Masterplan. This consultation commenced early in the preparation of the Preliminary Draft Master Plan and has continued through to the final stages of reviewing submissions and refining the Final Master Plan.

Those who have formed part of the consultation process to date are listed in **Appendix A.**

Consultation has occurred with the local community through:

- Public notice in local and statewide newspapers.
- Public meetings, discussions and information sessions with residents' associations (and their local representatives), and members of both the Victorian and Federal Parliaments.

Consultation (meetings and workshops) has also occurred with the local municipal authority (City of Kingston) and referral authorities (VicRoads, EPA, DNRE, CFA, United Energy, South-East Water and Multinet Gas), the Federal Department of Transport and Regional Services, Airport Environment Officer, Airport Building Controller, State Government Departments including the Department of Infrastructure and Business Victoria, Airport tenants and other stakeholders.

MAC has a strong commitment to ongoing consultation and has implemented a consultative committee as an information forum and monitor of aviation activities and proposed developments. This committee has met quarterly since November 1998. This committee will process and attempt to resolve complaints in a pro-active manner (refer section 1.4.3).

1.0 INTRODUCTION

1.1 Airports Act 1996

The Airports Act 1996 establishes the framework for the regulation of leased Federal Airports. The Act provides a system of separating the Airport Lessee Company (ALC), being the Airport operator, and Airport regulator roles. In the case of Moorabbin Airport, the regulator role will continue to be provided by the Department of Transport and Regional Services (DoTRS) and the Civil Aviation and Safety Authority (CASA). Moorabbin Airport Corporation, being the ALC, will conduct the Airport operator role.

Moorabbin Airport Corporation, as Airport operator, is primarily responsible for activities that take place on the ground and within Airport confines. The responsibility for aircraft operations and aircraft safety is held by Airservices Australia and CASA respectively.

This Final Master Plan is a refinement of the Preliminary Draft Master Plan, which was publicly exhibited from 26th October 1998 to 23rd January 1999, over a period of three months. A total of twelve (12) submissions were received in response to the exhibition of the Preliminary Draft Master Plan, covering a wide range of issues associated with the development and implementation of the Master Plan. A number of modifications to the Preliminary Draft Master Plan have now been incorporated into this **MASTER PLAN** in direct response to matters raised in submissions.

An Airport Master Plan must specify the following matters:

- 'The Airport lessee company's development objectives for the Airport.
- The Airport lessee company's assessment of the future needs of civil aviation users of the Airport, and other users of the Airport, for services and facilities relating to the Airport.
- The Airport-lessee company's proposals for land use and related development of the Airport site, where the proposals embrace airside, landside, surface access and land planning/ zoning aspects.
- Forecasts relating to noise exposure levels.
- The Airport-lessee company's plans, developed following consultations with the airlines that use the Airport and local government bodies in the vicinity of the Airport, for managing aircraft noise intrusion in areas forecast to be subject to exposure above the significant ANEF levels.
- The Airport-lessee company's assessment of environmental issues that might reasonably be expected to be associated with the implementation of the plan.
- The Airport-lessee company's plans for dealing with the environmental issues mentioned above.
- If a Draft Environmental Strategy has been approved - the date of that approval and such matters (if any) as are specified in the regulations (Commonwealth Government, 1996)'.

The Moorabbin Airport Master Plan has been assessed in some detail by the Department of Transport and Regional Services and has been deemed to **fully satisfy the requirements above.**

The Master Plan was approved by the Federal Minister for Transport and Regional Services on 21st May, 1999, with the Minister's endorsement that *"it provides a strategic management tool for the future development of the Airport."*

The Master Plan relates to a planning period of 20 years. The Master Plan will remain in force for 5 years or until a fresh Master Plan is approved by the Minister.

If buildings or works are proposed for which the cost of construction exceeds $10 million or such other amount as is prescribed by the regulations, the relevant requirements of Sections 92, 93 and 94 of the Airports Act 1996 apply.

1.2 Moorabbin Airport Master Plan

The Moorabbin Airport Master Plan has been prepared for the Moorabbin Airport Corporation Pty Ltd by Tract Consultants Pty Ltd in association with:

- Aerodrome Operation Services Pty Ltd.
- TTM Consulting Pty Ltd.
- V & C Environment Consultants Pty Ltd.
- Taylors Engineers Pty Ltd.
- Kinhills Pty Ltd.
- Denton Corker Marshall Pty Ltd.
- Alpine Services Pty Ltd.

The Master Plan has been prepared as part of the requirements of the Airports Act 1996, which guides the continued operations of aviation at Moorabbin Airport in the deregulated market environment.

A range of planning criteria have been assessed to determine the objectives for development of the Airport land, including the strategic policy context of the Airport and its environs, and the long term role of the Airport in contributing to metropolitan growth and development objectives. The opportunities and strengths of the region have also been examined and integrated into the strategic directions of the Master Plan.

The vision for the Moorabbin Airport is to ensure an efficient and fully functioning Airport of regional and state significance which contributes to and improves the regional economic and social base of South-Eastern metropolitan Melbourne.

The development objectives for Moorabbin Airport include:

- Establish a long term plan for the development of the Airport to enhance the economic role of the Airport to the South-East region and the State of Victoria.
- Establish a positive perception of the Airport within the local community.
- Consolidating and expanding the specialist aviation role of the Airport and improving facilities for passengers and operators in accordance with the Port Phillip Strategy.
- Maintenance of land required for airside and landside areas.
- Compliance with prescribed airspace requirements.
- Support of aviation activities through development of non-airside land for commercial, industrial, office and limited retailing uses, including aviation related industries seeking to optimise synergies with airside acitivities.
- Progressive development of land surplus to aviation needs into high quality industry and business parks.
- To maintain the open feel of the land with three-fifths of the land utilised in aviation related areas and enhanced landscape quality.
- Improved traffic and surface access arrangements for the Airport

1.3 Environmental Strategy and Principles

The Moorabbin Airport Corporation (MAC) recognises the importance of maintaining and where practical, enhancing the quality of the environment on the Airport site and neighbouring areas.

The MAC is therefore committed to:

- Establishing and maintaining practices to comply with all applicable environment laws and regulations and to continual improvement of environmental performance of all operations on the site.
- Developing and implementing environmental management and operating procedures to ensure the development and management of the Airport site is carried out in an environmentally sound manner.
- Conducting regular reviews of all site operations to:
  - identify areas which are or may have the potential to breach a regulatory requirement of which require improvement, for example, energy use.
  - reduce the actual or potential release of pollutants from the site into the environment.
  - develop plans to redress issues indentified by environmental reviews, to achieve ongoing improvements in the environmental performace of all aviation and non aviation operations on the site.
- Ensure the Airport Environment Policy and Management Plan requirements are communicated to all relevant staff and tenants.
- Review existing and future tenant facilities to identify any actual or potential breaches of regulations, or areas of proposed operations which could be improved, for example, waste reduction.
- Consultation with authorities and the community, to ensure that the views of external parties regarding environmental issues are considered when making decisions.

The on-going objective of this policy is the continual improvement of operational practice and environmental conditions on Moorabbin Airport, and the improvement of the environment management system itself. This is shown in more detail in Section 9 and in the Moorabbin Airport Environmental Strategy.

1.4 Consultation

1.4.1 Master Plan Consultation

An open process of community consultation has underpinned the preparation, development, exhibition and subsequent refinement of the Moorabbin Airport Master Plan. This consultation commenced early in the preparation of the Preliminary Draft Master Plan, and has continued through to the final stages of reviewing submissions and refining the Final Master Plan.

Those who have formed part of the consultation process to date are listed in **Appendix A**.

The public consultation process has been an important part in the development of this Master Plan. Consultations have occurred with the local community through:

- Public notice in local and statewide newspapers.
- Public Meetings, discussions and information sessions with community and residents' associations (and their local representatives) and members of both the Victorian and Federal Parliaments.

Consultation (meetings and workshops) both prior to and following the exhibition of the Preliminary Draft Master Plan has also occurred with the local municipal authority (City of Kingston) and referral authorities (VicRoads, EPA, DNRE, CFA, United Energy, South-East Water and Multinet Gas), the Federal Department of Transport and Regional Services, Airport Environmental Officer, Airport Building Controller, State Government Departments including the Department of Infrastructure and Business Victoria, Airport tenants and other stakeholders.

1.4.2 Submissions to the Preliminary Draft Master Plan

Under the Airports Act 1996 the Preliminary Draft Master Plan is required to be placed on public exhibition for a period of three months with an open invitation for public comment. Any submissions arising from the exhibition of the Master Plan are required to be reviewed by the MAC and forwarded to the Federal Minister for Transport and Regional Services with the Final Draft Master Plan. An explanation of how submissions have been addressed must also accompany the Master Plan.

The Moorabbin Airport Preliminary Draft Master Plan was exhibited from 26th October, 1998 to 23rd January, 1999. In conjunction with the exhibition of the Master Plan the Moorabbin Airport Corporation promoted interactive discussion of the Master Plan through its open dialogue with community groups, resident information forums, meetings with Council and State authorities and regular media updates.

Twelve (12) submissions were received in response to the exhibition of the Master Plan, which is testament to the success of the consultation program which assisted MAC with the development and exhibition of the Master Plan.

A list of submitters is provided in **Appendix B**, together with a summary of the major issues raised.

The Preliminary Draft Master Plan has been substantially refined in response to the concerns and suggested improvements raised in submissions. This Master Plan modifies the exhibited version in the following key areas:-

- Incorporation of a substantially revised Airport Strategic Statement which provides clear and strategically sound objectives to guide future land use development on the Airport land.
- Modified Precinct Development Plan to provide greater clarity and direction in respect to desired land use outcomes within each precinct.
- Commitment to the development of a comprehensive 'Fly Friendly Policy' by MAC in partnership with the Airport Consultative Committee, to advocate for continual improvements to environmental management of aviation operations.
- Changes to Land Use zoning framework to clarify preferred development objectives and outcomes for the development of non aviation land in particular.
- Incorporation of a substantially revised Environmental Management Strategy.
- Incorporation of a Protocol for Land Use Decision Making which:
  - Outlines the process for assessment and consideration of development proposals by the MAC.
  - Idenitifies the circumstances in which applications will be referred to authorities.
  - Explains the respective roles of the MAC, the Planning Review Committee, Council, State authorities and community groups in the assessment of development proposals.

The modifications above are considered to provide a comprehensive response to the issues arising from the exhibition of the Preliminary Draft Master Plan.

1.4.3 Ongoing Consultation

MAC has a strong commitment to ongoing consultation and has implemented a consultative committee as an information forum and monitor of the aviation activities, which complies with DoTRS Guidelines for consultative processes. This committee has met quarterly since November 1998. This committee will process and attempt to resolve issues or concerns in a pro-active manner. A wide cross section of representatives will be encouraged to participate in the committee, including a representative from each of the Moorabbin Airport Corporation, Airservices Australia, Moorabbin Airport Residents Association, Business Victoria, Department of Infrastructure, Kingston City Council, Local, State and Federal members of Parliament and the Moorabbin Airport Tenants Association.

1.4.4 Environmental Management

MAC does not wish to constrict the legitimate training operations conducted at Moorabbin Airport, but is mindful of the concerns expressed by local residents represented both by the Moorabbin Airport Residents Association (MARA) and the Dingley Village Community Association (DVCA) concerning noise intrusion particularly from circuit training and also relating to aviation activities when the Air Traffic Control tower is unmanned.

MAC must state that it has at present no authority to affect these operations, as aviation activity is promulgated by Air Services Australia and aviation safety is monitored by the Civil Aviation Safety Authority (CASA).

MAC views the forum established by the Moorabbin Airport Aviation Consultative Committee (MAACC) as being the proper place to table and resolve such concerns.

However, MAC supports, and will continue to support, both MARA and the DVCA in two key areas:

a) *Tower Operational Hours*

Tower hours have been progressively reduced from 0700-2100 (2200 during daylight savings) to 0800-1800 from 21st Dec 1998. The effects have been to significantly increase the hours when the tower is un-manned and the Airport is operated as a Mandatory Broadcast Zone (MBZ). Given that circuit training is allowed until 2200 local, and on warm summer evenings a large number of aircraft are likely to be airborne, the potential for conflict is obvious.

Following a number of representations Airservices Australia agreed to change tower hours to 0900-1900 from early January but in the view of MAC, MARA and the DVCA this is not an acceptable compromise.

MAC **supports** the view that tower operational hours should equate to hours when circuit training is permitted at the Airport. MAC **does not support** the view that acceptable hours for circuit training should be constrained around tower opening times, which may be set for economic or cost-saving reasons. It is, for example, an essential part of a pilot's training that he/she is trained in night operations which does require night time circuit training. MAC **supports the view** that an acceptable compromise must be reached where essential training, including night training, is conducted but that this training is conducted with responsible authority present in the Air Traffic Control Tower.

b) Monitoring of Aviation Activity

MAC supports the views expressed by MARA that there is insufficient monitoring of activity during times when the tower is non-operational. In the case of possible infringements of Civil Aviation Regulations it is the responsibility of CASA to monitor, to effectively "police", these occurrences.

MAC believes that CASA must take a more active role in monitoring airspace compliance and that this must extend throughout the entire period envisaged in the Master Plan to ensure continuing responsible growth of the General Aviation industry.

1.4.5 "Fly Friendly" Programme

In other areas of aviation activity MAC will work through the medium of the Moorabbin Airport Aviation Consultative Committee (MAACC) to alter airspace procedures to mitigate as far as possible the effects of noise intrusion on residential areas. The progress to date has already included a number of measures that will serve to mitigate noise, such as revised take-off procedures which extend the distance(and thus height) required before an aircraft may make a turn, and the imposition of runway choice limits on certain types of "noisier" aircraft based at Moorabbin.

Moorabbin Airport already has a **"Fly Friendly"** policy which applies to the designated training area for the Airport. MAC will extend this policy to the environs of Moorabbin Airport and will work with operators at Moorabbin Airport to answer the legitimate concerns of local residents whilst maintaining the right of pilots to operate from Moorabbin within legal limits.

2.0 BACKGROUND

2.1 Site Context

Moorabbin Airport is located approximately 21 kilometres South-East of the Melbourne Central Activities District in Melbourne's 'bayside suburbs'. It is bounded by Centre Dandenong Road to the North, Boundary Road to the East, Lower Dandenong Road to the South and Grange Road and Bundora Parade to the West.

The Airport comprises 294 hectares of relatively flat, open land used for a variety of aviation and related uses and also a range of non-aviation uses. Moorabbin Airport has a significant role in the Australian aviation industry, being one of the busiest light aircraft Airports in Australia. Several roads traverse the site, incorporating Grange Road, Southern Road and Bundora Pde. No through access is provided through the Airport land between Centre Dandenong and Lower Dandenong Roads.

The locality plan of the Airport is provided in **figure 1.**

The Airport land includes the following uses:

- A dedicated aviation movement area in the centre of the site, extending from Centre Dandenong Road to Lower Dandenong Road.
- A helicopter operations and parking area to the East of Bundora Parade.
- A control tower, Airport terminal and Airport management office located near the corner of Bundora Parade and Second Avenue.
- Offices, hangars, apron areas and parking areas North of Second Avenue and West of Bundora Parade, and on the Northern and Southern sides of Northern Avenue.
- An Airport museum South of Second Avenue.
- An existing factory retail outlet, with associated car parking, located in the North-West of the Airport site.
- A "Lone Star" restaurant, landscape garden suppliers, Kingston Golf Course (operating via a ten (10) year lease) and a service station are located on the Airport land to the East.
- Market gardens, landscape suppliers and timber sales premises to the South and South-East of the aviation movement area, abutting residential lots near the intersection of Bundora Pde and Lower Dandenong Road.

Adjoining uses include:

- Land immediately to the east of the site is generally dominated by the Redwood Gardens Industrial Estate which is characterised by low density industry, warehouse and commercial development within a high amenity, generously landscaped setting. The estate is well established as a local employment base and has been developed at a higher quality than older industrial estates further to the south in Braeside.
- The proposed Dingley Freeway extends to the east of the Redwood Gardens Estate, forming a break between industrial development on Boundary Road and residential areas located further to the east in Dingley.

- A McDonalds Restaurant and service station are located directly across Boundary Road to the East.

- Smaller scale industrial, manufacturing and warehousing premises are clustered directly to the south of the airport across Lower Dandenong Road, and also to the west in the vicinity of Grange Road. Some of the development to the west of the airport includes businesses with direct and indirect relationships to airport operations. These precincts generally cater for small to medium sized industries and do not offer the landscape/amenity environment of the Redwood Gardens Estate.

- A local strip centre is located towards the South-West of the airport on Lower Dandenong Road. The centre offers limited convenience retail facilities for the surrounding residential population.

- Established residential areas are located directly adjacent to the South and South-West of the airport. These areas also extend further to the west and north-west of the airport, although they are generally separated by intervening industrial or open space uses. A separate residential area is located further to the east beyond the Redwood Gardens Estate in Dingley.

- Across the site to the North land is developed with a range of public and private open space facilities, with limited agricultural/market garden areas further to the North-East. The Cheltenham RSL, Kingston Heath Municipal Reserve and Heatherton Recreational Reserve comprise the main public open space facilities in this area. The Capital Golf Course is a privately owned golf course which has been developed with extensive screening and mounding along its boundary to Centre Dandenong Road. This treatment has limited the site's visual integration with surrounding land uses, and as a result, its interface with the Airport is relatively stark.

2.2 Sub Regional and Strategic Context

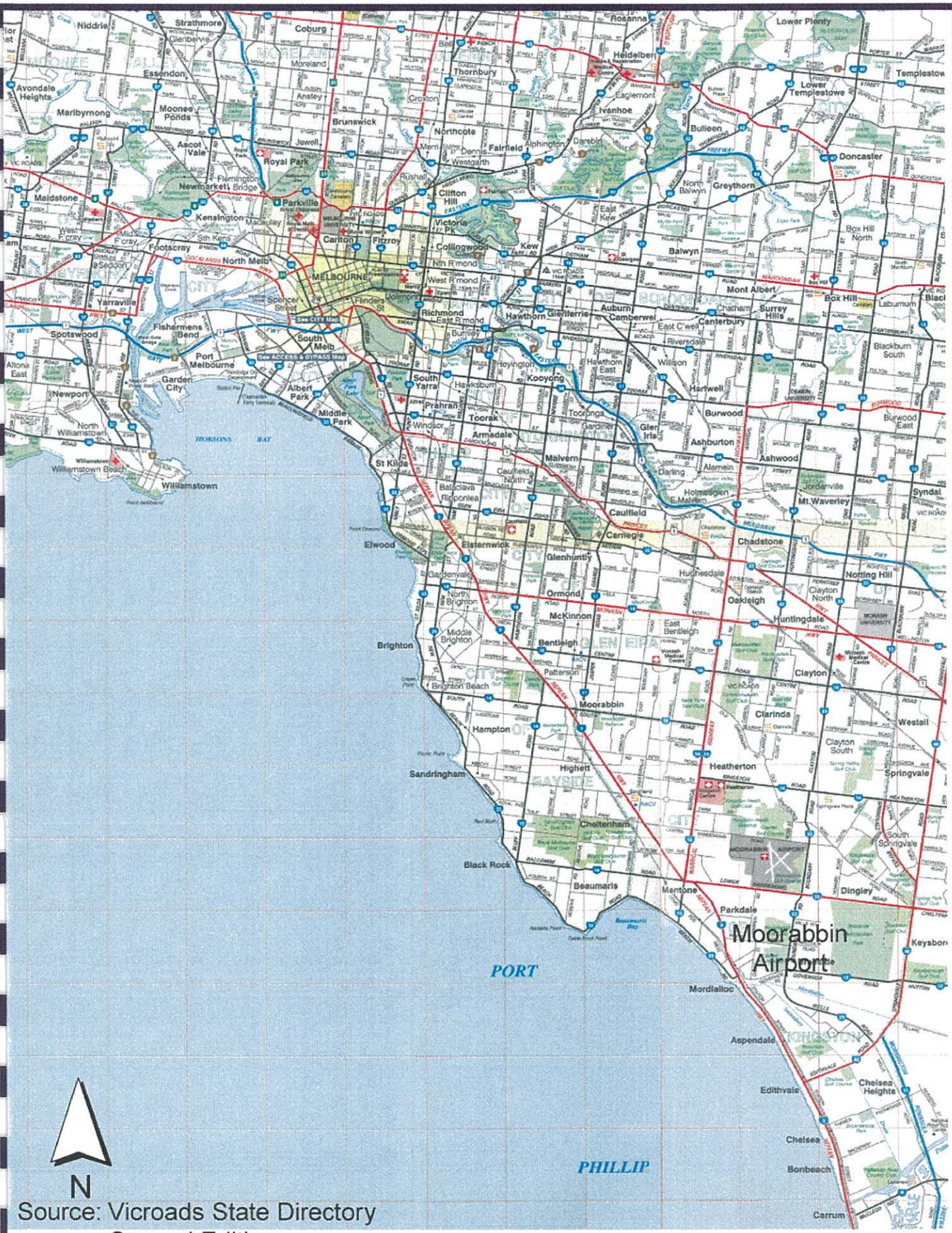
Moorabbin Airport is located in a predominantly urban area in South-East Melbourne, with the Northern boundary of the Airport defining a hard edge to the non urban area. This region is one of the most important industrial and manufacturing areas in Melbourne, closely linked to neighbouring industrial land to the East, South, West and North-West.

The area surrounding the Moorabbin Airport is characterised by a variety of urban uses, with a clustering of commercial and industrial uses to the South, East, and West of the site, and established residential areas towards the North-West and South–West of the site, and beyond.

The Strategic Overview Plan shown in **figure 4** shows the airport in its regional and metropolitan context. The Plan illustrates the airport's direct relationship to established industrial precincts across three of its key site frontages. These precincts form part of a major industrial and manufacturing activity node in South-East Melbourne.

A range of non urban uses extend to the North of the Airport, including a private golf course and agricultural activities. These uses, together with extractive industries and landfill operations further to the North in Heatherton, form part of a broader South-Eastern belt of non urban uses.

The Strategic Overview Plan is important in understanding the airport in its regional context and in identifying the Airport's role as a break between urban uses to the South of Centre Dandenong Road and non urban uses to the North and North-East of the Airport. Historically the 'break' provided by the Airport has been in a visual sense only, with runways and undeveloped areas towards the East of the site creating an open viewscape across the site. More intensive urban development along the Western part of the Airport has reinforced the physical edge between urban and non urban uses in this location.



Source: Vicroads State Directory Second Edition.

Not To Scale

Figure No. 1
Locality Plan

The Strategic Overview Plan highlights the airport's proximity to major transport arterials and demonstrates the airport's potential to build upon the strategic linkages to the existing major industrial/employment node to the South and East of the site formed by Redwood Gardens, Braeside, Mordialloc and the Woodlands Industrial Estate.

Extensive transport infrastructure, both existing and planned, surrounds the Airport. Reservations for the proposed Mornington Peninsula and Dingley Freeways are located within 500 metres of the Airport. Centre Dandenong, Boundary and Lower Dandenong Roads provide arterial connections to the Nepean Highway, Warrigal Road and the South Eastern Freeway. Rail infrastructure is provided nearby from the Frankston and Dandenong railways.

Much of the land surrounding Moorabbin Airport was developed through a pattern of metropolitan growth which followed the existing rail and road infrastructure until the 1940s. The post World War Two housing boom accelerated this pattern of urban growth. With greater emphasis upon expansion of Melbourne's metropolitan boundaries in the South-East by the 1950s and 60s, former townships such as Mordialloc, Moorabbin, Frankston and Dandenong were included in the Melbourne metropolitan area.

Although once dominated by market gardens, the areas surrounding the Airport have been progressively developed for a range of residential, industrial and commercial uses, with only limited areas to the north of the site still in use for agricultural purposes. Given the general decline in the agricultural industry some uncertainty exists in relation to the future role of these areas in a non urban context.

The site is located in a regionally significant and well established industrial and commercial area, with strong demand for a greater supply of land providing for expanded industrial, commercial, office and limited retailing developments. Moorabbin Airport's location at the inner end of the vast South Eastern Growth Area makes the Airport one of the most well located sites in Melbourne for further commercial and industrial development. Opportunities for such development may build upon the existing aviation functions of the airport and contribute to the economic development of the region as a major industrial/commercial node.

The Airport's interface with open space, agricultural and non urban areas further to the north of the site is important in relation to the open viewscapes the airport currently provides from the Centre Dandenong Road corridor. Whilst these viewscapes do contribute to the character of the adjoining non urban area, it is evident that the landscape qualities of this area have been diminished to some extent due to the dominance of extractive industries and landfill operations in the Heatherton area and the overall decline in the agricultural industry. Ultimately large parts of these areas will be developed into a 'Chain of Parks', formed by a series of linked open space networks. High quality landscaping along the airport's boundaries will contribute to the landscape vision promoted by the 'Chain of Parks' concept.

Residential development is generally located beyond the airport's immediate interface, except to the South–West of the site where residential development is established adjacent to the airport's boundary. Significant residential areas extend along the bayside area, with industrial development located generally inland from the Nepean Highway. Existing strip shopping and neighbourhood retail centres are located throughout the region with a major freestanding retail centre located in Cheltenham. The sub regional locality of Moorabbin Airport is illustrated in **figure 2** and an aerial photograph of the site is shown in **figure 3**.

The regional and metropolitan policy context of the Moorabbin Airport is discussed further by the following documents.

2.2.1 Living Suburbs

In 1995, the Victorian Government released its metropolitan policy for Melbourne. This contained five key directions aimed at facilitating economic development.

The most relevant direction is the following:

Direction 2 - Build on Melbourne's strengths as an international transport, production and communications hub.

Moorabbin Airport performs a strong role as a secondary Airport in the Victorian State and Melbourne metropolitan contexts, as well as a sub-regional economic function. The location of Moorabbin Airport in Melbourne's established and expanding South-Eastern suburbs affords it great opportunities for dynamic and improved linkages to commercial and industrial activities in the region, while maintaining the core Airport activities. This will help to advance the key strategic direction of Living Suburbs.

2.2.2 *Port Phillip Strategy*

The Port Phillip Strategy was prepared in 1991 to guide the future direction of aviation in the Port Phillip Catchment of Victoria, relating primarily to metropolitan Melbourne. The strategy's aims were to examine the Airport and airspace needs of the Port Phillip region by analysing the historical context of existing Airports and the findings of previous aviation/Airport studies. In relation to Moorabbin Airport, the strategy noted that the Airport fulfilled an aviation and economic role of regional and state importance.

In 1989, aircraft movements totalled 402,000, which included 34,000 helicopter movements. This number of movements was achieved by the use of parallel runway systems and General Aviation Airport Procedures. At this time, approximately 600 people were employed at the Airport with provision for further expansion. Commercial development was mooted as a significant development option for the non-movement (landside) area of the Airport.

In regard to Airport movement capacity, the Strategy stated that:

> *'No detailed assessment of capacity has been carried out but it is generally accepted that the unconstrained capacity is in the order of 450,000 to 500,000 aircraft movements. Current forecasts, unconstrained by environmental considerations, show levels of demand at Moorabbin Airport exceeding the capacity of the Airport within the study period'.*

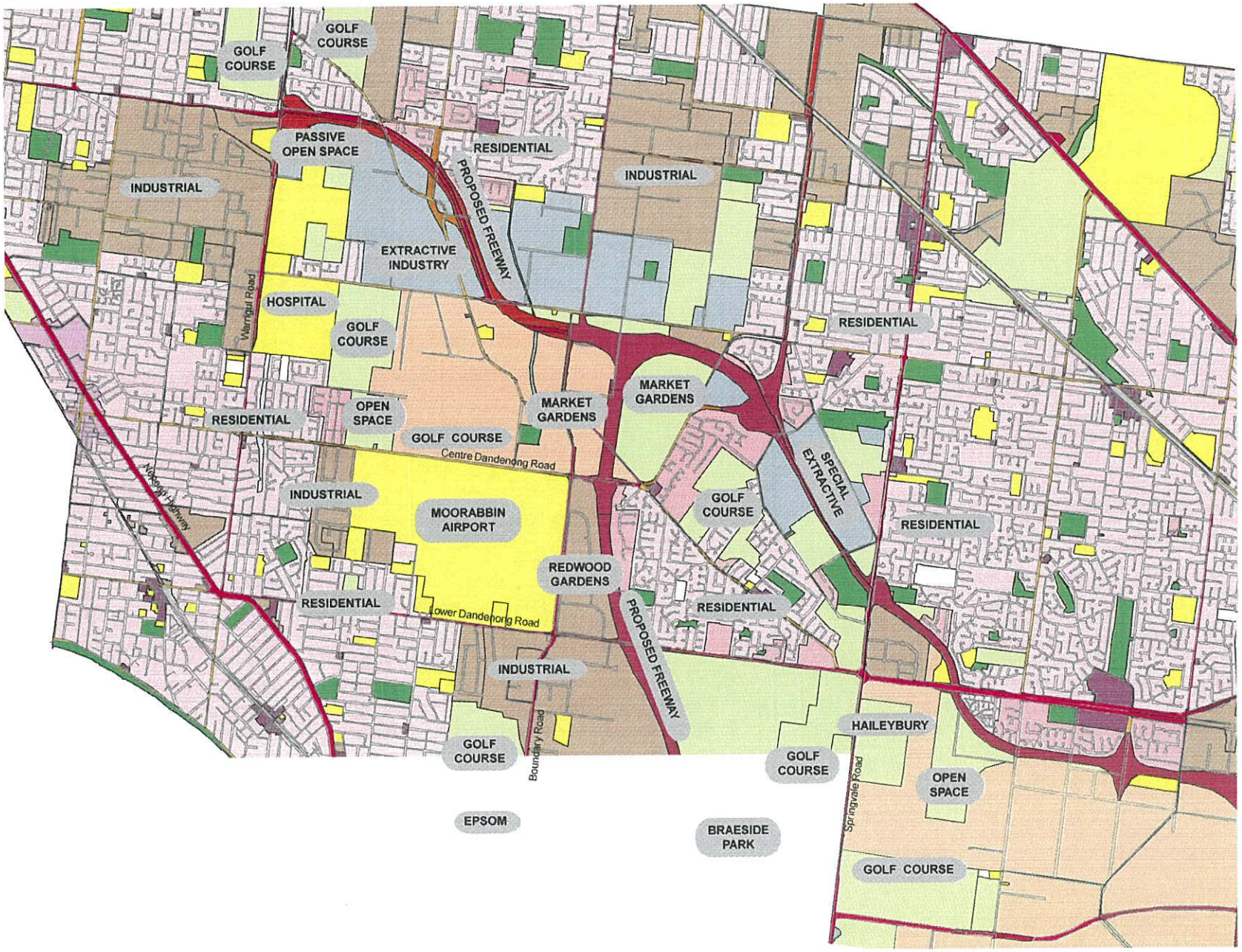
It has been estimated that 523,000 aircraft movements are the practical limit of the Airport although a theoretical limit of 686,000 GA movements and 11,000 commuter aircraft movements was indicated. A distinguishing feature of Moorabbin Airport is that 80% of its movements are related to pilot training. This results in concentrated aircraft activity in the near vicinity of the Airport (Port Phillip Region Airport and Airspace Study, 1991, pp. 5, 12, 16, 18).

MAC has adopted a 20 year forecast of 452,000 movements based on a 1.5% per annum increase, as shown in table 1 (refer to section 3.2.2). Whilst there is little change in the ANEF contours up to 523,000 aviation movements, a likely ceiling of 452,500 movements has also been adopted as a practical balance between environmental and commercial considerations.

2.2.3 *Transporting Melbourne*

Transporting Melbourne establishes broad strategies for the management and development of Melbourne's transport infrastructure into the next century. The Transporting Melbourne vision is that:

> *'Melbourne will continue to be a vibrant, environmentally sustainable, exciting metropolis, in which residents and visitors can be safe and secure, enjoying a rich cultural, social and recreational life in an economically advanced 21st century environment.*



MOORABBIN AIRPORT Master Plan

Figure No. 2

Sub-Regional Locality Plan

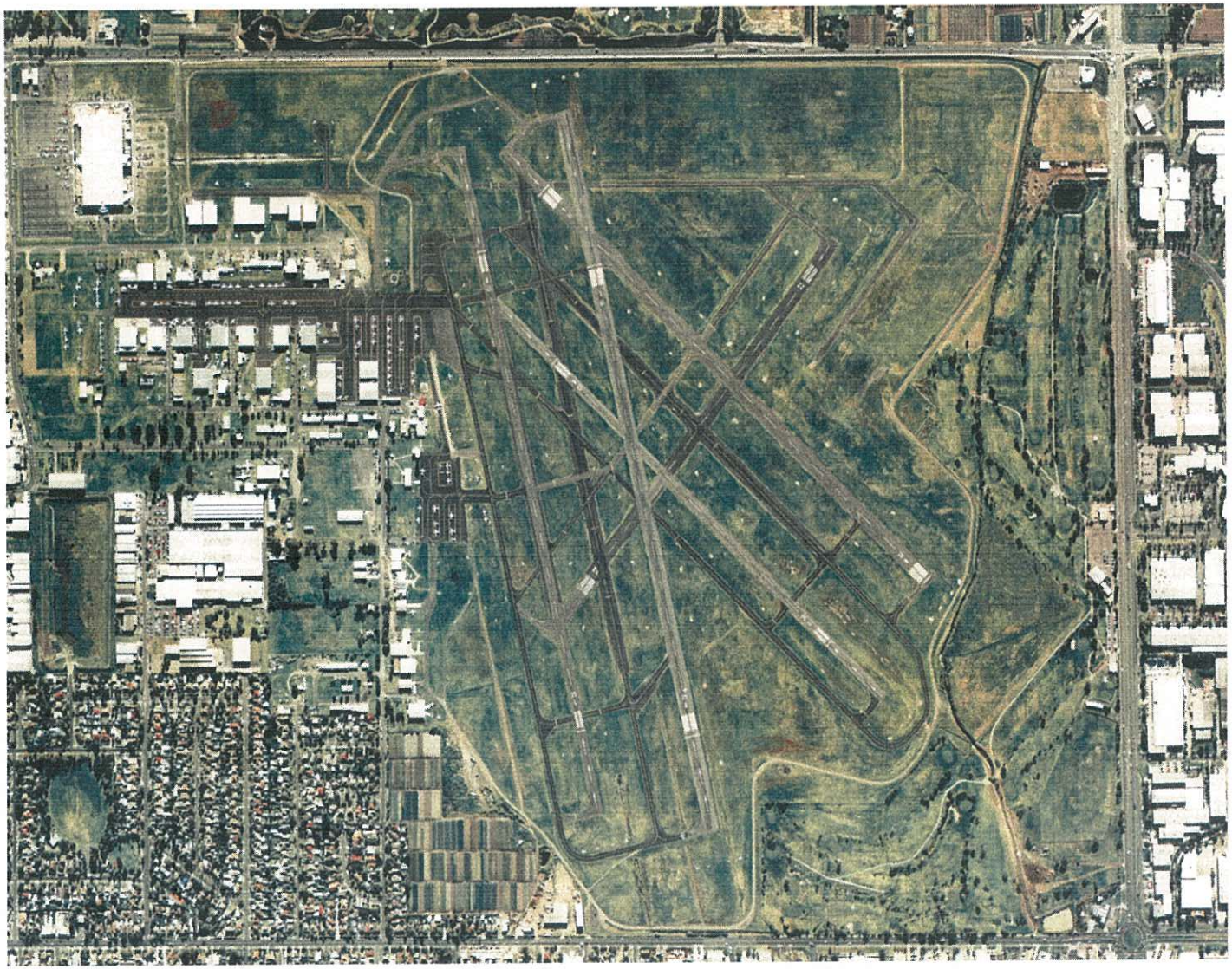


Figure No. 3
Moorabbin Airport
Aerial Photograph

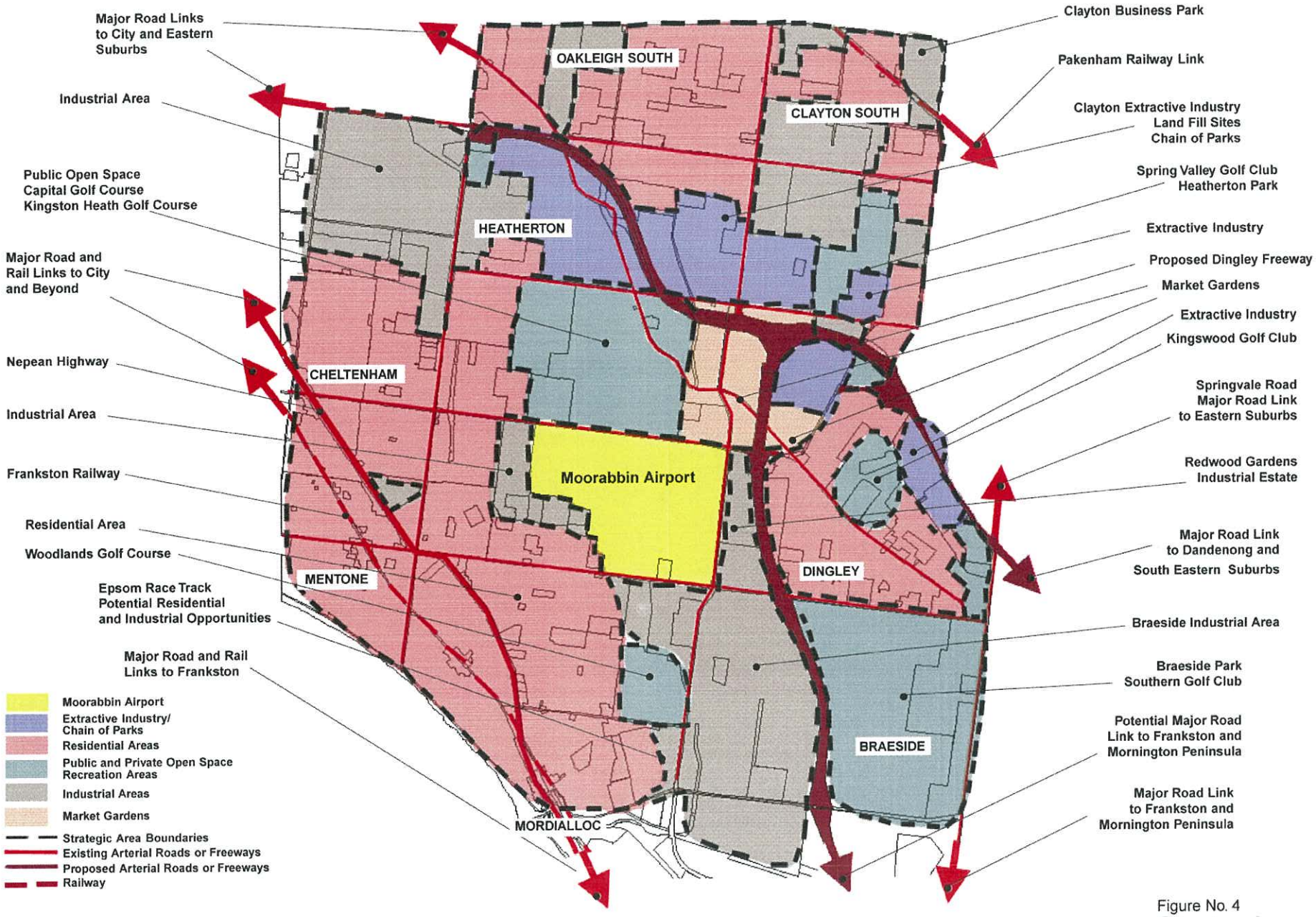


Figure No. 4

Strategic Overview

MOORABBIN AIRPORT Master Plan

Our manufacturing and service industries will be efficient, competitive, and technologically advanced, linked to world markets by instant electronic communications and a seamless transport system for freight and passengers.

