



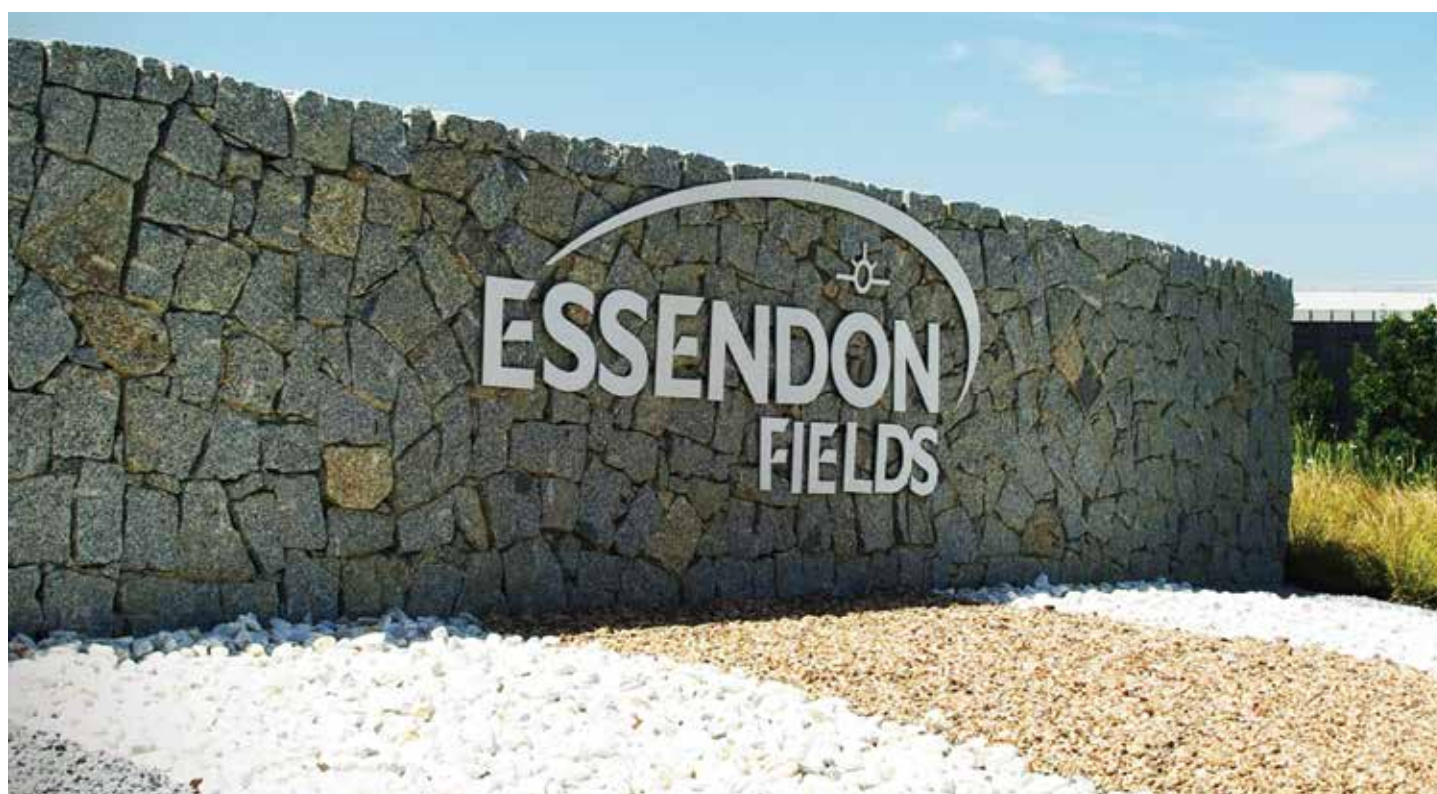
MASTER PLAN 2013



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English Street entrance



FOREWORD

Since privatisation in 2001, Essendon Airport Pty Ltd (EAPL) has successfully addressed a number of challenges. The Tullamarine – Calder Freeway Interchange Upgrade, new commercial offices, retail developments and new hangars, including for the Police Air Wing and Air Ambulance, have been built. There have also been improvements in aviation infrastructure, which include a wide range of security, lighting, safety and operational investments including the reconstruction of English Street providing access to the airport terminal. Our short and long term development objectives are set out in the Master Plan.

EAPL is owned by the Linfox Group and Beck Corporation.

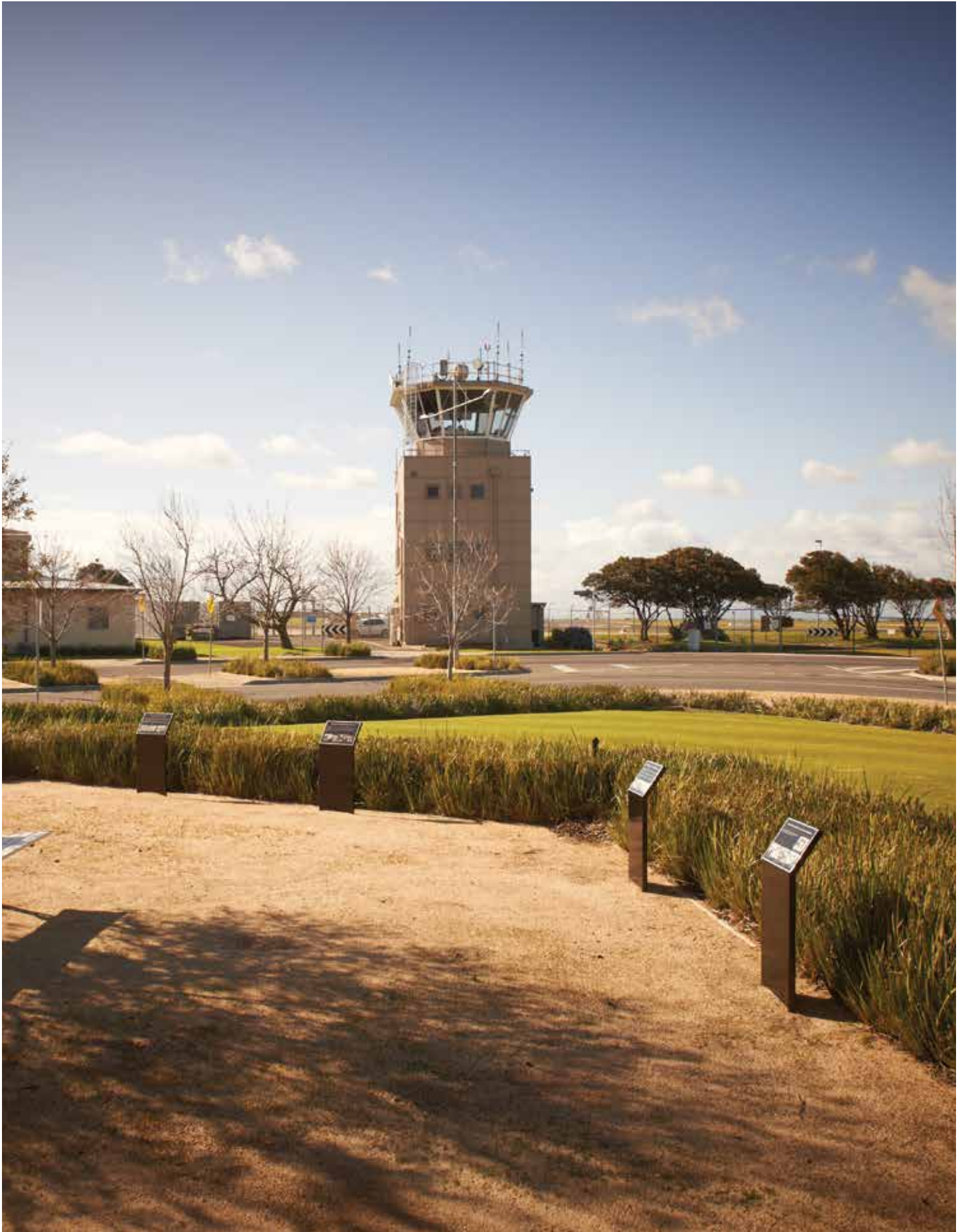
This third Essendon Airport Master Plan outlines the objectives for the period 2013-2033. This Plan is prepared in accordance with the *Airports Act 1996* and includes comments beyond the bare statutory requirements in order to provide a fuller picture of the future of Essendon Airport.

Essendon Airport remains a vital aviation resource for Melbourne and regional Victoria. It continues to provide excellent facilities to the aviation industry, with a special emphasis on Police and Emergency Services, flight support and the corporate aviation market. In addition, it offers the opportunity to create an integrated business environment, unlike anything else in Melbourne.

The Master Plan recognises that management of the interaction with the local community is a key issue for Essendon Airport. EAPL believes that public involvement is important to Essendon Airport's success, and in that spirit, we provide this Master Plan, for review and contemplation by the public and interested parties.

Bernard Griffiths
Director
Essendon Airport Pty Ltd

Andrew Nicholls
Director
Essendon Airport Pty Ltd



Heritage Walk and the Control Tower at Essendon Airport



EXECUTIVE SUMMARY

Essendon Airport is a general aviation aerodrome that is situated on 305 hectares, 11 kilometres northwest of Melbourne's Central Business District and 7 kilometres southeast of Melbourne Airport.

Since the establishment of international and domestic flights at Melbourne Airport in 1971, Essendon Airport's operations and level of aviation activity had steadily declined until 2007. Activity has stabilised since 2008 with increases in rotary and charter activity.

Today, the airport contains land and facilities that are surplus to current and projected aviation requirements. This provides the opportunity to pursue aviation initiatives, especially those with a corporate jet focus, and property development opportunities for a wider range of activities.

This Master Plan has been prepared to meet statutory obligations of the *Airports Act 1996* and sets out a broad framework for the development of the airport over the next 20 years.

MASTER PLAN FEATURES

The Master Plan has been prepared to achieve Essendon Airport Pty Ltd's vision, which is:

'To establish a commercially viable, safe and functional general aviation facility which meets projected aviation requirements whilst utilising the property's strategic land holdings for high quality commercial development.'

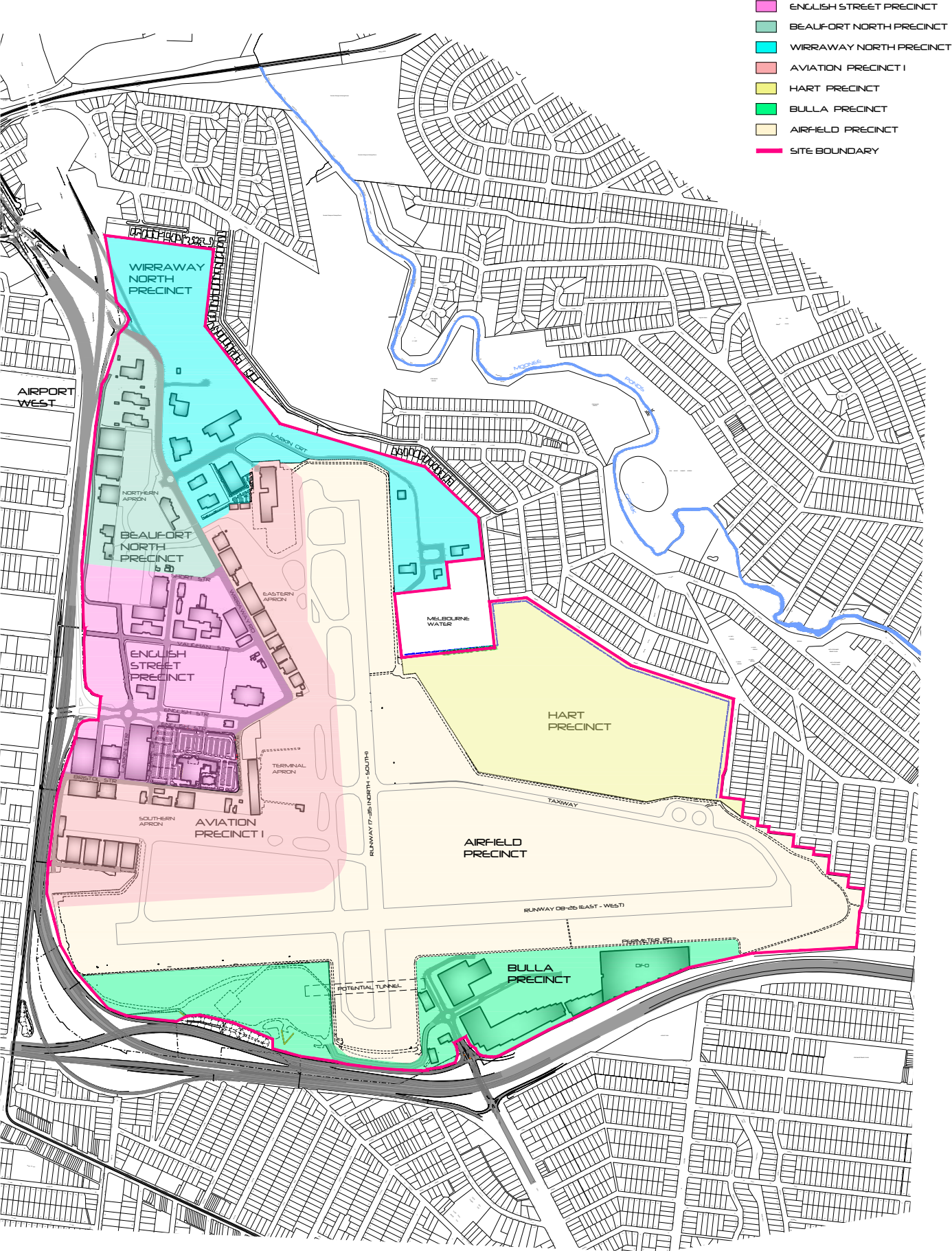
Essendon Airport Pty Ltd has established the following objectives to achieve this vision:

1. To improve and maintain safe, secure and efficient airport operations;

2. To add value to the airport by realising development opportunities;
3. To increase market awareness of development opportunities at the airport;
4. To improve the integration of the airport with its surrounds; and
5. To consolidate airport operations and aviation requirements to ensure efficient and sustainable land use.

The main aviation features include:

- A two-runway system, one of which has an Instrument Landing System;
- A maintained commitment to the airport's security infrastructure;
- An emergency services air wing consisting of hangars and apron facilities for the Victoria Police and Air Ambulance;
- No proposals in this master plan to change the current curfew or weight limitations;
- Further development of aviation operations; and
- A continued focus on the airport's heritage, including the façade upgrade to the airport's passenger terminal and potential restoration and repainting of buildings on Wirraway Road.



MASTER PLAN
ESSENDON AIRPORT PTY LTD

Essendon Airport is an emerging base for fly-in/fly-out (FIFO) operations to the mineral and energy sector throughout Australia. This has enabled an estimated additional 320 local and regional workers to find employment in the mining sector and has created \$43.1 million in direct economic benefit to Victoria.

The main non-aviation features include:

- Identification of land surplus to aviation requirements suitable for commercial or industrial redevelopment;
- Redevelopment of existing commercial areas centred around the English Street Precinct;
- Road and infrastructure upgrades, including the potential development of new internal roads;
- The Heritage Walk, which provides information, largely of a heritage nature and significant events at the airport, to members of the public; and
- Development of areas in the north of the airport.

The commercial development of Essendon Airport as a business activity centre since 2001 has created an additional \$484.6 million per annum of net-direct economic benefit for the City of Moonee Valley. This is estimated to increase by a further \$187.1 million per annum from proposed developments during the first five year period of this Master Plan. More information on the economic benefits can be found in Chapter 9.

LAND USE PLAN

A Land Use Plan describing proposals for land use and related planning, zoning and development has been prepared for Essendon Airport to satisfy the requirements of the Airport Regulations 1997. The Land Use Plan is in an amount of detail equivalent to that required by, and uses terminology (including definitions) largely consistent with that applying in land use planning, zoning and development legislation in force in Victoria, including in the City of Moonee Valley.

Business zones (B2Z and B3Z) have been modified and applied to land side precincts and special use zones (SUZ1 and SUZ2) have been created and applied to the Airfield Precinct and Aviation Precinct. The Land Use Plan will be used to guide the land use planning decisions in the issuing of the Airport Operator's consent to new developments on the Airport.

AIRPORT PROTECTION

In accordance with Section 71(2)(d) of the *Airports Act 1996*, a forecast for annual aircraft movements in 2033 (the planning period for the Master Plan) has been used in the preparation of the Australian Noise Exposure Forecast (ANEF) contours for Essendon Airport.

Essendon Airport Pty Ltd is not seeking involvement in planning controls outside the airport boundaries, except for the work undertaken with MVCC to implement a Design Development Overlay to protect the airspace at runway ends. Essendon Airport does not have referral authority status under the *Planning and Environment Act 1997 (Vic)*.

DEVELOPMENT PROPOSALS

Current hangar and aircraft parking facilities meet projected requirements with only a small amount of unused capacity so expansion of these facilities seems possible. Development of new hangar and parking facilities is expected to occur where existing facilities are replaced or relocated.

Commercial developments are expected to continue to take up the vacant land side areas at the Airport.

Development proposals for the next 20 years include:

- Consolidation and rationalisation of the aviation activities located in the northern airfield to a more central location. The specific location of those activities will be determined by assessing a number of factors at the time of relocation: efficiency of aviation activities, access to the apron and taxiways, control tower location, vehicular access, impact on the community and demand from operators at the time;
- Further construction of hangars, especially those associated with corporate jet activity;
- Further provision of services to sites for commercial developments;
- The extension of automotive retailing, servicing and related commercial activity;
- Reactivation of heritage assets;
- Expansion of the campus-style setting in at least the English Street Precinct; and
- Further office, retail, light industrial and commercial uses.

More detailed information on developments proposed within the first five years of the Master Plan is set out in Chapter 9 - Airport Development Proposals.

ENVIRONMENTAL MATTERS

Environmental issues have been considered in the Master Plan. The previous 2010 Environment Strategy is superseded by the 2013 Environment Strategy included in this Master Plan and outlined in Chapter 5.

Environmental matters will be specifically considered as part of individual development proposals with input from the Airport Environment Officer and Essendon Airport Pty Ltd.

IMPLEMENTATION AND REVIEW

The Master Plan will be reviewed every five years as required under the *Airports Act 1996*.



Emergency Services aircraft at Essendon Airport



1. INTRODUCTION

Essendon Airport comprises 305 hectares and is located approximately 11 kilometres northwest of the Melbourne Central Business District (CBD) and 7 kilometres southeast of Melbourne Airport. The Airport is used for a mix of aviation uses and growing non-aviation purposes.

Essendon Airport began operations in 1919 as an all-over field and was officially designated an international airport in 1950. The existing terminal building was constructed in 1959. In 1962, the Commonwealth approved the establishment of a new international and domestic airport at Tullamarine (Melbourne Airport) and international and domestic flights were transferred from Essendon Airport to the new Melbourne Airport facility in 1971.

Essendon Airport Pty Ltd (EAPL) was granted a 50 year lease with a 49 year option in 1998. Control of EAPL was transferred to a joint venture of the Linfox and Becton Groups in September 2001. In 2005, the Becton Group transferred its interest to Beck Corporation Today, Essendon Airport is used for a mix of charter, corporate, emergency services and general aviation and a mixture of commercial, retail and light industrial activities. In the past 17 years, aviation activity has decreased from 63,600 movements (31,800 landings) in 1990/91 to 53,700 movements (26,850 landings) in 2012.

Based upon the forecast of aircraft activity projections for 2033 (the planning period for the Master Plan), it is expected that there will be slight increase in aviation activity to approximately 56,850 movements over the next 20 years. This forecast is based on an extrapolation of aviation movement trends over the last ten years and

as an outcome from consultation with the key operators at the airport.

However, due largely to the reduction in aviation activity since 1971 and limited projected aviation activity growth, the airport contains land and facilities that are surplus to projected aviation requirements.

Consequently, this presents the continued opportunity to explore new development on surplus land.

Development will create employment and add economic activity to the airport, the community and the State.

Essendon Airport has approximately 78 hectares of non-aviation land available for development. The development of this land is important to strengthen the economic viability of the airport.

EAPL is responsible for the preparation of a Master Plan in accordance with the *Airports Act 1996* and associated Regulations.

This Master Plan has been prepared to meet the statutory obligations of the *Airports Act 1996* and sets out a broad framework for the development of the airport for the next 20 years.

The Master Plan sets out the development objectives for the airport, together with concepts for individual precincts. The Master Plan has been prepared on the assumption that tenant demand for non-aviation development will continue at similar levels to that of the past decade.

The timing and form of development will be influenced by a multitude of factors. EAPL will, over time, review the Master Plan as necessary and in accordance with the requirements of the *Airports Act 1996*.



Top Left : Beatles - Historical DHS - 1964
 Top Right : Roy Orbison at Essendon Airport 1964
 Bottom Left : Her Majesty steps off plane at Essendon Airport. 1954
 Above : President Lyndon B. Johnson and Mrs Johnson leaving their plane at Essendon Airport.

2. BACKGROUND & CONTEXT

2.1 AIRPORT LEASE

The Commonwealth retains ownership of Essendon Airport, which is leased to EAPL for 50 years with a 49 year option. As Lessee, EAPL is required by the Commonwealth to provide for the use of the airport site as an airport and for access to the airport by interstate and intrastate air transport. The lease also provides:

“Throughout the term the Lessee must develop the Airport Site at its own cost and expense having regard to:

- a) the actual and anticipated future growth in, and pattern of, traffic demand for the Airport Site;*
- b) the quality standards reasonably expected of such an airport in Australia; and*
- c) Good Business Practice.”*

2.2 CONTENTS OF THE MASTER PLAN

Section 71(2) of the *Airports Act 1996* specifies the matter that must be set out in a Master Plan:

- a) “the airport-lessee company’s development objectives for the airport; and*
- b) 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; and*
- c) the airport-lessee’s company’s intentions for land use and related development of the airport site, where the uses and developments embrace airside, landside, surface access, and land planning/zoning aspects; and*
- d) an Australian Noise Exposure Forecast (in accordance with regulations, if any, made for the purpose of this paragraph) for the areas surrounding the airport; and*
- da) flight paths (in accordance with regulations, if any, made for the purpose of this paragraph) at the airport; and*
- e) 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 significant ANEF levels; and*



Historical Mural of Queen Elizabeth II arriving at Essendon Airport

- f) *the airport-lessee company's assessment of environmental issues that might reasonably be expected to be associated with the implementation of the plan; and*
- g) *the airport-lessee company's plans for dealing with the environmental issues mentioned in paragraph f) (including plans for ameliorating or preventing environmental impacts).*
- ga) *in relation to the first 5 years of the master plan – a plan for a ground transport system on the landside of the airport that details:*
 - i) *a road network plan; and*
 - ii) *the facilities for moving people (employees, passengers and other airport users) and freight at the airport; and*
 - iii) *the linkages between those facilities, the road network and public transport system at the airport and the road network and public transport system outside the airport; and*
 - iv) *the arrangements for working with the State and local authorities or other bodies responsible for the road network and public transport system; and*
 - v) *the capacity of the ground transport system at the airport to support operations and other activities at the airport; and*
 - vi) *the likely effect of proposed developments in the master plan on the ground transport system and traffic flows at, and surrounding the airport; and*
- gb) *...detailed information on the proposed developments in the master plan that are to be used for;*
 - i) *commercial, community, office or retail purposes; or*
 - ii) *for any other purpose that is not related to airport services; and*
- gc) *...the likely effect of the proposed developments in the master plan on;*
 - i) *employment levels at the airport; and*
 - ii) *the local and regional economy and community, including an analysis of how the proposed developments fit within the planning schemes for commercial and retail development in the area that is adjacent to the airport;*
- h) *an environment strategy that details:*
 - i) *the airport lessee company's objectives for the environmental management of the airport; and*
 - ii) *the areas (if any) within the airport site which the airport lessee company, in consultation with State and Federal conservation bodies, identifies as environmentally significant; and*
 - iii) *the sources of environmental impact associated with airport operations; and*
 - iv) *the studies, reviews and monitoring to be carried out by the airport lessee company in connection with the environmental impact associated with airport operations; and*
 - v) *the time frames for completion of those studies and reviews and for reporting on that monitoring; and*
 - vi) *the specific measures to be carried out by the airport lessee company for the purposes of preventing, controlling or reducing the environmental impact associated with airport operations; and*
 - vii) *the time frames for completion of those specific measures; and*
 - viii) *details of the consultations undertaken in preparing the strategy (including the outcome of the consultations); and*
 - ix) *any other matters that are prescribed in the regulations."*

Each of these requirements is addressed in this Master Plan. Additionally, the timing of the Environment Strategy has now been aligned with the five-year Master Plan time frame and is incorporated within the Master Plan document. Amendments to the *Airports Act 1996* effective December 2010 including items (ga) to (h) above are some of the key changes in relation to Airport Master Plans.



3. THE VISION & DEVELOPMENT OBJECTIVES

EAPL's vision for the airport is:

“To establish a commercially viable, safe and functional general aviation facility which meets projected aviation requirements whilst utilising the property’s strategic land holdings for high quality commercial development”.

EAPL has established the following development objectives to achieve the vision:

- To improve and maintain safe, secure and efficient airport operations;
- To add value to the airport by realising development opportunities;
- To increase market awareness of development opportunities at the airport;
- To improve the integration of the airport with its surrounds; and
- To consolidate airport operations and aviation requirements to ensure efficient and sustainable land use.



4. ESSENDON AIRPORT TODAY



Essendon Fields House

Essendon Airport is a strategically important parcel of land, providing a unique opportunity to reinforce its activity centre function by realising non-aviation development potential.

