Moorabbin Airport

Moorabbin Airport
2015 Master Plan

25 June 2015

Notes

This 2015 Master Plan has been prepared by Moorabbin Airport Corporation (MAC) in accordance with the provisions of Part 5 of the Airports Act 1996 (Commonwealth) and the Regulations made under that Act.

This 2015 Master Plan is a new document which continues the overall themes and strategies for Moorabbin Airport described in the 2010 Master Plan, while taking account of new circumstances and objectives that have arisen since the 2010 Master Plan.

This 2015 Master Plan includes a number of objectives and strategies which have been formulated in response to various internal assessments, forecasts, analyses and assumptions undertaken or made by MAC as part of its strategic planning processes and to discharge its obligations under the Airports Act. The assessments, forecasts, analyses and assumptions made or undertaken should not be used or relied upon by any other person or for any other purpose.

It should be noted that the strategies and scenarios described are indicative only and their inclusion should not be read as an assurance that any or all of them will occur.

This 2015 Master Plan incorporates the Moorabbin Airport Environment Strategy and the Moorabbin Airport Ground Transport Plan in accordance with Part 5, Section 71 of the Airports Act.

Contents

Figures, Maps & Tables

Foreword

Moorabbin Airport is Asia Pacific's largest flight training facility, is among the three busiest airports in Australia (by flight movements) and has the greatest cluster of general aviation activity on the Eastern seaboard.

The 2015 Master Plan – Moorabbin Airport Corporation's (MAC) fourth since privatisation in 1998 – will deliver ongoing aviation and non aviation opportunities. Our aviation development strategy will grow our international reputation for training excellence and safe operations. Our non aviation activities will underpin the viability of the Airport and enhance the economic and social contributions at local, regional and State levels.

The 2015 Master Plan reinforces the Airport as a transport and economic hub of State significance within the emerging Kingston Central and Braeside Economic Precinct. Over the 20 year period to 2035, the total economic contribution of the Airport will exceed $10 billion and employment will increase from 3,300 today to 8,500.

The Airport's location within a rapidly growing urban area, its convenient access to the transport network and the availability of large tracts of land, make it a prime modern business park precinct in metropolitan Melbourne for small businesses, international brands, aviation and non-aviation activities.

Our metropolitan location brings with it an obligation for MAC to continue to engage and communicate with key community, business and government stakeholders across economic, social and environmental issues.

This is an exciting time in the Airport's 65 year history. It is a time for growth generated from private investment in infrastructure and facilities in designated zones. With land use being the cornerstone of Airport planning, the entire 294 hectares of the Airport has been carefully planned and specific activities encouraged.

Above all, the 2015 Master Plan will further develop Moorabbin Airport's role as Australia's leading flight training airport, further develop regional aviation connections, enhance our reputation for aviation excellence in South East Asia and create thousands of jobs and economic activity within the Victorian economy.

We look forward to welcoming you on your next visit to the Airport.

Paul Ferguson
Chief Executive Officer

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1 // Introduction

- This 2015 Master Plan establishes a framework for aviation and non-aviation activities and development at Moorabbin Airport from 2015 to 2035.
- This 2015 Master Plan builds on the Airport's roles as Australia's leading flight training airport, as a key Victorian transport gateway and as a centre of investment, employment and economic activity within the City of Kingston and metropolitan Melbourne.
- Industrial, retail and commercial activity within designated Airport precincts will leverage the commercial strengths of the Airport and will complement and subsidise its aviation functions.
- This 2015 Master Plan will enable the Airport to play its part in addressing challenges facing Australia's aviation industry. At the same time, the Airport will continue to build on the positive contributions it makes – including through enhanced operational and safety measures; services to regional areas; increased economic and employment opportunities; and engagement with youth, interest groups and other members of the community.

1.1 Overview

Moorabbin Airport is Australia's leading flight training airport and one identified by the Australian Government as being strategically important for Australia. The Airport is a critical Victorian transport gateway which will continue to meet the future needs of civil aviation users and provide for other services and facilities which will promote a centre of investment, employment and economic activity for the City of Kingston and for metropolitan Melbourne.

The 2015 Master Plan is a plan for growth, investment and jobs. It builds on the Airport's three previous Master Plans and balances aviation and non-aviation objectives and land uses. A range of activities are encouraged in 7 designated Airport precincts, including special purpose and mixed-use precincts. Industrial, retail and commercial activity leverages the competitive strengths of the Airport and subsidises its aviation functions.

The building block of an Airport Master Plan is land use. Land uses are carefully integrated across on-Airport and off-Airport precincts. Airport zoning reflects the optimal mix of activities to be undertaken in each precinct and takes into account activities in neighbouring precincts.

Precinct and site roll-out are led by market demand and infrastructure availability. Those precincts with existing development are well serviced by infrastructure and include multiple sites available for development. In precincts that are less developed, connections with civil infrastructure and transport access points located on the perimeter of the Airport are required.

The core roles of the Airport are to further develop flight training, deliver airport network efficiency through the separation of light aircraft from larger aircraft and to strengthen the development of general aviation in Victoria.

Flight training organisations based at Moorabbin Airport are training pilots that are part of the global solution for the rapidly increasing world demand for aviation services. With annual passenger numbers to double from 3.3 billion today to 6.1 billion in 2034, one in every two passengers are on journeys touching the Asia Pacific region. Up to 533,000 aviation professionals must be trained by 2034 (up to 216,000 of them within the Asia-Pacific region).

Moorabbin Airport is one of the largest aviation education facilities in the Asia Pacific region. More than 800 aviation students study at the Airport today; the Airport has the capacity to train more than 1,600 annually by 2035. Flight training organisations at the Airport are well positioned to train for up to 5% of the Asia-Pacific aviation professionals.

The Airport has been recognised for its increasingly important role in the metropolitan, regional, and State economies as a centre of economic and employment growth.

The non-aviation strategies contained within the three previous Master Plans have successfully delivered modern, high quality property solutions. An example is Chifley Business Park, a contemporary estate providing superior amenities and facilities. 1,250 people, or 40% of the Airport's total workforce, are employed in the Park's warehouses and industrial buildings.

Australian and global brands on Airport include Coca-Cola Amatil, Costco Warehouse (opening 2015), Visy, Simplot, Aldi and Direct Factory Outlets. This 2015 Master Plan leverages the presence of these leading brands to grow non-aeronautical business at the Airport.

Following privatisation, the three previous Master Plans provided a framework from which MAC was able to successfully deliver safe and sustainable long-term growth and opportunities. Moorabbin Airport is recognised as:

- a place of State Significance – confirmed by the Victorian Government;
- a Transport Gateway – confirmed by the Victorian Government;
- a place of learning – evidenced by universities, registered training organisations and flight training schools;
- a place of employment, investment and business – evidenced by 3,300 workers employed by 250 businesses, including 33% in aviation, 40% in warehouses and industrial buildings and the balance in a mix of retail and commercial;
- a place where non-aviation investment and economic activity can support the essential and ongoing development of local communities, their economies and regional infrastructure;
- a place where aviation has interacted responsibly with the community for 65 years; and
- a place not subject to land use controls under Victorian planning schemes, with its own zoning and planning framework which will usually be consistent with State-based planning controls but in appropriate situations may depart from them.

1.2 Location & Existing Infrastructure

Moorabbin Airport is located 21km south east of the Melbourne Central Business District, adjacent to middle-ring bayside suburbs, and has a land area of 294 hectares. The Airport and its surrounds are shown in **Figure 1.1 – Moorabbin Airport Locality Plan**.

Airport infrastructure includes:

- 5 runways (2 are lit with standby power), taxiways and 2 helipads;
- an Air Traffic Control Tower (one of only 29 in Australia);
- 320,000 square metres of asphalted runways, taxiways and aprons (equivalent to a 23km, 4-lane highway, the same distance as from the CBD to Melbourne Airport) and 10 km of sealed internal roads;
- advanced weather reporting infrastructure and a non-directional beacon;
- 8km of storm water drains and dry retention basins to service the runway complex;
- 7km of security fencing including airside access gates; and
- a children's playground, picnic facilities and free car parking for the public.

The Airport's configuration is shown in **Figure 1.2 – Existing Airport Layout**.

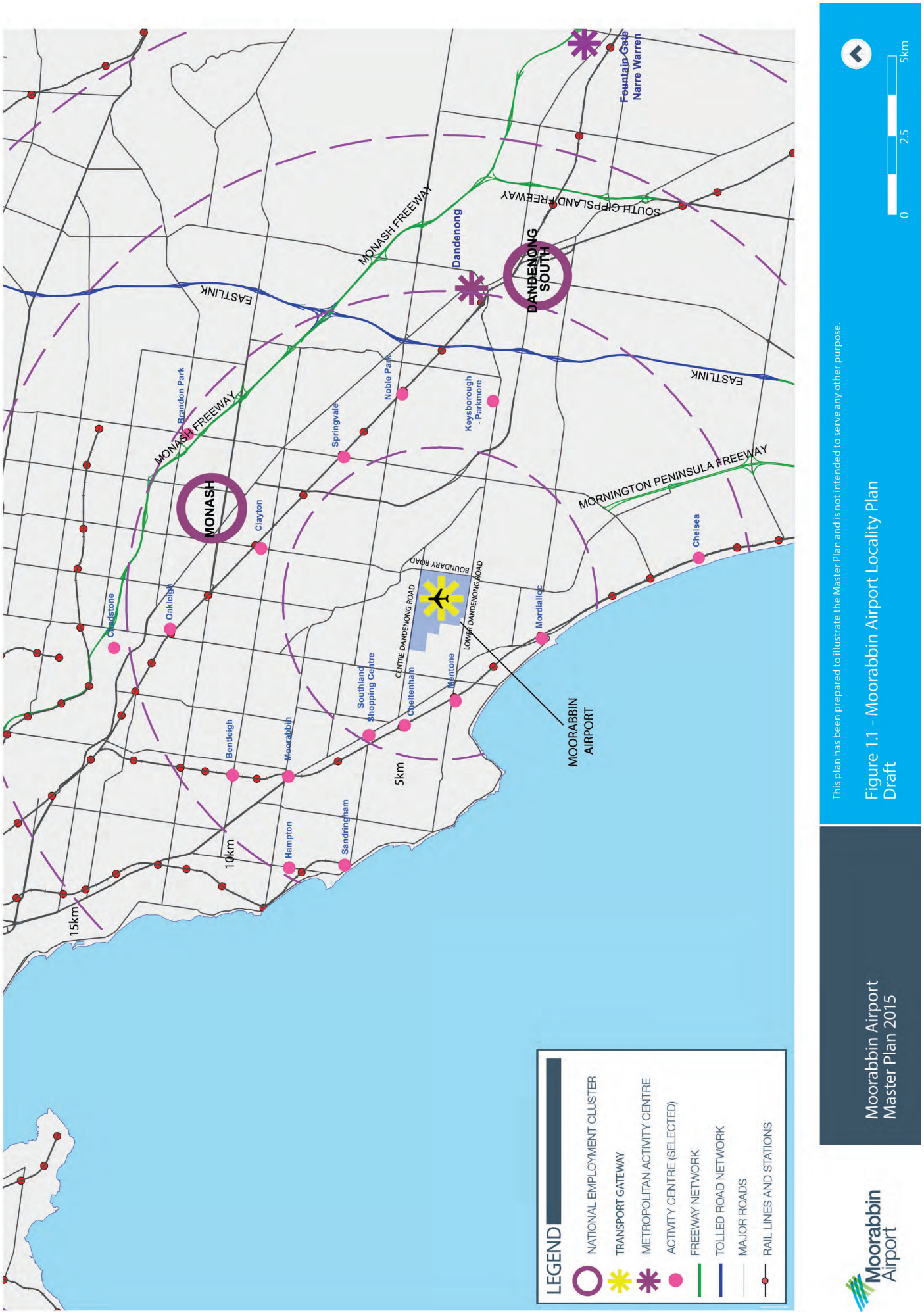

Figure 1.1 // Moorabbin Airport Locality Plan

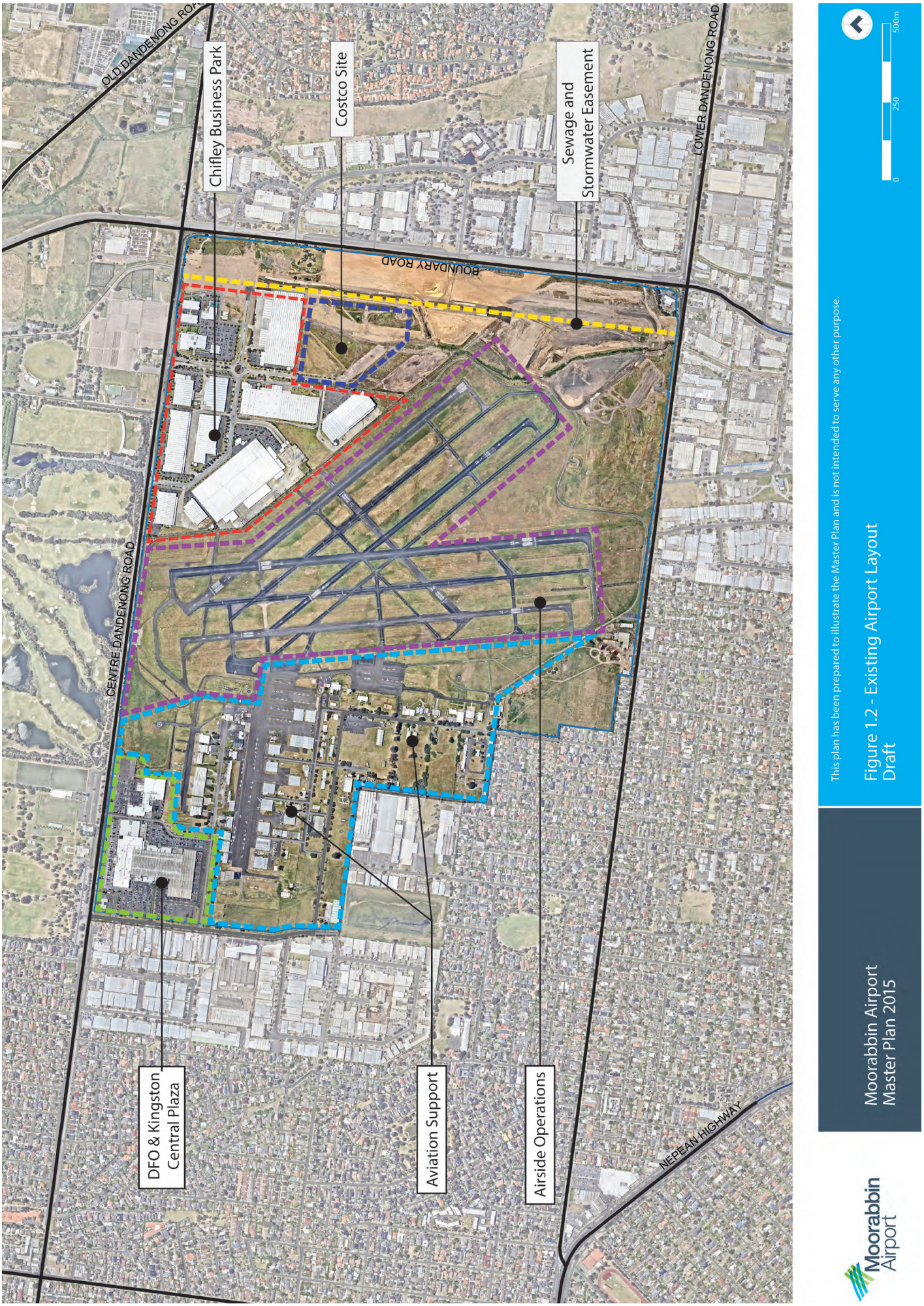

Figure 1.2 // Existing Airport Layout

1.3 Aviation – Past, Present & Future

The 2015 Master Plan builds on key aviation assumptions from previous Master Plans, including:

- that the Airport will remain a centre for flight training and a hub for general aviation;
- 173 hectares (60% of the total Airport land) will be used to facilitate general aviation; and
- long-range aircraft movements forecasts of 500,000 annually.

Today the Airport is home to a general aviation fleet of 300 aircraft, primarily connected with flight training and charter operators.

In 2014 there were 230,000 aircraft movements at Moorabbin Airport, making it the third-busiest airport in Australia. Aircraft movements have declined over the past two decades as a result of a focus on professional flight training at the Airport, use of flight simulators and ground-based flight theory schools, combined with reduced recreational flying, fewer low-capacity airlines and investment by the Victorian Government in regional airports. Moorabbin Airport is a part of a network of regional airports that compete with and complement each other in the provision of services.

Current movements at the Airport are 42% below 1989 movements of 395,000 and 34% below 2008 movements of 350,000.

Flight training operations account for 175,000 or three-quarters of movements. Each training flight from the Airport generates two movements, one for take-off and one for landing – meaning 87,500 flights occur annually (50% of 175,000). Flight training includes a mix of circuit training, flights to a designated training zone up to 35km from the Airport and navigational exercises over the Mornington Peninsula and Port Phillip Bay.

Moorabbin Airport has a key role in keeping the airport network across Melbourne efficient by providing alternative aviation infrastructure that facilitates the separation of light aircraft from larger aircraft. Through this support, Moorabbin Airport assists the larger airports to achieve their forecast growth targets.

Today Moorabbin Airport supports a myriad of general aviation businesses that make Victoria and Australia a more connected and better place, including:

- Pilots. Students from Moorabbin Airport are and have been pilots with the RAAF (including the Roulettes, border protection and Hornet squadrons), the RAN Fleet Air Arm, Qantas, Qantas Link, Jetstar, Virgin, China Eastern Airlines, British Airways, Cathay Pacific, Emirates, Indigo, King Island Airlines, Sharpe Airlines and many more.
- Passengers. 12,500 passengers fly to King Island every year from Moorabbin Airport.
- Aircraft maintenance facilities, which maintain aircraft operated for everyday Australians, heads of state, the Victoria Police Air wing, aeromedical providers, firefighting organisations, well-known Australian business leaders and sportspeople.
- Charter operations. Moorabbin Airport-based operators conduct beach safety patrols, lead search and rescue missions, undertake fire spotting and fire suppression missions, fly to major sporting events (Melbourne Cup, V8 supercars, Phillip Island Moto Grand Prix, regional golf courses) and to wineries and other recreational destinations. They fly politicians, entertainers and workers to their workplaces from Gippsland to Ballarat and Warrnambool to Mildura – in fact all over the State.
- Emergency services are regular users of the Airport including Air Ambulance, Country Fire Authority and the Victoria Police Air Wing.

Over the next 20 years the 2015 Master Plan provides a general aviation growth strategy. Core components include:

- up to 7 aviation sub-precincts including flight training, maintenance and rotary;
- enhancing flight training capability through the attraction of new entrants;
- long term aviation lease agreements;
- release of new aviation development sites for hangars, student accommodation and offices;
- investment in Airport infrastructure including runway overlays, taxiway improvements, aircraft guidance signs, new aircraft parking areas, a western access road and new utilities to service the aviation precinct;
- youth engagement programmes for primary and secondary schools and youth groups;
- marketing and promotion at aviation industry events, on the Airport perimeter and in the media;
- participation in government trade missions;
- cross-promotion of flight training in Airport retail precincts and at the museum; and
- encouraging universities and higher education providers to locate at Moorabbin Airport.

1.4 Non-aviation Use – Past, Present & Future

The non-aviation strategies contained in the three previous Master Plans have successfully attracted development, growth, investment and economic activity to Moorabbin Airport. The 2015 Master Plan retains important non-aviation assumptions from previous Master Plans, including:

- 121 hectares (40% of the total Airport land) will be available for commercial, industrial, retail, office and aviation support activities. Of this, 57 hectares is serviced land, ready to accommodate new employment and business opportunities;
- non-aviation development will underpin the viability of the Airport's aviation operations and diversify the risk profile for the Airport business;
- large-format non-aviation activities will continue to build on successful developments commenced in 1992, well before the 1998 privatisation of the Airport;
- no land at the Airport is zoned green wedge; and
- dedicated precincts will continue to support a variety of Australian and international brands as well as being a centre for small and medium businesses.

MAC's Non-Aviation Development Plan for the Airport is set out in **Chapter 7**.

The existing non-aviation precincts, Chifley Business Park and Kingston Central Plaza, are major employment and economic activity centres within the City of Kingston. These precincts support:

- 200 non-aviation businesses – most of them small businesses;
- award-winning, modern campus-style offices and facilities;
- regional businesses needing metropolitan office space and who fly staff to the Airport daily; and
- Australian and international quality brands locating within the City of Kingston.

1.5 Economic & Employment Role

Moorabbin Airport is one of the fastest-growing economic and employment activity centres within metropolitan Melbourne. The economic and social importance of the Airport is explained in **Chapter 2**.

Economic activity at the Airport is currently valued at $340 million annually and is expected to increase by 240% to $825 million by 2035 as aviation and non-aviation developments identified in this 2015 Master Plan are realised.

Employment at Moorabbin Airport will grow from 3,300 to 8,500 over the 20-year planning period of the 2015 Master Plan (a 255% increase), making it a significant centre for job creation and employment. Employment growth at the Airport will assist the City of Kingston to reduce unemployment rates which are up to 2% above the national average.

Moorabbin Airport:

- represents 5% of the City of Kingston's workforce (66,000 workers), and is a significant contributor to the Southern Subregion workforce (825,000 workers), making the Airport one of the most significant employment areas in metropolitan Melbourne;
- is within the emerging Kingston Central and Braeside Economic Precinct and accounts for 16% of the 19,800 industrial, retail and service jobs in that precinct;
- will deliver up to 3% (5,200) of the new jobs required for the Southern Subregion;
- meets the "20-minute neighbourhood" State Government policy objective, with nearly 60% of the Airport workforce living within a 20-minute drive of the Airport; and
- is recognised as a Transport Gateway and an economic and employment centre.

The economic success of the Airport is supported by the Airports Act regime and in particular the comprehensive 20-year Master Plans which are refreshed every 5 years.

1.6 MAC's Master Planning Context

The Airports Act, MAC's lease over the Airport and this 2015 Master Plan control the business operations of the Airport and provide a framework for the regulation of Airport activities.

The Airports Act, the Airport lease and this 2015 Master Plan contemplate that a variety of aviation, commercial, retail and industrial activities may be undertaken at the Airport. Major Airport Developments are subject to specific requirements for public exhibition and Ministerial approval. This regulatory regime is more comprehensive than comparable State and local requirements. In preparing this 2015 Master Plan, MAC has had regard to all relevant State and local planning regimes as well the views and concerns of the local community and stakeholders.

The planning period for this 2015 Master Plan is 20 years, commencing immediately after the expiry of the Airport's current (2010) Master Plan. The Environment Strategy within this 2015 Master Plan relates to a period of 5 years.

1.7 Challenges

Moorabbin Airport must successfully manage many issues, including:

- the aviation industry is faced with a skills shortage with limited national capacity for additional training, an aging aircraft fleet and increased costs for fuel and insurance;
- increasing competition from foreign general aviation training and maintenance providers;
- aviation activity revenues do not currently sustain the Airport's aviation business, nor will they support the development costs to expand and support general aviation activities. Ongoing support from non-aviation activities is essential;
- the large Airport site (294 hectares) requires substantial civil infrastructure investment. The aviation function is planned within the centre of the Airport and adjacent to industrial precincts so that operational impacts on surrounding areas are minimised. Non-aviation precincts on the Airport's perimeters absorb expensive connection and upgrade costs and deliver infrastructure to many aviation sites that would otherwise not be viable;
- the aviation requirement for a near-level gradient across the Airport means infrastructure networks must be carefully planned and designed. This particularly applies to storm water drainage systems and sewerage networks;
- MAC works with stakeholders so that off-Airport residential developments are consistent with aviation and planning requirements. Moorabbin Airport has been a part of the metropolitan area for 65 years and MAC considers it important that nearby communities understand aviation impacts relating to off-Airport land and have appropriate information available to make informed decisions;
- ensuring that competitive neutrality is maintained between property transactions on- and off-Airport; and
- general aviation is a limited market and flight training is a specialist industry. Neither high-capacity regular passenger services nor large freight services are a realistic option for Moorabbin Airport.

1.8 Community

Moorabbin Airport plays an important role in the community and recognises that working together provides the best outcomes. This 2015 Master Plan provides for:

- safe aviation infrastructure and operations;
- jobs for the wider region;
- responsible management of aircraft noise, Airport operations and developments;
- a range of services and facilities;
- road infrastructure that supports traffic flowing freely around and within the Airport; and
- delivery and engagement on multiple community initiatives, including family days, Australian Air League reviews, Australian National Aviation Museum redevelopment, aviation-related youth programmes and educational site tours for local primary and secondary schools.

2 // Economic & Social Impacts

- Moorabbin Airport is a major economic and social asset driving above-average growth and positive social outcomes.
- The 3,300 Airport jobs today represent 5% of the total employment in the City of Kingston.
- 8,500 people will work at the Airport by 2035.
- Moorabbin Airport will deliver 3% of employment growth for the Southern Subregion through the creation of 5,200 jobs.
- $10 billion in economic benefit will be generated at the Airport over the next 20 years.
- Annual economic value will increase to $825 million from $340 million.
- Export contributions from flight training services will increase to $140 million from $50 million.
- Moorabbin Airport is providing a well-trained aviation workforce, training pilots to meet the ever increasing market demand for aviation services.
- The Airport supports social inclusion and regional development through the provision of freight, charter, emergency services and aircraft maintenance.
- The Airport provides infrastructure for essential services such as police, firefighting and emergency medical services.
- General aviation has a strong volunteer culture including the Australian National Aviation Museum, Australian Air League, Air Scouts, Young Eagles, special needs schools, Able Australia, Royal Flying Doctor Service, Angel Flight and the Avalon Airshow.

2.1 Introduction

The Airport is a major economic activity centre for the City of Kingston, greater Melbourne, Victoria and Australia through its aviation and non-aviation activity. The total economic contribution of the Airport will exceed $10 billion over the 20 year planning period of this 2015 Master Plan. Economic contribution is a key requirement of the Airports Act and the State planning regime.

The economic value of activity at the Airport in 2014 (including aviation services, flight training, aircraft maintenance, engineering, retail and commercial) is $340 million annually. This contribution will be enhanced by outcomes delivered by this 2015 Master Plan, so that by 2035:

- the economic value of activity will increase to $825 million annually from $340 million (an increase of $485 million or 240%);
- direct jobs will increase to 8,500 from 3,300 today (an increase of 5,200 jobs or 260%); and
- total jobs (direct and indirect) will increase to 23,705 from 9,335 today (an increase of 14,370 jobs or 250%).

Key current economic, employment and investment impacts of the Airport, and the projected position in 2020 and 2035, are shown in **Figure 2.1 – Economic Impacts Summary**.

	Current	2020	2035
Land Area			
Non-Aviation	121 Ha	121 Ha	121 Ha
Aviation	173 Ha	173 Ha	173 Ha
Total	294 Ha	294 Ha	294 Ha
Employment - Direct			
Non-Aviation	2,630	5,110	7,450
Aviation	670	730	1,050
Total	3,300	5,840	8,500
Economic Value			
Non-Aviation	$265m	$495m	$710m
Aviation	$75m	$85m	$115m
Total	$340m	$580m	$825m
Investment			
Non-Aviation	n/a	$205m	$445m
Aviation	n/a	$10m	$125m
Total	n/a	$215m	$570m
Export			
Non-Aviation	n/a	n/a	n/a
Aviation	$50m	$95m	$140m
Total	$50m	$95m	$140m

Figure 2.1 // Economic Impacts Summary

The proposed developments will see investment of $215 million into the local and regional economy over the next 5 years and $570 million by 2035. These investments will generate additional economic value of $580 million and $825 million over the respective periods.

The export potential from flight training services provided at Moorabbin Airport is material. Currently, $50 million in export revenue is generated by organisations training more than 200 international students. One Airport-based operator is currently negotiating with the Airport to materially increase training activities by 2016. Where the Airport and the operator successfully conclude lease terms for new facilities, the export potential from flight training services within 5 years will total $95 million and in 20 years, increase to $140 million.

The indirect economic contribution of the Airport is also significant and varied. The aviation function of Moorabbin Airport is an essential element to the economic success of many regional Victorian and interstate centres, including:

- Bairnsdale – workers of a major Victorian food company charter weekly flights between its offices in Chifley Business Park and its processing plant in regional east Victoria;
- King Island – 12,500 passengers fly annually including tourists, workers and visiting professionals. A range of freight is carried to and from the island including fruit and vegetables, seafood, beef, dairy products and household goods;
- Flinders Island – freight including beef, dairy and poultry; and
- Northern Tasmanian centres – freight, competitors in sporting competitions and tourists are transported to Wynyard, Bridport and Burnie.

The aviation function of Moorabbin Airport is also an essential element to the economic success of many industries including:

- Aviation – Flight training, general aviation aircraft maintenance, aircraft sales, aircraft insurance, pilot supply shops, aircraft leasing;
- Education – Swinburne University and RMIT University students;
- Medical – regional to city patient transfers, infant care, live tissue transport, surgeon and medical staff transfers to the regions;
- Tourism – King Island, Flinders Island, South Australian vineyards, Uluru, Birdsville, Kings Canyon, Kimberleys, Gold Coast, Phillip Island and Northern Tasmanian destinations;
- Sports – 3,500 golfers are flown to Tasmania annually, AFL players fly to regional training camps, fishers are flown to Bass Strait islands and Kangaroo Island, ski field flights; and
- Primary industries – beef, dairy, seafood, fruit and vegetables are freighted around the country.