Melburnians and visitors to Melbourne will have a high level of access to all urban services, including jobs, recreation, and cultural and social pursuits.'

The specific transport related strategic objectives relevant to Moorabbin Airport are as follows:

'Contribute to the development of the national, State and regional economies, by enhancing Melbourne's trading and transport hub function...

Integrate transport with urban and regional development, so that access needs are satisfied by both the relative location of activities and the mobility provided by the transport system...

Build upon the strengths of the existing transport network to better utilise assets and resources'.

It is important to note that Freightway Melbourne designates a strategic hub zone and corridor network as a priority for the identification of strategic locations for private and public sector investment. Advanced freight terminals at ports and Airports are identified as essential to the development of seamless freight services and in improving the economic well being of the State.

The middle ring South-Eastern manufacturing area (of which Moorabbin Airport is a part) accommodates 18% of the manufacturing and production activity in Melbourne, which is the second highest industrial agglommeration in Melbourne. The Dandenong and Cranbourne industrial areas are placed third with approximately 11%. This places Moorabbin Airport in a prime area for increased industrial and commercial development.

The Moorabbin Airport Master Plan supports these strategic objectives by building upon the existing aviation infrastructure on site and further developing regular public transport (RPT) and freight aircraft services over the next twenty years.

2.2.4 *Victoria Planning Provisions - State Planning Policy Framework*

The State Planning Policy Framework establishes a set of statewide policies applying to land use and development. This strategic framework utilises many of the relevant statewide policies for implementation in land use planning and decision making for the Airport land.

The Airports Act and Regulations (section 6.05) specify that the basis of land use planning for Airports located on Commonwealth land is the relevant state based statutory and strategic planning framework. Relevant parts of the Victoria Planning Provisions have been utilised in the Moorabbin Airport Land Use Plan in a form consistent with Victorian planning schemes. The detail of this planning framework is set out in the Moorabbin Airport Land Use Plan.

A range of aviation related and other developments will be encouraged at Moorabbin Airport which will support the state-wide policy framework.

The Business Policy (clause 17.02 of the SPPF) encourages developments which will meet the community's retail, office and commercial needs, providing accessibility, aggregation, efficient infrastructure use and sustainability.

Information in support of retail and office developments in excess of 4000 square metres in floorspace in any one location will include an assessment of the net community benefit and costs of the development, as well as traffic and environmental impacts in accordance with the Victorian Government's Retail and Office Development Guidelines. This assessment will be provided to MAC with comments from Council and referral authorities as appropriate.

Car parking will be provided in accordance with the provisions stated in the schedules to the Special Use Zone included in this Land Use Plan. Otherwise, clause 52.06 of the Land Use Plan will apply.

Significant industry uses exist on land surrounding the Moorabbin Airport. This role will be complemented with industrial uses encouraged in various precincts on the land, which support aviation activities and other appropriate manufacturing and industrial uses. MAC will have regard to *Recommended Buffer Distances for Industrial Residual Air Emissions (EPA 1990)* and clause 52.10 of the Land Use Plan. Like industries will be encouraged to locate within nominated precincts to minimise inter-industry conflict and to establish precincts of compatible industrial uses which complement and enhance the regional industrial role and aviation function of the area.

Planning for the Moorabbin Airport has considered the airfields policy (18.04) through the preparation of the Moorabbin Airport Master Plan and Land Use Plan. This has created a clear distinction between the airside and landside areas and comprehensive development objectives and proposals for the use and development of the land.

2.2.5 Kingston Planning Scheme

The new format Kingston Planning Scheme was prepared as part of the planning reform process adopted by the Victorian Government.

The Kingston Municipal Strategic Statement (MSS) was exhibited in 1997, forming part of the exhibited planning scheme. The MSS is a vision statement defining the future strategic land use planning for the municipality. The Kingston Planning Scheme zones the Airport as Commonwealth land (CA).

Moorabbin Airport is identified in the MSS as an important regional and state asset, and as the third busiest Airport in Australia. Depending on the role of other Airports, particularly Essendon, the significance of Moorabbin Airport may be further enhanced. Whilst the MSS states that the Airport is located centrally within the non-urban area, it is actually bounded on three sides by developed industrial and residential urban areas. The Airport has a direct relationship to regional urban land use activities and regional economic development imperatives.

The Kingston Planning Scheme was reviewed by an independent panel. Various recommendations were made with respect to the planning controls affecting Moorabbin Airport including:

- Confirmation of the Commonwealth zoning within the Kingston Planning Scheme. The effect of this was to recognise the proprietor ownership by the Federal Government. This means that Federal, rather than State law, applies to the Airport land unless otherwise delegated under the Airports Act or Regulations.

- Strategic support for the application and boundaries of the Airport Environs Overlay 1 (AEO1) and the Moorabbin Airport Environs Policy (formerly referred to as AEO2).

- Support for inclusion of a Design and Development Overlay relating to the Aviation Obstacle Referral and Height Area.

- Discussion of future roles and responsibilities of the Airport operator:

  - The sale of the lease for Moorabbin Airport to the Moorabbin Airport Corporation was confirmed, resulting from a Department of Transport and Regional Services tendering process. This process triggered the preparation of the Master Plan for the Airport to specify use and development objectives following an extensive consultation process.
  - The issue of the Airport owner as a referral agency was discussed in relation to AEO1 overlay. The Panel recommended that the Victoria Planning Provisions should be amended to require referral to the Federal Department of Transport and Regional Services in the application of the AEO1.

The Kingston Planning Scheme Panel supported the zoning, overlay, local policy and Master Planning processes for the Moorabbin Airport, as reflected in this strategic report. The recommendations from this Panel have been assessed by Kingston Council and the Department of Infrastructure. It is envisaged that the amended "new format" Kingston Planning Scheme will be approved by the Victorian Minister for Planning and Local Government in mid 1999.

2.2.6 *Industrial Opportunities*

Industrial land use is highlighted in a range of strategic documents with encouragement for diverse industrial and commercial developments to broaden the regional economic base. This industrial base is seen as essential for the sustainable social development of the region as shown by the location of many light industries and larger industrial firms, such as Nylex, in the municipality. With approximately one quarter of the City of Kingston's working population employed by existing industrial establishments, a significant opportunity is presented by land surplus to the airside operations of the Airport for future industrial developments.

The opportunity presented by the industrial and commercial development of surplus land on the site will enable value adding industries, commercial premises and offices to be provided. A quality and conveniently located Business and Industrial Park will be created in the North-East of the site, offering a distinct, attractive estate with modern buildings comparable to successful industrial and business estates in the region. This will offer a clear alternative to many of the older, poorly integrated and designed industrial areas in the municipality. This will complement the core objectives and strategies of the Kingston MSS and improve employment opportunities in the region.

2.2.7 *Regional Market Analysis*

There are three major holdings in the City of Kingston suitable for corporate and industrial development. These are:

- The Woodlands Industrial Estate (stage 5) comprising some 10 hectares, which has significant development problems, potentially restricting it from being placed on the market in the short term.
- Industrial land South of Governor Road, whilst this land may become available in the medium term, this will be for traditional industrial development due to the lack of main road exposure and will not compete with the Airport Business Park.
- Parkview Estate on Warrigal Road, which is the only real competitor in the region in that both large and small industrial and corporate uses can be accommodated. This site comprises a gross area of 40 hectares.

Moorabbin Airport is larger and its multiple main road frontages make it the most suitable land in the region for a high quality, up-market Business Park and other commercial and industrial uses.

In early 1998 a regional analysis was undertaken by Urban Enterprise P/L of a proposed air service between Moorabbin and Bankstown Airports, including identification of a target market, key demand factors and demand forecasts. The catchment for the analysis comprised the municipalities of Kingston, Monash, and Greater Dandenong.

As part of this demand analysis, a range of key indicators was identified with regard to the demand for industrial land in the area.

A total of 7,164 total businesses are located within this South-Eastern catchment, with manufacturing businesses comprising approximately 2,577 (or 36%) of this total. The total number of employees within the catchment is 126,592, with manufacturing employees totalling 65,877 (or 52%) of this amount. The vast majority of these manufacturing businesses supply for interstate and/or international markets. This clustering of industrial establishments is illustrated in **figure 5**.

Manufacturing remains a key economic activity in Victoria with a significant industrial base in the City of Kingston. Investment trends in new factories have increased substantially throughout 1997/98, restoring the dollar value of industrial construction to pre-1990 levels.

The report stated the following key industrial property indicators:

- 'The Southern region (which includes the primary and secondary catchments) has 26 designated industrial parks.
- Demand for tenancies of between 1,000 and 5,000 square metres was focussed in the South and East accounting together for 62% of activity in this tenancy range.
- Based on the type of business, the strongest demand in the year to September 1997 came from tenants requiring premises for the purpose of manufacturing (ie. factories). Factories accounted for 37% of the total area leased in the year to September 1997 and was achieved in 61 leasing deals, predominantly in the Southern suburbs.
- Warehousing accounted for 29% of the total area leased in the year to September 1997 and was achieved in 39 leasing deals, predominantly in the Northern and Southern regions.
- Specialised Hi-Tech tenants accounted for 16% of the total area leased in the year to September 1997 and was achieved in 12 leasing deals, predominantly in the Southern and Eastern regions.
- The South-East region has established itself as the High-Tech region of Melbourne with the obvious agglomeration of industries in business/industrial parks.' (Urban Enterprise, 1998, pp. 9-10).

Figure 5 shows a predominant clustering of industrial business around Moorabbin Airport, with a high proportion being large business located within 5km of the Airport.

This establishes a strong regional basis for the development of industry on non-airside land and for related freight and passenger Airport movements to be strengthened.

2.2.8 South East Non Urban Study

In 1996/97 the Cities of Frankston, Greater Dandenong, Kingston and Casey, with the Department of Infrastructure employed consultants to undertake a South East Non Urban Study for metropolitan Melbourne.

TOTAL MANUFACTURING ESTABLISHMENTS WITH AN INTERSTATE/INTERNATIONAL MARKET IN THE CATCHMENT

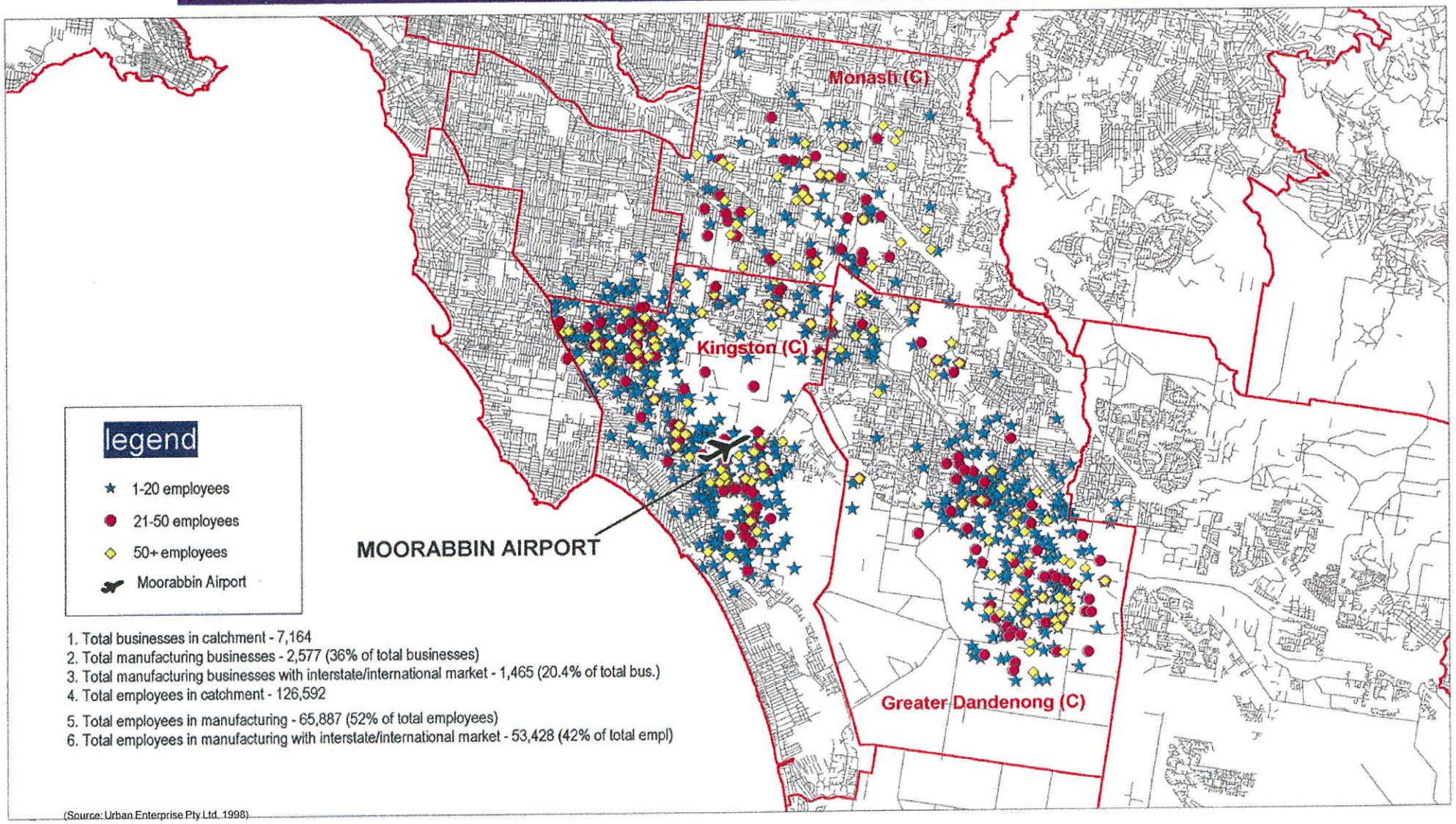


Figure No. 5

Clustering of Industrial Establishments

The study area included all non-urban land between Moorabbin in the North to the Mornington Peninsula. Moorabbin Airport was included in the review of this land.

The purpose of the study was to:

- Gain a clear understanding of how the non-urban uses function and are managed together with an assessment of existing development trends in Melbourne's South-East and their impact on the non-urban areas.
- Assess the likely impacts emerging from changes to land use in the non-urban areas.
- Provide a physical framework plan for the study area for implementation of local land use and development plans.
- Identify actions that would lead to sustainable land use and development in the study area
- Develop processes to guide consideration of development proposals in the study area.

The study found that not withstanding recognition of the green wedge concept:

'that some parts of the area have potential for urban conversion although this is limited...where urban conversion is contemplated through the rezoning of land for residential, rural residential, industrial and/or commercial uses this must only occur if:

- *'A detailed structure plan is prepared for the whole of the relevant sector, including the area to be maintained as green wedge and a clearly defined edge for the green wedge is provided.*
- *Contributions are made by the rezoned areas to the achievement of the green wedge concept* (South East Non Urban Study, 1997, p. v)'.

The study noted that the Airport is within an area used for intensive agriculture, but is primarily within an industrial and to a lesser extent, a residential and recreational area. In particular, the Dingley residential and industrial developments provide an urban break between various non-urban uses and activities in the area.

This Master Plan acknowledges these recommendations by providing a detailed structure plan and defining a logical hard edge to the green wedge.

The study identified that the Northern and North-Western portion of the study area is characterised by:

- 'Multiplicity of land uses.
- Larger areas are unattractive in appearance due to the extensive land area that is currently (or has recently been) subject to sand mining or land fill. In the longer term visual amenity will improve if restoration policies for land affected are implemented.
- Very high concentrations of Golf Courses and Market Gardens.
- Largest concentrations of residential and industrial development in the study area (South East Non Urban Study, 1997, p. 9)'.

Moorabbin Airport is included in the study's "sector A" which is defined as the Heatherton area. Key issues identified for this sector include:

- Urban conversion around the Chain of Parks.
- Develop open space links on landfill sites.
- No urban conversion in areas affected by flight paths or extractive industry and freeway buffers.

An important constraint for development of this policy area (and for the Dingley Village policy area) is to ensure that Moorabbin Airport flight paths are not compromised by future development.

The study states that:

'Moorabbin Airport is a substantial transport infrastructure for Melbourne and is important to the region. Respect needs to be given to the Airport's flight paths and ANEC noise contours. These place restrictions on the types and heights of development allowed near the Airport precinct (South East Non Urban Study, 1997, p. 24).'

The Kingston Planning Scheme Panel confirmed this view.

In terms of conflicting land uses surrounding the Airport, the Kingston MSS requires Airport operations to be preserved. Residential encroachments around the Moorabbin Airport and changes in nearby land use have also brought about conflict at the Airport interface. The Airport, due to its major influence on the regional economy must be adequately protected to ensure that the Airport reaches its full aviation potential without being compromised. The Airports Act 1996 and regulations prohibit residential use and development on Commonwealth land prescribed as an Airport. As such, any opportunities for further residential development in the area are necessarily limited (Kingston City Council, 1997, p.39).

The Strategic Overview Plan (**figure 4**) illustrates these factors, showing the location of the Airport land amongst a predominantly industrial area. The Redwood Gardens Industrial Estate is located East of Boundary Road, set in a heavily landscaped setting. Single industrial lots with minimal landscaping are located to the South and South-East of the Airport, extending to Braeside and the Mordialloc Creek. The residential area of Dingley is located further West of the Redwood Gardens Industrial Estate. More fragmented and older industrial premises, many operating businesses directly or indirectly related to the Airport operations, are located South-West and West of the Airport.

Beyond this, developed residential land extends to Warrigal Road and beyond Nepean Highway to Cheltenham and Mentone. A small neighbourhood centre is located South of the Airport along Lower Dandenong Road between Warren Road and Rivette Street. Residential land is located further South of the centre to Parkdale and Mordialloc. An industrial area is located South of the Airport in the Northern most area of Mordialloc. Further South of this area is the Woodlands Golf Course.

The Capital Golf Course, Heatherton Recreation Reserve, Kingston Heath Reserve and Kingston Heath Golf Course are located North of the Airport, across Centre Dandenong Road. Public land, extractive industry sites and market gardens are located further Northwards. These areas of public reserve and extractive sites (when exhausted of quarry material and filled as landfill sites) will form the "Chain of Parks" open space network.

The development of the Capital Golf Course has now separated the Moorabbin Airport from remaining non-urban land located to the North.

2.2.9 South East Non Urban Study – Memorandum of Understanding

Since the release of the final consultant report, a memorandum of understanding has been agreed to by each of the participating Councils and the Department of Infrastructure. The aim of this is to "encourage sustainable land use practices and provide optimal long term planning solutions for the use and development of land within the South East Non Urban Area (Kingston City Council, 1998, p. 8).'

Key Performance Objectives include:

- 'To protect the economic and operational viability of key industries and infrastructure in the area including extractive industries, Moorabbin Airport, the Dandenong Offensive Industry Zone (DOIZ) and the Eastern Treatment Plant (ETP).

  The need to protect these industries has been recognised since metropolitan growth policy objectives were first developed. Current metropolitan policy, Living Suburbs, also reaffirms this need caused by the encroachment of incompatible activities. Thus the maintenance of appropriate buffers (both in terms of land use and distance) is an important component of this objective (ibid.)'.

- To ensure that use and development within the non urban area does not compromise metropolitan urban growth strategies.

  This could include efficient use of land and infrastructure, the encouragement of redevelopment and urban consolidation opportunities, and the utilisation of designated growth areas for new urban development.

- To manage the edge of urban areas in a manner which ensures that the non-urban area is both stable and enduring.'

The memorandum states that:

> *'Land on the urban fringe often exists as a 'zone of impermanence' where the use of land is in a state of transition from non-urban to urban uses. This pattern creates uncertainty and instability for land owners and the community alike, and can frequently result in urban blight along the urban/non urban interface. The creation of a 'hard' edge would be an important outcome. Such edges might include natural features (such as streams and ridgelines), major roads or public land (parkland, etc)'.*
>
> *'The process involves establishing broad land use principles for management of land use within each sector of the non urban area. Local structure plans will be prepared for each sector, where relevant, and will result in clear directions on land use, environmental, transport and open space systems. Proposals for changes in land use within such sectors must be assessed against this policy and other strategic policies for the sector'.*

The importance of Moorabbin Airport relates to its regional and state aviation role and its links to adjoining urban land and significant industrial/commercial uses. The Moorabbin Airport Land Use Plan complies with this structure planning process by proposing urban consolidation through high quality and well landscaped industrial and commercial development of the non-airside land. This will complement the efficient use of existing infrastructure and the economy of the region. At least three-fifths of the Airport land will remain unchanged, retaining extensive open vistas over the runways and taxiways between Centre Dandenong and Lower Dandenong Roads.

3.0 AVIATION STRATEGY

Moorabbin Airport and the aviation businesses located there are significant and strategically important to the aviation industry in Victoria and Australia. In the past development of aviation facilities has been hampered by the Airport owner's policy of **not** providing capital for the construction of specific buildings for general aviation, such as hangers, etc. Consequently, companies that need to be located at Airports had no option other than to invest in their own business facilities. This tied up business capital that could otherwise have been put into business development and expansion.

MAC will work closely with existing Airport users and the broader aviation industry to identify the best companies in the industry and entice them to locate their businesses at Moorabbin. MAC will attract aviation companies to Moorabbin as it has access to the capital, technical resources and development experience needed to provide buildings for lease and the vision to develop the industry.

MAC intends to fully meet the various statutory requirements of Airport ownership, principally to maintain and support the general aviation activities at Moorabbin Airport. Further, we intend to build the Airport into a centre of aviation excellence in Australia.

MAC's strategy for the future long term growth of aviation operations at Moorabbin builds upon the existing **Approved Australian Noise Exposure Forecast (ANEF)** for the Airport, which represents the current accepted level of forecast aviation growth. The existing ANEF has been endorsed by Air Services Australia and accepted by State Government and Council as a basis for the long term planning of the Airport. This Aviation strategy allows for development to occur taking account of the approved ANEF and the nominated level of aviation growth it envisages. Further options for development of the Airport identified through this Master Plan may require the existing ANEF to be revised, however approval and endorsement of any new ANEF will be sought at the appropriate time.

3.1 Aviation Planning Criteria

A range of studies and forecasts have been examined in the preparation of the aviation strategy for the Moorabbin Airport as detailed below.

3.1.1 Existing Aviation Operations

Moorabbin Airport was opened in 1949 following a decision to develop a secondary Airport for Melbourne. The Airport began as a grass field and asphalt runways were constructed during the 1960s to establish all weather runways. During 1983-87, the runway layout was modified to its current layout to accommodate General Aviation Airport Procedures.

Moorabbin Airport is used for a variety of aviation uses including commercial aviation, training and recreational flights. Five runways service the Airport as shown in **figure 6**. Existing runways and associated lengths are as follows:

- 17L/35R: 1335 metres
- 17R/35L: 1240 metres
- 13L/31R: 1150 metres
- 13R/31L: 1060 metres
- 04/22: 814 metres

The Airport has a substantial network of taxiways and aprons serving several hangar and building areas. Over 300 aircraft are based at the Airport. These range from light single engine aircraft and sophisticated twin engine aircraft through to smaller executive jets. Up to 150 weekly services are scheduled to the Bass Strait Islands, Northern Tasmania and Merimbula. The Airport is also a base for emergency services.

70 tenants are located at the Airport, with 50 aviation related tenants and 15 flying training organisations, amongst others. Examples of aviation related tenants include the Airport tenants group (General Aviation Association – Victoria Branch), Aus-Air Regional Airline, King Island Airlines, Schutt Aviation, the Royal Victorian Aero Club, Superior Aviation, Tysons Refuelling Services, Moorabbin Air Museum, Airservices Australia and CASA. Aviation buildings and annexes comprise 36 hangars and 75 general purpose buildings and hangars. The leased area of these buildings and annexes is approximately 225,000 m^2. Approximately 648,000 m^2 of non-aviation related area is leased, situated mostly on the perimeter of the Airport.

3.1.2 Objectives and Constraints

The primary purpose of the Master Plan is to articulate a clear vision for the ultimate development of the Airport so that the potential of the Airport site is optimised to satisfy long term aviation needs and provide for complementary commercial developments.

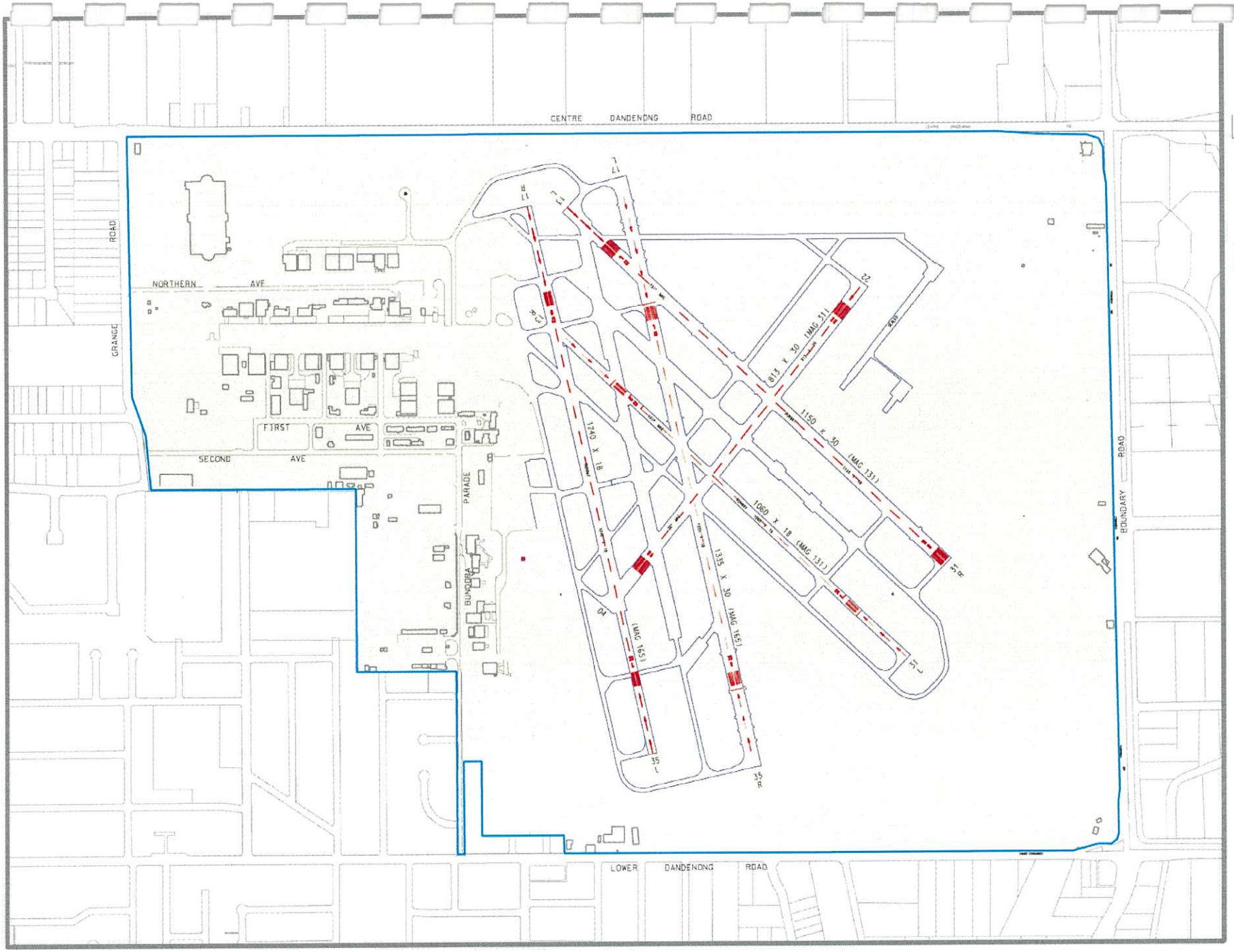
Airport capacity is arguably constrained by environmental considerations, particularly the need to preserve the existing compatibility and balance between Airport noise impacts and nearby residential areas. The Master Plan adopts a practical ceiling of 452,500 annual aircraft movements to respect the amenity of the area. This ceiling represents about 80% of the practical capacity of the existing runway system.

To address the requirements of the *Airports Act 1996* and ensure the Master Plan reflects the anticipated operational and commercial environment, MAC has undertaken a comprehensive review of the Airport's forward planning.

On present indications this ceiling will be reached in 20 years. Although Moorabbin will retain its role as Australia's premier flying training Airport, subsequent growth in commercial aviation is likely to mean a gradual change in the mix of aircraft operations. The Master Plan proposes an Airport design which balances the airside and landside operations and allows for this gradual readjustment in aviation activities.

It has been estimated that 523,000 aircraft movements is the practical limit of the Airport, although a theoretical limit of 686,000 GA movements and 11,000 commuter aircraft movements was indicated by the Port Phillip Airport and Airspace Study in 1991.

Moorabbin Airport is strategically well located to attract the corporate aviation sector, and to expand its regular public transport (RPT) and freight services. At this time it is difficult to do more than speculate about the potential scope of these activities. **Figure 9** provides an indication of the airport's potential long term requirements for hangars and aircraft parking in association with these activities. The Master Plan therefore needs to have sufficient short term ("the first five years") flexibility to allow reassessment of spatial allocation in response to actual industry demands.



MOORABBIN AIRPORT MASTER PLAN

Figure No.6

Existing Runway Plan

This will be achieved by:

- Making provision for future runway extensions to suit modern regional jet aircraft commonly engaged in Regular Public Transport (RPT) operations.

- Designating a future passenger terminal precinct. The Master Plan designates the most likely location for a terminal, which is the site of the current management offices. However, an airline operator may require an alternate site and this must be allowed for in future planning.

- Providing for corporate aviation and aerospace industry hangars and facilities, and ancillary development.

- Proposing to separate fixed and rotary wing operations and proposing revised arrangements for helicopter training activity; while

- Continuing to accommodate a mix of general aviation aircraft and activities.

The dimensions, shape and layout of basic Airport facilities (runways, taxiways and aprons) and the surrounding airspace which must be kept free of obstacles, are determined by the performance capability and size of the aircraft for which they are provided. The planning of Airport facilities therefore begins by identifying the most demanding or "critical" design aircraft intended to use them.

Australian requirements are determined by the Civil Aviation Safety Authority (CASA) and published primarily in their *Rules and Practices for Aerodromes* (RPAs). Each aircraft or Airport facility has a reference code which comprises a number and a letter, hence a Code 3C aircraft, a code 3 runway or a code C taxiway. A code 3C aircraft is permitted to operate only if the appropriate code 3 and code C facilities are provided.

3.1.3 Design Aircraft

The Master Plan adopts a Code 3C aircraft for the facilities initially planned for regular public transport (RPT) operations. Facilities which would need to be developed for RPT activity include runway 13R/31L, its parallel taxiway, and a taxiway link to the passenger terminal apron.

Moorabbin can serve as an origin/destination port for both the business and leisure traveller providing a viable and attractive alternative to Melbourne Airport, offering high frequency and equivalent service levels with typical regional turbojet aircraft. The largest of these is currently a code 3C aircraft. This class is typified by the BAe 146/AI(R) Avro RJ series of turbo jet aircraft with seating capacity for between 70 and 100 passengers. These state of the art aircraft use the most modern large fan jet engines which are particularly quiet. Future generation aircraft in this class will include quiet operating technology and will be of very similar size and performance capability because of runway limitations of regional Airports to which they are typically designed to operate worldwide.

It is not proposed to accommodate larger aircraft on a regular basis. For both operational and economic reasons it is not expected that this Airport will be suitable to older generation aircraft such as the Fokker F28, DC9 or early B737 series aircraft.

Facilities intended for corporate aircraft are planned to accommodate a Code 2B or 2C aircraft, for example: a Learjet. Runways and associated taxiways intended for use by larger general aviation aircraft are also planned to accommodate Code 2 aircraft. Generally speaking runway 13L/31R, the parallel 17/35 runways, and their associated taxiways are planned to this standard.

Helicopter facilities will allow unrestricted use by aircraft with a maximum rotor diameter of 15 metres, although detailed planning will ensure sufficient flexibility to accommodate the occasional larger helicopter. Examples of the type of helicopters to be accommodated at the Airport include those used by the media and emergency services.

These provisions recognise the inherent development limitations of the Moorabbin Airport site and the difficulties in providing infrastructure for larger aircraft types.

3.1.4 Terminal Facilities

The International Air Transport Association (IATA) publishes *Guidelines for Airport Capacity/ Demand Management* to address the problem of peak hour demands and congestion within the terminal precinct. Future planning of the passenger terminal facility will be based on the appropriate IATA "level of service" criteria which provide good levels of service and comfort at reasonable cost.