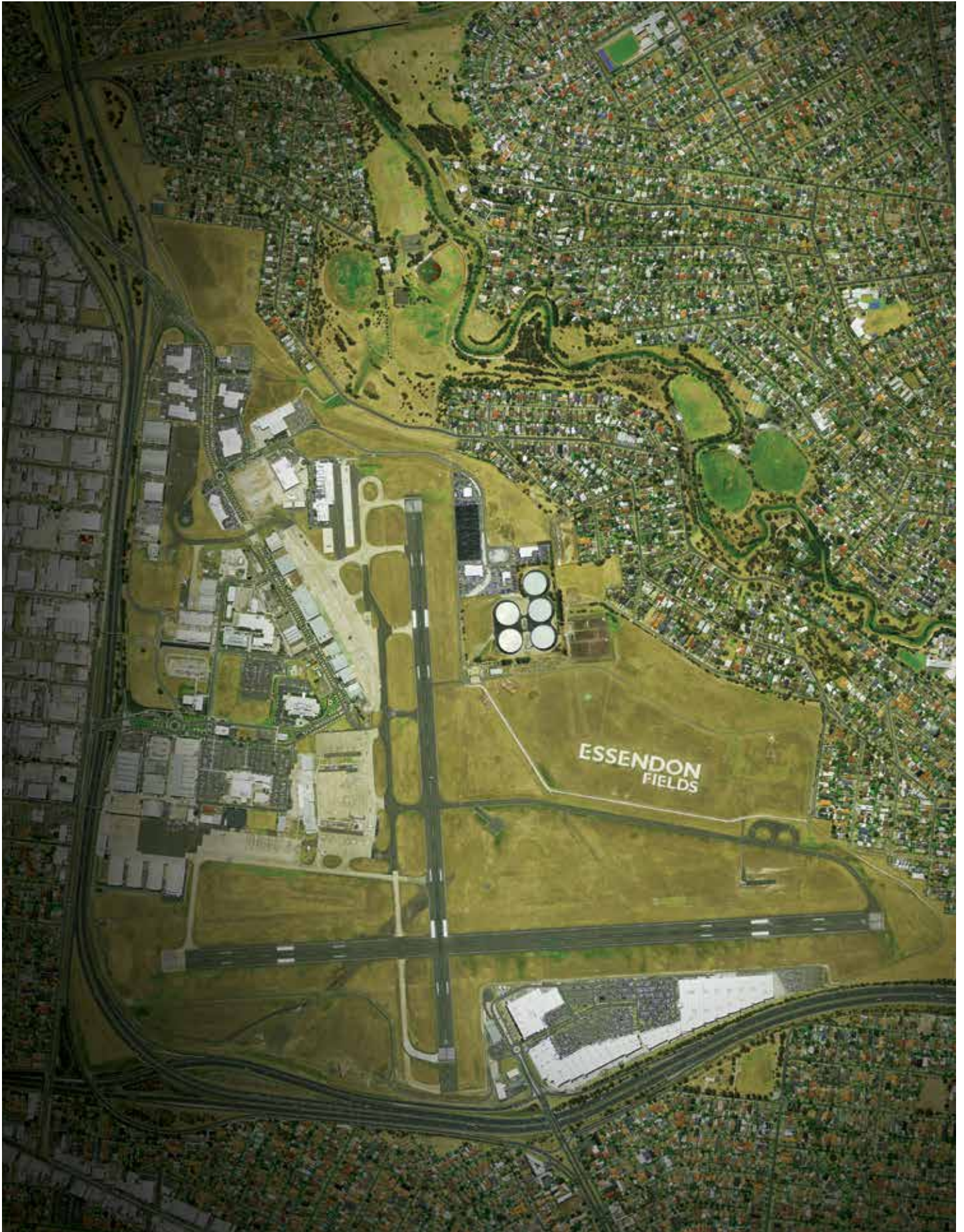
The site has potential for the creation of thousands of new employment opportunities, through the enhancement and expansion of the range of services and facilities presently located in the northwest of Melbourne. Further information on these opportunities can be found in Chapter 9 of the Master Plan.

Essendon Airport is located within an established urban area surrounded by industrial, commercial and

residential uses in the suburbs of Airport West, Niddrie, Essendon, and Strathmore.

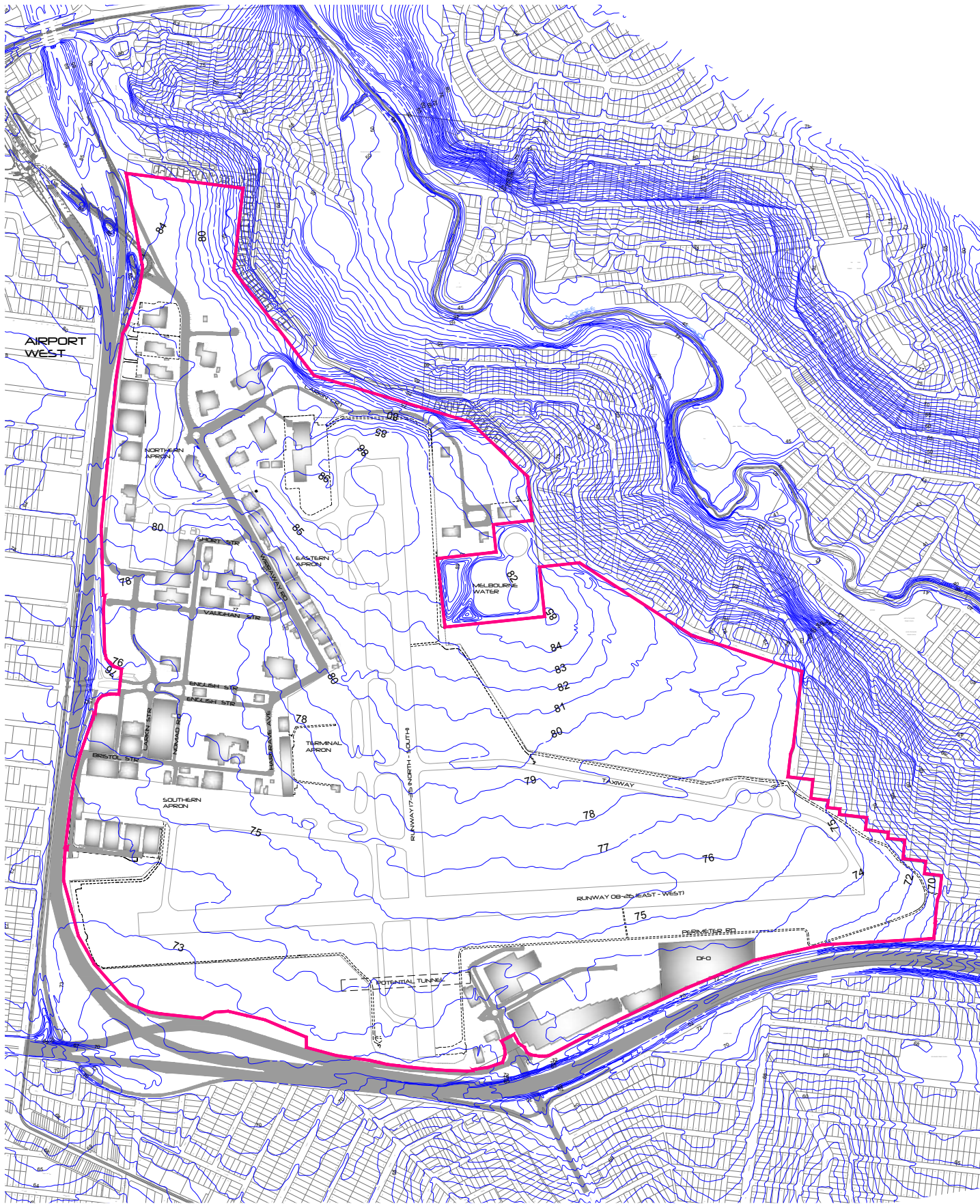
While designated public transport routes do not service Essendon Airport, the majority of businesses within the airport are located within 800m of a sustainable public transport source.

Generally, the majority of the Airport terrain is flat with the exception of the grade differential between sections of the Tullamarine Freeway and the Airport and the northern section of the Airport that slopes down towards Boeing Reserve and the adjoining residential area. Refer to FIGURE 4.1 contour plan:



Aerial view of Essendon Airport

FIGURE 4.1



CONTOUR PLAN
ESSENDON AIRPORT PTY LTD

4.1 EXISTING FACILITIES

Essendon Airport was formerly the main (international) airport for Melbourne and contains most aviation facilities required to support current and projected general aviation operations.

The runways, taxiways and aprons are of a size unique among aviation aerodromes in Australia, providing Essendon Airport with the ability to physically accommodate most aircraft types permitted by law (there is a legislated weight limit of 45,000kg).

4.2 AVIATION FACILITIES

The existing aviation facilities include:

- Runways including, 08/26 which runs east/west and is 1,921m long by 45m wide, and a secondary runway: 17/35 (north/south), 1,504m long by 45m wide;
- A network of flexible and concrete taxiways which provides access between the runways and the aprons;
- An apron area of some 165,000m²;
- A Control Tower located to the north of the main terminal building;
- Navigation aids including a Non Directional Beacon (NDB), and an Instrument Landing System (ILS);
- A Terminal Building which is approximately 5,910m² in area and was constructed when Essendon Airport was the main domestic and international airport for Melbourne. Today the building is used for terminal purposes and also accommodates a number of aviation and non-aviation tenants; and
- Aviation hangars, including the base for the Police Air Wing and Air Ambulance Victoria.

4.3 NON-AVIATION FACILITIES

Non-aviation facilities include:

- Building area in excess of 200,000m², accommodating approximately 170 active businesses and upwards of 4,200 employees;
- Buildings used for commercial activities such as offices, warehouse storage and distribution centres, including a key Australia Post Distribution Centre;
- Extensive landscaping throughout the Airport;

- Buildings fitted out for retail activities including a Direct Factory Outlet, bulky retail Homemaker Hub stores, two supermarkets, cafe and food outlets, nine car dealerships (servicing twelve brands) and other retail uses such as a 24 hour emergency veterinary clinic and a pharmacy;
- Roads and car parking areas;
- Outdoor advertising billboard signs; and
- Telecommunication towers.

4.4 AVIATION SECURITY

Essendon Airport is classified as a security controlled airport under the *Aviation Transport Security Act 2004 (Cth)*. Essendon is a Category 6 security controlled airport. Security screening is not mandatory for any existing regular operations at Essendon.

Airport security guards are in place and contracted to provide ad hoc and dedicated security patrols on an ongoing basis with an emphasis on night time operations.

As part of its legislative requirements, Essendon Airport Chairs a Security Committee which includes members of the Victoria Police and representatives from various airport operators. This Committee is responsible for ensuring the Transport Security Plan of the airport is suitable for the current security climate.

Essendon Airport also conducts regular emergency exercises and has representatives on the Municipal Emergency Planning Committee and the Region 3 Emergency Response Planning Committee.



Airport Safety

Regard is given to the application of “security by design elements” when undertaking risk assessment of aviation infrastructure projects. Over the coming five years particular attention will be given to road infrastructure design, the passenger terminal upgrade and landscaping works in places adjoining aviation infrastructure and areas of potential mass gatherings.

4.5 CURRENT AVIATION OPERATIONS

Since 1971, Essendon Airport has operated as a general aviation airport. In this role, Essendon Airport provides:

- A base for passengers and light cargo services to regional Victoria and Bass Strait;
- A base for emergency service providers including:
 - Air Ambulance Victoria;
 - Victorian Police Air Wing (see over);
 - The Royal Flying Doctor Service;
 - The Erickson Air Crane Helicopter fleet; and
 - Australian Maritime Search and Rescue Coastal Watch;
- Airport services and facilities to corporate and business aircraft;
- A facility for small to medium airfreight operations;
- Training bases for domestic operations (note Local Traffic Regulations published by Airservices Australia generally does not allow fixed wing circuit training at Essendon Airport);

- A base for domestic and international charter flight activity;
- A base for recreational and regional flyers and light aircraft owners;
- A base for third party maintenance and overhaul operations for fixed wing aircrafts and helicopters; and
- An emerging base to service FIFO operations to the mineral and energy sector throughout Australia.

AIR AMBULANCE VICTORIA

Essendon Airport plays a vital role in Air Ambulance Victoria’s (AAV) life-saving work. AAV are based at a facility shared with Victoria Police that opened in 2009 and have had a presence at Essendon Airport since 1963. AAV has four planes and two helicopters based at the airport.

AAV has three other helicopters – based in South West Victoria, Bendigo and the Latrobe Valley – that regularly bring time-critical trauma patients to major Melbourne hospitals, often via Essendon Airport.

One of the state’s busiest Air Ambulance Helicopter’s is located at Essendon and provides important 24-hour adult, neonatal and pediatric retrieval capacity to critical patients being transferred from rural hospitals to specialist care in Melbourne.

AAV’s four custom-designed King Air B-200 planes based at Essendon Airport assist paramedics and doctors in the treatment of patients in flights across



Air Ambulance Victoria

Victoria, Tasmania and southern New South Wales.

Weather plays a major role in AAV's ability to land helicopters at hospital helipads. If conditions aren't favourable, helicopters are able to land at Essendon Airport and be transferred by road to the nearby hospitals.

For these reasons Essendon Airport is an ideal location for AAV. It is the closest airport to Melbourne's major hospitals including the Royal Melbourne Hospital, the Royal Children's Hospital and the Royal Women's Hospital.

VICTORIA POLICE AIR WING

The Victoria Police Air Wing was officially formed in 1975. Initially, the Police Air Wing operations were all fixed wing. Helicopters were introduced in 1979. The current helicopter fleet consists of two Dauphin AS365 N3's and an EC135.

The Police Air Wing's work includes¹:

- Crime prevention and detection - regular patrols of metropolitan Melbourne;
- Traffic surveillance - to enable the police to better assess a situation on major traffic thoroughfares;
- Detection of traffic offenders through Operation Airtector - to detect and apprehend blatant traffic violators on the state highways;

- Location of stolen cars - search areas of bushland where dumped stolen cars may be found in remote and otherwise barely accessible areas;
- Air-surface direction of other units - from the vantage of aerial observation, guiding police on the ground or water to their targets;
- Search and Rescue - an aerial search to find people missing at sea or remote places. The helicopters can cover large areas in a short space of time, increasing the chance of rescue;
- Fire duties - The Air Wing can provide the Country Fire Authority (CFA) and Metropolitan Fire Brigade (MFB) with aerial observation reports or evacuation support;
- Photographic tasks - the Air Wing provides aerial support to facilitate all types of aerial photography for crime, traffic, planning and routine operations;
- Covert surveillance - observation and photography of criminal activities;
- Urgent transport of specialist members, such as the Dog Squad, to time critical incidents.

RUNWAY END SAFETY AREAS (RESA'S)

Currently, RESA's are not provided at the end of each runway at Essendon Airport and it is assumed the existing situation will remain.



1. Source - www.police.vic.gov.au

NAVAIDS

A new Instrument Landing System (ILS) was installed in 2006. Essendon Airport now has some of the most modern air navigational infrastructure in Australia. A network of Movement Area Guidance Signs was also established during 2006.

LIGHTING

During the 2006/2007 year EAPL invested \$5 Million in a state of the art runway, taxiway and airfield lighting system. This included the installation of four Precision Approach Path Indicators (PAPI). This project was one of the largest investments in a general aviation airport in Australia in the last decade.

REFUELLING FACILITIES

The existing refuelling facilities have been upgraded to provide more enhanced security, environmental protection and fuel storage capabilities.

4.6 CURFEW AND OTHER RESTRICTIONS

The Air Navigation (Essendon Airport) Regulations 2001 (Cth) imposes a maximum take-off weight of 45 tonnes. This restriction applies at all times.

The Regulations also prescribe a curfew period which applies to aircraft from 11pm until 6am the following day. Movements that are permitted during curfew periods include:

- Propeller driven aircraft and helicopters subject to specified maximum take-off weights and or maximum noise levels;
- Where the aircraft is involved in an emergency; or
- Where the aircraft is involved in a Police Air Wing operation; or
- A dispensation is granted by the Secretary under regulation 15 that authorises the take-off or landing, and the take-off or landing is in accordance with the dispensation.



Ground Crew at Essendon Fields



Private jet over Essendon Fields

4.7 AIRPORT AVIATION ACTIVITY

Some 180 aircraft are currently based at Essendon Airport. These comprise a cross-section of smaller airline, corporate and charter jets, general aviation aircraft and a broad range of helicopters. Based on a comprehensive analysis of aircraft movements recorded by the Essendon Airport aeronautical system, the proportion of movements of each aircraft type generally operated at Essendon Airport are provided in this Master Plan and outlined in Chapter 7.

Essendon Airport is an ex-international and domestic airport with commensurate infrastructure. Today Essendon Airport operates as a mix of charter, corporate, emergency services and general aviation activities. In recent years, the general aviation sector has been typified by a downward trend in activity and been replaced in part by growth in the corporate aviation market, in particular private jet charters and closed charter FIFO operations. Helicopter operations have also grown to become a significant part of operations at the airport.

Essendon Airport is now a critical hub for essential emergency services with over 8,000 incidents per year being attended to by Air Ambulance Victoria and the Police Air Wing.

The airport's 24 hour access for emergency movements and its proximity to the major hospitals in the Melbourne CBD are critical factors influencing decisions by both State and Federal agencies to use Essendon Airport as an emergency base.

4.8 NATIONAL AIRPORTS SAFEGUARDING FRAMEWORK

The National Airports Safeguarding Advisory Group (NASAG) was established in accordance with the National Aviation Policy White Paper. The NASAG comprising the Federal, State and Local Government formed to develop the National Airports Safeguarding Framework (NASF).

With residential and commercial communities located immediately adjacent to our airport boundary the protection of Airspace is a major focus. EAPL is working with the Federal, State and Local Governments to support improvements in planning outcomes that will improve the safety and viability of operations in the Melbourne region.

EAPL has worked with the Moonee Valley City Council to finalise a planning scheme amendment relating to building height restrictions in areas under the runway approach and departure paths. Amendment C121 is currently with the Victorian Minister for Planning for approval.

The Essendon Airport airspace encompasses the Melbourne CBD so EAPL is involved in the assessment of CBD development proposals that could penetrate OLS or PANS OPS surfaces. EAPL is currently working with the Department of Infrastructure and Transport and the Victorian Department of Planning and Community Development in the preparation of a 3D model of the OLS and PANS OPS surfaces over the Melbourne CBD. This will provide a functional planning tool for the building and development industry.

An Airport Environs Overlay has not been prepared for Essendon Airport.



5. ENVIRONMENT

5.1 ENVIRONMENT STRATEGY

An Environment Strategy covering the management of environmental matters has been developed for Essendon Airport to encompass the first five years of this Master Plan. The Airport Environment Strategy is attached to the Master Plan and will replace the previous 2010-2014 Environment Strategy approved on 7 December 2010. The Environment Strategy includes environmental issues including:

- Air Quality;
- Noise;
- Stormwater;
- Groundwater;
- Soil Quality;
- Waste Management;
- Dangerous Goods and Hazardous Substances;
- Resource Use;
- Flora and Fauna; and
- Heritage (including Indigenous Cultural Heritage).

It is proposed that environmental issues associated with the implementation of the Master Plan will be managed within the regulatory framework established by the Environment Strategy.

5.2 IMPLEMENTATION OF THE MASTER PLAN; ENVIRONMENTAL ISSUES AND MITIGATION

In accordance with sections 71(2)(f) and (g) of the *Airports Act 1996* this Master Plan sets out:

- f) *“the airport-lessee company’s assessment of environmental issues that might reasonably be expected to be associated with the implementation of the plan; and*
- g) *the airport-lessee company’s plans for dealing with the environmental issues mentioned in paragraph (f) (including plans for ameliorating or preventing environmental impacts)”.*

5.3 ASSESSMENT OF ENVIRONMENTAL ISSUES

The implementation of the Master Plan may involve a number of environmental considerations. These considerations, including the demolition of buildings, excavation of surface soils, and the construction of additional roads and buildings may all have some degree of effect on the environment and these will be monitored as works proceed.

Expected environmental issues include exposure to hazardous building materials, increased sediment load in stormwater, exposure to potentially impacted soils and importation of fill material, dust generation, noise impacts and air quality impacts.

5.4 PLANS FOR DEALING WITH ENVIRONMENTAL ISSUES

During the term of this Master Plan, it is likely that a mix of retail, office, light industrial, hotel and many other uses will occur across the airport site. All will have some impact on the environment.

The environmental issues that could arise, either during construction or after implementation can be considered to be:



Essendon Airport's Famous Aviators Historical Walk

- Land Contamination and Management;
- Water Quality Management;
- Air Quality Management (Dust & Vehicle Emissions);
- Noise Management;
- Flora and Fauna; and
- Heritage Conservation.

LAND CONTAMINATION AND MANAGEMENT

Assessment

As is the case with all construction activities, if not correctly addressed, potential land contamination issues could arise throughout the development process.

These impacts may include spoil from leveling the site, dust created from earth moving activities, wind erosion of exposed soils, or the storage and handling of fuel or chemicals after the establishment of a development.

Plans for ameliorating or preventing environmental impacts

Essendon Airport's Construction Environmental Management Plan (CEMP) addresses these impacts by:

- Following Victorian EPA guidelines for the removal of spoil;
- Using water carts for dust suppression when required;
- Limiting the amount of soil exposed at any given time; and
- Following the procedures of the Victorian EPA guidelines for the storage and handling of fuel and chemicals.

WATER QUALITY MANAGEMENT

Assessment

Water quality is an extremely important issue to Essendon Airport, particularly due to the close proximity of Moonee Ponds Creek to the east and Steele Creek to the west.

During a development, stormwater runoff may have an increased sediment load.

Plans for ameliorating or preventing environmental impacts

The CEMP addresses these by specifying that:

- Stormwater sediment concentrations are below the Airport (Environment Protection) Regulations 1997;
- Reference should be made to both the Construction Techniques for Sediment Control Measures and Reducing Stormwater Pollution from Construction Sites – both of which are EPA Publications.

The CEMP also specifies that impacts on water quality can be managed through:

- Minimising the area of land disturbed at any one time;
- Diverting potential upstream runoff from exposed soil and disturbed areas;
- Vegetating, paving, covering or stabilising all exposed and unstable soil or loose material;
- Installation of water diversion devices away from disturbed and exposed soil;
- Installation of sediment and litter control devices such as filter/sediment fences, filter strips, and sediment trap dams and basins; and
- Installation of designated vehicle crossovers and control measures such as shakedown pads.

AIR QUALITY

Assessment

The air quality can be impacted in the construction phases of a development by dust and vehicle emissions.

Plans for ameliorating or preventing environmental impacts

The CEMP specifies that measures to reduce or eliminate dust emission during construction activities may include:

- Water carts spraying the soil on a regular basis;
- Avoiding or minimising works throughout dry and windy conditions;
- Placing covers on all loads; and
- Utilising passive devices such as silt fences.

During this period, EAPL encourages control of vehicle emissions which should be maintained through regular maintenance to manufacturers' specifications.

Post development, the airport's Environment Strategy monitors and manages any ongoing Air Quality issues arising from the development.

NOISE MANAGEMENT

Assessment

During the development process, noise can arise as a result of truck haulage, excavations and general construction.



Wirraway Road Heritage Precinct



Existing building on Wirraway Road

Plans for ameliorating or preventing environmental impacts

The CEMP emphasises that these impacts must be reduced by efficient site planning for operating hours and limiting the speed of trucks.

- Where possible, the CEMP outlines proposed hours of operation and management practices to ensure that noise levels are maintained within the acceptable limit as outlined in the Noise Control Guidelines (EPA Publication TG302-92) Schedule;
- Noise management must also comply with the Airports (Environment Protection) Regulations 1997;
- During all works, EAPL encourages control of vehicle emissions which should be maintained through regular maintenance to manufacturers' specifications.

Post development, the airport's Environment Strategy and Annual Environment Report is used to monitor and manage any ongoing noise issues.

FLORA AND FAUNA

Assessment

Our assessment is that there are no flora and fauna environmental issues that might reasonably be expected to be associated with the implementation of this Master Plan.

The 1998 report prepared by Ecology Australia Pty Ltd about the time of the privatisation of Essendon Airport

said "Essendon Airport is an area of low biological value. More than seventy years of clearance within the airport grounds and rapid urbanisation of surrounding areas has contributed to the elimination of most native vegetation in the area. Remaining flora and fauna habitats are now highly modified, degraded and weed invaded. At this time, no specific management activities are needed to accommodate the flora and fauna values of Essendon Airport."

Studies since the 1998 report, have been in respect of parts of the Airport, not the airport as a whole. There were no issues identified in those reports that affected the implementation of previous Master Plans.

HERITAGE

Assessment

Heritage is an important issue for Essendon Airport and one which EAPL takes seriously when undertaking new developments in areas of heritage significance. Consultation with Aboriginal Affairs Victoria has confirmed that no known sites of indigenous archaeological significance exist at the airport.

Plans for ameliorating or preventing environmental impacts

EAPL has implemented a Heritage Management Plan which identifies specific guidelines for Essendon Airport to follow. Further information on our Heritage works can be found in the Environment Strategy attached to the Master Plan.



6. INFRASTRUCTURE SERVICES

6.1 WATER

The existing reticulation water mains on the airport are treated as private mains and accordingly City West Water is not the responsible authority for onsite facilities.

Balance storage tanks are located outside the eastern boundary of the site and are used in conjunction with the Greenvale reservoir. It is not expected that any extension works are required to these assets. The existing supply connection point would be maintained and if necessary upgraded. This tank farm will remain, as will the distribution mains that emanate from this location. The feed to the tanks is 900mm diameter mild steel main and crosses the airport site from the west within a 6.1 metre wide easement. There are a number of large distribution water mains that traverse the site. EAPL are in discussions with Melbourne Water about the relocation of these mains as part of the Melbourne Water renewal works. Over the next five years the M9 and M102 water mains that run through the Airport will be upgraded and realigned. If the mains are realigned, the existing pipes will either be removed or act as rainwater storage tanks for Airport use.

The site obtains its supply from the upstream feed into the tanks. There is also a City West Water pump station on the site that draws water from an 1150mm diameter distribution main. This pumps water into a 375mm diameter supply, which runs along English Street and then under the Tullamarine Freeway to the west.

The reticulation mains are a mixture of cast iron, ductile iron and mild steel mains. These mains would have to be tested and where necessary upgraded.

It will be necessary to extend the existing water main network to service the development areas shown on the Master Plan.

6.2 SEWERAGE

Reticulated sewers service the airport site. These are regarded as private mains and therefore are not under the control of City West Water.

A 225-diameter sewer services the landside areas of the airport, running along the existing Tullamarine Freeway reserve south to an existing sewer outfall provided by City West Water. This sewer system will be monitored as to the need to extend it to accommodate the future development proposals of the Master Plan.

6.3 STORMWATER

The airport site has an extensive network of underground drains that accommodate the runways, and existing office and warehouse areas. Melbourne Water is the responsible authority that collects the water via the local drainage infrastructure from the site. Site runoff currently flows to the following:

- Mascoma Street Main Drain;
- Clydesdale Road Main Drain;
- Hoffmans Road Main Drain;
- Five Mile Creek Main Drain;
- Magdala Ave Main Drain; and
- Moonee Ponds Creek.

To help mitigate the downstream effects of stormwater run-off EAPL has invested significantly in rainwater retention systems. All new developments at the Airport are designed to include rainwater tanks and bio-retention swales to stem the flow of water leaving each development site. It will be necessary to extend the existing storm water network to service the development areas shown on the Master Plan.

6.4 TELECOMMUNICATIONS

Telecommunication lines service the airport. In recent years there have been significant telecommunication upgrades at the Airport to service the private network which provides telecommunications services to tenants as well as internal services infrastructure.

The existing service will require further updating and extension to service new development sites and any requirements for the deployment of the National Broadband Network in the local area.

6.5 GAS

Gas assets service the airport site. These mains will need to be augmented and extended to service the areas proposed for development within the Master Plan.

Supply and reticulation of gas mains will be undertaken in accordance with the development process.

6.6 ELECTRICITY

The airport site has sufficient electricity infrastructure to supply the current activities at the airport.