2.2 Employment

- **3,300 people work on the Airport today and this will grow to 8,500 in 2035.**
- **9,335 direct and indirect jobs will grow to 23,705 in 2035.**
- **Annual wages of Airport-based workers total $170 million.**
- **Industrial (warehouse/distribution) activity provides 40% of Airport-based jobs, or 1,250 workers.**
- **60% of Airport workers live within a 20 minute drive of the Airport.**

Aviation and non-aviation activities make the Airport an essential economic and employment hub for the City of Kingston and the Southern Subregion of metropolitan Melbourne.

Employment at the Airport contributes up to 5% of employment in the City of Kingston. Employment opportunities at the Airport strengthen the local economy, noting the City of Kingston unemployment rate has exceeded the Australian average by up to 2%. The 5,200 jobs to be created during the next 20 years will offset the forecast job losses in the Braeside industrial area following the motor vehicle industry restructure.

Moorabbin Airport has a high concentration of employment opportunities. The Airport comprises 1% (3 sq km) of the land area of the Melbourne Southern Subregion (2,800 sq. km), but will contribute more than 3% (5,200) of the employment growth for the Subregion by 2031 (167,000 new jobs).

Moorabbin Airport is in an emerging metropolitan economic and employment precinct. The Kingston Central and Braeside Economic Precinct provide 19,700 direct jobs in areas adjacent to the Airport to the west and south-east. Up to 30% of employment within the City of Kingston is in this Precinct.

State strategic policy seeks to locate jobs close to areas of population growth. The Airport contributes to reduced journey-to-work time and to the employment self-sufficiency of the City of Kingston and the Southern Subregion. Already 60% of Airport workers are located within a 20 minute drive of the Airport.

Figure 2.2 – Employment Impacts summarises employment contributions to the City of Kingston.

Employment Type	Impacts
Direct Employment	■ In 2014, 3,300 direct jobs are at Moorabbin Airport: ■ Aviation – **670** (20%) jobs, including pilots, instructors, engineers, management and service staff. ■ Industrial – **1,250** (38%) industrial related jobs. ■ Retail – **850** (26%) jobs in the DFO and Kingston Central Plaza. Costco jobs are in addition to this figure (estimated at 375). ■ Office – **480** (14%) jobs in the Airport's office precincts. ■ Ancillary – **25** (1%) jobs in a variety of uses such as petrol stations. ■ Support – **20** (1%) jobs in café, child care and other general support services. ■ Direct employment of 8,500 by 2035 will make the Airport one of the largest economic assets in the City of Kingston.
Indirect Employment	■ Significant flow-on employment is created through the multiplier effect. These jobs include accountants, supervisors, security guards, delivery persons and electricians who do not directly produce goods or services, but make efficient production possible. ■ There are significant positive economic impacts on regional centres arising from daily flights and freight from Airport warehouses. ■ 15,205 indirect jobs in the wider economy over 20 years.

Figure 2.2 // Employment Impacts

Current and projected employment outcomes are shown in **Figure 2.3 – Employment.**

	2014	2020	2035
Aviation Employment	670	730	1,050
Non-aviation Employment	2,630	5,110	7,450
Total Direct Employment	3,300	5,840	8,500
Indirect Employment	6,035	10,060	15,205
Total Direct & Indirect Employment	**9,335**	**15,900**	**23,705**

Figure 2.3 // Employment

Total direct employment levels for the Airport will grow to 5,840 over the next 5 years and 8,500 by 2035. Total direct and indirect employment levels will be 15,900 and 23,705 for the respective periods. The table above excludes potential employment from transactions currently being negotiated.

2.3 Investment

- **$570 million will be invested into Airport facilities by 2035:**
  - **$125 million will be invested in aviation facilities; and**
  - **$445 million will be invested in non-aviation facilities.**

Investment of $570 million will develop infrastructure and facilities for aviation and non-aviation activities over the 2015 Master Plan period. This is more investment than Moorabbin Airport has ever achieved in any previous period.

Aviation investment of $125 million includes:

- aeronautical infrastructure, taxiways, lighting, safety equipment and aircraft parking;
- hangars, maintenance facilities, terminals and other "hard" aviation infrastructure; and
- aviation related industry facilities, classrooms, research centres, sales offices and community facilities such as the Australian National Aviation Museum.

Non-aviation development of $445 million will deliver retail, showroom, commercial and industrial floor space as set out in **Chapter 7 – Non-Aviation Development Plan**.

In addition to the infrastructure and facility investment of $570 million, Airport customers and users will invest hundreds of millions of dollars in new aircraft, research facilities, flight simulators, avionics upgrades, air traffic control upgrades and building fit-outs.

2.4 Economic Benefits

Economic benefits from investment to be delivered under the 2015 Master Plan include:

- **Enhanced aviation hub for metropolitan Melbourne** – the Airport's role as a hub for general aviation, flight training, aviation education, charter flights, and aircraft maintenance generates significant economic benefits for the Southern Subregion.
- **Growth in the aviation industry** – the Airport indirectly supports the wider aeronautical industry not located on the Airport. These activities include aircraft component manufacturing, aircraft repair and maintenance, light aircraft manufacturing, system design and development and air traffic management products.
- **Local employment growth** – the Airport generates 5% of employment in the City of Kingston. Development of the Airport will increase the Airport's employment share.
- **Significant export income** – flight training accounts for $50 million annually in exports today and is forecast to grow to more than $140 million over 20 years.
- **Synergies with adjacent employment uses** – increased activity at the Airport will benefit the surrounding Kingston Central and Braeside Economic Precinct by enabling employees to more readily access new aviation and non-aviation retail, business offerings and services. This will further stimulate the local and regional economy.
- **Community and consumer benefits** – continuing growth and development of the Airport supports convenient access to a range of retail and other services.

The economic benefits of the Airport will be optimised where all levels of government and the community support:

- growth of responsible aviation activities, including flight training and charter;
- educational institutions investing in aviation "mini campuses";
- development of planning tools and controls to inform the community of aircraft impacts;
- aviation friendly off-Airport developments; and
- non-aviation development, recognising the ability of the Airport to attract quality brands and operations that are less suited to other employment land in the region.

Aviation is an important contributor to Australia's economy. The International Air Transport Association (IATA) has confirmed that aviation directly contributed 2.6% ($32 billion) to Australian Gross Domestic Product (GDP) and 6.1% of GDP ($75.6 billion) when taking account of indirect benefits such as tourism. Moorabbin Airport businesses contribute $340 million in economic activity annually.

2.5 Social Context

Moorabbin Airport is an important part of the social fabric of the community. As the Airport grows the community will continue to learn about its increasing social contributions. These include the creation of new jobs, the provision of new business sites, a place for youth engagement and the provision of aviation, retail and commercial operations.

The Airport considers and adapts to social concerns as part of its everyday business.

Planning and development has regard to the community, social impacts and the legislative and policy context so that the Airport is best positioned to deliver positive social impacts within the City of Kingston, metropolitan Melbourne and the State of Victoria.

2.6 Demographics

In considering the social impacts of the Airport the demographic profile of the community is important. **Figure 2.4 – City of Kingston Population – 2011 & Forecasts for 2026 & 2031** summarises population forecasts by age groups.

	2011		2026		2031	
Age Group (Years)	**Number**	**%**	**Number**	**%**	**Number**	**%**
0 to 4	9,321	6.3	9,555	5.8	9,703	5.8
5 to 9	8,419	5.7	9,033	5.5	9,146	5.5
10 to 14	7,819	5.3	8,822	5.4	8,967	5.4
15 to 19	8,585	5.8	9,293	5.7	9,380	5.6
20 to 24	9,668	6.5	10,019	6.1	10,259	6.1
25 to 29	9,985	6.8	10,549	6.5	10,808	6.5
30 to 34	10,414	7.0	11,371	7.0	11,487	6.9
35 to 39	11,430	7.7	11,779	7.2	11,866	7.1
40 to 44	11,588	7.8	11,609	7.1	11,785	7.1
45 to 49	10,501	7.1	11,141	6.8	11,434	6.8
50 to 54	10,038	6.8	10,831	6.6	10,747	6.4
55 to 59	8,629	5.8	10,312	6.3	10,313	6.2
60 to 64	8,196	5.5	9,157	5.6	9,635	5.8
65 to 69	6,454	4.4	8,323	5.1	8,483	5.1
70 to 74	5,170	3.5	7,071	4.3	7,687	4.6
75 to 79	4,452	3.0	6,180	3.8	6,284	3.8
80 to 84	3,719	2.5	4,404	2.7	4,884	2.9
85 and over	3,527	2.4	4,025	2.5	4,175	2.5
Total persons	**147,915**	**100.0**	**163,474**	**100.0**	**167,043**	**100.0**

Figure 2.4 // City of Kingston Population – 2011 & Forecasts for 2026 & 2031

The City of Kingston will experience strong growth in demographic bands that best support:

- flight training – the 15 to 24 year old age group is the major demographic for aviation students and will grow by 6%;
- flight charter and retail offerings – the 30 to 54 year old age group is the highest spending group and will grow by 8%. It will account for a significant proportion of the demand for flight charter services to tourist and leisure based destinations. Additional services (retail, medical, consultants) at the Airport will be required; and
- other community sectors that will benefit from Airport growth include aviation apprentices, retail and commercial casual employees and trades (e.g. electricians, plumbers).

2.7 Current Social Benefits

Key social benefits of the Airport, having regard to legislative and policy contexts and the demographics of the region, are shown in **Figure 2.5 – Key Social Benefits.**

Benefit	Comment
Employment and business development	■ Moorabbin Airport supports the social fabric of the community by continuing to provide employment opportunities for the region – including for new pilots, youth employment in the retail sector and construction sector employees. ■ Aviation and non-aviation investment and associated employment opportunities are material social benefits. Airport-based employment will reduce unemployment levels in the City of Kingston. Locally-based jobs reduce travel times and are more desirable. ■ Development of non-aviation activities on land approved as surplus to aviation needs is a statutory requirement and facilitates higher use of otherwise underutilised land.
Place of Community activity	Moorabbin Airport has a strong community profile gained through: ■ hosting and sponsoring the Australian Air League annual review for all Victorian squadrons – 500 people attending; ■ sponsoring autistic children family days – 250 people attending (including 120 or more youngsters); ■ sponsoring local school fetes; ■ participating in “Clean Up Australia” Day; ■ sponsoring the Life Saving Helicopter for the South East; ■ sponsoring multiple aviation-related youth programmes; ■ providing Airport tours to local primary and secondary schools; ■ supporting the Australian National Aviation Museum, including by providing three land sites at peppercorn rentals; ■ providing a careers day – 130 school children from 6 schools attended the 2014 event; ■ sponsoring RSL activities including ANZAC Day events; ■ sponsoring Aero Club anniversaries; ■ sponsoring local community centres and historical projects; ■ working with local animal and pet owner groups; and ■ providing playground and picnic facilities.

Benefit	Comment
Engagement with stakeholders	■ MAC engages with the community regarding all aspects of the Airport including economic and social contributions and the impact of aircraft operations. ■ MAC has held 70 Community Aviation Consultation Group meetings since the early 2000s and was one of the first airports to introduce this important community interface. ■ The 5-yearly master planning process and related community and stakeholder involvement are social benefits.
Landside Amenity	■ A master planned airport site provides a coordinated and integrated space for the surrounding region. ■ Modern, high quality aviation and non-aviation developments provide visual benefits. ■ The Airport's adoption of a precinct delivery approach has delivered contemporary estates providing superior amenities and facilities including Chifley Business Park located in the north-east.
Location of Social Infrastructure for the region	■ Direct Factory Outlets – retail centre in the north-west, operating since the early 1990s; ■ Kingston Central Plaza – retail centre in the north operating since mid-2000s; ■ Chifley Business Park – campus-style business park in the north east operating from early 2000s; ■ Joseph Avenue Early Learning Centre in the north east operating from mid-2000s; ■ Royal Victorian Aero Club – aviation club in the west operating since 1914 and at Moorabbin Airport since 1949; ■ Australian National Aviation Museum – aviation museum in the west operating since 1960s; ■ Moorabbin Airport Community Park – in the west operating since mid-2000s; and ■ multiple areas of well-maintained open space.
Facilitates social infrastructure off-Airport in the surrounding region	■ Bayside beaches, walkways and open spaces; ■ Mordialloc Community Centre, Cheltenham Mordialloc RSL, Benevolent Association of Nafpaktians and Central Bayside Community Health Services; ■ Capital Golf Club, Melbourne Golf Academy and Woodlands Golf Club; ■ Dingley International Hotel and Snipers Den Paint Ball Facility; ■ Parkdale Secondary College and Mentone Park Primary School; and ■ Heatherton Recreation, Kingston Heath, Southern Road and Mentone Racecourse Reserve.

Figure 2.5 // Key Social Benefits

MAC will continue to work with the community for improved social outcomes, as shown in. **Figure 2.6 – Key Social Impacts**.

Impact	Comment
Aircraft Noise on lifestyle and amenity	■ Residential developments near the Airport to include appropriate design responses; ■ local and State planning regimes to better inform new residents of aircraft operations; ■ aircraft noise is minimised through the Airport's comprehensive fly friendly procedures and operator engagement; ■ encouraging home purchasers in the area to conduct due diligence at different times of day and different seasons; and ■ working with community groups on aircraft operations generally and specific issues.
Safety concerns	■ The aviation industry, including government agencies, place a considerable and continuing emphasis on aircraft, aviation operations and airport safety to manage the risks associated with aircraft activity; and ■ industry bodies with a safety function include the Australian Transport Safety Bureau, MAC, Airservices Australia and the Civil Aviation Safety Authority.
Road traffic through increased development	■ The Ground Transport Plan in **Chapter 8** addresses traffic issues; and ■ off-Airport traffic planning and approvals are made by independent statutory bodies.

Figure 2.6 // Key Social Impacts

2.8 Future Social Impacts

MAC's assessment of future social benefits and impacts arising from Airport operations are set out in **Figure 2.7 – Future Social Impacts**.

Time Period	Further Benefits/Impacts
2015-2020	Positive social impacts include: ■ increases in employment (with associated regional increases in economic activity); ■ increases in flight training activity (with associated regional increases in economic activity); and ■ substantial improvements in the appearance of the Airport, including the Boundary Road frontage, the completion of drainage works and modern, high quality industrial/retail/commercial developments. Adverse social impacts may include: ■ continued concerns about the safety of operations and exposure to aircraft noise; ■ concern about the adequacy of public transport and overall traffic management in the region; and ■ concerns over loss of borrowed amenity as undeveloped land parcels in employment zones are developed.
2020-2025	■ Social benefits of the Airport by 2025 are anticipated to be similar to those in the previous 5 year period; ■ increased development over the next 10 years will result in the recognition of the Airport as an employment and economic hub; ■ more ancillary facilities and services are likely to be attracted to the Airport with the resultant potential to increase employment concentration; and ■ social concerns in relation to the Airport by 2025 are anticipated to be similar to those in the previous 5 year period.
2025-2035	■ social benefits and impacts of the Airport by 2035 are anticipated to be similar to those in the previous 5 year period; and ■ Moorabbin Airport will remain an internationally recognised flight training and general aviation hub and a regionally important economic and employment centre in the social fabric of the City of Kingston.

Figure 2.7 // Future Social Impacts

MAC will continue to consult with and engage the wider community about the Airport and its operations to increase social benefits and minimise social impacts through:

- engagement through forums, public information sessions and educational material;
- convening the Community Aviation Consultation Group meetings (70 meetings to date);
- creating operational procedures to deal with issues and concerns raised by the public;
- focusing on youth in the City of Kingston and the wider area to:
  - educate them about the Airport and aviation;
  - develop their interest in the Airport and the aviation industry; and
  - encourage them to inform others of all ages about the Airport; and
  - working to instil a sense of community.

Moorabbin Airport will remain an important social asset for the 20-year planning period of the 2015 Master Plan.

2.9 "Fit" with State Planning Schemes

The 2015 Master Plan proposes developments for a period of 5 years that are largely consistent with State Planning Schemes. The Master Plan framework is consistent with the operation of the relevant State Planning Policy Framework and sets out appropriate land use and developments which integrate relevant environmental, social and economic factors in the interests of net community benefit and sustainable development.

The State Planning Scheme provides existing and new strategies and objectives. For example, new convenience and small scale shopping and entertainment opportunities. The 2015 Master Plan incorporates these strategies and objectives within the retail and commercial employment sections by providing additional opportunities for new and existing Airport-based businesses and workers. Industrial land development strategies within State Planning Schemes require access for employees, freight and road transport. This Master Plan delivers on these objectives through planning for new and upgraded Airport based facilities, infrastructure and amenity.

Overall the 2015 Master Plan achieves a balanced approach with on- and off-Airport strategies and objectives and will deliver increased productivity and liveability.

Airport-based land use and developments are not antagonistic or contrary to local planning schemes. There may be some inconsistencies as discussed in **Chapter 7**. In this respect, even if there are inconsistencies, they are justified on a number of bases including that the proposed developments improve the Airport, increase employment levels and support the community and local and regional economies.

Each of these areas highlight the role and importance of the 2015 Master Plan and demonstrate the relevance to the overall success and viability for the Airport. Each is discussed below in turn:

- Plan Melbourne envisages the Airport as a Transport Gateway, with significant emphasis placed on the economic and employment generating functions. The proposed developments within the 2015 Master Plan address these key areas by developing the Airport into a key hub of metropolitan Melbourne by developing 250 businesses balanced by a mix of aviation, warehouse and industrial sectors and commercial and retail business models;
- implementing non-aviation developments within the Airport not only furthers the SPPF objective to encourage further development, but also addresses a community need for retail, entertainment, office and commercial services while encouraging competition. This promotes a net community benefit which specifically relates to accessibility, efficient infrastructure use and aggregation and sustainability of commercial facilities; and
- Non-aviation development within the Airport also addresses the objectives of the draft PPF. This development will promote city structure to drive productivity and support investment, it will create a wide variety of jobs which in turn promote the Airport as a transport gateway which will focus future investment and employment opportunities. These opportunities will be ensured through the availability of suitably located land to meet the needs of industry and by creating competitive frameworks for the delivery of retail, entertainment, office and other commercial services.

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3 // Master Plan Process

- The Airports Act contains comprehensive requirements for community and stakeholder consultation, public exhibition, consideration of stakeholder submissions and publication.
- Extensive consultation with the community and with stakeholders and agencies at national, State and local level has occurred and has been taken into account in preparing the 2015 Master Plan.
- After consultation in relation to the Preliminary Draft 2015 Master Plan, the Draft 2015 Master Plan was submitted to the Australian Minister for Infrastructure and Regional Development and was given Ministerial approval.

3.1 Introduction

This chapter sets out how the 2015 Master Plan has been developed, and consultation undertaken by the Airport with the community and other stakeholders. It explains the process under which the 2015 Master Plan was submitted to the Australian Minister for Infrastructure and Regional Development for approval.

3.2 Community & Stakeholder Consultation

During the preparation of this 2015 Master Plan, MAC established a formal consultation programme with a wide range of government, industry and community representatives. This consultation was critical in developing the various elements of the 2015 Master Plan and the Environment Strategy (Chapter 10 of this 2015 Master Plan).

MAC's representatives consulted with the stakeholders detailed below prior to the completion of the statutory consultation period. A number of these meetings were conducted during pre-consultation.

- Aviation users of the Airport – including aviation training providers and students;
- the Airport Building Controller and the Airport Environment Officer;
- Airservices Australia;
- CASA;
- Australian Members of Parliament, Australian Government officers and government agencies;
- State Members of Parliament and State Government officers;
- local government councillors, administrators and officers; and
- community members, industry groups and the Moorabbin Community Aviation Consultation Group (CACG).

MAC has undertaken, and will continue to undertake, detailed consultations with the Kingston City Council reflecting the importance of the Council to the Airport, and the important role that the Airport plays in the growth, economy and service provision for the City of Kingston.

3.3 Public Exhibition

In accordance with section 79 of the Airports Act, the Preliminary Draft 2015 Master Plan was publicly exhibited for 60 business days. Newspaper notices were published inviting members of the public to give written comments about the Preliminary Draft 2015 Master Plan and the Environment Strategy (Chapter 10 of this 2015 Master Plan).

The Preliminary Draft 2015 Master Plan was available for viewing from Friday 20th March 2015 until 5:00pm on Tuesday, 17 June 2015:

- at the Airport's website: www.moorabbinairport.com.au/corporate/master-plan
- in person at the Airport Management Centre, 66 Bundora Parade, Moorabbin Airport, Victoria 3194, Monday to Friday (excluding public holidays) from 9:00am to 5:00pm.

Prior to releasing the Preliminary Draft 2015 Master Plan for public consultation, MAC advised the following persons, in writing, of the Preliminary Draft 2015 Master Plan:

- State Minister for Planning;
- State Department of Environment, Land, Water and Planning; and
- City of Kingston.

3.4 Comments & Submissions

Under the Airports Act, MAC was required to consider any comments received during the public exhibition period. **The public exhibition period ran from 20 March 2015 until 5:00pm, Melbourne time, on Wednesday 17th June 2015**.

After the public exhibition period, MAC reviewed and assessed all comments and, where appropriate, made changes to the Preliminary Draft 2015 Master Plan to address those comments. Changes made are reflected in the 2015 Master Plan which was submitted to the Minister for approval.

3.5 Submission to Minister

The Preliminary Draft 2015 Master Plan was amended to produce the Draft 2015 Master Plan, which was submitted to the Australian Minister for Infrastructure and Regional Development for approval.

The submission to the Minister was accompanied by various documents, including:

- copies of comments received from members of the public; and
- a written certificate signed on behalf of MAC containing:
  - a list of names of the people or organisations who provided written comments to the Preliminary Draft 2015 Master Plan;
  - a summary of the comments received; and
  - evidence that MAC has given due regard to those comments.

These documents are compiled in the Supplementary Report which accompanied the 2015 Draft Master Plan as submitted to the Minister.

3.6 Publication of Final Master Plan

On approval by the Minister, the Draft 2015 Master Plan came into effect as the final 2015 Master Plan. In accordance with Section 86 of the Airports Act, MAC will undertake the following notifications:

- publish newspaper notices advising that the 2015 Master Plan has been approved;
- make copies of the 2015 Master Plan available for inspection in person at the Airport; and
- make a copy of the 2015 Master Plan available on the Airport's website.

The 2015 Master Plan will also be disseminated to Airport customers, licensees, other Airport users and local communities through a range of stakeholder engagement mechanisms including the Airport's website and the Moorabbin Airport Community Aviation Consultation Group.

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4 // Planning Framework & Context

- The Airports Act regulates all aspects of airport planning, and was implemented to the exclusion of State planning laws.
- The Airports Act planning regime is often more prescriptive than State and Local Government planning requirements.
- Plan Melbourne recognises the strategic importance of Moorabbin Airport. It supports the development of job generating activity at the Airport and designates it as a Transport Gateway with a significant economic and employment generating role.
- This 2015 Master Plan is supported by numerous provisions of the Kingston Planning Scheme and local planning policy, even though they do not directly apply to the Airport.

4.1 Introduction

This 2015 Master Plan is the primary document which guides land use, development and investment at the Airport. It will see the Airport continue and increase its role as a centre for investment opportunities, which will grow the Airport's potential to be a significant employment generator in Melbourne's south-east.

Since the 2010 Master Plan, the State Government has released Plan Melbourne, which emphasises the importance of the Airport as a centre of aviation activity and as an economic and employment hub of State significance. This 2015 Master Plan will allow the Airport to deliver the objectives identified under Plan Melbourne, to the benefit of nearby communities, the whole of Victoria and Australia.

This chapter sets out the key planning objectives for use and development of the Airport in the context of the statutory, policy, strategic and land use frameworks at national, State, regional and local levels.

4.2 Consistency with State Planning Schemes

The Airports Act requires this 2015 Master Plan to address:

- the extent (if any) to which certain specified objectives and proposals contained in the Master Plan are consistent with planning schemes in force under Victorian law; and
- if the Master Plan is not consistent with those planning schemes – the justification for the inconsistency.

This 2015 Master Plan is consistent with State planning policy, and with planning schemes in force under Victorian law, as outlined in sections 5.6 (the Land Use Plan), 6.6 (the Aviation Development Plan) and 7.11 (the Non-Aviation Development Plan).

In addition, this 2015 Master Plan contributes significantly towards important State planning policy objectives, including:

- providing for employment and investment in accordance with State economic objectives. See section 2.1, above;
- providing for land on and off the Airport to buffer other land uses in accordance with State planning policy and NASF standards. See section 11.7.1 below;
- outlining why the land uses set out in this 2015 Master Plan are appropriate in the context of off-Airport land which is designated as part of Melbourne's green wedge. See section 7.3 below; and
- in the zoning controls applicable under Appendix 1 to this 2015 Master Plan, reflecting a contemporary application of commercial zones under the Victoria Planning Provisions to non-aviation land at the Airport. See section 5.6 below.

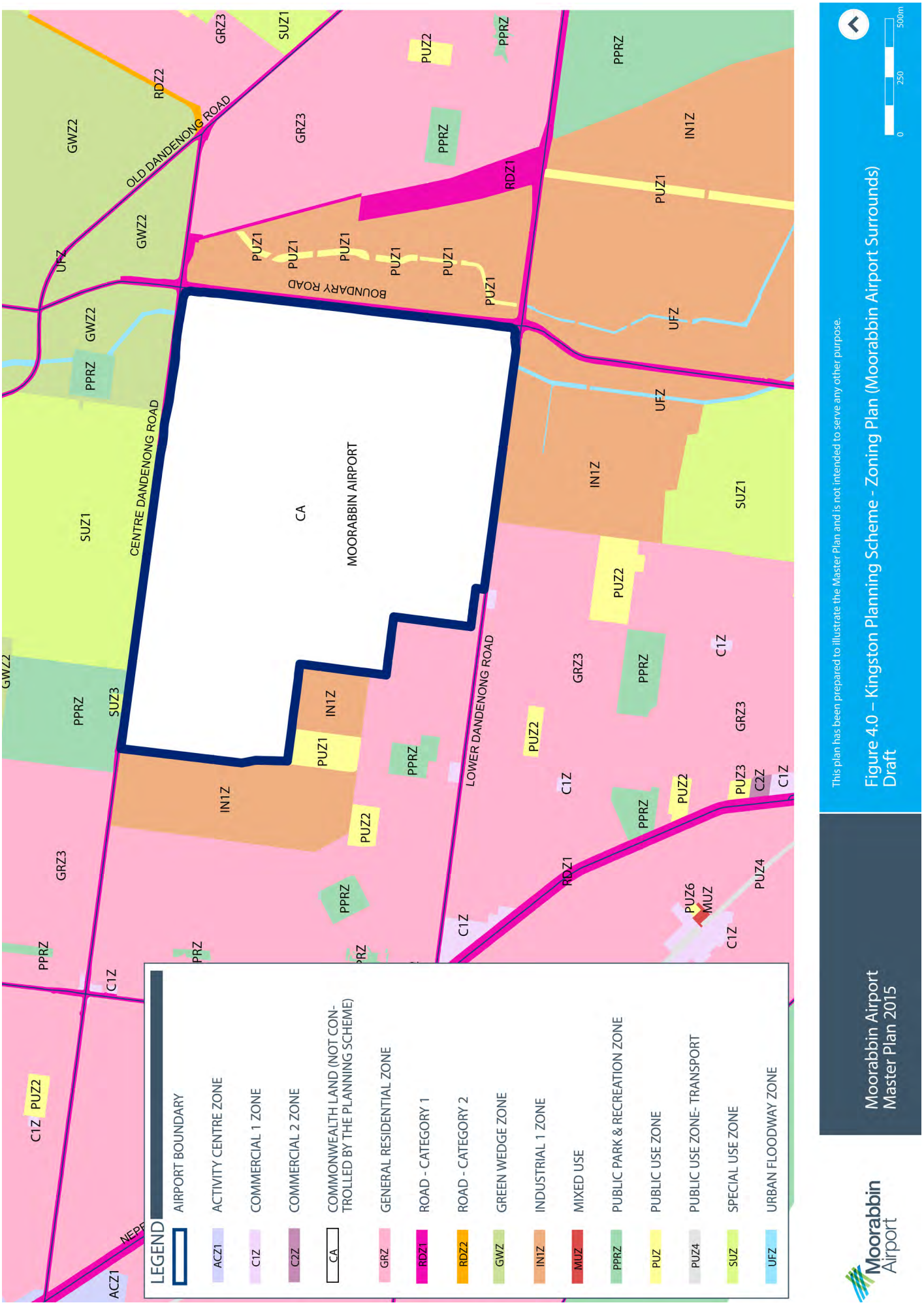


Figure 4.0 // Kingston Planning Scheme – Zoning Plan (Moorabbin Airport and Surrounds)

In considering consistency between airport land use plans and planning schemes under State law, regard must now be had to the February 2015 decision of the Commonwealth Administrative Appeals Tribunal (AAT) in Moorabbin Airport Corporation Pty Ltd v Minister for Infrastructure and Regional Development, [2015] AATA 77 - a decision which amongst other things considered questions of consistency with State planning schemes, and justifications for inconsistencies.

In the AAT decision the AAT drew on expert planning evidence to find that:

- Plan Melbourne now provides an "overarching policy context" to shape Melbourne;
- the Airport fits into Plan Melbourne, and through it into Victorian planning schemes, as a Transport Gateway - a place of economic and employment generating significance; and
- Plan Melbourne has lessened the significance of the hierarchy of activity centres.