This methodology cannot be used until the characteristics of peak hour demand and passenger behaviour have been established. As an interim measure, short term ("the first five years") planning for the passenger terminal facilities will be based on a provision of 12 square metres per expected peak hour passenger, or such other ratio as agreed with the relevant authorities. The Australian experience has shown this makes reasonable allowance for the normal range of functions associated with passenger processing.

The terminal will take a relatively simple form but make normal provision for passenger and baggage flow, and provide a limited range of retail services.

3.2 Aircraft Movements

3.2.1 Past Activity

Traffic levels at Moorabbin reached a peak of 402,000 aircraft movements in 1989. This may have been partly due to the effects of the airline pilots dispute on the overall level of general aviation activity. In earlier and subsequent years activity has been relatively stable at around 340,000 aircraft movements. Even so, in the last 20 years aircraft movements have grown at a rate equivalent to annual average of 2.1%.

Moorabbin is predominantly a general aviation (GA) Airport. GA encompasses both commercial operators (those who hold an Air Operator's Certificate or AOC) and non-commercial aircraft owners. General Aviation AOC holders engage in low capacity RPT services, charter or aerial work (which currently accounts for some 7,000 annual aircraft low or high capacity movements). RPT and charter operations are well understood. The term "aerial work" includes activities such as aerial surveying, agricultural operations, aerial photography, advertising, flying training and ambulance functions. Non-commercial GA includes operators whose dominant flying activity is either associated with their business but not for hire or reward, or is undertaken for fully private purposes. All of these activity groups are represented at Moorabbin Airport.

3.2.2 Forecasts

The General Aviation Industry is currently experiencing a major decline in activity and early data for the 1998 calendar year indicates total movements at less than the forecast 360,000 level. This is due to a number of factors including the weakness of the Australian Dollar affecting aircraft and parts prices, the effect of one major operator moving a large number of aircraft to Point Cook Airport for circuit training, unseasonable weather conditions and a general trend for private owners to move away from GAAP Airports due to perceived higher prices compared to non-GAAP Airports. Whether any of these factors will become a trend can only be a matter for conjecture, but MAC must take a view that a "normal" baseline for calculations of growth in aircraft movements would be a figure of 335,000 in the 1998/99 calendar year.

For illustrative purposes we have included the Australian Noise Exposure Index (ANEI) for 1997/98, which shows the actual pattern of noise exposure which occurred in that period. The ANEI is shown in **figure 7**, and is a useful comparison with the existing approved Australian Noise Exposure Forecast (ANEF) for the Airport shown in **figure 12**.

Aircraft movements are expected to grow at an annual equivalent of around 1.5% in the long-term, however there may be distortions to a purely linear growth due to the change in ownership of the facility and the impact of location specific charging. At this rate the total aircraft movements would increase to around 452,500 within 20 years.

Total aircraft movements are shown in **table 1**. Within this growth a gradual change in the mix of aircraft is anticipated as alternatives to recreational flying and other forms of non-commercial GA evolve at the site.

Table 1: Total Aircraft Movements

Year	*MAC Forecast*
1998/99	335,000
2003/04	361,000
2008/09	389,000
2013/14	419,000
2018/19	452,500

MAC will continue to fully investigate all proposals for RPT services and actively encourage commercial GA activities as a key element in their Airport development strategy. However, it must be noted that new RPT services are dependent on attracting suitable operators.

3.3 Passenger Movements

3.3.1 Past Activity

Regular passenger services have operated since the late 1970s, serving the Bass Strait Islands, Northern Tasmania and Victorian regional centres.

RPT activity was officially recorded for the first time in 1996/97, and amounted to 6,903 aircraft movements, a little over 2% of the annual total.

Passenger movements have remained relatively stable since they were first recorded in 1991/92, although declining slightly at about 1.25% per annum to their present level (in 1996/97) of 32,980 passengers. Two AOC holders currently provide RPT services utilising light aircraft such as the 19 seat Bandierante and the 9 seat Piper Navajo. The potential for RPT services to mainland interstate capitals utilising larger aircraft has remained untapped.

3.3.2 Forecasts

The level of RPT passenger movements is presently estimated at around 33,000. To date all services provided have been restricted to low capacity RPT operations.

A market demand analysis (Urban Enterprise Pty Ltd, 1998) commissioned by the Airport's previous owner estimated a potential demand for business travel within the primary catchment area for Moorabbin Airport of around 250,000 passenger movements a year for a Moorabbin-Bankstown (Sydney) service. The primary catchment area was identified as the municipalities of Kingston, Monash and Greater Dandenong, and the primary target market within this area was identified as the small to medium sized manufacturing companies with a national/international market focus.

At least 50% of businesses responding to the survey indicated they would also patronise a Moorabbin-Archerfield (Brisbane) or Moorabbin-Parafield (Adelaide) service.

This report did not address the demand for a reciprocal service from Bankstown to Moorabbin. Further, no studies have yet been completed to address market demand for a Moorabbin – Sydney – Kingsford Smith service or similar services to Adelaide, Canberra or Brisbane and/or Coolangatta. MAC believes that a large latent market exist for such services, which would compliment existing services from Melbourne Tullamarine and not dilute them.

The Moorabbin Airport Master Plan adopts the Urban Enterprise forecasts as an indication of the potential total passenger movements. These are used as the basis for planning the terminal facility. Clearly these forecasts are indicative only and will be reviewed in the light of actual demand, should the service eventuate.

MAC believes that a potential market exists for RPT services at a level of up to 12,500 movements (6,250 round trip flights) per year within the 20 year time span of the Master Plan. Both potential passenger movements and the adopted ANEF forecast have been prepared using this data.

This level of operations would support two airlines operating low frequency services to the stated destinations or 1.5 airlines operating medium frequency business-orientated services to the major capital cities and lesser frequencies to other destinations.

However, it is possible that two or more airlines will be attracted to service these markets and the figure of 12,500 movements is seen as a likely, but not certain target.

MAC reserves the right to apply for an increase in frequencies if market demand warrants this and will provide for public exhibition and government approval new ANEF profiles and revised passenger movement forecasts if demand so warrants.

The data below, and attached ANEF in **figure 12** relates to a forecast figure based upon 12,500 movements at the end of 20 years. The low forecast is based upon a 70 seat aircraft at 70% load factor. The High forecast is based upon a 100 seat aircraft at 70% load factor.

Growth forecast is at a conservative annual level of 1.1%.

The 100 seat aircraft is based upon a Bae146-300 or similar. No 70 seat regional jet aircraft that would be economically viable for Moorabbin is currently in service but it is certain that within the time span of the Master Plan such an aircraft will not only exist but will find a secure niche in revenue service. For information, the current "new generation" regional jets such as the Embraer ERJ145, Bombardier CRJ and Dornier 528JET all have seating capacities around the 50 seat level. Most manufacturers have plans to upgrade these aircraft into the 70 seat market niche.

Forecast passenger movements are shown in **table 2**.

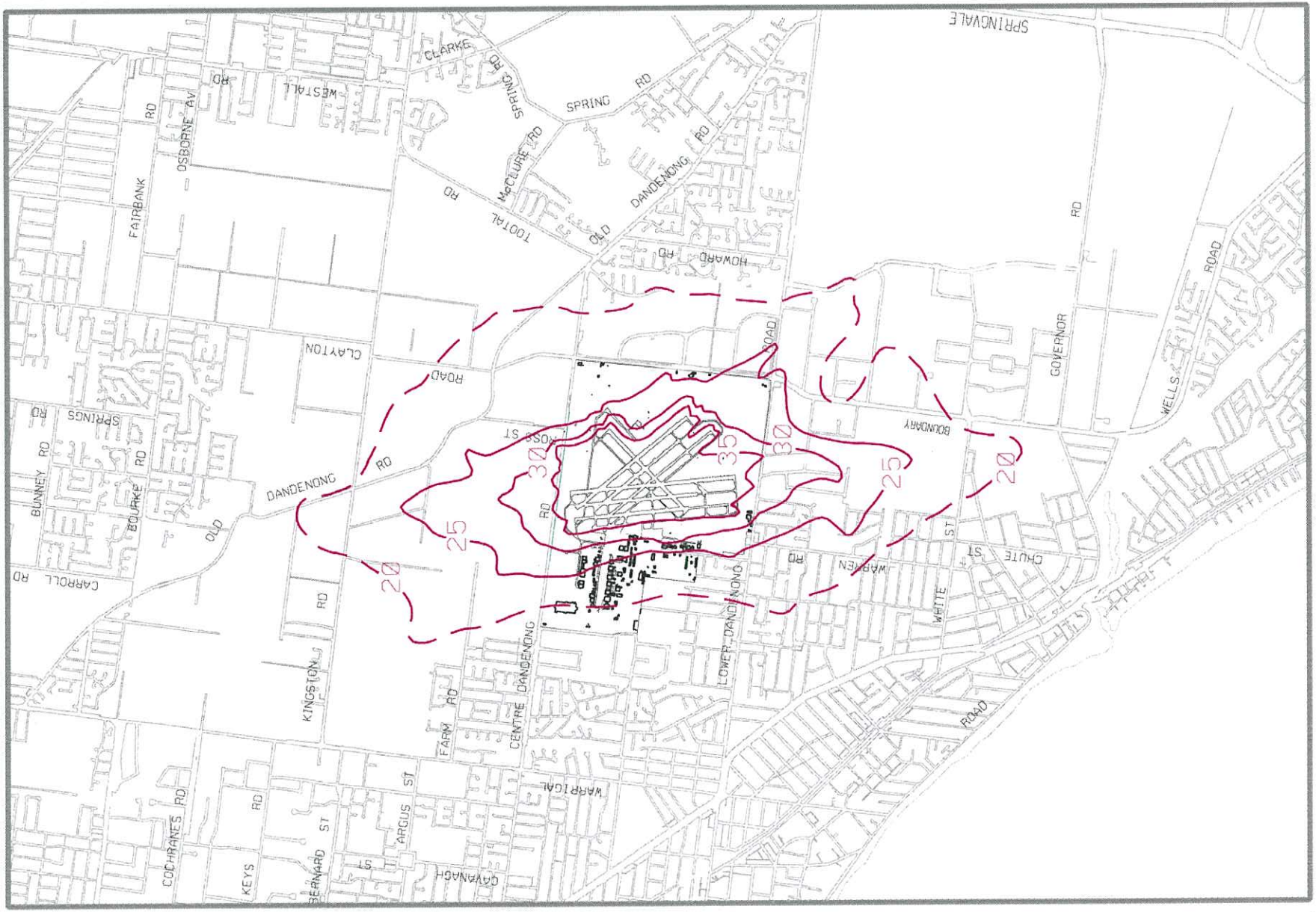


Figure No. 7

Australian Noise Exposure Index 1997/98

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Table 2: Total passenger movements

*Year**	*Low Forecast*	*High Forecast*
Year 1	491,000	701,000
Year 5	519,000	741,000
Year 10	548,000	783,000
Year 15	579,000	828,000
Year 20	612,500	875,000

* Year 1 refers to the first year of the operations of the RPT services

3.4 Freight Movements

Figures recorded between 1992/93 and 1995/96 suggest that around 1,100 tonnes of airfreight is consigned annually on the low capacity RPT services. A small number of dedicated freight services are provided by light aircraft with typical payload of 2-3 tonnes. Perhaps 4,000 tonnes of air freight are trans-shipped annually.

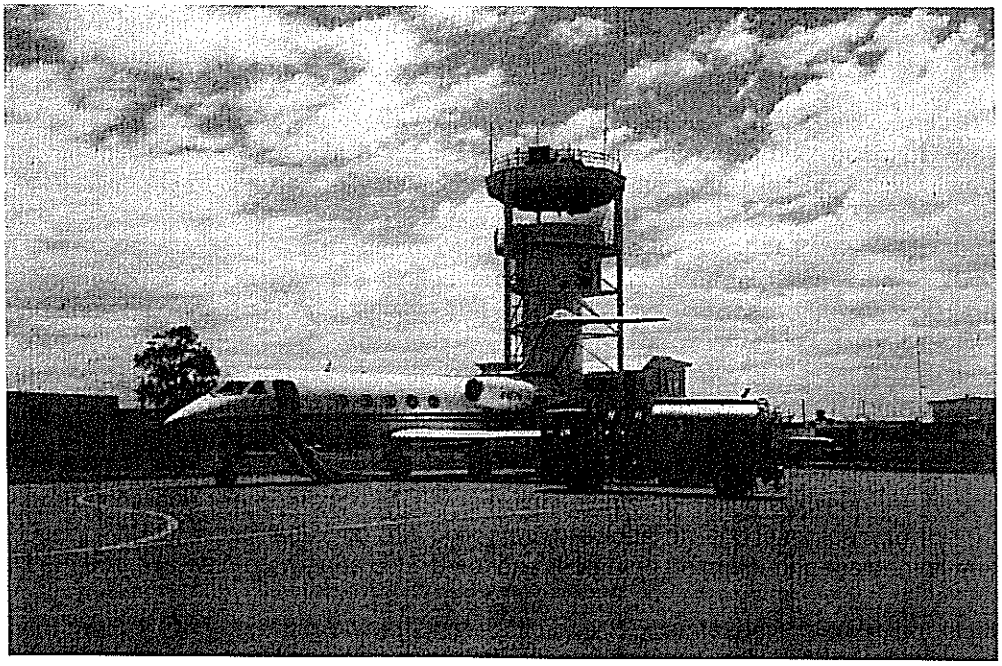
Air freight typically comprises high value lightweight articles or time-sensitive items such as perishables or business services which require maximum security. As a by product of high capacity RPT services such freight can normally be accommodated in the hold of the operating aircraft.

Because of its urban location Moorabbin Airport is a possible location for the development of night freight traffic and already supports a limited number of flights largely from and to King Island, transporting seafood, mail and newspapers. The potential, however, for the development of express parcels traffic does exist.

MAC does not believe this is an appropriate use for Moorabbin Airport in the context of increased aircraft noise at night impacting upon local residents.

MAC will not encourage the operation of any airfreight flights operating between the hours of 2300 and 0600 local. MAC recognises that this policy will preclude an economic gain to the Airport but cannot accept that this gain outweighs considerations regarding neighbouring residential areas.

MAC will encourage the development of freight traffic on RPT flights, dedicated freight flights during daylight hours, and will encourage companies operating Logistics supply "Parts Banks" operating on the "Just-in-Time" principal provided they comply with the above requirements.



4.0 AIRPORT DEVELOPMENT

4.1 Methodology

In preparing this Master Plan, MAC has reviewed previous planning and reassessed the location and space allocation of developments needed to cater for the forecast growth in Airport activity levels during the next 20 years.

The planning approach has involved assessment of demands for space on the Airport and the determination of an integrated layout for various aviation, aviation support, and commercial requirements.

Airside requirements have been established largely by reference to previous studies of land area and land use requirements (Meldrum Burrows & Partners, 1990 and Tract Consultants, 1998), development plans prepared by the Airport's previous owner (Federal Airports Corporation, 1996), and a market demand analysis for a proposed RPT service (Urban Enterprise, 1998). Aviation operation areas are shown in **figure 8**. A potential aviation development plan is also provided in **figure 9**, which represents a longer term projection of future aviation needs and areas required for infrastructure development.

4.2 Specific Developments

4.2.1 Runways

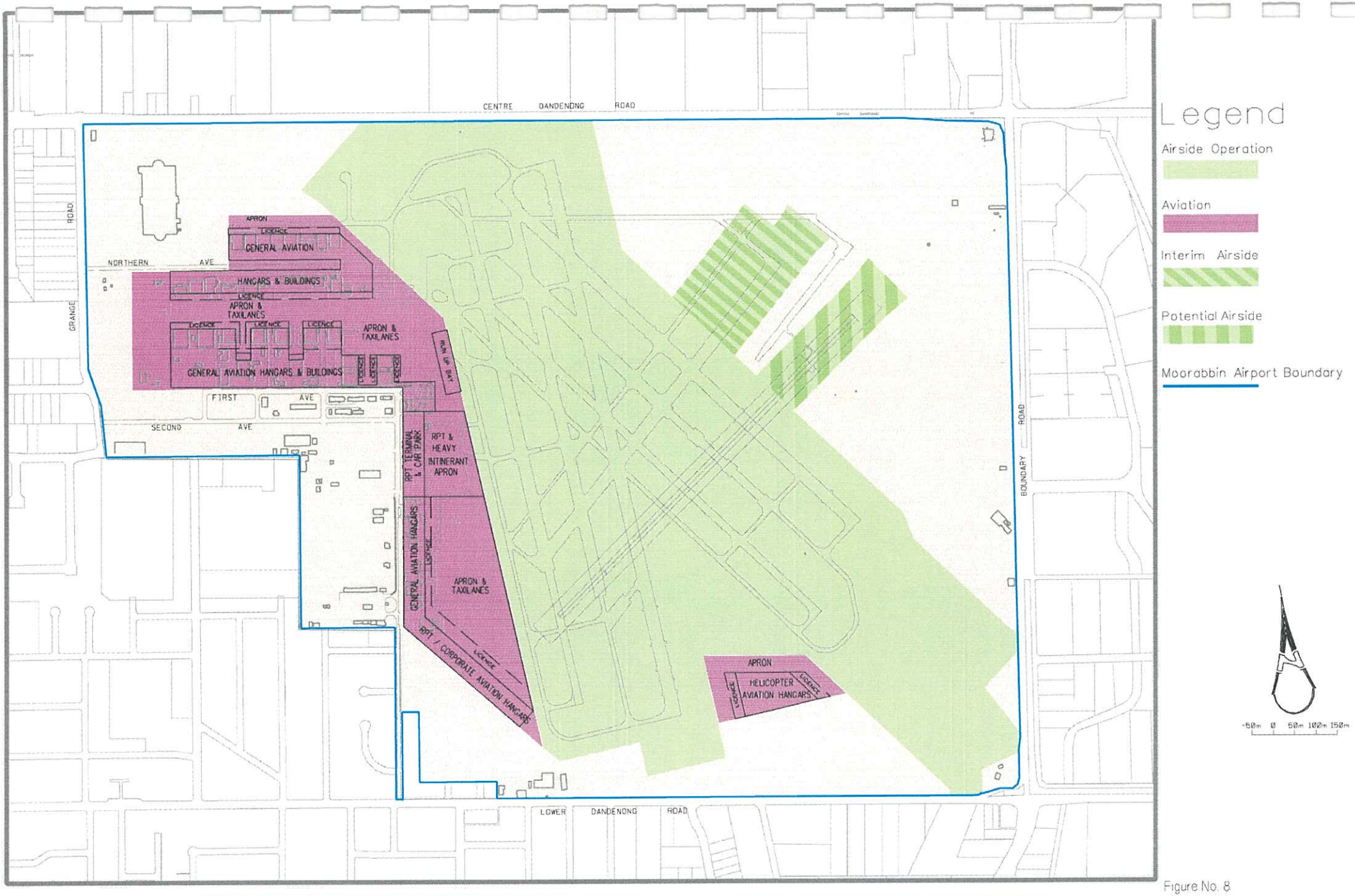
Runways are referred to by a designator which is derived by truncating their magnetic bearing. A runway aligned 130° Magnetic becomes runway 13. The reverse direction, or opposite runway end, is designated as runway 31. Each runway comprises two directions and, in this case, would be known as runway 13/31.

Parallel runways are distinguished by designating them left (L) or right (R), as viewed by the pilot on take-off or landing. Moorabbin has two sets of parallel runways designated 13L/31R, 13R/31L, and 17L/35R, 17R/35L.

When landing and taking off, pilots are able to manoeuvre their aircraft on a runway as long as the wind component at right angles to the direction of travel (defined as cross-wind) is not excessive. CASA follows international practice in recommending that the number and orientation of runways should be such that aircraft may be landed, as a target, at least 95% of the time within their allowable cross-wind limits. The RPAs state that "where runways are provided essentially for light aeroplane operations, the maximum permissible cross-wind component to be used for determining runway useability is to be 10 knots where 'ab initio' flying training is carried out."

Analysis of wind data from the Moorabbin Airport weather observation station, indicates that the primary and secondary runway directions (the 17/35 and 13/31 parallel runways) provide a combined useability of 92.7% for aircraft subject to a 10 knot cross-wind limitation. A third runway direction is therefore used. The existing 04/22 runway (aligned 035º Magnetic) provides the additional useability suggested by CASA (actually 97.8%).

RPA's clearly state that the decision on the provision and location of runways is the responsibility of the operator, who must make an economic judgement, balancing the cost of provision of runways against the economic cost of building them.



MOORABBIN AIRPORT MASTER PLAN

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Figure No. 8

Aviation Operations Plan

MOORABBIN AIRPORT MASTER PLAN

MOORABBIN AIRPORT CORPORATION

Figure No. 9

Potential Aviation Development

The existing 04/22 runway, as located, has a severe negative impact on the useability and value of the land in the North-East sector of the Airport. MAC has considered two options regarding the provision of runway 04/22 and its overall economic impact on the Airport:

1. Relocation to the South.
2. Reduction in length to provide a safe landing area in extreme crosswinds.

Each option is accompanied by a proposed ANEC (see **figures 13A and 13B**).

Option 1: Relocation

This option proposes a new North–East/South–West runway alignment of 042° Magnetic with a slight Southerly shift from the existing runway location. This has the dual advantage of providing increased useability for light aircraft and an aggregated area in the North-East sector of the Airport for commercial development opportunities.

MAC has attached an ANEC for this option, which is shown in **figure 13-A**.

The proposed runway length is 870 metres. If operations on this runway assume a headwind of at least 10 knots (equivalent to the cross-wind component which prevents operations on the other runways), this length will be sufficient to cater for typical light 4-9 seat aircraft such as the Beech Bonanza and Baron, Cessna 150 and 180, and the Piper Cherokee, Comanche and Navajo. The latter is currently used in regional RPT operations.

The disadvantage to this option is the increased expense of re-locating the runway compared with a marginal gain in Airport performance.

None of the submissions to the Master Plan has directly expressed any objection to this option, and indeed several of the submissions has requested that the runway be closed altogether.

Option 2: Reduction in length to provide a safe landing area in extreme crosswinds

This option proposes reducing the length of the existing runway 04/22 to approx 500 metres. This will provide a safe landing capability to all current light training aircraft but will restrict the take-off ability of some aircraft on occasional days with direct crosswinds to the other runways.

This option will maintain the safety levels for Moorabbin Airport, remove expensive re-location costs, will reduce ANEF levels on residential areas, and provide more efficient land-use in the NE corner of the Airport.

The disadvantage of the partial closure option is that some commercial flying schools may have restricted operations on occasional days (estimated at under 2 per year) when an excessive direct crosswind component exists.

MAC has contacted CASA, Airservices and the major schools regarding this option. CASA and Airservices have confirmed that the resulting landing strip meets all possible safety criteria. The major flying schools (representing approx 60% of all movements) have no objections to this approach as it does not have a direct economic impact on their operations.

It is noted that the 04/22 runway currently performs a training function for student pilots in cross wind conditions. The partial closure of this runway will not impede opportunities for cross-wind training as the existing 13R/31L runway can also perform this function when certain wind conditions are in existence. Importantly, the partial closure option does not constrain one of the primary roles of the Airport as a training facility.

MAC has attached a proposed ANEC relating to the reduction in length of runway 04/22, which is shown in **Figure 13B**.

MAC is considering both options at this stage, and has issued a Major Development Plan for Option 1- the re-location of runway 04/22. The consideration of these options has partly arisen from the full consideration of submissions to the Preliminary Draft Master Plan, with several submissions requesting full closure of this runway on the basis that it is rarely used.

It is emphasised that MAC's investigations of the partial closure option indicate that the operating capacity of the Airport will not be affected by this proposal, nor will it raise any safety issues. In crosswind conditions safety regulations will dictate that particular aircraft will not be permitted to take off. In the event that a crosswind develops after a plane is airborne provision for safe landing is still preserved by the partial closure option.

MAC has not yet determined which of the options will be pursued. The Master Plan simply indentifies that these options are under consideration and may form the basis of a revised Draft ANEF for the airport at some point in the future. Any new Draft ANEF would necessarily require endorsement by Air Services Australia at the appropriate time.

Other Runway Developments

The existing main runway 13R/31L is 1060 metres long and 18 metres wide. The Master Plan provides for widening to 30 metres (for Code 3C aircraft). The Plan also protects a possible 394 metre runway extension of the Northern end and an initial 181 metre extension of the Southern end to provide a length of 1635 metres. A further extension of 235 metres to the South is possible to provide an ultimate length of 1870 metres. This is the only runway which can be extended sufficiently within the existing Airport site to provide for RPT regional jet operations. Limitations imposed by existing obstacles in the approach and take-off areas dictate that reduced lengths will be available for landing operations. The runway pavement will require strengthening to cater for aircraft weighing up to 50 tonnes. The Master Plan provides for runway lighting and a precision approach path indicator (PAPI) installation for landings in either direction.

Planning is based on providing a code 3C non-precision instrument runway, the intention being to provide an instrument approach to both runway ends utilising Global Positioning Satellite (GPS). This implies a 150 metre overall runway strip requirement with the central 90 metres being graded.

The runway strip will be marked at the extremity of the 90 metre graded portion to allow the use of parallel taxiway Bravo in Visual Meteorological Conditions (VMC). Aircraft utilising runway 13R/31L would need to use taxiway Echo in Instrument Meteorological Conditions (IMC), when the runway strip requirement increases to 150 metres. This is not a significant operational or ground access penalty given many light aircraft engaged in flying training are grounded in these conditions.

The future development of GPS technology is likely to include a precision approach capability. Present standards require a 300 metre wide runway strip for this type of approach procedure but this is physically difficult to achieve. The standard allows the strip width to be reduced to 150 metres subject to an increase in decision height for the approach procedure. The decision height is the height above the landing threshold at which the pilot must execute a missed approach if the runway is not visible. Given the relatively favourable weather conditions experienced in Australia the likely increase in decision height of 11 metres (35 feet) is unlikely to affect aircraft operations.

The runway extension will displace the run-up bay for which additional provision needs to be made South of its existing location.

The existing 13L/31R runway is 1150 metres long and 30 metres wide. It is equipped with low intensity runway lighting. The Master Plan protects a possible 350 metre extension of the Southern end to provide an ultimate length of 1500 metres. In this respect the Master Plan adopts previous owner's planning, but it should be noted that the need for this runway extension will require further examination/justification. The proposed runway extensions are shown in **figure 10.**

The existing runway 17L/35R is 1335 metres long and 30 metres wide. It is equipped with low intensity runway lighting. The existing runway 17R/35L is 1240 metres long and 18 metres wide. The Master Plan retains both of these parallel runways in their present configuration.

The runways will be protected to the following standards:

- Runway 17R/35L: Code 2 non-instrument.
- Runway 17L/35R: Code 3 non-precision instrument.
- Runway 13R/31L: Code 3 non-precision instrument.
- Runway 13L/31R: Code 2 or 3 non-instrument (depending on whether extended).
- Runway 04/22: Code 1 non-instrument.

The Master Plan provides for the approach and take-off area immediately beyond each runway end to be kept free of incompatible objects or activities, particularly places of public assembly or workplaces. This follows international practices in recognition that an aircraft accident is more likely to occur in close proximity to an Airport during the final approach, take-off and initial take-off climb phases of a flight. A minimum distance of 300 metres is preserved as a "runway end safety zone" in each instance. This is shown in the Runway Protection Plan, **figure 11**.

4.2.2 Taxiways

The existing taxiway system provides sufficient runway and apron access entries/exits to deal with the forecast volumes of air traffic. The Master Plan retains this network of taxiways and, subject to final placement of the terminal building, the following additional taxiways are expected.

Taxiway Echo will be extended to provide a full length parallel taxiway to both ends of runway 13R/31L. It will primarily be used to access this runway in IMC when the runway strip width requirement increases to 150 metres. This may not be ideal since aircraft will be required to cross the runway to gain access to the taxiway, but aircraft movements are likely to be reduced in number during such periods. This would be operationally acceptable from ATC view point. In VMC taxiway Bravo is available to give direct access between the runways and the apron/building areas. Further taxiways may be constructed to meet individual needs of tenants and Airport areas.

4.2.3 General Aviation Aprons

The Airport's previous owner commissioned a study of land area requirements (Meldrum Burrows & Partners, 1990) which, among other things, identified the number of aircraft normally housed at the Airport during the period 1979-1989. This number was compared with total aircraft movements to derive a relationship which could be used to forecast future apron requirements.

Aircraft numbers ranged from a low of 320 to a high of 430, with the average being around 400. Moorabbin Airport noted that 15-20% of these aircraft were undergoing maintenance and repairs (and presumably housed in hangars) at any time, leaving 320-340 aircraft parked on site. It was noted that the average number of movements per parked aircraft increased markedly from 846 to 1000 following the first year of FAC ownership and the introduction of the user pays principle (GAIT). This implies that general aviation aircraft parking demand is highly price sensitive and may be further reduced should parking charges increase. Even so the Master Plan assumes a continuing relationship of 1 aircraft based at Moorabbin Airport for each 1,000 annual aircraft movements.

The 400 aircraft based on average at the Airport during the study period comprised:

- 260 single engine fixed wing.
- 120 twin engine fixed wing.
- 20 helicopters rotary wing.

The are approximately 350 aircraft based at the Airport. Assuming a similar mix of single and twin-engined aircraft and helicopters, an additional 1.5 hectares of apron area is required for aircraft parking at the forecast level of 452,500 annual movements. The Master Plan allows for a range of parking options to be provided including grassed and paved areas. Potential areas for future aircraft parking on the site are shown in **figure 9**.

This estimate does not include apron frontage to hangar developments, which is licensed for dedicated use by the hangar occupant.

The Master Plan provides a further 2.9 hectares for aircraft circulation, i.e. taxilanes providing access to hangars and aircraft parking areas.

4.2.4 Helicopter Aprons

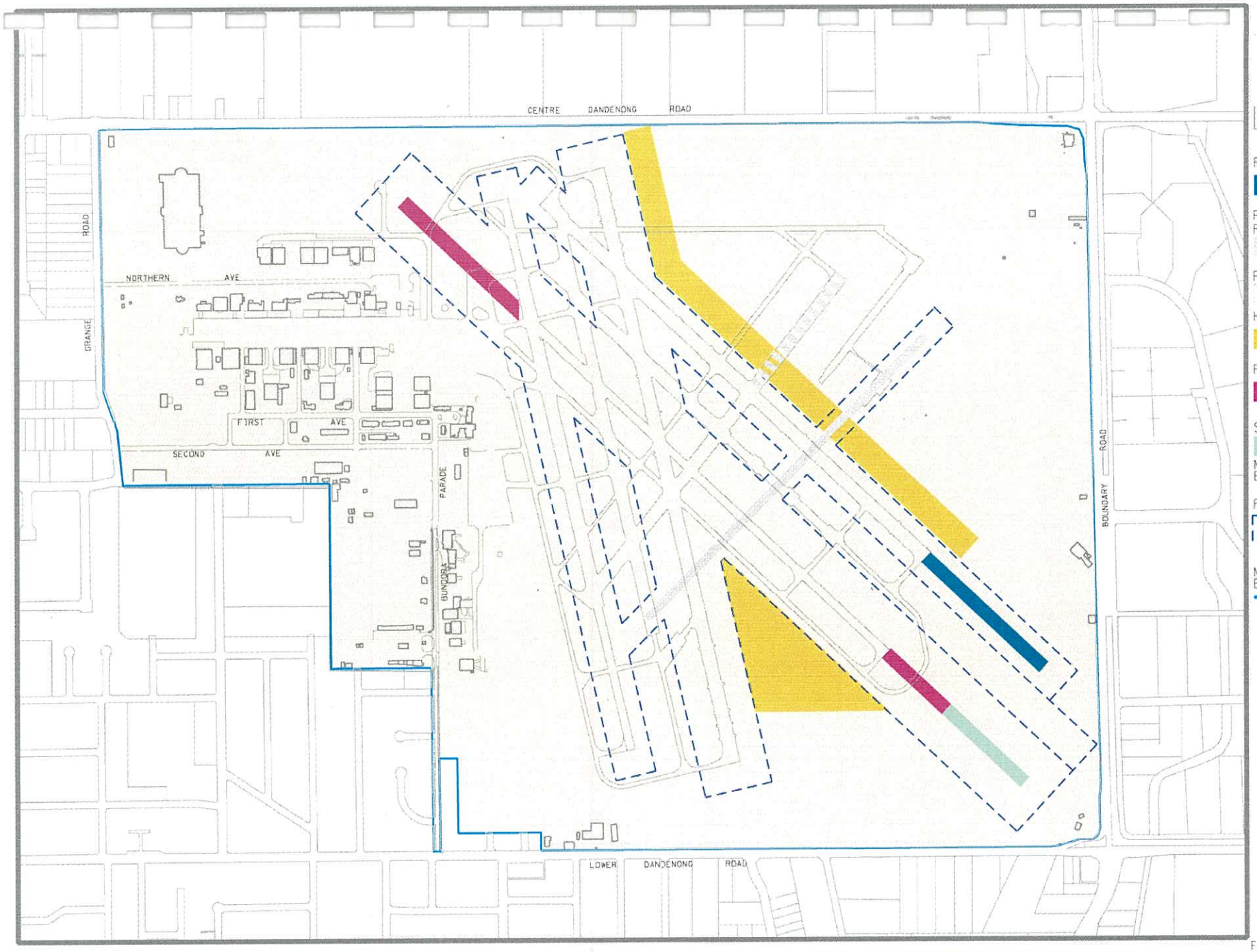
The Master Plan allows a further 0.6 hectares for additional helicopter parking and 1.2 hectares for circulation within the Southern area which is designated for helicopter operations. The Plan provides for relocation of existing helicopter facilities and this additional area for expansion, subject to lease negotiations with existing tenants.

4.2.5 RPT Apron

The start-up level of service on the Moorabbin-Bankstown route envisaged by the RPT feasibility study (Urban Enterprise Pty Ltd, 1998) would require parking for up to six BAe146 type aircraft during the forecast busy hour. Should additional services to Brisbane and Adelaide prove feasible in the medium to long-term, two additional parking positions are likely to be required.