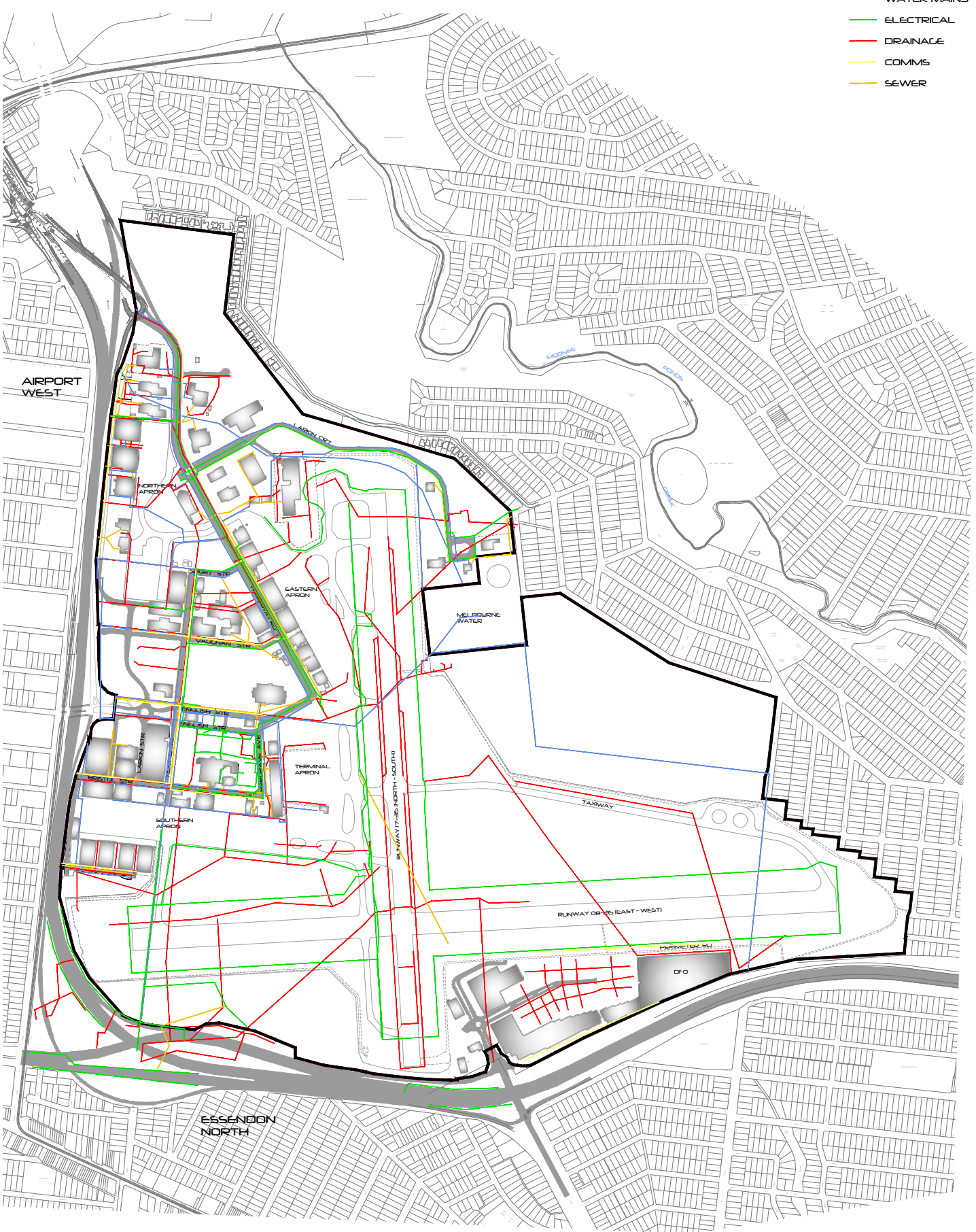
The future demand of the development envisaged by the Master Plan will need to be determined. Supply of electricity and reticulation will be undertaken in accordance with development.

EAPL provides an underground power network to all new developments, and as a result of this, are currently in the process of removing all overhead power lines throughout the Airport as it ties in with these new developments.



English Street main thoroughfare

FIGURE 6.1



**EXISTING TRUNK SERVICES PLAN (2013)
ESSENDON AIRPORT PTY LTD**



7. AVIATION ACTIVITY FORECASTS

7.1 HISTORIC AVIATION ACTIVITY

Since the opening of Melbourne Airport in 1971, aviation activity at Essendon Airport has moved towards general aviation with the current trend moving towards increased rotary and charter movements.

Over the last ten years aircraft traffic has reduced from 68,000 annual movements in 2002 to a level of around 54,000 annual aircraft movements in recent years.

Historic aviation activity at Essendon Airport over the past 10 years is shown in the following table.

Table 7.1
Historic Aviation Activity at Essendon Airport
(Calendar years)

Year	Annual Aircraft Movements	Year	Annual Aircraft Movements
2002	68,418	2008	54,739
2003	64,240	2009	58,659
2004	59,826	2010	54,994
2005	58,708	2011	54,162
2006	59,244	2012	53,779
2007	53,802		

Source: Airservices Australia Annual report and EAPL data

Table 7.2
Essendon Airport in 2012 Proportion
of Aircraft Movements

Single Propeller	23.2%
Twin Propeller	21.1%
Twin Turboprop	18.0%
Jets	5.4%
Rotary Wing	32.3%

Source: Airservices Australia Annual report and EAPL data

In accordance with Section 71(2)(b) of the *Airports Act 1996*, EAPL has assessed the future needs of civil aviation users of the airport and of other users of the airport, for services and facilities relating to the airport.

As part of this assessment, EAPL deems that a broad change of aviation trends for Essendon Airport is occurring. EAPL envisages a decline in single and twin engine use of the airport, but a notable shift towards increasing use of the airport for corporate jets, high end general aviation uses, mining and energy sector charters and helicopter operations.

Moderate growth in regional RPT services is also likely. To a certain extent, it is envisaged that one trend will offset the other, and aircraft movements at the airport will plateau between approximately 54,000-57,000 movements over the next 20 years. This trend is occurring due to the worldwide expansion of corporate jet travel. Conversely, investment in smaller general aviation at Essendon Airport continues to decline. Interest continues to be received for additional corporate jet hangar construction. Little, if any, interest is occurring for smaller general aviation hangars.

The increase in FIFO activities driven by the mining and energy markets across Australia in recent years has had a significant impact on aviation across Australia. There had been minimal impact on Victorian airports outside the regular public transport operations until 2012.

Regular closed charter FIFO flights began operating from Essendon Airport in early 2012. Further flights have been introduced to meet demand and it is anticipated that this will continue to grow. Currently four flights a week depart Essendon Airport servicing Prominent Hill, Telfer and Orange. We have allowed for this activity to double in the Master Plan period.



Sharp Airlines providing services to regional Victoria

The mining companies choose to operate out of Essendon Airport due to the access to labour markets, ease of operation and the ability to provide direct access to their mining sites. The economic impact of FIFO flights is an estimated additional 320 local and regional workers are able to secure FIFO jobs and \$43.1 million in direct economic benefit to Victoria. This figure would expect to double if our forecast of a doubling in flights to the mining regions is realised in this Master Plan period. Additional employment opportunities will arise for ancillary support services for these miners such as food and beverage outlets and medical centres.

Essendon has experienced growth in rotary wing movements in the last 5 years. This growth has been driven through increased emergency flights as well as corporate use. We have forecast the growth to level off in the Master Plan period.

However, the existing Air Navigation (Essendon Airport) Regulations 2001 restrict use of the Airport by corporate jets now and it is assumed they will continue to do so.

This limits growth expectations due largely to the existing curfew status arrangements and weight limitations. The curfew arrangements and limitations are outlined below. Due to this status, at present, Essendon presently refuses ad hoc requests for corporate jets that exceed the maximum limit.

It is envisaged that the demand for these aircraft to use Essendon will significantly rise in the coming decade, as

new model corporate jets increase in size. The Gulf Stream 650 which has a maximum take-off weight of 45,600 kg is a good example of a modern corporate jet that is presently not able to be used at Essendon Airport even though it is quieter and more fuel efficient than many of the smaller aircraft operating at the airport.

A contributing factor to the decline in smaller general aviation aircraft continues to be the competing factors of the many smaller general aviation airfields on Melbourne's outskirts. Airfields such as Bacchus Marsh, Lilydale, Coldstream, Tyabb, Moorabbin, Melton, Barwon Heads and even Ballarat compete directly with Essendon Airport. With the exception of Moorabbin, all are significantly smaller and have landing charges at lower rates than Essendon Airport. It is envisaged that a number of those airports will continue to grow at the expense of Essendon in this sector.

Regional Regular Public Transport (RPT) services are currently limited to one operator using relatively small twin engine turboprop aircraft (ie Metroliners) with a seat capacity of 19 persons and a maximum take-off weight of 7,300kg.

The services currently operate to Hamilton, Portland and Flinders Island and total around 4 to 6 movements per day. These regional Victoria services play an important role in connecting regional areas to Melbourne. We see potential for new services to regional Victoria, Tasmania and NSW also using small turboprop aircraft such as the SAAB 340 which carries 36 passengers with a maximum take-off weight of 13,155 kg.

On considering these issues, EAPL has extrapolated general aviation trends over the next 20 years.

It is anticipated that in 2033 the combined operation of all the above mentioned aircraft types will generate approximately 57,000 total aircraft movements.

EAPL's analysis of the market generally, and for ANEF purposes, establishes that:

- Single Propeller Aircraft Movements are likely to continue to decline by 2% per annum over the next 20 years;
- Twin Propeller Aircraft Movements are likely to continue to decline by 2% per annum over the next 20 years;
- Twin Turboprop Movements are likely to increase by 1% per annum over the next 20 years;
- Jet Movements are likely to increase by 3% per annum over the next 20 years;
- Rotary Wing Movements are likely to increase by 2% per annum over the next 20 years.

Current and projected aircraft movements are summarised in Table 7.3 below.

In broad terms, it is envisaged that aircraft movement declines in some airframe types (namely single propeller and twin propeller) will largely be offset by increases in others (namely turboprop, jet and rotary wing aircraft).

It is therefore considered that whilst there has been a decline in flight activity during this decade, this will now be stabilised and will remain consistent in the future.

More particularly, we therefore anticipate that total average movements over the next 20 years will be within the range of 53,000 to 57,000 movements per annum.

Table 7.3

Current and Projected Aircraft Movements

Aircraft Category	2012 Aircraft Movements		2033 Forecast	
	% of total	Movements	% per annum	Movements
Single Propeller	23.2	12,477	2% decrease	7,747
Twin Propeller	21.1	11,347	2% decrease	7,407
Twin Turbo	18.0	9,680	1% increase	11,894
Jet	5.4	2,904	3% increase	5,319
Rotary Wing	32.3	17,371	2% increase	24,481
Total	100	53,779		56,848

7.2 EMERGENCY SERVICES

EAPL also envisages a further trend for emergency services use of Essendon Airport. Over the past five years, operations related to Emergency Services have significantly increased.

Whilst growth at this level is unlikely to continue, there is still potential for slower growth. This increase has largely been a result of activities of the Victorian Police Air Wing and Air Ambulance.

The Victorian Police Air Wing and Air Ambulance Centre were completed in 2009. It accommodates three main components: an apron; the hangars; and ancillary support areas including offices, mess areas and maintenance facilities. Separate hangars were constructed for both the Police Air Wing and Air Ambulance Victoria. This development positioned Essendon Airport at the forefront of the provision of aviation facilities for emergency services use in Australia. The close proximity of Essendon Airport to the major hospitals in the City of Melbourne ensures that demand for these services will continue to be high.

Since 2005, Essendon Airport has also become the home for Aero Rescue. The organisation operates Dornier 328-120 aircraft and provides fixed wing search and rescue services on behalf of the Australian Maritime Safety Authority. Essendon Airport has become one of five Australian bases for these standby search and rescue services, providing vital maritime support services.

In summary, EAPL is committed to the sustainability and ongoing use of Essendon Airport for emergency aviation services and considers that the airport meets the long term needs of Emergency Services users in Victoria.

8. AIRCRAFT NOISE & AIRSPACE MANAGEMENT



8.1 AIRCRAFT NOISE

Aircraft noise will always arise as part of an airport's operation, and while modern aircraft are becoming quieter, considerable ongoing attention is required to manage the noise associated with an airport.

Section 71(2)(d) of the *Airports Act 1996* requires the production of an Australian Noise Exposure Forecast (ANEF) at all leased Commonwealth airports as part of the airport master planning process. While aircraft flight paths and responses to noise created by aviation movements are the responsibility of Airservices Australia, EAPL takes a proactive approach to noise impacts on the community.

Noise impacts in the vicinity of airports are evaluated in accordance with the Australian Standard AS 2021-2000. The standard prescribes acceptability of various building types within ANEF zones based on forecast exposure to noise from aircraft operations.

The *Essendon Airport Environmental Strategy 2013-2018* sets out at Chapter 5 EAPL's strategies to deal with the environmental impact of noise.

8.2 COMMUNITY AVIATION CONSULTATION GROUP

In January 2010 EAPL established a Community Aviation Consultation Group (CACG). The CACG replaced the Essendon Airport Noise Management Working Group.

The CACG is the primary community consultation forum for noise issues.

Attendees at the CACG meetings include:

- Local Federal Member of Parliament;
- Local State Member of Parliament;

- MVCC councillor;
- CEO of EAPL;
- Aviation Manager of EAPL; and
- 2 community representatives nominated by 2 local federal members of Parliament.

Representatives of Airservices Australia and the Department of Infrastructure and Regional Development are invited guests at each meeting. The Aircraft Noise Ombudsmen has also attended meetings of the CACG.

Initiatives undertaken by EAPL in conjunction with the CACG include:

- Implementation of the first Fly Neighbourly Agreement in Australia;
- Local fly neighbourly procedures to encourage helicopter operations at the northern end of runway 17/35 to use the green belt area;
- An EAPL staff member spending the night at the home of a local resident to gain a better understanding of the noise issues that were impacting on this particular person;
- Arrangements were made for another resident to meet the CEO and Chief Pilot of a local airfreight company to discuss their concerns and gain a better understanding of this particular business;
- A new engine test site which uses the existing formation of the adjacent freeway overpass to absorb noise was trialled and is now a confirmed location for engine test runs; and
- The CACG has commenced working on a community booklet to enhance understanding of the operation of the airport and the impacts of Essendon Airport on the community.

EAPL will continue to discuss noise concerns that the community have with the CACG on a regular basis.

8.3 2033 ANEF

A 2033 ANEF has been prepared in accordance with the procedures prescribed by Airservices Australia (the Agency responsible for the endorsements of ANEF's for all Australian Airports).

The ANEF system is a measure of the aircraft noise exposure levels around aerodromes over a 12-month period. Noise exposure levels are calculated in ANEF units, which take into account the following factors of aircraft noise:

- The estimated growth or reduction rate of aircraft movements using historical data of aircraft movement;
- The audible frequencies of aircraft take off, approaches to land, and reverse thrust after landing;
- The average daily distribution of aircraft movements in daytime and night-time (night-time defined as 1900 hours to 0700 hours). Night time movements are multiplied by a factor of 4 for ANEF calculations;

- The forecast frequency of aircraft types and movement on the various flight paths.

The Essendon Airport 2033 ANEF has been assessed for technical accuracy and has been endorsed by Airservices Australia in the manner approved by the Minister for Infrastructure and Regional Development. The 2033 ANEF is shown in Figure 8.1

8.4 RUNWAY CAPACITY

In accordance with the Faa Advisory Circular AC 150/5060-5, EAPL must demonstrate that the forecast numbers of aircraft movements are not greater than the physical capacity of the existing or proposed runways.

The two runway system at Essendon Airport can allow up to 215,000 fixed wing movements per annum, far more than the projected 2033 demand of 32,370 fixed wing movements. EAPL has determined a 20 year ANEF is preferred to an ultimate capacity ANEF as projecting movements reaching ultimate capacity at the airport is considered unlikely.



Inside Essendon Airport Terminal

FIGURE 8.1

AIRCRAFT DAILY MOVEMENTS BY RUNWAY AND AIRCRAFT TYPE

Runway	Light aircraft	General aviation	Commercial	Other	Total
08-26	12	18	15	10	55
17-35	10	15	12	8	45
35-07	8	12	10	5	35
05-23	5	8	7	3	23
16-34	3	5	4	2	14
24-06	2	3	2	1	8
33-15	1	2	1	0	4
01-19	0	1	0	0	1
19-01	0	0	0	0	0
09-27	0	0	0	0	0
27-09	0	0	0	0	0
03-21	0	0	0	0	0
21-03	0	0	0	0	0
04-22	0	0	0	0	0
22-04	0	0	0	0	0
10-28	0	0	0	0	0
28-10	0	0	0	0	0
12-30	0	0	0	0	0
30-12	0	0	0	0	0
14-32	0	0	0	0	0
32-14	0	0	0	0	0
18-36	0	0	0	0	0
36-18	0	0	0	0	0
20-38	0	0	0	0	0
38-20	0	0	0	0	0
22-40	0	0	0	0	0
40-22	0	0	0	0	0
24-42	0	0	0	0	0
42-24	0	0	0	0	0
26-44	0	0	0	0	0
44-26	0	0	0	0	0
28-46	0	0	0	0	0
46-28	0	0	0	0	0
30-48	0	0	0	0	0
48-30	0	0	0	0	0
32-50	0	0	0	0	0
50-32	0	0	0	0	0
34-52	0	0	0	0	0
52-34	0	0	0	0	0
36-54	0	0	0	0	0
54-36	0	0	0	0	0
38-56	0	0	0	0	0
56-38	0	0	0	0	0
40-58	0	0	0	0	0
58-40	0	0	0	0	0
42-60	0	0	0	0	0
60-42	0	0	0	0	0
44-62	0	0	0	0	0
62-44	0	0	0	0	0
46-64	0	0	0	0	0
64-46	0	0	0	0	0
48-66	0	0	0	0	0
66-48	0	0	0	0	0
50-68	0	0	0	0	0
68-50	0	0	0	0	0
52-70	0	0	0	0	0
70-52	0	0	0	0	0
54-72	0	0	0	0	0
72-54	0	0	0	0	0
56-74	0	0	0	0	0
74-56	0	0	0	0	0
58-76	0	0	0	0	0
76-58	0	0	0	0	0
60-78	0	0	0	0	0
78-60	0	0	0	0	0
62-80	0	0	0	0	0
80-62	0	0	0	0	0
64-82	0	0	0	0	0
82-64	0	0	0	0	0
66-84	0	0	0	0	0
84-66	0	0	0	0	0
68-86	0	0	0	0	0
86-68	0	0	0	0	0
70-88	0	0	0	0	0
88-70	0	0	0	0	0
72-90	0	0	0	0	0
90-72	0	0	0	0	0
74-92	0	0	0	0	0
92-74	0	0	0	0	0
76-94	0	0	0	0	0
94-76	0	0	0	0	0
78-96	0	0	0	0	0
96-78	0	0	0	0	0
80-98	0	0	0	0	0
98-80	0	0	0	0	0
82-100	0	0	0	0	0
100-82	0	0	0	0	0
84-102	0	0	0	0	0
102-84	0	0	0	0	0
86-104	0	0	0	0	0
104-86	0	0	0	0	0
88-106	0	0	0	0	0
106-88	0	0	0	0	0
90-108	0	0	0	0	0
108-90	0	0	0	0	0
92-110	0	0	0	0	0
110-92	0	0	0	0	0
94-112	0	0	0	0	0
112-94	0	0	0	0	0
96-114	0	0	0	0	0
114-96	0	0	0	0	0
98-116	0	0	0	0	0
116-98	0	0	0	0	0
100-118	0	0	0	0	0
118-100	0	0	0	0	0
102-120	0	0	0	0	0
120-102	0	0	0	0	0
104-122	0	0	0	0	0
122-104	0	0	0	0	0
106-124	0	0	0	0	0
124-106	0	0	0	0	0
108-126	0	0	0	0	0
126-108	0	0	0	0	0
110-128	0	0	0	0	0
128-110	0	0	0	0	0
112-130	0	0	0	0	0
130-112	0	0	0	0	0
114-132	0	0	0	0	0
132-114	0	0	0	0	0
116-134	0	0	0	0	0
134-116	0	0	0	0	0
118-136	0	0	0	0	0
136-118	0	0	0	0	0
120-138	0	0	0	0	0
138-120	0	0	0	0	0
122-140	0	0	0	0	0
140-122	0	0	0	0	0
124-142	0	0	0	0	0
142-124	0	0	0	0	0
126-144	0	0	0	0	0
144-126	0	0	0	0	0
128-146	0	0	0	0	0
146-128	0	0	0	0	0
130-148	0	0	0	0	0
148-130	0	0	0	0	0
132-150	0	0	0	0	0
150-132	0	0	0	0	0
134-152	0	0	0	0	0
152-134	0	0	0	0	0
136-154	0	0	0	0	0
154-136	0	0	0	0	0
138-156	0	0	0	0	0
156-138	0	0	0	0	0
140-158	0	0	0	0	0
158-140	0	0	0	0	0
142-160	0	0	0	0	0
160-142	0	0	0	0	0
144-162	0	0	0	0	0
162-144	0	0	0	0	0
146-164	0	0	0	0	0
164-146	0	0	0	0	0
148-166	0	0	0	0	0
166-148	0	0	0	0	0
150-168	0	0	0	0	0
168-150	0	0	0	0	0
152-170	0	0	0	0	0
170-152	0	0	0	0	0
154-172	0	0	0	0	0
172-154	0	0	0	0	0
156-174	0	0	0	0	0
174-156	0	0	0	0	0
158-176	0	0	0	0	0
176-158	0	0	0	0	0
160-178	0	0	0	0	0
178-160	0	0	0	0	0
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180-162	0	0	0	0	0
164-182	0	0	0	0	0
182-164	0	0	0	0	0
166-184	0	0	0	0	0
184-166	0	0	0	0	0
168-186	0	0	0	0	0
186-168	0	0	0	0	0
170-188	0	0	0	0	0
188-170	0	0	0	0	0
172-190	0	0	0	0	0
190-172	0	0	0	0	0
174-192	0	0	0	0	0
192-174	0	0	0	0	0
176-194	0	0	0	0	0
194-176	0	0	0	0	0
178-196	0	0	0	0	0
196-178	0	0	0	0	0
180-198	0	0	0	0	0
198-180	0	0	0	0	0
182-200	0	0	0	0	0
200-182	0	0	0	0	0
184-202	0	0	0	0	0
202-184	0	0	0	0	0
186-204	0	0	0	0	0
204-186	0	0	0	0	0
188-206	0	0	0	0	0
206-188	0	0	0	0	0
190-208	0	0	0	0	0
208-190	0	0	0	0	0
192-210	0	0	0	0	0
210-192	0	0	0	0	0
194-212	0	0	0	0	0
212-194	0	0	0	0	0
196-214	0	0	0	0	0
214-196	0	0	0	0	0
198-216	0	0	0	0	0
216-198	0	0	0	0	0
200-218	0	0	0	0	0
218-200	0	0	0	0	0
202-220	0	0	0	0	0
220-202	0	0	0	0	0
204-222	0	0	0	0	0
222-204	0	0	0	0	0
206-224	0	0	0	0	0
224-206	0	0	0	0	0
208-226	0	0	0	0	0
226-208	0	0	0	0	0
210-228	0	0	0	0	0
228-210	0	0	0	0	0
212-230	0	0	0	0	0
230-212	0	0	0	0	0
214-232	0	0	0	0	0
232-214	0	0	0	0	0
216-234	0	0	0	0	0
234-216	0	0	0	0	0
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236-218	0	0	0	0	0
220-238	0	0	0	0	0
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222-240	0	0	0	0	0
240-222	0	0	0	0	0
224-242	0	0	0	0	0
242-224	0	0	0	0	0
226-244	0	0	0	0	0
244-226	0	0	0	0	0
228-246	0	0	0	0	0
246-228	0	0	0	0	0
230-248	0	0	0	0	0
248-230	0	0	0	0	0
232-250	0	0	0	0	0
250-232	0	0	0	0	0
234-252	0	0	0	0	0
252-234	0	0	0	0	0
236-254	0	0	0	0	0
254-236	0	0	0	0	0
238-256	0	0	0	0	0
256-238	0	0	0	0	0
240-258	0	0	0	0	0
258-240	0	0	0	0	0
242-260	0	0	0	0	0
260-242	0	0	0	0	0
244-262	0	0	0	0	0
262-244	0	0	0	0	0
246-264	0	0	0	0	0
264-246	0	0	0	0	0
248-266	0	0	0	0	0
266-248	0	0	0	0	0
250-268	0	0	0	0	0
268-250	0	0	0	0	0
252-270	0	0	0	0	0
270-252	0	0	0	0	0
254-272	0	0	0	0	0
272-254	0	0	0	0	0
256-274	0	0	0	0	0
274-256	0	0	0	0	0
258-276	0	0	0	0	0
276-258	0	0	0	0	

8.5 MANAGEMENT OF AIRPORT NOISE INTRUSION

EAPL has considered the requirements of Section 71(2)(e) of the *Airports Act 1996*, “plans developed following consultation with the airlines that use the airport and local government bodies...for managing aircraft noise intrusion in areas forecast to be subject to exposure above the significant ANEF levels.”

Airservices have one permanent, and from time to time temporary, noise monitoring points within the vicinity of the airport to detect the operating aircraft, the altitude of the aircraft, the noise created by the aircraft and the level of background noise. This helps determine whether aircraft have been operating in accordance with approved flight procedures. Noise monitoring results are provided by Airservices at CACG meetings.

Noise Abatement procedures for Essendon Airport have also been designed and implemented by Airservices. These procedures seek to minimise the impact of noise over the community through the management of runway use and reducing flight paths over residential areas, however flight paths are often dictated by aircraft type and weather conditions.

Further to this, in April 2011 Essendon Airport was the first airport in Australia to introduce a Fly Neighbourly Agreement (FNA). A full copy of the FNA is available on the EAPL website. The signatories of the FNA have implemented the following voluntary procedures;

- Comply with Commonwealth legislative requirements for noise management;
- Comply with noise abatement procedures;
- Ensure that environmental awareness and noise issues are included in pilot training;
- Respond to community inquiries about noise in a cooperative manner; and
- Display this agreement in the reception area of our business and website.

Where aviation operators are not signatories to the voluntary Fly Neighbourly procedures, EAPL encourages the operators to adhere to the principles of the Fly Neighbourly Agreement.

Consistent with the principles of the FNA, in 2011 EAPL in consultation with the CACG, Airservices & local operators agreed a preferred route for helicopters over less densely populated areas for flights departing from the north east. Operators including Police & Air Ambulance have adopted this voluntary procedure subject to safety and operating procedures. Improved outcomes have resulted from this initiative.

The Air Navigation (Essendon Airport) Regulations restrict aircraft usage outside curfew hours and limit the size of aircraft which can use the airport.

EAPL will also carry out an investigation into the shortening of the north-south runway during this master plan period. This investigation will include the noise impacts of any modifications to the north – south runway.

Workshops were convened to bring EAPL, Airservices, helicopter and other aircraft operators together to ensure the data used to produce the ANEF reflected the flight tracks and altitudes flown by the various helicopter types. EAPL has also undertaken consultation with State and Local Government authorities, as well as the CACG, with regard to the proposed ANEF contour chart and impacts of noise.