Even if development proposals or objectives are inconsistent with the local and state planning schemes they can be justified on the basis that:

a. the Airport is on Commonwealth land and subject to the Airports Act, the Airport lease and the applicable Master Plan;

b. the Airport is not governed by the Local Planning Scheme or any other State Planning Scheme;

c. the Local Planning Scheme does not allocate a zoning to the Airport;

d. Plan Melbourne identifies the Airport as a "State Significant Element – Transport Gateway" and, as such "an economic and employment centre" providing "a significant economic and employment-generating role" - that is, given the overriding policy context of Plan Melbourne, consistency with the requirements of being a Transport Gateway under Plan Melbourne will of itself allow for inconsistencies with other local planning schemes;

e. commercial development is essential to the continued operation of the Airport and provides an important income base to support investment in aviation infrastructure to ensure the ongoing viability and growth of the Airport and aviation activities at the Airport;

f. the proposal increases net employment in the local and regional economy; and

g. the proposal increases the level of competition and choice for local residents and workers, including employees at the Airport.

Consistency of the objectives and proposals set out in this 2015 Master Plan, and (where any inconsistency is identified) justification for that inconsistency using the criteria outlined by the AAT in its decision, are addressed in a number of sections of this Master Plan including **Section 5.6** (in relation to land use), **Section 6.6** (in relation to aviation development) and **Section 7.11** (in relation to non-aviation development).

4.3 Legislative Framework

The Airport operates within a legislative framework that includes:

- the Airports Act and the Airports Regulations;
- the Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth);
- the long-term lease of the Airport to MAC; and
- Victorian State legislation, where it applies to the Airport directly or where it must be taken into consideration in preparing this 2015 Master Plan.

4.4 National Policy Framework

4.4.1 Master Plan Amendments – Guidelines

In January 2012, the then Department of Infrastructure and Transport produced Guidelines to assist airport lessee companies to address new requirements for airport master plans.

The Guidelines make clear the obligation of airport lessees to undertake regular and ongoing consultation with airport users, the State government, local authorities and the community to improve information sharing and to strengthen planning and development outcomes.

The Guidelines have been taken into account in the preparation of this 2015 Master Plan, and in the reports and studies which were prepared to inform it.

4.4.2 National Airports Safeguarding Framework

The National Airports Safeguarding Framework (NASF) is a national land use planning framework, which aims to:

- improve community amenity by minimising aircraft noise-sensitive developments near airports; and
- improve safety outcomes by ensuring aviation safety requirements are recognised in land use planning decisions, through guidelines being adopted by jurisdictions on various safety-related issues.

The focus of this 2015 Master Plan is to facilitate development that promotes the Airport as a hub of general aviation services and aviation education, underpinned by complementary commercial, industrial and retail uses. In facilitating such a mix of activity and development, this 2015 Master Plan balances potential aircraft noise impacts. This 2015 Master Plan provides important information that has the potential to be used by other stakeholders to better safeguard the Airport from inappropriate off-Airport development and the community from aircraft noise.

Commonwealth, State and Territory Ministers considered the NASF at the Standing Council on Transport and Infrastructure meeting on 18 May 2012. The NASF was agreed at that meeting, but Guideline A was subject to the Australian Government's intention to seek a review of AS2021 by Standards Australia.

Each State and Territory jurisdiction is responsible for implementing the NASF and aligning their planning processes with the NASF principles and guidelines, as appropriate.

While the implications of the NASF for the Airport are discussed in more detail in **Chapter 11**, for completeness MAC notes that Plan Melbourne recognises the need to strengthen airport safeguarding, consistent with the objectives of the NASF. To this end, Victoria's draft Planning Policy Framework (PPF) includes the NASF as a background document.

4.5 Victorian Policy Framework

The Airport's leasehold is regulated under the Airports Act. Accordingly, the Victoria Planning Provisions (VPPs), including the State Planning Policy Framework, do not of their own force apply to the Airport. **Figure 4.0 – Kingston Planning Scheme – Zoning Plan (Moorabbin Airport and Surrounds)** illustrates how as Commonwealth land, the Airport has not had any zone applied to it under the Kingston Planning Scheme.

Local councils and other planning authorities in the Victorian planning system therefore have no direct approval, supervisory or enforcement role in land use planning or development approval at Moorabbin Airport.

Notwithstanding this, the Victorian planning system does have implications for land use and development at and in the vicinity of the Airport, and has therefore been considered when developing this 2015 Master Plan.

4.5.1 Plan Melbourne

Plan Melbourne was formalised by the Victorian State Government in May 2014. It outlines the plan and vision for Melbourne's growth to 2050, and helps to create a framework that will support the sustained growth and prosperity of Victoria. It is currently the key metropolitan strategic planning document in Victoria.

Following the change of State government in Victoria in November 2014, Plan Melbourne may be reviewed and may be amended. This 2015 Master Plan is based on Plan Melbourne as it stands at the date of approval by the Minister.

Plan Melbourne expressly recognises:

- Moorabbin Airport as an existing "Transport Gateway" – alongside other major airports such as Melbourne, Avalon and Essendon;
- that Melbourne's airports are major economic assets, which are vital to the growth and vibrancy of the city, with an important economic and employment-generation function;
- the importance of airports not only for transport, but also as economic and employment hubs for metropolitan Melbourne; and
- that Moorabbin Airport is a general aviation airport which provides an important aviation training function, scenic and commercial operations.

The Strategic Direction for Transport Gateways in Plan Melbourne provides that airports will be protected from incompatible land uses, but that adjacent complementary uses and employment-generating activity will be encouraged.

Accordingly, Plan Melbourne envisages airports within the Melbourne metropolitan region, including Moorabbin Airport, adopting a broader approach to land use and the operations that may occur at airports alongside aviation and general aviation services. The development and operation of commercial, industrial and retail uses on airports is clearly intended to be part of the broader suite of uses which will drive economic growth and prosperity in Melbourne and across Victoria.

Designation of Moorabbin Airport as a Transport Gateway in Plan Melbourne makes the Airport a "Place of State Strategic Significance to Victoria".

Other examples of Places of State Strategic Significance include Melbourne's CBD, national employment clusters, health and education precincts and major metropolitan centres such as Dandenong and Frankston.

Places of State Strategic Significance are recognised for their city-shaping role and their existing and potential contribution to productivity and economic growth. Plan Melbourne notes that it is in the interests of all Victorians to ensure that these places achieve their potential. By way of contrast, Places of Local Significance, including activity centres, neighbourhood centres, medium and small-scale industrial areas and many urban renewal sites, are mainly of local importance and remain primarily the responsibility of local government.

The designation of Moorabbin Airport as a Place of State Strategic Significance means that is a major metropolitan infrastructure, economic and employment hub which supports the present productivity of Melbourne and Victoria and has the potential to make a significant contribution to future growth.

This 2015 Master Plan implements these objectives of Plan Melbourne by incorporating commercial, industrial and retail uses at Moorabbin Airport over the 20 year planning period of the 2015 Master Plan. Such uses are complementary to the Airport's use for general aviation services and aviation education, and will underpin and support the continuation of the Airport's general aviation function and the aviation education services that have traditionally been provided.

This 2015 Master Plan recognises that a significant opportunity exists for Moorabbin Airport to increase non-aviation activities on site, thereby increasing the employment generating opportunities available on the Airport and across the City of Kingston, and ensuring that further investment in the Airport as a provider of general aviation and aviation education services is possible.

The development of large format commercial and industrial development at the Airport will see Moorabbin Airport facilitate significant growth in available commercial space for new employers. In addition, land-intensive retail formats (for example restricted retail) that are not easily accommodated in other parts of the City of Kingston will be able to be provided, bringing a stronger and more dynamic retail offering to the City, which will also increase employment opportunities.

The new developments contemplated by this 2015 Master Plan will not adversely affect aviation and general aviation operations at the Airport. They are to be sited in areas where their development is compatible with air traffic movements, and are developments of a type which is generally not vulnerable to air traffic noise (when compared, for example, to general residential development or other sensitive uses not associated with Airport operations).

4.5.2 State Planning Policy Framework

As noted above, the SPPF does not strictly apply to the development of the Airport under the Airports Act and this 2015 Master Plan. Notwithstanding this, some provisions of the SPPF refer to Moorabbin Airport, and as required by the Airports Act, the SPPF has been considered in preparing this 2015 Master Plan.

Clause 18.04-2, Planning for Airports, has the objective of strengthening the role of Victoria's airports within the State's economic and transport infrastructure and protecting their ongoing operation. One of the stated strategies is to:

> **"Recognise Moorabbin Airport as an important regional and State aviation asset by supporting its continued use as a general aviation Airport, ensuring future development at the site encourages uses that support and enhance the State's aviation industry and supporting opportunities to extend activities at the Airport that improve access to regional Victoria".**

Other SPPF provisions, while not referring specifically to the Airport, set out relevant general policy objectives. These include:

- Clause 11.01-2, Activity centre planning, with the objective of encouraging the concentration of major retail, residential, commercial, administrative, entertainment and cultural developments into activity centres which provide a variety of land uses and are highly accessible to the community. Correspondingly, Clause 17.01-2, Out of centre development for Metropolitan Melbourne, has the objective of managing out of centre development in metropolitan Melbourne, and aims to discourage "single use" retail, commercial and recreational facilities outside activity centres.

  While acknowledging these clauses, MAC's view is that for the reasons outlined in more detail in section 4.2 above the significance of the hierarchy of activity centres as described in the SPPF has been lessened following the introduction of the Plan Melbourne metropolitan planning strategy, and that there are particular considerations applying to the Airport and development at the Airport which can and do justify land use and development which may be seen as inconsistent with a provision such as Clause 11.01-2.

  In addition, the vision outlined in this Master Plan for the development of the Airport as an integrated, master planned precinct which links with and complements the wider Kingston Central and Braeside Economic Precinct and the wider Southern Subregion of metropolitan Melbourne is not an instance of a "single use", stand-alone facility that Clause 17.01-2 seeks to discourage. Rather, it represents the development of the Airport in accordance with its designated role as a Transport Gateway and Place of State Significance. Clause 17.01-2 contemplates, and the AAT has recognised (as outlined in section 4.2 above) that net benefit to the community in the region of the Airport will justify any inconsistency with the objective of Clause 17.01-2.

- Clause 11.04-3, A more connected Melbourne, which includes the strategy of increasing the capacity of airports and improving landside transport access.
- Clause 11.04-7, Green wedges, specifies a wide variety of non-urban uses including waste facilities, road infrastructure, open space and parklands as part of the objective of protecting areas required for non-urban uses of Metropolitan Melbourne from inappropriate development. It includes the strategy of planning for and protecting major transport facilities that serve the wider Victorian community, such as airports and their associated access corridors.
- Clause 11.05-4, Regional planning strategies and principles, with the objective of maintaining and enhancing regional Victoria's competitive advantages, including by ensuring that the capacity of major infrastructure such as airports is not affected adversely by urban development in adjacent areas. The Airport's direct function as a gateway for air passenger and freight services to regional Victoria, and its indirect contribution to maintaining these links through training of pilots, engineers and other aviation industry participants, mean that it has an important part to play in meeting this objective.
- Clause 11.12-4, Infrastructure, which aims to minimise the impact of urban development on the current and future operation of airports of national, State and regional significance.
- Clause 17.01-1, Business, with the objective of encouraging development which meets communities' needs for retail, entertainment, office and other commercial services, and which provides net community benefit in relation to accessibility, efficient infrastructure use and aggregation and sustainability of commercial facilities.
- Clause 18.04-2, Planning for Airports, includes strategies to protect airports from incompatible land uses; to ensure that the planning of airports identifies and encourages activities that complement the role of the airport; and to enable the operator to effectively develop the airport to be efficient and functional and contribute to the aviation needs of the State.

This 2015 Master Plan establishes a clear direction for the continuing operation of the Airport as a State and regional aviation asset, a key component of the State's aviation industry and a hub for connection to regional Victoria. In particular, this 2015 Master Plan maintains Moorabbin Airport as a hub for general aviation services and aviation education.

4.5.3 Planning Policy Framework Review

An Advisory Committee was appointed by the Victorian Government in 2013 to update the existing SPPF, with the objective of incorporating regional policy, and enabling local policy to be better aligned with State and regional policy. The Advisory Committee prepared a draft Planning Policy Framework (PPF) to achieve these aims.

The March 2014 draft PPF, as applicable to the City of Kingston, includes as part of Clause 12.09-S-01 the following objectives and strategies of specific relevance to the Airport:

- Objective 1, with the aim of strengthening the economic, defence and social roles of Victoria's airports within the State's economic and transport infrastructure, and protecting their ongoing operations.
- Strategy 1.2, to support activities that complement the tourism, transport and logistics roles of an airport and enable the operator to develop the airport to be efficient, functional and to contribute to the aviation needs of the State.
- Strategy 1.3, to plan for associated businesses that depend on or gain significant economic advantage from proximity to an airport, airbase or airfield.
- Objective 2, to safeguard airports and aviation operations, with associated Strategies including management of adverse noise impacts and the use of land-use buffers to protect airports from incompatible land uses and development.

The NASF is a background document referred to in Clause 12.09 of the draft PPF.

Like the current SPPF, the draft PPF specifically recognises Moorabbin Airport as an important regional and State aviation asset. The draft PPF also supports the continued use of the Airport as a general aviation airport; seeks to ensure that future development will encourage uses that support and enhance the Airport; and supports opportunities to extend activities at the Airport that improve access to regional Victoria (Clause 12.09-M00-01).

Clause 03.06-M00-01 of the draft PPF, which sets out objectives and strategies for metropolitan Melbourne, is relevant to the Airport as a recognised Transport Gateway in Plan Melbourne. The stated strategic direction for Transport Gateways is to secure adequate gateway capacity for moving passengers and freight in and out of Victoria, with protection from incompatible land uses but encouragement for adjacent complementary uses.

Importantly, the draft PPF also includes (in Clause 9 – Economic Development) policies, objectives and strategies of key relevance to the Airport, including:

- recognition of major areas of industrial, business and commercial land, with planning for concentrated areas of employment and for infrastructure investment in areas with concentrated employment linked to transport networks to maximise productivity (Clause 09.01-S01);
- creating a city structure that drives productivity, supports investment and creates more jobs, including by improving Metropolitan Activity Centres, activity centres, industrial precincts and transport gateways as places of investment and employment (Clause 09.01-M00-01). Strategic planning is required to identify priority investigation areas that can provide new employment opportunities on existing or new infrastructure;
- ensuring availability of land in suitable locations to meet the needs of industry, including providing, where possible, suitable separation between industrial land uses with potential amenity impacts, and sensitive land uses (Clause 09.05-S-01);
- creating opportunities for innovation and the knowledge economy within existing and emerging industries, research and education, including by supporting the development and intensification of business clusters (Clause 09.06-S-01); and
- creating a competitive framework for the delivery of retail, entertainment, office and other commercial services, including the creation of vibrant mixed-use commercial centres for retail, office, business, entertainment and community uses, and avoiding establishing uses that affect the safety and amenity of adjacent, more sensitive uses (Clause 09.07-S-01).

This 2015 Master Plan has been prepared taking account of the draft PPF and its potential introduction into Victoria's planning system. Specifically, the 2015 Master Plan reinforces the importance of Moorabbin Airport as a Transport Gateway, by supporting the ongoing, primary use of the Airport as a centre for general aviation and aviation education. It makes available land that is suitable for large scale industrial, commercial and retail uses, the development of which will foster investment and job creation in a format that will have no adverse impact on the ongoing operation of Moorabbin Airport's aviation uses.

The employment opportunities provided by the proposals contained in this 2015 Master Plan will provide significant benefit to the community both in terms of new employment opportunities and the provision of new industrial, commercial and retail facilities in a convenient location.

4.5.4 New Commercial Zones

This discussion paper was released by the then Department of Planning and Community Development in 2008. One of its critical messages was the need to improve planning and development approval processes in and around activity centres and strategic development sites.

Two of the key principles stated within the discussion paper are of specific relevance to the Airport and this 2015 Master Plan:

- planning policies and controls should allow capacity for growth and change in retailing; and
- planning policies and controls should not limit retail competition or innovation, or distinguish between or favour particular forms of retailing unless there is a clear public policy case for doing so.

The Review notes the clear public policy rationale for supporting competition and innovation in retailing and – subject to the satisfaction of appropriate locational and design criteria – no commensurate public policy case for restricting or favouring particular types of retailing. Retail change and innovation should be driven by consumer preferences, and not by planning policies which favour particular types of retail development over others.

The desire to protect existing retailers from competition is not seen as a valid basis for restricting retail investment or innovation.

The policy directions evident in the discussion paper have since been implemented in reforms to statutory planning controls within Victoria, including:

- the introduction of reformed commercial zones in July 2013 (replacing 5 previous business zones with 2 new commercial zones), and removing floor space restrictions and the need for planning permits for some uses, including supermarkets in some situations; and
- Amendment GC06 to a range of Victorian planning schemes (removing floor space restrictions from specific commercial areas across metropolitan Melbourne).

Clearly, both the nature of retailing activity and the policy basis for regulating retail land use and development are evolving, with planning policies increasingly directed towards encouraging retail competition, choice and innovation without undue or unnecessary limitation.

At the same time, continued support exists for the concentration of employment and economic activity at Places of State Significance – including the Airport, as a recognised Transport Gateway – as well as within designated employment clusters and other centres, as demonstrated under Plan Melbourne.

The existing and evolving role that the Airport plays as a centre of retail and employment activity within the City of Kingston and the wider metropolitan area is one which finds support within the present policy framework. This role should in turn therefore be recognised and supported as and when relevant policy reviews are being undertaken.

4.5.5 The Victorian Freight & Logistics Plan (Victoria the Freight State)

The Victorian Freight and Logistics Plan (August 2013) sets out the State Government's vision for Victoria to retain its status as Australia's freight and logistics capital, building on its competitive strengths. It seeks to facilitate distribution, warehousing and logistics activities by ensuring that container and cargo ports, and airports, are supported by appropriate links to rail and road networks.

Included within the plan, as part of Direction 4 – Ensuring adequate air freight capacity is the recognition that airports with regular daily regional passenger services, including Moorabbin Airport, provide opportunities for air freight delivery. Other regional airports may potentially support increased air freight activity through appropriate infrastructure upgrades.

As outlined in section 2.1 of this 2015 Master Plan, the Airport meets the airfreight needs of a number of industry sectors in regions including King Island, Flinders Island and northern Tasmanian centres. This 2015 Master Plan does not seek to dramatically increase freight movements at the Airport, for reasons including that typical freight industry operating hours are inconsistent with demonstrated community sensitivity to early-morning and late-night aircraft movements.

The maintenance of Moorabbin Airport as a centre of aviation and aviation general services is however consistent with the intent of Direction 4 of the Victorian Freight and Logistics Plan.

The success to date of Chifley Business Park, and its anticipated growth and development during the 20-year planning period of this 2015 Master Plan, means that the Airport's access to designated Principal Freight Network (PFN) and approved B-Double routes (discussed further in **Chapter 8**) will be a continuing competitive advantage for the Airport.

4.6 Local Policy Framework

The Airport is within the municipal area of the City of Kingston. Strategic and statutory land use planning policies and controls for the City of Kingston are set out in the Kingston Planning Scheme (KPS). Like the SPPF, the Kingston Planning Scheme does not strictly apply to the development of the Airport under this 2015 Master Plan.

The Kingston Planning Scheme is discussed in **Section 4.7**.

4.6.1 One Vision – City of Kingston Council Plan 2013-2017 and Living Kingston 2035

One Vision sets out Council's vision for the City of Kingston as a diverse, dynamic community where all residents share a sustainable, safe, attractive environment and a thriving economy. One Vision is informed by community engagement, government policy, demographic forecasts and budgetary considerations. One Vision recognises the place of the Airport as a centre of manufacturing, retail and transport among other diverse land uses within the city's boundaries.

One Vision also recognises the role of the City of Kingston as a major employment centre and industrial base, with a skilled labour force. Of 70,000 employed Kingston residents, almost 30% work locally, benefiting from shorter travel times and an improved work/life balance. A reduction in the proportion of employment in manufacturing, and a corresponding increase in small to medium enterprises, is a key observation within the plan. Council's vision for the future, Living Kingston 2035, includes the objective for residents to have ready access to employment, services and facilities, with infrastructure in place to support growth, and housing, industrial precincts, businesses and shops integrated as part of a well-designed city.

To deliver a prosperous and dynamic city, the plan aims to foster innovation, research, learning and skill development, and encourages the sharing of knowledge. The City of Kingston is to be a hub for business and industry in Melbourne's south-east, with thriving industrial estates and strong retail sectors supporting a strong local economy and the availability of local jobs.

This 2015 Master Plan seeks to further implement the aims of One Vision, by providing a diverse offering of compatible commercial, industrial and retails uses within the Airport, while continuing to maintain the Airport's operation as a centre of aviation related uses. The extensive training and education provided by 16 flight schools delivers the One Vision objective of skills and knowledge development. This large cluster of education organisations and the presence of students from multiple Victorian universities makes Moorabbin Airport one of the largest educational clusters within the City of Kingston.

Currently, with approximately 5% of the City of Kingston's workforce working at Moorabbin Airport, and with development set out in this 2015 Master Plan expected to increase this figure to 10% by 2035, it is considered that this 2015 Master Plan is consistent with and supports these objectives of Living Kingston 2035.

60% of the Airport workforce lives within a 20 minute drive of the Airport, demonstrating that the development of Moorabbin Airport in accordance with this 2015 Master Plan will provide residents with a better offering of local jobs in strong aviation, industrial, commercial and retail sectors which will support the local economy.

4.6.2 City of Kingston Retail/Commercial Development Strategy

The City of Kingston commissioned Charter Keck Cramer to produce a Retail/Commercial Development Strategy, with the final report published in July 2006. The Strategy was developed to help guide the future direction of retail, commercial and office investment in the City of Kingston.

The Strategy clearly recognises the importance of the Airport as a current and future centre of retail and commercial activity within Kingston and the wider area.

Of particular relevance to Moorabbin Airport are the following observations:

- Kingston's office market was seen to be in a transition phase. Increasingly, corporate clients are choosing new business park environments over traditional office precincts, while strong growth in the business services sector has increased demand for smaller strata office suites close to facilities in activity centres.

- Chifley Business Park is recognised as accommodating existing and new corporate customers in a contemporary campus style environment that offers a range of support facilities. It responds to the demand for many large corporate customers to locate in centres close to the epicentre of their workforce catchment and incorporates facilities such as childcare services, banks, cafés and car parking. Chifley Business Park is acknowledged as a significant asset within the City of Kingston, providing the opportunity to retain corporate offices which might otherwise be attracted elsewhere in search of a contemporary campus style environment.
- The established role of Direct Factory Outlets (DFO) as a distinctive retail format drawing visitors from a wide catchment area is also recognised in the Strategy, including its ability to address, in part, the gap in the retail hierarchy represented by the lack of a sub-regional shopping centre in Melbourne's bayside area.
- Recognition is given to the potential for and the likelihood of additional bulky goods retailing floor space being developed at the Airport. In addition, the potential for larger-scale showroom uses at the Airport, in association with existing retail activities, is recognised, particularly along the Boundary Road frontage.

The Strategy recommended that the City of Kingston should review the role of Chifley Business Park with a view towards further strengthening its ability to attract larger corporate customers, and ensuring that necessary support services for the employee population are provided as needed.

Appropriate retail activities at the Airport are consistent with this local strategy for retail and commercial land use. The development of these activities should be considered and assessed against the Airports Act and include an overarching test of net community benefit, including:

- the need for additional retail facilities and services in the locality and the communities which will be served by these new facilities; and
- whether those facilities can be effectively provided at established activity centres.

The provision of retail facilities at the Airport will provide a net community benefit to the City of Kingston, and will also be consistent with the key strategic State planning document, Plan Melbourne.

4.7 Kingston Planning Scheme Planning Controls

As previously noted in relation to the Victorian planning framework, the Airport's leasehold is regulated under the Airports Act, which means that the Kingston Planning Scheme does not of its own force apply to the Airport. However, use and development of "off-Airport" land adjoining the Airport is controlled by the Kingston Planning Scheme. This means that some elements of the Kingston Planning Scheme will have important implications for land uses within the Airport's boundaries.

Implementation of the NASF and outcomes of this 2015 Master Plan may, over time, give rise to amendments to the Kingston Planning Scheme, as discussed in more detail in **Section 11.7**.

While the Victorian planning framework and the provisions of the Kingston Planning Scheme do not apply to the Airport, there are a number of planning controls which recognise the potential adverse amenity impacts associated with the Airport and its operation, and at the same time seek to protect the Airport and its operations from inappropriate encroachment of residential and other sensitive uses.

These existing controls make the Airport an ideal location for industrial, commercial, retail and other land uses which have potential amenity impacts, as they have ensured that large areas of the Airport are well separated from areas with the potential to be affected by these impacts.

As Council undertakes future reviews of relevant parts of its Local Planning Policy Framework, MAC will take advantage of any opportunities which arise to reinforce the Airport's relationship with the Braeside Industrial Area as part of the emerging Kingston Central and Braeside Economic Precinct.

4.7.1 Municipal Strategic Statement (MSS)

The Municipal Profile (Clause 21.02-2) within the Kingston Planning Scheme recognises the major role played by the Airport within the State's economic and transport infrastructure. This contribution is enhanced by associated aviation and aviation-related industrial and commercial activities located on the Airport supplying a significant number of jobs to the local economy. Long-term protection of the Airport's flight paths is required to optimise its potential for future growth.

It is specifically recognised in the Municipal Profile that land which is not required for aviation purposes at the Airport is becoming increasingly utilised for a diversity of retail and commercial activities.

These elements of the MSS were included in the Kingston Planning Scheme under Amendment C75 in 2009. Among the recommendations of the Planning Panel which considered and reported on Amendment C75 was that Kingston's MSS should recognise the growth of non-aviation activities at the Airport:

> **"The Panel notes that retail and other developments that have occurred at Moorabbin Airport are not subject to the Victoria Planning Provisions. That such development has occurred that may be inconsistent with the goals and objectives of Council and therefore 'unplanned' in a municipal context is however beside the point. The fact is developments at Moorabbin Airport now play a significant role in the retail framework of the municipality and beyond and should be recognised accordingly."**

This observation by the Panel in Amendment C75 accords with State Government policy as expressed in Plan Melbourne. In particular, the designation of Moorabbin Airport as a Place of State Strategic Significance in Plan Melbourne acknowledges that Moorabbin Airport has a city-shaping role and great potential to contribute to productivity and economic growth.

Also within the MSS:

- Clause 21.06 – Retail and Commercial Land Use discourages "out of centre" retail and restricted retail development – that is, outside designated and established Activity Centres identified in the Kingston Planning Scheme. Notwithstanding this, it recognises and supports the emergence of campus-style office precincts – including at the Airport – which differ from the historical suburban "in centre" model. Planning decisions "at all levels" should have regard to the continual growth of "non-aviation related activities" at the Airport. Clause 21.06 includes both the superseded Moorabbin Airport Master Plan 2004, and the Moorabbin Airport Aviation Obstacle Referral Height Plan, as reference documents within the Kingston Planning Scheme.
- Clause 21.07 – Industrial Land Use, recognises the potential for future development of industry at the Airport to increase the availability of industrial land, which is diminishing in other parts of the region. Within Clause 21.07, the City of Kingston Industrial Framework Plan calls for development of surplus Airport land "as a high quality industry business park". It also recognises the sustained demand for new, high-quality integrated industrial areas; the limited supply of new land and buildings available to meet the needs of expanding and new manufacturing operations and that the potential future development of industry at Moorabbin Airport is likely to increase the availability of industrial land in the region.

The Industrial Framework Plan recognises the Airport as being surrounded by existing industrial areas – to the west, to the south and south-east (older industrial areas) and to the east (established and planned "garden industrial" estates). The potential for high-quality industrial land use at the Airport is in contrast to the recognised limitations of some of these nearby areas with a predominance of small, ageing premises and restricted potential for growth due to land and building size, poor infrastructure and access and limited loading and parking facilities. Kingston Planning Scheme proposals to rezone industrial land to residential use on the Airport's boundaries further increases the importance of the Airport to provide new employment opportunities. Refer to **Figure 4.1 – City of Kingston Industrial Framework Plan**

The Moorabbin Airport Aviation Obstacle Referral Height Plan is included as a reference document within Clause 21.07 for the purpose of assessing applications to construct a building or carry out works within the City of Kingston

This 2015 Master Plan envisages further industrial development on the Airport, thereby increasing the offering of land suitable for industrial development across the City of Kingston. The abundance of land available at Moorabbin Airport for the development of large scale industrial uses supports the objectives of Clause 21.07, and will provide an opportunity for the development of additional industrial facilities which will foster investment and job opportunities within the City of Kingston.

- Clause 21.10 – Non Urban Areas aims to "protect the economic and operational viability of key industries and infrastructure in the non-urban area", including Moorabbin Airport aircraft activities. Associated strategies include protecting flight paths and their immediate environs from development or use which may compromise the long-term viability of the Airport or prejudice its safety and efficiency, and ensuring that appropriate buffers (both in terms of land use and distance) are established and maintained around aircraft-related activities at the Airport.

In seeking to develop large scale industrial, commercial and retail uses across the Airport site, which are not susceptible to interference from the Airport's continuing aviation uses, the long term viability of the Airport is ensured and complies with the protection of the aviation function.

4.7.2 Moorabbin Airport Environs Policy

Within the Kingston Planning Scheme, Clause 22.05 – Moorabbin Airport Environs Policy confirms the significant role played by Moorabbin Airport in the local and regional economy and as part of the State's transport infrastructure. The policy is based on the principles of the Airport Environs Overlay and has arisen from the need to ensure that the use and development of land around the Airport is sensitive to the long-term operation of the Airport.

Objectives include the following:

- to identify areas which are or will be subject to high levels of aircraft noise, including areas where the use of land for uses sensitive to aircraft noise will need to be restricted;
- to ensure that the use and development of land within the policy area is compatible with the operation of airports in respect to the impact of aircraft noise on sensitive uses, and is consistent with any approved Australian Noise Exposure Forecast (ANEF) as contained in the appropriate airport strategy or master plan for the airport;
- to assist in shielding people from the impact of aircraft noise by requiring appropriate noise attenuation measures in new dwellings and other noise sensitive buildings; and
- to limit the number of people residing in the area or likely to be subject to significant levels of aircraft noise.