4.2.6 General Aviation Hangars

The relationship established by Meldrum Burrows suggests a demand for 42 hangars at the forecast maximum capacity of the Airport. There are currently 34 hangars. The Master Plan allows space for an additional 8 hangars at an average of 2,200 square metres for each site – a total of 1.8 hectares. Indicative areas for new hangar facilities are shown in **figure 9.**



Legend

- Runway 13L/31R (1505m)
- Relocation Option Runway 04/22
- Part Closure Option
- Helicopter Training Areas
- Runway 13R/31L Extension
- Stage 1 (1635m)
- Maximum Extension (1871m)
- Runway Operational Clearance
- Moorabbin Airport Boundary

-50m 0 50m 100m 150m

Figure No. 10

Runway Extensions Plan

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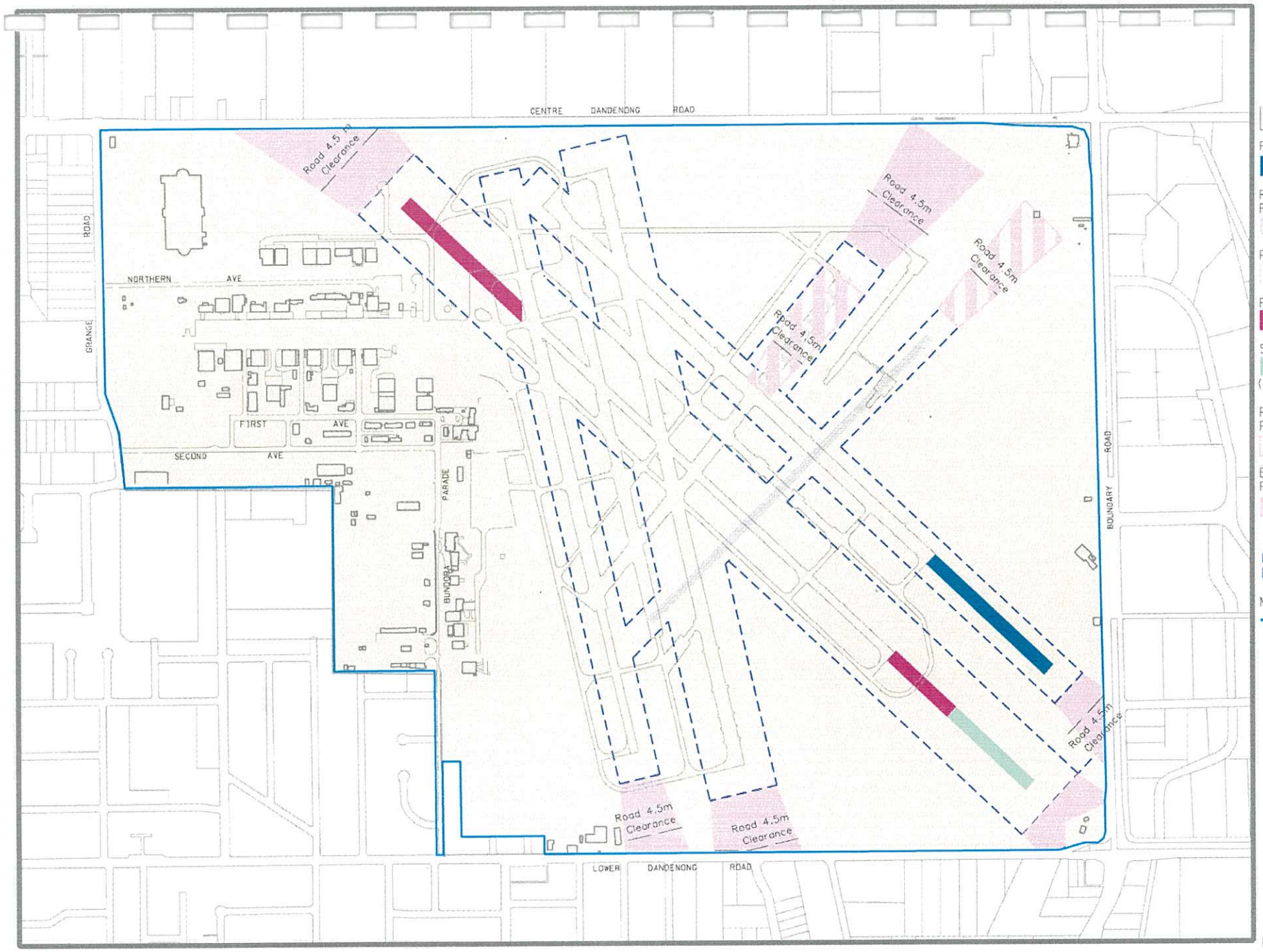

Legend

- Runway 13L/31R (1505m)
- Relocation Option Runway 04/22
- Part Closure Option
- Runway 13R/31L Extension
- Stage 1 (1635m)
- (Maximum Extension - 1871M)
- Potential Runway Protection Areas
- Existing Runway Protection Areas
- Runway Operational Clearance
- Moorabbin Airport Boundary

-50m 0 50m 100m 150m

Figure No. 11

Runway Protection Plan

MOORABBIN AIRPORT MASTER PLAN

MOORABBIN AIRPORT CORPORATION

4.2.7 Helicopter Aviation Hangars

The relationship established by Meldrum Burrows suggests that a further 2 operators may need to be accommodated at the forecast capacity of 452,500 annual movements. The Master Plan designates the Southern area for development of helicopter operations and allows sufficient capacity to relocate existing businesses and to establish these additional facilities. This includes a small common user terminal.

4.2.8 Corporate Aviation Hangars

The Master Plan allows for up to 5 hangars each of 2,800 square metres (approximately 1,200 square metres of building, 800 square metres of car parking and 800 square metres of apron) – a total of 1.4 hectares. **Figure 9** shows the potential location for corporate aviation hangars and facilities in the South-West corner of the site.

4.2.9 RPT Hangar

The Master Plan allows for a large maintenance hangar complex of 6,600 square metres (approximately 3,800 square metres of building, 1,000 square metres of car parking and 1,800 square metres of apron) – or 0.66 hectares. A potential location for an RPT hangar complex is shown towards the Southern boundary of the airport in **figure 9.**

4.2.10 RPT Terminal and Car Park

Peak hour activity is estimated as either two BAe146 type aircraft outbound and one inbound during the morning peak, or the reverse of two inbound and one outbound aircraft during the early evening peak. Since discrete facilities are generally provided for inbound and outbound passenger processing the functional design of the terminal should be based on two aircraft in each direction. Assuming a load factor of 70% and 200 available passenger seats, the terminal would need to cater for an equivalent of 280 passengers. On the basis of a relatively simple and functional terminal design this suggests a total area requirement of around 3,000 square metres as the first stage of the terminal development.

Long-term requirements would be more accurately determined once patronage and patterns of use have been established for the RPT service. At this stage it seems probable that the terminal would need to cater for up to 400 busy hour passengers and provide space allocation of around 5,000 square metres.

Car parking requirements are purely speculative at this stage, but assuming a significant proportion of passengers would drive the initial requirement is likely to be at least 250 parking spaces. This would increase to 350 spaces in the longer term.

The Master Plan provides for an RPT terminal and contiguous car park development on and adjacent to the site presently occupied by the MAC Administrative Office (see **figure 9**). However, an airline operator may require an alternative site and this must be allowed for in future planning.

4.3 Noise Impact Assessment and External Land Use

4.3.1 Use of the ANEF System

Government policy requires adoption of the Australian Noise Exposure Forecast (ANEF) system for predicting likely noise exposure around Australian Airports. The system is described in Australian Standard AS2021-1994, which also advises the acceptability of building sites for various uses based on ANEF zones. Noise exposure contours of 20, 25, 30, 35 and 40 are normally shown on these charts, the higher numbers representing an increasing level of aircraft noise nuisance. Noise from other sources is likely to dominate outside the 20 ANEF contour.

Three different types of charts are produced using the ANEF system:

- The ANEC (Australian Noise Exposure Contour) which comprises a set of contours based on hypothetical operations at an Airport in the future, and primarily used to examine planning options.
- The ANEF which comprises the Australian Standard set of contours used land use planning, and is derived from firm forecasts of aircraft operations in a particular year.
- The ANEI (Australian Noise Exposure Index) which comprises a set of contours calculated using actual aircraft movement details from a particular year. The 1997-98 ANEI is shown in **figure 7.**

4.3.2 Moorabbin Airport Approved and Endorsed ANEF

The Airport's previous owner (FAC) produced an Australian Noise Exposure Forecast (ANEF) in 1998. This ANEF has been endorsed by Airservices Australia and adopted by the City of Kingston as the basis of land use planning controls in the Airport environs. The approved ANEF is shown in **figure 12.**

It is based on a forecast scenario of 452,500 annual aircraft movements of which 12,500 movements were expected to be by BAe 146 type regional jet aircraft.

Computer modelling which generated the ANEF was based on the existing runway directions with both 13/31 parallels extended. 13R/31L is the only runway which can be extended sufficiently to cater for RPT regional jet operations and runway 13L/31R was thought likely to be required as a noise abatement alternative for smaller corporate jet aircraft.

The existing ANEF reflects the standard arrival, departure and circuit training procedures and flight paths applicable for operations in the Moorabbin General Aviation Aerodrome Procedures (GAAP) control zone. This mode of operation is assumed to continue into the foreseeable future.

Nearly seventy percent (70%) of all fixed and rotary wing general aviation operations were forecast to be involved in flying training.

When the adopted ANEF was prepared, it was based on a forecast growth rate of 1.7% per annum (Tourism Futures, 1996) and was therefore thought to be representative of operations in year 2010/11.

MAC forecasts a slightly more conservative growth rate of 1.5% which means that the adopted ANEF scenario would now apply several years later.

4.3.3 Moorabbin General Aviation Airport Procedures (GAAP)

The standard parallel runway operation at a GAAP Airport permits simultaneous opposite direction or contra-circuits by day and in visual conditions utilising separate Control Tower frequencies. ATC regulates operations independently in each circuit. If weather conditions dictate or low traffic density permits operations to be confined to a single runway, ATC will specify the circuit direction. All circuits are conducted to the East and North-East of the Airport if the control tower is not staffed. Circuit training is generally not permitted between 9 pm (10 pm daylight saving) and 7 am. No circuit training is permitted after dark on weekends. The standard circuit altitude is 1000 feet, which is 950 feet above ground level.

Aircraft departing from Moorabbin achieve vertical separation by climbing as soon as practicable to 2000 feet (or higher if cloud permits) once they are airborne. Piston engined light general aviation aircraft depart from Moorabbin either by continuing straight ahead on the runway heading or by extending the appropriate leg of the circuit. Heavier piston engined general aviation, corporate jets and RPT aircraft invariably depart straight ahead on the runway heading.

Proposed RPT operations by regional jet RPT aircraft such as the BAe146 will be required to make a 15° right turn when taking off to the North on runway 31L. These aircraft will make a "straight in" approach to the runway when landing. These measures are designed to minimise overflight and reduce noise exposure in residential areas.

Aircraft inbound for Moorabbin enter the GAAP control zone at 1000 feet from one of six designated approach points located at a distance of about 6 nautical miles (10 kilometres) to the East, North-East, North-West, West, South-West and South of the Airport. Once inside the GAAP control zone ATC may authorise pilots to make a straight-in approach to land or to do so after joining an appropriate leg of the circuit.

Helicopters operate in visual conditions by day at an altitude of 700 feet (650 feet above ground level). Special procedures apply to avoid helicopters arriving or departing Moorabbin from flying over Airport buildings, public viewing areas or adjoining residential areas. Helicopter circuit training is conducted to the East of the duty runway from the area known locally as the "Eastern grass". This arrangement confines helicopter circuits to the Airport or adjacent "noise tolerant" land uses.

4.3.4 External Land Use Planning Controls

The City of Kingston new format Planning Scheme recognises the importance of Moorabbin Airport and acknowledges its potential to expand. Moorabbin Airport is recognised as a core use and the Municipal Strategic Statement (MSS) identifies the interface between residential development and the Airport as the key issue for Kingston.

The MSS states that:

> *Residential encroachment around Moorabbin Airport and changes in nearby land use have also brought about conflict at the Airport interface. It is considered that the Airport, due to its major impact on the regional economy, needs to be adequately protected to ensure that it can develop to reach its full potential without adversely affecting current activities, and as such any opportunities for further residential development in this area are necessarily limited.*

This policy objective has been implemented by incorporating into the Kingston Planning Scheme:

- An Airport Environs Overlay (AEO1) control over areas above the 25 ANEF contour.
- An Airport Environs Policy covering those areas between the 20 and 25 ANEF contours.

In AEO1, regardless of the zone provisions, land must not be used for noise sensitive uses such as a childcare centre, school or hospital. A permit is required for a number of nominated uses including a dwelling, hotel, office and residential hotel. All applications to use land within this overlay must be referred to the Airport owner and would only be approved if the building design incorporates appropriate noise attenuation measures.

The Moorabbin Airport Environs Policy lists a range of sensitive uses and provides for new developments to meet AS2021 standards. The policy requires Council to consider the present and future operations of Moorabbin Airport taking into account the views of the Department of Transport and Regional Services. Rate notices are used to advise property owners if they are subject to the policy.

4.3.5 Moorabbin Airport Alternative ANECs

The Master Plan proposes as Option 1 the development of an alternative 04/22 runway, aligned 042º Magnetic and located to the South of the existing runway. The Master Plan also proposes changes to helicopter operations, including relocation of the main North-South arrival and departure routes to a more centrally located helicopter landing site (HLS) and adoption of clearly defined helicopter training lanes East of, and immediately adjoining, the 13L/31R and 17L/35R runway strips.

The ANEC associated with this option is depicted in **figure 13-A**. **Figure 14-A** depicts areas of increased or reduced forecast noise exposure which would result from the proposed changes in flight tracks and rotary wing operations. In all other respects the assumptions of the original model have been unchanged. In general terms the minor increases in noise exposure are confined to rural and industrial/commercial zonings while the decreases occur in residential areas.

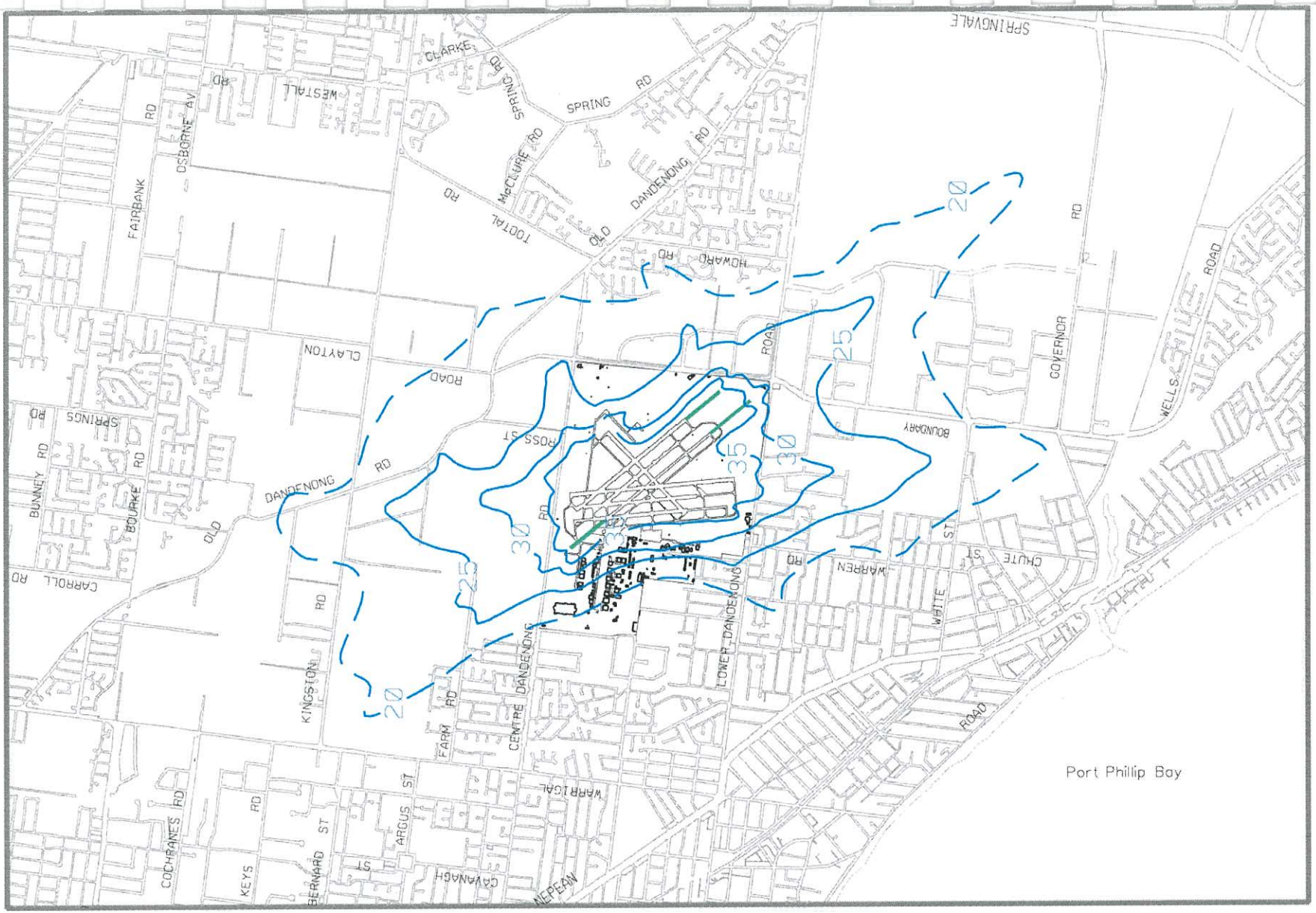

Figure No. 12

Approved ANEF
April 1998

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A second option is put forward in the Master Plan which proposes a reduction in the length the 04/22 runway and relocation of helicopter operations as above. The proposed ANEC for this scenario is shown in **figure 13-B**. The changes in forecast noise exposure which would result from this option are shown in **figure 14-B**. Importantly, Option 2 results in a significant decrease in noise impacts on residential areas directly to the South and South-West of the Airport, in the Mordialloc area.

The two options described above will be the subject of further consideration and review and investigation by MAC. It is premature at this stage to identify a preferred option, given that further assessment is required by MAC to fully explore the detailed technical issues associated with each proposed option.

Until such investigations have been thoroughly completed MAC will retain flexibility in respect to the final configuration of this runway.

The existing approved ANEF will continue to represent the model for growth upon which the planning overlays are based. Indeed, the City of Kingston has indicated that it would not be willing to modify the planning overlays until any new revised ANEF is formally endorsed by the Federal Department of Transport and Regional Services and the necessary runway alterations are commenced.

On this basis, it is desirable that neither Options 1 or 2 be put forward for approval as a revised ANEF until further investigations are completed.

4.4 Prescribed Airspace

Prescribed Airspace is defined under the *Airport (Protection of Airspace) Regulations* as airspace above any part of either the Obstacle Limitation Surfaces (OLS) or the Procedures for Air Navigation Services – Aircraft Operations (PANS-OPS) surfaces, whichever part represents the lower airspace surface for an Airport.

The OLS is a number of reference surfaces in airspace which determine when an object may become an obstacle to aircraft manoeuvring in the vicinity of an Airport or during landing or take-off. The PANS-OPS are a second set of surfaces determined by aircraft flight operations under instrument conditions that form an envelope over the existing obstacle environment. These surfaces are established by the instrument procedure designer to ensure that an aircraft will have a specified minimum clearance above any accountable obstacle in situations where the pilot is relying entirely on the information derived from cockpit instruments and may have no external visual reference to the ground, to obstacles or to other aircraft. As a result, PANS-OPS surfaces cannot be infringed in any circumstances.

Prescribed airspace may also include reference to specific airspace, designated in a written declaration by the Secretary of the Department of Transport and Regional Services, being protected in the interests of safety, efficiency or regularity of future transport operations into and out of an Airport.

The objective of the prescribed airspace is to ensure that the Airport is not adversely affected by the building of structures or other activities in the area used by aircraft arriving or departing Moorabbin Airport. New structures should be designed or other activities controlled to ensure they fit under the prescribed surfaces.

The OLS for Moorabbin Airport is depicted in **figure 15-A**. This plan assumes relocation of the 04/22 runway, described as Option 1 above. Should a partial closure of this runway be pursued (Option 2), the resulting OLS would be slightly modified, as shown in **figure 15-B.**

The existing PANS-OPS surfaces for Moorabbin Airport provide airspace protection for the following instrument departure and approach procedures published by Airservices Australia:

- 5 GPS arrival procedures.
- An approach procedure to a circling minima using the Moorabbin Non Directional Radio Beacon (NDB) as a sole aid or in conjunction with the Melbourne, Avalon or Cowes VHF Omni-directional Radio Range (VOR), and/or the Melbourne or Avalon Distance Measuring Equipment (DME).
- A runway 35R Global Positioning System (GPS) approach procedure.

Instrument approach procedures based on the US military satellite based Global Positioning System (GPS) are gradually being introduced throughout Australia. The prescribed airspace for Moorabbin Airport should make provision for the protection of non-precision GPS approaches to runway 13R/31L for RPT operations. This additional requirement is depicted in the Draft 1998 PANS-OPS plan in **figure 16-A**, which assumes relocation of the 04/22 runway (Option 1). Should Option 2 be carried forward, the resulting PANS-OPS plan would be as shown in **figure 16-B**.

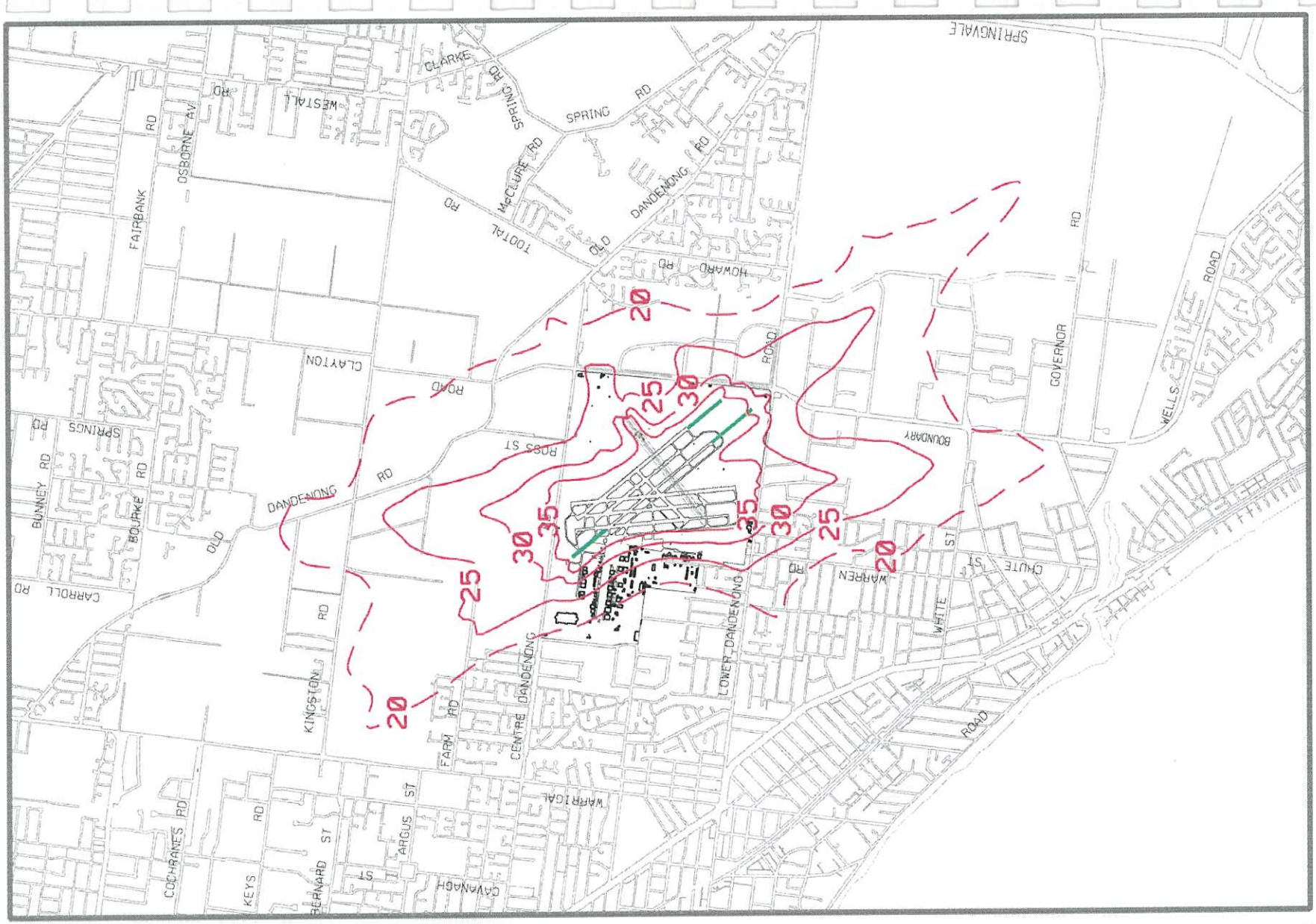

Figure No. 13-A

ANEC - Realigned Runway Option

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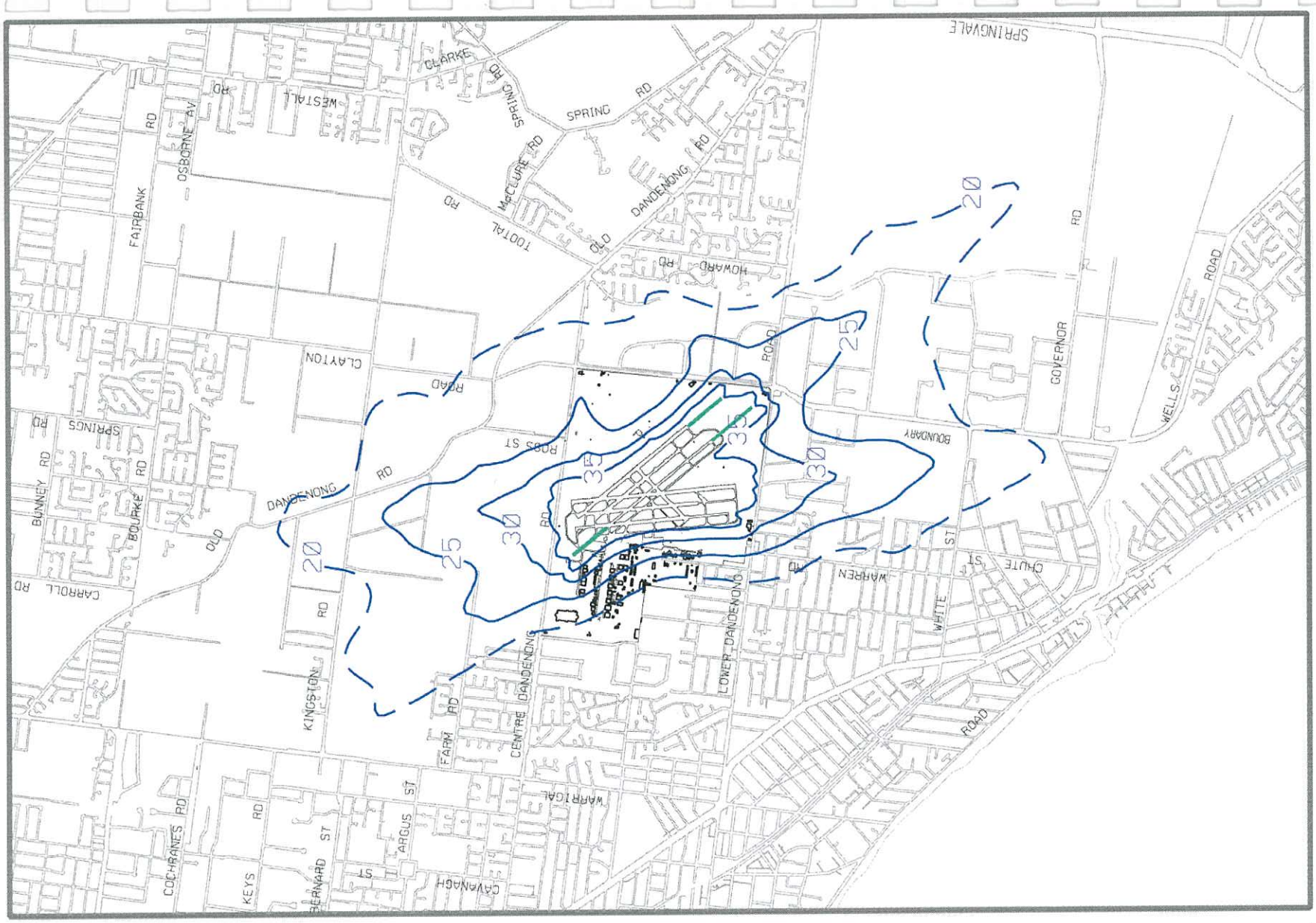

Figure No 13-B

ANEC - Partial Closure of Runway 04/22 Option

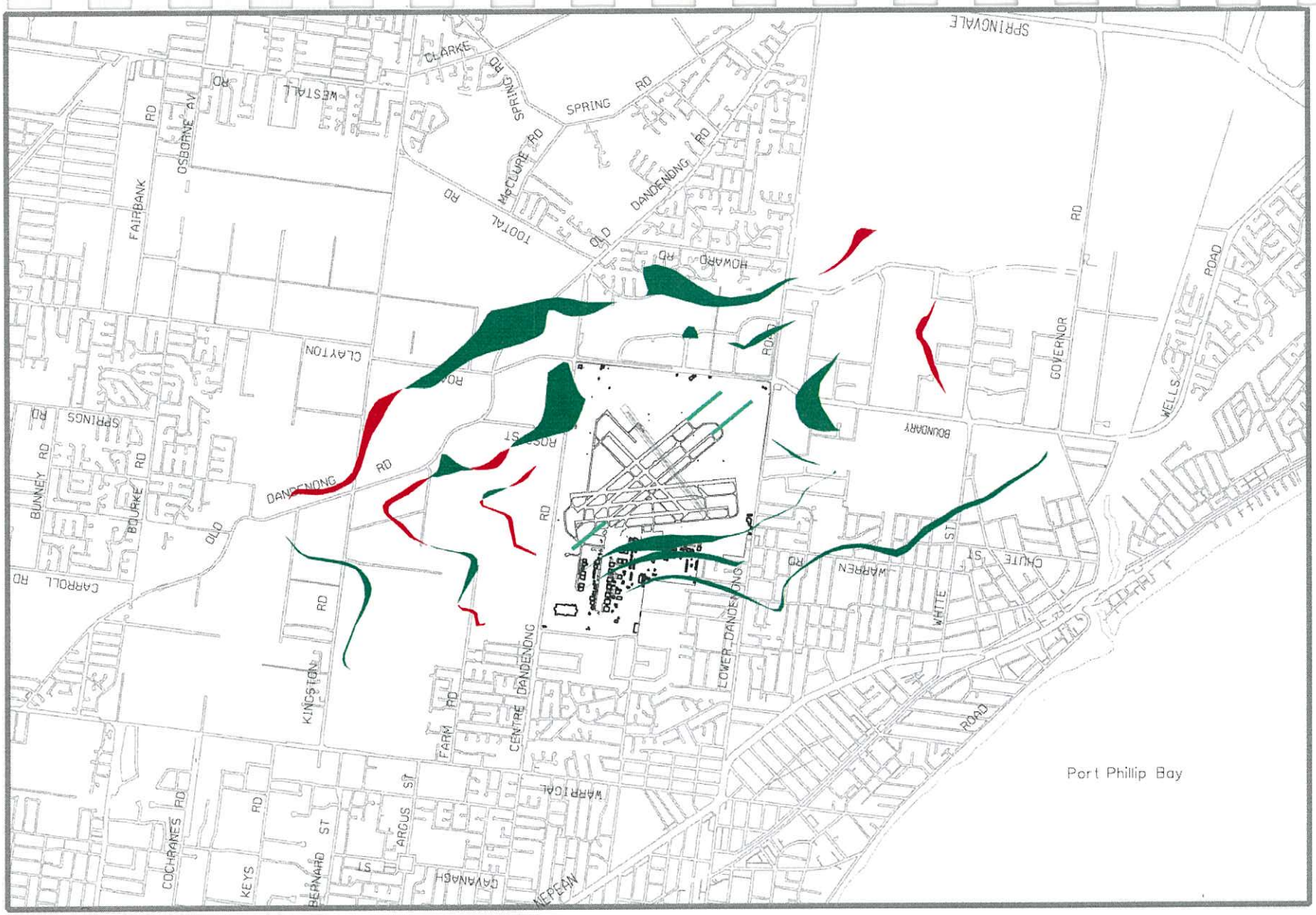

Figure No. 14-A

ANEC Variations - Realigned Runway Option

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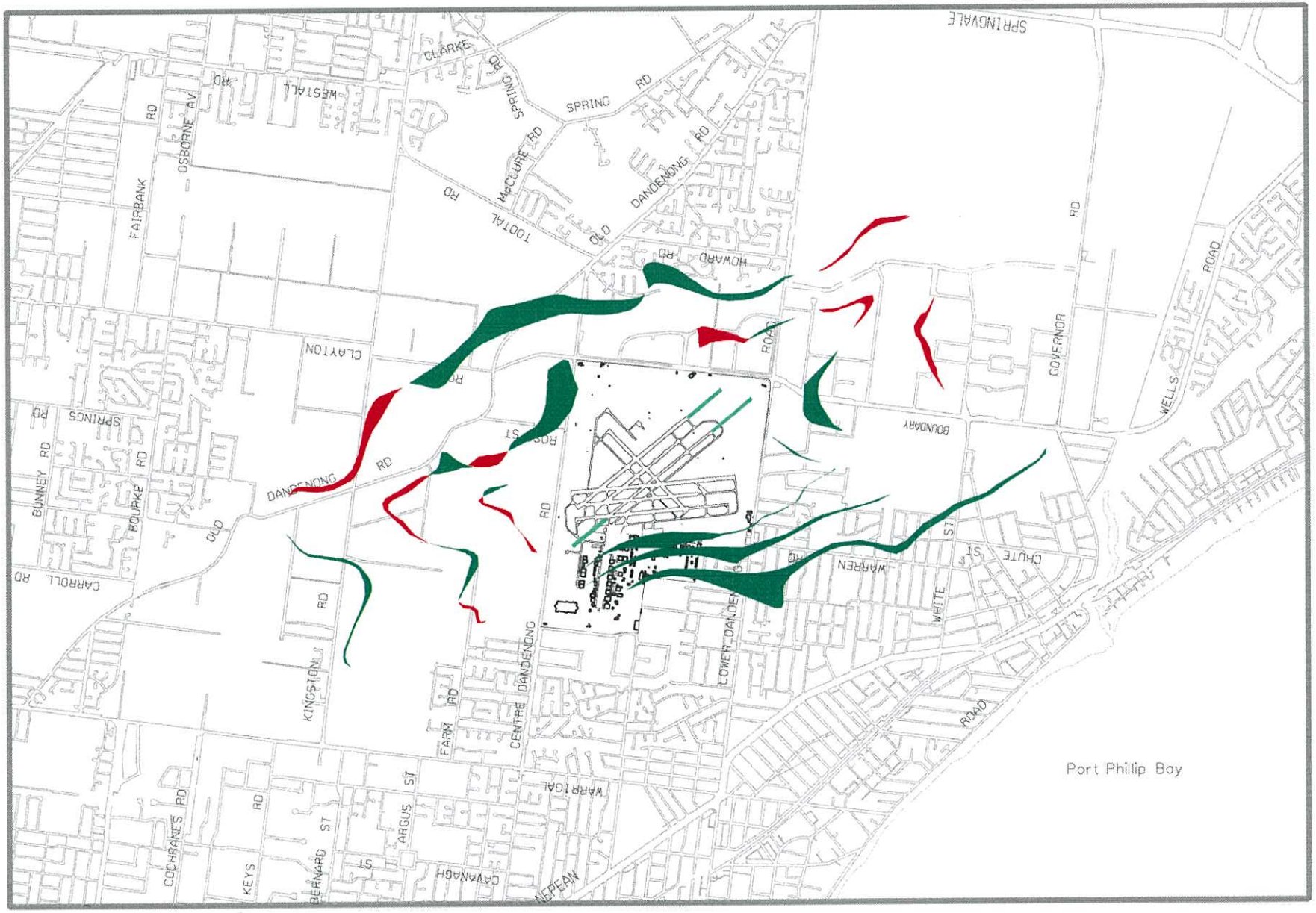