EAPL will continue to consult with local government authorities to develop plans for managing aircraft noise intrusion in areas forecast to be subject to exposure above significant ANEF levels.

8.6 ANEF OVERVIEW

The contours on the ANEF chart are a measure of the noise exposure over a 12-month period divided by 365 to show an average annual day. The 2033 ANEF is different in size and shape to the 2027 ANEF found in the 2008 Master Plan. This is due to a number of factors which include the following:

NEW VERSION OF THE INM SOFTWARE

The only method of calculating ANEF contours is by the use of the Integrated Noise Model (INM) developed by the Federal Aviation Agency of the USA. The INM calculates the aircraft noise exposure for an average day (averaged over a year) activity at the forecast year.

A new version of the INM (7.0b) was used for the 2033 ANEF. This version uses a much wider range of aircraft types than was previously available. In particular, the new model provided comprehensive modeling of helicopters for the first time. In the 2027 ANEF the model substituted a small plane in place of a helicopter.

CHANGES IN THE NUMBER OF MOVEMENTS AND FLEET MIX

Due to changes in aviation activity experienced in the last 5 years the number of movements and fleet mix vary significantly between the 2027 and 2033 ANEF.

TABLE 8.1 ESTIMATED CHANGE IN AIRCRAFT MOVEMENTS

Forecast Annual Movements	2027 ANEF	2033 ANEF	Difference
Fixed Wing	40,000	32,370	-7,630
Helicopters	13,500	24,480	10,980
Total Movements	53,500	56,848	3,350

As the Airport Operator, EAPL realises that noise will affect the community and seeks to address these issues proactively and mitigate likely impacts. EAPL's plan to manage noise intrusion around the airport is discussed above.

The majority of the ANEF 30 contour is located above airport land, public open space, industrial land or over the adjacent freeway; however houses are also located within this contour. The ANEF 25 and 20 contours cover residential properties to the south, east and north-east of the airport. EAPL realises that noise does not suddenly dissipate at the 20 ANEF contour and in fact transcends past this point.

CHANGES IN MOVEMENTS AND NOISE LEVELS IN THE FUTURE

EAPL forecasts the change to the ANEF over the period of this Master Plan to be minimal.

This is demonstrated in Figure 8.2 which compares the 2012 Australian Noise Exposure Index (based on actual movements) with the 2033 ANEF contour chart (based on forecasts). Currently there are approximately 3000 homes located within the ANEF with a further 700 properties forecast to be affected by the increased ANEF contours over the next 20 years. The additional flights forecast by 2033 equate to an additional 8 to 9 movements per day.

IMPACT OF MELBOURNE AIRPORT TRAFFIC

By definition, the ANEF provides a measure of noise based on forecast movements at a specified airport (ie Essendon Airport). It does not take account of noise generated by aircraft that overfly Essendon Airport on route to Melbourne Airport. These aircraft operate at relatively low altitudes over Strathmore, Oak Park, Essendon North and Airport West.

Short term noise monitoring surveys conducted by Airservices Australia in September 2012 show that 30% of the aircraft flying over these suburbs are jet aircraft approaching Melbourne Airport to land. Figure 8.3 shows the areas that may be affected by movements at both Melbourne and Essendon Airports.

INTRODUCTION OF QUIETER AIRCRAFT

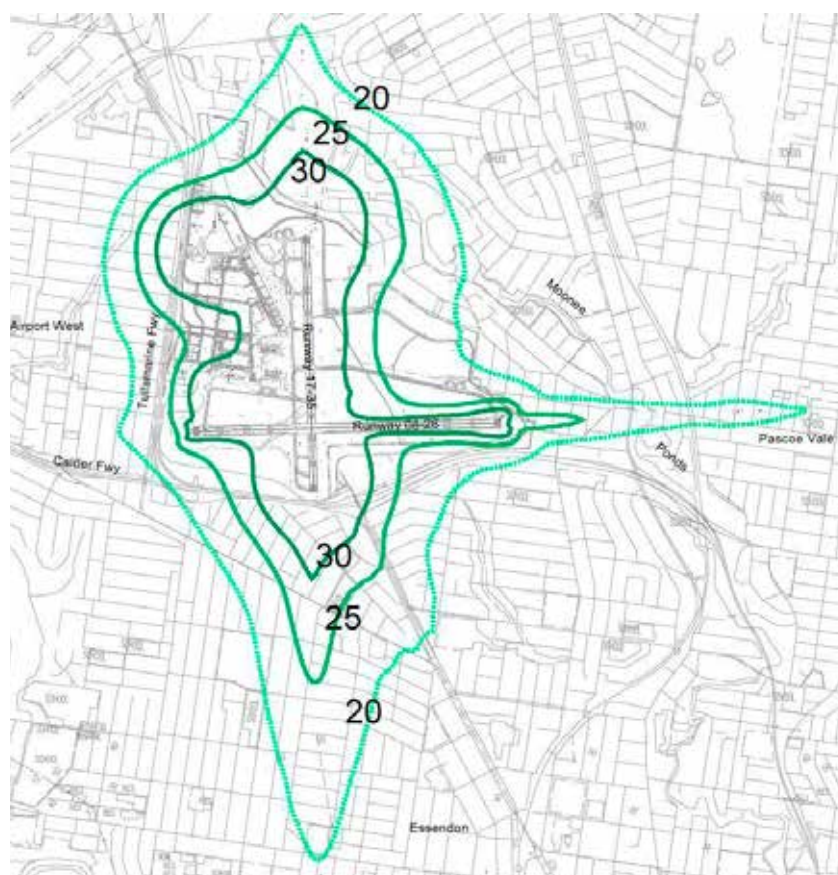
New technology now being used in the design of modern aircraft is expected to have a positive impact on noise levels in the future. Newer models of helicopters that are quieter than current models have not been allowed for in calculating the ANEF. The newer models have an improved rotor system which is tailored to produce a minimised noise signature for urban area operations.

8.7 FLIGHT PATHS

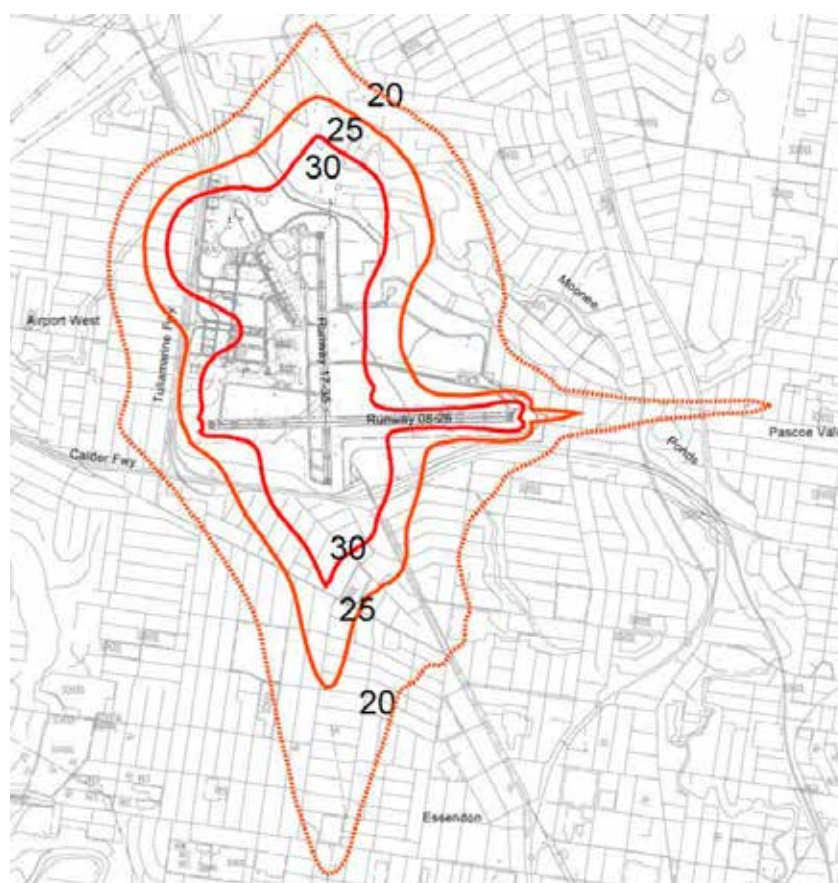
In addition to the ANEF, the Master Plan records the following flight paths into Essendon Airport, as specified in Section 71(2)(da) of the *Airports Act 1996*. Flight paths can also be seen through the WebTrak program accessible online through the Essendon Airport website. This tool is provided by Airservices Australia and provides information on aircraft flying over metropolitan areas within the vicinity of Essendon Airport. The flight paths for Essendon Airport can be found in figures 8.4- 8.7.

FIGURE 8.2

ANEI 2012	
ANEI 2012 MOVEMENTS	53,779

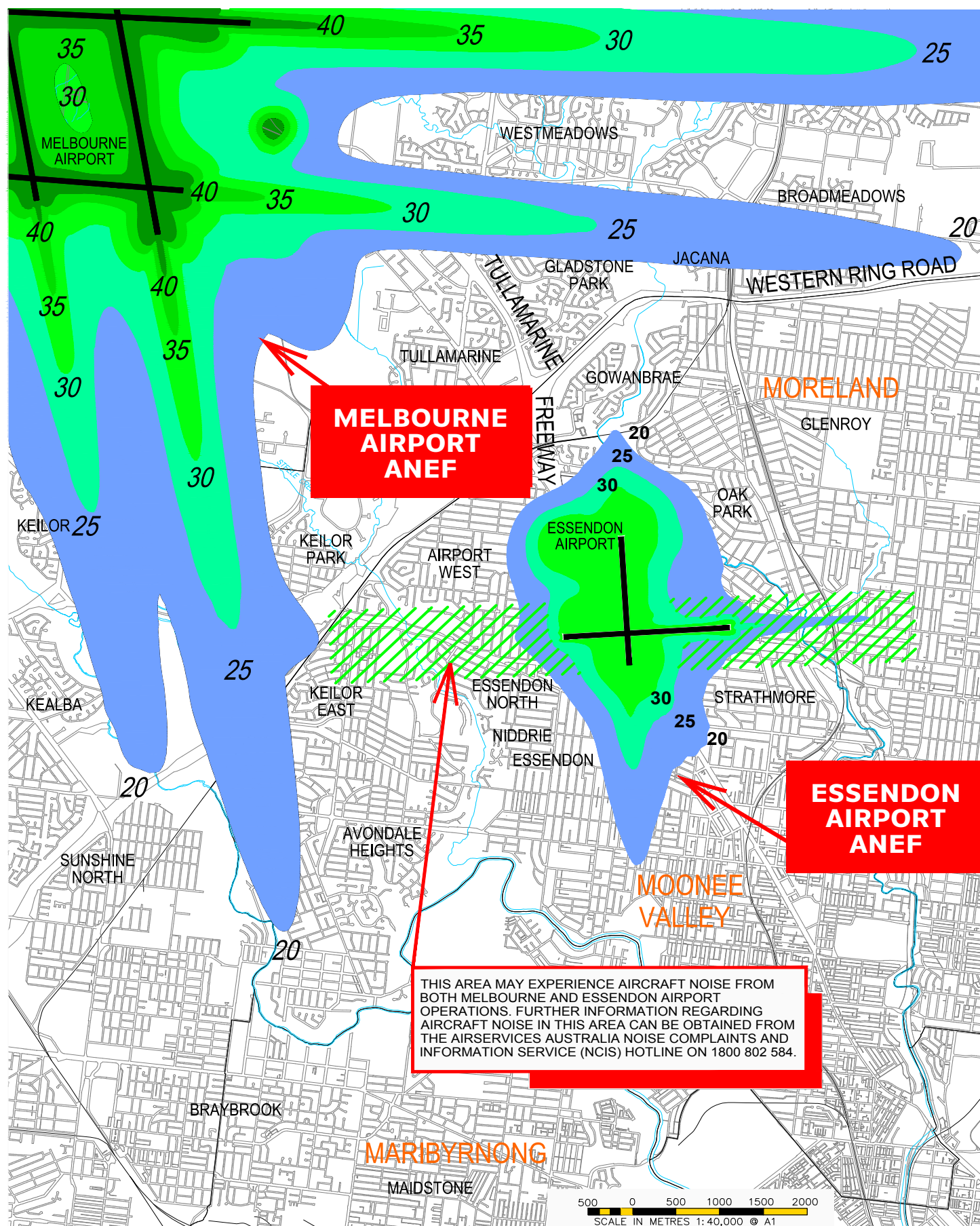


ANEF 2033	
ANEF 2033 MOVEMENTS	56,848



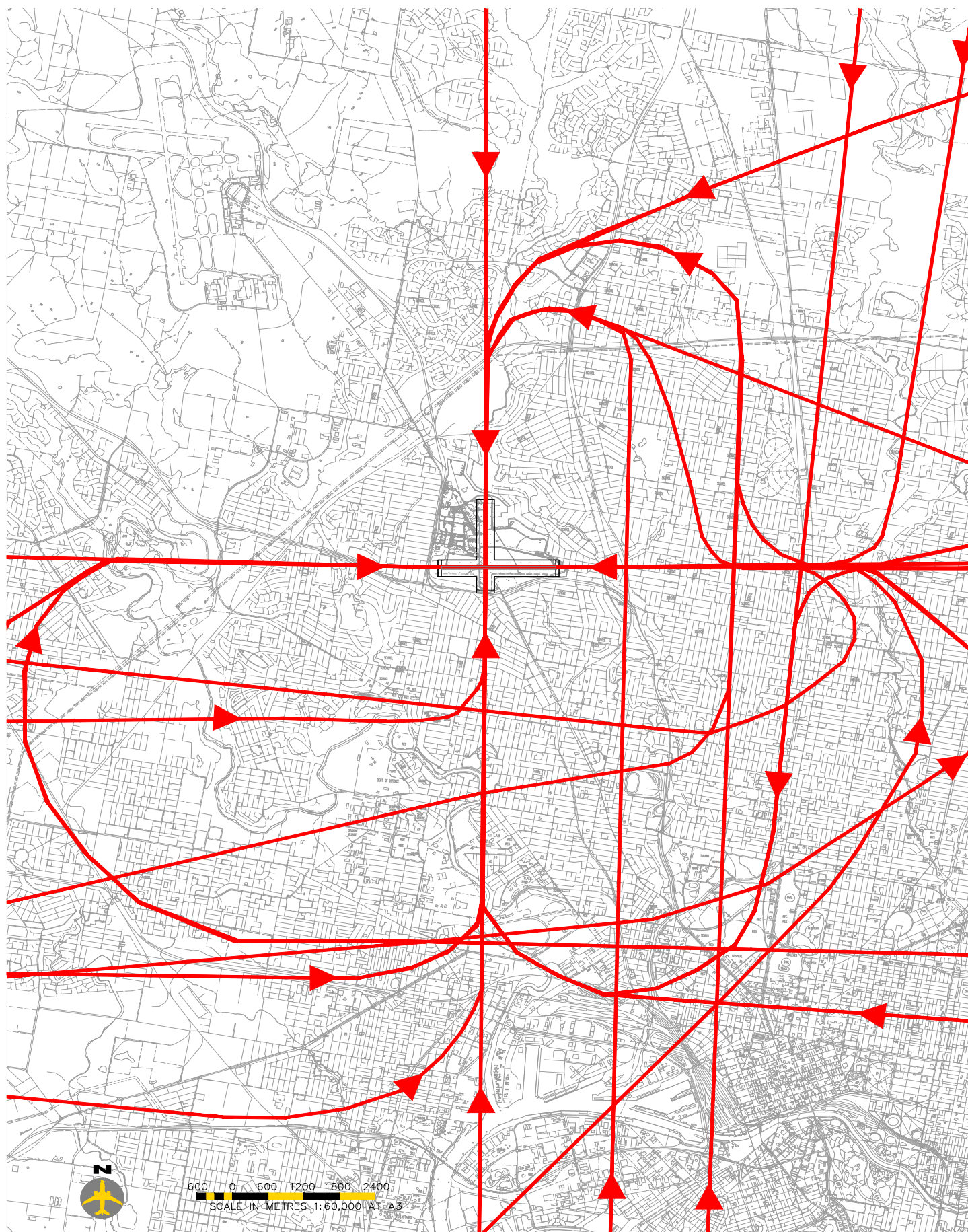
AUSTRALIAN NOISE EXPOSURE INDEX 2012 (ANEI 2012) AND AUSTRALIAN NOISE EXPOSURE FORECAST 2033 (ANEF 2033)

FIGURE 8.3



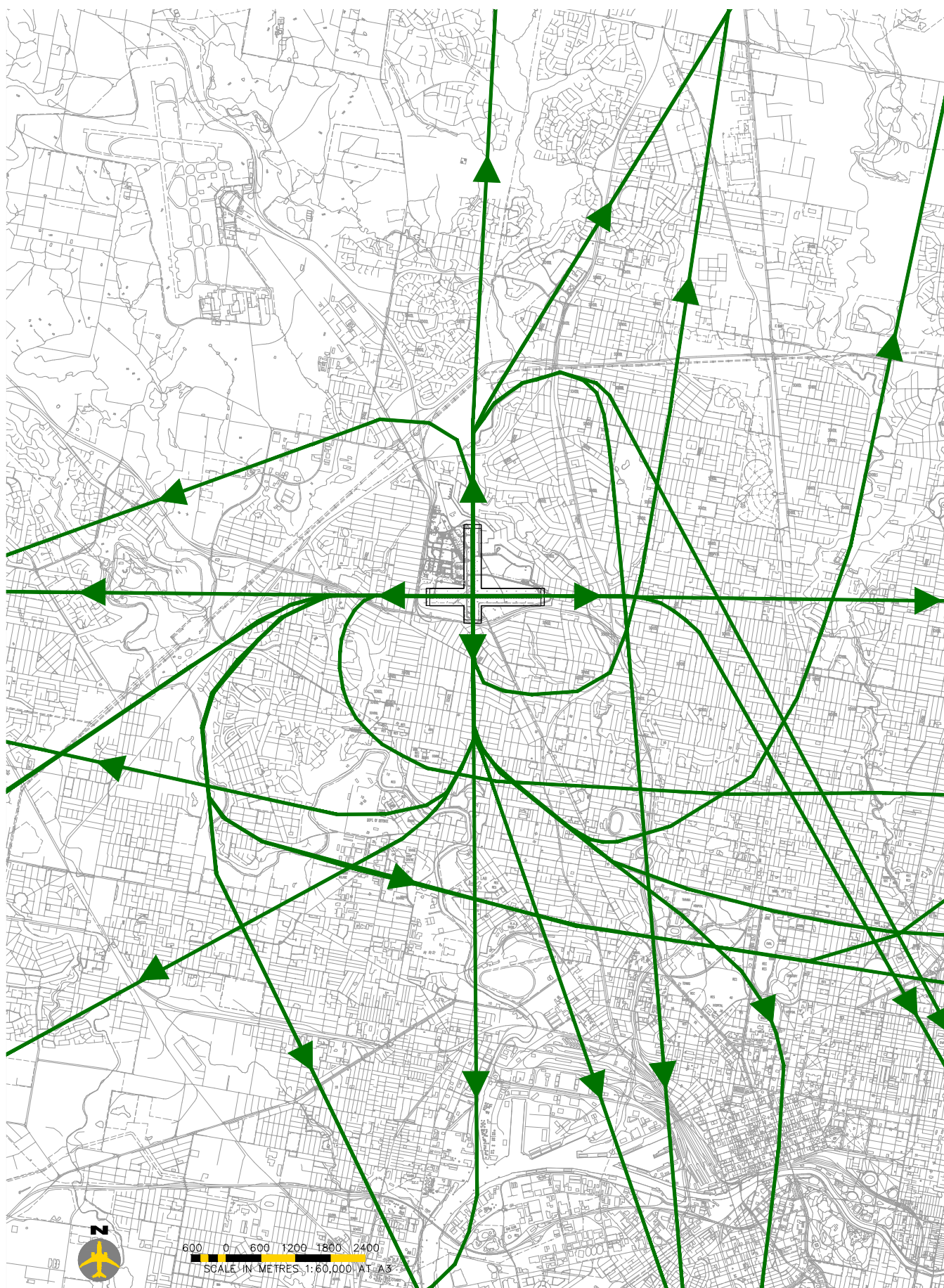
**RELATIONSHIP BETWEEN MELBOURNE AIRPORT ULTIMATE CAPACITY ANEF,
AND ESSENDON AIRPORT 2033 ANEF FORECAST**

FIGURE 8.4



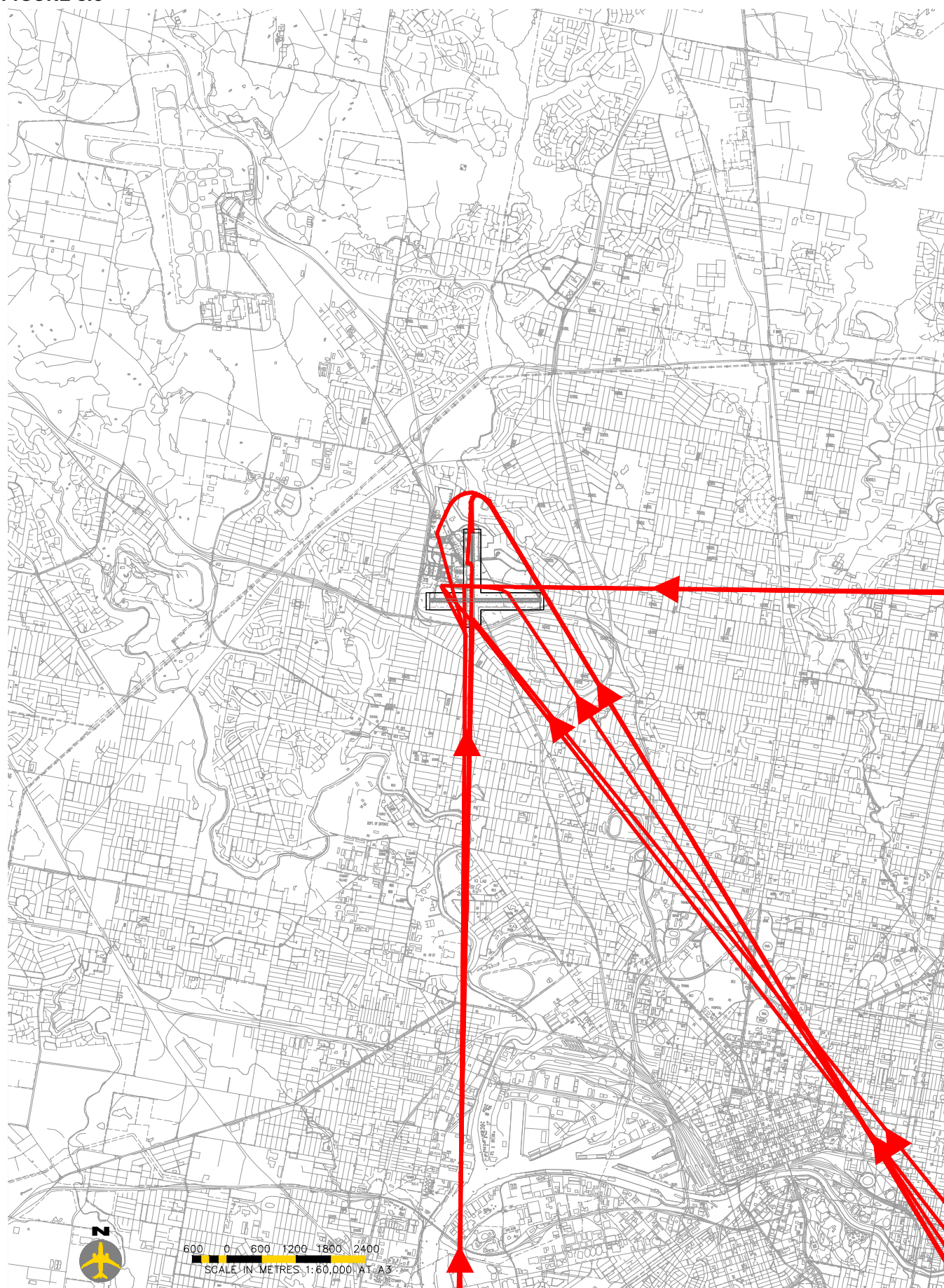
ARRIVAL FLIGHT PATHS FOR FIXED WING AIRCRAFT

FIGURE 8.5



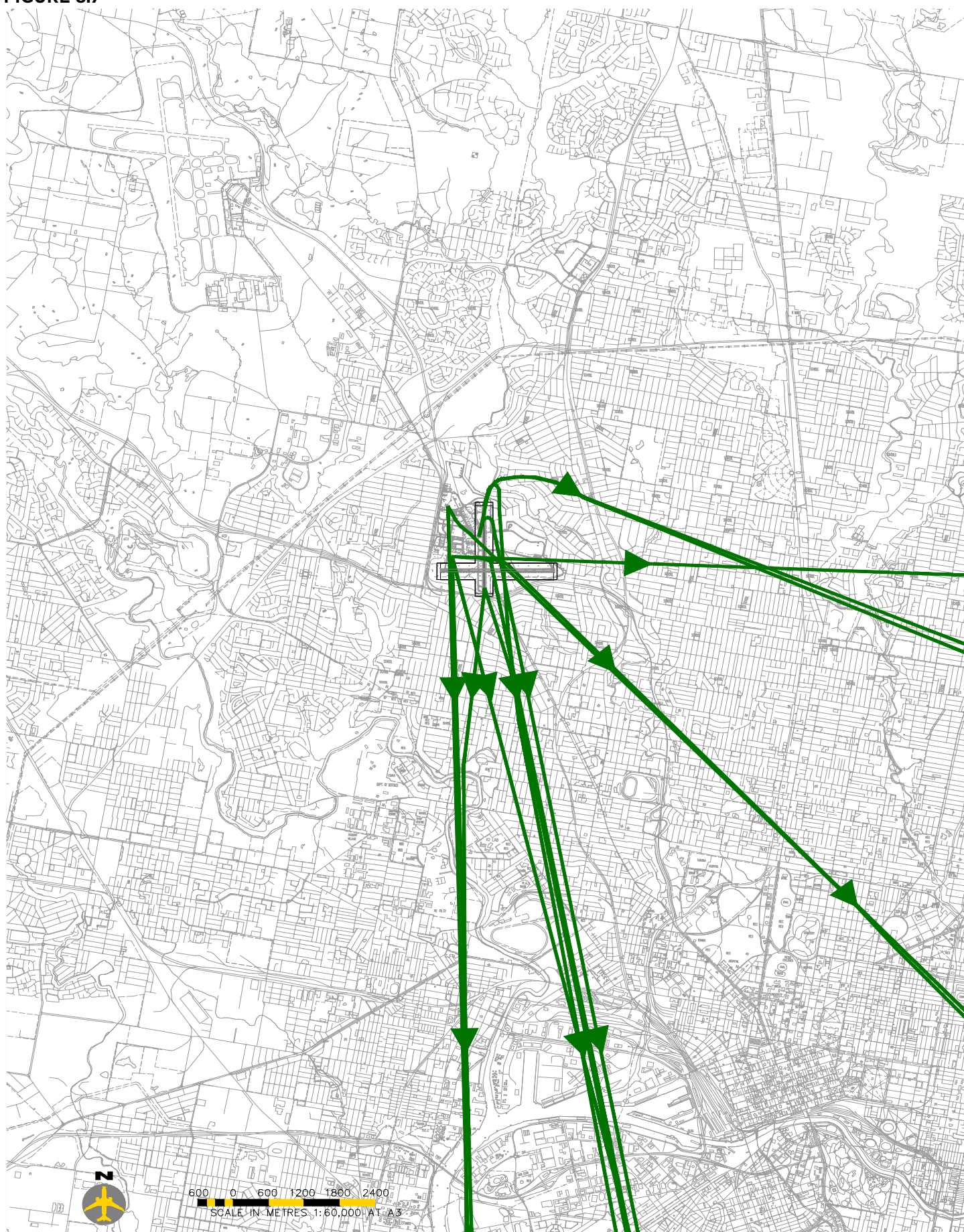
DEPARTURE FLIGHT PATHS FOR FIXED WING AIRCRAFT