The policy area is an area surrounding the Airport and depicted within Clause 22.05, but excludes land affected by the Airport Environs Overlay. The policy area is as shown in **Figure 4.2 – Kingston Planning Scheme – Moorabbin Airport Policy Area**.

When considering applications for specified uses within the policy area (including accommodation, office, child care, education centre, hospital and hotel), as well as applications for subdivision of land, Kingston City Council will take into account present and future Airport operations (in accordance with the 1998 ANEF). Council must consider the view of the Department of Infrastructure and Regional Development (as successor to the Department of Transport and Regional Services), unless satisfied that the proposal satisfies requirements previously agreed in writing between Council and the Department.

New buildings within the policy area are to be constructed to comply with noise attenuation measures as required under Section 3 of Australian Standard AS 2021-1994, Acoustics – Aircraft Noise Intrusion – Building Siting and Construction. It is important for stakeholders to review the standard carefully and to understand the practical implications of compliance with the standard.

For example, attenuation measures will be less effective if windows or doors are opened and will not usually reduce noise from aircraft when residents are outside. Whilst a review of the standard has been recently undertaken, the terms of reference have not yet been amended (contrary to views advanced by airports) to directly allow the standard to cover noise impacts and/or mitigation for people living in aircraft noise impacted areas when they are participating in activities outside their home walls.

The Moorabbin Airport Environs Policy should be reviewed as part of the implementation of NASF within the Victorian planning system. In particular, information in this 2015 Master Plan should be taken into account when the policy is reviewed. This is discussed in more detail in **Chapter 11**.

4.7.3 Airport Environs Overlay

Since the mid-1990s a co-operative agreement between Moorabbin Airport and the City of Kingston has resulted in the operation of an Airport Environs Overlay (AEO). Moorabbin is one of a very few airports in Australia to have developed and implemented such a scheme in co-operation with the local council.

The Kingston Planning Scheme applies the Airport Environs Overlay Control and Schedule 1 to the overlay (AEO1) to parts of the municipality within the 25 ANEF contour, as it stood when the Kingston Planning Scheme came into effect on 22 December 1999. The extent of AEO1 in the vicinity of the Airport has not been updated to reflect changes in the ANEF since that time.

In AEO1, regardless of the zone provisions, land must not be used for noise sensitive uses such as a childcare centre, school or hospital, and a permit is required for a number of nominated uses including a dwelling, office and residential hotel.

Given that the extent of AEO1 has not been reviewed since its introduction, in future it may be appropriate for new AEO boundaries to be agreed based on the endorsed ANEF contours and the factors considered in this 2015 Master Plan. In addition, the AEO should be reviewed as part of the implementation of the NASF within the Victorian planning framework, as discussed in more detail in **Section 11.7**.

A plan showing the current AEO is included as **Figure 4.3 – Kingston Planning Scheme Airport Environs Overlay - AEO1**. While the Airport Environs Overlay within the Kingston Planning Scheme is mapped to include substantial areas inside the Airport's boundaries, because the Airport is Commonwealth land the Overlay does not of its own force apply to the Airport land.

4.7.4 Design and Development Overlay Schedules 4 and 5 (DDO4 and DDO5)

DDO4 and DDO5 under the Kingston Planning Scheme apply, respectively, to areas defined as Aviation Obstacle Referral Height Area No. 1 and Aviation Obstacle Referral Height Area No. 2.

Within areas affected by DDO4, a planning permit is required for a building or works exceeding 16 metres in height. Within areas affected by DDO5, a planning permit is required for a building or works exceeding 25 metres in height. In each case buildings and works include radio masts, television antenna and flagpoles.

A plan showing DDO4 and DDO5 is included as **Figure 4.4 – Kingston Planning Scheme – Design and Development Overlay – DDO 4 and DDO5**. As with the Airport Environs Overlay, Schedules 4 and 5 to the Design and Development Overlay within the Kingston Planning Scheme are mapped to include areas inside the Airport's boundaries. Again, because the Airport is Commonwealth land, these overlays do not of their own force apply to the Airport land.

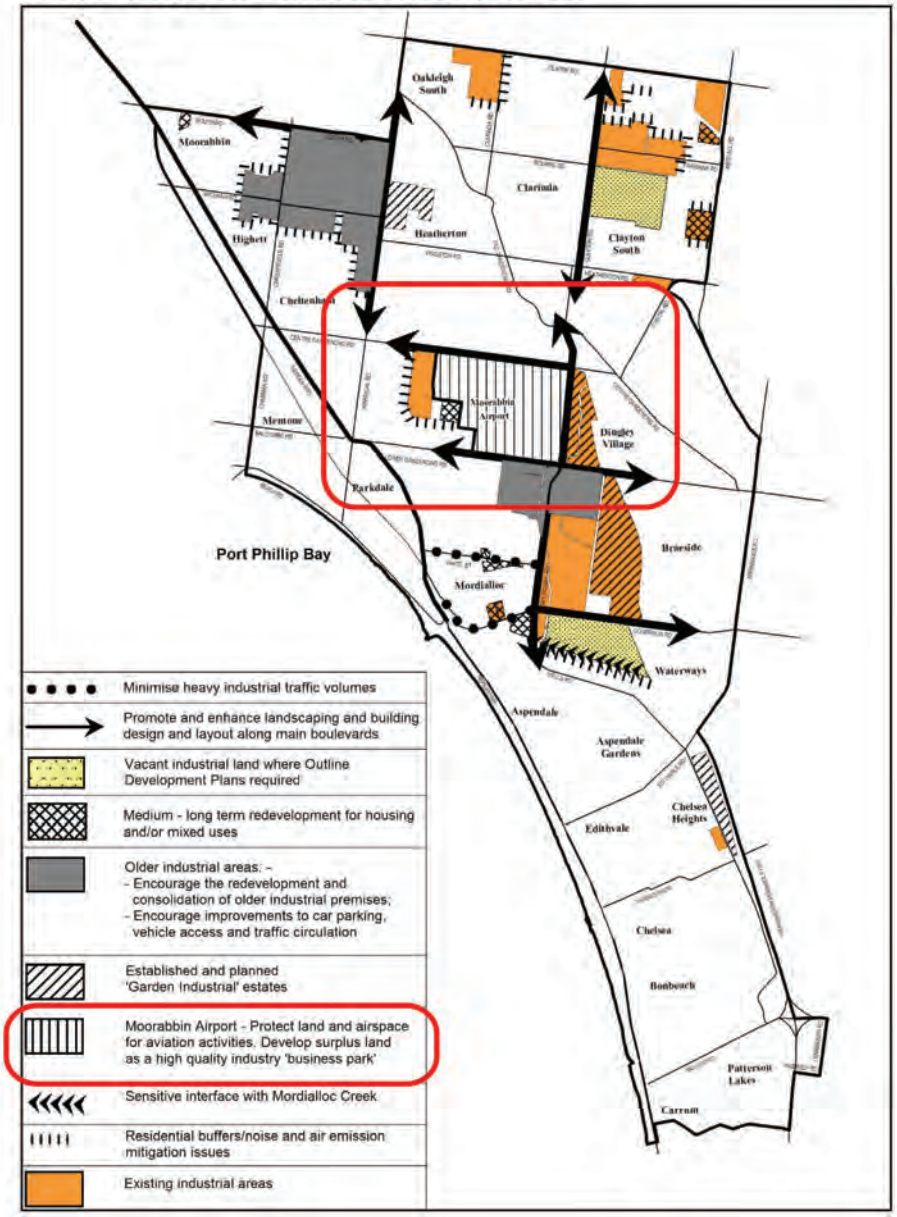
4.7.5 Development Plan Overlay Schedule 1 (DPO1)

On land subject to DPO1 (the former Epsom Training Facility, on land bounded by White Street, Boundary Road, Governor Road and McDonald Street, Braeside, located approximately 1.5 kilometres south of the Airport's southern boundary), any development plan must assess noise impacts on the site, including by reference to existing industrial development and the impact of ANEF associated with the Airport. The assessment is required to identify any noise mitigation treatments required to ensure a high standard of residential amenity on the site. Again, additional information including noise contours and the location of Airport controlled airspaces has also proved helpful for existing and potential residents.

A plan showing DPO1 is included as **Figure 4.5 – Kingston Planning Scheme: Development Plan Overlay – DPO1**.

KINGSTON PLANNING SCHEME

City of Kingston Industrial Framework Plan



MUNICIPAL STRATEGIC STATEMENT - CLAUSE 21.07 PAGE 5 OF 5

Moorabbin Airport

Moorabbin Airport Master Plan 2015

This plan has been prepared to illustrate the Master Plan and is not intended to serve any other purpose.

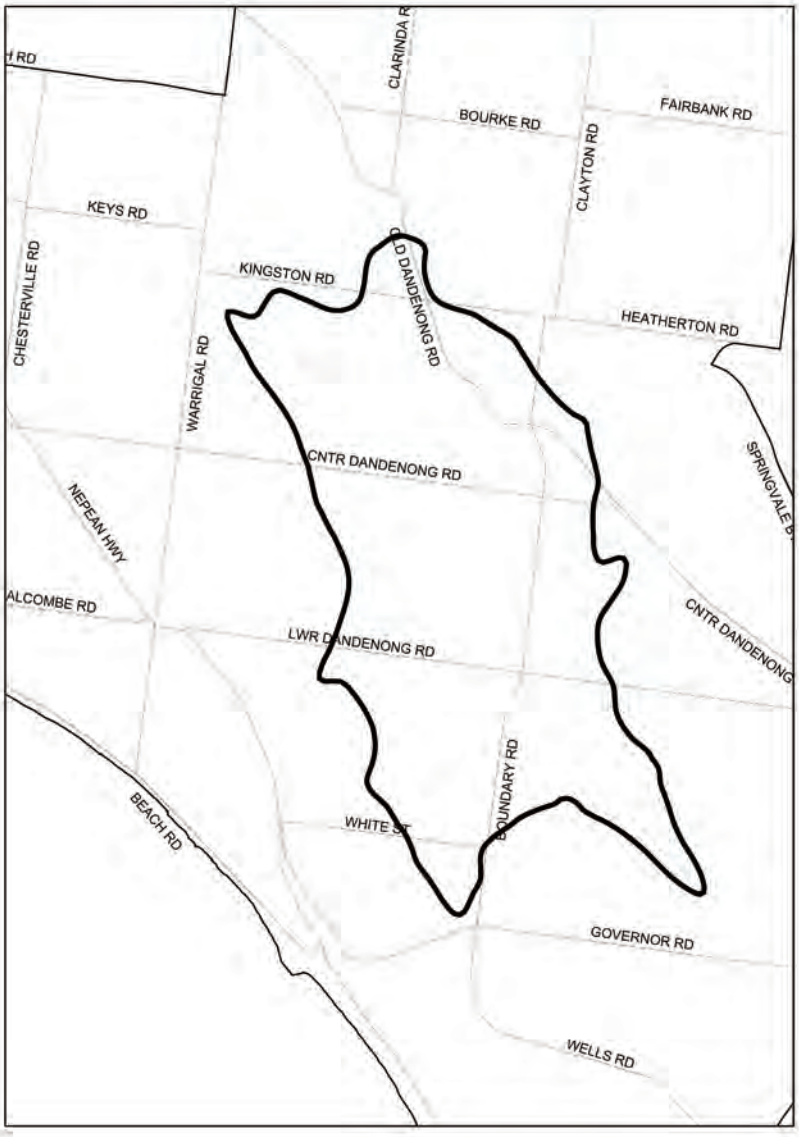
Figure 4.1 - City of Kingston Industrial Framework Plan

Not to scale

Figure 4.1 // City of Kingston Industrial Framework Plan

KINGSTON PLANNING SCHEME

Map 1: Moorabbin Airport Environs.



LOCAL PLANNING POLICIES - CLAUSE 22.05 PAGE 3 OF 3

Moorabbin Airport

Moorabbin Airport Master Plan 2015

This plan has been prepared to illustrate the Master Plan and is not intended to serve any other purpose.

Figure 4.2 - Kingston Planning Scheme - Moorabbin Airport Policy Area

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Figure 4.2 // Kingston Planning Scheme – Moorabbin Airport Policy Area

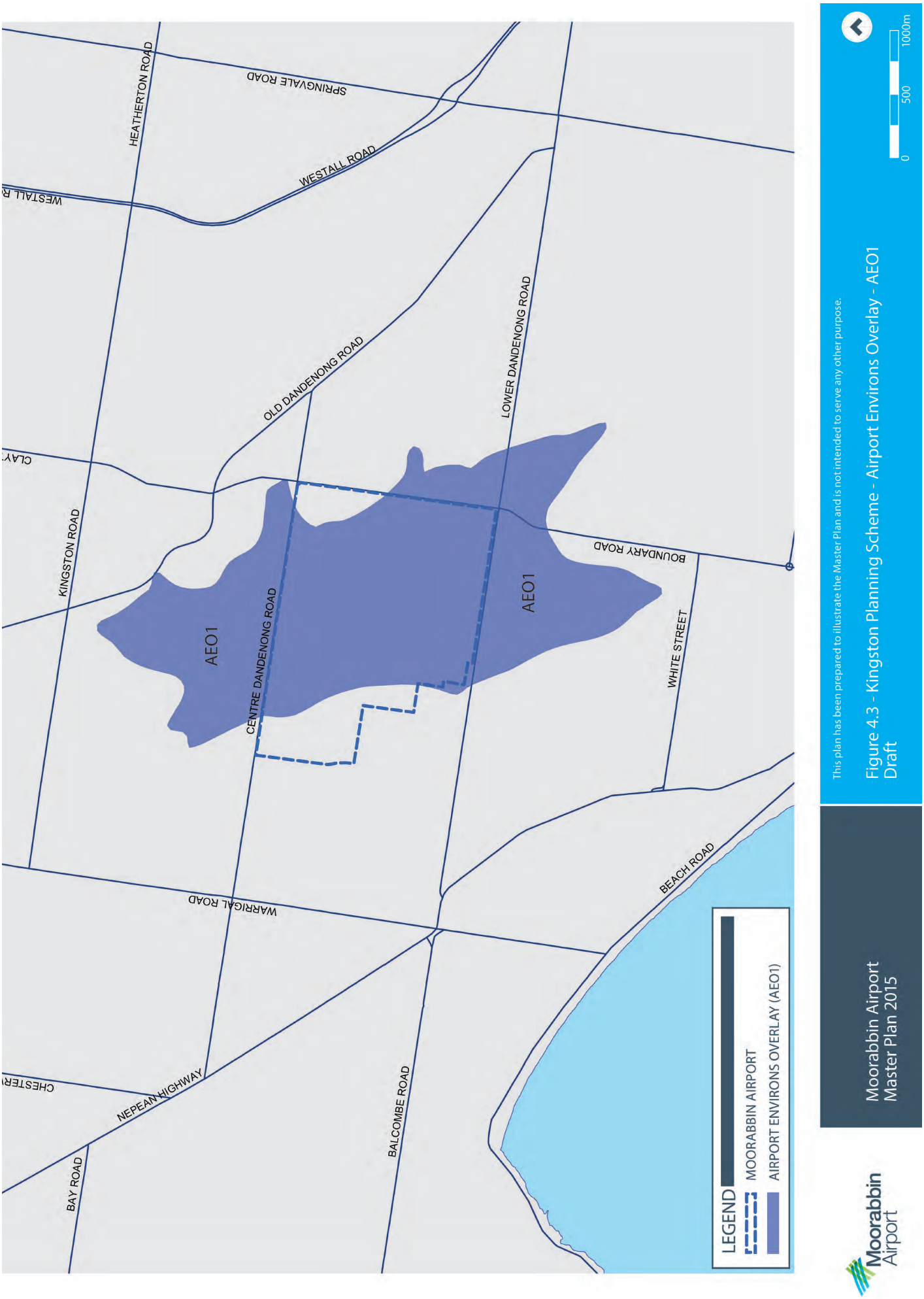
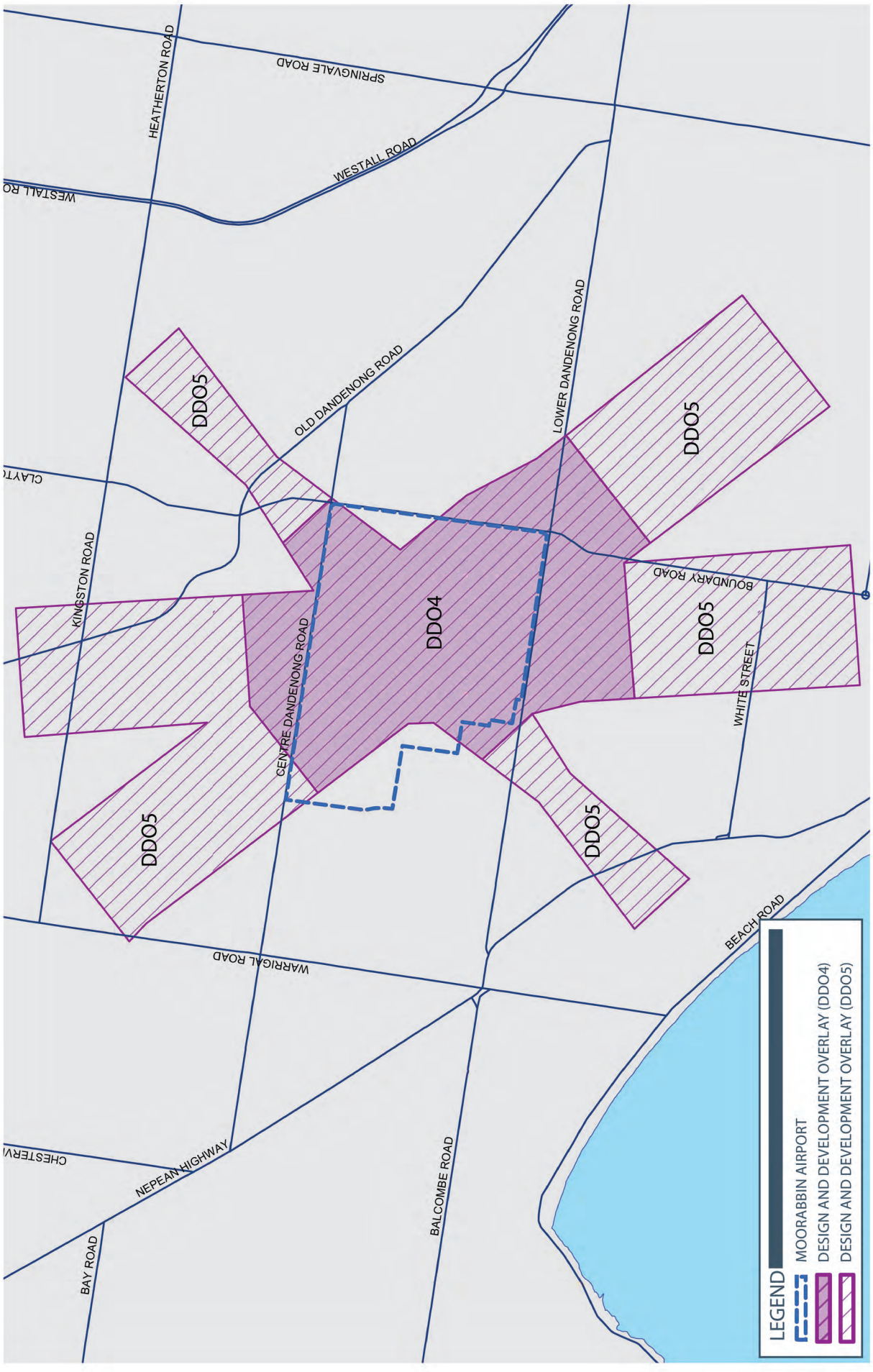


Figure 4.3 // Kingston Planning Scheme – Airport Environs Overlay – AEO1



This plan has been prepared to illustrate the Master Plan and is not intended to serve any other purpose.

Figure 4.4 - Kingston Planning Scheme - Design and Development Overlay - DDO4 and DDO5
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Moorabbin Airport
Master Plan 2015

Moorabbin Airport

Figure 4.4 // Kingston Planning Scheme – Design and Development Overlay – DDO4 and DDO5

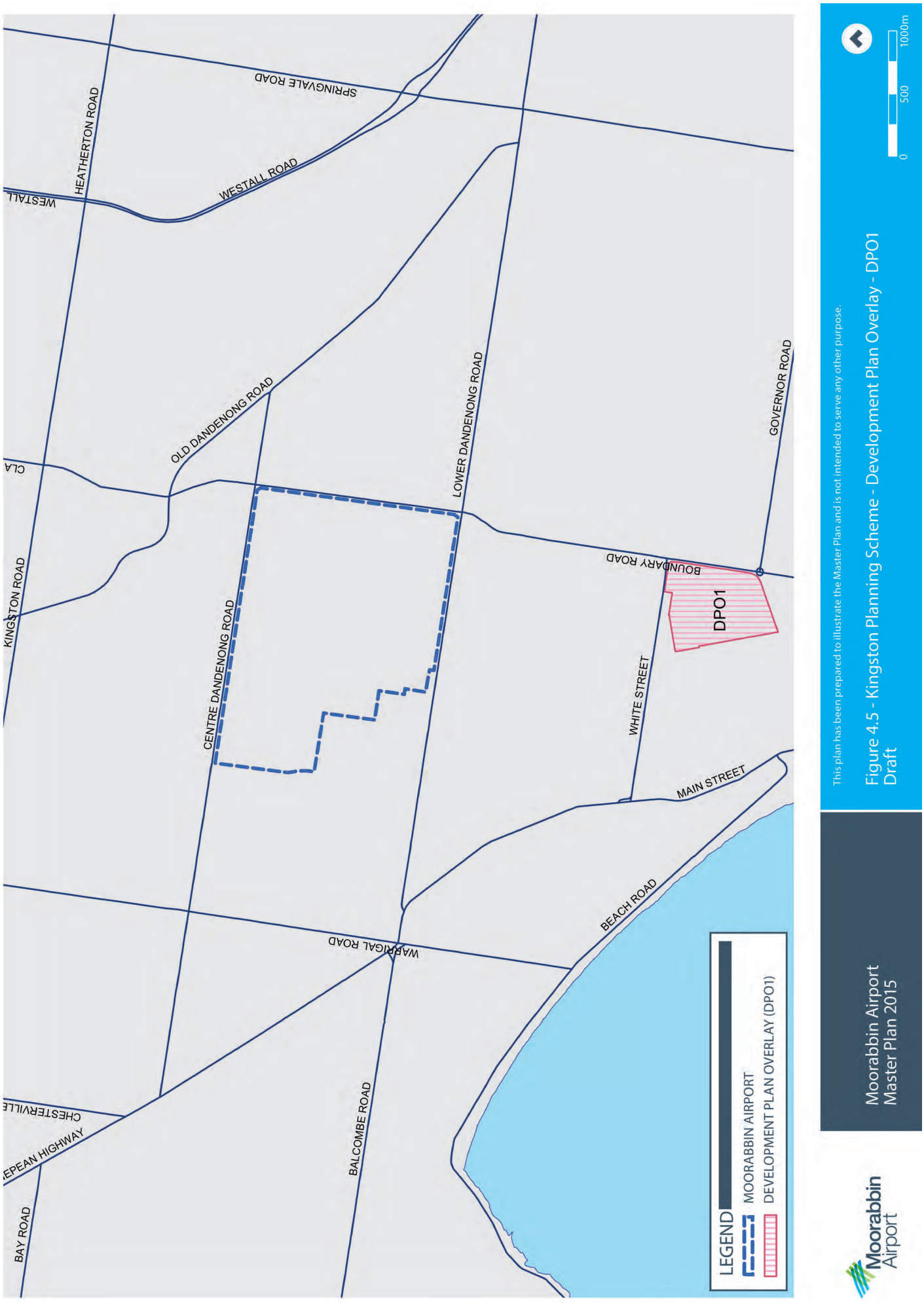

Figure 4.5 // Kingston Planning Scheme – Development Plan Overlay – DPO1

4.8 Other Aviation Planning Requirements

4.8.1 Aviation Planning Standards

The International Civil Aviation Organisation (ICAO) determines international standards and recommended practices for aviation operations. In Australia, aerodrome standards are based on the ICAO standards and recommended practices. The Civil Aviation Safety Authority (CASA) is responsible for developing and promulgating appropriate aerodrome safety standards including Part 139 of the Civil Aviation Safety Regulations 1998 (CASR 139) which deals with aerodromes. CASA prescribes the detailed technical requirements for aerodrome safety through the CASA Manual of Standards Part 139 (MOS 139). CASA expects that all facilities at Moorabbin Airport will be planned to meet the standards set out in CASR 139 and MOS Part 139 – Aerodromes. Any changes which are implemented to the aerodrome movement areas will need to be acceptable to CASA.

The dimensions, shape and layout of aerodrome facilities such as runways, taxiways and aprons are determined by the performance capability and size of the aircraft that are intended to use them.

The planning and design of these facilities therefore begins by identifying the most demanding or critical aircraft that the facilities are intended to serve. In Australia, like most countries, this is achieved by using an ICAO reference code system. The reference code has two elements, a number and a letter, which are derived by grouping aircraft with similar performance capability and key physical dimensions. The number indicates the runway length required and the letter indicates the taxiway width required by the aircraft. The codes vary from code 1A for small aircraft such as a Cessna 152, to 4F for the Airbus 380. There are some 14 standard variations of this code system.

The objective in planning aerodrome facilities is to accommodate the critical design aircraft as efficiently as possible. Individual facilities at an Airport, such as RPT facilities and flying training precincts, are normally planned for their specific aircraft. On the other hand, some common use facilities, such as the primary runway and taxiway system, will be planned for the critical aircraft.

At Moorabbin Airport, the following aerodrome reference code groupings are those applicable to the expected operations:

- single and twin piston engine flying training, typically with a wingspan of 12m or less (reference code 1A);
- twin turboprops for freight, RPT, charter and aeromedical operations, typically with a wingspan of 18m or less (reference code 2B); and
- light private and corporate jets (up to reference code 3B).

MAC will regularly review runway coding, and will implement code changes as necessary to best match operational requirements. Appropriate protection of future runway codings for operational requirements will also be undertaken.

4.8.2 Pavement Strength

In Australia, the ACN-PCN method of pavement strength classification has been adopted. The Pavement Classification Number (PCN) is defined as a number expressing the bearing strength of a pavement for unrestricted operations by aircraft with an Aircraft Classification Number (ACN) value less than or equal to the PCN. The ACN is defined as a number expressing the relative damaging effect of an aircraft on a pavement for a specified standard subgrade category.

Because almost all aircraft using Moorabbin Airport are less than 5,700kg MTOW, the ACN-PCN definition is not used to report pavement strength. Unrestricted movements of aircraft up to 5,700kg MTOW are allowed on the runways and taxiways. Prior permission is required for movements of aircraft in excess of this weight and a Pavement Concession may be issued by MAC.

4.8.3 Helicopter Facilities

There is currently an absence of specific Australian legislation covering physical and flight path protection requirements for Helicopter Landing Sites (HLS) in Australia. The relevant CASR places the onus on the helicopter pilot to determine the suitability of a landing site.

CASA has provided guidelines to pilots for the identification of suitable HLS through its Civil Aviation Advisory Publication (CAAP) 92-2(2) Guidelines for the establishment and use of helicopter landing sites (HLS). This document provides advice on the minimum physical parameters required to assist helicopter pilots and operators in meeting their obligations. It reflects closely the international standards and recommended practices established by ICAO in relation to helicopter facilities in Annex 14 Volume II – Heliports (3rd Edition). CASA has also signaled to the industry that it expects helicopter facilities on aerodromes which it regulates to meet the guidance within CAAP 92-2(2) and that in the future these requirements will become mandatory under the appropriate regulations.

4.8.4 Airport Roads

The Airport's internal road network is built on Commonwealth land. As the Airport lessee, MAC is responsible for funding, developing and constructing the internal road network. The development of the Airport's road network must ensure safe, secure, efficient and convenient access to and from the terminals and landside development areas, and involve a thorough analysis of long-term traffic forecasts.

Road development plans must also meet the requirements of relevant codes, standards and accepted engineering practices. The relevant standards include the Austroads Guide to Traffic Engineering Practice series, which refers to relevant Australian standards, guidelines and codes of practice.

Roads and access planning will follow State road planning standards, which encompass the following principles:

- transport modes are seen as complementary rather than competing;
- transport plans are integrated with land planning strategies; and
- roads contribute to an integrated transport system that strengthens the economy, liveability, social inclusion and environmental outcomes.

The transport system objectives and decision-making principles set out in the Transport Integration Act 2010 (Victoria) are also a relevant consideration.

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5 // Land Use Plan

- This 2015 Master Plan is the relevant land use planning instrument for the Airport.
- This Land Use Plan sets out the policies, guidelines and procedures for decisions about land use and development at the Airport. It is consistent with the Victoria Planning Provisions, where appropriate.
- The Land Use Plan divides the Airport into 7 separate precincts, accommodating a range of aviation and non-aviation uses.
- Planning zones have been applied to each precinct, which will determine the kinds of land use that will be approved in each precinct. In addition, development of certain kinds, or in certain areas, will be subject to planning overlays and particular planning provisions.
- Major developments, and developments which are sensitive in nature, require the preparation of a Major Development Plan (MDP) which is publicly exhibited. The Commonwealth Minister responsible for airports has approval authority for an Airport MDP.
- This Land Use Plan has been carefully developed so that the aviation function is located in the centre of the Airport, and is surrounded by non-aviation precincts to buffer off-Airport urban areas from ground-based noise. The non-aviation precincts located on the Airport perimeter subsidise the investment required to service the centrally located aviation precincts.
- This 2015 Master Plan supports the broader regional planning objectives by facilitating employment and economic activities in the emerging Kingston Central and Braeside Economic Precinct.