Figure No. 14-B

ANEC Variations - Partial Closure of Runway 04/22 Option

MOORABBIN AIRPORT MASTER PLAN

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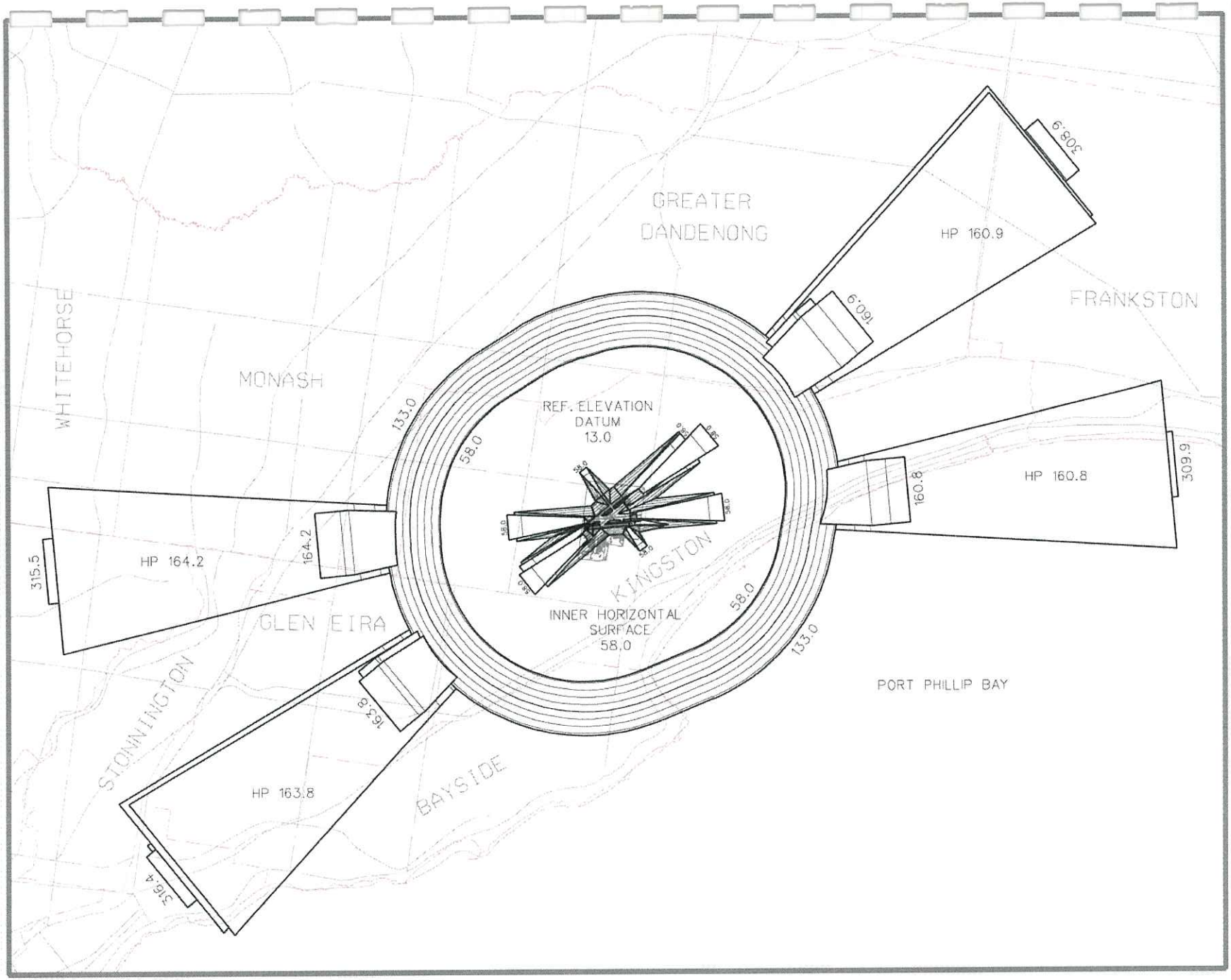


NOTE:
HP: Horizontal Plan

All elevations at Australian Height Datum (approx. sea level - in metres)

Airport Reference Elevation at 13m

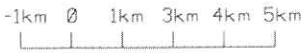
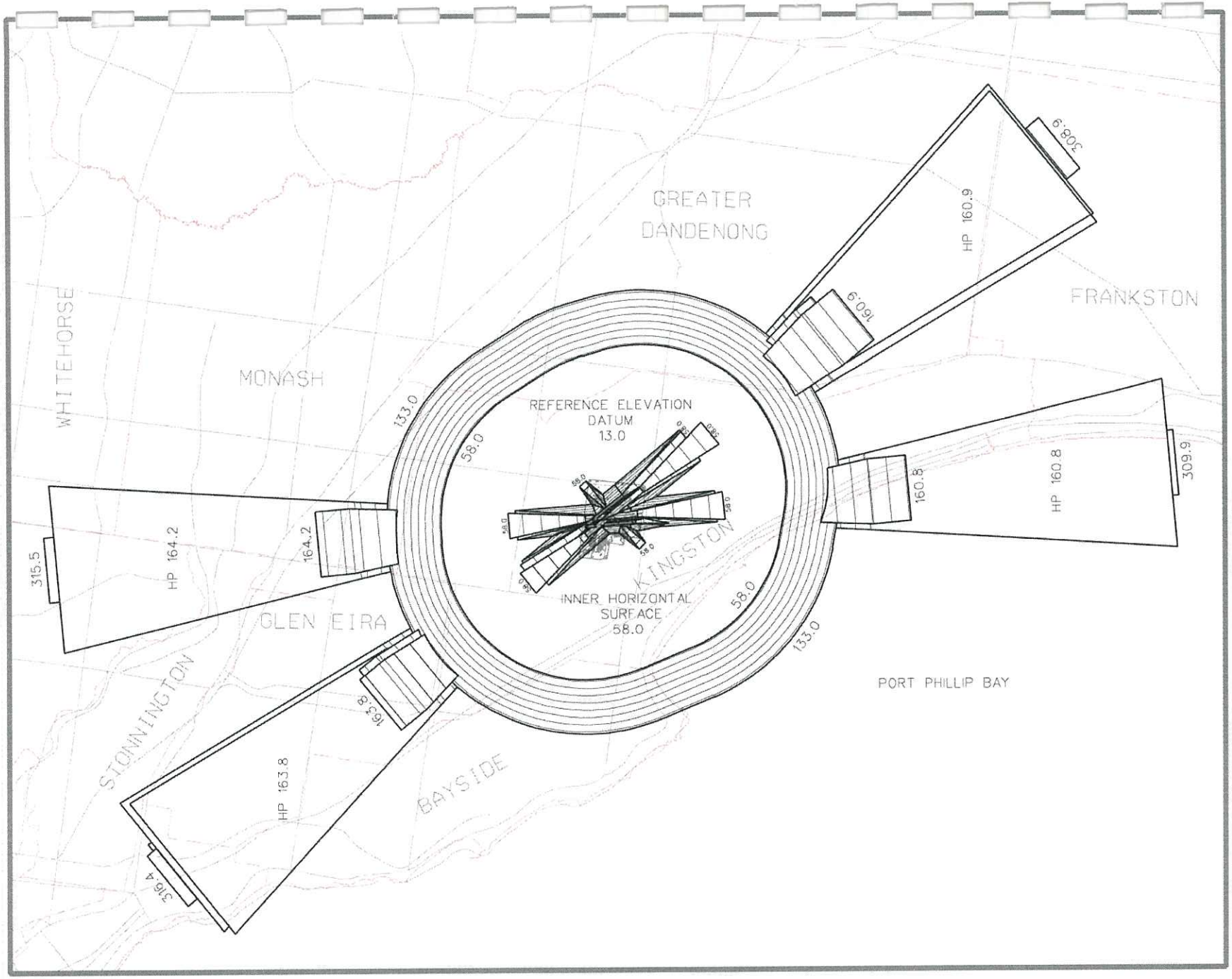


Figure No. 15-A

Draft 1998 Prescribed Airspace OLS - Realigned Runway Option



NOTE:
HP: Horizontal Plan

All elevations at Australian Height Datum (approx. sea level - in metres)

Airport Reference Elevation at 13m

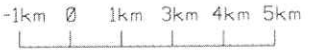


Figure No 15-B

Draft 1999 Prescribed Airspace OLS - Partial Closure of Runway 04/22 Option

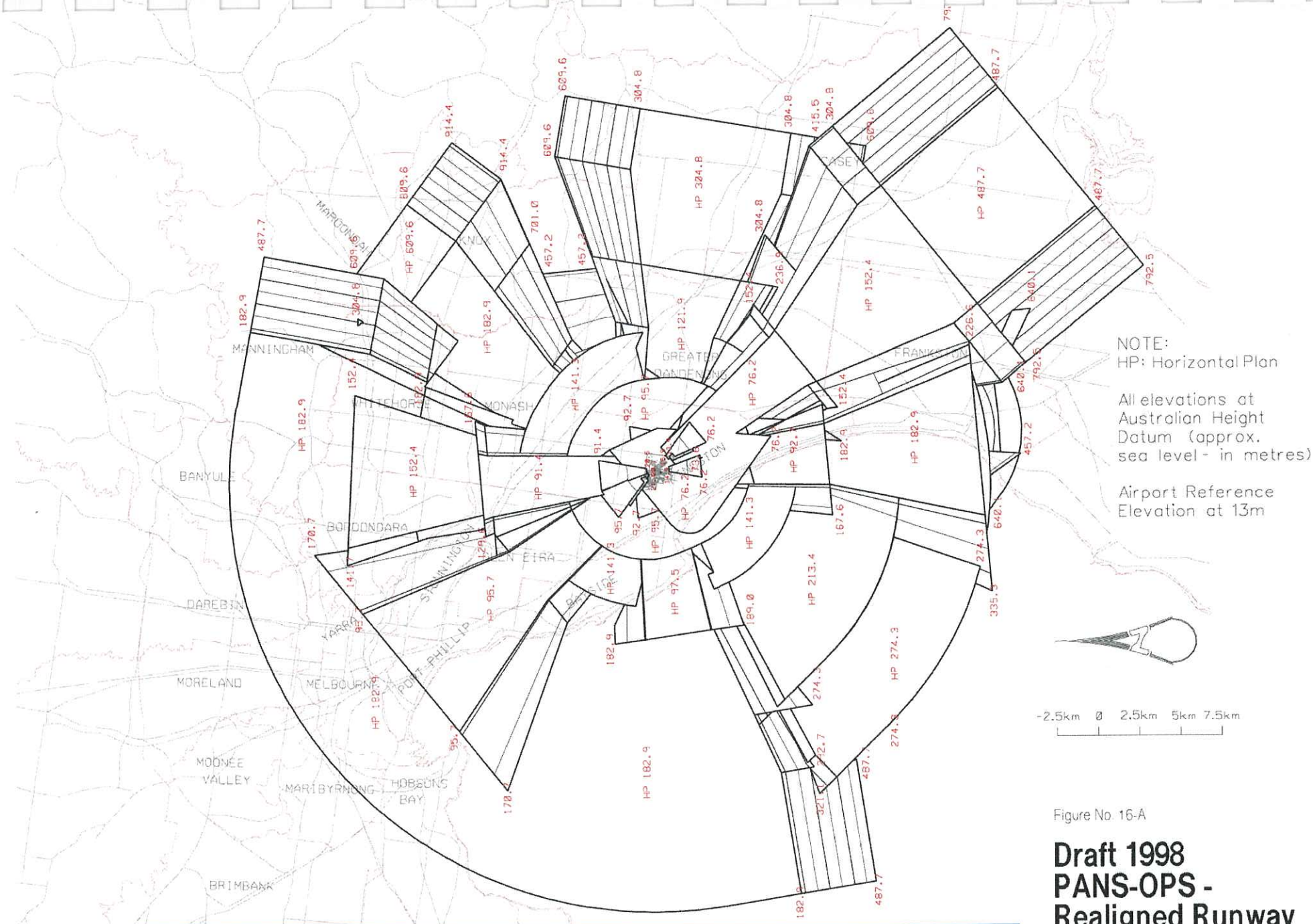


Figure No 16-A

Draft 1998 PANS-OPS - Realigned Runway Option

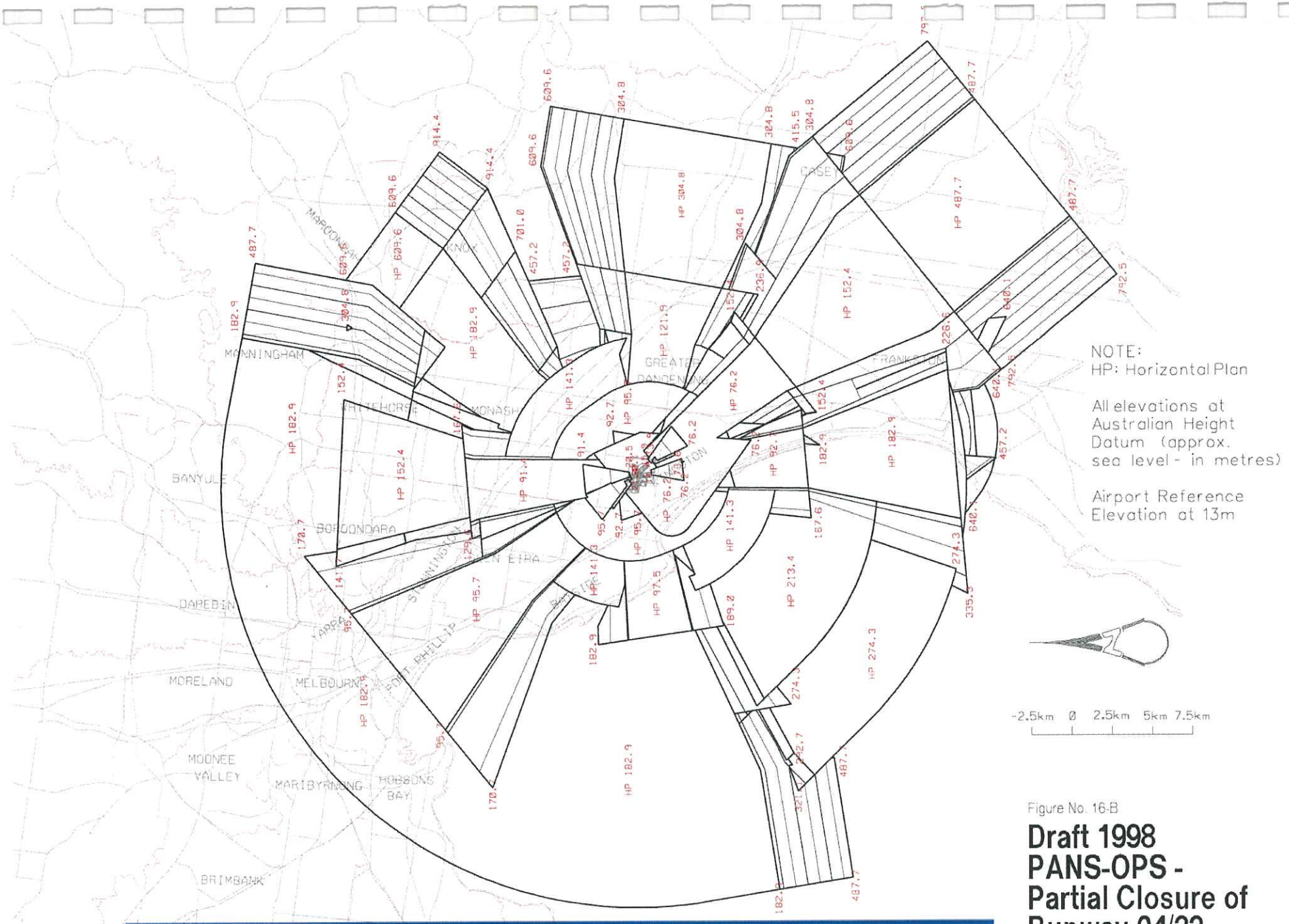


Figure No. 16-B

Draft 1998 PANS-OPS - Partial Closure of Runway 04/22 Option

5.0 MOORABBIN AIRPORT LAND USE PLANNING

5.1 Commercial Development Strategy

MAC will seek to develop land not required for aviation into income producing investment properties. MAC will attract tenants of the highest quality by providing an exceptional business environment and the security of long-term ownership to preserve the integrity and quality of the developed estate. The built environment will be established and maintained by the provision and adherence to the planning principles set out in this Master Plan, including generous building setbacks, view corridors between buildings - to preserve the feeling of open space, and extensive landscaping.

Due to the long-term nature of the Airport lease and MAC's investment it is important that the Master Plan provides flexibility within the land use zonings to allow for changes in potential uses over the investment period. Flexibility is required in response to the unique opportunities presented by the Airport site for direct integration between land-side and airside activities. It is therefore important that the land use and zoning framework builds in sufficient flexibility to accommodate a wide mix of aviation support industries, commercial development and other compatible uses which may play an important role in supporting long term aviation growth at the Airport.

Moorabbin Airport Corporation will be responsible for exercising discretion under the land use framework and ensuring that all proposed developments meet the requirements of the zoning and policy framework and are consistent with the approved Master Plan. MAC has now prepared a detailed '*Protocol for Land Use Decisions*' which outlines the process for how development applications will be assessed and the circumstances in which authorities will be advised of land use proposals. The protocol and the process for assessment of commercial development proposals is outlined in more detail in Section 7.8.

Moorabbin Airport Corporation will be responsible for the approval of all development activities on the Airport site. Unlike other property developers MAC does not intend to sell individual buildings to the external investment community. MAC or a company directly associated with it will hold completed investments.

MAC believes that one of the key ingredients to successful commercial developments is to ensure the provision of quality landscaping, prominent entry statements, broad boulevards and a mechanism to ensure that this high standard is maintained. The integrity of the business park will not be compromised by the selection of inappropriate tenants associated with traditionally "unclean" or unattractive business or industrial uses, or small "backyard" operations.

To ensure that high standards of urban and landscape design are achieved for all future commercial development on the Airport MAC will assess all development proposals against the '*Moorabbin Airport Urban Design and Landscape Guidelines,*' which will be incorporated as a reference document in the Land Use Plan. The Guidelines will be prepared by a team of consultants appointed by the MAC with expertise in the areas of site planning, urban design and landscape planning. The Guidelines will establish clear standards for future tenants in respect to detailed siting and design issues, including site coverage, building setbacks, materials and finishes, landscape setbacks and design, and advertising signage. Separate guidelines may be prepared for individual precincts on the Airport in recognition of the particular attributes/landscape qualities of different site frontages and the different objectives to be pursued for each precinct.

By controlling the entire process, from concept to completion of income producing investments, MAC will ensure that the business estates created by our development activities will be of the highest quality in terms of design and presentation. We believe this unique association will attract the best companies as tenants and enhance the value of our investment over the term of the Airport Lease.

5.2 Airport Planning Criteria

Planning for the Moorabbin Airport has adopted a strategic, multi-disciplinary approach. This has been guided by the principle of maintenance of the Airport activities on the land, fulfilling a regional and statewide aviation transport role. This is governed primarily by the Airports Act 1996, which determines the regulatory framework for Australian aviation in a competitive, demand driven economic environment.

The criteria that has determined planning for the Airport has considered the following issues/aspects:

- Opportunities for the Airport.
- Constraints on the Airport.
- Airport strengths.
- Airport weaknesses.
- Maintenance of aviation role.
- Assessment of regulations affecting the Airport.
- Regional context of the Airport.
- Infrastructure and services.
- Future beneficial uses of the Airport land.
- Economic issues.
- Preferred land uses, land use plan and planning framework.

These points have been considered in the preparation of the Land Use Plan and Master Plan.

5.3 Moorabbin Airport Land Use Plan

Protocols between the State and Federal Governments establish the overall planning framework for Commonwealth land. This approach applies the Commonwelath land zoning leased by the Department of Transport and Regional Services to the Moorabbin Airport Corporation. Land and premises are then sub leased to individual businesses and aircraft operators on the land.

The Victoria Planning Provisions establish the overall strategic and statutory framework for land within the State of Victoria. Given that the Moorabbin Airport is Commonwealth land and not subject to the control of the Kingston Planning Scheme, a Moorabbin Airport Planning Scheme, or land use plan, has been created in parallel to the Moorabbin Airport Master Plan. The Land Use Plan is modelled on the Victorian Planning Provisions and sets out the way land may be used or developed on the Airport.

The Land Use Plan comprises a framework of zones, policies, overlays, an Airport Strategic Statement and a range of general planning provisions. The Land Use Plan is broadly based on the land use planning, policy and development legislation in force in the State of Victoria. Its structure is therefore quite similar to a municipal planning scheme, except that it is not governed by State legislation.

The components of the Land Use Plan are as follows:

- **STATE PLANNING POLICY FRAMEWORK**
  - **AIRPORT STRATEGIC STATEMENT**
    - **ZONES**
      - **OVERLAYS**
        - **PARTICULAR PROVISIONS**
          - **GENERAL PROVISIONS**
            - **DEFINITIONS**

It is important to note that whilst the Land Use Plan includes references to State Planning Policies and legislation, they are not completely appropriate or applicable to the Moorabbin Airport. The Land Use Plan is not recognised as a planning scheme under the Planning and Environment Act 1987, and is therefore not subject to the provisions of this Act. However, this does not preclude MAC from considering the overall objectives and requirements of State planning policy in the assessment of land use proposals, as discussed further in Section 7.8.

5.4 Land Use Plan - Preparation

The preparation of the Land Use Plan has been guided by the designation of appropriate 'airside' areas to provide for current and future aviation use and development. There are however large areas of underutilised land existing at the Airport which are not necessarily appropriate for airside activities.

MAC has undertaken detailed investigations into the Airport's expected future aviation needs and requirements as part of its business planning for aviation management. This work has been used as a basis for determining the land which is surplus to airside activities.

The Land Use Plan designates areas for land side and airside development, and nominates a range of desired land use outcomes to be pursued in different areas across the site. The identification of appropriate uses for non aviation land has unfolded from careful site analysis planning which addresses the Airport's relationship to surrounding land uses and responds to issues at the Airport's key site interfaces.

A thorough examination has also been undertaken of the regional and strategic issues facing the Airport. As a result of this, an opportunities and constraints exercise has been undertaken revealing the following points with regard to maintenance of aviation activities with a stronger industrial, commercial and retailing focus for surplus non-airside land.

5.4.1 Opportunities

- Regional and state aviation role as one of Australia's busiest Airports.
- Convenient and central location in Melbourne's South-Eastern suburbs.
- Buses service the site.
- Large land areas currently underutilised.
- Ability to link existing industrial areas to the West, South and East with proposed Airport industrial areas.
- Strong market demand for industrial and commercial land in the region.
- Large customer catchment provided for industrial and commercial development.
- Reservation for Mornington Peninsula and Dingley Freeways pose significant locational advantages when constructed.
- Potential for medium density RPT services.
- Ability to link aviation businesses (e.g. freight) to proposed industrial areas.

5.4.2 Constraints

- Residential encroachment into airspace and flight paths.
- Poor integration with adjoining areas.
- Primary mode of access is car based.
- Community perception that Airport is an open space area.
- Infrastructure requires substantial upgrading.
- Obstacle Limitation Surfaces restrict the built form on non-aviation land.
- Community concern about Airport noise.

5.4.3 Strengths

- Strategic location.
- Existing infrastructure.
- Existing road network.
- Regional economic/employment role.
- Larger customer catchment provided by nearby residential, commercial, business and industrial areas.
- Strong market demand for industrial land.
- Synergies exist between aviation use and industrial development.
- Aviation businesses are located on site.
- Strong landscape character in evidence around the site.

5.4.4 Weaknesses

- Many old buildings.
- Restricted physical integration with adjacent industrial areas.
- High cost to develop Airport and other infrastructure.

5.4.5 Summary

It is evident from this analysis that the Moorabbin Airport has an extremely important role in aviation both in regional and state contexts which must be maintained. The flight training, regular public transport, recreational, emergency vehicle and freight roles of the Airport are extremely important to the economic viability of the surrounding area. This results in local employment generation for aviation related activities and also for support industries which depend on the Airport for their livelihood.

The site is also located in a regionally significant and well established industrial and commercial area, with strong demand for a greater supply of land providing for expanded industrial, commercial, office and some limited retail developments.

5.5 Land Use Plan - Features

The strategic planning approach utilised for this Master Plan has considered the strategic issues affecting aviation in the Melbourne metropolitan region and Victoria, over a twenty year planning period. This has considered the regional physical and economic context of the Airport, recommending that the existing industrial and commercial strengths of the region provide the basis for an expansion of such uses at Moorabbin Airport. This expansion will serve a regional economic and social need and support and enhance the continuation of aviation activities at the Airport.

The Land Use Plan provides a statutory planning framework within which the development objectives and opportunities identified above can be realised. These are given expression through the Airport Strategic Statement, which enshrines the key goals and objectives of the MAC in planning for the growth and development of the Airport. The Strategic Statement is intended to provide a sound policy basis from which to assess all future land use proposals.

Development areas relating to the land use plan are represented in the Precinct Development Plan, which has evolved from the Master Planning process. The Precinct Development Plan provides a geographic representation of the Airport's future strategic directions as detailed in the Airport Strategic Statement. Its purpose is to identfy locations where specific land use outcomes will be supported and promoted. The implementation of the Precinct Development Plan in conjunction with the Land Use Plan will ensure that future land use development occurs in a coordinated and strategically sound manner.

The Precinct Development Plan is illustrated and discussed in more detail in Section 6.

The strategic planning analysis concludes that all non-airside land should be utilised for industrial, commercial, limited retailing or office uses to complement the strengths of the existing area.

6.0 LANDSCAPE VISION AND AIRPORT PRECINCTS

6.1 Landscape Vision

The landscape vision for Moorabbin Airport seeks to maintain the open feel of the land with three-fifths of the land utilised in aviation related areas. The landscape character of the Airport includes expansive open areas, great viewscapes and other landscape features.

The broad Landscape Concept Plan of the Airport is shown in **figure 17** and a Landscape and Entry Concept Plan is shown in **figure 18.**

The following landscape principles apply to Moorabbin Airport:

- Respect and build upon the historical and current landscape character and be visually complementary to the surrounding landscape and uses.
- Ensure quality landscaping throughout the Airport area and maintain a high standard of landscaping.
- Respect obstacle limitation surfaces in the location and height of landscape features.
- Provide broad boulevards at appropriate locations, such as the business park, in key Airport precincts.
- Encourage low growing or large, open canopy trees to maintain the "open feel" of the Airport. Tree and shrub species will be selected to avoid attracting birds.
- Provide definitive and exciting entry statements at appropriate locations in the Airport.
- Site and design to minimise disruption to the natural landscape systems (i.e. soil stability, drainage, vegetation protection, etc.).
- Respect and respond to the form, line, colour and texture of the landscape with any new development.

These principles will be embodied in the Urban Design and Landscape Guidelines which are currently being prepared for the Airport. The purpose of these guidelines is to ensure that future development contributes to the creation of a high quality landscape environment on the site and is reponsive to the landscape attributes of surrounding land.

6.2 Airport Precincts

Moorabbin Airport has been divided into a range of aviation, commercial, industrial, business park and limited retailing precincts. This is shown in **figure 19.**

6.2.1 Precinct Development Plan - Implementation

The Precinct Development Plan is sufficiently broad to enable development flexibility in response to market conditions. Flexibility is also required in response to the unique opportunities presented by the Airport site for direct integration between land-side and airside activities. Where possible clear direction has been provided in respect to the desired mix and combination of land uses to be contemplated in each precinct. The precinct statements also attempt to differentiate between preferred, discretionary and ancillary uses to provide guidance to stakeholders in relation to the types of land use outcomes which may be supported.

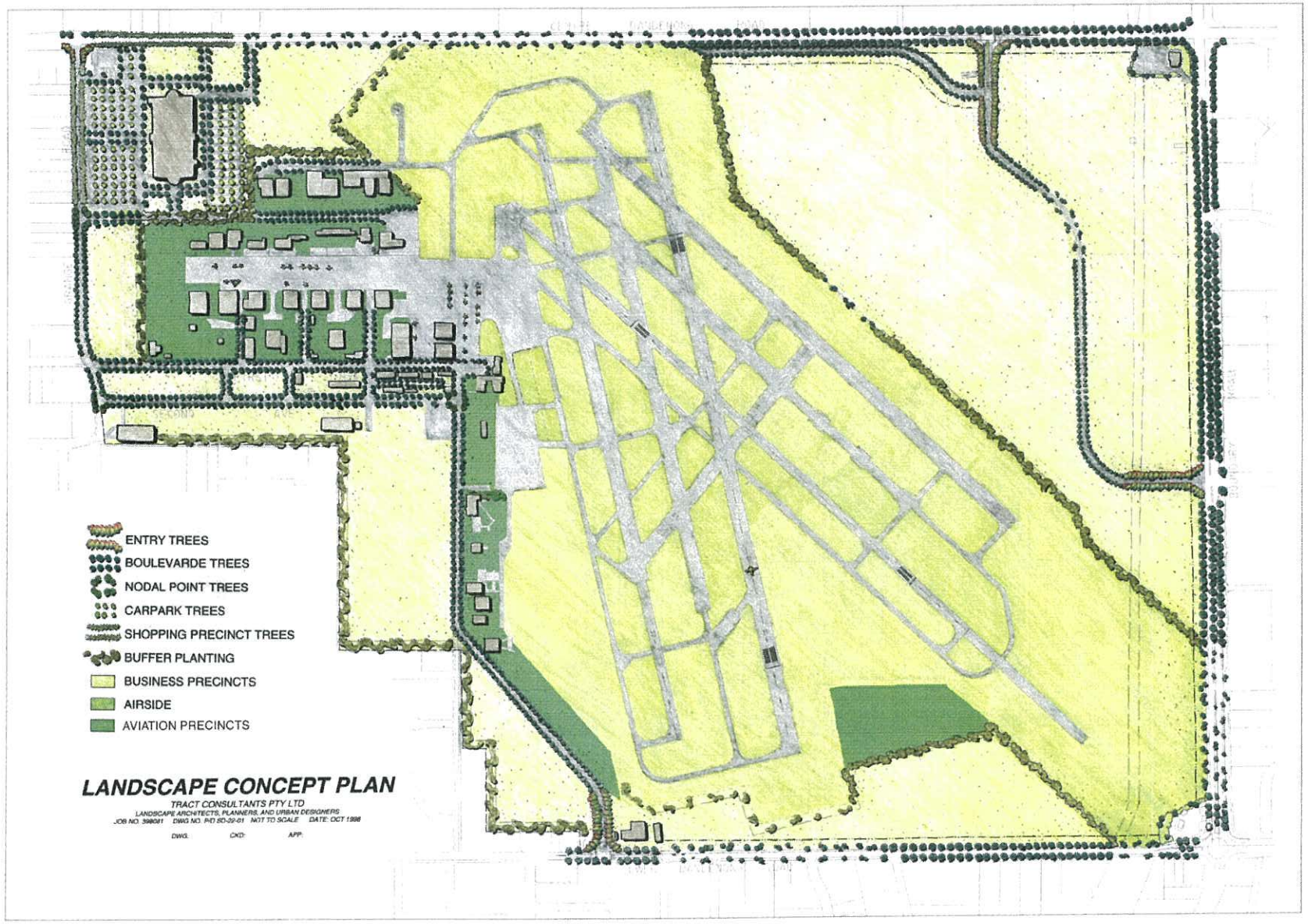
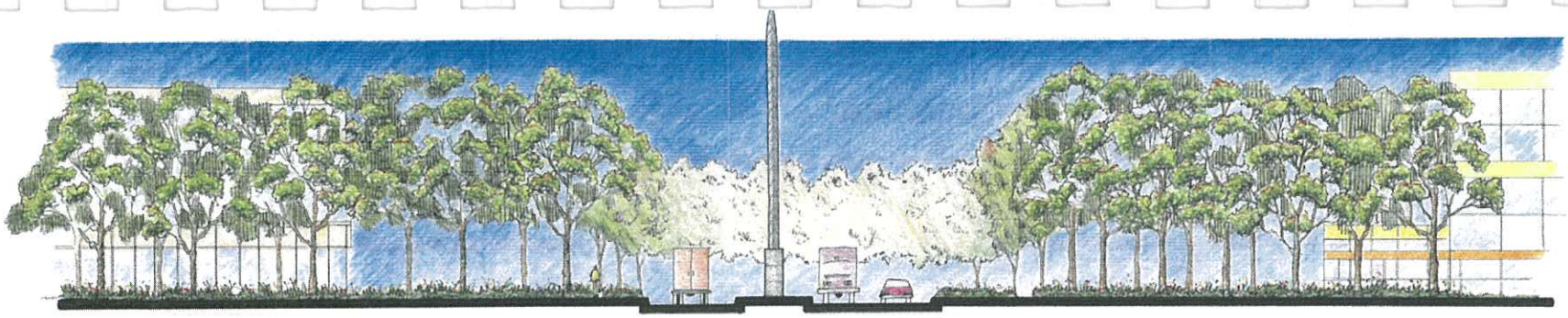


Figure No. 3

Landscape Concept Plan



ELEVATION SCALE 1:100

LANDSCAPE & ENTRY CONCEPT

BEN CHIFLEY INDUSTRY PARK

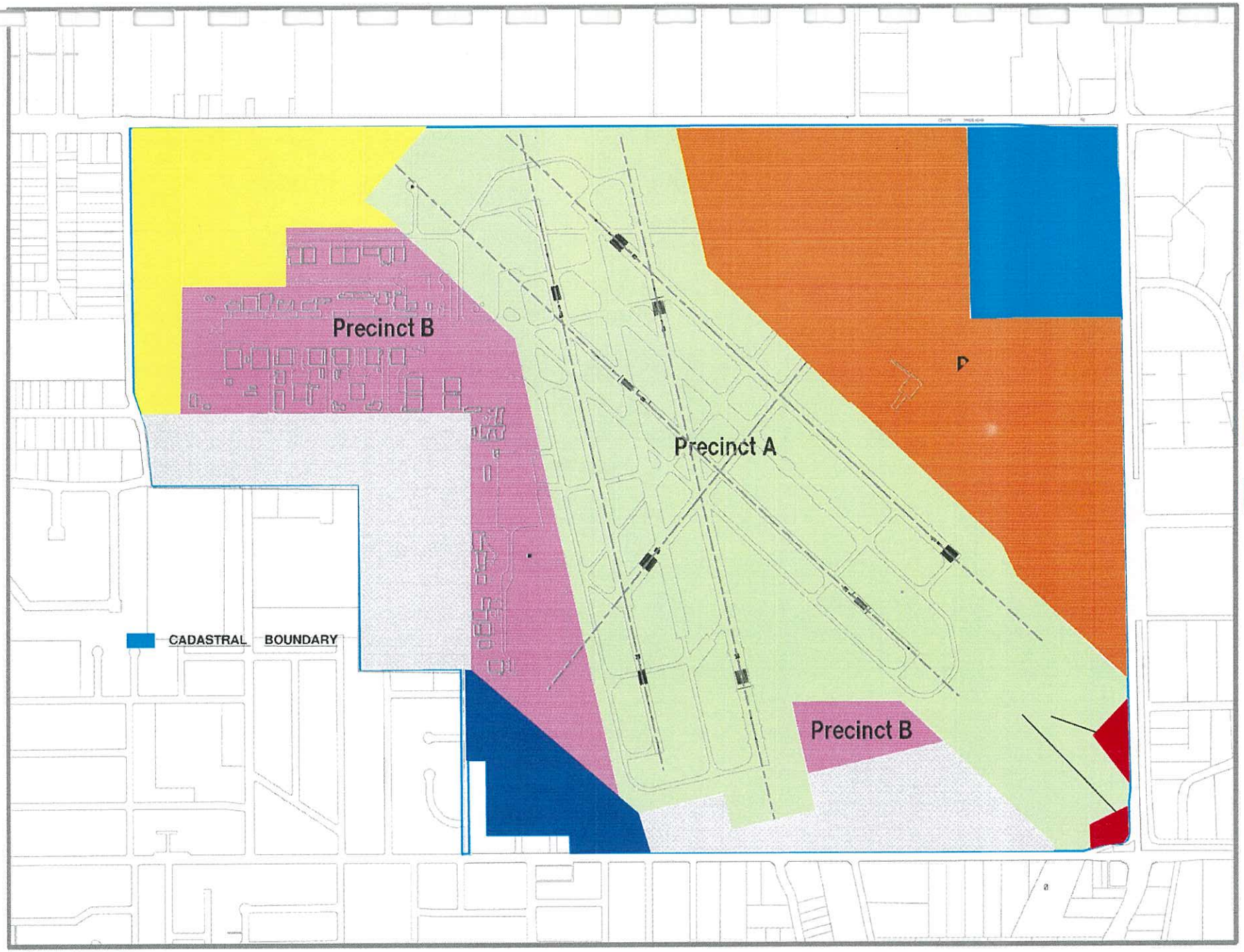
MOORABBIN

TRACT CONSULTANTS PTY. LTD.
PLANNERS, LANDSCAPE ARCHITECTS AND URBAN DESIGNERS
146 LENNOX STREET RICHMOND, VICTORIA 3121

JOB NO. 396058 DRW. NO. P/D SD-01.00 SCALE 1:200 (B1) DATE Feb 99

Figure No. 18

Landscape and Entry Concept Plan



Legend

- Precinct A Airside
- Precinct B Commercial Aviation/ Landside
- Precinct C Non Traditional Retailing
- Precinct D(1&2) Business and Industrial Park
- Precinct E Office, Commercial, Hotel and Restaurant Precinct
- Precinct F Industrial
- Precinct G Commercial, Light Industrial and Convenience Retailing

Figure 19
Precinct Development Plan

With this flexibility, the Precinct Development Plan provides a strategic direction for the Airport over the next twenty years. It will be reviewed after five years as a part of the overall Master Plan review process.