FIGURE 8.6



ARRIVAL FLIGHT PATHS FOR HELICOPTERS

FIGURE 8.7



DEPARTURE FLIGHT PATHS FOR HELICOPTERS

8.8 N70 NOISE CONTOURS

The National Airports Safeguarding Advisory Group, through AS 2021, recommend utilising frequency based measures to supplement the ANEF. Frequency based measures offer an alternative and complementary tool for assessing aircraft noise, therefore, although not a statutory requirement, an N70 contour chart has also been prepared for this Master Plan. The N70 measure is the most commonly used frequency based noise

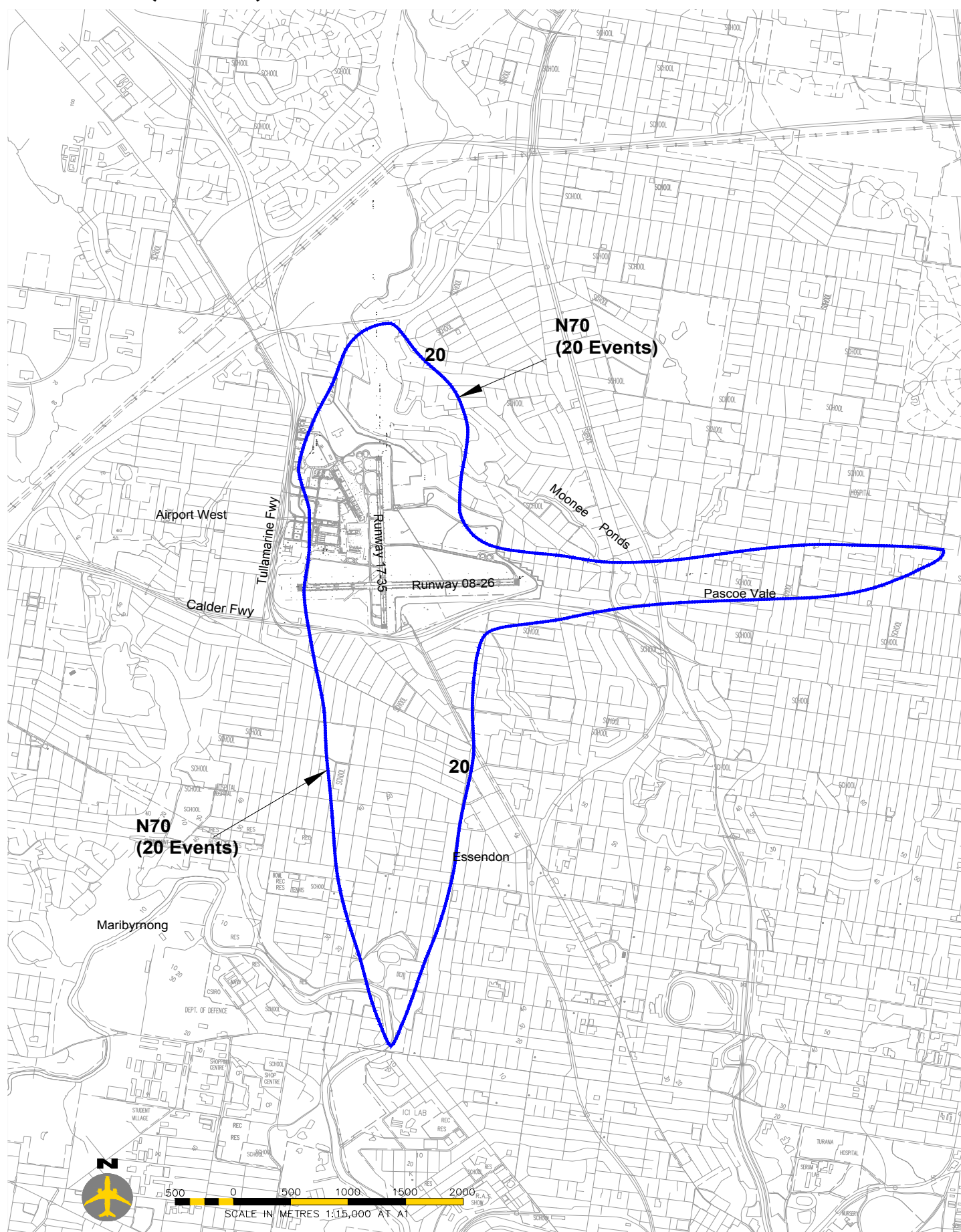
measure which represents a 70 decibel outside noise, which will be measured at 60 decibels inside a house with windows open. 60 decibels is the sound level that will disturb a normal conversation or activities such as watching television.

The N70 (20 event) contour represents the area where noise events of 70 decibels will be experienced 20 times per day. The N70 (20 event) contour plan for Essendon Airport can be found in figure 8.8.



Alliance Airlines – providing FIFO services out of Essendon Airport

FIGURE 8.8 N70 (20 EVENTS) NOISE CONTOUR



N70 (20 EVENTS) NOISE CONTOUR

8.9 AIRSPACE MANAGEMENT

OBSTACLE LIMITATION SURFACES

The protection of airspace in the vicinity of an airport is provided by the definition of a set of Obstacle Limitation Surfaces (OLS) that identify the lower limits of the airspace above which objects may become obstacles to aircraft operations.

OBSTACLE RESTRICTION AREA

Any object that stands on or above the specified OLS is deemed to be an obstacle and must be removed or marked and lit in accordance with the Airports (Protection of Airspace) Regulations 1996.

The Obstacle Restriction Area of Essendon Airport comprises the following and is shown in Attachment 4:

- Runway strip(s);
- Clearways; and
- Taxiway strips.

Prescribed airspace for an airport is the airspace above any part of either an OLS or PANS-OPS surface for the airport.

PANS-OPS

PANS-OPS is an acronym for Procedures for Air Navigation Systems Operations which are rules for designing instrument approach and departure procedures. A PANS-OPS surface for an airport is a surface ascertained in accordance with the procedures in document number 8168 OPS- 611 procedures for Air Navigation Services, Aircraft Operations, published by the International Civil Aviation Organisation on 11 November 1993.

No change to the OLS or PANS-OPS surfaces for the airport is likely to result if development proceeds in accordance with the Master Plan.

CONTROLLED ACTIVITY

Essendon Airport is a region of prescribed airspace which is protected by Part 12 of the *Airports Act 1996*. Under the Airports (Protecting Airspace) Regulations 1996 (Cth) any intrusion into prescribed airspace is considered to be a “controlled activity” which requires consent of the secretary.

“Controlled activities” include (but are not limited to) construction of a building or other structure that intrudes into the prescribed airspace and any other activity that causes an item attached to, or in physical contact with the ground (such as cranes or scaffolding) to intrude into the prescribed airspace. Controlled activities also includes for possible intrusions of airspace which may interfere with a pilot’s visibility from an aircraft, including light distractions and emission of smoke and dust etc.

Given the proximity of Essendon Airport to ongoing development activities it is important that the Master Plan contain information to assist the community to understand the potential impact of development on Airspace.

The prescribed airspace charts are set out in Attachment 4.

PROTECTION OF AIRSPACE ON RUNWAY ENDS

EAPL has consulted extensively with the Moonee Valley City Council as part of a proposed design and development overlay for land surrounding Essendon Airport in conjunction with anticipated amendments to the Moonee Valley Planning Scheme to ensure better protection of airspace around Essendon Airport.

This scheme is in final stages of the planning process and will be an important planning tool for home owners, builders and developers, and will ensure that the airspace around Essendon Airport is protected.



The unique jet crossing located at Essendon Airport



Aircraft at Essendon Airport

9. AIRPORT DEVELOPMENT PROPOSALS

This Master Plan sets out the “intentions for land use and related developments of the airport site, where the uses and developments embrace airside, landside, surface access and land planning / zoning aspects” and the “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.”

By necessity, the Master Plan is flexible in order to cater for a range of developments which may occur over the next 20 years.

As required by the *Airports Act 1996*, this Master Plan will be reviewed in five years’ time. The Master Plan has been prepared by reviewing existing conditions and operations at the airport.

The proposed layout of the airport recognises current and projected airport activities and operations, the likely need for buildings and the most suitable location for aviation and non-aviation activities in order to achieve the intentions for developments.

Whilst the Master Plan puts in place a framework for the future of the airport, the ability to achieve this will be influenced by external factors such as the aviation industry, the community and commercial markets. Therefore, the timing and specific nature of developments at the airport will remain fluid and will be continually monitored and re-assessed.

The intentions for developments within each precinct are summarised below.

9.1 AVIATION DEVELOPMENTS

AIRFIELD PRECINCT

Runways and Taxiways

No new runways are proposed for Essendon Airport. The existing runways and taxiways are satisfactory to handle the forecast numbers and types of traffic throughout the 20-year planning horizon.

The re-alignment of the Tullamarine Freeway resulted in a shortening of the 17/35 Runway in 2005.

The existing runway lengths are now:

- Runway 08/26 1,921m; and
- Runway 17/35 shortened from 1,585m to 1,504m.

RUNWAY SHORTENING

During the course of the Master Plan, EAPL may undertake a trial shortening of the North-South runway. A trial shortening of this runway has previously been proposed and could provide positive outcomes for meeting the needs of users of the airport by improving internal circulation of traffic within the airport site, particularly the Bulla Precinct.

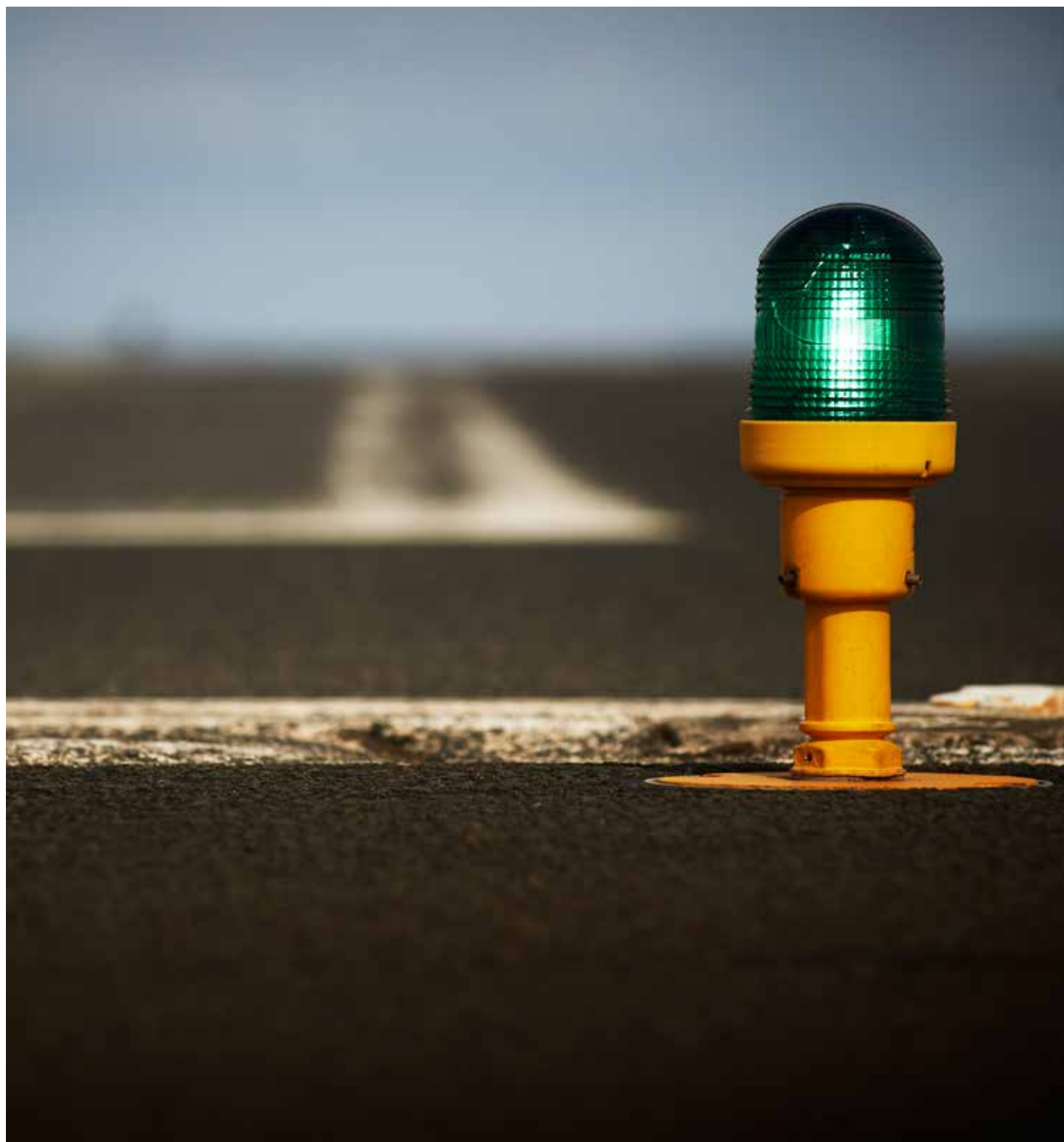
Any trial shortening will be preceded by an investigation into the impact the shortening of the runway will have on aviation operations, noise, safety and vehicular circulation around the airport as well as aviation maintenance expenditure on excess aviation infrastructure of the airport.

The investigation will also need to consider the impact of Melbourne Airport’s proposed third runway on flight paths and aviation operations at Essendon.

EAPL awaits further details to be provided by Melbourne Airport during the major development plan process for the third runway.

During the investigation, EAPL would carry out adequate consultation on appropriate safety, flight paths and noise studies and determine the impact on the aviation industry, and the local community.

If the investigation supports altering a runway in any way that significantly changes flight paths or the patterns or levels of aircraft noise, this would be deemed a “major airport development” pursuant to section 89(1)(ba) of the *Airports Act 1996* and a Major Development Plan would be required.



Northern end of the north-south runway operating at Essendon Airport

Aprons

EAPL has available land in the airfield zone should additional apron space be required. It is likely that any extension of the apron space would only occur due to the replacement or relocation of existing aviation services to a more centralised location of either the southern apron or Hart Precinct.

As the aviation industry is a changing environment, the need for specific apron works will be determined by the extent of new hangar demand and development. In the most recent Master Plan period, new hangars and apron works were developed for the Emergency Air Services for the Victorian Police and Air Ambulance. On top of this, several hangars were extended and refurbished to cater for the expanding corporate aviation market.

9.2 AVIATION PRECINCT

TERMINAL BUILDING

The existing terminal building is sufficiently spacious to cater for aviation activity for the planning period. Current terminal use for aviation purposes includes FIFO charters, low volume regional RPT, pilot training offices and pilot and passenger facilities.

As detailed in the Heritage Section of the Airport Environment Strategy, EAPL intends to upgrade the Terminal Building. EAPL has recently completed a minor upgrade to passenger facilities including check in counters, baggage equipment and heritage images in the terminal. Any development and restoration work carried out on the terminal will give appropriate regard to the heritage report which has been undertaken. Into the future, EAPL envisages further use of this terminal will be by a mix of both aviation and general commercial tenants.



Airside view of the terminal building



Air Ambulance Victoria facility

EMERGENCY SERVICES

Completed in 2009, the Victorian Police Air Wing and Air Ambulance Centre were constructed in the Aviation Precinct adjoining the Wirraway North Precinct. The works provided a hangar for the Victorian Police and Air Ambulance Victoria, a new apron and ancillary

support areas including offices, mess areas and maintenance facilities. The facility has become one of Australia's most prestigious aviation based emergency services centres, and provides an important service for all Victorians. Detail of the works carried out by the Police and Air Ambulance can be found in Chapter 4.



Victorian Police Airwing



Police Airwing and Air Ambulance hangar facility



Corporate hangars

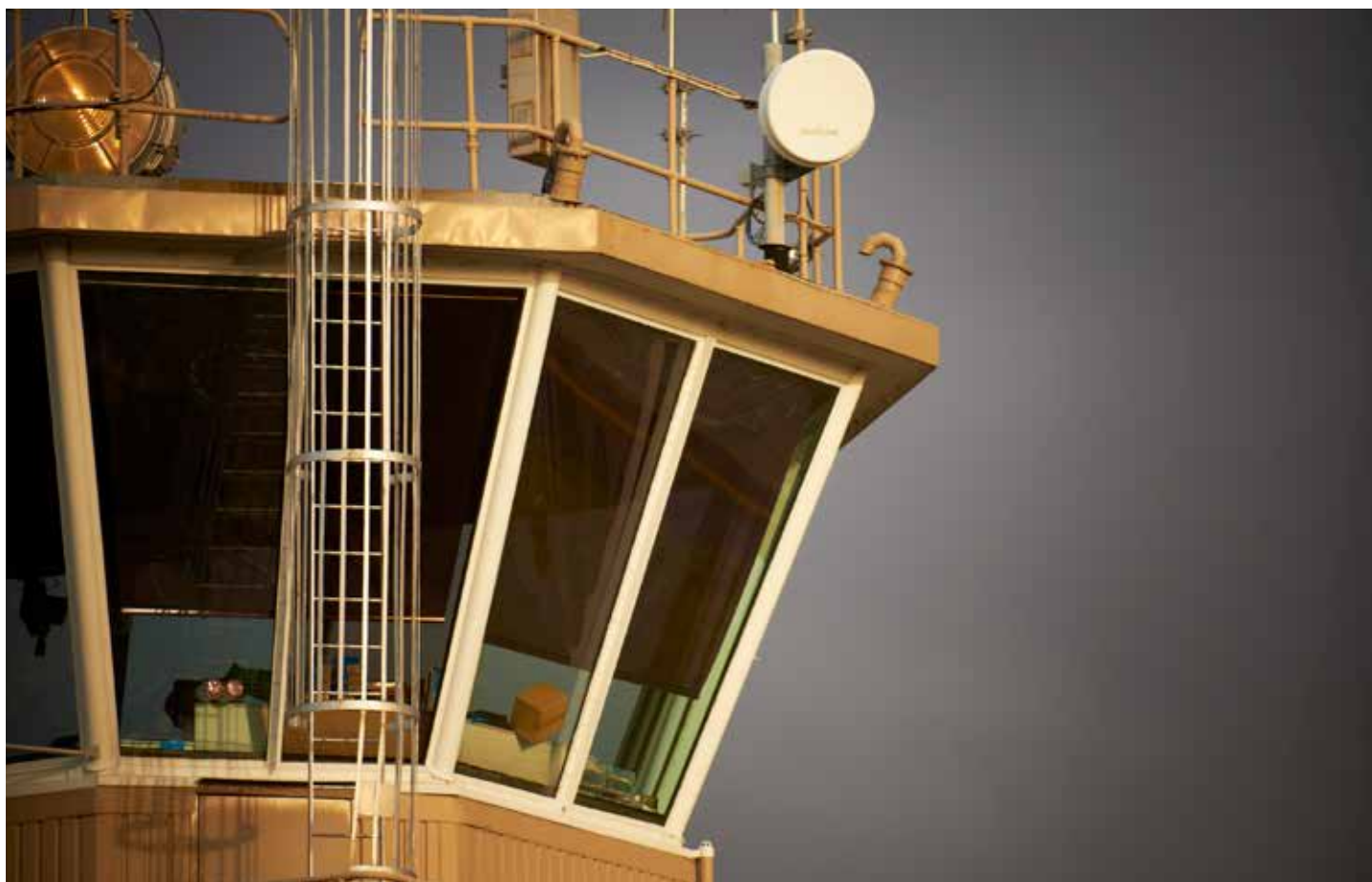
NEW HANGARS

Pending demand especially from jet operators, it is possible that up to five new hangars, capable of accommodating aircraft up to 45,000 kilograms MTOW, could be constructed over the Master Plan period within the Aviation Precinct. Construction of further smaller hangars could also occur if demand requires.

The majority of these new hangars would likely be

developed around the Southern Apron or in the Hart Precinct adjacent to the north south runway (subject to appropriate vehicular access to the Hart Precinct being established) and will depend on the strength of the corporate aviation market.

Hangar development in the Hart Precinct would also require further infrastructure including taxi way and apron construction within the airfield.



Existing Essendon Airport Air Traffic Control Tower

NEW CONTROL TOWER

In recent years, Airservices Australia has contemplated the establishment of a new Air Traffic Control Tower at Essendon Airport. EAPL understands that the existing tower was established in 1956 and EAPL believes that the establishment of a new tower is desirable and should not be delayed any further. Airservices Australia are currently investigating a number of alternatives to relocating the tower (including the Hart Precinct) and the final location of the new control tower will be agreed by EAPL and Airservices.

EAPL's preference is for the tower location to be determined as soon as possible in order to provide greater certainty in planning for both aeronautical and non aeronautical development.

9.3 AVIATION FACILITIES PLAN

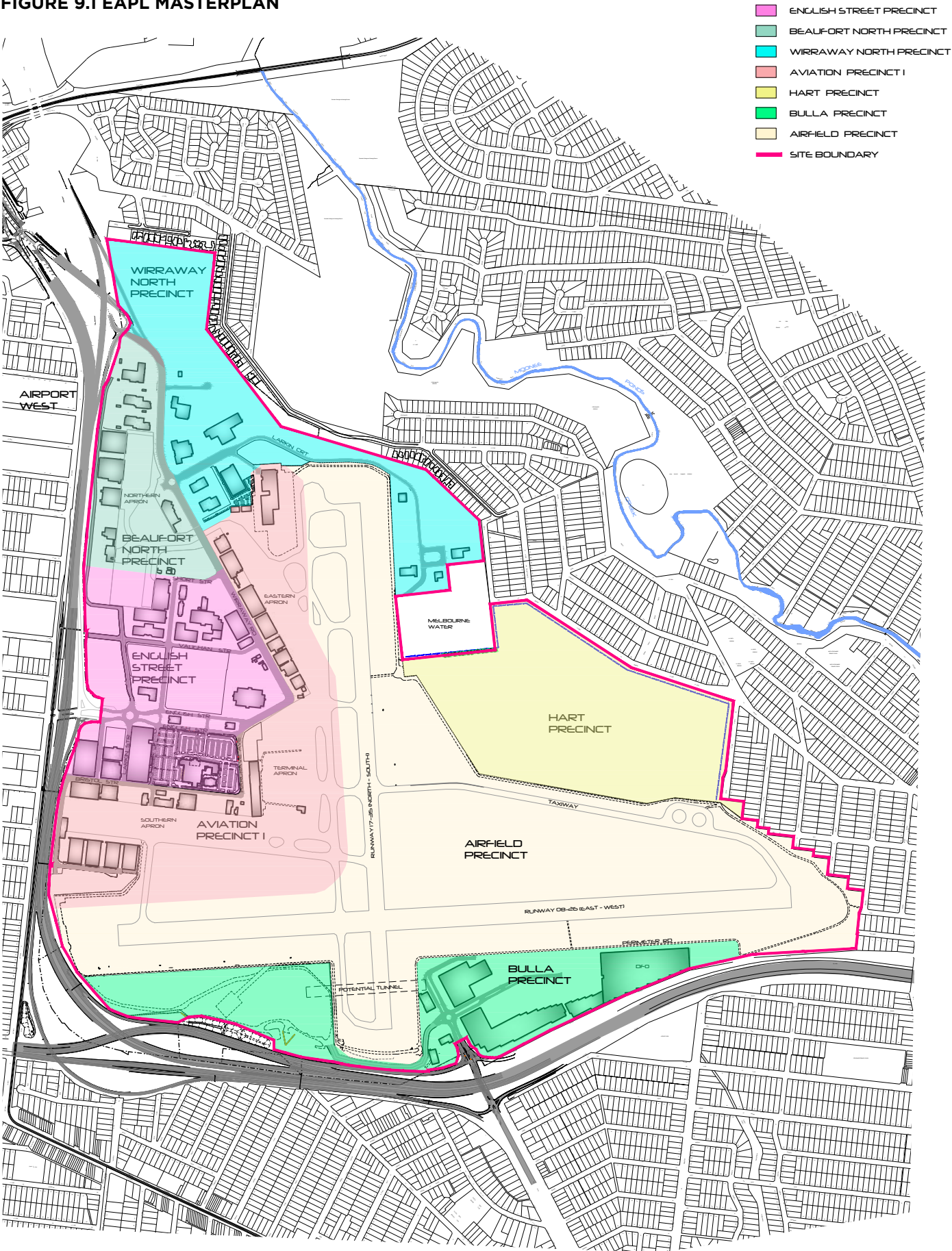
In summary, the key features of the Aviation Plan are:

- The operation of a 2 runway system;
- The servicing of emerging aviation opportunities, especially those in the Charter Jet sector;
- Refurbishment of the existing passenger terminal for both aviation and non aviation activities;
- The potential further development of aircraft hangars;
- The expansion of FIFO operations at the Airport; and
- Investigation into the shortening of the North-South runway.

In the long term, EAPL does not see a significant increase in aviation services provided at the airport.

EAPL will continue to investigate construction of new hangars to meet demand if required, as well as upgrading the road network providing access to these aviation facilities.

FIGURE 9.1 EAPL MASTERPLAN



9.4 NON-AVIATION DEVELOPMENTS

Essendon Airport is well located with linkages to the surrounding road network, its proximity to Melbourne Airport and CBD. Frontage to the Tullamarine Freeway, with high levels of exposure and views, makes it an attractive location for many businesses. Over one million people are located within a 15 minute drive of Essendon Airport and 2.6 million people live within 30 minutes of the airport. The Master Plan will assist in planning the optimum development outcomes for the airport.

Essendon Airport has approximately 78 hectares of non aviation land available for development. The development of this land is important to strengthen the economic viability of the airport. EAPL has improved the overall amenity, access and appearance of the site. English Street and Wirraway Road have been extensively upgraded with planting and landscaping to create a boulevard-type feel to the airport. In time, the appearance of the airport will further be improved and buildings upgraded as new tenants are secured.