5.1 Introduction

The Land Use Plan set out in this Chapter establishes policies, guidelines and procedures for land use and development decisions at the Airport based on the strategic policy considerations and objectives included within this 2015 Master Plan.

This Land Use Plan comprises:

- the precinct policies and requirements;
- the land use and development controls; and
- the land use management framework.

The concepts underpinning the Land Use Plan are generally consistent with the Victorian planning system. The structure, language, concepts and objectives of the Victoria Planning Provisions (VPPs) have been adopted for the Land Use Plan where practicable. Any differences between the Land Use Plan and the VPPs are necessary only because of the specific regulatory framework applying to the Airport under the Airports Act, or to address gaps in the VPPs to the extent to which they relate to airports.

5.1.1 Strategic Policy Considerations

The following key strategic issues have informed the development of this Land Use Plan:

- Precinct identification for specified users;
- Structure heights and location;
- Environment issues and impacts;
- Transport infrastructure;
- Services infrastructure;
- Mix of activities, uses and services;
- Market demand for services and facilities;
- Quality built form;
- Increasing amenity;
- Consultation;
- “Off-Airport” land use and planning controls; and
- State and local planning policy.

5.1.2 Land Use Areas

The key land use areas are identified under the titles 'Airside' and 'Landside' as follows:

i. Airside

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

The airside land use area supports current and future aviation operations and contains runways, taxiways, aprons, the control tower, helipads, certain hangars and other aviation infrastructure. Access to airside areas is restricted to those with specific permission.

Aviation support land use areas:

- have been made contiguous with fixed aviation infrastructure, while still having access to non-aviation infrastructure (such as roads and power);
- have generally been placed in central locations; and
- have been designed to be ringed with high-quality built form having regard to the nature of the activities to be undertaken within those areas

The location of the airside fence will ultimately determine the airside boundary. Of the precincts described in this 2015 Master Plan, Precinct 1 and parts of Precinct 2 are airside. In the future, subject to market demand, there is the potential for additional parts of Precinct 2, and parts of Precinct 3, to be included within the airside area. Permitted land uses within each designated precinct are set out in **Appendix 1**.

The legal frameworks relating to the security and safety of airside land mean that this land has restricted access for the general public.

Aviation operators and other Airport customers whose business involves access to airside land will be required to frame their business in consideration of the Act.

ii. Landside

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

This land covers both aviation and non-aviation facilities and activities.

The aviation facilities and services include passenger terminals, aircraft hangars, maintenance depots, fuel depots, airline and aviation related businesses.

A myriad of aviation support services are also provided from landside areas. It is important that these associated services are co-located with airside land use areas to ensure ease of use, access and efficiency.

Landside areas are also used for commercial, industrial, retail and business operations, including DFO, Kingston Central Plaza, Chifley Business Park and the eastern and southern precinct.

Permitted land uses within landside areas are as set out in **Appendix 1**.

5.2 Precinct Plan

The Airport is divided into 7 precincts. Each is focused on predominant kinds of activities. The relevant policy for each precinct is as set out below. The Airport Precinct Plan is shown at **Figure 5.0 – Moorabbin Airport Precinct Plan**.

The precinct plan provides land that supports the retention of businesses in the City of Kingston and wider region given the scarcity of appropriate sites due to urban infill. The Airport can continue to provide for the development of large format outlets to service the surrounding region.

MAC will work with the City of Kingston to jointly commission a Strategic Economic Analysis with a view to forming the basis for an agreed position as to the level of conventional retailing at the Airport.

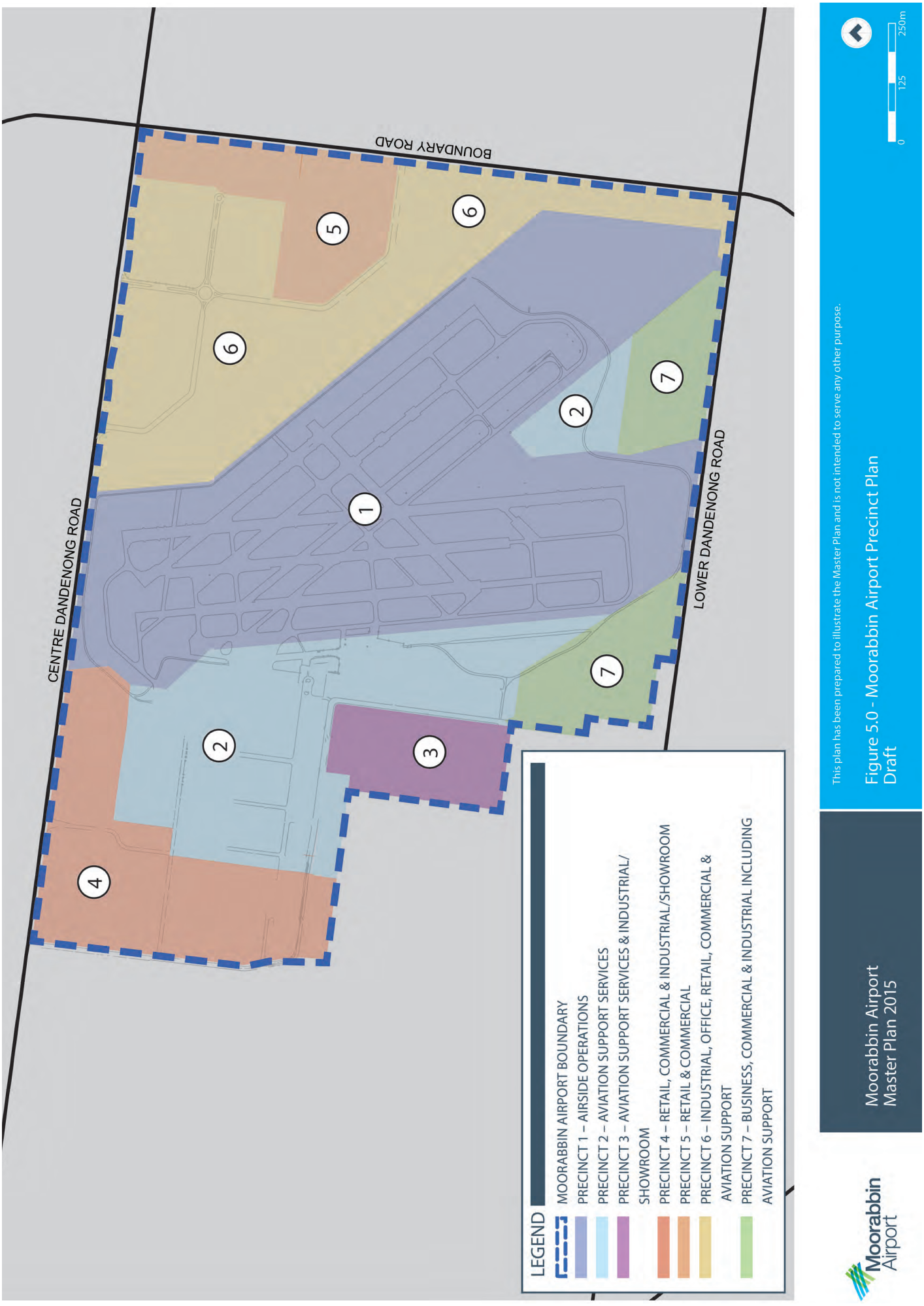

Figure 5.0 // Moorabbin Airport Precinct Plan

5.2.1 Precinct 1 Policy – Airside Operations

Precinct 1 encompasses land directly required for airside activities and is located within the centre of the Airport. Given the critical nature of the aviation infrastructure contained within this Precinct, this area is essential to the long-term sustainability of airside operations.

The primary purpose of Precinct 1 is to provide land and infrastructure for existing and future aviation activities in a manner which is safe, consistent with the Aviation Development Plan and compliant with applicable regulation.

As Precinct 1 is used entirely for airside operations, MAC does not see Precinct 1 as an appropriate location for residential development.

Objectives

To protect aviation operations.

To provide sufficient land for the Airport's existing and future core aviation infrastructure and services.

To provide land for the development and operation of runways, taxiways, training areas, aircraft parking areas, apron areas, aviation buildings and runway clearance and protection areas.

To provide for and encourage an efficient and capable base for a range of aviation functions.

To facilitate compliance with relevant regulatory requirements.

To facilitate further integration of services and infrastructure across Airport precincts.

To deliver the highest quality infrastructure and built form that the market will support.

Strategies

- Reserve land for runways and taxiways and other infrastructure to enable forecast aviation growth levels to be realised.
- Protect land required for airside activities together with buffers.
- Develop an overall strategy to ensure the long term sustainable growth of the Airport and its aviation business.
- Attract and secure sustainable aviation businesses.
- Ensure that new activity takes account of issues related to sustainable aviation business growth.
- Reserve part of the south-eastern corner of the precinct for the dry retention basin which will alleviate flooding of runways and Airport infrastructure.

Precinct 1 is shown in **Figure 5.1 – Moorabbin Airport Precinct Plan 1 – Airside Operations**.

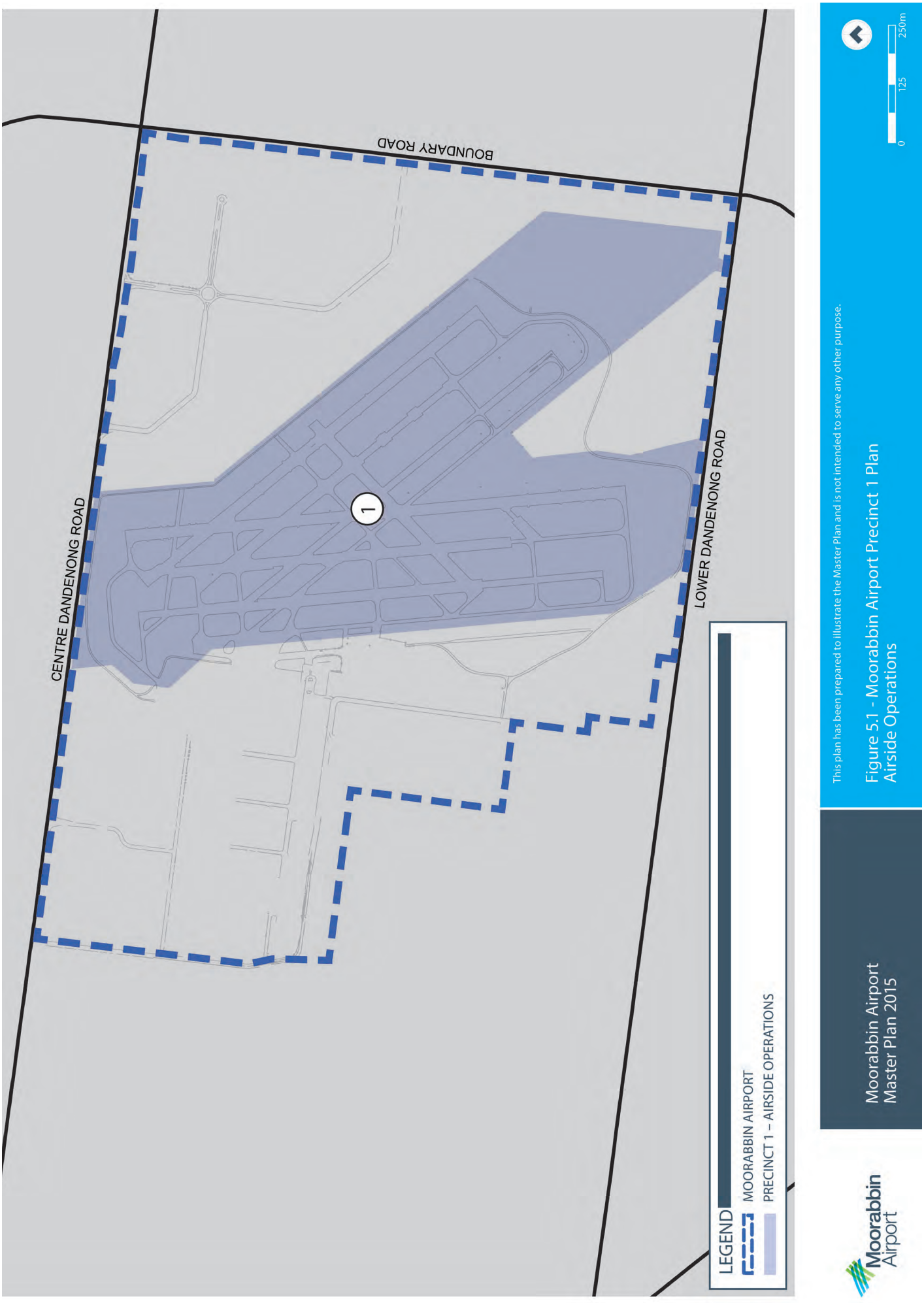

Figure 5.1 // Moorabbin Airport Precinct 1 Plan – Airside Operations

5.2.2 Precinct 2 Policy – Aviation Support Services

Precinct 2 encompasses land to the west and south of the existing runways and taxiways. The primary role of Precinct 2 is to provide for aviation industry employment and support facilities, including aviation hangars, aviation related business, offices and aircraft parking.

The primary purpose of Precinct 2 is to provide land to accommodate aviation activities, buildings and infrastructure which protect, support and facilitate the aviation activities carried out in Precinct 1, many of which by their nature must be adjacent to Airside Operations areas.

The secondary purpose of Precinct 2 is to allow for buildings and infrastructure which accommodate a range of non-aviation businesses which may, consistent with the primary purpose, be located within Precinct 2.

Precinct 2 will accommodate expanded aviation activities including hangars for corporate and general aviation as well as dedicated helicopter hangars, additional aircraft parking and support uses. Pursuant to Heads of Agreement, the Airport is working towards establishment of new flight training facilities in Precinct 2. The southern part of Precinct 2 is to accommodate aviation expansion as well as small scale café and convenience businesses and support uses.

MAC envisages that residential development in Precinct 2, primarily in the form of student accommodation, may be appropriate subject to the Airports Act and the planning controls in **Appendix 1** of this 2015 Master Plan. Student accommodation in Precinct 2 will be subject to commercial considerations as well as to the requirements and constraints of any applicable overlays (for example, the Moorabbin Airport Airport Environs Overlay and the Moorabbin Airport Design and Development Overlay).

Objectives

To support the long-term aviation needs of the Airport including aviation operations, infrastructure and terminal areas.

To provide for and encourage an efficient and capable base for a range of aviation functions.

For aviation facilities to ring the airside boundary so as to free up the central area for aircraft parking.

To ensure that taxiway clearances and aircraft parking satisfy regulatory requirements.

To ensure that areas where general public access needs to be restrictired are clearly identified.

To provide additional employment opportunities to support the growing local and regional area.

To recognise adjacent off-Airport areas designated for residential land use as at 17 June 2015.

To facilitate further integration of services and infrastructure across Airport precincts.

To deliver the highest quality infrastructure and built form that the market will support.

Strategies

- Protect aviation activities by ensuring the appropriate siting and design of buildings and structures.
- Encourage the use of the precinct for the development of aviation facilities including terminals, hangars, aircraft parking areas, apron areas, fuel depots, taxiways, flight training education centres and maintenance facilities.
- Support opportunities for a range of aviation businesses including flight training, engineering, student accommodation, avionic and other aviation business related land use as well as non-aviation industries, businesses, support services, offices and other activities.
- Support opportunities for a range of non-aviation businesses.
- Work towards appropriate amenity outcomes for adjacent off-Airport areas designated for residential land use as at 17 June 2015.
- To deliver a high quality landscaped environment.
- Encourage aviation-related industry including education, research and application of aviation technology.
- Encourage journey-to-work opportunities via existing and future public transport facilities.
- Reserve land for the western access road.

Precinct 2 is shown in **Figure 5.2 – Moorabbin Airport Precinct 2 Plan – Aviation Support Services**.

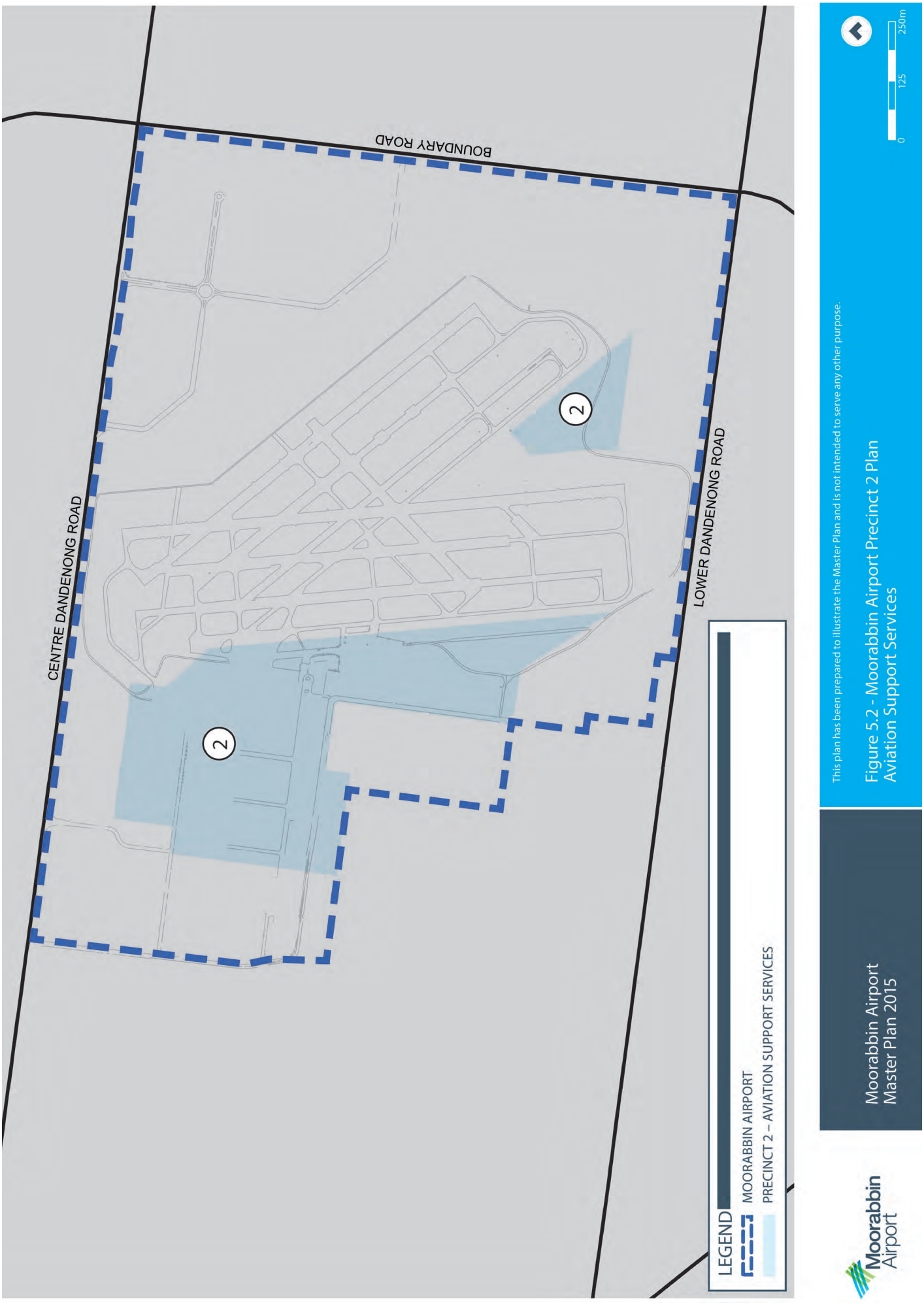

Figure 5.2 // Moorabbin Airport Precinct 2 Plan – Aviation Support Services

5.2.3 Precinct 3 Policy – Aviation Support Services & Industrial/Showroom

Precinct 3 encompasses land on the western boundary of the Airport, to the south and west of Precinct 2. Precinct 3 is currently largely undeveloped. Precinct 3 is important for growth of aviation and non-aviation uses, subject to market demand.

The primary purpose of Precinct 3 is to provide land for aviation and aviation-related activities which require or benefit from proximity to the Airside Operations and Aviation Support activities in Precincts 1 and 2.

The secondary purpose of Precinct 3 is to allow for buildings and infrastructure which accommodate a range of non-aviation activities which may, consistent with the primary purpose, be located within Precinct 3.

The potential development of Precinct 3 as a further aviation support service precinct would be logical given:

- its position next to Precinct 2 in which aviation support services are provided;
- that there is access to the necessary aviation and non-aviation infrastructure from Precinct 3; and
- the potential to offer positions in Precinct 3 to businesses currently located in Precinct 2.

Precinct 3 could also be developed for industrial and showroom uses, restricted retail premises, food and drink premises, convenience shop or specialist aviation retailing premises. Whether this occurs will ultimately depend on whether the demand for such services and businesses will be large enough to warrant such development.

MAC envisages that residential development in Precinct 3, primarily in the form of student accommodation, may be appropriate subject to the Airports Act and the planning controls in **Appendix 1** of this 2015 Master Plan. MAC is working through a Heads of Agreement with flight training operators to develop Stage 1, consisting of 150 beds, of a flight student accommodation facility in Precinct 3.

Student accommodation in Precinct 3 will be subject to commercial considerations as well as to the requirements and constraints of any applicable overlays (for example, the Moorabbin Airport Airport Environs Overlay and the Moorabbin Airport Design and Development Overlay).

Objectives

To provide for aviation and non-aviation business facilities and employment growth.

To support the long-term aviation needs of the Airport including aviation operations and aviation expansion.

To support the role of the Airport as a key regional destination.

To promote industrial and industrial/showroom uses where appropriate.

To provide additional employment opportunities to support the growing local and regional area.

To facilitate further integration of services and infrastructure across Airport precincts.

To deliver the highest quality infrastructure and built form that the market will support.

Strategies

- Support opportunities for a range of aviation support services including engineering, avionic and other aviation businesses.
- Protect airside and aviation activities by ensuring the appropriate siting and design of buildings.
- Encourage activities and services which support and enhance the local and regional economies and provide locally based business and commercial employment opportunities.
- Promote opportunities for industrial and industrial/warehouse uses, where the uses are consistent with other existing and likely future uses within the precinct.
- Encourage journey-to-work opportunities via existing and future public transport facilities.
- Reserve land for the western access road.

Precinct 3 is shown in **Figure 5.3 – Moorabbin Airport Precinct 3 Plan – Aviation Support Services & Industrial/Showroom**.

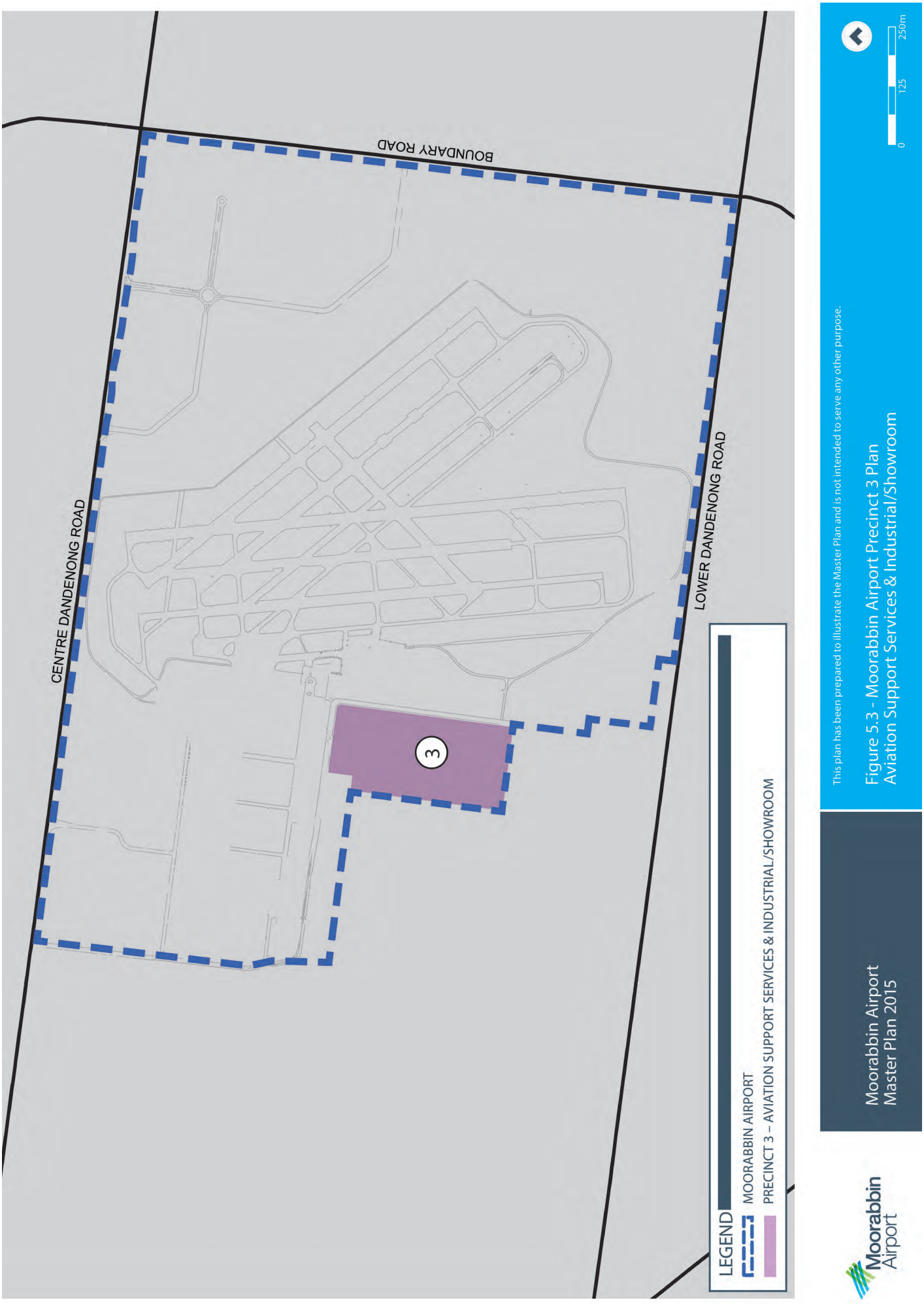

Figure 5.3 // Moorabbin Airport Precinct 3 Plan – Aviation Support Services & Industrial/Showroom

5.2.4 Precinct 4 Policy – Retail, Commercial & Industrial/Showroom

Precinct 4 encompasses land in the north-western corner of the Airport which is currently occupied by the Direct Factory Outlets Centre, Kingston Central Plaza and other retail activities, a service station with minor retail and associated car parking areas. It also includes land which is currently undeveloped.

The primary purpose of Precinct 4 is to provide buildings and infrastructure for commercial activities, including retail, industrial and showroom land uses and flight student accommodation.

The secondary purpose of Precinct 4 is to allow for use of land for medical, entertainment, leisure and recreation activities, subject to the Airports Act and the planning constraints and considerations set out in this Master Plan. MAC will not proceed with aged care land uses without the support of the State Government and the City of Kingston. Similarly use of land for a cinema will occur only with the support of the State Government and the City of Kingston.

The location of retailing outlets (including non-traditional forms such as DFO and other "warehouse-style" or large-format outlets) and other business and commercial uses, including industrial and industrial/showroom uses, will continue to be encouraged in Precinct 4. Entertainment, leisure and recreation uses are also encouraged.

MAC envisages that residential development in Precinct 4, primarily in the form of student accommodation, may be appropriate subject to the Airports Act and the planning controls in **Appendix 1** of this 2015 Master Plan. Student accommodation in Precinct 4 will be subject to commercial considerations as well as to the requirements and constraints of any applicable overlays (for example, the Moorabbin Airport Airport Environs Overlay and the Moorabbin Airport Design and Development Overlay).

Medical and aged care facilities (excluding in-patient facilities, community care facilities and residential dwellings) may also be considered within Precinct 4. MAC will not proceed with aged care land uses without the support of the State Government and the City of Kingston.

Objectives

To promote retailing activity and uses.

To promote industrial and industrial/showroom uses.

To promote entertainment, leisure and recreation uses.

To allow for medical and (subject to the support of the State Government and the City of Kingston) aged care uses as appropriate.

To maximise usage of the Principal Public Transport Network.

To provide additional employment opportunities to support the growing local and regional area.

To facilitate further integration of services and infrastructure across Airport precincts.

To deliver the highest quality infrastructure and built form that the market will support.

To deliver journey-to-work opportunities via existing public transport network facilities.

Strategies

- Encourage the provision of retail premises, including so as to support the future employment base of the Airport of a projected 23,705 direct and indirect jobs by 2035.
- Encourage activities and services which support and enhance the local and regional economies and provide locally based retail, business and commercial employment opportunities.
- Promote opportunities for industrial and industrial/warehouse uses.
- Promote opportunities for entertainment, leisure and recreation uses.
- Allow for medical and aged care facilities of appropriate kinds and in appropriate locations. MAC will not proceed with aged care land uses without the support of the State Government and the City of Kingston.
- Encourage pedestrian linkages to and use of the Principal Public Transport Network along Centre Dandenong Road abutting this precinct.

Precinct 4 is shown in **Figure 5.4 – Moorabbin Airport Precinct 4 Plan – Retail, Commercial & Industrial/Showroom**.