The Precinct Development Plan will provide for the staging of development consistent with infrastructure provision and the ability of the market to respond to the broad parameters set by the planning controls. The anticipated timing of these developments within the first five years is shown below:

Precinct A: Aviation development, taxiways and runway options.
Precinct B: Various aviation and commercial developments.
Precinct C: Consolidation of non traditional retailing development.
Precinct D: Development of the Business Park in stages along Centre Dandenong and Boundary Roads, subject to expiry of Golf Course lease.
Precinct E: Development in stages subject to market demand.
Precinct F: Various industrial and commercial developments
Precinct G: Various aviation, industrial and commercial developments.

6.2.2 Precinct A – Airside

Overview

Precinct A encompasses all land directly required for airside activities. The protection of this precinct for development strictly in association with aviation activities is essential to the long term sustainability of airport operations.

Key Issues

- Flexibility in infrastructure provision is required to accommodate future changes in the mix of aviation operations;
- Timing of infrastructure development is not known as a result of the uncertainties which exist in relation to the demand for Corporate and RPT services.

Objective

To provide for the growth and development of the airport's core aviation support infrastructure, including the development and operation of runways, helicopters, taxiways, training areas, aircraft parking areas, apron areas, hangars, fuel depots, runway clearance areas and transport terminals.

Strategies to achieve this objective

- Protect areas directly required for airside activities together with appropriate buffers to meet safety requirements;
- Reserve appropriate areas for runways, taxiways, hangars and aircraft parking to enable forecast growth levels to be realised.
- Ensure that new development takes account of issues related to aviation business development as shown in the Framework Plan for potential aviation growth, shown in **figure 9** of the Master Plan.

Zoning and Implementation

This precinct is zoned Special Use Zone No. 1. The purpose of this zone is to provide exclusively for airside activities. The implementation of this zone will facilitate the continued protection of land required for airside activities as required by the airport lease and the Federal Airports Act, and will allow for the adopted forecast aviation growth levels to occur.

6.2.3 Precinct B – Commercial Aviation and Landside Precinct

Overview

This precinct encompasses land to the west of existing runways and taxiways as well as a small area of land towards the south of the site. The existing primary role of this precinct is to provide for the accommodation of aviation industry and facilities, including aviation hangars, aviation related industry, offices and aircraft parking.

Key Issues

- Need to set aside substantial areas for hangars and aircraft parking to accommodate appropriate facilities for long term aviation growth and development. This includes land to the south of Northern Avenue adjacent to Grange Road, which was previously considered for non aviation and commercial development.
- Opportunities exist to develop and diversify activities towards non aviation related businesses.

Objective

To provide for an integrated mix of aviation and non aviation businesses and facilities, which support the long term aviation needs of the airport and build upon the opportunities in surrounding precincts for complementary industrial and commercial development.

Strategies to achieve this objective

- Encourage the primary use of the precinct for the development of transport terminals, hangars, aircraft parking areas, apron areas, fuel depots, and runway clearance areas.
- Support opportunities for a range of complementary non aviation industries, offices, convenience retail facilities and caretakers dwellings which support the core aviation function of the precinct.
- Encourage the up-grading of existing buildings and facilities on the site which enhance the function, amenity and overall integration of development within the precinct.
- Encourage the agglomeration of industry which contributes to the development and application of aviation technology.

Zoning and implementation

This precinct is zoned Special Use Zone No.2. The purpose of this zone is to encourage the development of aviation related and other commercial, industrial and office uses in a planned and landscaped setting. The application of this zone will enable the continued use of this precinct for transport terminal, aviation related uses and commercial/industrial development.

6.2.4 *Precinct C – Non Traditional Retailing Precinct*

Overview

Precinct C comprises land in the north-west corner of the site which is currently occupied by the Direct Factory Outlets Centre, a service station complex and associated car parking areas. Its existing role is to provide for a concentration of non-traditional or clearance retailing outlets which are primarily geared towards clearance of surplus inventory including seconds, samples and end of line merchandise. Brand name fashion houses, sporting goods outlets, homeware manufacturers and associated retailing uses currently utilise the site for the disposal of seconds and surplus merchandise at discount prices.

The strategic focus for this precinct is to encourage the consolidation of clearance retailing outlets and complementary restricted retailing and larger scale showroom uses. Mainstream retailing, including activities based upon full line, full price retailing are not expected to dominate this precinct. Discount department stores and supermarkets are directly prohibited within this precinct.

Key Issues

- Opportunities exist to strengthen the function of this precinct as a regional destination for seconds retailing and disposal of end of line merchandise.
- Need to ensure that the form of retailing is structured to complement rather than transform the retail hierarchy of the region.
- Consolidation of this precinct as a clearance retail outlet generates opportunities for establishment of take-away food and restaurant uses which support the tourism and leisure function of the precinct.

Objective

To promote the consolidation of non traditional retailing activity and to provide for new development which enhances the leisure and tourism function of this precinct.

Strategies to achieve this objective

- Ensure that retailing within this precinct is primarily limited to clearance retailing and disposal of seconds, samples and end of line merchandise. The development of restricted retail premises, warehouses, home maker uses and limited other retailing forms will be considered where they compliment the non traditional retail function of this precinct. Other forms of retailing activity which exhibit 'mainstream' retail characteristics may be considered in an ancillary function.
- Prevent the development of this precinct as a mainstream retail activity node by excluding department stores, supermarkets and other traditional 'anchor' retail facilities from this precinct.
- Ensure that proposals for expansion of retail facilities on the site in excess of 4000m^2 in floor area are supported by an analysis of net community benefit/cost of the development;
- Promote opportunities for the development of a range of take-away food, restaurant and convenience food and drink premises which contribute to the tourism role of the precinct.

Zones and Implementation

This precinct is zoned Special Use Zone No.3. The purpose of this zone is to provide for a range of commercial development and non traditional retailing. Importantly the zoning framework for this precinct directly prohibits department store and supermarket uses, which will ensure that the future development of this precinct does not allow for the agglomeration of mainstream retailing activities and therefore does not undermine the existing retail heirarchy of the surrounding region.

6.2.5 *Precinct D – Business and Industrial Precinct*

Overview

This precinct encompasses substantial areas of land to the east of the existing runways, which enjoy expansive frontages to Centre Dandenong and Boundary Roads. A small area of land in the south-east corner of the site is also included in this precinct.

The City of Kingston Golf Course currently occupies a substantial part of this precinct adjacent to Boundary Road, and a service station is located in south-east corner of the site. The significant balance of the precinct is generally unutilised. The precinct currently affords open vistas across the airport site, although the landscape character of this area is not strongly developed.

Opportunities exist within this precinct for the development of an integrated high quality office business park within an exceptional landscaped setting. Primary uses to be promoted within this precinct will include warehouses, higher order manufacturing and corporate offices. The development of synergies between new commercial development and airside activities will also be strongly promoted throughout this precinct, with support for high tech aviation industries, aviation terminal buildings, and commercial/retailing activities in association with industrial activities.

Lower scale building form will be supported in the south-east corner of the precinct, to ensure that development is sensitive to the view lines of existing runways.

Key Issues

- Options for the relocation, partial closure or closure of the existing 04/22 runway will enhance opportunities for non-aviation and commercial development within this precinct;
- Need to respect existing open view corridors across the airport from Centre Dandenong Road.
- Need to preserve flexibility for incorporation of aviation related uses within the precinct, including terminal buildings, RPT and corporate aviation facilities, and terminal car parking areas, subject to future demand for corporate and RPT services.

Objective

To promote opportunities for local employment, industrial and business activity development which contribute to the creation of a high profile, high quality landscaped environment on the site.

Strategies to achieve this objective

- Promote opportunities for the development of a high quality industry/business environment which is identifiable by its integrated urban design form, exceptional landscape entry treatments, generous boulevards, sensitive treatment of key site frontages, and balanced site coverage.

- Encourage the development of the northern part of the precinct primarily for integrated warehouse, industry and office uses, with opportunities for commercial and restricted retailing activities supported in an ancillary function.

- Promote the development of the eastern section of the precinct for larger scale corporate offices uses, industry and associated commercial uses. Limited retailing activities which support the core function of the precinct may be supported where positive planning outcomes can be demonstrated.

- Ensure that proposals for office or retail developments in excess of 4000m^2 in floor area are supported by an analysis of net community benefit/cost of the development;

- Promote the creation of a strong landscape character which is responsive to the Landscape Vision for the airport described in 21.04.2 above.

- Ensure that all new development responds to the design objectives contained within the *'Moorabbin Airport Urban Design and Landscape Guidelines.'*

Zoning and Implementation

This precinct is zoned SUZ2 and allows for a range of office, industry, warehouse, restricted retailing and other commercial uses. The implementation of this zone will allow for a unique integration of commercial, industrial and aviation related development.

6.2.6 *Precinct E – Office, Commercial , Restaurant and Hotel Precinct*

Overview

This precinct includes land in the north-east corner of the site which offers a high degree of exposure to both Centre Dandenong and Boundary Roads. The vision for this precinct is to create a more intensive and vibrant cluster of corporate offices, conference and hotel facilities, and ancillary commercial development which supports the core business/tourism function of the precinct. A higher density of uses with a stronger commercial focus is envisaged for this precinct than in the adjoining precinct D, although lower density industrial uses may locate on the periphery of this precinct.

Key Issues

- Access to this precinct must be carefully designed to minimise impact on Boundary Road/Centre Dandenong Road intersection.

- Scale of new development should be responsive to development in adjoining precinct D.

- Need for quality urban design treatment of key gateway corner.

Objectives

To develop an intensive mixed use activity precinct which provides a key business and tourism focus for the region.

Strategies to achieve this objective

- Promote the development of a high concentration of corporate offices, hotel, serviced apartments and conference facilities. Uses which complement the key function of this precinct including restaurants, cafes, convenience retailing, and limited restricted retailing may also be supported in an ancillary function.
- Ensure that proposals for office or retail developments in excess of 4000m^2 in floor area are supported by an analysis of net community benefit/cost of the development.
- Provide integrated pedestrian and movement systems which create a high degree of permeability to the adjoining industry/office parks.
- Recognise and enhance the site's gateway function through strong landscaping and well designed urban form particularly along the site's major frontages.
- Ensure that all new development responds to the design objectives contained within the *'Moorabbin Airport Urban and Landscape Design Guidelines.'*

Zoning and Implementation

This precinct is zoned Special Use Zone No.2. The implementation of the objectives of this zone together with the '*Moorabbin Airport Urban Design and Landscape Guidelines'* should ensure that development within this precinct is generally in line with the vision and overview described above.

6.2.7 Precinct F – Industrial Precinct

Overview

This precinct includes land towards the south of the site with frontage to Lower Dandenong Road, as well as existing industrial land to the west of the site in the vicinity of Grange Road. The vision for this precinct is to provide for a range of small – medium scale industrial, office and warehouse uses which are compatible with existing industrial development within the precinct and with development to the south of Lower Dandenong Road. Traditional industrial uses provide the dominant focus for this precinct, although trade supplies and ancillary commercial uses may also be supported where positive planning outcomes can be demonstrated.

Attention to landscape design will be required particularly along the Lower Dandenong Road frontage to ensure that the existing open vistas available across this part of the site are addressed in the siting and layout of new development.

Key Issues

- Precinct currently affords open vistas across the airport from Lower Dandenong Road.
- Access to this precinct must be carefully designed to minimise impact on traffic movement on Lower Dandenong Road.
- Scale of new development should be responsive to nearby development to South of Lower Dandenong Road.

Objective

To provide for a wide range of industrial development which builds upon the strategic linkages to existing industrial precincts to the west of the site.

Strategies to achieve this objective

- Promote the development of high amenity industrial development within a well landscaped setting.
- Promote a high standard of subdivision layout, road access and design, carparking and building design consistent with the '*Moorabbin Airport Urban and Landscape Design Guidelines.*'

Zoning and Implementation

This precinct is zoned Special Use Zone No.2. The implementation of this zone together with the '*Moorabbin Airport Urban Design and Landscape Guidelines*' should ensure that development within this precinct is generally in line with the vision and objectives described above.

6.2.8 Precinct G – Commercial and Light Industrial and Convenience Retailing

Overview

This precinct includes land in the extreme South-West corner of the site. The vision for this part of the site is for a mix of integrated land uses, including small scale commercial, convenience retailing and aviation related industry. It is likely that substantial parts of this precinct will be required for aviation related and corporate aviation facilities, subject to market demand. Only limited retailing activity is envisaged for this precinct, which performs a convenience rather than traditional retailing function.

Key Issues

- Uncertainties exist in relation to the long term requirements for corporate and RPT aviation facilities in this precinct.
- Existing traffic movements on Lower Dandenong Road limit opportunities for retailing activity.
- Road link with Grange Road is a potential option which is still being considered.
- Any new development within this precinct must be sensitive to existing residential development.

Objective

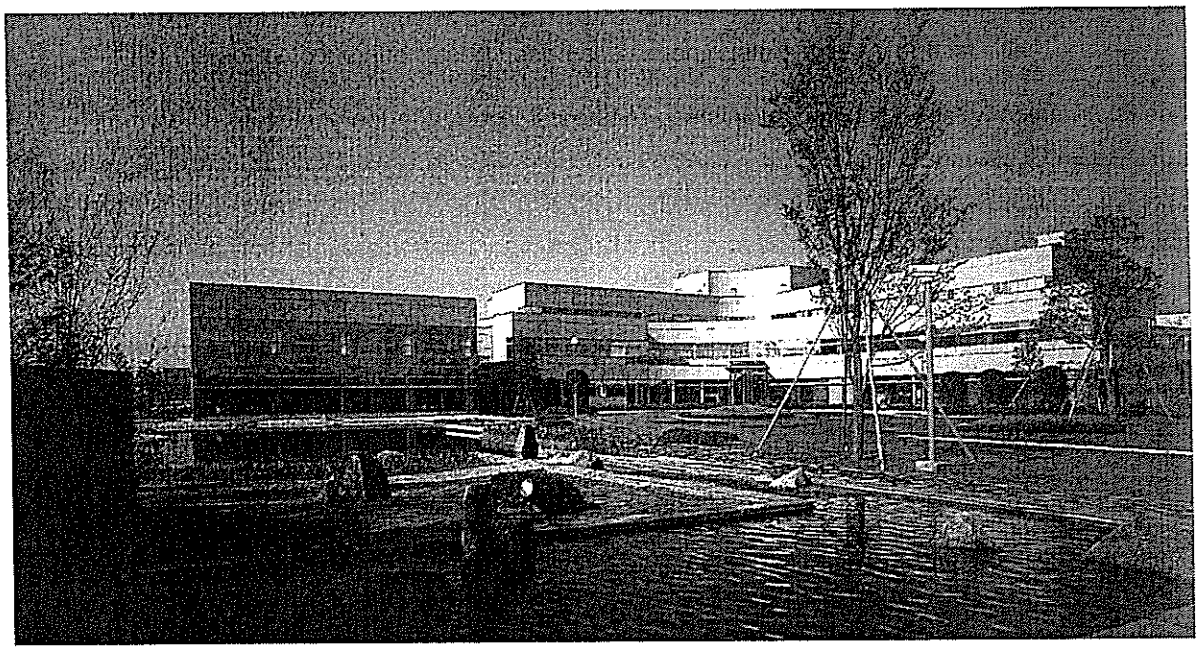
To provide for a mix of integrated light industrial, commercial and limited convenience retailing uses which complement and enhance existing commercial development to the south of the airport, while preserving the ability to expand into this area with aviation activities to meet market demand.

Strategies to achieve this objective

- Protect the ability to expand airport hangars, aviation related industry and facilities.
- Promote the development of a mix of integrated uses including light industry, commercial and convenience retailing.
- Ensure that any future proposal to construct a road link between Grange Road and Lower Dandenong Roads is supported by a detailed traffic assessment approved by Council and Vic Roads.
- Promote a high standard of subdivision layout, road access and design, carparking and building design consistent with the *'Moorabbin Airport Urban Design and Landscape Guidelines.'*

Zoning and Implementation

This precinct is zoned Special Use Zone No. 2. The implementation of this zone together with the *'Moorabbin Airport Urban Design and Landscape Guidelines'* should ensure that development within this precinct is generally in line with the vision and objectives described above.



7.0 AIRPORT ZONING

The strategic planning analysis conducted for the Airport has been translated into a statutory planning framework that provides for the comprehensive development of the Airport land. The recommended zoning approach has utilised the Special Use Zone and three schedules to that zone. This statutory planning framework has been derived from the new Victorian Planning System, the Victoria Planning Provisions, to ensure ongoing consistency in the application of town planning controls to the Commonwealth owned Airport land. The Zoning Plan is shown as **figure 20.**

The Special Use zone has been applied to the Airport because this zone allows for a unique mix of uses and developments which are specifically applicable to Moorabbin Airport. Unlike other standard zones from the Victoria Planning Provisions, the special use zone can be specifically tailored to provide for different land use outcomes. The State Government recommends the use of this zone only in special circumstances where no other standard VPP zone can achieve the desired policy objective. In the case of Moorabbin Airport, the opportunity to create an environment with a high degree of interaction and integration between commercial and airside activities is one which cannot be accommodated through standard zoning provisions. The need to retain flexibility to grow the aviation business on all parts of the site also reinforces the need for a flexible and unique zoning framework for the Airport. This is clearly reflected in **figure 9**, which shows the airport's potential long term aviation needs and the substantial areas which may be needed to accommodate these requirements.

It is recognised that where possible the zoning framework for the site should respond to the zoning of surrounding land. The zoning of land surrounding the Airport includes a mix of industrial, residential and special use zoning. A residential zone is directly prohibited under the Airports Act and the standard industrial zone clearly does not provide for the mix of commercial and airside uses which may be pursued in various precincts across the site.

Other standard business and industrial zones from the Victoria Planning Provisions (VPPs) were examined but determined unacceptable for application to the Airport on the following grounds:

- As an Airport of regional and statewide significance, Moorabbin Airport requires use and development controls to properly coordinate a mix and range of uses which are unique in Victoria.

- Following advice from the Department of Infrastructure during the initial stages of the development of the Master Plan, the proposal to use a number of zones on the Airport land was reduced to a minimum.

- The use "transport terminal" must relate to airside and landside areas on leasehold land which can not be adequately addressed by other standard zones. The Special Use zone allows for a range of special uses and developments which fall outside of the usual types of land uses across Victoria to be properly controlled and facilitated.

- The purposes and controls of the standard Industrial and Business zones do not adequately cater for a range of strategic uses and developments related to the Airport, such as the Business Park in Precinct D, or the potential development of residential hotel at appropriate locations on non-airside land. Importantly these zones do not appropriately provide for the integration of aviation related facilites, or ancillary commercial uses which may be required to support such aviation uses. The application of either the Industrial or Business zones would also send an unclear message to potential investors in areas such as the Business Park and other areas located at the Airport.

- The standard Business zones (B1Z, B2Z and B3Z) are not relevant to the factory direct outlet located in the North-West corner of the Airport, because of the need to significantly restrict the key "department store", "supermarket" and "shop" uses. This has been done so as not to detrimentally affect the retail hierarchy of the region. The types of uses allowed by the "retail premises" and "restricted retail premises" definitions continues to inadequately provide for a range of non-traditional retailing uses that have emerged over recent years. The use of local controls and policy in restricting the "department store" and "supermarket" uses is seen as contrary to the purpose of the standard Business zones. Consequently, the Special Use zone has been applied to recognise the special use of this part of the Airport land.

7.1 Special Use Zone

The Special Use Zone has been used as the zoning framework for the Moorabbin Airport. The purpose of this zone is 'to provide for the use and development of land for specific purposes as identified in the schedule to the zone.'

A schedule to the zone specifies a range of as-of-right, discretionary and prohibited uses. Further requirements are stated with respect to use of land, subdivision, buildings and works and advertising signs. Ministerial Direction No. 9 has been taken into consideration in the preparation of all schedules to the Special Use Zone.

A planning permit is not required to construct a building or to construct or carry out works if consistent with the Moorabbin Airport Master Plan. If buildings and works are proposed for which the cost of construction exceeds $10 million or another amount as prescribed by the Airports Act 1996 or regulations, specific requirements apply.

This includes the need to prepare a Major Development Plan that is widely publicised, with adequate community, government and agency consultation and approved by the Minister for Transport and Regional Services. This ensures government, agency, community and stakeholder input into major developments which have not been prepared as part of the initial Moorabbin Airport Master Plan.

Category 2 advertising sign controls (clause 52.05-8 of the Land Use Plan) are specified for all Airport land.

The implementation of the Special Use zone will be supported by the 'Moorabbin Airport Urban Design and Landscape Guidelines,' and will be strongly guided by the policy directions outlined in the Airport Strategic Statement.

7.2 Schedule 1 to the Special Use Zone (SUZ1)

Schedule 1 to the Special Use Zone, the Moorabbin Airport Airside Area specifies the following purposes:

- To provide for the integrated use and development of the land in accordance with the Moorabbin Airport Master Plan.
- To encourage the development of airside uses.

Apiculture, Mineral exploration, Mining, Search for stone and Transport terminal are the only specified as-of-right uses.

If the section 1 condition is not met, Agriculture, Mining and Search for stone are discretionary uses (section 2). Otherwise, all other uses are prohibited (section 3).

Legend

SUZ1

Special Use Zone Schedule 1
Moorabbin Airport Airside

SUZ2

Special Use Zone Schedule 2
Moorabbin Airport Landside and Commercial Development Area

SUZ3

Special Use Zone Schedule 3
Moorabbin Airport Non-Traditional Retailing Area

SUZ2 (Interim Airside)

Reverts to SUZ2 When 04/22 Runway is Relocated

SUZ2 (Potential Airside)

-50m 0 50m 100m 150m

Figure No. 20

Zoning Plan

MOORABBIN AIRPORT MASTER PLAN

MOORABBIN AIRPORT CORPORATION

7.3 Schedule 2 to the Special Use Zone (SUZ2)

Schedule 2 to the Special Use Zone, the Moorabbin Airport Landside, Industrial and Commercial Area specifies the following purposes:

- To provide for the integrated use and development of the land in accordance with the Moorabbin Airport Master Plan.

- To encourage the development of aviation related and other commercial, industrial and office uses in a planned and landscaped setting.

A range of uses that do not require a permit are proposed including: apiculture, caretaker's house, convenience shop, leisure and recreation, industry, mineral exploration, mining, minor utility installation, office, place of assembly (other than cinema), road, residential hotel, retail premises (other than shop and gambling premises), search for stone, service station, transport terminal and warehouse.

The combined leaseable floor area for all shops must not exceed 6,000 m^2 and is envisaged to be spread throughout land affected by this zone, rather than as one large retail node. Shops will occupy an area of no more than 2000 m^2 in any one development. These areas could be used to provide convenience shops ancillary to industrial and commercial uses, and to complement the operation of the neighbourhood retail centre near the corner of Rivette Street and Lower Dandenong Road.

Discretionary uses include: a range of as-of-right uses, if the section 1 condition is not met, utility instillation and any other use not listed as prohibited.

Prohibited uses include accommodation (other than caretaker's house and residential hotel), corrective institution, department store, extractive industry, gambling premises, major sports and recreation facility, motor racing track, and supermarket.

7.3.2 Special Use Zone (Interim Airside)

Schedule 2 to the Special Use Zone 2 (Interim Airside) has been applied to the existing 04/22 runway. Schedule 2 to this zone will apply to land required for airside activities along this existing runway alignment until such time as a preferred option for the future configuration of the 04/22 runway is resolved. In this interim period, the land affected by this control will be used for a transport terminal.

Once a preferred option for the relocation or partial closure of this runway is identified, the interim planning controls for this runway will revert to Schedule 2 to the Special Use Zone. This will allow precinct D shown on the Precinct Development Plan to develop as planned, as a Business and Industrial Park.

7.4 Schedule 3 to the Special Use Zone (SUZ3)

Schedule 3 to the Special Use Zone, the Moorabbin Airport Non-traditional Retailing Area specifies the following purposes:

- To provide for the integrated use and development of the land in accordance with the Moorabbin Airport Master Plan.

- To encourage a range of commercial developments and non-traditional retailing.

Non-traditional retailing is considered to be retailing which is primarily geared towards the clearance of surplus inventory including samples, seconds and end of line merchandise. It may also include premises accommodating convenience shops, restricted retail premises, homemaker uses, showrooms and warehouse type sales outlets which compliment the non traditional retailing function of the precinct. Importantly, this type of retailing activity is considered to directly exclude supermarket and department store uses.

A range of as-of-right uses are proposed including: leisure and recreation, office, place of assembly, road, retail premises (other than gambling premises), service station, shop (other than supermarket and department store) and warehouse.

Discretionary uses include: accommodation (other than bed and breakfast, corrective institution and residential hotel), industry, and utility installation, amongst others.

Prohibited uses including bed and breakfast, corrective institution, department store, extractive industry, gambling premises, intensive animal husbandry, major sports and recreation facility, motor racing track and supermarket.

As discussed in section 6.2.4, the strategic focus for this precinct is to build upon its existing role as a clearance retail outlet centre, primarily providing goods and services which are different to the full line, full price goods offered in mainstream retail centres. The application of the special use zone is intended to prevent the full array of retail uses which can be contemplated under a standard Business 1 zoning.

7.5 Airport Environs Overlay (AEO1)

The exhibited Kingston Planning Scheme applies the Airport Environs Overlay Control to parts of the municipality effected by the 25 ANEF contour or greater.

In AEO1, regardless of the zone provisions, land must not be used for noise sensitive uses such as a childcare centre, school or hospital. A permit is required for a number of nominated uses including a dwelling, office and residential hotel. All applications to use land within this overlay must be referred to the Airport owner and would only be approved if the building design incorporates appropriate noise attenuation measures complying with Australian Standard AS 2021-1994, Acoustics – Aircraft Noise Intrusion – Building Siting and Construction.

7.6 Airside

Airside land is defined by the Airports Act 1996 as the part of the Airport grounds, and the part of the Airport buildings, to which the non-travelling public does not have free access.

This land primarily refers to runway and taxiways, helipads, the control tower, lighting and navigation areas, apron areas and fuel refilling operations. Access to airside areas is restricted to those with specific permission. Airside areas are zoned as schedule 1 to the Special Use Zone, SUZ1.

7.7 Landside

Landside land is defined by the Airports Act 1996 as the part of the Airport grounds, and the part of the Airport buildings, to which the non-travelling public has free access.

This land primarily refers to passenger terminals, aircraft hangars, maintenance depots, fuel depots, airline and aviation related businesses and other commercial operations. Access to landside areas is not restricted. Landside areas are zoned as schedule 2 to the Special Use Zone, SUZ2.

7.8 The Process for Land Use Decision Making

7.8.1 Implementation of the Zoning Framework and Land Use Plan.

As discussed in section 5.3, a comprehensve Land Use Plan has been prepared in parallel with the Moorabbin Airport Master Plan. The Land Use Plan embodies the overall policy objectives for each precinct on the Airport (as outlined in the Airport Strategic Statement), which are intended to be implemented through the zoning framework described above. The implementation of the Land Use Plan and zoning framework will ensure that there is a sound and strategic approach to the use and development of land in the Airport.

7.8.2 The role of the Moorabbin Airport Corporation as Responsible Authority

The Moorabbin Airport is Commonwealth land and ownership of the land will remain with the Federal Government, specifically the Department of Transport and Regional Services. Accordingly the Moorabbin Airport Corporation is the Airport Lessee Company as defined by the *Airports Act 1996*. As the land is not formally subject to State planning controls the responsible authority role rests with the Moorabbin Airport Corporation.

In its Planning Authority role the MAC is required to provide sound, strategic and coordinated planning of the use and development of the Airport, in keeping with the objectives of the Land Use Plan. This involves the assessment of use and development proposals against the provisions of the Land Use Plan to determine whether a proposal is consistent with the overall zoning and policy framework and with the approved Moorabbin Airport Master Plan. In determining land use applications the MAC *may* take into account any relevant environmental, social or economic effects which it considers the proposal may have on the Airport and surrounding land.

The Moorabbin Airport Corporation is committed to establishing a clear and transparent process for land use decision making. MAC has now prepared a detailed 'Protocol for Land Use Decisions' which is contained within the Land Use Plan as a reference document. The protocol establishes an overall process for land use decision making by MAC which is generally consistent with established Victorian town planning principles and procedures. Importantly it also explains the roles of Council, the State Government, public authorities and community groups in viewing land use proposals, as part of the MAC's commitment to ongoing consultation.

7.8.3 The Role of the Planning Review Committee

The role of the Planning Review Committee is to oversee the strategic and statutory requirements of the Land Use Plan and to provide advice to the Moorabbin Airport Corporation on individual use and development proposals. The Committee will comprise representation from the Moorabbin Airport Corporation as well as specialist planning, architectural and engineering advice. The planning role will be performed by Tract Consultants Pty Ltd, the architectural role by Denton Corker Marshall, and engineering advice from Kinhills Pty Ltd.

The primary responsibility of the Planning Review Committee will be to assess all future land use and development proposals on the Airport site against the requirements of the Land Use Plan, the objectives of the Airport Strategic Statement and the requirements of the 'Moorabbin Airport Urban Design and Landscape Guidelines'. The Committee will also be responsible for advising Council and relevant public authorities of land use and development proposals.

7.8.4 The role of the Airport Building Controller

The Airport Building Controller is responsible for the technical approval of all buildings and works on the Airport. The Airport Building Controller must make an assessment of all proposed buildings and works against the requirements of the Building Code of Australia and issue approvals/certifications for new buildings and structures. The Airports Act 1996 prevents the Airport Building Controller from approving any building activity which is not consistent with the approved Master Plan.

7.8.5 The Airport Environment Officer

The Airport Environment Officer (AEO) fulfills the role of Environmental Regulator on the airport site. The AEO is responsible for investigating incidents which have, or may have caused pollution or issues of soil contamination. Where necessary, the AEO can issue an infringements notice to any operator on the Moorabbin Airport site, if the operator has committed an offence against the Regulations.

7.8.6 Council and State Government roles

The Master Plan recognises the need for ongoing consultation with the City of Kingston, the State Government and relevant public authorities in the future management and development of the Airport. The City of Kingston will be formally advised of all use and development proposals on the Airport by the Planning Review Committee, including those which are deemed to be 'as-of-right' and do not require a planning permit. Where necessary proposals will also be referred to relevant public authorities. The Moorabbin Airport Corporation will consider any comments received prior to an application being determined.

Major development proposals, including retail and office developments of more than 4000m² will also be referred to the State Government for comment. The MAC understands that Council may wish to seek the views of community groups prior to providing comment on an application.

The Planning Review Committee will coordinate any comments received from Council or the State Government and, while not required to do so, may undertake further discussion where clarification is required.

7.8.7 The Airport Consultative Committee

The Moorabbin Airport Consultative Committee will continue to play an important role in monitoring aviation operations and reviewing issues associated with the Airport's future growth and development. The MAC recognises that this forum provides an excellent vehicle for regular consultation with key stakeholders, and will therefore ensure that regular reports are made to the committee on the progress of land use development at the Airport.

7.8.8 Referral Authorities

Clause 66 of the Land Use Plan is a general provision of the Victorian Planning Provisions which sets out requirements for referral of subdivision applications. The application of this clause to the Moorabbin Airport is not entirely appropriate as subdivision of land at the Airport is directly prohibited by the Airports Act. However, MAC envisages that various precincts on the site may be divided into 'lots' for the purposes of subleasing, which will be represented on an overall subleasing plan for the precinct. This plan will be required to address a wide range of access, infrastructure and servicing issues similar to a subdivision proposal. On this basis, MAC will consult with relevant public authorities in regards to all proposals for the creation of major 'subleasing' areas. This consultation will be coordinated and addressed by the Planning Review Committee.

7.8.9 Assessment of Section 1 Uses

Where a proposed use is deemed to be as-of-right under the relevant zoning provisions, an assessment of the proposal will still be undertaken by the Planning Review Committee to ensure compliance with the requirements of the Land Use Framework. Amongst other things, this may include assessment against:

- The objectives of the Master Plan.
- The objectives of the Airport Strategic Statement
- Any relevant state planning policies.
- The buildings and works, carparking and landscaping requirements of the zone.
- The 'Moorabbin Airport Urban Design and Landscape Guidelines'

Development proposals must be accompanied by detailed site plans and a written assessment of how the proposal responds to the relevant precinct objectives outlined in the Land Use Plan. Where a proposal is for a retail or office development in excess of 4000m^2 applications must also be accompanied by an assessment of net community benefit and cost.

Upon receipt of the development proposal the Planning Review Committee will advise Council and any other relevant public authority of the application. The purpose of this notification is for authorities to advise MAC of any issues which should be given consideration prior to approving the proposal. MAC will allow a minimum of 5 business days for authorities to make comment prior to granting an approval.

The Planning Review Committee will provide an assessment and recommendation on the proposal to assist the MAC's determination. This assessment will summarise any comments received from authorities and explain how they have been addressed in the proposal. Where the proposal raises specific landscape, urban design, environmental or engineering issues the Planning Review Committee may include a more detailed analysis in the assessment report.

The assessment report will be considered by the MAC and authorities will be advised of the MAC'S decision on the proposal.

7.8.10 Assessment of Section 2 Uses

Where a proposal is a section 2 use a planning permit is required to be issued by the MAC. Similar to the consideration of Section 1 uses development proposals will be assessed against:

- the objectives of the Master Plan.
- the objectives of the Airport Strategic Statement.
- any relevant state planning policies.
- the buildings and works, carparking and landscaping requirements of the zone.
- the 'Moorabbin Airport Urban Design and Landscape Guidelines'.

The Planning Review Committee will refer applications to Council and to relevant state authorities. Authorities will be invited to make comment on the proposal within 10 business days of receiving the application.

The Planning Review Committee will be responsible for making a detailed assessment of the proposal and submitting a comprehensive report and recommendation to the MAC.

7.8.11 Signage

Category 2, office and industrial signage requirements apply to the Moorabbin Airport land (clause 52.05-8).

7.8.12 Car Parking

Car parking provisions at clause 52.06 of the Land Use Plan are applicable to the land except where specifically stated in a schedule to the Special Use Zone.

7.8.13 Definitions

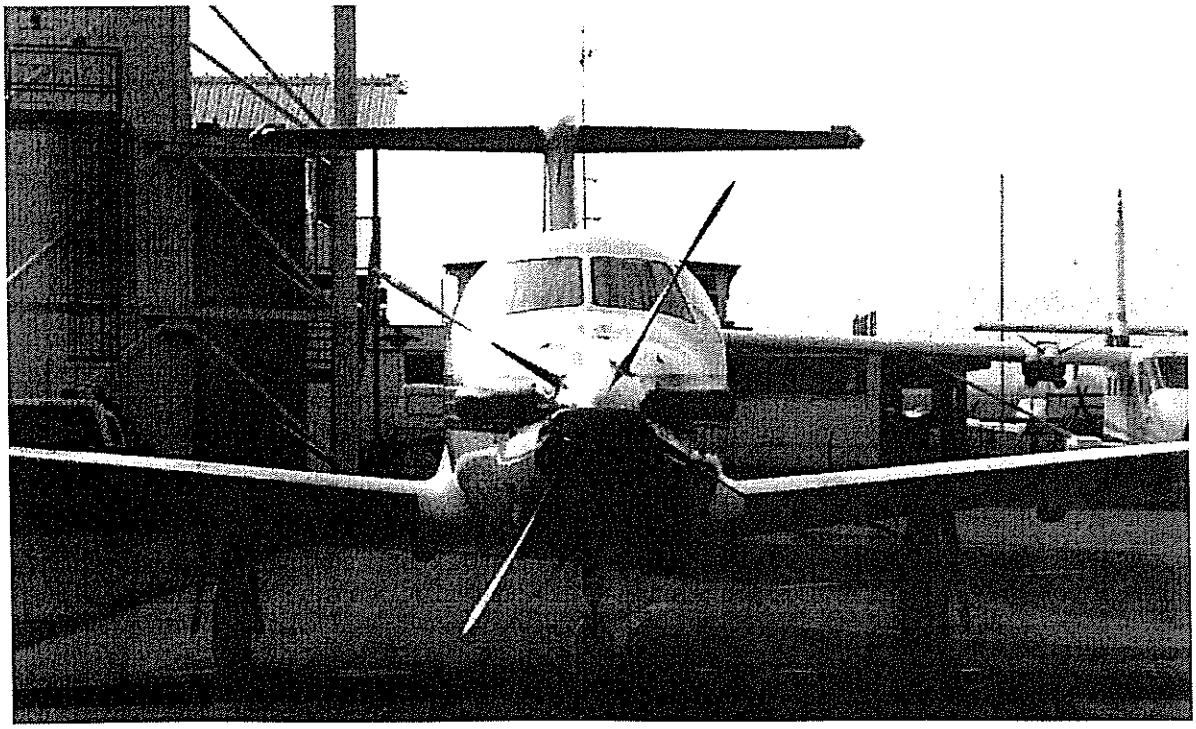
In addition to the land use planning definitions provided at Clauses 71-74 of the Land Use Plan the following terms and definitions apply:

- *Non-traditional retailing:*

  Non-traditional retailing is defined as retailing which excludes supermarket and department store uses. It is essentially focussed on the disposal of surplus inventory stock including samples, seconds and end of line merchandise. It may also include premises accommodating convenience shops, restricted retail premises, homemaker uses, showrooms and warehouse type sales outlets which compliment the non traditional retailing function of the precinct.