The objectives of the non-aviation development are to:

- Create an activity centre situated between Melbourne Airport and Melbourne CBD;
- Create a master planned business community which facilitates high quality developments;
- Complement the aviation activities; and
- Encourage local employment for the north and west of Melbourne.

As required under Section 71(2)(c) of the *Airports Act 1996*, the following summarises the current intentions for land use and related developments for each precinct at the Airport.

FIRST 5 YEARS PROPOSED DEVELOPMENTS

In relation to the first 5 years of the master plan, Section 71(2)(gb) of the *Airports Act 1996* requires “detailed information on the proposed developments that are to be used for:

1. Commercial, community, office or retail purposes; or
2. For any other purpose that is not related to airport services.”

Section 71(2)(gc) of the *Airports Act 1996* provides that the Master Plan must also specify “the likely effect of the proposed developments in the Master Plan on;

- Employment levels at the airport; and
- The local and regional economy and community, including an analysis of how the developments fit within the planning scheme in the area that is adjacent to the airport.”

The extent of proposed development over the next five years will depend on demand, and that is currently difficult to gauge due to the global economic conditions.

New developments are driven by tenant demand. Until such time as potential tenants indicate willingness to commit to commercially viable terms for development it is not possible to predict the location or size of any future developments.

Detailed information on the proposed developments

The proposed developments represent neither a maximum nor a minimum of development activity over the next 5 years. EAPL expects to continue commercial development at a rate similar to that of the last ten years, retail will occur at a slower rate as it will be difficult to replicate a development the size of the DFO and Home Maker Hub, while developments outside of these areas will occur as opportunities arise.

EAPL intends to make the most of development opportunities that present themselves.

Estimates of the overall scale of development for the purposes of the Master Plan.

EAPL have made assumptions in determining the likely overall scale of development based on our knowledge of the market today. The conditions and opportunities will undoubtedly change over time. EAPL have included an estimate of the likely scale of development over the next 5 years to enhance the consultation process and to help inform other aspects of the Master Plan such as the ground transport plan and the community and economic benefits.

Effect on employment levels and the local and regional economy and community

The *Essendon Fields Economic and Employment Contribution Assessment* prepared by Street Ryan & Associates Pty Ltd confirms the significant economic benefits to the local community and Victoria as a whole. Construction expenditure within the five year Master Plan period is estimated to exceed \$95 million with over 655 jobs being created during the construction phase. However, the enduring impacts are estimated to be much greater.

Already the Municipal Area of Moonee Valley has had a net-direct economic benefit of \$484.6 million per annum derived from developments at the airport since 2001. This is expected to increase by \$187.1 million per annum upon completion of the estimated scale of

development for MVCC and \$29.1 million for Victoria.

The airport site contains approximately 174 businesses providing over 4,200 jobs (this represents 12% of jobs within the City of Moonee Valley) with an additional 908 direct jobs expected to be created on the airport over the next five years. A further 83 indirect jobs are expected to be created within the City of Moonee Valley and 954 indirect jobs within Victoria. Essendon Airport, in assessing its long term development capacity, determined the long term employment capacity to be approximately 18,000 jobs.

We have further considered the proposed developments fit with the local planning scheme. Details are provided within Chapter 11 and also the Land Use Plan attached to the Master Plan.



Aerial showing the real potential for development at Essendon Airport

9.5 CENTRAL – ENGLISH STREET PRECINCT

English Street is the main entry to Essendon Airport and appropriate development in the English Street Precinct is important to the airport's aviation and non aviation long term success. Future developments in this Precinct will also provide an important visual statement about the airport more generally.

In 2010 English Street was reconstructed to aid traffic flow into and out of the Airport as well as providing a more visually attractive entry for visitors. The extensive landscaping which was undertaken offers an eye-catching gateway to Essendon Airport.

In 2008 the Beaufort Building, located on Hammond and Bristol Street, was converted into 7,500m² of office space while preserving the heritage value of the building, both externally and internally. The fit out to one of these tenancies received the 'Property Council of Australia National Award for Tenancy Design and Interior Fit out'.

The refurbishment of Building 89 for the LaManna Direct Supermarket in 2009 highlights the value that EAPL has been able to create from refurbishment of older buildings at the Airport. The facade of this old but not heritage listed building was restored and this 9,000m² building was converted into one of the largest independent supermarkets in Australia.

The English Street Precinct has also seen the development of the Linfox Head Offices in 2008 and the completion of a 6,000m² office building and multi level car park on Vaughan Street in 2013, all of which

have been designed to Green Star ratings. The English Street Precinct has gained recognition as a desirable business district location in Melbourne's North market place. This central precinct now contains in excess of 100,000m² of leased building area.

It is envisaged that over the next 20 years this precinct will be further developed with high value commercial developments. Development will include office, hotel, retail, car parking and entertainment.

The English Street Precinct has high visibility and direct access to the Tullamarine Freeway.

The following developments, aimed to complement the existing use of commercial and retail tenants, have been proposed to occur over the next five years;

- 10,000m² of new commercial floor space and associated car parking;
- 140 - 180 room hotel with associated conference and Food and Beverage facilities to meet the existing and future demand from users of the airport and the region;
- Refurbishment of Building 4 into 2,000m² of office space and of Hangar 4 to new use which may not be aviation related;
- Refurbishment of the Terminal to include 1,500m² of office space or retail;
- Establishment of a long-term car park for up to 150 cars catering to the mining workers using the airport for FIFO purposes.



LaManna Direct



The Beaufort Building – A successfully refurbished heritage building converted to office use



Linfox National Headquarters

9.6 NORTHERN – BEAUFORT NORTH AND WIRRAWAY NORTH PRECINCT

The Beaufort North and Wirraway precincts have high visibility to the Tullamarine Freeway and direct access to the freeway from Wirraway Road. Similar to the themes of the English Street Precinct, it is envisaged that the Beaufort North and Wirraway North Precincts will continue to be developed as a high quality commercial area incorporating a mix of differing uses within its large land holdings. EAPL aims to create an impressive setting with well-landscaped tree-lined streets, appropriate building setbacks and at-grade car parking.

The completed developments include a range of commercial activities including auto-dealership showrooms, some with freeway frontages, and two Australia Post facilities – a distribution centre and E-Letter complex, totaling in excess of 50,000m² of lettable area. Additionally, the dealerships are also supported by vehicle pre-delivery centres located in less visible locations.

The last few years has seen an increase in the number of vehicle retailers trading in the Beaufort North and Wirraway North Precincts. The number of dealerships currently stands at nine servicing twelve different brands (Chrysler, Dodge, Ford, Hyundai, Honda, Jeep, Kia, Mazda, Mitsubishi, Nissan, Toyota, Volkswagen) with plans in place to develop this area further with a

mix of similar commercial and retail activities of similar size and nature.

The airport proposes further development over the next 20 years of high value commercial facilities (industrial and office), further retail including car dealerships and, associated car storage, service centre, food and car parking to meet the needs of users. In the event of industrial use EAPL will consult with Victoria's Environment Protection Authority and other Victorian Government agencies to ensure any light industrial impacts are correctly addressed.

Proposed developments within the next five years for the Beaufort and Wirraway North Precinct (subject to tenant demand) are:

- A service station with convenience retail to support further development of the precinct;
- 25,000m² of store (such as the existing pre-delivery centres situated on Larkin Court, which support the car dealerships);
- 75,000m² of land area for new motor vehicle sales premises and retail (broadly similar to those now existing though perhaps with some smaller premises for lower volume brands) as part of an extension to Auto Centro. This may include between five and ten additional motor dealerships of various sizes and road infrastructure;
- A range of other uses compatible with the Land Use Plan for this Precinct.



Essendon Volkswagen at Auto Centro



Essendon Mitsubishi at Auto Centro



Essendon Nissan at Auto Centro

9.7 SOUTHERN - BULLA PRECINCT

The Bulla Precinct was developed during 2004-2007. During this time, the Precinct has met with considerable success and been tremendously well supported by the public. A DFO and a Homemaker Hub development have been established on the Precinct, accompanied by high quality larger retail operators as well as a Dan Murphy's liquor store within the 60,000m² of developed buildings.

EAPL is currently looking for further commercial development on the south-west quadrant of the Airport near the Bulla Precinct, as well as within the existing retail area. The south-west quadrant provides high-value, high-visibility land adjacent to the Tullamarine Freeway well suited for higher value commercial development in the long term such as retail, car parking, and office.

Traffic flow of the Bulla Road Interchange is nearing capacity due to heavy freeway flows. EAPL has been in consultation with key stakeholders to improve the flow of vehicles in this area. This work will provide significant improvement to the overall traffic flow around the interchange. These works will also provide capacity to further develop in and near the Bulla Precinct. EAPL will be able to provide more information once VicRoads have approved a plan and agree to make this information public. More information on ground transport is provided in chapter 10.

Proposed developments within the next five years (subject to tenant demand) are:

- Additional car parking to service the existing retail;
- Up to an additional 15,000m² of retail development.

9.8 EASTERN - HART PRECINCT

The Hart Precinct is approximately 36 hectares in total and is irregular in shape. The precinct is bounded at the north-east by Lebanon Street with a residential area directly adjacent. The north-west corner is adjacent to Melbourne Water storage tanks which service the region. The precinct is bounded to the west by runway and to the south by existing taxi ways.

The Hart Precinct was previously designated as Airfield Special Use in the 2008 Master Plan. The re-designation as Business 3 is considered appropriate to reflect the development potential of the Hart Precinct. It was

previously recognised for its future potential development opportunity. There is no requirement or plans to use the Hart Precinct as an airfield. The Precinct has been re-designated as Business 3 for both aviation and non-aviation purposes which is consistent with the designations for the rest of airport.

The purpose of the Hart Precinct land use policy is to "facilitate the development of the precinct for a range of commercial and light industrial activities compatible with the existing economic and employment opportunities of Essendon Fields."

It is a land use policy of EAPL to ensure that interface issues with residential areas of Strathmore Heights are considered as part of determining the suitability of proposed land uses.

The Hart Precinct is partly "land locked" by the East-West and the North-South Runways, and is currently only accessible through airside roads or private gates accessed from Strathmore.

There is currently limited usage of these gates. EAPL's intention is to provide access into the Hart Precinct from the Wirraway North Precinct. We envisage that this road could be completed within the next five years. EAPL's preference is to avoid the use of access from existing residential streets where possible.

Development is expected to be of lower value in comparison to the English Street precinct within the airport. Development of the Hart Precinct will depend on a number of items such as infrastructure, roads, provision of services, noise and impact on the neighbouring residents.

EAPL will encourage development towards the western end of the precinct first. Any aviation development will be located in areas closest to the runways.

Uses proposed in the Hart Precinct in the longer term include hangars, vehicle storage, and office/warehouse providing commercial and light industrial office facilities for both aviation and non aviation related uses.

EAPL have had discussions with Airservices Australia who have considered the Hart Precinct (adjacent to the north-south runway) as a potential area to relocate the Air Traffic Control Tower.

The location of new hangars (at either the Hart Precinct or the southern apron) will be subject to a number of

factors including access to the airfield, vehicular access, airfield infrastructure, and impact on the community.

There are only minor low value improvements on the Hart Precinct at present.

Development may be limited over the next five years subject to proposed access. Proposed developments within the next five years may include:

- 50,000m² of on grade and warehouse storage (such as the existing pre-delivery vehicle storage centres on Larkin Court or hangars).

Any hangar development in the Hart precinct in the first five years of this master plan will be within 400 metres of the North South runway.

9.9 SENSITIVE DEVELOPMENTS

Section 71(A) of the *Airports Act 1996* provides that;

“A draft or final master plan must identify any proposed sensitive development in the plan.

A sensitive development is the development of, or a redevelopment that increases the capacity of any of, the following:

- c) a residential dwelling;*
- d) a community care facility;*
- e) a pre-school;*
- f) a primary, secondary, tertiary or other educational institution;*
- g) a hospital.”*

Pursuant to Section 89A(1) of the *Airports Act 1996*:

A person must not:

- (a) carry out a sensitive development relating to an airport; or*
- (b) cause or permit to be carried out a sensitive development relating to an airport;*

unless the Minister gives an approval under this section for the preparation of a draft major development plan for the sensitive development at the airport.

The proposed sensitive developments in this Master Plan are:

1. Vacant parcels of airport land.

The airport lease includes 23 vacant parcels of airport land which are owned by the Commonwealth and located within residential areas. In past decades these blocks have accommodated approach lighting, but are now fully vacant, not used and represent an onerous maintenance and management responsibility. A plan of the land can be found at Attachment 3.

EAPL considers that these parcels of land could be converted to residential dwellings (a sensitive development) or other use under arrangements which are consistent with the existing character of the neighbourhood and consistent with the City of Moonee Valley Planning Scheme. At an appropriate time, EAPL would undertake appropriate consultation and apply for necessary consent to undertake this activity.

2. Hospital

While no plans currently exist, EAPL believes that a hospital on the airport site would provide much needed facilities and services to users of the airport and the local region. The location and easy access of the airport, along with the on-site base of the Air Ambulance, means that the site is particularly suitable.

If the hospital were to allow for overnight stay patients, noise impacts, among other items relevant to sensitive developments, will be carefully addressed and presented for approval. A hospital could either be a brand new development or accommodated within one of the existing buildings on site.



10. GROUND TRANSPORT PLAN

EAPL has undertaken a Ground Transport Plan for the landside of the airport in relation to the first 5 years of the Master Plan that details the matters required by section 71(2)(ga) of the *Airports Act 1996*. This includes an impact study that proposed developments will have on the ground transport system over the next five years.

EAPL has regular formal meetings with Moonee Valley City Council (MVCC) on a range of matters including Ground Transport. EAPL are in regular consultation with key authorities such as VicRoads, City Link and Public Transport Victoria with regard to access into and out of the airport and will continue to monitor it as development continues. Further consultation with the State, MVCC, VicRoads and Public Transport Victoria will occur during the consultation phase of this Master Plan and during the life of this Master Plan.

Three Activity Areas are located adjacent to the airport, being:

- Airport West Principal Activities Area, approximately 2 km to the west;
- Niddrie / Keilor Park Major Activities Area, approximately 1 km to the south-west; and
- North Essendon Major Activities Area, approximately 3 km to the south.

To the north and east, the airport is mostly surrounded by residential areas which are also bound by the Moonee Ponds Creek. These residential areas are characterised by free standing homes and quiet local streets.

The entire southern and western sides of the site are bordered by 4.5km of the Tullamarine Freeway, which provides excellent access to the metropolitan road network through the freeway connections at Wirraway



English Street thoroughfare

Road, Matthews Avenue and Bulla Road. This excellent freeway connectivity, has been greatly enhanced by the 2006/2007 Tullamarine Calder Freeway Interchange upgrade, providing linkages with central Melbourne, the suburbs and areas of regional Victoria. However, the freeway also presents a significant barrier to access and movement through the site, due to the limited crossing points into the adjacent activity centre.

Notwithstanding this, there are two pedestrian overpass connections to the site from tram stops in Matthews Avenue in addition to the other three road connections, all of which include pedestrian facilities of varying standards.

10.1 ROAD NETWORK CONNECTIONS

A series of sealed roads service the landside and airside areas of the Airport. Many of these roads have been resurfaced and upgraded and new roads have been built, with extensive landscaping providing a boulevard feel, in particular English Street and Wirraway Road.

EAPL will continue to upgrade and create new roads as necessary for new and expanding land use requirements determined by development location and layout, however, currently the roads are operating at less than one-third of their theoretical daily capacity.

The connectivity that Essendon Airport has with the local and regional road network means that private car is the predominate mode of transport into the Airport.

AIRSIDE ROADS

The perimeter road circles the Aviation Precinct and is only accessible to those with an airside driver's licence. Future modifications to the perimeter road and other airside access roads will be undertaken in conjunction with development of landside areas when and if required.

LANDSIDE ROADS

Three thoroughfares currently provide access to the airport; English Street, Bulla Road and the Wirraway Road Northern access which opened in 2007.

English Street provides the main access point into the English Street Precinct, the central precinct of the airport. This wide divided carriageway was upgraded in 2010 providing a more traffic efficient and safer entry point into the airport. The road offers access to all areas of the Central Precinct as well as being the main entry point to the terminal. English Street is

complemented with extensive landscaping and links in with Wirraway Road to provide access to the Northern Precinct of the Airport.

Bulla Road, located in the Southern Precinct is the major road servicing the DFO and Homemaker Hub area and future access into the south-west quadrant. Access to the south-west quadrant will be achieved through an upgrade of the existing road which runs south of the runway. A tunnel underneath the north-south runway has been contemplated in previous Master Plans but is not considered likely.

The road network within the airport will continue to be upgraded as development continues and usage increases, with provisions made to service public transport.

SOUTHERN ACCESS (BULLA ROAD)

The extension of Bulla Road provides access to the Bulla Precinct and during the period 2003-2007 this intersection was substantially improved.

During peak times, the Bulla Road intersection experiences some congestion, however this is primarily the result of Bulla Road providing an alternate major traffic and bypass route for vehicles not wishing to use the City Link toll way to access the city and inner suburbs. EAPL is currently in discussions with VicRoads, Moonee Valley City Council and traffic engineers about upgrading this intersection as a result of the Tullamarine-Calder Freeway Interchange off-ramps reaching capacity. EAPL, along with our traffic engineers, have put forward several solutions, which are currently being reviewed for approval.

EAPL believes an upgrade to this area will significantly improve traffic flow to the entire Essendon North area as well as the flow of traffic at the Tullamarine-Calder Interchange.

CENTRAL ACCESS (ENGLISH STREET)

The English Street freeway interchange provides the dual function of distributing traffic to both the adjacent freeway and local road network of Airport West, via the Tullamarine Freeway and Matthews Avenue.

Due to the complexity of the English Street/Matthews Avenue/Tullamarine Freeway intersection (containing effectively five approach roads, freeway ramps and a tramline),

Capacity to Essendon Airport's main commercial area can at times be restricted. EAPL does not envisage the developments proposed over the next five years, outlined in the non-aviation section of chapter nine, will contribute any significant additional congestion associated with this intersection in the next planning period. However, as with all entry/exit points into the airport, EAPL will continue to monitor these areas and liaise with relevant authorities and stakeholders as development and usage of the Airport increases over the longer term.

NORTHERN ACCESS (WIRRAWAY ROAD)

The extension of Wirraway Road to the northern access intersection at the Tullamarine Freeway was completed in 2007 and created new and additional road capacity and enabled further development. As development continues in this Wirraway North Precinct, the road network in the precinct will be adjusted to suit future developments. This access point currently provides unfettered road access to the Beaufort North and Wirraway North Precincts and experiences very little congestion. The road has been fully sealed and landscaped and will be extended as development in this area continues with a mix of retail, office, commercial, showroom and light industrial uses.

The introduction of this interchange provides Essendon Airport with greater flexibility to manage traffic flow at the English Street entrance.

HART PRECINCT

Access to the Hart Precinct is available from the adjacent residential streets and there is potential for access to be achieved from within the Airport boundaries in the next five years, which is the preference of EAPL.

10.2 CAR PARKING

The airport provides approximately 5,500 car parking spaces over the three precincts, with the majority of these spaces located within the Bulla and English Street Precincts. On street car parking is provided on a number of roads throughout Essendon. Observations of the available car parking indicate that car parking demands do not typically exceed the supply in the English and Wirraway North Precincts.

It is however noted that whilst the car parking supply within the Bulla Precinct is generally adequate, an

occasional overflow of car parking has been observed to occur during peak periods such as the Boxing Day sales. During these times EAPL works closely with the Victorian Police and VicRoads to provide additional car parking facilities to cater for the increased demand.

The next five years will see further car parking spaces provided to each of the three precincts of the airport to support developments. Car parking will be a mix of on-grade and multi-deck car parking to suit future developments, as set out in the previous chapter, and tenant requirements.

10.3 PUBLIC TRANSPORT

There are a number of public transport services in the vicinity of Essendon Airport. However, with the exception of the Smart Bus to DFO during business hours, the overall quality of connections both to the existing public transport stops and to the wider public transport network is limited. This is identified as a key barrier to improving the public transport mode share of employees and visitors to the airport.

While there are a number of public transport services that run to, or close by the airport, these do not necessarily form convenient or direct connections to the wider metropolitan public transport system. Public transport accounts for less than 5% of existing transport into Essendon Airport. Significant upgrade of public transport within the Essendon Airport / Airport West / Strathmore area will assist further economic development of the region. At present, aside from an Orbital bus servicing DFO, Essendon Airport does not have any onsite public transport links. The Airport West (Route 59) tram route has two stops situated near the Western perimeter of the airport along Matthews Avenue. This route, operating at eight minute frequency during peak periods, provides direct access to the city and connection to the Essendon Railway Station as it travels along Keilor Road, Mount Alexander Road, Flemington Road and along Elizabeth Street before terminating at Flinders Street.

The Airport is serviced by two pedestrian freeway overpasses providing a linkage to the tram line running on Matthews Avenue. These links have in excess of twenty-five steps to each side and are a significant barrier to convenient and amenable public transport access. To improve patronage of public transport better

access to and more regular services are required to operate within and around the Airport boundaries.

Travel time also ensures that public transport is not the preferred method as it takes approximately 45 minutes to travel between the airport and the Melbourne CBD by public transport. This travel time is significantly increased due to the lack of public transport priority routes along Keilor Road and Mt Alexander Road.

The provision of a new bus route or potential diversion of existing bus routes servicing Matthews Avenue and/or Airport West shopping centre, through the English Street, Beaufort and Wirraway North Precincts would provide a significant improvement to public transport access to the major commercial uses and encourage development at the site. English Street and Wirraway Road have been designed for future use by bus services and currently house a number of bus stops that are not in use. EAPL believes that a diversion of any of these services through Essendon Airport will greatly encourage workers to travel to work by more sustainable methods, particularly with over 15% of workers living in the local area and having direct access to the local bus network.

Essendon Airport continues to investigate and lobby for future possible integration of the site with the broader public transport network. This will continue to be explored as the landside areas of the airport develop. In 2009 an Orbital Bus running between Essendon Train Station and DFO and Homemaker Hub Complex in the Bulla Precinct commenced operations. This service operates at 15 minute intervals during peak times, and 30 minute intervals thereafter, and provides workers and shoppers an alternative means other than driving to access the Airport.

EAPL considers that a train station at Essendon Airport would provide significant benefit to both the airport and Airport West Principal Activities area. Such a connection would clearly promote major land use change and urban renewal in the area and EAPL would like to see an Essendon Airport train station included with any possible future train line servicing Melbourne Airport.

10.4 TAXIS

The main airport terminal is serviced by a taxi rank, with taxi services used as a primary means of transport to meet private / corporate flights arriving

at the airport. The existing taxi facilities are considered adequate for the use required of them. Designated taxi spaces are also provided within the car park servicing the DFO and Homemaker Hub.

10.5 PEDESTRIANS AND CYCLING

Further to developing the road connections into the Airport, EAPL is looking to improve both pedestrian and bike access into and around the airport.

Pedestrian access to the site is limited to an extent by the surrounding road network, specifically the Tullamarine Freeway which borders Essendon Airport to the south and west, and the nature of the site operation as a working airport.

There are currently five pedestrian access points to the airport linking with the on-site walking network connecting the major land uses throughout the airport. Pedestrian access continues to be upgraded as developments occur.

There are currently no dedicated bicycle connections to the site; however, an opportunity exists to formalise connections to surrounding areas and the Principal Bicycle Network (PBN) as part of the ongoing development of the airport. The PBN currently adjoins the airport boundaries, however no bicycle connections into the airport exist. It is also noted that many of the internal roads have sufficient carriageway widths to incorporate bicycle lanes in future. Currently bicycle lanes exist along a portion of the main English Street thoroughfare and EAPL is looking at ways to further integrate car use, parking and bike traffic throughout the Airport. Located to the north-east of the site, with access available from Mascoma Street, is the Moonee Valley Creek bike path which links into the city as part of the metropolitan bike network. This link is currently only used by Australia Post employees however it does provide an alternative safe option for cyclists looking to get to Essendon Airport.

To help encourage alternative means of transport into the Airport (as well as increasing Green Star credentials), new developments generally include change room and bike storage facilities. EAPL considers it a priority to link the Airport to the public bicycle network.

MVCC is currently investigating potential improvements to walking and cycling links between Airport West Activities Area and the airport.

TABLE 10.1 – SUMMARY OF TRANSPORT OBJECTIVES

Item	Mode	Objective	Implementation
1	Active Transport	Increase transport choice for employees and visitors to the airport by improving existing walking and cycling links, and creating new links to the surrounding network:	<ul style="list-style-type: none"> Facilitate east-west movement through the site to connect with regional shared path network. Improve connectivity of the internal road network for pedestrians and cyclists. Ensure that new development provides adequate end of trip facilities, consistent with comparable off airport developments, such as showers, lockers and parking facilities.
2	Public Transport	To advocate for improved public transport services to Essendon Airport, to cater for both visitors and employees:	<ul style="list-style-type: none"> Advocate improved links to tram network. Advocate improving the existing bus service to the Bulla Precinct to better cater for employee usage. Advocate providing a new public transport service through the airport, to support the existing land uses in the English Street, Beaufort and Wirraway North Precincts. Advocate for inclusion of Essendon Airport in any future Melbourne Airport rail link alignment, and consideration of wider economic benefits to the area as part of the rail link business case.
3	Road Network	To provide capacity for future increases in land use at the airport:	<ul style="list-style-type: none"> Ensure that the internal road network continues to support the development of the airport. Continue to monitor the operation of the three external access intersections in consultation with the DTPLI, VicRoads, Council and PTV.
4	Car Parking	To provide capacity for future increases in land use at the airport:	<ul style="list-style-type: none"> Ensure that car parking is appropriately located to service the main land uses in the various precincts. To minimise vehicle circulation associated with finding car parks through centralised provision of parking and associated signage. Ensure that where possible complementary land uses are able to share car parking to minimise overall provision requirement.



English Street Entry – gateway to Essendon Airport

10.6 PROPOSED DEVELOPMENTS

With only a small increase in retail, office and light industrial floor space and aviation movements expected throughout the next five years it is not expected that this level of development will significantly alter the existing transport characteristics at the airport during the lifetime of the ground transport plan and initial 5 year phase of the Master Plan. EAPL continues to liaise with external authorities such as VicRoads, Public Transport Victoria and MVCC as to the short and long term monitoring of the road network surrounding and within Essendon Airport. In the short-term, EAPL will develop on road bicycle

lanes and shared paths within the Airport, improve pedestrian footpaths around the airport and update and improve the internal road network as required.

In the medium to longer term EAPL will work with authorities to provide better bicycle links to the public bike network, and advocate to provide more public transport service to the airport, and continue to monitor the access for all transport into and out of the site.

Future consideration of capacity constraints at external intersections should be undertaken with a holistic view of the relative demands from the airport as well as other surrounding land uses and transport routes.

11. AIRPORT LAND USE

The site's proximity to the CBD, major arterial roads, freeways, and national highways and its location within an established urban environment marks the airport's uniqueness. The area of developable land at Essendon Airport equates to approximately half the area of the Melbourne CBD and two-thirds of the land area at Docklands.