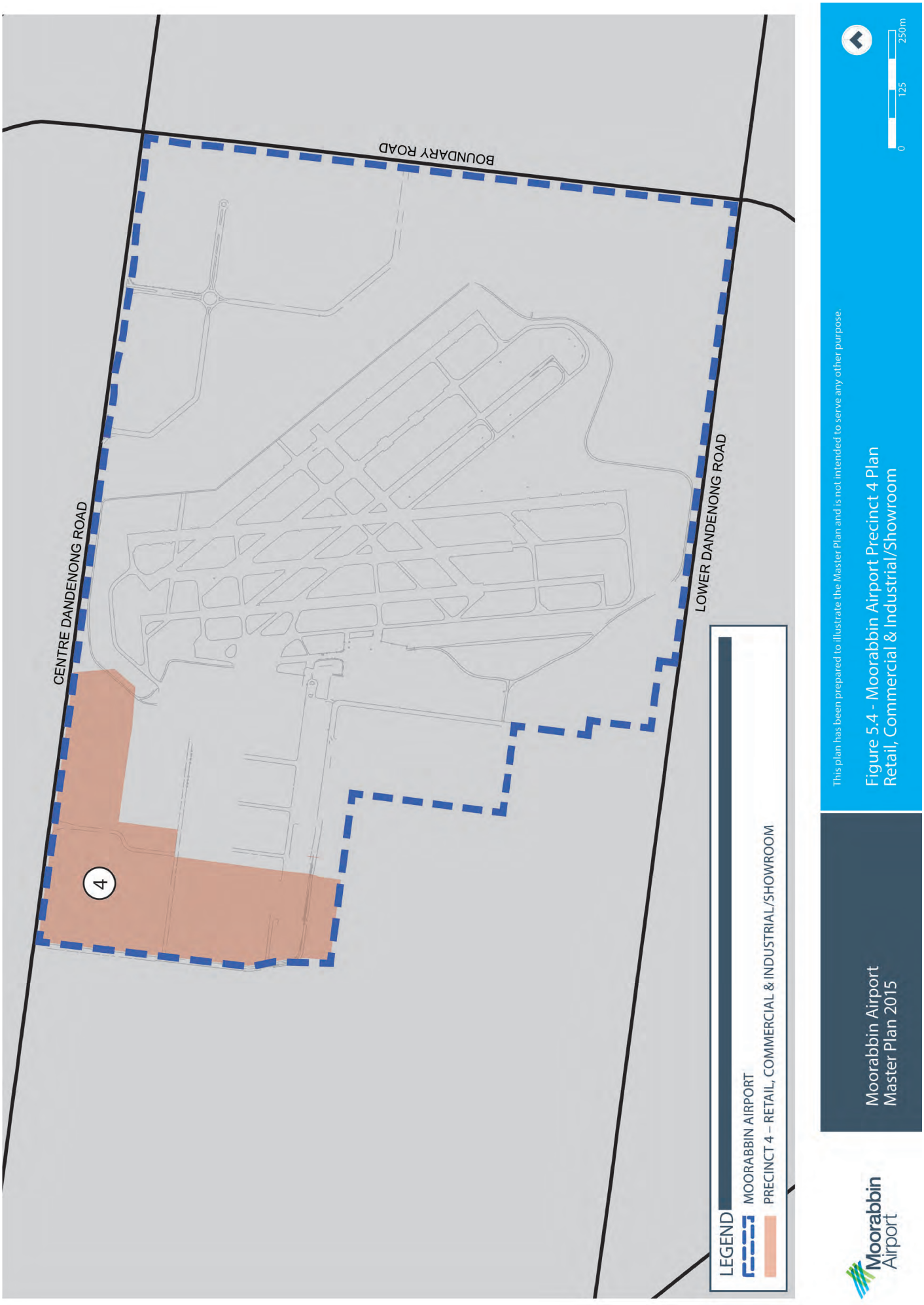

Figure 5.4 // Moorabbin Airport Precinct 4 Plan – Retail, Commercial & Industrial/Showroom

5.2.5 Precinct 5 Policy – Retail & Commercial

Precinct 5 encompasses an area at the north-eastern corner of the Airport, with frontages to Boundary Road and Centre Dandenong Road. In the 2010 Master Plan, it was designated as part of Precinct D and intended for Industrial, Office, Retail, Commercial & Aviation Support.

Under this 2015 Master Plan, Precinct D has been split into Precincts 5 and 6 to better communicate the primary objectives for the area.

The primary purpose of Precinct 5 is to provide for and encourage use of land for retail activities, including the development of non-traditional warehouse style and large format outlets.

The secondary purpose of Precinct 5 is to allow for use of land for other business and commercial uses.

MAC will also undertake those non-aviation Major Development Plans approved consistent with the previous Master Plan.

MAC envisages that residential development in Precinct 5, primarily in the form of student accommodation, may be appropriate subject to the Airports Act and the planning controls in **Appendix 1** of this 2015 Master Plan. Student accommodation in Precinct 5 will be subject to commercial considerations as well as to the requirements and constraints of any applicable overlays (for example, the Moorabbin Airport Airport Environs Overlay and the Moorabbin Airport Design and Development Overlay).

Objectives

To promote retailing activity and uses which support the role of the Airport as a key regional destination.

To continue to grow, and compete in, the retail market for the region.

To develop an offering that meets the needs of the changing demographics, and the new residential developments, in the City of Kingston and the wider region.

To promote retailing, commercial and service activities which complement the existing Chifley Business Park and support the existing and future employee base.

To provide additional employment opportunities to support the growing local and regional area.

To facilitate further integration of services and infrastructure across Airport precincts.

To deliver the highest quality infrastructure and built form that the market will support.

To deliver journey-to-work opportunities via existing public transport network facilities.

Strategies

- Encourage the development and operation of retail businesses.
- Encourage activities and services which support and enhance the local and regional economies and provide locally based retail, business and commercial employment opportunities.
- Promote industrial and industrial/warehouse uses.
- Encourage pedestrian linkages to and use of the Principal Public Transport Network along Centre Dandenong Road abutting this precinct.

Precinct 5 is shown in **Figure 5.5 – Moorabbin Airport Precinct 5 Plan – Retail & Commercial**.

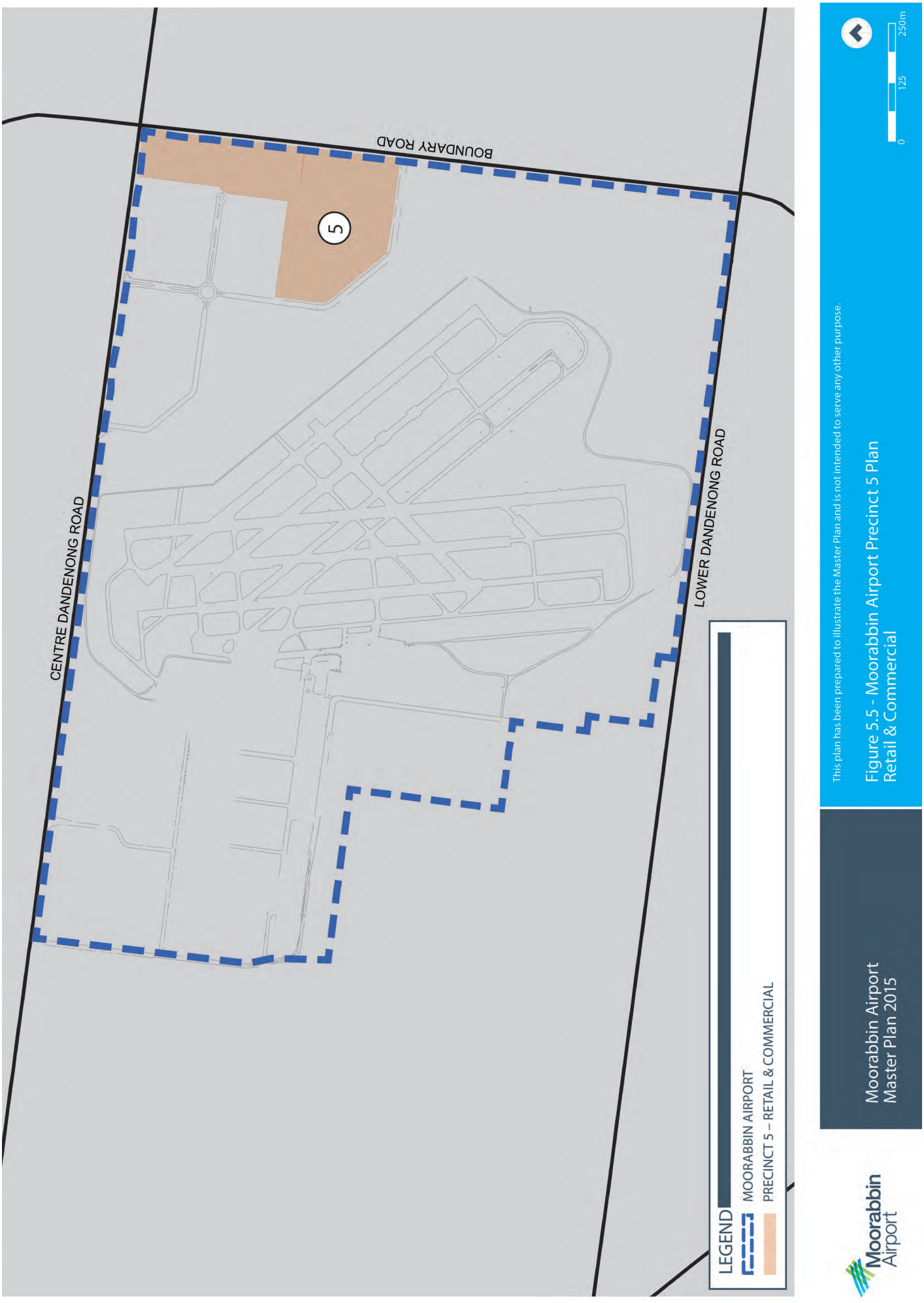

Figure 5.5 // Moorabbin Airport Precinct 5 Plan – Retail & Commercial

5.2.6 Precinct 6 Policy – Industrial, Office, Retail, Commercial & Aviation Support

Precinct 6 encompasses land to the east of the existing runways which has expansive frontages to Centre Dandenong and Boundary Roads and a frontage to Lower Dandenong Road. Since the approval of the 1999 Master Plan this precinct has been extensively developed with high quality large format warehouses and campus-style offices.

The primary purpose of Precinct 6 is to provide for and encourage use of land for industrial, warehouse, office, restricted retail, showrooms, motor vehicles and storage, aviation support services, aviation student accommodation, conference and hotel facilities and a service station.

The secondary purpose of Precinct 6 is to allow for use of land for retail purposes, noting that such uses are limited by the exclusion of supermarkets (of greater than 1,800 square metres leasable floor area) and traditional and discount department stores.

Within Precinct 6 significant infrastructure development and investment has occurred including the major redevelopment of the Mordialloc Settlement drain connecting off-Airport drainage infrastructure to the north, running south though this Precinct 6 to a dry retention basis and the existing drainage outfall in Precinct 1. It is proposed to construct a new internal Airport connector road between Centre Dandenong Road and Boundary Road as an extension to the existing Chifley Drive. Other infrastructure works proposed for this precinct are set out in **Chapter 9** (Infrastructure Services) of this 2015 Master Plan.

It is also intended to relocate the Australian National Aviation Museum to Precinct 6 with a Boundary Road frontage.

MAC envisages that residential development in Precinct 6, primarily in the form of student accommodation, may be appropriate subject to the Airports Act and the planning controls in **Appendix 1** of this 2015 Master Plan. Student accommodation in Precinct 6 will be subject to commercial considerations as well as to the requirements and constraints of any applicable overlays (for example, the Moorabbin Airport Airport Environs Overlay and the Moorabbin Airport Design and Development Overlay).

Objectives

To encourage opportunities for high tech aviation industries and aviation support on land abutting Precinct 1.

To promote opportunities for employment in a manner that contributes to the high profile, high quality landscaped environment already in part established on the site.

To facilitate further integration of services and infrastructure across Airport precincts.

To deliver the highest quality infrastructure and built form that the market will support.

To deliver journey-to-work opportunities via existing public transport network facilities.

Strategies

- Deliver a high quality landscaped environment.
- Provide services and facilities for the growing employee population at the Airport and in the region.
- Promote opportunities in appropriate locations for high tech aviation industries and aviation support activities.
- Accommodate the Mordialloc Settlement Drain reserve and Clayton sewer.
- Reserve land associated with the proposed connector road between Centre Dandenong Road and Boundary Road and other infrastructure works.

Precinct 6 is shown in **Figure 5.6 – Moorabbin Airport Precinct 6 Plan – Industrial, Office, Retail, Commercial & Aviation Support**.

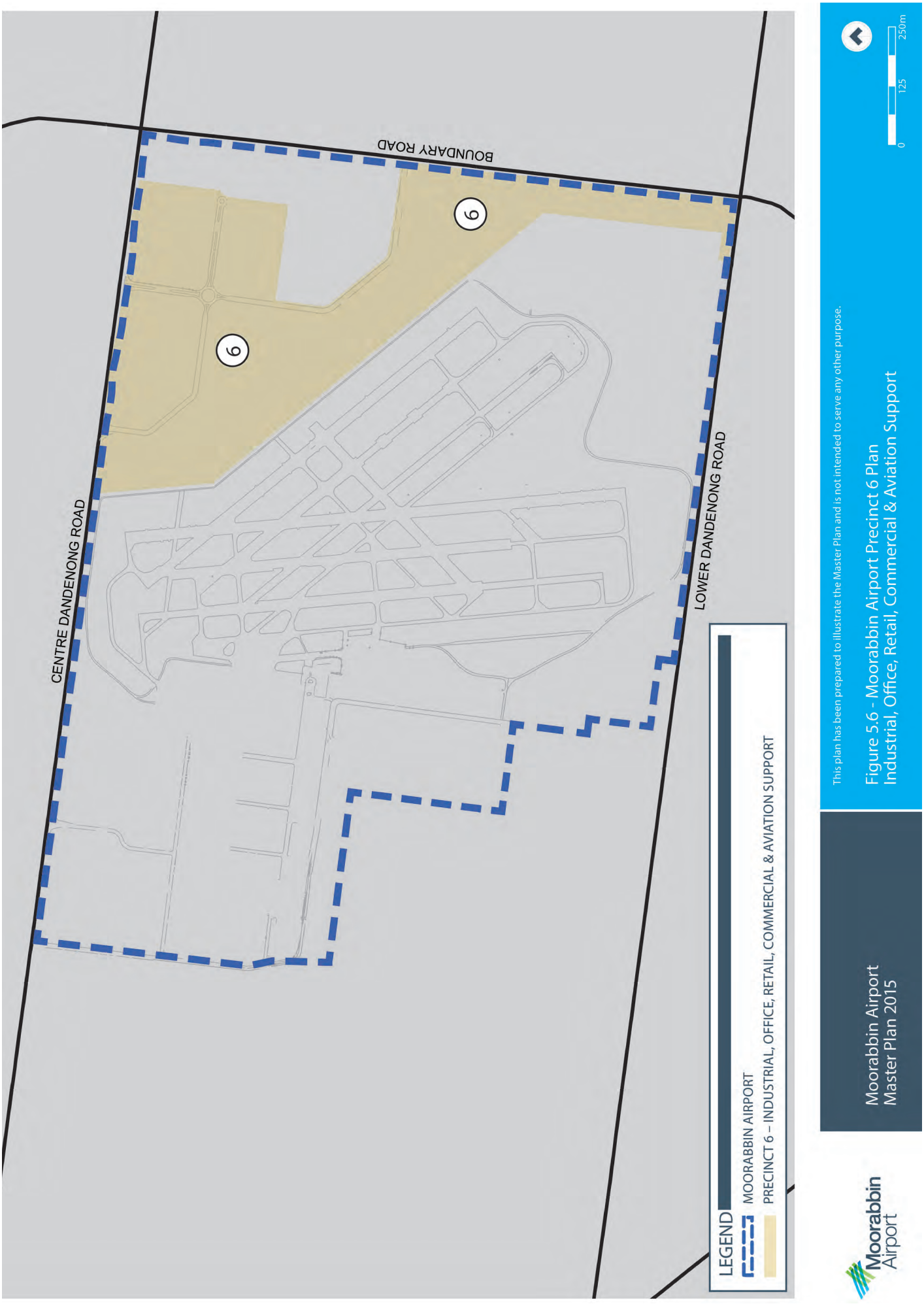

Figure 5.6 // Moorabbin Airport Precinct 6 Plan – Industrial, Office, Retail, Commercial & Aviation Support

5.2.7 Precinct 7 – Business, Commercial & Industrial including Aviation Support

This precinct encompasses two separate areas to the west and south of the Airside Operations area (Precinct 1) and Aviation Support Services area (Precinct 2), running along the south side of the Airport.

The primary purpose of Precinct 7 is to provide land for and encourage the development of buildings and infrastructure which accommodate a range of non-aviation activities including commercial and industrial land uses.

The secondary purpose of Precinct 7 is to provide for aviation and aviation-related activities on appropriately located sites within the Precinct.

Precinct 7 will include industrial uses and support services as well as the development of an internal access road. This internal access road will be critical to development of Precinct 7 and Precincts 2 and 3 and will re-establish an important link into the Airport terminal and aviation facilities from the south east, improving access to the precincts both inside and outside the Airport. An ongoing objective is to encourage public transport to better service the western aviation precincts and the new access road will support this objective. Further, the location of the proposed access road allows existing road closures on Airport boundaries at Bundora Parade and Houston Street to be retained.

Aviation support services may locate in areas abutting airside operations in Precinct 1, being consistent with the objective to locate aviation uses in the central areas of the Airport.

MAC has considered and rejected the original master planning concepts of intensively using the south-western corner of Precinct 7 for aviation uses, in particular helicopter operations. The focus of non-aviation uses will support noise buffer objectives for off-Airport areas, with warehouse structures ringing the Airport boundary.

MAC recognises that the south-western corner of Precinct 7 adjoins an existing residential area, and will work with the City of Kingston to plan how the interface is appropriately managed.

MAC envisages that residential development in Precinct 7, primarily in the form of student accommodation, may be appropriate subject to the Airports Act and the planning controls in **Appendix 1** of this 2015 Master Plan. Student accommodation in Precinct 7 will be subject to commercial considerations as well as to the requirements and constraints of any applicable overlays (for example, the Moorabbin Airport Airport Environs Overlay and the Moorabbin Airport Design and Development Overlay).

Objectives

To support the development of aviation support services and related business activities.

To deliver a western access road.

To provide additional employment opportunities to support the growing local and regional area.

To recognise adjacent off-Airport areas designated for residential land use as at 17 June 2015.

To facilitate further integration of services and infrastructure across Airport precincts.

To deliver the highest quality infrastructure and built form that the market will support.

To deliver journey-to-work opportunities via existing public transport network facilities.

Strategies

- Promote a range of business, commercial and industrial uses.
- Promote uses which support the expanding Airport, local and regional populations.
- Provide the opportunity for new aviation uses, support services and industrial uses.
- Provide the opportunity to link existing and new uses.
- Ensure that activities within this precinct have regard to the interfaces with other precincts.
- Work towards appropriate amenity outcomes for adjacent off-Airport areas designated for residential land use as at 17 June 2015.
- Recognise and enhance the visual prominence of that part of the precinct fronting Lower Dandenong Road through strong landscaping and well-designed urban form.
- Ensure that activities within this precinct have regard to the identified location of the new access road linking the precinct (and land to the north) with Lower Dandenong Road.
- Retain the opportunity for a new road connection from Southern Road through to Second Avenue and Grange Road.

Precinct 7 is shown in **Figure 5.7 – Moorabbin Airport Precinct 7 Plan – Business, Commercial & Industrial including Aviation Support**.

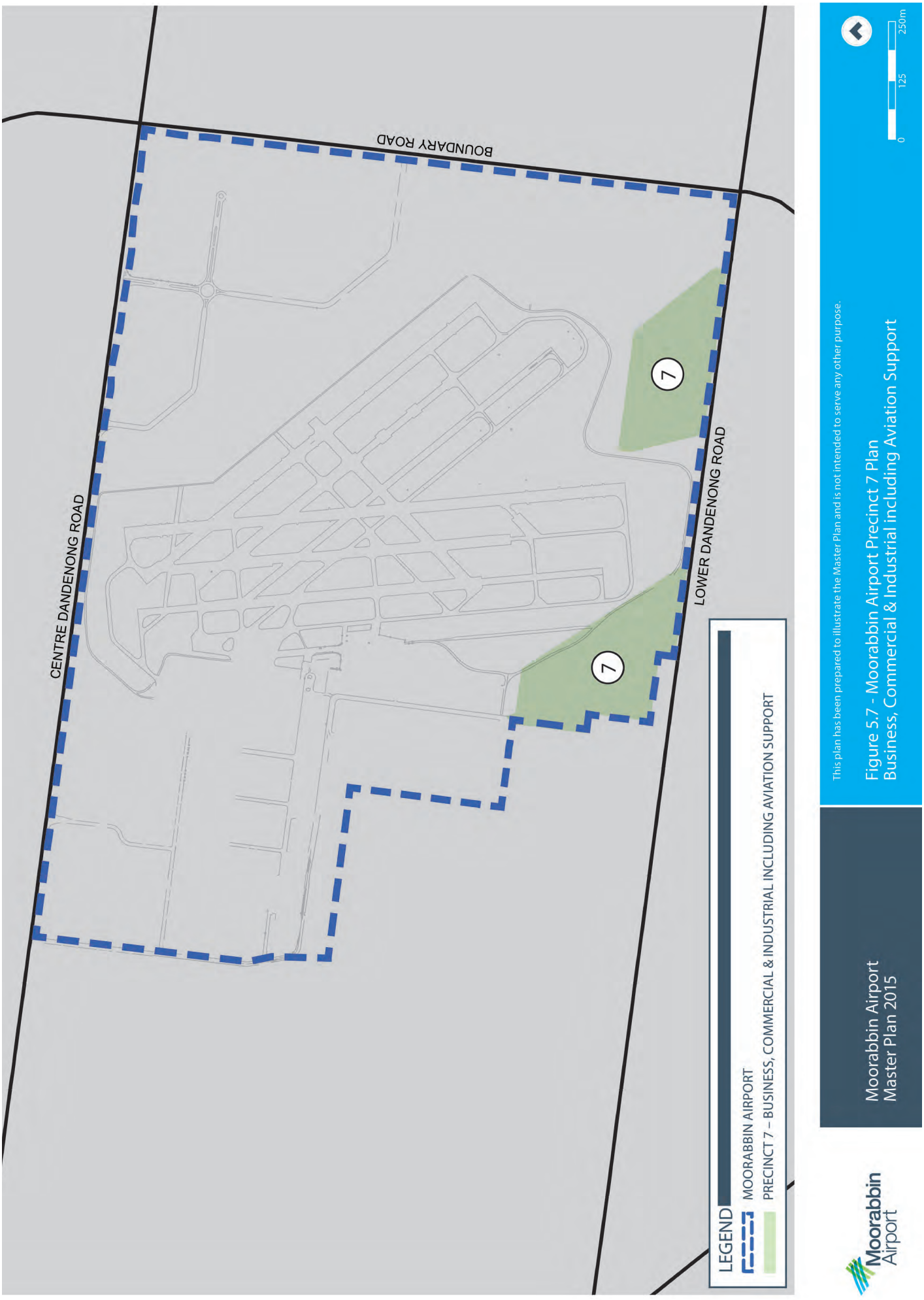

Figure 5.7 // Moorabbin Airport Precinct 7 Plan – Business, Commercial & Industrial including Aviation Support

5.3 Land Use & Development Controls

5.3.1 Land Use Zones

Under the Airports Act, this 2015 Master Plan is the primary document for the planning of the Airport, including the establishment of land use zones and development controls.

Airport land use zones directly control land use and development. The Moorabbin Airport land use zones are the key planning mechanism by which the land use objectives in the Precinct Plan as set out in **Section 5.2** are implemented.

Each zone that applies to a part or parts of the Airport is set out in **Appendix 1** to this 2015 Master Plan. **Appendix 1** includes detail of the uses and main purposes of each zone, and the requirements that apply regarding land use and the construction and carrying out of buildings and works when land is subject to a particular zone.

Each Moorabbin Airport land use zone lists land uses in three categories:

- Section 1, which lists uses for the relevant zoned area that do not require additional planning approval from MAC, however any condition opposite the relevant use must be met. If the condition is not met, the relevant development is to be treated as though it were a use set out in Section 2 of the relevant zone.
- Section 2, which lists uses for the relevant zoned area that require additional MAC planning approval and consideration. Any condition opposite the use must be met. If the condition is not met, the use is prohibited and the relevant development may not proceed.
- Section 3, which lists uses that are prohibited within the relevant area.
- Specific land uses that are not listed in a zone are generally considered to be Section 2 Uses, requiring MAC approval.

In relation to the zones:

- the MAC approval requirements referred to above are in addition to any approvals or consents that are required under the Airport Act and do not limit MAC's rights as lessee of the Airport;
- **Figure 5.8 – Precinct Objectives & Section 1 (Planning Approval Not Required) Uses Under Zoning Controls** summarises for each precinct the precinct objectives, applicable zone and "as of right" uses. The summary only lists Section 1 uses. The full detail for each zone is set out in **Appendix 1** to this 2015 Master Plan; and
- the zone boundaries generally reflect the precinct boundaries and are illustrated in **Figure 5.9 – Moorabbin Airport Zoning Plan**.

Land use controls given effect by the Moorabbin Airport zones will ensure that a strategic and co-ordinated approach is taken to the overall use of land across the Airport. The preparation and consideration of development proposals across the Airport will occur under the applicable zone and overlay controls, as well as the specific controls in relation to signage, parking and vehicle loading and unloading. Principles in relation to the design and siting of new buildings at the Airport are also a key part of the controls.