- *Site coverage:*

  Site coverage is defined as the building site coverage or building footprint as a percentage of the total site or subleased area. A building excludes the gross area of carparking (including multi-deck car parking), plant rooms, hard paving areas and footpaths.



8.0 PHYSICAL INFRASTRUCTURE

Moorabbin Airport is provided with all necessary physical infrastructure or opportunities for upgraded infrastructure to enable aviation activities to be maintained and commercial, industrial and retail use and development to be maximised. The location and capacity of existing physical infrastructure is shown in **figure 21** and proposed upgrades to physical infrastructure are shown in **figure 22.**

8.1 Water Supply

8.1.1 Existing Supply

Water provision is supplied by South-East Water and is reticulated around the site by the following means:

- A 225mm diameter at Grange Road then a 150mm diameter main along the North side of Centre Dandenong Road to Boundary Road.
- A 150mm diameter main along the West side of Grange Road.
- A 375mm diameter main along the South side of Lower Dandenong Road.
- A 300mm on the East side of Boundary Road at Lower Dandenong Road then reducing to 225mm diameter then a 150mm diameter at Centre Dandenong Road.
- A 150mm on the East side of Bundora Parade.

8.1.2 Proposed Extensions

The existing mains in Lower Dandenong Road, Boundary Road, and Grange Road, have sufficient capacity to support developments adjacent to the roads.

However, supply in the North-East corner, adjacent to Centre Dandenong Road and at the North end of Boundary Road, has limited capacity to service additional development. In order to service the proposed development, it will require construction of approximately 420 metres of 225mm diameter main along Centre Dandenong Road from the existing 225mm DICL located on the North side of Centre Dandenong Road approximately 150 metres East of Grange Road.

8.2 Sewerage

8.2.1 Existing Sewerage System

Sewerage provision is supplied by South-East Water. The whole of the Airport area is currently served by sewer reticulation mains of 150mm to 450mm diameter, which discharge into the 1200mm diameter Interceptor Sewer located on the North side of Lower Dandenong Road.

The 450mm diameter Clayton Branch Sewer, which runs through the Airport from North to South approximately 150 metres West of Boundary Road, is believed to be near capacity. However, subject to the type and location of development, it may be able to provide capicity for some limited development to this sewer (North East corner).

8.2.2 Proposed Extension

Generally, the development of the Airport in both the Eastern and Western areas, will require the extensions of suitably sized sewers at a minimum of 225mm diameter from the existing Mentone Intercepting Sewer Main, located on the North side of Lower Dandenong Road.

Again as with water supply, some small areas of development in the North-East section of the Airport, may be serviced by the existing Clayton Branch Sewer, depending upon the extent of development and proximity to this Branch Sewer.

8.3 Stormwater Drainage

8.3.1 Existing Stormwater

The relevant drainage agency is Melbourne Water. The Airport region drains to the South and discharges through a 1,350mm main drain under Lower Dandenong Road near Sibthorpe Street. This outlet flows into the Mordialloc Settlement Drain, a Melbourne Water Main Drain system which flows through the Airport, from North to South-West of Boundary Road.

This system is apparently under capacity for the major flow discharges and causes down stream flooding. In addition, areas along the East and South-East corner are currently subject to flooding in the 1 in 100 hundred year flood.

8.3.2 Proposed System

Depending upon the type and proximity of development, the existing internal drainage system, particularly on the Eastern side, may need to be upgraded, and generally developments on the site will need to retard the drainage discharge to equate to the existing conditions.

This on-site retardation may well be a combination of retention within each development site, together with a controlled outflow, and a possible major retarding basin in the South-East corner.

8.4 Electricity

8.4.1 Existing Electricity

Electricity provision is supplied by Citi Power and is available to the site from high voltage supply lines in Lower Dandenong Road and Grange Road.

In general, the existing infrastructure can meet a gross amount of up to 1 Mega Watt, although the North-East region of the site is poorly serviced from existing infrastructure.

8.4.2 Proposed Electricity

The Western and Southern areas can be serviced from the existing high voltage overhead supply lines, and will require a number of sub-stations to be located within the proposed developments to suit individual needs.

Development in the North-East will require the extension of existing high voltage lines, again sub-stations will be located within the development to suit individual consumer demands.

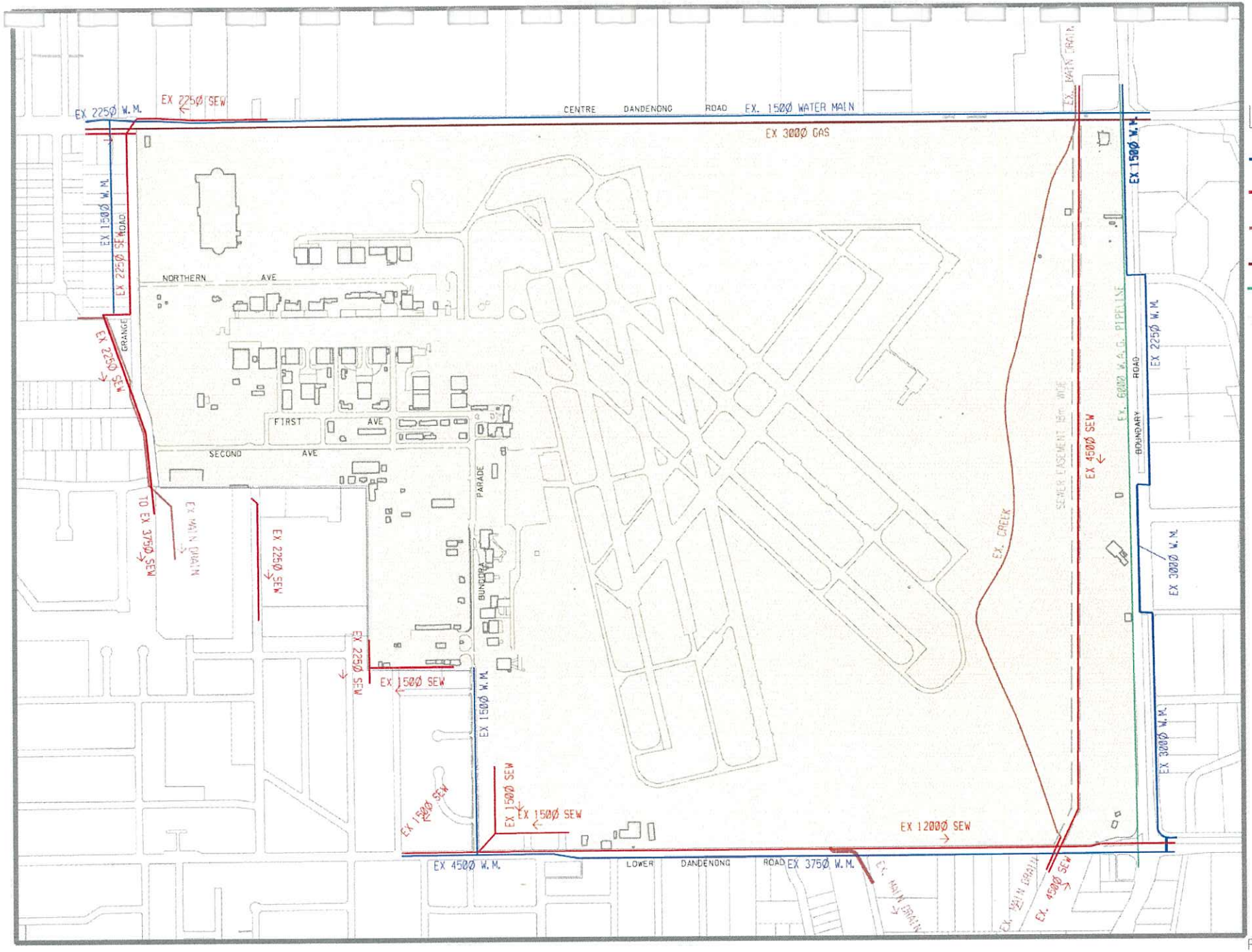
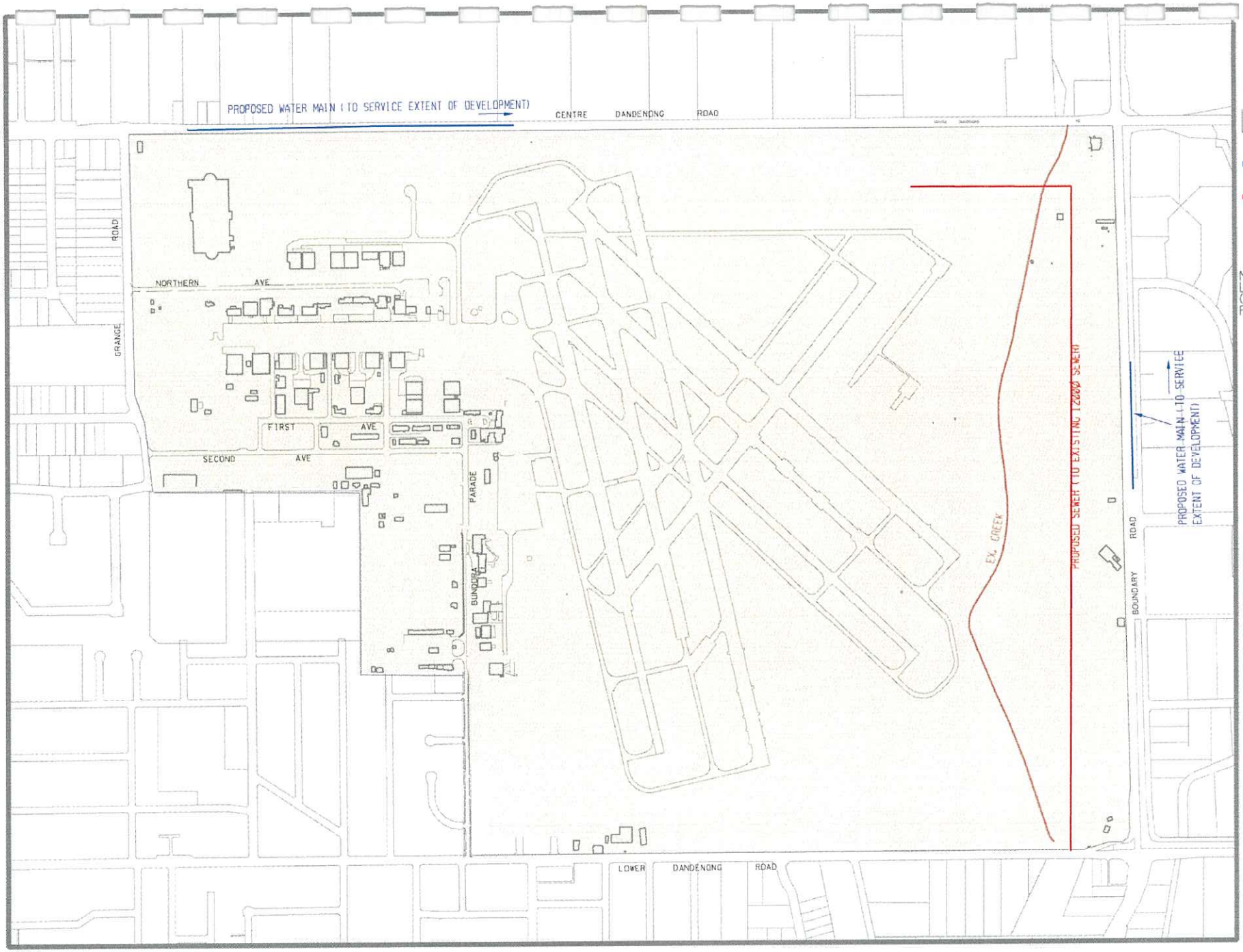


Figure No. 21

Existing Physical Infrastructure

MOORABBIN AIRPORT Master Plan

MOORABBIN AIRPORT CORPORATION



LEGEND

- PROPOSED WATER MAINS (W.M.)
- PROPOSED SEWERAGE (SEW.)

Note: Proposed Infrastructure Locations are Indicative Only and Subject to Further Investigations

-50m 0 50m 100m 150m

1:8000

Figure No 22

Proposed Physical Infrastructure

8.5 Telecommunications

8.5.1 Existing

Telecommunications installations are provided by Telstra and facilities exist within all the roads surrounding the current Airport site, to meet all known and future requirements.

8.5.2 Proposed

Telstra will extend, at no cost to the developer, facilities necessary to suit any proposed development.

8.6 Gas

8.6.1 Existing

The relevant gas provider is Multinet Gas. High pressure gas mains are present in Grange Road, Boundary Road and Lower Dandenong Road, with sufficient capacity to serve developments in the adjacent areas.

At present, gas is not available along Centre Dandenong Road and a new reticulation main would need to be constructed to support developments.

8.6.2 Proposed

Gas extensions to service any new development would be on a `viability basis' by the contributions towards the cost of extending the gas service may be required depending upon the projected consumer consumption in the plan for the gas company.

8.7 Regional Accessibility

8.7.1 Strategic Road Network

The Airport is located approximately 22 kilometres South-East of the Melbourne CBD. Its major arterial road link with the CBD is provided by the Nepean Highway.

Access to the South is provided by the Boundary Road/Wells Road connection to the Mornington Peninsula Freeway.

The Lower Dandenong Road/Cheltenham Road route to Dandenong provides the current strategic linkage to the East.

Boundary Road to the North will ultimately provide a connection to the Dingley Freeway and is soon to be upgraded in anticipation of this. It is to be realigned to intersect Heatherton Road opposite Clayton Road. The regional transport context is shown in **figure 23.**

A number of major road projects are planned to be undertaken by VicRoads which will significantly enhance the accessibility of the Airport in the medium to long term. These include the following:

- **Springvale Bypass**

  The first stage of the Springvale Bypass was constructed as a six lane divided road between the Princes Highway and Centre Road and was opened to traffic in September 1992. The second stage involved the construction of a four lane divided road between Heatherton Road and Springvale Road and was opened in December 1994.

  The intermediate section is formed by Westall Road which is planned to be upgraded to a six lane divided road including an overpass at the railway line and signalised intersections at Osborne Avenue and Fairbank Road. Funding has been allocated in the VicRoads budget and construction is about to commence.

- **Dingley Freeway**

  The Dingley reservation runs East from the end of South Road at Warrigal Road, passing through Clayton South, Dingley and Keysborough before linking with the South Gippsland Freeway at Hampton Park. The Freeway will intersect the upgraded Boundary Road approximately 1.5 kilometres North of the Airport.

  The Current VicRoads Corporate Plan indicates an objective of completing the Dingley Freeway between South Road and the Springvale Bypass within 5 years.

- **Scoresby Freeway**

  The Scoresby reservation runs South from Ringwood to link with the Mornington Peninsula Freeway at Frankston. A major interchange with the Dingley Freeway is proposed.

  An environmental effects study has recently been prepared and is about to be exhibited for public comment.

  VicRoads Corporate Plan indicates an objective to complete construction of this route within 10 years.

- **Mornington Peninsula Freeway**

  Proposals for the extension of the Mornington Peninsula Freeway North to link with the Dingley Freeway have been developed. The current reservation passes within half a kilometre of the Eastern boundary of the Airport.

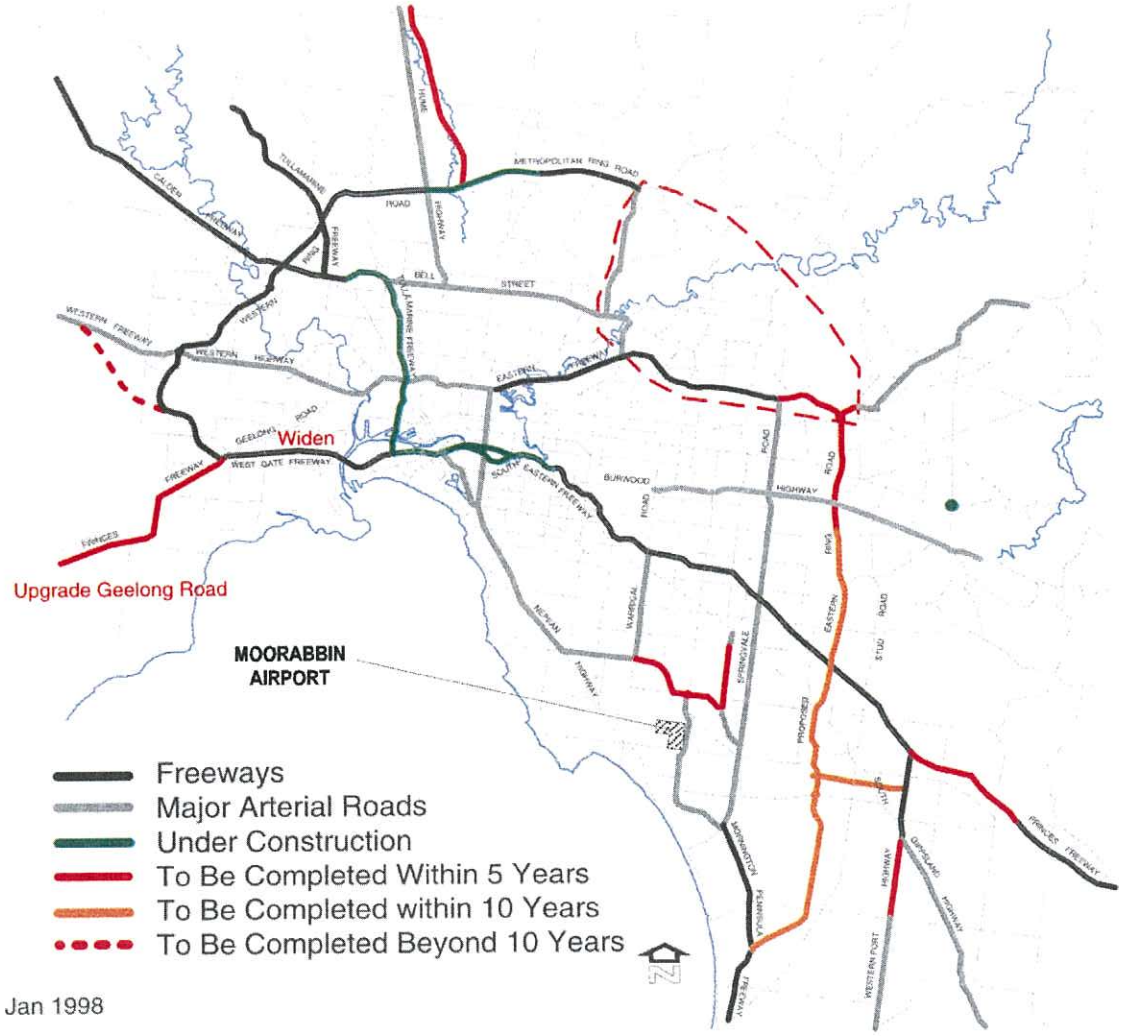
  VicRoads Corporate Plan currently makes no commitment to this Freeway.

8.7.2 Public Transport

Excellent bus service linkages are provided along both Centre Dandenong and Lower Dandenong Roads. These routes cross link and interconnect with the Frankston and Dandenong railway lines at a number of strategic stations and activity centres.

The opportunity exists to re-route some of the bus services through the Airport, subject to projected passenger demand.

Melbourne's Strategic Road Network



Note: Project completion timeframes are subject to funding and statewide priorities

Source: VicRoads Corporate Plan 1998-2000

8.8 External Road Network and Access

The site is bounded on three sides by arterial roads.

Centre Dandenong and Lower Dandenong Roads extend Eastwards from Nepean Highway, generally providing four lane undivided cross sections in the vicinity of the Airport.

Boundary Road is a six lane divided road adjacent to the Airport site. The Redwood Gardens industrial estate is located to the East and is generally provided with service road frontages and three formalised points of access with median openings on Boundary Road.

Currently, access to the Airport is restricted generally to a signalised intersection on Centre Dandenong Road at Grange Road, which is supplemented by a left in/left out access 350 metres further East which services the Fairways Leisure Market.

Road works and signal operational modifications have recently been completed to improve the safety performance of right turns into Grange Road.

The predominant use of the Eastern sector of the Airport site is the Moorabbin Golf Course. This is provided with a fully directional, unsignalised access on Boundary Road.

Some commercial development has occurred in the North Eastern corner of the site and this has limited left in/left out access in Boundary Road and Centre Dandenong Road.

The Airport was formerly provided with a linkage to Lower Dandenong Road at Bundora Parade. As this is a residential street at its Southern end, this road was closed at the Airport boundary many years ago.

8.9 Existing Internal Road Network

Grange Road is currently the only effective entry to the site. It has a width between kerbs of 12 metres which enables the provision of two stand up lanes at the traffic signals at Centre Dandenong Road.

It services the Airport as well as an industrial area to its West, which is isolated to Grange Road by a closure of Voltri Street. Grange Road intersects with Second Avenue approximately 700 metres South of its intersection with Centre Dandenong Road.

Second Avenue, which has a width between kerbs of 10 metres, traverses the site Eastwards for a distance of 650 metres, where it intersects Bundora Parade at a T intersection.

Bundora Parade has a width between kerbs of 12 metres which continues Southwards for a distance of approximately 300 metres. It continues at a reduced width for a further distance of 200 metres to its closure at the Airport boundary.

To supplement this main access route to the Western sector of the Airport site, a local street network is provided to the North of Second Avenue to access the aviation facilities.

8.10 Proposed Road Developments

The Master Plan proposes a potential extension of the Grange Road/Second Avenue/Bundora Parade route through the Airport property to intersect with Lower Dandenong Road at a signalised location, approximately 160 metres East of the Warren Road signalised intersection.

This proposal has been discussed with officers of VicRoads and City of Kingston in the context of the following advantages:

- It could provide an alternative access to the Airport from an arterial road, which could assist the overall capacity requirements and directional distribution of Airport related traffic.

- The predominant traffic movement at this access would be to and from the East which could be reflected in the signal operation. This signal operation could be linked to Warren Road signals os as to minimise conflicting vehicle movements for vehicles accessing angled parking adjacent to the strip shopping centre to the West in Lower Dandenong Road.

- A potential road connection between Lower Dandenong and Centre Dandenong Roads has the potential to alleviate an existing local area traffic management problem in Glenelg Drive. Traffic movement between Lower Dandenong Road and Warrigal Road is constrained by the need to traverse the busy signalised intersections on Nepean Highway. Council has installed extremely restrictive traffic management devices in Glenelg Drive to discourage the use of this route by through traffic. This has failed to achieve the elimination of this movement. A potential new collector link through the Airport could accommodate this traffic demand.

- Vehicle access to the Airport, from the Southern section of Bundora Parade, would be prevented.

- An isolated industrial site (Hella) is located at the Northern end of Southern Road off Lower Dandenong Road. This site could be connected to Second Avenue within the Airport enabling a subsequent road closure and elimination of this industrial traffic from the residential areas of Southern Road.

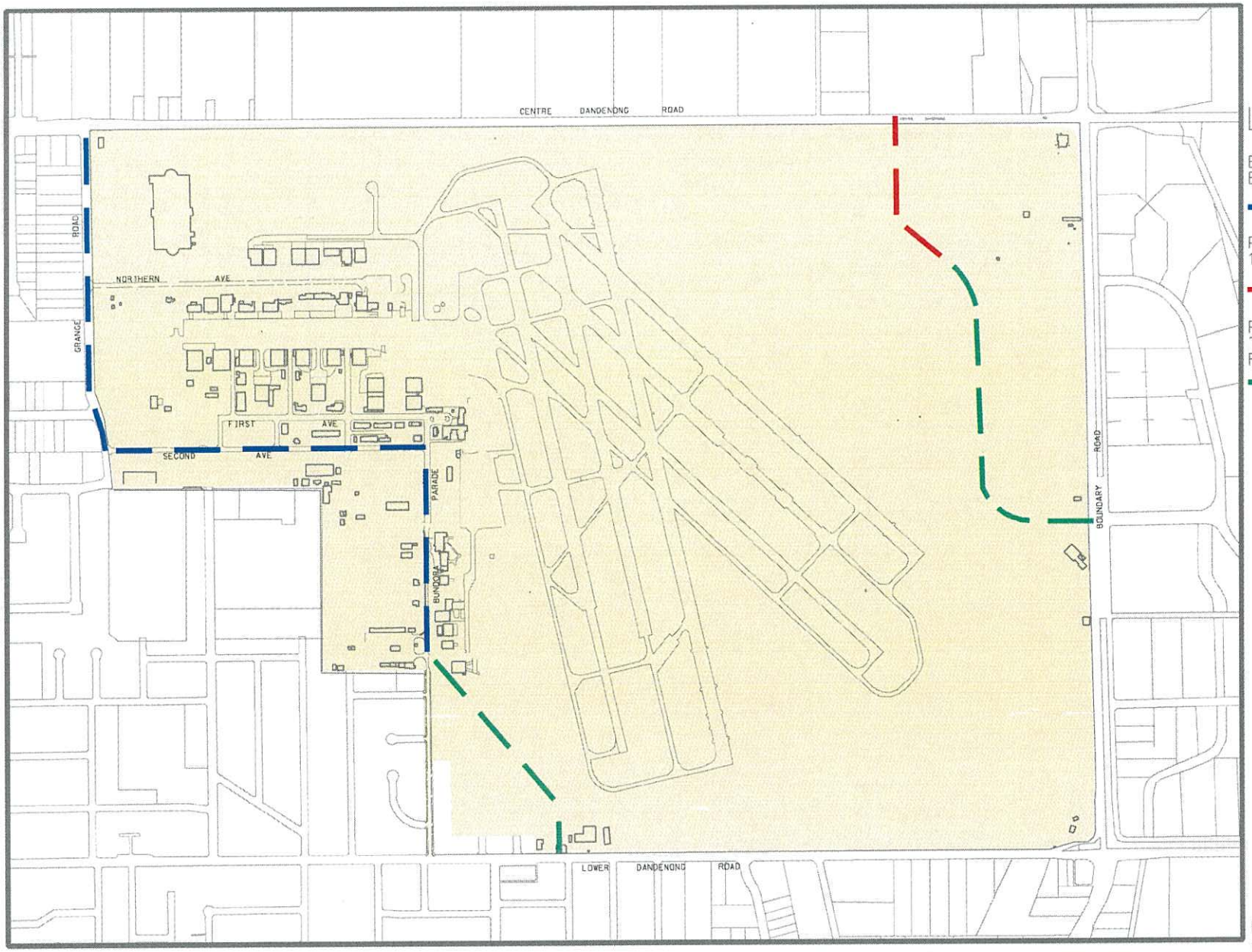
It is estimated in total that the above proposed road link could carry in the order of 10,000 vpd at its Northern and Southern extremities.

Whilst the potential connecion road offers benefits to local traffic circulation both within and around the Airport, its construction is ultimately dependent upon the type and mix of land uses to be accommodated in the South-West corner of the site. It is likely that a large part of this area may be directly required for corporate aviation facilities and hangars, in which case the potential road connection may not prove to be warranted or desirable. Although the status of the road link remains uncertain the Master Plan preserves the option of its future construction.

Should aviation infrastructure development grow into this precinct as envisaged by the 'Potential Aviation Development Plan', in **figure 9** a much weaker road link may be provided to Lower Dandenong Road. Appropriate traffic claming measures would be introduced to prevent rat-running through any new local road link in this precinct.

It is emphasised that the potential road connection above and any other future points of access to the site will be negotiated with Vic Roads prior to their development. In addition, such proposals will be supported by a detailed traffic assessment which addresses required intersection treatments and any other ameliorative road works to the satisfaction of Vic Roads and Council.

MAC considers that it is premature at this stage to prepare a detailed traffic study for the whole site, given the uncertainties which exist in relation to the ultimate form of development on the site. Appropriate traffic studies will be prepared and discussed with Vic Roads as part of the development of each precinct on the site.



Legend

Existing Road To Be Upgraded

Possible Road 1st Five Years

Possible Road Ten Year Time Frame

-50m 0 50m 100m 150m

Figure No. 24

Road Development Options

MOORABBIN AIRPORT MASTER PLAN

MAC MOORABBIN AIRPORT CORPORATION

With respect to the Eastern sector of the Airport, which is proposed to be developed as a business park, following the expiry of the golf course lease, it is proposed that linkages to Boundary Road would be similar to and generally offset from those of Redwood Gardens opposite. Discussions with VicRoads indicate that they may support the installation of traffic signals at one location, if and when warrants are met. It should be noted that the golf course lease does not expire until the year 2008.

In the interim, the development of the North Eastern corner of the site will be facilitated by the construction of a 10 metre wide roadway from the site to intersect Centre Dandenong Road, 150 metres East of its intersection with Ross Street. This would provide B-Double truck access with potential for rear access to warehouse and other developments. A plan of road development options is shown in **figure 24.**

The intersection would be flared to provide a protected turn lane treatment similar to that at the Capital Golf Club access further to the West. Signals may be required subject to VicRoads warrants being met. The intersection geometry would incorporate service road linkages and truncations to appropriate standards.

8.11 Summary

A range of opportunities are provided to the local area by the proposed developments at the Moorabbin Airport. Available options include an improved road network within the Airport land to service aviation and non aviation activities and a potential upgrade of regional tranport linkages. These options may provide benefits to the local area by the proposed development at the Moorabbin Airport.

9.0 ENVIRONMENTAL MANAGEMENT

9.1 Background

The *Airport (Environment Protection) Regulations 1997 "the Regulations"* (subordinate legislation to the *Airports Act 1996*) "the Act" requires a Draft Airport Environment Strategy ("the Strategy") to be submitted to the Minister for Transport and Regional Services for consideration and approval. This Final Strategy is based on the initial Draft Strategy, which was issued for a 90 day public comment period in October 1998. Comments received during the exhibition period from the Airport Environment Officer (AEO), the Victorian Environment Protection Authority (EPA) and the Commonwealth Department of Transport and Regional Services - Airports Division (DEST), have been reviewed and incorporated into this document.

9.2 Environment Policy

Moorabbin Airport Corporation's (MAC's) Environment Policy sets out the principal guidelines the organisation will operate to and defines the objectives and vision which the organisation is attempting to achieve. The Policy commits the MAC to develop and implement systems and procedures which will identify environmental issues of concern and develop solutions which will improve environmental performance of both the MAC and other operators on the Moorabbin Airport site.

MAC ENVIRONMENT POLICY

The MAC recognises the importance of maintaining and where practical, enhancing the quality of the environment on Moorabbin Airport and neighbouring areas.

The MAC is therefore committed to:

- *Establishing and maintaining practices to comply with all applicable environment laws and regulations and to continually improve environmental performance of all operations on the site.*

- *Conducting regular reviews of all site operations to:*
  - *identify areas which are or may have the potential to breach a regulatory requirement or which require improvement, for example, energy use;*
  - *reduce the actual or potential release of pollutants from the site into the environment; and*
  - *develop plans to redress issues identified by environmental reviews, to achieve ongoing improvements in the environmental performance of all aviation and non-aviation operations on the site.*

- *Developing and implementing environmental management and operating procedures to ensure the development of Moorabbin Airport is carried out in an environmentally sound manner.*

- *Reviewing proposed tenant facilities to identify any actual or potential breaches of regulations, or areas of proposed operations which could be improved, for example, waste reduction.*

- *Ensuring that Moorabbin Airport's Environment Policy and Management Plan requirements are communicated to all relevant staff and tenants.*

- *Consulting with authorities and the community to ensure that the views of external parties regarding environmental issues are considered when making decisions.*

The on-going objective of this Policy is the continual improvement of operational practice and environmental conditions on Moorabbin Airport, and the improvement of the environment management system itself.

9.3 MAC Airport Environment Strategy Overview

The MAC uses the ISO 14001 Environmental Management System (EMS) to help manage environmental issues on the site. ISO 14001, which has been adopted as the Australian standard for environmental management systems; provides a formal and logical structure for identifying environmental issues; developing environmental management plans to manage these issues; and a method to review and measure environmental performance on the Moorabbin Airport site. The management system forms the core of the Strategy and fulfils both the MAC's legislative responsibilities and provides direction for its day-to-day operations.

The scope of the EMS includes MAC operations, existing tenants, new facilities, non-aviation tenants and activities and emergency events occurring on the site. Currently, the MAC has responsibility for the maintenance of runways, taxiways, grassed areas and infrastructure, the development of new airport facilities, the leasing of sites and the management of tenants through lease conditions.

The implementation of the Strategy will occur over the 1999 calender year and includes distribution of the approved strategy, implementation of management plans and operating procedures to control environmental issues and training of MAC personnel and tenant operators. This training, which includes responsibilities and liabilities under State and Federal environmental legislation, will help improve cooperation of all personnel on the Airport site. Cooperation of tenants will also be improved via their involvement in development of management plans, through lease conditions, and in extreme circumstances, with the assistance of the AEO.

9.4 Identification and Management of Environmental Risks

To help identify those issues which require attention, the MAC initiated three studies, namely:

- Biosis Research Pty Ltd, *Archaeological Survey of Moorabbin Airport*, September 1998
- Ecology Australia, *Moorabbin Airport Survey for Significant Fauna and Flora Species*, June 1998
- VCEC, *Environmental Risk Review for Moorabbin Airport Corporation*, June 1998

The archaeological, fauna and flora studies found little evidence that sites of environmental significance were present at Moorabbin Airport (see discussion below). However, the environmental review (VCEC 1998) identified a number of environmental practices (such as the storage of raw materials and wastes) which required appropriate management to resolve.

This identification and management process should be on-going. The MAC therefore proposes to carry out similar environmental reviews of MAC and tenant operations every 18 months. The reviews will assess compliance with time frames and objectives set in the previous management plans, water monitoring results, a review of any environmental incidents which may have occurred and include an inspection of operational facilities. These reviews will assess both MAC and tenant operations.

The findings and recommendations from each review will be used to develop a formal objective, time-frame and management plan for each issue identified. If the issues are related to tenant operations, then the proposed plans will be discussed with tenants before each receives a series of actions and time-frames they will need to meet. Information gathered during the reviews will be supplied to the AEO.

Based on the findings of the original environmental review, the MAC has also developed a series of operating procedures (for example, proper disposal of wastes and equipment washing), to ensure works which may damage the environment are carried out in an environmentally sound manner. These procedures also include emergency requirements, in the instance of a chemical or fuel spill. These procedures will also be made available to site tenants for their use.

9.5 Current Environmental Status and Issues

9.5.1 Fauna and Flora

The fauna and flora study (Ecology, 1998) found that most native vegetation communities have been eliminated from the site and the existing vegetation retained little of its original structure. The main fauna species present were rabbits and foxes and the airport land is considered to be of low value for vertebrate fauna. No fauna and flora species listed in Victorian or Commonwealth databases (Flora Information Services - Department of Natural Resources and Environment (DNRE), *Commonwealth Endangered Species Protection Act, 1992* and *Victorian Fauna and Flora Guarantee Act. 1988*) were found at Moorabbin Airport, and the study concluded that none were unlikely to occur there.

9.5.2 Aboriginal and Heritage

The Aboriginal and heritage report (Biosis, 1998) carried out an on-site study, reviewed a number of State Aboriginal register sites and contacted the Wurundjeri Tribe Land Compensation and Cultural Heritage Council, which represents the local Aboriginal community. The Report found no evidence of Aboriginal or non Aboriginal historic sites on the Moorabbin Airport site and concluded that:

"No further archaeological work is required and the management plan for Moorabbin Airport does not need to incorporate measures to manage Aboriginal and non-Aboriginal heritage values."