The airport is important as an aerodrome and as an activity centre. The contribution it can make to the west and north areas of metropolitan Melbourne by complementing existing activity areas should be recognised and promoted.

The *Airports Act 1996* requires the Master Plan to have regard to the planning legislation/framework of the State of Victoria. Section 5.02(2) of the Airport Regulations 1997 states:

"...an airport master plan must in relation to the landside part of the airport, where possible, describe proposals for land use and related planning, zoning or development in an amount of detail equivalent to that required by, and using terminology, (including definitions) consistent with that applying in, land use planning, zoning and development legislation in force in the State or Territory in which the Airport is located."

In this regard the Land Use Plan has been prepared to support the Master Plan and has been prepared in an amount of detail and in a form generally consistent with the Victoria Planning Provisions.

The Moonee Valley Planning Scheme does not allocate a zoning to Essendon Airport; it simply describes Essendon Airport as "Commonwealth Land Not Controlled by Planning Scheme". It is therefore difficult to address the extent (if any) of consistency with planning schemes in force under a law of the

State or Territory in which the airport is located, because the planning scheme acknowledges that it does not apply to Essendon Airport. However as required by section 71(2)(gc)(ii) of the *Airports Act 1996* EAPL have undertaken *"an analysis of how the proposed developments fit within the planning schemes for commercial and retail development in the area that is adjacent to the airport."* The Moonee Valley Planning Scheme Strategic Statement, clause 21.02-3 remains inconsistent with this Master Plan in that it states that "the future of Essendon Airport is also uncertain" but is consistent to the extent that it contemplates development for non aviation uses on the western side of the airport. Some of the uses contemplated are largely consistent with the Master Plan including high quality industrial parks, hotels with convention facilities and others are less immediate including a diversity of housing types and sizes.

11.1 BACKGROUND TO THE LAND USE PLAN

The Land Use Plan has been prepared having regard to:

- The requirements of the *Airports Act 1996* and associated regulations;
- The projected aviation requirements of the airport;
- The development objectives and proposals for landside areas of the airport;
- The Victoria Planning Provisions; and
- The surrounding Planning Schemes for the Cities of Hume, Moonee Valley, Brimbank and Moreland.

The existing State Planning Policy for airfields contains the following objective:

“To facilitate the siting of airfields and extensions to airfields, restrict incompatible land use and development in the vicinity of airfields, and recognise and strengthen the role of airfields as focal points within the State’s economic and transport infrastructure.”

The Federal Government has chosen to regulate land use planning at Essendon Airport through the *Airports Act 1996* and both the Master Plan and Major Development Plan process. State Planning Policies do not apply to Essendon Airport, and therefore have not been incorporated in the Land Use Plan.

Certain topics covered by the State Planning Policies that are of relevance to Essendon Airport have been addressed in the Essendon Airport Planning Policy Framework.

EAPL will have regard to State Planning Policies as they affect land use in adjoining cities and the wider State of Victoria in a similar manner to the regard given to the local planning policies of neighbouring cities.

Melbourne 2030 – Planning for Sustainable Growth, was released in October 2002 as a 30 year plan to manage growth and change across Metropolitan Melbourne. Melbourne 2030 forms part of the State Planning Policy framework and is referenced within all planning schemes in Victoria. This document contains many worthy initiatives but there is a fundamental inconsistency between the statement in Melbourne 2030 that *“in the medium term, this facility (Essendon Airport) should be closed as an airport”* and this Master Plan. The development of Essendon Airport as an activity centre with a variety of commercial uses in accordance with this Master Plan is, however, broadly consistent in the long term with the statement in Melbourne 2030 that *“the creation of a mixed-use activity centre might be supported”*. EAPL believes that the Master Plan is consistent with the objects of the *Airports Act 1996*, in particular Section 3(c) to promote the efficient and economic development and operation of airports.

In October 2013 the Victorian State Government released the Metropolitan Planning Strategy (Plan Melbourne) for public comment. The strategy outlines the vision for Melbourne’s growth to the year 2050 and is to be the new blueprint for the city’s future prosperity.

The strategy outlines an implementation plan that includes:

- An integrated approach to land use and transport;
- Economic needs and productivity that is central to the strategy, such as access to employment zones, maximizing use of existing infrastructure and how commercial and residential uses need to work together; and
- The creation of new subregions to coordinate the delivery of this plan.

As the Essendon Airport site is Commonwealth land, State Planning legislation, in particular, the Victorian Planning and Environment Act 1987 does not apply. However, EAPL is currently seeking greater recognition of Essendon Airport in Plan Melbourne, for its role as a transport hub and employment zone with significant benefits for Victoria.

11.2 PRE-EXISTING INTERESTS IN LAND

In developing this Master Plan, EAPL has considered all interests in the land existing at the time the airport lease was created, including leases, sub-leases, licences and easements. There are no conflicts or inconsistencies existing between these interests and any proposals in the Master Plan.

11.3 LAND USE PLAN STRUCTURE

As required under the Airport Regulations 1997, Part 5, Reg. 5.02(2), the Land Use Plan has been prepared to generally reflect the Victoria Planning Provisions, but is tailored to the particulars of an airport and Commonwealth land.

The Land Use Plan contains:

- Purpose;
- Contents;
- User Guide;
- The Essendon Airport Local Planning Policy Framework including:
 - The Essendon Airport Strategic Statement; and
 - Essendon Airport Local Planning Policies;
- Zones including:
 - Business 2 Zone;
 - Business 3 Zone;
 - Special Use Zone, Schedule 1 – Aviation;
 - Special Use Zone, Schedule 2 – Airfield;
- Public Acquisition Overlay.

ESSENDON AIRPORT LOCAL PLANNING POLICY FRAMEWORK

The Essendon Airport Local Planning Policy Framework consists of the Essendon Airport Strategic Statement and Essendon Airport Local Planning Policies.

The purpose of this section is to provide a strategic planning context for the airport and reinforces the Airport Vision and Development Objectives as stated within the Master Plan.

The Essendon Airport Local Planning Policies have been established for each Precinct within the Airport as well as for particular matters, eg protection of aviation activity. These policies set out the objective for each area based upon the vision for the airport.

11.4 LAND USE ZONES

The zones have been prepared using the Victoria Planning Provisions but have been modified to reflect both the legislative/decision-making framework in which the airport functions and the unique nature of the airport and its operations.

Each zone is summarised below:

- **Business 2 Zone** - This zone applies to the English Street and Bulla Road Precincts. The purpose of this zone is to encourage a range of commercial activities and to assist in establishing an urban gateway and create a distinct entry and sense of arrival at each point.
- **Business 3 Zone** - This zone applies to the Wirraway North, Beaufort North and Hart Precincts. The purpose of this zone is to encourage the development of a mix of uses including retail, showroom, office and warehouse, and high technology industry/light industry whilst continuing the campus theme.
- **Special Use Zone, Schedule 1 – Aviation** - This zone applies to the Aviation Precinct, areas that have direct frontage/access to airside, and it includes the Airport Terminal and aircraft hangars.
- **Special Use Zone, Schedule 2 – Airfield** - This zone applies to the Airfield Precinct and, relates to the unique operations of the airport, which are undertaken in restricted areas. It includes the taxiing areas, runways and navigational aids.

The Hart precinct is not required for future Airfield activities. Business 3 Zone is now a more consistent zoning for the Hart Precinct. Business 3 fits with the planning scheme for Airport West which is adjacent to the Western border of the Airport.

The Hart Precinct Policy in clause 22.05 of the Land Use Plan continues to include “ensure interface issues with the residential areas of Strathmore Heights are considered as part of determining the suitability of proposed land uses.”

Figure 11.1 shows the location of the various zones discussed above.

11.5 LAND USE PLAN

PARTICULAR AND GENERAL PROVISIONS

Particular provisions relating to specific land uses, i.e. signage, car parking and vehicle loading, have been included.

The General Provisions detail the administrative aspects of the Land Use Plan.

DECISION MAKING

Whilst the Land Use Plan has been prepared in a format generally consistent with the Victoria Planning Provisions, it is not a planning scheme and therefore is not administered as such or subject to Victorian Planning Legislation.

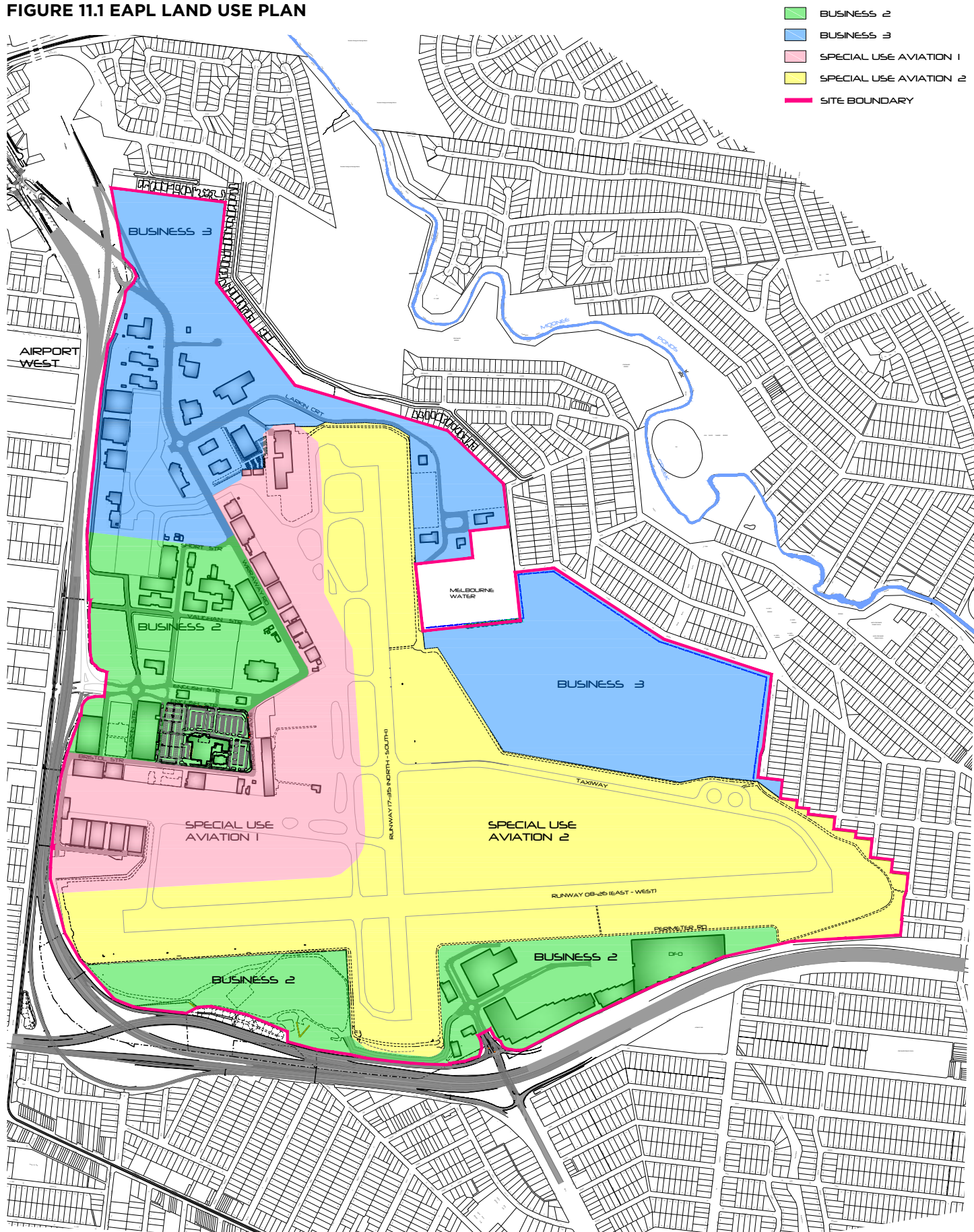
The Master Plan, any variation to it, and any Major Development Plan, require the consent of the Minister for Infrastructure and Regional Development following public consultation pursuant to the *Airports Act 1996*. Developments affecting heritage buildings and features may require referral to the Minister for the Environment.

OPERATOR'S CONSENT

All proposed uses and developments at Essendon Airport require approval from EAPL.

EAPL can issue conditional consent which may require changes to be made to a proposal prior to final consent, or which requires ongoing undertakings by the proponent for the term of their lease. In some instances, comment from other interested parties, such as the local Council, may be sought.

FIGURE 11.1 EAPL LAND USE PLAN



**LAND USE PLAN
ESSENDON AIRPORT PTY LTD**

MAJOR DEVELOPMENT PLANS

Major Development Plans as defined in the *Airports Act 1996* must be consistent with the Master Plan. All major developments must go through a process similar to a Master Plan prior to being submitted to the Minister for approval. A Major Development Plan (MDP) is required for “a development of a kind that is likely to have a significant impact on the local or regional community.” Significant impact on the local or regional community is just one of the many triggers of an MDP.

BUILDING CONTROLLER APPROVAL

Applications for a building approval are published on the EAPL website within 5 business days. Prior to the commencement of any building activity, consent is also required from the Commonwealth appointed Airport Building Controller.

Pursuant to Section 99 of the *Airports Act 1996*, any building approval issued must be consistent with the Master Plan or an approved Major Development Plan.

11.6 FIT WITH THE LOCAL & STATE PLANNING SCHEME

Section 71(gc)(ii) of the *Airports Act 1996* provides that in relation to the first five years of the Master Plan the Master Plan must specify the likely effect of the proposed developments in the Master Plan on “*the local and regional economy and community including an analysis of how the proposed developments fit within the planning schemes for commercial and retail development in the area that is adjacent to the airport*”.

The proposed developments are each listed in the non-aviation development section of this Master Plan under each precinct.

Relevant parts of the planning scheme in the area that is adjacent to the airport are as follows:

THE MOONEE VALLEY PLANNING SCHEME

Essendon Airport is included in the Moonee Valley Planning Scheme (MVPS). State Planning Policy incorporated into the MVPS (at clause 18.04) recognises Essendon Airport’s:

“... current role in providing specialised functions related to aviation, freight and logistics and its potential future role as a significant employment and residential precinct that builds on the current functions.”

State Planning policy (at clause 17 – economic development) also seeks to foster economic growth and development.

Strategies to achieve this include:

- Encouraging new convenience shopping facilities to provide for the needs of the local population within or immediately adjacent to, existing commercial centres; and
- Provide outlets of trade-related goods or services directly serving or ancillary to industry and which have adequate on-site car parking.

The policy also provides the opportunity for new commercial facilities that are located outside of existing retail centres where they are of net benefit to the community in the region served by the proposal.

The Local Planning Policy framework (at clause 21.02) specifically recognises Essendon Airport in its Strategic Framework Plan (reproduced below) as an employment node nestled between the Keilor Road and Airport West precincts. Both of those precincts are also identified in the MVPS as areas that provide potential for new residential development in the municipality.

The MVPS (at clause 21.07) also acknowledges that:

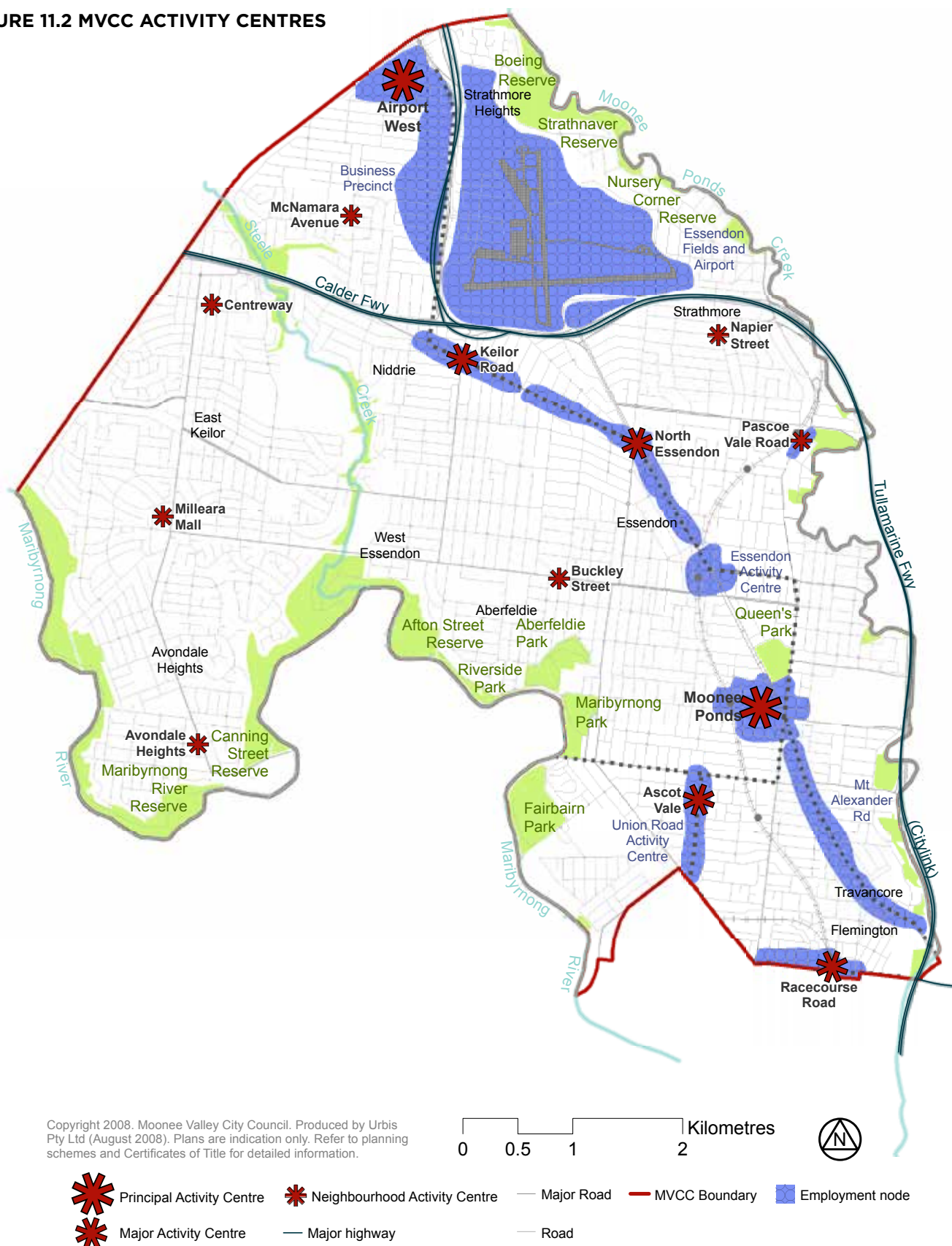
“The economic advantages of the redevelopment of the Essendon Airport site into a large scale business/ retail park is a unique economic development opportunity for Moonee Valley.

Essendon Fields has the potential to develop up to 500,000m² of commercial, industrial and retail floor space and as such presents a major employment generation and investment opportunity for both Moonee Valley and the broader region.”

These policies are in addition to those with the objectives of protecting the airport operations.

The development anticipated by the Master Plan for the next five years, as outlined in Chapter 9 Airport Development Proposals, fits well with and will make positive contributions towards the objectives and strategies contained in the MVPS. The evolution of the Auto Centro car dealership area has had a significant and productive influence on the local economy in general and the business centres of Airport West and Keilor Road in particular. Large land parcels in Keilor Road for example, previously occupied by car sales facilities, have provided opportunities for mixed use commercial/residential developments that have stimulated commercial activity in that centre.

FIGURE 11.2 MVCC ACTIVITY CENTRES



Strategic Framework

12. IMPLEMENTATION

Once approved, the Essendon Airport Master Plan will remain in effect for a period of five years as prescribed under the *Airports Act 1996*. Within this timeframe, EAPL may amend the Master Plan with the consent of the Minister following public consultation or alternatively the Minister may write to Essendon Airport Pty Ltd and direct the lessee to replace the approved Master Plan.

Similarly the Environment Strategy and Ground Transport Plan will now be reviewed as part of the ongoing Master Plan process every five years.

Essendon Airport Pty Ltd will continue to monitor and review the Master Plan. This ongoing review of aviation activity and commercial development will confirm, or otherwise, the projections and assumptions.

To ensure that the Master Plan vision is achieved, Essendon Airport Pty Ltd believes it is important to continue to develop and foster relationships with all levels of government, agencies and authorities, as well as tenants and the local community. As part of this

Master Plan process, EAPL has held consultation meetings with the following groups;

- Department of Infrastructure and Regional Development
- Department of the Environment
- Moonee Valley City Council
- VicRoads
- Public Transport Victoria
- The Local Community Aviation Consultation Group
- Airservices Australia
- Civil Aviation Safety Authority
- Victorian Department of Transport, Planning and Local Infrastructure
- Victorian Department of State Development, Business and Innovation
- Airport Building Controller and Airport Environmental Officer



Essendon Airport looking over Fresh Fields Shopping District

ATTACHMENT 1 - GLOSSARY OF TERMS

AIRSERVICES AUSTRALIA

Airservices is a Commonwealth government business providing air traffic management, air navigation support services and aviation rescue, and fire fighting.

AIRSIDE

The part of the airport grounds, and the part of the airport buildings, to which the non-travelling public does not have free access.

APRON

A defined area intended to accommodate aircraft for the purpose of loading or unloading passengers, mail, cargo, refuelling, parking or maintenance.

CIVIL AVIATION SAFETY AUTHORITY (CASA)

CASA was established as an independent statutory authority on 6 July 1995. The powers and functions of CASA are defined in Section 9 of the amended Civil Aviation Act 1988. CASA's primary focus is delivering aviation safety to the Australian public.

ESSENDON AIRPORT PTY LTD (EAPL)

The lessee of the Essendon Airport site, and the operator of Essendon Airport.

GENERAL AVIATION (GA)

The International Civil Aviation Organisation (ICAO) defines general aviation operation as an aircraft operation other than a commercial air transport operation or an aerial work operation.

General Aviation is not defined in the Australian civil aviation legislation. It encompasses a wide field of private aviation operations including recreation, commuting, sport and in some cases charter services. Most GA operators choose to fly small single or twin engine aircraft.

INSTRUMENT LANDING SYSTEM (ILS)

A system, which provides in the aircraft the lateral, longitudinal, and vertical guidance necessary for landing.

LANDSIDE

The part of the airport grounds, and the part of the airport buildings, to which the non-travelling public has free access.

OBSTACLE LIMITATION SURFACE (OLS)

Surfaces which define the airspace around airports to be maintained free from obstacles for the purposes of ensuring safe aircraft operations at the airport and of ensuring the continued usefulness of the airport.

PANS-OPS

Procedures for Air Navigation Services - Operations Surfaces - These surfaces are established in accordance with ICAO standards and are used in the construction of take-off, landing and approach procedures based entirely on navigation with sole reference to aircraft instruments. They are designed to protect aircraft from colliding with obstacles when flying on instruments. Minimum safe altitudes are established for each segment of an instrument procedure. PANS-OPS surfaces are strictly controlled and cannot be penetrated without the approval of the Secretary for the Department of Transport and Infrastructure.

RUNWAY

A defined rectangular area on an airport prepared for the landing and take-off of aircraft.

RUNWAY END SAFETY AREA (RESA)

A RESA is provided at the runway end to protect an aircraft in the event of undershooting or overrunning the runway.

TAXIWAY

A defined path over which aircraft can taxi from one part of an airport to another.