Precinct	Primary Purpose and Key Precinct Objectives	Applicable Moorabbin Airport Land Use Zone	Section 1 Uses (No Additional MAC Approval required)
1	**Primary purpose** To provide land and infrastructure for existing and future aviation activities in a manner which is safe, consistent with the Aviation Development Plan and compliant with applicable regulation. **Key Precinct Objectives** To protect aviation operations. To provide sufficient land for the Airport's existing and future core aviation infrastructure and services. To provide land for the development and operation of runways, taxiways, training areas, aircraft parking areas, apron areas, aviation buildings and runway clearance and protection areas. To provide for and encourage an efficient and capable base for a range of aviation functions. To facilitate compliance with relevant regulatory requirements. To facilitate further integration of services and infrastructure across Airport precincts. To deliver the highest quality infrastructure and built form that the market will support.	Moorabbin Airport Special Use Zone Schedule 1 **(MA-SUZ1)**	Air traffic control facility Aircraft operations Airport Airport operations facilities Apron Helipad Heliport Minor utility installation Navigational aids including weather station Road Runway Runway approach aid Taxiway

Precinct	Primary Purpose and Key Precinct Objectives	Applicable Moorabbin Airport Land Use Zone	Section 1 Uses (No Additional MAC Approval required)
2	**Primary purpose** To provide land to accommodate aviation activities, buildings and infrastructure which protect, support and facilitate the aviation activities carried out in Precinct 1, many of which by their nature must be adjacent to Airside Operations areas. **Key Precinct Objectives** To support the long-term aviation needs of the Airport including aviation operations, infrastructure and terminal areas. To provide for and encourage an efficient and capable base for a range of aviation functions. For aviation facilities to ring the airside boundary so as to free up the central area for aircraft parking. To ensure that taxiway clearances and aircraft parking satisfy regulatory requirements. To provide additional employment opportunities to support the growing local and regional area To facilitate further integration of services and infrastructure across Airport precincts. To deliver the highest quality infrastructure and built form that the market will support.	Moorabbin Airport Special Use Zone Schedule 2 **(MA-SUZ2)**	Air traffic control facility ATC associated facilities Aircraft operations Airport Airport operations facilities Apron Aviation maintenance facility Aviation support facility Car park Flight Training Education Centre Helipad Heliport Industry - Refer to condition set out in MA-SUZ2 in **Appendix 1** Minor utility installation Navigational aids including weather station Road Runway Runway approach aid Taxiway Warehouse

Precinct	Primary Purpose and Key Precinct Objectives	Applicable Moorabbin Airport Land Use Zone	Section 1 Uses (No Additional MAC Approval required)
3	**Primary purpose** To provide land for aviation and aviation-related activities which require or benefit from proximity to the Airside Operations and Aviation Support activities in Precincts 1 and 2. **Key Precinct Objectives** To provide for aviation and non-aviation business facilities and employment growth. To support the long-term aviation needs of the Airport including aviation operations and aviation expansion. To support the role of the Airport as a key regional destination. To promote industrial and industrial/ showroom uses where appropriate. To provide additional employment opportunities to support the growing local and regional area. To facilitate further integration of services and infrastructure across Airport precincts. To deliver the highest quality infrastructure and built form that the market will support.	Moorabbin Airport Special Use Zone Schedule 3 **(MA-SUZ3)**	Aircraft operations Airport Airport operations facilities Apron Aviation maintenance facility Aviation support facility Car park Commercial Display Area Flight Training Education Centre Industry - Refer to condition set out in MA-SUZ3 in **Appendix 1** Minor utility installation Office Road Student Accommodation Service Industry Vehicle Store Warehouse

Precinct	Primary Purpose and Key Precinct Objectives	Applicable Moorabbin Airport Land Use Zone	Section 1 Uses (No Additional MAC Approval required)
4	**Primary purpose** To provide buildings and infrastructure for commercial activities, including retail, industrial and showroom land uses and flight student accommodation. **Key Precinct Objectives** To promote retailing activity and uses. To promote industrial and industrial/ showroom uses. To promote entertainment, leisure and recreation uses. To allow for medical and aged care uses as appropriate (subject to the support of the State Government and the City of Kingston) To maximise usage of the Principal Public Transport Network. To provide additional employment opportunities to support the growing local and regional area. To facilitate further integration of services and infrastructure across Airport precincts. To deliver the highest quality infrastructure and built form that the market will support. To deliver journey-to-work opportunities via existing public transport network facilities.	Moorabbin Airport Commercial 1 Zone **(MA-C1Z)**	Accommodation (other than Corrective institution) Child care centre Education centre Exhibition centre Home occupation Informal outdoor recreation Motor racing track Minor utility installation Office Place of worship Railway Retail Premises (other than Gambling Premises and Shop) Shop (other than Adult sex bookshop) Telecommunications facility Tramway

Precinct	Primary Purpose and Key Precinct Objectives	Applicable Moorabbin Airport Land Use Zone	Section 1 Uses (No Additional MAC Approval required)
5	**Primary purpose** To provide for and encourage use of land for retail activities, including the development of non-traditional warehouse style and large format outlets. **Key Precinct Objectives** To promote retailing activity and uses which support the role of the Airport as a key regional destination. To continue to grow, and compete in, the retail market for the region. To develop an offering that meets the needs of the changing demographics, and the new residential developments, in the City of Kingston and the wider region. To promote retailing, commercial and service activities which complement the existing Chifley Business Park and support the existing and future employee base. To provide additional employment opportunities to support the growing local and regional area. To facilitate further integration of services and infrastructure across Airport precincts. To deliver the highest quality infrastructure and built form that the market will support. To deliver journey-to-work opportunities via existing public transport network facilities.	Moorabbin Airport Commercial 1 Zone **(MA-C1Z)**	Accommodation (other than Corrective institution) Child care centre Cinema Cinema based entertainment facility Education centre Exhibition centre Home occupation Informal outdoor recreation Motor racing track Minor utility installation Office Place of worship Railway Retail Premises (other than Adult sex bookshop and Gambling Premises and Shop) Shop (other than Adult sex bookshop) Telecommunications facility Tramway

Precinct	Primary Purpose and Key Precinct Objectives	Applicable Moorabbin Airport Land Use Zone	Section 1 Uses (No Additional MAC Approval required)
6	**Primary purpose** To provide for and encourage use of land for industrial, warehouse, office, restricted retail, showrooms, motor vehicles and storage, aviation support services, aviation student accommodation, conference and hotel facilities and a service station. **Key Precinct Objectives** To encourage opportunities for high tech aviation industries and aviation support on land abutting Precinct 1. To promote opportunities for employment in a manner that contributes to the high profile, high quality landscaped environment already in part established on the site. To facilitate further integration of services and infrastructure across Airport precincts. To deliver the highest quality infrastructure and built form that the market will support. To deliver journey-to-work opportunities via existing public transport network facilities.	Moorabbin Airport Commercial 2 Zone **(MA-C2Z)**	Cinema Cinema based entertainment facility Food and drink premises Industry (other than Materials recycling and Transfer station) – refer to condition set out in MA-C2Z in **Appendix 1**. Informal outdoor recreation Minor utility installation Motor racing track Museum Office Postal agency Railway Restricted retail premises Shop (other than Adult sex bookshop, Restricted retail premises, Supermarket and Department store (including a Discount department store) – refer to condition set out in MA-C2Z in **Appendix 1**. Supermarket (the leasable floor area must not exceed 1,800 square metres). Telecommunications facility Trade supplies Tramway Warehouse

Precinct	Primary Purpose and Key Precinct Objectives	Applicable Moorabbin Airport Land Use Zone	Section 1 Uses (No Additional MAC Approval required)
7	**Primary purpose** To provide land for and encourage the development of buildings and infrastructure which accommodate a range of non-aviation activities including commercial and industrial land uses. **Key Precinct Objectives** To support the development of aviation support services and related business activities. To deliver a western access road. To provide additional employment opportunities to support the growing local and regional area. To facilitate further integration of services and infrastructure across Airport precincts. To deliver the highest quality infrastructure and built form that the market will support. To deliver journey-to-work opportunities via existing public transport network facilities.	Moorabbin Airport Commercial 2 Zone **(MA-C2Z)**	Cinema Cinema based entertainment facility Food and drink premises Industry (other than Materials recycling and Transfer station) – refer to condition set out in MA-C2Z in **Appendix 1**. Informal outdoor recreation Minor utility installation Motor racing track Museum Office Postal agency Railway Restricted retail premises Shop (other than Adult sex bookshop, Restricted retail premises, Supermarket and Department store (including a Discount department store) – refer to condition set out in MA-C2Z in **Appendix 1**. Supermarket (the leasable floor area must not exceed 1,800 square metres). Telecommunications facility Trade supplies Tramway Warehouse

Figure 5.8 // Precinct objectives and Section 1 (planning approval not required) uses under zoning controls

The Moorabbin Airport Special Use Zone (MA-SUZ) and MA-SUZ Schedules 1, 2 and 3, the Moorabbin Airport Commercial 1 Zone (MA-C1Z) and the Moorabbin Airport Commercial 2 Zone (MA-C2Z), are to be read in conjunction with the balance of this Land Use Plan, specifically the Precinct Policy, the Land Use and Development Controls and the Land Use Management Framework, which together provide guidance for decision-making in relation to Airport land.

5.3.2 Overlays

In accordance with the VPPs, the Airport has applied overlays to target a single issue or related set of issues. The overlays used are:

- the Moorabbin Airport Design and Development Overlay (MA-DDO), shown in **Figure 5.10 – Moorabbin Airport Design and Development Overlay Plan – MA-DDO**; and
- the Moorabbin Airport Airport Environs Overlay (MA-AEO), shown in **Figure 5.11 – Moorabbin Airport Airport Environs Overlay Plan – MA-AEO1 and MA-AEO2**.

Each of the overlays has a strategic justification and is linked to the policies and development objectives described in this 2015 Master Plan. The requirements and restrictions of each overlay are similar to those in the VPPs.

5.3.3 Interface Amenity Design Responsibility

Where a change in zoning or land use control is proposed or implemented to off-Airport land, it has the potential to give rise to amenity issues, either by placing a sensitive land use in close proximity to a potential source of noise, visual impact or other amenity impact on Airport land, or by placing a source of amenity impact off-Airport in proximity to a sensitive land use on-Airport.

Conversely, a change in zoning or land use control to Airport land may have a similar outcome or outcomes.

The Airport's view is that where a change in zoning or land use control is proposed or takes effect, the proponent of the change should be primarily responsible for design measures to address or mitigate actual amenity impacts at or near the interface between Airport and non-Airport land.

For the purpose of this section 5.3.3, a change in zoning or land use control means (in the case of Airport land) a change from the zoning or control set out in this 2015 Master Plan, and (in the case of off-Airport land) means a change from the zoning or control set out in the Kingston Planning Scheme as in effect on 17 June 2015 (disregarding any proposed planning scheme amendments which have not at that date already been gazetted).

5.4 Land Use Management Framework

5.4.1 Background

The Airports Act provides a comprehensive development approval regime. In this regard, there are certain requirements to obtain planning approval before seeking Building Activity Consent from the Airport Building Controller. All federally leased airports are subject to the same regime. The Airports Act codifies the planning requirements for the building activities of Commonwealth airports.

5.4.2 Land Use & Development Approvals

i. The Role of Airport Lessee Company as Approval Authority

Planning and design approval (by MAC as the Airport Lessee Company) or MDP approval (by the Minister if required) are a prerequisites for obtaining a Building Permit from the Airport Building Controller (ABC) for any development at the Airport

The Airport Lessee Company is required to provide for the strategic and coordinated planning of the use of the Airport in keeping with the objectives of the Land Use Plan, including the Precinct Plan and the Moorabbin Airport Planning Controls – 2015 Master Plan. This involves the assessment of proposals to determine whether they are consistent with each of the elements of the Land Use Plan.

In assessing applications, the Airport Lessee Company may seek specialist input from planning, economic, architectural, transport and engineering advisors as necessary.

A more detailed description of the approvals process is provided in **Section 5.4.3**.

ii. The Role of the Airport Building Controller

The ABC is responsible for the technical approval of all buildings and works on the Airport. The ABC must make an assessment of all proposed buildings and works against the requirements of the Building Code of Australia, the Airports Act and the 2015 Master Plan and issue approvals/certifications for new buildings and structures.

iii. The Role of the Airport Environment Officer

The Airport Environment Officer (AE Officer) fulfils the role of an environmental regulator for Airport land. The AE Officer is responsible for reviewing land use proposals against environmental criteria and investigating incidents which have, or may have caused pollution or issues of contamination. Where necessary, the AE Officer can issue an infringement notice to any operator on the Airport site, if the operator has committed an offence against the Regulations.

iv. Consultation

As part of the approvals process, MAC may, as necessary, consult with:

- **Council and State Government** – where appropriate, the City of Kingston and State authorities are advised of land use proposals at the Airport by MAC. MAC will then consider any comments received (within 14 days) in determining an application.

- **The Moorabbin Airport Community Aviation Consultation Group** – the Moorabbin Airport Community Aviation Consultation Group plays an important role in reviewing issues associated with the Airport. MAC recognises that this forum provides an excellent vehicle for regular consultation with key stakeholders, and will ensure that regular reports are made to the committee on the progress of land use at the Airport.
- **Authorities** – MAC envisages that various precincts on the site may be divided into 'lots' for the purposes of subleasing, which will be represented on an overall subleasing plan for the precinct. This plan will be required to address a wide range of access, infrastructure and servicing issues similar to a subdivision proposal. On this basis, MAC will consult and work with relevant public authorities, where appropriate, in regards to proposals for the creation of major 'subleasing' areas.
- **Residents** – When MAC considers a land use or development proposal that is not subject to the major development or sensitive use framework (see **Section 5.5** below), there is no formal obligation to inform or consult with residents in the vicinity of the Airport. MAC recognises that even when a proposal is generally compliant with the land use objectives and controls set out in this 2015 Master Plan, there may be potential impacts on residents. When considering proposals for use or development of Airport land which have the potential for adverse amenity impacts, MAC will inform and consult with residents who are likely to be affected, and will take account of their feedback in deciding whether, and on what terms, to approve the proposal.

5.4.3 Approvals Process

MAC has established a comprehensive and systematically-run process for the assessment of land use and development proposals. The steps in the process are set out below and summarised in a flow chart in **Figure 5.12 – Moorabbin Airport Planning Approvals Process Flowchart**.

Where necessary this process is followed for external applications to MAC and is also followed by MAC when preparing and reviewing its own proposals.

i. Applicant Preliminary Information Review

The initial stage of the approval process involves the applicant collating the preliminary information including any preliminary plans, explanation of works and proposed use. The purpose of this stage is to ensure that appropriate information is collated prior to a pre-assessment review.

ii. Pre-assessment Discussion

Once the applicant has collated the preliminary information material, a pre-assessment meeting with MAC is recommended. The aim of this meeting is to enable an open forum to take place and resolve any relevant issues that become apparent at an early stage of the approvals process.

iii. Lodgement of the Application

Following the pre-assessment review and once the required information has generally been agreed upon the application is lodged with MAC at the following address:

Moorabbin Airport Corporation
Airport Management Centre
66 Bundora Parade
MOORABBIN AIRPORT VIC 3194

An application must be accompanied by the following information:

- A site plan drawn to scale.
- Application form filled out and detailing what use/development the applicant is applying specifically for.
- Scaled elevation drawings to identify the colour and materials of all buildings and works.
- Construction details of all drainage works, driveways, vehicle parking and loading areas.
- A landscape layout which includes the description of vegetation to be planted, its source, the surfaces to be constructed, site works specification and method of preparing, draining, watering, maintaining and monitoring the landscape area.
- Details relating to access, vehicle parking, noise amenity, visual amenity and height limitations.
- Pre- and post-construction environmental and works plan.
- Any other information required by the Moorabbin Airport Planning Controls – 2015 Master Plan (contained in **Appendix 1**).

A preliminary assessment of the proposal will be undertaken and any further requirements that may be required will be requested in writing at this stage to the applicant.

iv. Consultation regarding the application

Upon lodgement of the application MAC may distribute it to relevant authorities for their review where necessary. Such authorities may include:

- Various State Government authorities.
- Various aviation authorities.
- The City of Kingston.
- South-East Water (water and sewer).
- Jemena (electricity).
- Telstra (telecommunications).
- Vic Roads (roads).
- Melbourne Water (stormwater and drainage).

In addition, where appropriate, MAC will consult with residents who are likely to be affected by the proposed development, as outlined **Section 5.4.2 iv**, above.

MAC will also consult at an early stage with Airservices in relation to any proposed developments (including plant and crane operations), Controlled Activities and Major Development Plans, so that Airservices has sufficient time to conduct relevant technical and operational assessments to protect safety-critical zones, siting criteria around any navigational aids and PANS-OPS/flight procedures.

v. Consideration of the application

In considering the application, MAC takes into account the relevant Precinct Policy (**Section 5.2**) and applicable zoning and other provisions.

vi. Decision on the application

MAC will issue a decision to the applicant either approving or rejecting the application. Any approval granted generally contains a number of conditions which relate to matters such as:

- building design, materials and colour;
- access and parking;
- landscaping;
- amenity;
- infrastructure provision.

Standard conditions are imposed on most approvals, however a number of application-specific conditions may also be appropriate. All decisions are notified in writing. Where an approval is issued plans must also be finalised and endorsed prior to any proposal proceeding.

5.5 Major Developments & Sensitive Developments

For any major airport development or a sensitive development (as defined in the Airports Act), a Major Development Plan (MDP) must be prepared, placed on public exhibition and submitted to the Minister for approval, prior to obtaining any building approval under the Act.

In the case of sensitive developments, an Airport Lessee Company may not prepare a major development plan for the relevant development unless and until the Minister has consented to the production and submission of the relevant plan. Section 71A of the Airports Act requires a Master Plan to identify any proposed "sensitive developments", defined as development or redevelopment that increases the capacity of the following:

- residential dwelling;
- community care facility;
- pre-school;
- primary, secondary, tertiary or other educational institution; and
- hospital.

A sensitive development does not include the following:

- an aviation educational facility;
- accommodation for students studying at an aviation educational facility at the Airport;
- a facility with the primary purpose of providing emergency medical treatment and which does not have in-patient facilities;
- a facility with the primary purpose of providing in-house training to staff of an organisation conducting operations at the Airport.

While there are no specific proposals for sensitive development in this 2015 Master Plan, the provisions of some of the zones applicable to the Airport (as set out in Appendix 1) will enable certain sensitive developments to be considered in the future subject to the Airports Act requirements to prepare a draft MDP. Future development opportunities may include:

- medical facilities in relevant Precincts, where such facilities are not intended to provide in-patient services or otherwise act as a hospital; and
- delivery of aged care options, where those options are unlikely to be a community care facility or residential dwelling for the purposes of the Airports Act (which MAC acknowledges limits the type of facilities that may be considered). MAC will not proceed with aged care land uses without the support of the State Government and the City of Kingston. In addition, if there were a specific proposal for aged care facilities that included either a community care facility or residential dwelling under the Airports Act, the consent of the Minister would be required before that proposal could progress to the production of an MDP.

5.6 Consistency with State Planning Schemes

This section sets out how MAC"s intentions for land use and related development of the Airport, embracing airside, landside, surface access and land planning/zoning aspects, are consistent with State Planning Schemes, and provides justification for any identified inconsistencies.

5.6.1 Application of Moorabbin Airport Special Use Zone to Precincts 1, 2 and 3

Moorabbin Airport is recognised as an airport and as a Transport Gateway in Plan Melbourne, the planning strategy for metropolitan Melbourne released in May 2014. As a Transport Gateway, the Airport is also recognised within Plan Melbourne as a Place of State Strategic Significance to Victoria. This is the same recognition as is given to other airports in metropolitan Melbourne – Melbourne, Avalon and Essendon airports.

Under Plan Melbourne, the Strategic Direction for the Airport (as a Transport Gateway) includes – as well as its passenger and freight movement role – its role as an economic and employment centre with a significant economic and employment-generating role. The Airport's transport function is to be protected from incompatible land uses, but adjacent complementary land uses and employment-generating activity are encouraged. The continued development of aviation, aviation support and airport services as contemplated for the Precincts 1, 2 and 3 is consistent with Plan Melbourne.

The Moorabbin Airport Special Use Zone is applied under this 2015 Master Plan to areas of the Airport designated for aviation, aviation support and airport uses. It is based on the Special Use Zone which forms part of the Victoria Planning Provisions, with some changes made to ensure consistency with the provisions of the Airports Act.

The Victoria Planning Provisions Practice Note of February 1999 in relation to application of the Special Use Zone provided that the complexity of planning requirements is to be reduced by keeping the number of zones to a minimum, with detailed and complex site-specific zones discouraged in preference for clear policy guidelines as a primary tool for decision making on planning matters. Among other situations, the Special Use Zone can be considered when an appropriate combination of other available zones, overlays and local policies cannot give effect to the desired objectives or requirements.

In the circumstances, the Moorabbin Airport Special Use Zone is considered the appropriate zone for airside and aviation support precincts of the Airport and its use is consistent with planning schemes under Victorian law. Complexity is reduced by the application of a single zone to these precincts, with flexibility afforded by the use of separate zone schedules. The Moorabbin Airport Special Use Zone and its schedules allow for specialised aviation and aviation support land uses at the Airport to be recognised and specifically facilitated in a manner not allowed for by the more general-purpose commercial or public use zones under the VPPs.

5.6.2 Application of Moorabbin Airport Commercial 1 Zone to Precincts 4 and 5

Like many airports in Australia and around the world, non-aviation development has occurred at Moorabbin Airport. Non-aviation development complements and supports the Airport's aviation operations and is consistent with general urban planning arrangements for the Southern Subregion of metropolitan Melbourne, including Plan Melbourne and the Kingston Planning Scheme. It is acknowledged by industry and government that appropriate non-aeronautical development underpins the viability of the Airport's aviation operations.

The Moorabbin Airport Commercial 1 Zone (MA-C1Z) is based on the Commercial 1 Zone (C1Z) which forms part of the VPPs, with appropriate changes made to ensure consistency with the provisions of the Airports Act. Purpose statements in relation to housing have been removed, for example, as most forms of housing are a "sensitive use" not allowed at the Airport without Ministerial approval, as outlined in **Section 5.5**, above.

Given the Airport's designation as a Transport Gateway and a Place of State Significance under the Plan Melbourne strategy for metropolitan Melbourne, applying the Moorabbin Airport Commercial 1 Zone to parts of the Airport which are suited for retail, office, industrial and other commercial activities is consistent with the State Planning Policy Framework and the VPPs and reflects a contemporary application of commercial zones under the VPPs. In particular, it is consistent with the function of the corresponding VPP Commercial 1 Zone as a zone which supports a full range of retail and commercial activities and areas of intensive, mixed-use employment.

Even without considering the implications of Plan Melbourne, the use of the Moorabbin Airport Commercial 1 Zone for Precincts 4 and 5 is consistent with the "net community benefit test" approach as set out in the State and Local Planning Framework.

Any potential inconsistency between Clause 21.06 of the Kingston Planning Scheme, and the application of the Moorabbin Airport Commercial 1 Zone and the Moorabbin Airport Commercial 2 Zone to parts of the Airport, is addressed in **Section 7.11** of this 2015 Master Plan.

5.6.3 Application of Moorabbin Airport Commercial 2 Zone to Precincts 6 and 7

The Moorabbin Airport Commercial 2 Zone (MA-C2Z), based on the Commercial 2 Zone as set out in the VPPs, has been applied to Precincts 6 and 7, with appropriate changes made to reflect the Airport's particular circumstances.

The use of the Moorabbin Airport Commercial 2 Zone is consistent with the State Planning Policy Framework and the VPPs – especially given the role that Airport is required to play under Plan Melbourne as an economic and employment centre with a significant economic and employment-generating role. In particular, it is consistent with the function and contemporary application of the corresponding VPP Commercial 2 Zone as a zone which provides more opportunities for office, commercial businesses, restricted retail and bulky goods premises and specified forms of retail activity, without floor area restrictions in many instances, to create new opportunities for office and retail growth – including "non-traditional" retail formats.

Again, even if Plan Melbourne had not been implemented, the use of the Moorabbin Airport Commercial 2 Zone for these precincts would have been consistent with the "net community benefit test" approach as set out in the State and Local Planning Framework.

5.7 Pre-existing Interests

In developing this 2015 Master Plan, all interests existing at the time the Airport lease was created were considered, including easements, licences, leases and sub-leases. There are no conflicts or inconsistencies existing between these interests and any proposals in the 2015 Master Plan. The Airport will continue to ensure that any Airport development contemplated will not interfere with the rights granted under any pre-existing interest.

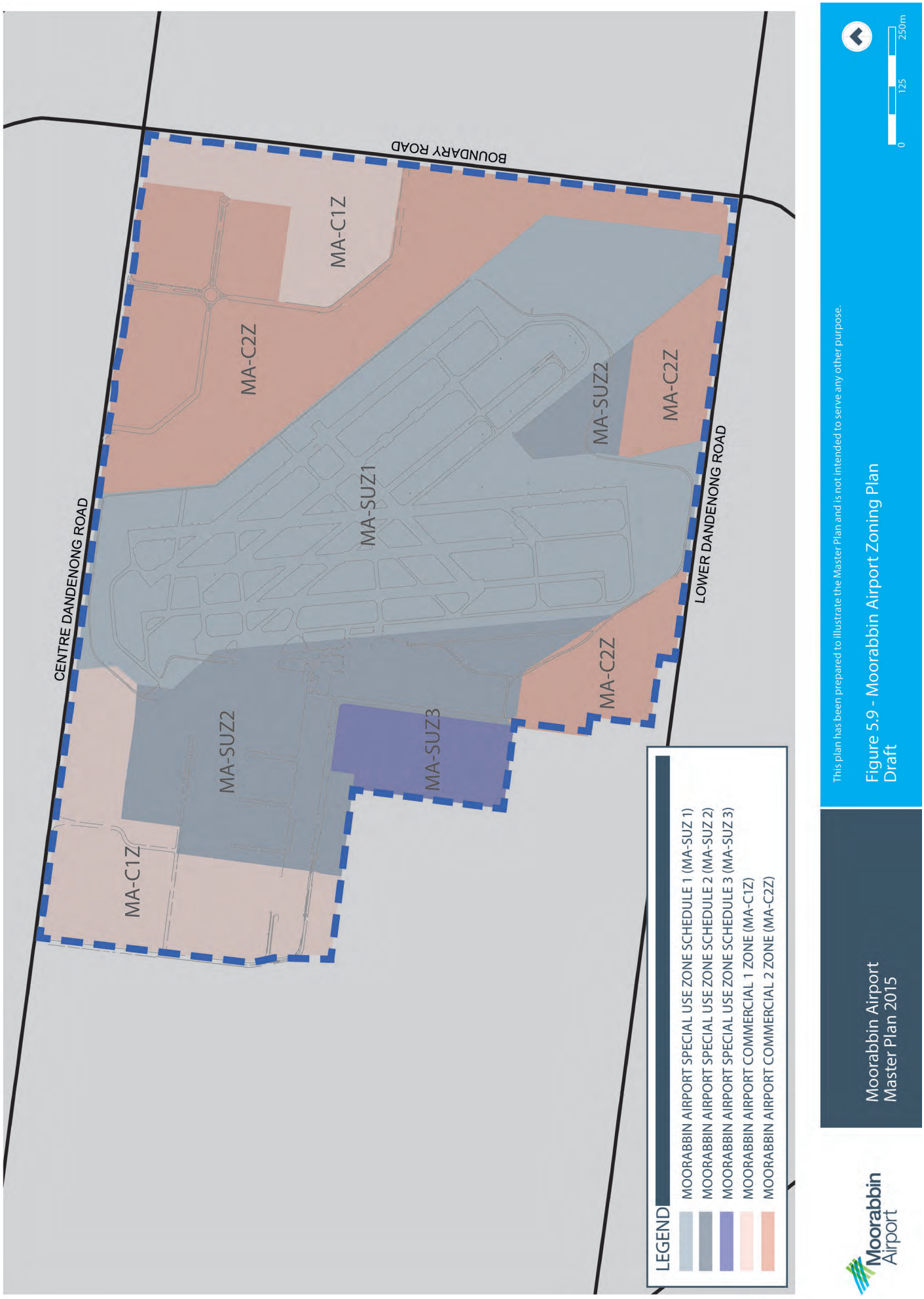

Figure 5.9 // Moorabbin Airport Zoning Plan

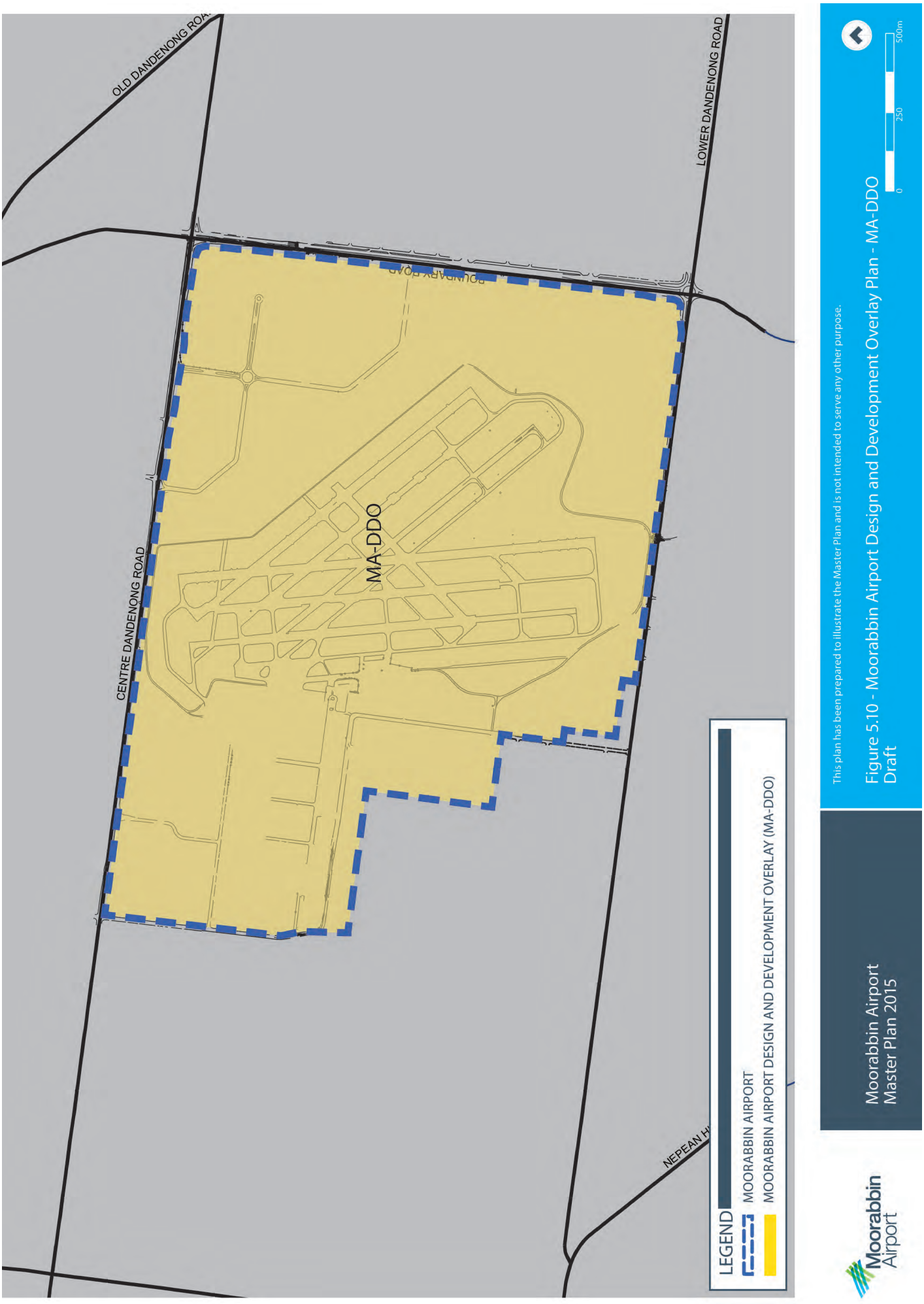

Figure 5.10 // Moorabbin Airport Design and Development Overlay Plan – MA-DDO

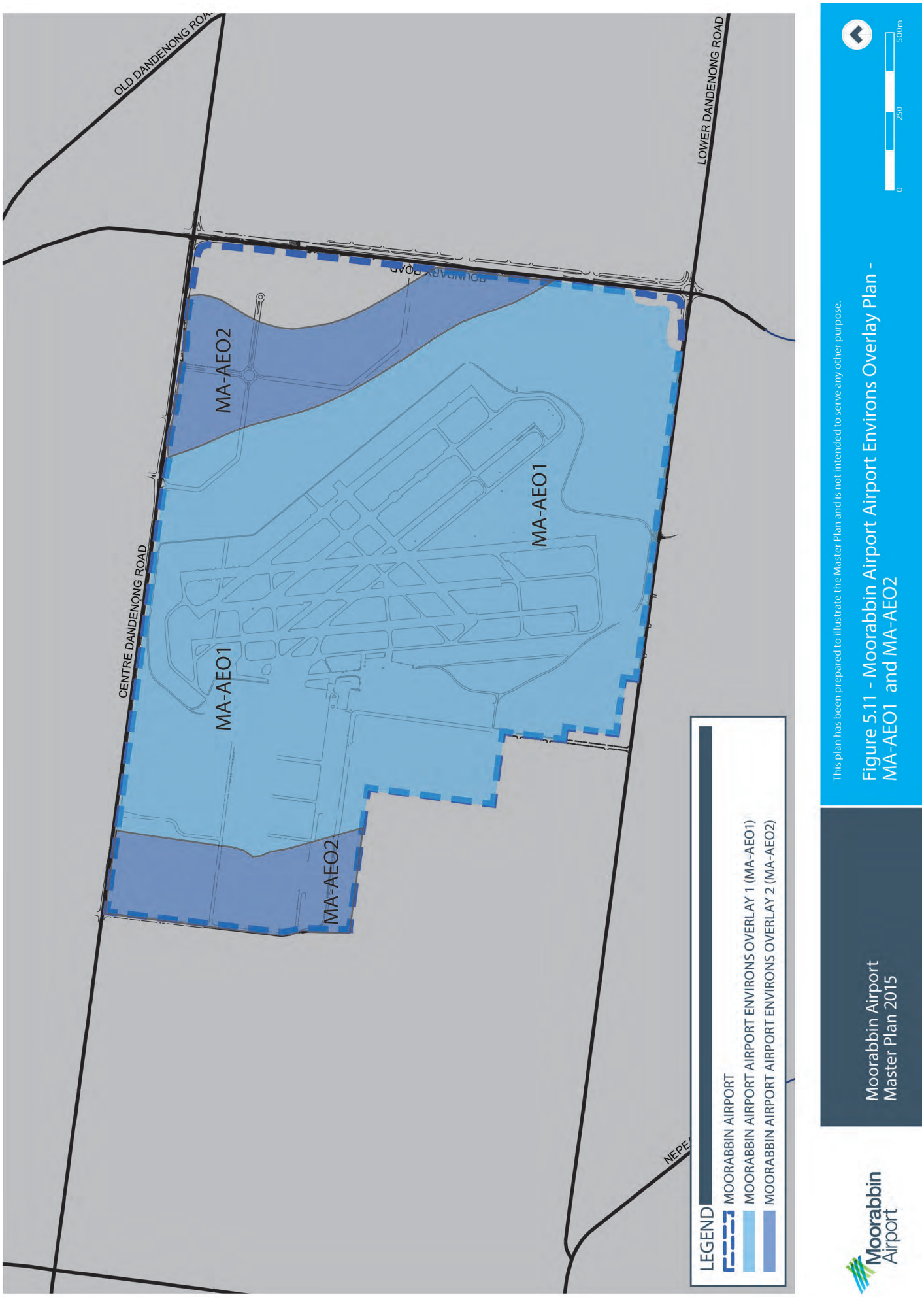

Figure 5.11 // Moorabbin Airport Airport Environs Overlay Plan – MA-AEO1 and MA-AEO2

1 - Applicant Preliminary Information Review

Collation of preliminary information regarding the application including:

- An understanding of the relevant controls
- Preliminary plans
- A description of the proposed use and/or any buildings and works

2 - Pre-Assessment Discussion With MAC

A discussion with MAC at this stage will highlight any particular issues or information requirements that should be addressed prior to lodgement of the application.