9.5.3 Emissions to Air

The 1998 environmental review (VCEC, 1998) found that emissions to air is not an issue on the site, as operations were comparable to those carried out in typical light industrial zones. This conclusion is supported by the fact that there has never been a complaint received concerning air emissions due to operations under MAC control. Based on the '*Air Emissions Inventory and Air Quality Management Plan*' report produced by Melbourne Airport in 1995, it can be concluded that emissions to air of the major pollutants (ie. nitrogen oxides, carbon monoxide and hydrocarbons) from the Moorabbin Airport site are one to two orders of magnitude lower than the emission of these pollutants from the roadways, industry and residential areas immediately surrounding the Airport site.

Based on the findings of the environmental review and the estimated emissions from the site, monitoring of on-site emission sources or ambient air levels is not considered warranted at this time, as the majority of air pollutants present on the site come from off-site sources. However, the MAC will be compiling an inventory of emission sources on the site (aircraft and fixed sources) and analysing these emissions through a computer model. The model will determine the concentration of pollutants (mainly nitrogen oxides, carbon monoxide and hydrocarbons) which occurs off site due to on site emission sources. The results can be used to assess compliance with legislative ambient air quality requirements. Following major developments, or significant increases in air movements, this inventory and analysis can be updated.

9.5.4 *Surface Water*

At present, the quality of stormwater discharging from the Airport site has not been adequately assessed. As part of the Strategy, a monitoring program of the water quality will be initiated in 1999. The monitoring program will initially carry out quarterly tests over a 12 month period for a wide range of parameters, such as hydrocarbons, surfactants and turbidity. Based on the test results, a long term monitoring program will be developed which is satisfactory to both the AEO and the local EPA.

9.5.5 *Soil*

The testing of underground fuel tanks on the site originally identified 5 underground tanks which appeared to be leaking. Two of the 5 tanks have been removed and the contaminated material taken away and a further 2 tanks were decommissioned after soil tests adjacent the tanks indicated low levels of soil contamination, which did not require further action. The remaining tenant has been required to remove their tank and reinstate the area during 1999. This will leave four sound underground tanks still in service. Tenants operating these remaining tanks will need to institute a monitoring program to ensure the tanks are not leaking.

9.5.6 *Waste Management*

The 1998 environmental review (VCEC, 1998) assessed waste management practices on the Moorabbin Airport site. Apart from an improvement in waste storage practices, the environmental review found wastes (mainly waste oil and solvents) were being disposed of appropriately. The monitoring of waste materials will continue as part of the regular 18 monthly environmental reviews of airport operations. This will be supplemented by the on-going vigilance of all MAC personnel present on the Moorabbin Airport site.

The environmental review (VCEC 1998) was also used to compile a manifest of dangerous and non-dangerous goods which were present on the Airport. The manifest provides the MAC with information concerning the nature and quantities of hazardous materials and wastes maintained by tenants on the Airport.

The recent environmental review (VCEC, 1998) did not identify any justification or benefits for further monitoring of waste material on the site.

9.5.7 Ozone Depleting Substances

The environmental review found the MAC has removed all halon fire extinguishers and will be replacing freon filled equipment with freon free equipment as the equipment is decommissioned and freon-filled equipment becomes available. The illegal use of halon equipment was assessed during the recent environmental review, with none found. The presence of this equipment will be reassessed during the regular 18 monthly environmental reviews of the site. The use of other freon filled equipment, such as air conditioners, will be progressively phased out when the equipment reaches the end of its useful life and non-freon equipment becomes available, as is the case throughout most of industry.

9.5.8 Recycling and Conservation

The environmental review (VCEC, 1998) identified a number of waste materials which are being recycled by operators at Moorabbin Airport (eg. waste oil, waste solvents and empty drums). The review did not identify any obvious areas where other resources, such as power or water, could be reduced. The regular 18 monthly reviews will identify any changes to the current status and the potential to save natural resources.

9.5.9 Noise

The recent environmental review did not identify any operations within MAC's control which could result in noise complaints from the community, except the ground running of aircraft engines for maintenance purposes. The MAC restricts the time and locations where ground running can occur to minimise the impact on neighbouring residents. Historically, ground running accounts for less than 5% of noise complaints. However, current practices have resulted in no noise complaints concerning ground running over the past 12 months. Due to the success of the current management practices, additional controls and monitoring are not considered warranted at this time. However, if the situation changes or complaints are received, then these will be investigated.

The Airport carried out a "Noise Exposure Forecast" in 1998. This study defined areas where noise levels due to aircraft movements may be unacceptable for sensitive uses, such as residential developments. The results of the study have been incorporated in the local government's Airport Environs Overlay, which will restrict development of sensitive uses within these areas of elevated noise.

If the MAC anticipates that the level of noise could vary due to changes in aircraft movements, augmentation of airport facilities, or any tenant operations, than a further noise study will be carried out as required by the Airports Act 1996.

9.6 New Facilities

For any new proposals for use and development on the site, the applicant will need to supply MAC with details of:

- The proposed activities and operations on the site;
- Any chemicals to be used or stored on the site including maximum quantities stored;
- Evidence proving the proposal meets any applicable EPA legislative requirements and guidelines; and
- Evidence proving the proposal meets any applicable Workcover storage and placarding requirements.

This information will be brought to the attention of the Airport Environment Officer. If the facility would have required an EPA licence for construction in another location, then the information concerning the proposal will also be provided to the Victorian EPA. The MAC chaired consultative committee (refer to section 9.7) will also be advised of the proposal. Comments received from external parties will be considered when making decisions concerning the proposal. Where required, conditions will be included in the lease, which control the development and on-going management of the proposal.

Any significant changes to airport operations will be reviewed in accordance with current Federal Department of Transport environmental requirements for new airport development. Where the Airports Act 1996 requires involvement by the community, then the community and/or the City of Kingston will be advised of the proposal and invited to make comment where appropriate.

9.7 Communication

The Strategy will require formal communication to occur between the MAC and a number of parties both on the site (tenants and operators) and external to the site (the City of Kingston, AEO, EPA and other interested parties).

The development of environmental management plans will involve discussions with tenants to arrive at a suitable solution. Regular meetings will be held between the AEO, the EPA and the MAC to identify any concerns the regulatory agencies may have with operations at the Airport, any changes or potential changes to legislation which could affect the Airport and to keep regulators informed of progress in implementing the Environment Strategy.

Regular 12 monthly environmental performance reports are required by the *Airport (Environment Protection) Regulations 1997*. The regular internal performance reviews described in section 9.4, the environmental monitoring results, progress in implementing the strategy, its management plans and any additional remediation plans, and the findings of any incident investigations, will form the basis of these reports.

If major developments occur where formal consultation is required by the *Airports Act 1996*, then formal communication will be initiated with interested parties. The AEO will be involved with new developments on the Airport site. If in the opinion of the MAC, the development could result in a significant off-site impact, the City of Kingston, and possibly the community and the EPA will also be consulted.

The MAC chaired consultative committee consisting of MAC, Air Services Australia, Moorabbin Airport Residence Association, Business Victoria, Department of Infrastructure, Kingston City Council and Moorabbin Airport Tenants Association, will be utilised:

- To disseminate information to the various interest groups concerning new proposals (refer to Section 9.6), Airport developments and proposed environment management plans;
- To gauge the reaction from these parties to new information;
- To solicit comments; and
- During future amendments of the Airport Environment Strategy.

Any complaints received concerning an operation on the site will be recorded and dealt with promptly.

If an environmental incident occurred, for example a spill of fuel or chemical into a site drain, then the AEO will be contacted immediately. The incident will be investigated by the MAC and a formal internal reporting, investigating and corrective action procedure initiated in accordance with Moorabbin Airport's EMS. The AEO will be kept informed of all findings and assisted as far as possible. Where the incident had the potential to seriously affect the off-site environment, then the EPA will also be informed, in accordance with requirements of the Victorian *Environment Protection Act 1970*.

The AEO will also be informed within the 14 day time period stipulated in the *Airport (Environment Protection) Regulations 1997*, if monitoring indicates an excessive discharge or level of pollutant is present.

9.8 Environmental Training

The majority of current MAC staff took part in an environmental awareness training program in April 1997. The MAC will be running refresher training every 2 years, commencing 1999. The 1998 environmental review (VCEC, 1998) identified the need for tenants and their employees to be trained. The current management plan requires tenants to provide appropriate training to staff by mid 1999. Any contractors hired by the MAC, which are carrying out any duties which the MAC believes could result in environmental damage, will also need to provide evidence of having appropriate training or experience.

9.9 Consultation During Development of the Airport Environment Strategy

In development of the Draft Strategy, the MAC consulted directly with:

- AEO;
- Commonwealth Department of Transport and Regional Services - Airports Division;
- the Victorian EPA; and
- the Victorian Department of Natural Resources and Environment.

Copies of the Draft Strategy were also supplied to the City of Kingston and made available to the community and other interest groups during the 90 day comment period. Comments received during this period have been incorporated where appropriate, into this Final Strategy.

The majority of comments were received from the AEO, Commonwealth Department of Transport and Regional Services and the Victorian EPA. Comments and subsequent amendments to the Strategy consisted of:

- Further details concerning previous studies;
- Further details concerning current environmental conditions on the Airport;
- Further details concerning the MAC's environmental control and improvement methodologies;
- Clearer indication of when and how the community would be consulted; and
- More frequent reporting and meetings with the AEO and the Victorian EPA.

Tenants will be consulted during the development of the Airport Environment Management Plans and the environmental requirements specific to each tenant's operations.

10.0 PERIODIC REVIEWS

The planning period for this Master Plan is twenty years. However, this Master Plan will be reviewed after a period of five years, so as to update the assumptions integral to the Master Plan and ensure current strategic directions are followed for the use of aviation and non-aviation Airport land.

11.0 CONCLUSION

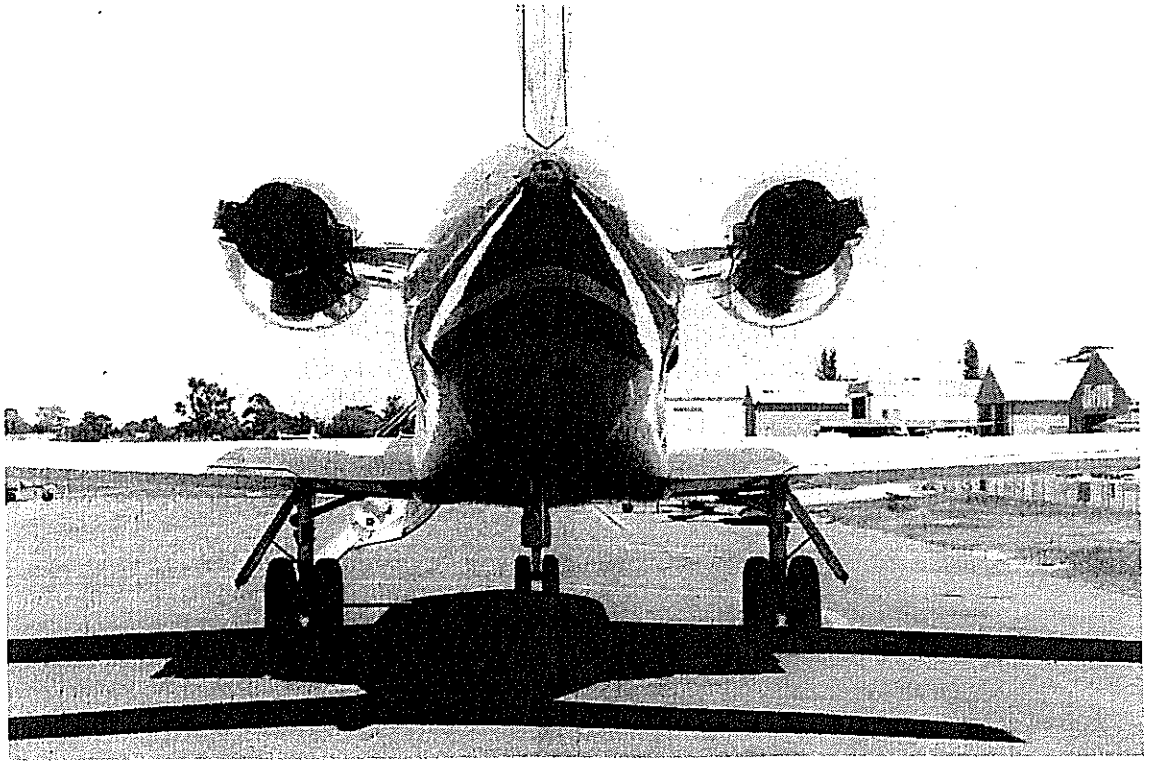
The Moorabbin Airport Master Plan has established a set of strategic directions for the development of aviation and non-aviation land.

The strategic directions build upon the existing aviation strengths of the Airport, regional economic factors, and complement the industrial and commercial role of surrounding land.

This Master Plan complies with the Airports Act 1996 by specifying:

- The Airport Lessee Company's development objectives for the Airport.
- The Airport Lessee Company's assessment of the future needs of civil aviation users of the Airport, and other users of the Airport, for services and facilities relating to the Airport.
- The Airport Lessee Company's proposals for land use and related development of the Airport site, where the proposals embrace airside, landside, surface access and land planning/zoning aspects.
- Forecasts relating to noise exposure levels.
- The Airport Lessee Company's plans, developed following consultations with all relevant users of the Airport and local government bodies in the vicinity of the Airport, for managing aircraft noise intrusion in areas forecast to be subject to exposure above the significant ANEF levels.
- The Airport Lessee Company's Environmental Strategy which deals with all relevant environmental issues which affect the Airport.

This approved Master Plan now form the basis of an integrated aviation and industrial - commercial development strategy for Moorabbin Airport into the 21st century.



12.0 REFERENCES

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Commonwealth Government (1996) **Airports Act 1996.**

Commonwealth of Australia (1991) **Port Philip Region Airport and Airspace Study Appendices,** Canberra: AGPS.

Kingston City Council (1997) **Draft Municipal Strategic Statement.**

Kingston City Council (1997) **Exhibited Kingston Planning Schemes.**

Kingston City Council et al (1998) **South-East Non Urban Study, Memorandum of Understanding.**

Moorabbin Airport Corporation (1998) **Moorabbin Airport Environmental Strategy.**

Moorabbin Airport Corporation (1998) **Moorabbin Airport Land Use Plan.**

City of Kingston (1994) **Moorabbin Airport: A Pictorial History.**

Spiller Gibbons Swan (1997) **South-East Non Urban Study.**

Urban Enterprise (1998) **Market Demand Analysis for a Proposed Air Service between Moorabbin and Bankstown Airports.**

Victorian Government (1995) **Living Suburbs.**

Victorian Government (1998) **Victoria Planning Provisions, V5**

APPENDIX A: CONSULTATION

- Airport Environmental Officer.
- Business Victoria.
- City of Kingston.
- Country Fire Authority.
- Department of Infrastructure.
- Department of Infrastructure, South East Region.
- Department of Natural Resources and Environment.
- Department of Transport and Regional Services.
- Environment Protection Authority.
- Moorabbin Airport Residents Association.
- Multinet Gas.
- South-East Water.
- United Energy.
- VicRoads.
- Members of the Victorian and Federal Parliaments.
- Moorabbin Airport Residents Association
- The local community through a range of public meetings.

APPENDIX B: LIST AND SUMMARY OF SUBMISSIONS TO PRELIMINARY DRAFT MASTER PLAN

1. Mobil Oil Australia Pty Ltd
2. Geoffrey Hall
3. Moorabbin Airport Residents Association (MARA)
4. Tom Uren & Anna Emanuel (President MARA)
5. Kingston City Council
6. Perrott Lyon Mathieson on behalf of Crown Limited
7. Peter McKittrick
8. Brian Byrnes
9. H.E & T. Schreuders
10. Dingley Village Community Association
11. Victorian Government Response
12. Holding Redlich on behalf of Westfield Shoppingtown

SUBMISSIONS TO MOORABBIN AIRPORT MASTERPLAN

NO.	MITTOR	KEY ISSUES/COMMENTS	REQUESTED CHANGES	RESPONSE IN MASTERPLAN
1.	Mobil Oil Australia GPO Box 4507 Melbourne 3004	• No objection to Master Plan provided existing Mobil office and fuel farm are not proposed to be relocated.		• *No change to Master Plan*
2.	G. Hall 3 Florida Ave Dingley	• Concerned about any potential increase in aircraft movements particularly over the Dingley area. Submission requests MAC consider relocation of circuit paths to industrial/open space areas. • Need for control tower to be adequately manned. • No objection to relocation of runway 04/22	• MAC should pursue stronger consultative role with CASA and AirServices in respect to airspace management.	• *New section on 'Environmental Management' has been incorporated into the Master Plan at clause 1.4.4. This section addresses in some detail MAC's proposed approach to tower operational hours and ongoing monitoring of aviation activity.* • *Clause 1.4.5 has also been expanded to outline MAC's commitment to the development and implementation of a comprehensive 'Fly Friendly' Policy for the airport, to be prepared in association with the Airport Consultative Committee.*
3.	Moorabbin Airport Residents Association	• Opposition to forecast growth levels and proposed introduction of larger aircraft envisaged by the Master Plan due to amenity impacts on surrounding residential environment. • No objection to proposed relocation of Runway 04/22 or development of commercial precincts on the airport. • Concerned that impact of Master Plan cannot be assessed without knowledge of new limitations which are proposed to apply to airport operations (ie: curfews, CASA regulations, etc). • Strongly advocated for changes to CASA regulations to	• Masterplan should specify curfews on training flying circuits and relocation of circuits away from residential areas; • Minister should introduce locally specific regulations for Moorabbin Airport. • Review of CASA regulations should be undertaken as an immediate priority.	• *As above*

		introduce more restrictive controls on curfews & circuit training. • Strongly advocated for Minister to introduce specific regulations for Moorabbin Airport, to give effect to the 'Fly Friendly' program and to reduce noise impacts on surrounding residential areas.		
4.	Tom Uren & Anna Emanuel (President of MARA)	• Support for Council's ongoing role in the assessment of future building and development approvals on the airport. • Endorsement of 'Fly Friendly policy.' • Support for relocation of helicopters • Opposition to forecast growth levels and introduction of larger aircraft due to noise impacts on surrounding residential areas. • Opposition to introduction of Airport Environs Overlays on residential areas around the airport. • Concerned with safety and noise impacts associated with older aircraft.	• Circuit patterns be moved away from residential areas; • Phasing out of older aircraft; • Abandonment of formation flying, etc • Review of CASA regulations should be undertaken as an immediate priority.	• *As above*
5.	City of Kingston	***ategic Land Use issues*** • Confirmed that high quality, low density, garden industrial development on the site consistent with nearby use and development would be generally be acceptable to Council. • Support for proposed land use framework provided there are suitable controls in place to ensure inappropriate uses are not permitted to establish. • Preservation of landscape typology on the airport site is supported.	• Clarify desired land use and development outcomes for the site. • Balance development objectives with landscape and design standards to ensure	• *Draft Master Plan has been substantially modified to include more detailed precinct statements which clarify strategic land use objectives for each precinct, and explain preferred development outcomes.* • *Airport Strategic Statement has also been significantly re-written to tighten the objectives and strategies for future land use development on the airport.* • *The revised precinct statements together with the Airport Strategic Statement will ensure that the Master*

			open landscape typology is achieved.	*Plan provides clear guidance on the types of land use outcomes which will be supported, and those which will generally be discouraged.* • *Urban Design and Landscape Guidelines will be prepared and used to assess all use and development applications on the airport.*
		ation Strategy • Support for relocation of runway • Support for revised ANEF once federal approval is granted for relocation of runway and relocation of helicopter facilities.	• Future noise mitigation initiatives must be pursued with the MAC, CASA and Air Services through existing consultative committee.	• *Master Plan outlines MAC' s commitment to Fly Friendly program in clause 1.4.5.*
		d Use Planning • Policy statements accompanying land use precinct plan must articulate the expected use and development outcomes sought for different parts of the airport. Precinct statements are currently too broad. • Process for planning approvals must be clearly articulated in Master Plan. • Support for Special Use Zone No.1 • Clarification required on Special Use Zone No.2	• Specific modifications to precinct plan and associated policy statements are suggested (refer to submission) • Master Plan should require Planning Review Committee to assess as of right uses. Role of Council and State Government in approvals process required clarification. • Master Plan should introduce more stringent development controls in relation to retail floor areas, requirements for major development proposals, reduction in as-of-rights uses, etc. • Retail and office development proposals in excess of 4000m2 should be accompanied by assessment of community	• *Precinct statements have been substantially modified in draft Master Plan as outlined above.* • *A Protocol for land use decision making has now been included in the Land Use Plan to establish the process for decision making by MAC and to explain the roles of Council, State Government and the community in the development approvals process.* • *Additional control to be introduced to zone provisions to require submission*

			benefit and cost.	*of 'community benefit analysis' in relation to office and retail proposals over 4000m2.*
			• Master Plan should provide better definition of non traditional retailing.	• *Definition of 'non traditional retailing' has been clarified in draft Master Plan.*
			• Master Plan should respond to Council's traffic concerns.	
		D) Traffic considerations • Local traffic issues and timing of proposed road works should be subject to further clarification and review prior to approval of masterplan. • Strong support for creation of new vehicle access via Second Ave for the Hella operation.		• Clause 8.10 of the Master Plan has been modified to explain that detailed traffic studies will be undertaken in conjunction with the development of each precinct on the site.
		iation issues • Continued operation of tower beyond 6pm is essential	• Confirmation from CASA and AirServices that development proposed in non aviation precincts will not compromise safety.	
			• A more formal referral process should be built in to the Master Plan and Land Use Plan.	
		going Consultation • Masterplan does not articulate circumstances in which comments of Council will be sought.		*Protocol for land use decision making is now included in Land Use Plan.*
		G) Implementation of Land Use Plan • Too many as-of-right uses are provided in Land Use Plan	• Greater range of uses should be subject to review by the Planning Review Committee • Regular 'development approval' reports should be	• *Land Use Protocol establishes that Planning Review Committee will review ALL development proposals, including those which are as-of-right.*

			made to the Community Consultative Committee. • MP should require public exhibition of major use and development proposals. • Council should be represented on the Planning Review Committee	• *Protocol requires regular updates of land use development proposals to be provided to the Airport Consultative Committee.* • *Those uses/developments which constitute 'Major Development Plans' will be publicly exhibited.* • *Council should not be included in Planning Review Committee but should continue to be involved in assessment of development applications as an independent referral agency.*
5.	Perrott Lyon Mathieson on behalf of Crown Limited (owner of Capital Golf Course)	• Strongly opposed to forecast increases in aircraft movements • Masterplan does not adequately respond to State Planning Policy on airfields, which provides that planning for existing airfields 'must take account of the present and prospective character, amenity, land use and development of any land considered for the purpose and of surrounding areas.' Masterplan should therefore give greater recognition to adjoining land uses. • Crown Limited expects to be notified of all future land use and development proposals on the airport.	• Requested all land use and development applications be referred to the land owner for comment. • Masterplan should be modified to give greater recognition to surrounding land uses.	• *Land Use Protocol outlines process for decision making and review.* • *Section.2.2 of the Masterplan has been expanded to provide more detail on the sub regional and strategic context of the airport, to ensure surrounding land uses are appropriately recognised.*
7.	Peter McKittrick 6 Tracey Court Cheltenham	• Strong opposition to planned extension of runway and introduction of larger aircraft;	• Requests removal of runaway extension proposal from Masterplan	• *No change to Masterplan.*
8.	Brian Byrnes 50 Jacks Avenue	• Opposition to planned extension of runway and forecast growth levels;	• Master Plan should deal with expected noise levels in significantly greater detail.	• *As per submission 2*

	Dingley Village	• Concerned about continuation of current noise levels over Dingley (would like to see at least a 50% reduction by end 1999) • Support for proposed industrial/commercial development; • Would like to see ongoing commitment by MAC to operate as a 'good neighbour' to Dingley residents.	• Stronger commitment by MAC to encourage sensitive aviation practices.	
9.	H.E. & T.Schreuders 5 Jetske Crt Dingley	• Advocated for introduction of night time curfews, and relocation of circuit paths away from residential areas; • Opposition to introduction of larger aircraft; • Landscaping vision for airport should respond to landscape character of surrounding areas.	• Masterplan should specify curfews on training flying circuits and relocation of circuits away from residential areas; • landscape vision for the airport as outlined in masterplan should be improved.	• *As per submission 2* • *No changes to landscape vision.*
9a)	Dingley Village Community Association c/- Marcus Rd Dingley Village		• Circuit patterns be moved away from residential areas; • Phasing out of older aircraft;	• *As per submission 2*
9b)	As above	***A) Policy Issues*** • Master Plan does not acknowledge the regional role of the airport in contributing to the landscape character and green space quality of the surrounding non urban area; • Master Plan incorrectly assumes the airport is located in an urban context as a justification for	• Master Plan should be modified to give recognition to the airport's non urban role and context.	• *Section.2.2 of the Masterplan has been expanded to provide more detail on the sub regional and strategic context of the airport, to give recognition to the non urban belt to the north of the airport. Relationship of the airport to surrounding non urban areas has been better explained.*

		introducing intensive commercial/industrial development; • Development as outlined in the Master Plan will undermine long standing green wedge policy and set a precedent for urbanisation of surrounding non urban land. • Proposed 'urbanisation' of the airport as envisaged by the Master Plan suggests that commercial opportunities take precedence over airport functions; • Existing Non Urban Policy (SENUS) does not support new urban development in this area except where exceptional contributions to the green wedge concept are made. MP does not satisfy this requirement. • Council's Municipal Strategic Statement includes the airport its non urban boundary, and envisages only limited industrial expansion on the site. ***B) Landscape Vision*** • Concern that the open landscape character currently afforded by the airport will be destroyed by the density of development proposed by the Master Plan. • Concern that rigorous site analysis planning has not been addressed through the Master Plan (ie: identification of view lines, landscape vistas, opportunities for preservation of open character, etc).	• Scale and intensity of development envisaged by Master Plan should be reduced in recognition of surrounding low density character. • Master Plan should be explicit about how airport will contribute to the green wedge concept. • Open landscapes particularly across Centre Dandenong • and Lower Dandenong Road frontages should be preserved. • Master Plan should incorporate more detailed site analysis plan which shows how landscaping,	• *The role of the airport as a major state economic resource has also been better explained in the Airport Strategic Statement to justify the introduction of compatible commercial activities on the site.* • *Potential Aviation Development Plan has been incorporated (figure 9) which clearly shows that future airside development is a priority over substantial parts of the airport site.* • *Urban Design and Landscape Guidelines for the airport will address this issue and require extensive* • *landscape setbacks to be provided along the site's key frontages.* • *Reject this request.*

			setbacks, and view corridors will be incorporated.	
		C) Zoning • Justification for special use zone has not been established in the Master Plan. There is no evidence to suggest that the development that is proposed is different to that being achieved in other parts of metropolitan Melbourne.	• Master Plan should confine new development opportunities to west of existing runways only.	• *Chapter 7 has been expanded to justify the use of the special use zone. The uniqueness of the airport and the potential synergies between commercial and airside activities has been outlined in more detail.*
		• No evidence of design and development guidelines to ensure high standards of building and landscape design will be achieved.	• Master Plan should incorporate design and development provisions in relation to site coverage, landscape design, lot sizes and setbacks.	• *Urban Design and Landscape Guidelines will be included in the Land Use Plan.*
		D) Permit Approval process • Master Plan's stated objectives for high quality development on the site are not represented in the proposed planning controls;		
		• Role of Planning Review Committee is unclear, as are the procedures for deciding on applications and the circumstances in which public input will be sought.	• Zoning controls should be reviewed to reduce the number of as-of-right uses. Opportunities for public scrutiny should be built in to the approvals process.	• *Protocol for Land Use Decision Making addresses this issue.*
		• Master Plan does not provide any indication of the proposed staging of development on the site, which may result in an ad-hoc approach to development.		• *Staging plan not recommended given uncertainties which exist in relation to commercial interest and timing of RPT services, etc.*
			• Master Plan should include a staging plan.	
		E) Process • Community does not have confidence in the manner in which submissions to the Master Plan will be dealt with.		• *Panel hearing not required for consideration of submissions to the Master Plan. Individual response to each submittor will be made which outlines how issues have been addressed in the final masterplan.*
		• Community has not been adequately consulted in the development of the masterplan.	• Independent panel should be appointed to hear submissions to the Master Plan and make	

		F) Noise • Strong opposition to any increases in aircraft movements which may impact on amenity of surrounding residential areas. • Concerned about safety implication of extending runway 31L/13R to accommodate larger aircraft. • Strong objection to the MP's statement that "*Airport capacity is constrained by environmental considerations, particularly the need to preserve the existing compatibility and balance between airport noise impact and nearby residential areas.*" • Request that Fly Friendly policy should apply night time curfews and redesign of circuit patters away from residential areas. • Support for relocation of helicopters. • Strong objection to realignment of runway 04/22. Suggested that it should be closed given that it is only used 2% of the time.	recommendations to the MAC. • MP should not refer to 'balance' between residents and airport operations as this does not exist. • MP should elaborate on Fly Friendly policy.	• *Clause 1.4.5 has also been expanded to outline MAC's commitment to the development and implementation of a comprehensive 'Fly Friendly' Policy for the airport, to be prepared in association with the Airport Consultative Committee.* • *Option for partial closure of the 04/22 runway has been included in MP*
10.	Department of State Development (whole of Government response)	**A) Business Victoria** • Specific text changes requested • Clarification sought on runway clearance distances. **B) Tourism Victoria** • Query in relation to capping of growth levels (at 452,000) • Timeframes/triggers should be attached to proposed		• *Majority of text changes supported.* • *Staging plan not recommended given uncertainties which exist in relation to commercial interest and timing of*

		runway developments outlined in pp.26-30.		*RAPT services, etc.*
		C) Vic Roads • No objection to proposed road developments • Comprehensive traffic study needs to be undertaken and revised every five years in line with the MP reviews. • Roadworks to be funded by developer. • Comments made in respect to need for signalised intersection treatments in various locations.	• Landscape and Entry concept plan should be replaced with functional layout plans for each type of proposed intersection. • Setback distances for buildings and works should be more clearly specified in schedule 2 to Special Use zone. • Traffic study to be prepared and approved by Council and Vic Roads prior to development of the site. • Zoning controls should require a planning permit for all development seeking direct access from Centre Dandenong, Boundary & Lower Dandenong Roads.	• *New Landscape entry concept has been prepared based on Vic Roads' intersection requirements.* • *Section 8.10 of Master Plan identifies that traffic study will be prepared and submitted to Vic Roads in conjunction with the development of each precinct on the site.*
		D) Department of Premier and Cabinet • Overall support for MP. **E) Environment Protection Authority** • EPA supports Environmental Strategy of the MP. **F) Department of Natural Resources and Environment**	• MP should show ANEIs as well as ANEFs. • Format and content of Airport Strategic Statement should be	• *Draft Master Plan introduces a substantially revised Environmental Strategy.* • *1997-98 ANEI has now been incorporated into Master Plan and two options for ANECs.*

		• General support for MP **G) Department of Infrastructure** • MP should provide a vision for the future development of the airport and should clearly express its strategic directions. Airport Strategic Statement does not provide adequate strategic direction and vision. • MP in its current form is too broad. It appears to allow for a very wide range of land uses. Terms such as 'non traditional retailing' do not give sufficient guidance to stakeholders. • Process for development approvals is unclear • Concerned about the application of special use zones	reviewed to achieve consistency with new VPP format. • MP should more clearly articulate the type of use and development envisaged at the airport (ie: potential niche market retailing opportunities, integration of commercial activities with airside activities, etc). • Master Plan should provide indication of staging and triggers for development. • ANEF should show influence of existing 04/22runway as there is no indication of when it will be relocated. • MP should explain development approvals process including role of stakeholders • MP should explain role of MAC as referral authority in considering planning applications outside the airport within AEO1. • MP should be more explicit in relation to building height limitations. • MP should build in ongoing	• *Master Plan introduces a substantially revised Airport Strategic Statement in accordance with new VPP format. Precinct statements have been tightened to distinguish between preferred and discouraged uses.* • *Staging plan not recommended given uncertainties which exist in relation to commercial interest and timing of RPT services, etc.* • *Master Plan includes ANEI for 1997/98 which shows impact of 04/22 runway.* • *Protocol for Land Use Decisions deals with this issue.* • *Additional justification has been provided for use of special use zone.* • *Airport Strategic Statement outlines MAC's approach to referral of applications within AEO1.*

			consultation mechanisms, including a communication strategy for dealing with submissions to the MP.	
12.	Contour Consultants on behalf of Ventana Pty Ltd (Westfield Southland)	• Master Plan is inadequate both as a regulatory tool and as a document which provides confidence in the ongoing development and management of the airport. • Inherent flexibility of proposed zoning framework will allow full array of retail, commercial and industrial development without objective process for controlling decision making. Process for decision making does not appear to be independent. • Significant planning, economic and strategic consequences for the region are likely to arise as a result of ad hoc development on the airport land. • No economic justification, impact analysis or net community benefit analysis has preceded the Master Plan in any way which would satisfy the usual requirements which accompany major land use and development decisions. • Master Plan lacks opportunities for objective third party scrutiny in future evaluation of development proposals. • Objection to wide range of uses contemplated by precinct plans. • Strategic planning basis is lacking in MAC's proposals for the airport site.	• Land use framework should have regard to metropolitan planning policy and activity centres policy. • Major retail development on the airport should be assessed against the state's Retail Development Guidelines. • Strategic policy framework of the MP requires significant tightening. • Decision making process should have a sound, coordinated and strategically competent basis. • Tests which ordinarily apply to assessment of major retail and commercial proposals should equally apply to those on the	• *Draft Master Plan has been substantially modified to include more detailed precinct statements which clarify strategic land use objectives for each precinct, and explain preferred development outcomes.* • *Protocol for Decision Making deals with this issue.* • *Additional control to be introduced to zone provisions to require submission of 'community benefit analysis' in relation to office and retail proposals over 4000m2.* • *Airport Strategic Statement has also been significantly re-written to tighten the objectives and strategies for future land use development on the airport. The revised precinct statements together with the Airport Strategic Statement will ensure that the Master Plan provides clear guidance on the types of land use outcomes which will be supported, and those which will generally be discouraged.* • *Protocol deals with this issue.* • *Community benefit analysis will be required to be submitted with retail and office proposals in excess of 4000m2, consistent with the*

			airport land.	*requirements of the State Planning Policy Framework.*

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QUALITY ASSURANCE
Report Record

Project Name	***Moorabbin Airport Master Plan***
Document Number	***398081P/R - 01***
Revision (see below)	***10***
Prepared By	***Sarah Emons***
Reviewed By	***Nevan Wadeson***
Approved By	
Date of Issue	***24/02/1999***

REVISION STATUS

All revisions must be identified by the following information

Revision Number	*Date of Revision*	*Description of Revision*	*Prepared By*	*Approved By*	*Pages Revised*
00	09/05/98	Draft table of contents	P.B.	N.W.	-
01	21/5/98	Revised table of contents with delegation	P.B.	N.W.	all
02	15/06/98	Text incoporated into table of contents producing first Draft Master Plan	P.B.	N.W.	all
03	24/06/98	Revised Draft Master Plan report	P.B.	N.W.	all
04	26/06/98	Revised Draft Master Plan report	P.B.	N.W.	all
05	21/08/98	Revised Draft Master Plan report	P.B.	N.W.	all
06	04/09/98	Revised Draft Master Plan report	P.B.	N.W.	all
07	30/09/98	Revised Premilinary Draft Master Plan report	P.B.	N.W.	all
08	06/10/98	Revised Premilinary Draft Master Plan report	P.B.	N.W.	all
09	07/10/98	Revised Premilinary Draft Master Plan report	P.B.	N.W.	all
10	20/10/98	Revised Preliminary Draft Master	P.B.	N.W	all
11		Revised – change of title, text etcs	S.E.		all
12	16/06/99	Revised Final Master Plan	S.E.	N.W	all