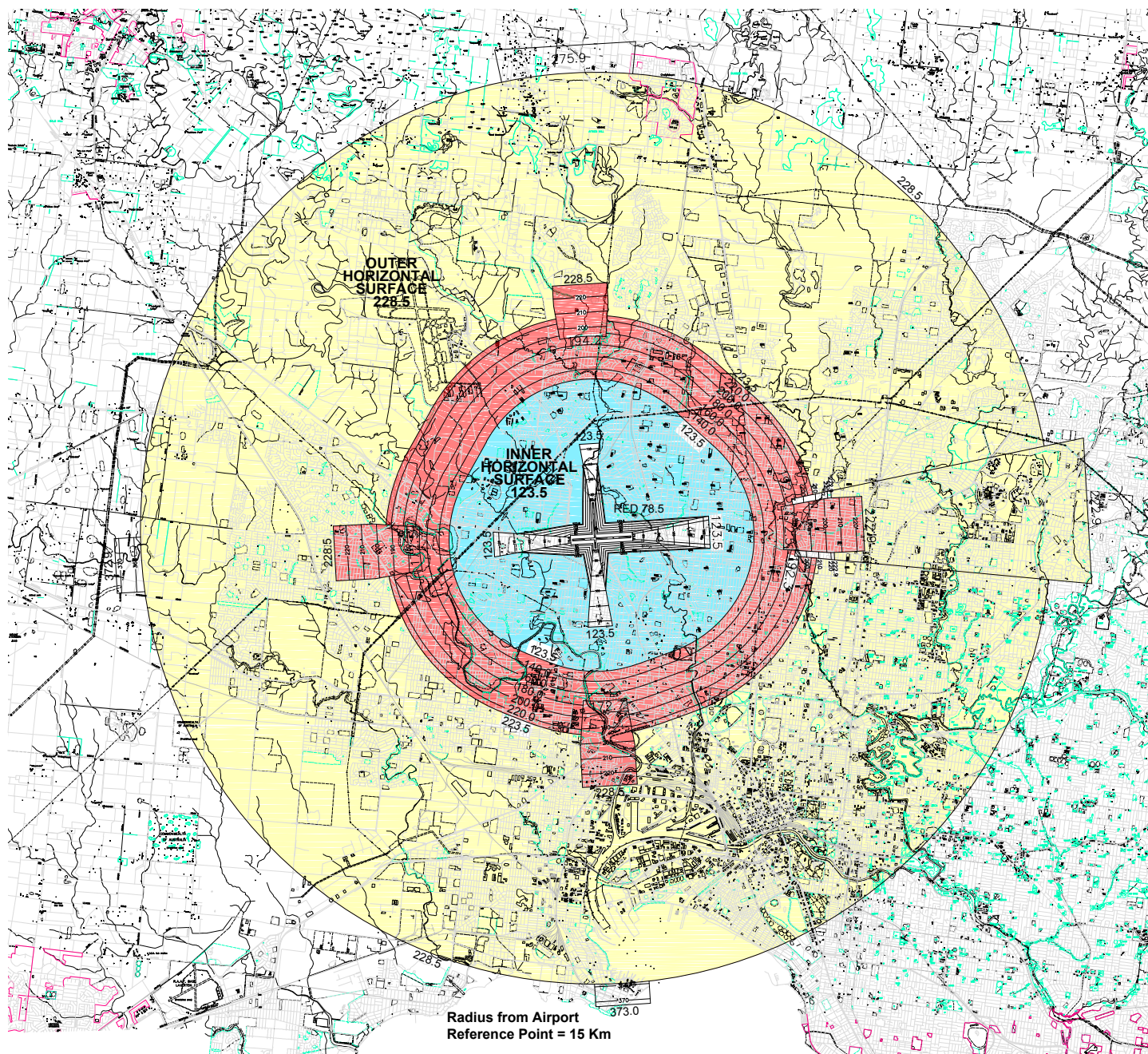
ATTACHMENT 2 - REFERENCES

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ATTACHMENT 3 - VACANT PARCELS OF AIRPORT LAND



ATTACHMENT 4 - PRESCRIBED AIRSPACE CHARTS ESSENDON AIRPORT OBSTACLE LIMITATION SURFACES



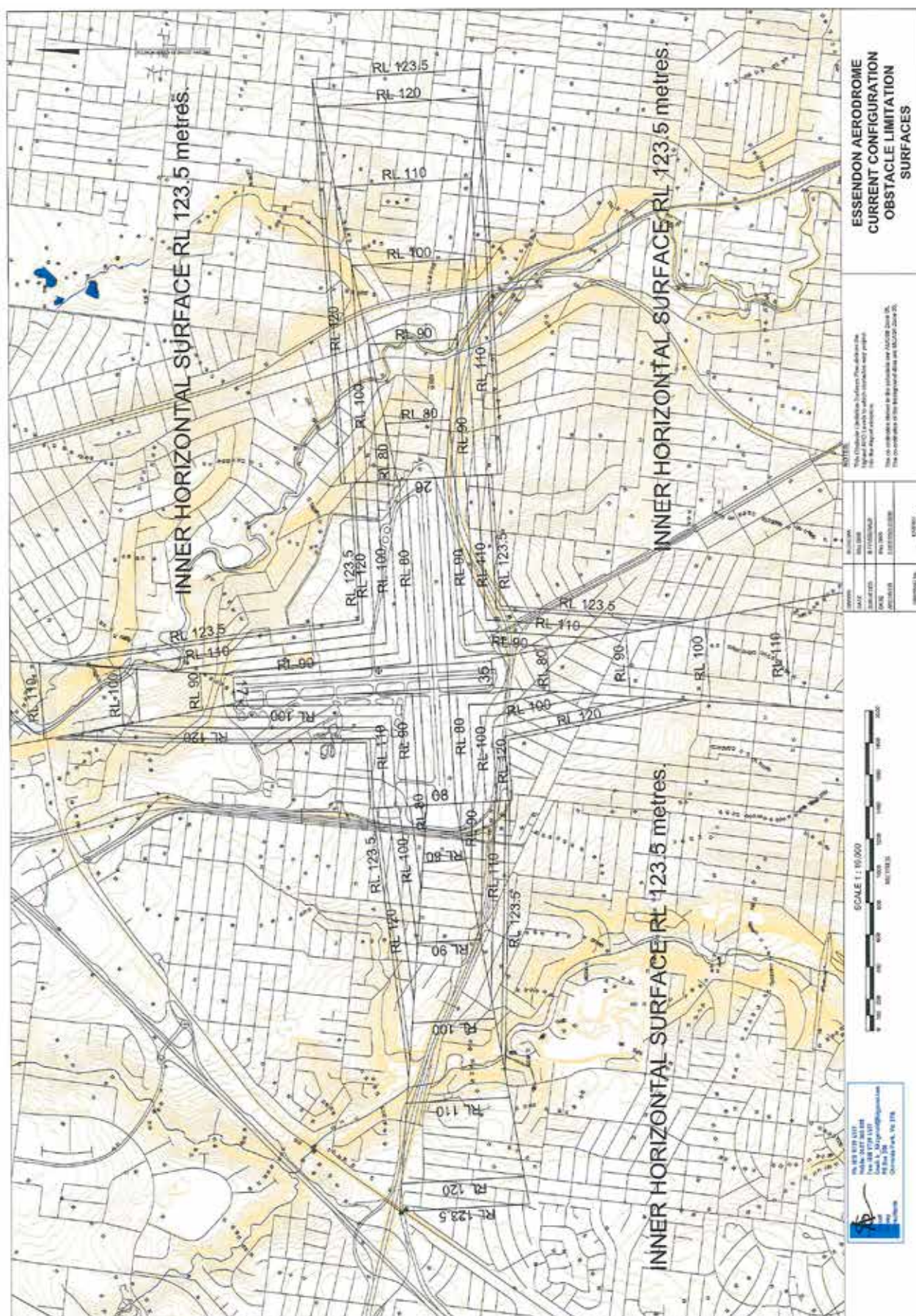
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	Drawing Status Information Only			
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ESSENDON AIRPORT OBSTACLE LIMITATION SOURCES

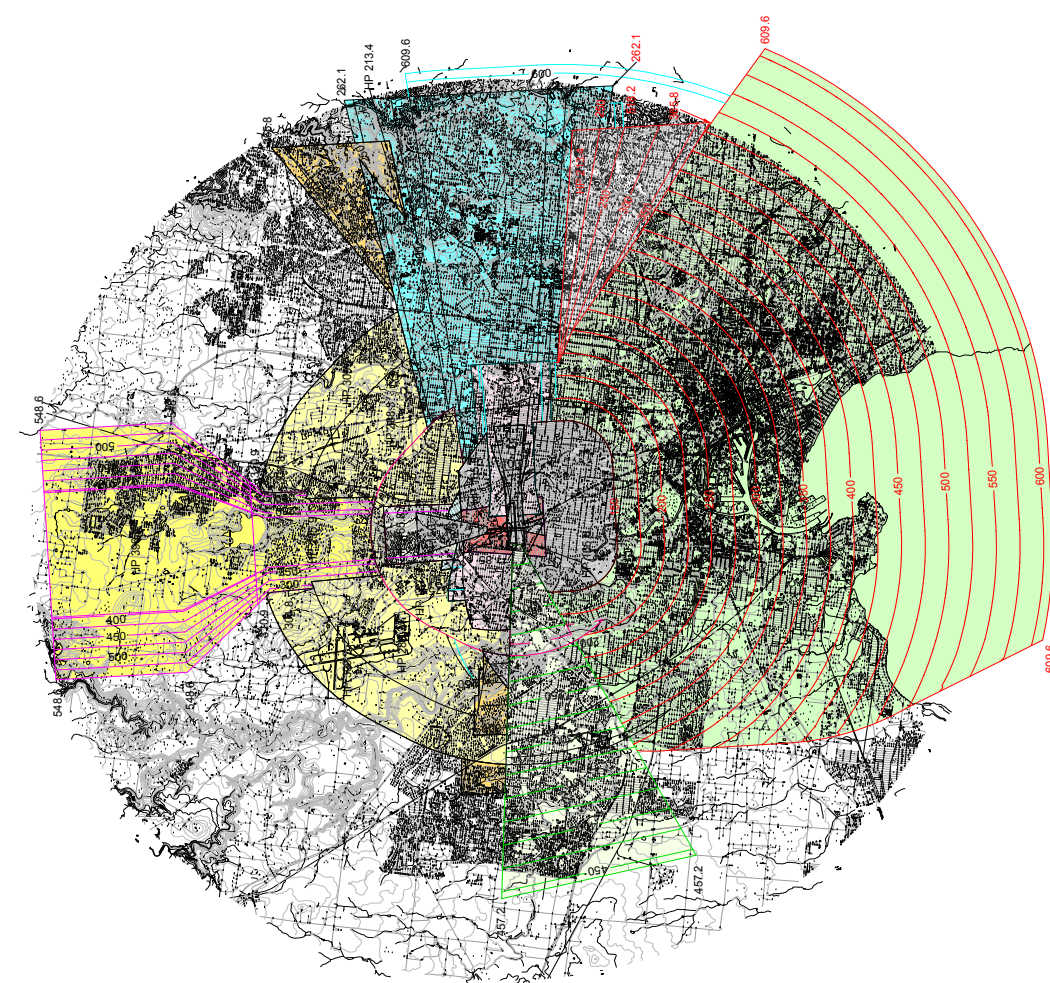
ATTACHMENT 4 – PRESCRIBED AIRSPACE CHARTS

ESSENDON AERODROME CURRENT CONFIGURATION OBSTACLE LIMITATION SURFACES



ATTACHMENT 4 - PRESCRIBED AIRSPACE CHARTS

ESSENDON AIRPORT PRESCRIBED AIRSPACE



F		26/04/13	CMF		KM
E		26/04/13	CMF	QUANTAL BACKGROUND	KM
D		06/04/12	CMF	PAINTED INNER CONTOURS	KM
C		17/02/11	CMF	PAINTED INNER CONTOURS	DWR
B		22/02/11	CMF	SKAGEN/INER CONTOURS	DWR
A		17/11/10	CMF	POPE DEC. 405664/44	DWR

REHBEIN



Airport Consulting

Project: **ESSENDON AIRPORT
PRESCRIBED AIRSPACE**

Title: **EXISTING PANS-OPS CRITICAL SURFACES**

ESSENDON AIRPORT

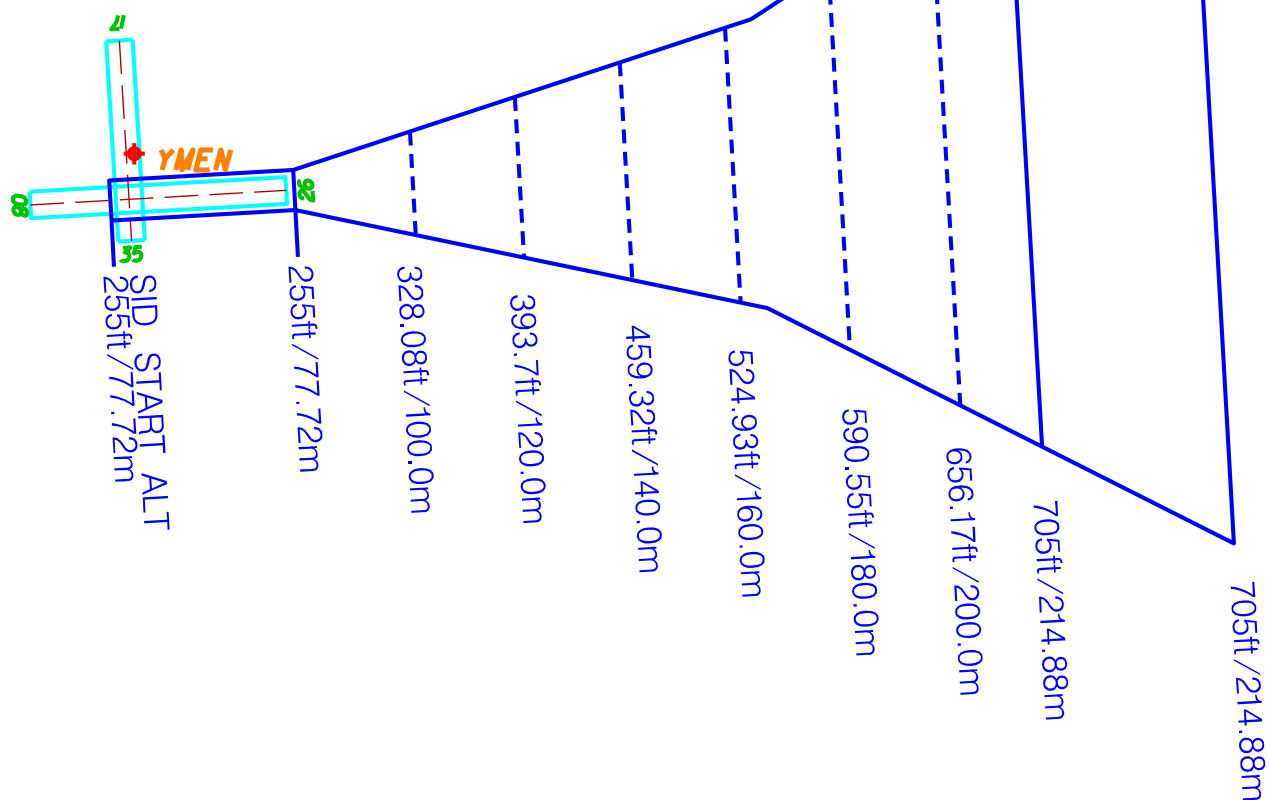
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**ATTACHMENT 5 – STANDARD INSTRUMENT DEPARTURE (SID)
RUNWAY 08**

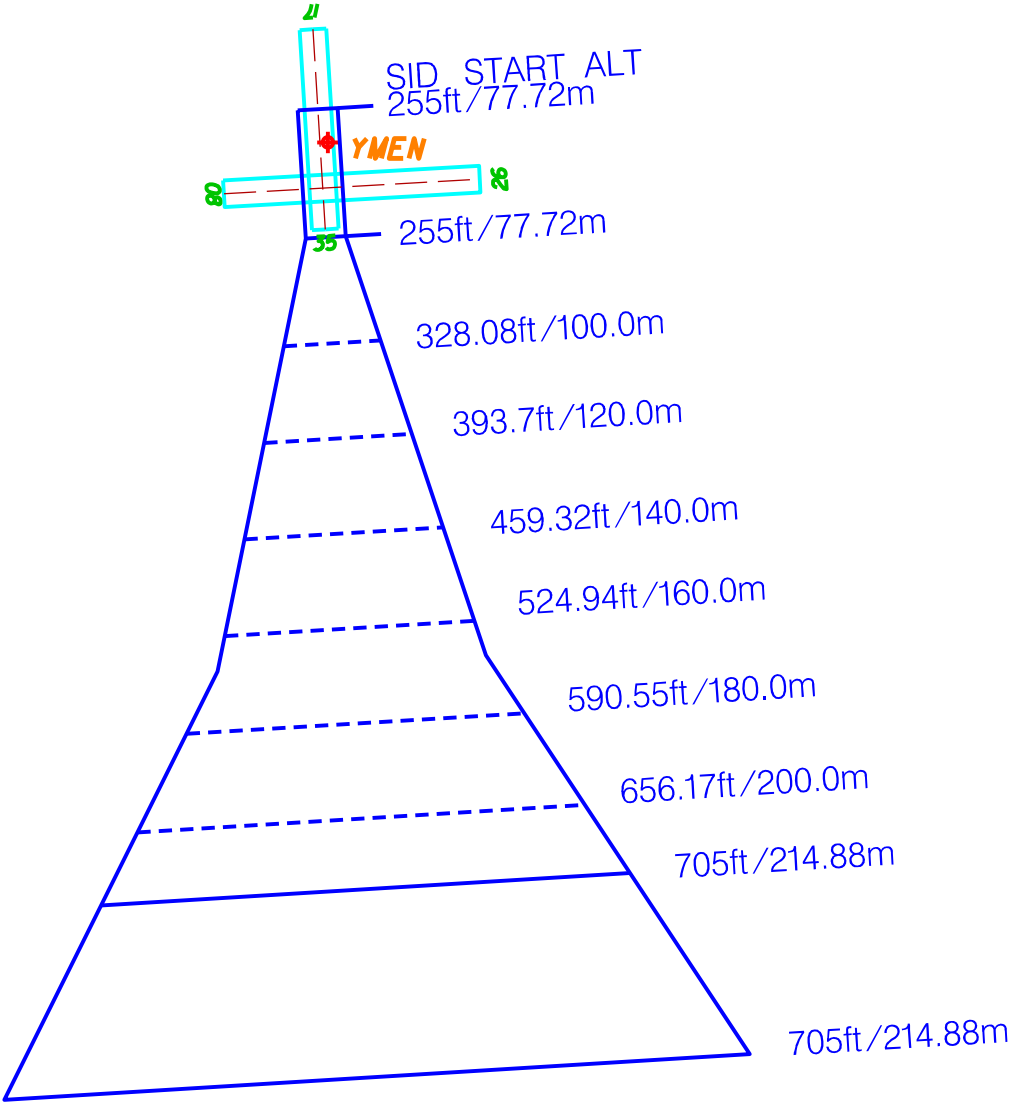
SID RWY 08



Project: Essendon Airport Prescribed Airspace				Figure No: Fig 1.0.1	
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Drawn: Airservices	Checked: NB	Approved:	1	30/01/2014	Scale: File Ref:
			Rev	Date	A4

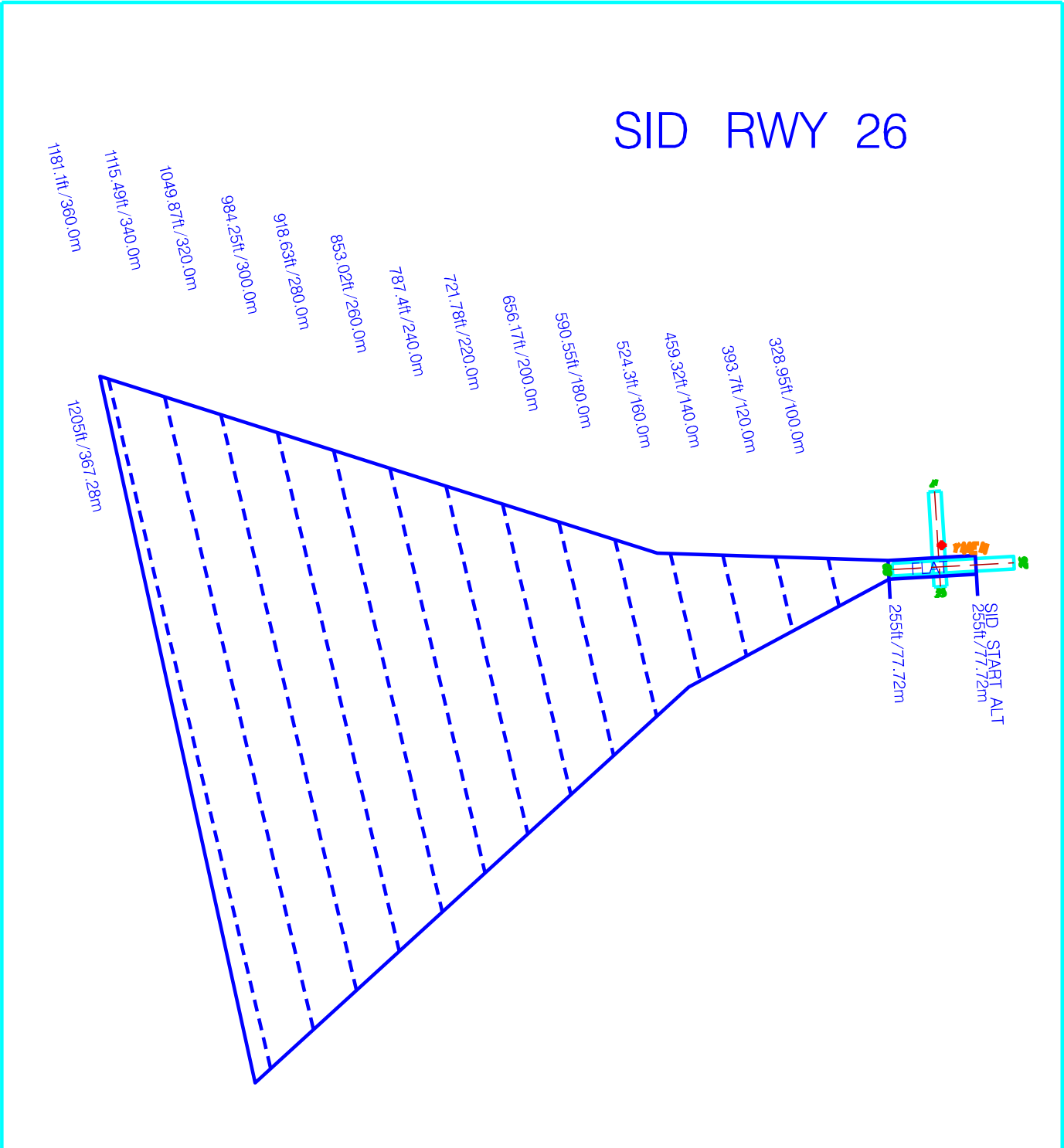
ATTACHMENT 5 – STANDARD INSTRUMENT DEPARTURE (SID)
RUNWAY 17

SID RWY 17



Project: Essendon Airport Prescribed Airspace			Figure No: Fig 2.0.1	
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Drawn: Airservices	Checked: NB	Approved:	1 Rev	30/01/2014 Date
			Scale:	File Ref:
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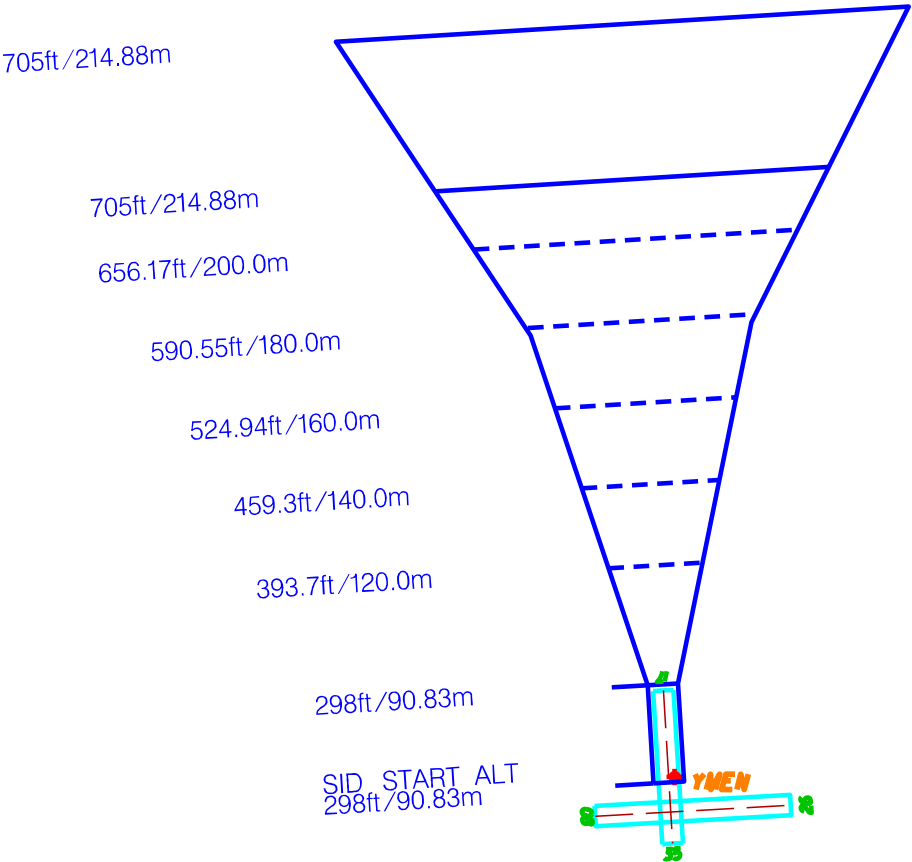
ATTACHMENT 5 – STANDARD INSTRUMENT DEPARTURE (SID)
RUNWAY 26



Project: Essendon Airport Prescribed Airspace				Figure No: Fig 3.0.1	
Title: Standard Instrument Departure (SID) Runway 26					
Drawn: Airservices	Checked: NB	Approved:	1 Rev	30/01/2014 Date	Scale: File Ref:
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ATTACHMENT 5 – STANDARD INSTRUMENT DEPARTURE (SID)
RUNWAY 35

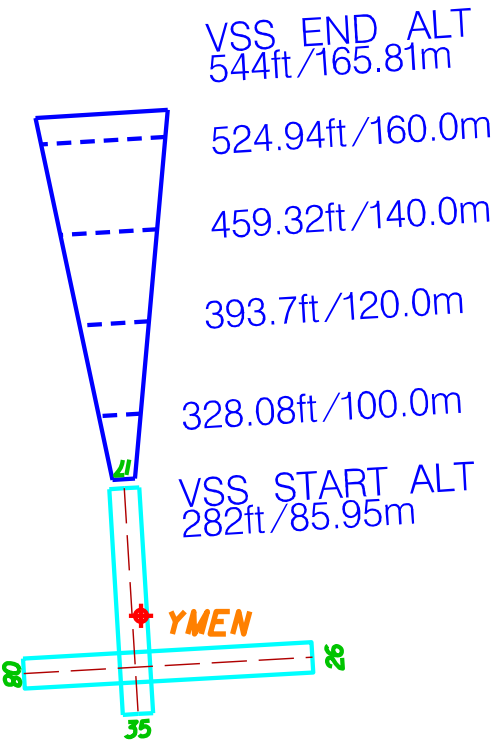
SID RWY 35



Project: Essendon Airport Prescribed Airspace							Figure No: Fig 4.0.1	
Title: Standard Instrument Departure (SID) Runway 35								
Drawn: Airservices	Checked: NB	Approved:	1	30-01-2014	Scale:		A4	
			Rev	Date	File Ref:			

ATTACHMENT 6 - VISUAL SEGMENT SURFACE (VSS) APPROACH
RUNWAY 17

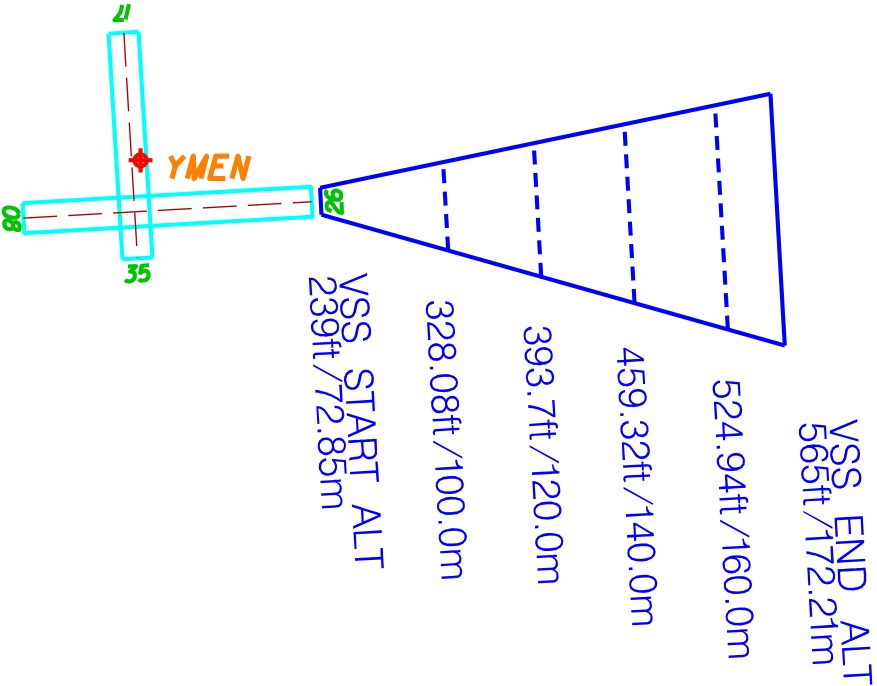
VSS RWY 17



Project: Essendon Airport Prescribed Airspace				Figure No: Fig 5.0.1	
Title: Visual Segment Surface (VSS) Approach Runway 17					
Drawn: Airservices	Checked: NB	Approved:	1	30/01/2014	Scale:
			Rev	Date	File Ref:
					A4

ATTACHMENT 6 - VISUAL SEGMENT SURFACE (VSS) APPROACH
RUNWAY 26

VSS RWY 26



Project: Essendon Airport Prescribed Airspace				Figure No: Fig 6.0.1	
Title: Visual Segment Surface (VSS) Approach Runway 26					
Drawn: Airservices	Checked: NB	Approved:	1 Rev	30/01/2014 Date	Scale: File Ref:
					A4