3 - Lodgement of the Application

The application lodged with MAC must include information as specified within the Moorabbin Airport Planning Controls - 2015 Master Plan in relation to the zone or zones to which the application relates. Such information may include items such as:

- Completed application form
- A description of the proposed use and/or any buildings and works
- Any use-specific assessments required under the zone
- Plans, elevations and details of materials, colours, etc.
- External treatments (e.g. landscaping and car parking)

Further information may be requested by MAC upon further consultation

4 - Consultation Regarding the Application

MAC will distribute the application to relevant authorities for review where appropriate. Such authorities will include State Government authorities, the City of Kingston, and infrastructure service providers (eg. road, water, drainage, sewer, power, telecommunications). Where appropriate, it may also include residents who are likely to be affected by any adverse amenity impacts.

5 - Consideration of the Application

MAC reviews the application, all comments received, the relevant Land Use Policy, Precinct Policy, Zoning, Decision Guidelines and other provisions in the determination of the application.

6 - Decision of the Application

MAC will issue a decision to the applicant either approving, approving with conditions or rejecting the application. Any approval granted generally includes a number of conditions which may relate to matters such as:

- Building design
- Access and parking
- Landscaping
- Infrastructure provisions; and the like

This figure is for illustrative purposes only as part of the Moorabbin airport 2015 Master Plan.
It is not intended, nor should it be relied upon, for any other purpose.

Figure 5.12 // Moorabbin Airport Planning Approvals Process Flowchart

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6 // Aviation Development Plan

- Safety and regulatory compliance are paramount in the operation of the Airport.
- The Aviation Development Plan (ADP) identifies land and infrastructure for existing and future aviation activities.
- The ADP is a plan to responsibly grow general aviation operations at a metropolitan airport.
- General aviation and flight training are fundamental components of MAC's overall plan to develop all segments of the Airport.
- Non-aeronautical developments underpin the viability of the Airport's aviation operations. Without these subsidies, fewer aviation development sites located within the inner core of the Airport could never be released as, alone, they could not bear the infrastructure servicing costs.
- The ADP supports a wide variety of additional Airport-based businesses including aircraft maintenance, charter, emergency and essential services, fire and land management, search and rescue, aeromedical, infant care, rapid tissue transfers, aerial surveillance, mapping, geotechnical services and data collection. Recreational flying is also a strong component of aviation activity.

6.1 Introduction

Moorabbin Airport is Australia's leading centre for flight training and general aviation excellence. The Airport's role is to safely and responsibly provide airport infrastructure and services to enable delivery of continued flight training and general aviation activity. The Aviation Development Plan (ADP) delivers the aviation vision for Moorabbin Airport. That vision is for safe, responsible aviation growth, expanded flight training capability, economic activity, employment, delivery of aviation services, infrastructure and operations.

The ADP sets out the development objectives of the airport and affirms and enhances the role of the airport. It is fundamentally a land use and planning tool. However the ADP is built on much more than lines on a page. MAC's airport team culture is one that pro-actively creates, leads and participates in aviation growth initiatives.

The MAC ADP is based on five principles:

- Airport land use, development and safe compliant operations
- Aviation customer growth
- Community engagement
- Regional support and engagement
- Industry growth

Overview 2010-2015

Moorabbin Airport is consistently one of Australia's busiest airports and continues to successfully deliver its ADP. An overview of the last 5 years at Moorabbin Airport and relevant facts for the ADP are set out below.

- 60% of the airport site continues to be reserved for aviation activities.
- 16 flight training organisations – the largest number in South East Asia (from 11 in 2010, a 40% increase) are based at the airport.
- 4,000+ student pilots have been trained since the 2010 Master Plan.
- Student pilots trained annually has remained stable at 800 in difficult conditions over the past 5 years. The aviation industry has a positive outlook for future growth.
- The airport is planning for aviation growth and has constructed 24 additional aircraft parking spaces (from 90 in 2010 to 114, a 26% increase). About a third of aircraft park in parking spaces, one third are in hangars and one third park on unimproved grassed areas.
- The airport has remained fully operational for 365 days per annum since 2010.
- MAC has agreed more aviation leasing arrangements than at any time post-privatisation - including 25 aviation leases that collectively provide 200 years of lease term (ranging from 5 to 30 years depending on Customer requirements), 100 years of options covering 30,000 sqm of aviation land. These aviation leases represent 25% of the available site areas in the aviation support precinct and provide certainty to the aviation industry.
- Aviation site enquiry being actively negotiated includes 10 lease proposals that collectively provide 200 years of lease term regarding a further 30,000sqm of aviation land.
- $7.5m has been invested into aviation facilities since 2010 by MAC and our aviation customers and double this investment is being negotiated in multiple lease proposals.
- $10m has been invested in site drainage works that are fundamental to the whole airport. The Mordialloc Settlement Drain, new Southern retarding basins and reconstructed open cut drains and swales allow the airport to manage 1 in 100 year flood events without loss of aviation infrastructure during (the airport site is located on a historical flood plain).
- $2m in improved road infrastructure that will benefit aviation precincts. Works include commencement of the landside Western Precinct Link road "Duigan Drive" and airside perimeter road bridging, surfacing and widening works.
- Aviation common user terminal renovation.
- Multiple airfield lighting projects including 5km of taxiway lighting (Alpha, Bravo and Golf) and the upgrade replacement of 8 main aviation apron lighting units.

The ADP and Airport land use, development and safe operations

Three aviation precincts over 173ha (60%) of Moorabbin Airport provide for airport operations and aviation support activities. This is marginally more than the 2010 Master Plan aviation precinct areas of 171ha.

Aviation land use has been continuously refined since the airport's privatisation in 1998. The ADP is informed by a comprehensive aviation land use study and other factors as noted below.

- Current and future aviation precincts and uses.

- Regulatory compliance and safety.
- Runway considerations including.
  - Orientations/ compass bearings, which are driven by prevailing wind patterns.
  - Lengths and operating distances, noting smaller flight training aircraft are the airport's main aviation users.
  - Retention of our 2 sets of parallel runways to concurrently deliver flight training circuits and approach/ departure movements.
  - Retention of the cross wind runway.
- Clustering aviation activities in dedicated precincts in the central and western portions of the airport site to support efficient aviation operational activity. Aviation support precincts are planned and located contiguously to the airport operations precinct. This allows aircraft and users to efficiently access runways from aircraft parking areas and airside generally.
- Up to 7 aviation support sub-precincts for major general aviation activities conducted at Moorabbin Airport – flight training; maintenance; premium flight training, charter, maintenance, lower cost and premium aviation operations, regional services, hangarage and aircraft parking.
- A major driver in the zoning of Precinct 3 as aviation support has been MACs plans to grow the aviation footprint over the next 20 years. 2ha of the 10ha site is already leased for aviation purposes including the Australian National Aviation Museum (since the last Master Plan MAC has increased the "gifted" museum land area by 100% and gifted a 500sqm building for Museum use), pilot shop, three flight training schools, Airservices compound, the MAC Airport Maintenance Compound and the main public access aviation car park for scheduled services passengers, flight schools and public. There is interest in the available land for several aviation related activities including student accommodation, aeronautical engineering and research facility and additional private aviation motor vehicle parking areas.
- Responsibly limiting aviation activities and infrastructure adjacent to off airport dwellings.
- Utilising airport developments (aviation and non-aviation structures) to shield off airport local residents from ground based aircraft noise.
- The National Airports Safeguarding Framework.
- Aviation required infrastructure in non-aviation precincts, to achieve a whole of site infrastructure delivery methodology, e.g. drainage, roads and services infrastructure.
- Provision for Western precinct link road (that will support public transport accessing the airport site and improved access to aviation precincts – these objectives have been identified by aviation customers since privatisation).
- Aviation navigational aids, weather instruments and general user terminal location.
- A mix of general aviation aircraft types, weights and wingspans.

The ADP provides for continued improvements to the airport infrastructure. Works planned (with appropriate industry and community consultation) may include:

- Airside pavement re-sheets and rejuvenation (as required).
- Expansion of the existing terminal apron.
- Runway and taxiway sealing and edge works.
- New run-up bays (adjacent to terminal).
- Coordination of delivery of fibre optic cable.
- Taxiway design and efficiency works.
- Airside access and gate improvements.
- Further airfield drainage works.

Aviation customer growth

The ADP vision includes Moorabbin Airport responsibly doubling flight student training numbers (from 800 in 2015 to 1600+ in 2035) and doubling aircraft movements (from 230,000 in 2015 to 500,000 by 2035). The Aviation customer growth foreshadowed in the ADP will be delivered and supported by a range of initiatives as set out below.

- Agreeing long term leases with aviation customers to provide them certainty of tenure necessary for investment, financing and business decisions.
- Providing lease sites and lease agreements that can accommodate staged investment and growth plans by our aviation customers. Pleasingly this is an increasing request from aviation operators who are increasingly engaging with MAC early, including in response to MAC initiatives seeking information about planning to the future.
- Providing aviation customers with flexible uses

within aviation support precincts to permit often complex general aviation business models, many of which are small businesses. The ADP responds to this general aviation business commercial reality through the airport land use plan which details a principle precinct objective and lists other uses that are permitted.

  - By way of example a single aviation business located in the aviation support area may provide pilot training services (retail), lease aircraft (short or long term), sell aircraft, sell aircraft parts, import aircraft, provide charter services, carry limited amounts of freight, seek airport student accommodation, maintain aircraft and have a series of arrangements in place with other aviation businesses.

- Encouraging a mix of general aviation activity (and associated land uses) in order that:
  - Aircraft may be bought, operated, maintained, stored and sold;
  - Pilots can acquire training services, training materials, medical and license testing, pilot related products, and access to services including restaurants and cafes, local and specialty shopping and museums;
  - Broader community aviation needs are met including flight training, charter, fire management, niche RPT, mineral exploration and aerial photography
- Strengthening relationships with aviation universities. MAC continues to enhance its strong ties with the two leading Victorian aviation universities by:
  - Facilitating new connections/ introductions between aviation university department leaders and lecturers with on airport flight training schools (fixed wing and rotary);
  - MAC participating in Careers Days located at university campuses;
  - MAC staff delivering aviation lectures and speaking at university conferences and
  - Mentoring university students
  - Offering universities complimentary airport-based outdoor advertising
  - Securing university participation at Moorabbin Airport Careers Days - two universities attended our 2016 event
  - Providing airport site tours to university students (domestic and international)
- Creating new relationships with other aviation higher education providers. MAC has targeted metropolitan TAFEs offering aviation courses and is working with an airport operator to secure an on airport presence of a Victorian TAFE.
- Ongoing development of an aviation youth engagement strategy to increase awareness of aviation, connect the next student generation to the aviation industry, and engage with all levels of Government. To progress the strategy, over the last five years, we have:
  - Provided a written 10-page strategy document to the State Government outlining Moorabbin Airport's Youth Engagement – Flight Training Strategy
  - Sponsored local schools – five local schools targeted
  - Provided work experience to local secondary school students – six students worked on-airport closely with the MAC senior management team
  - Provided an aviation focused family-friendly playground, picnic chairs and tables adjacent to the terminal and helicopter precinct. To enhance visitor's experiences at the playground MAC routine proves children with aviation themed toys.
- The airport has adopted a pro-active and supportive aviation marketing role.
  - MAC co-pitch with customers to their target markets and stakeholders (including to customers potential new aviation investors and customers. Increasingly at the request of airport based flight training schools MAC is providing information and co pitching to airlines seeking to train new pilots.
  - Moorabbin Airport as a place of general aviation growth, opportunity and competitive advantages both in Australia and overseas. In this regard MAC has participated in State sponsored overseas aviation trade missions to multiple Asian countries.
  - MAC provides complimentary outdoor advertising sites for aviation customer events and promotions.
  - MAC participates in operator promotions, launches, and events.
  - MAC promotes broader aviation customer

business objectives - eg regional travel, fore management services, flight training through advertising signage and brochures.

- We are re-designing the aviation support precinct site layout to:
  - Further improve site utilisation and access for aviation customers.
  - Provide enhanced co-location of aircraft parking adjacent to aviation businesses
  - identify immediately developable aviation sites for hangars and other facilities.
  - identify additional aviation development sites that can be created following the infrastructure and services construction and network connection.
  - Allow aviation businesses to better access the planned Western Link Road through the aviation precinct.
- Improved understanding of aviation customer growth and investment plans to better align airport and aviation customer objections (MAC issues questionnaires to our aviation customers).
- Review aero charges to support based airport operators, larger aircraft fleet operators, start up businesses; expanding businesses.
- Introduce, including participation in follow up meetings, customers to other operators where the relationship would be mutually beneficial (e.g. Museum, engineering businesses, universities).

Community engagement

The ADP is built on Moorabbin Airport proactively improving our connections with the community. We recognise we can always do more to enhance community engagement and interaction. Ways we connect with the community are set put below.

- Communications and media. MAC engages with the community through ongoing quarterly CACG meetings, meetings with resident associations as required, targeted aviation briefing notes, newsletters, radio, and local newspaper briefings.
- Long-term sponsorship of local schools - five schools.
- Providing a place of community activity through 50+ events on-airport per annum, including historic motor vehicle clubs, museum, canine agility training groups, school and university functions, seniors groups, international and regional visitors and youth organisations.
- Support for off-airport events hosted by Kingston City Council, Industry Groups and the RSL (Anzac Day and Remembrance Day).
- Providing long-term leases to charities making a social impact – we have recently gifted a 30-year lease on a 3,000sqm kitchen garden site to Victoria's leading food rescue organisation to support the provision of 1.2 million meals to hungry Victorians.
- MAC team membership of community organisations including Rotary.
- Introducing aviation to people with disabilities through long-term partnerships with schools for students with disabilities (over 25 years, more than 5,000 people have participated).
- Provision of physical infrastructure including footpaths, bike-friendly access, street lighting, landside open spaces.
- Participation in a broad range of Council activities including committees, meetings and awards nights.
- Promotion of women in aviation through support of the Australian Women Pilots' Association. MAC provides sponsorship.
- Hosting emergency services on-airport (MFB, Victorian Police) including multiple-agency training, aviation education events and emergency related training.

Regional support and engagement

Moorabbin Airport supports social inclusion and regional development through the provision of freight, charter, emergency services and aircraft maintenance. Importantly, Moorabbin Airport interacts extensively with regional communities on multiple levels regarding aviation issues by:

- Facilitation of the transportation of people, goods and services to regional centres including Bairnsdale, King Island, Flinders Island and Northern Tasmania.
- Participation in regional airport grants submission by Queensland University of Technology for enhancing the impact, viability and efficiency of remote rural and regional airport infrastructure in Australia.
- Initiated discussions with two Victorian aviation universities regarding promotion of their brands and courses to regional Victoria, including at AAA events and MAC regional airport site visits.
- Participation in the AAA regional and small

airport committees and regional airport meetings (e.g. Mildura, Bendigo).

- Site visits to regional airports (9 Victorian airports visited over the last 18 months).
- Provision of advice to regional airports regarding operator consultation methods, land use, aero charges and attracting flight training providers to regional centres.
- Provision of Airport Reporting Officer training to regional aerodrome managers including King Island and Tyabb.
- Presentation and participation in regional shire aerodrome meetings.
- Hosting of regional Air League squadrons from across Victoria during the annual review.
- Inviting regional students to participate in the 2014 and 2016 aviation careers days (Ballarat, Geelong, Bendigo).
- Fuel sponsorship for regional charity air events.
- Waiving of airport charges for regional support services including Angel Flight and Royal Flying Doctor Service.

Aviation Industry growth

The ADP demonstrates Moorabbin Airport's commitment to strengthening the aviation industry through promotion of flight training and aviation generally. Specific industry growth initiatives include:

- Active participation in Industry Groups and organisations
  - Australian Airports Association (AAA) membership, MAC team member is AAA Board member and Chair of the Victorian Division, and MAC regularly participated in AAA committees, meetings, national conferences and issue development.
  - Aviation/ Aerospace Australia (A/AA) membership, member of the A/AA Avalon Airshow 2017 committee, sponsor of multiple events including youth networking events and trade functions.
  - Avalon Airshow participation in 2013 and 2015, Moorabbin Airport was a part of the State Government aviation industry exhibition stand. MAC team members assisted to set up 'Avalon East' General Aviation airport, provided Airport Reporting Officers throughout the event, provided cones and markers for the airstrips.
  - Tyabb Airshow support and participation in networking events, including with State Government members, regulators and other Moorabbin Airport attendees.
  - University Aviation Industry Advisory Committee membership by MAC team member.
  - Australian Air League sponsorship, use of airport open space for the Moorabbin Airport squadron and host of the Victorian end of year review for 13 squadrons from around the State (500 attendees).
  - Australian National Aviation Museum sponsorship and support for 20+ events per annum, gifting of aviation museum site, storage yard and 500sqm building to house aviation archives and artefacts, host whole of airport customer events at the museum to re-connect airport users with living aviation history.
- Initiatives developed by MAC that are most effective where the support of the State Government is obtained. The 18 initiatives which have been formulated since 2011 include Aviation Careers days, aviation curriculum, an aviation website and aviation industry calendars.
- Ongoing Australian Defence Force (ADF) engagement including Royal Australian Air Force, Royal Australian Navy fleet air arm and the ADF Recruiting team. Presence of ADF aircraft and uniformed personnel at Moorabbin Airport are inspirational for children and young adults. Aspiring student pilots that do not enter the ADF have the opportunity to further their training in civil aviation at Moorabbin Airport.
- Industry recognition of General Aviation through the nomination of local GA 'heroes' and aviation champions. Recent MAC efforts have included:
  - Written nomination for flight training Chief Flying Instructor for A/AA leadership award.
  - Written nomination for AAA successful leader in flight training award.
  - Written nomination of aviation leaders for Order of Australia awards.
  - Recognising aviation market sectors and contributions to the aviation community (e.g. aerial firefighting).

MAC's current and future flight training objectives are set out in **Figure 6.1 – Present and Future Flight Training Operations at Moorabbin Airport**.

ADP Item	2015	2035
Flight Training Operator category		
	1	2+
	12	16+
	3	6+
Total Students	800	1,600 – 2,000
Aircraft	300	Up to 580
Aviation Land Area Planned	173 Ha	173 Ha
Movements	230,000	500,000
Runways	5	5
Helipads	2	2
Aviation GLA	70,000+	155,000+

Figure 6.1 // Present and Future Flight Training Operations at Moorabbin Airport

6.2 Growth Forecasts for Aviation

Planning for aviation-related facilities (runways and taxiways, hangars and other facilities) for the Airport is based on a range of factors, including current aviation activity and forecast aviation traffic growth.

Currently, over 250 businesses are located within the Airport, including approximately 50 aviation related customers.

The major aviation customers include:

- flight training operators;
- Aero Clubs;
- lower capacity regional airlines;
- Helicopter operators;
- Fuelling services for all major oil companies; and
- an Aviation Museum.

6.2.1 Current Aviation Activity

Moorabbin Airport is currently home to the most number of flight training organisations of any airport in Australia and South East Asia (16 organisations are currently based at the Airport). These flight training organisations are within aviation buildings and annexes on Airport comprising 39 hangars and numerous general-purpose buildings.

The 800 flight students who currently train on the Airport every year do so in light single-engine piston aircraft such as Cessna 152, Cessna 172, Cessna 182 and Piper PA-28 Warrior types.

Moorabbin Airport is working with a flight training operator to assist them to service flight training students from their international airlines and facilitate further growth of aviation operations at Moorabbin Airport. Moorabbin Airport continues to work with operators to deliver student accommodation as contemplated in the Non-Aviation Development Plan in chapter 7. Over the near term, new flight training opportunities may see an increase in base movements from 10 – 15%.

MAC has entered into Heads of Agreement to develop new training academy and simulator facilities in Precinct 2. This follows public announcements early in 2015 and specific advice to the CACG.

In addition, and consistent with similar developments at equivalent metropolitan airports in Australia, MAC has been working through Heads of Agreement to develop Stage 1, consisting of 150 beds, of a flight student accommodation facility in Precinct 3.

The Airport has been a base for low-capacity Regular Public Transport (RPT) services since the 1970s, serving the Bass Strait Islands, Northern Tasmania and Victorian regional centres. These have been limited to 8-9 seat Piper PA-31 Chieftain aircraft and 18-seat Embraer EMB-120 Bandeirante aircraft. Currently the only RPT airline operating at the Airport is King Island Airlines daily on a mixed passenger/ freight schedule using Piper PA-31 Chieftain and Embraer EMB-120 Bandeirante aircraft.

6.2.2 Aircraft Movements

Aircraft movements at Moorabbin Airport were 230,000 in 2014, making it the third busiest airport in Australia. Aircraft movements have been declining over the last two decades as a result of reduced recreational flying and reduced low-capacity services to regional centres. Current movements are 42% below 1989 movements of 395,000 and 34% below 2008 movements of 350,000.

Fixed-wing movements comprise approximately 85% of total movements and helicopters represent around 15% of total movements, on average.

MAC's aviation development plan provides the settings necessary to deliver improved aviation growth. This plan centres on expanding flight training. For instance, the student and aircraft numbers given above do not take account of recent agreements reached concerning the establishment of an international airline's cadetship programme at the Airport – a programme that will significantly increase movements over time. Furthermore, the Airport is progressing a light jet growth strategy. This is a strategy that targets the operators of aircraft which are capable of using existing Moorabbin Airport infrastructure and which are looking to move from their existing base of airport operations or are commencing new operations. Given the ability of Moorabbin Airport to offer competitive landing charges, access to infrastructure, hangarage, and access to other aviation, commercial and retail services this is a strategy that MAC believes has the potential to deliver significant benefits to Moorabbin Airport and the region over time. If further feasibility work establishes that there is sufficient demand, MAC will consider the development of a light jet precinct as a (part) use in Precinct 2 in the mid-term.

Figure 6.2 – Moorabbin Airport Historical Total Annual Aircraft Movements, 1998-2014 shows annual aircraft movements at the Airport recorded by Airservices Australia since privatisation of the Airport in 1998.

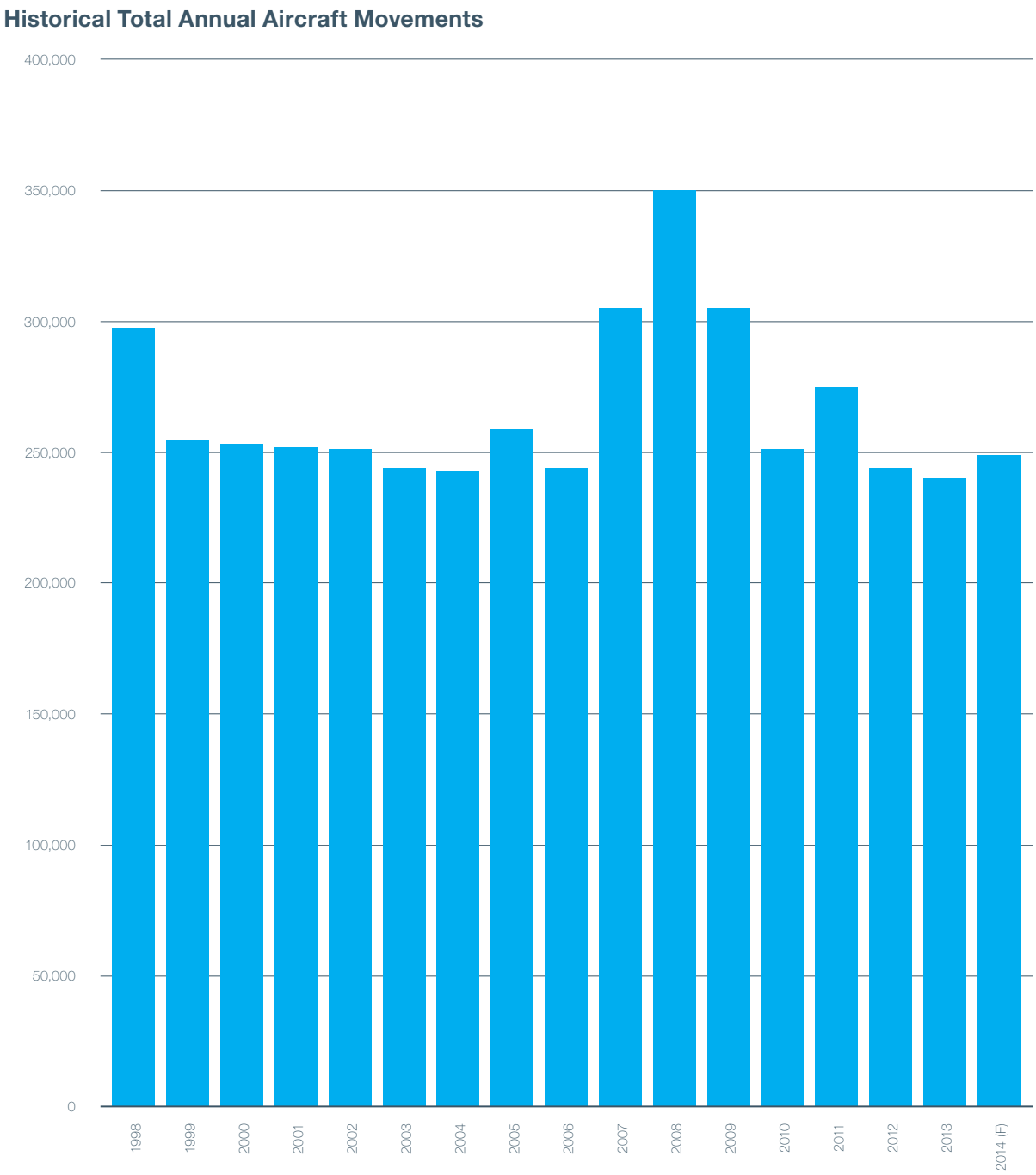

Figure 6.2 // Moorabbin Airport Hospital Total Annual Aircraft Movements, 1998-2014

This historical analysis highlights that aircraft movement levels at the Airport have been highly variable over the last 15 years or more. This is a situation reflected at the other major metropolitan general aviation airports in Australia and results, at a basic level, from the sensitivity of the aviation industry, and the general aviation sector in particular, to global and national economic conditions.

Key drivers which influence the level of flight training activity include the increasing popularity of sports and recreational flying, in which training is generally conducted at small regional aerodromes and not at airports such as Moorabbin, and the large overseas component of commercial students which is dependent on the health of overseas markets. Due to the cyclical variation in general aviation activity, particularly flight training activity, the 20-year forecasts in previous Master Plans have not proved accurate.

In 2004, MAC established a forecast for the 20 years to 2024 based on growth in aircraft movements of 1.5% per annum. This growth level had been used in the previous (1999) Master Plan and resulted in a forecast of 348,000 movements in 2029. In the 2010 Master Plan, starting from a higher base, a growth rate of 1.5% per annum resulted in around 431,000 movements by 2029 and 500,000 movements by 2039.

In response to the challenges involved in forecasting aircraft movements at airports like Moorabbin, in the 2010 Master Plan MAC adopted a forecast of 500,000 aircraft movements per year for long-term planning. Work undertaken in relation to this 2015 Master Plan has further assessed and confirmed that this number of movements is an appropriate long-term planning assumption. The 2010 Master Plan estimated that this level would be reached between 2031 and 2039, depending on actual traffic growth rates.

Forecasts based on trend extrapolation are highly sensitive to the assumptions made in determining historical trends from the data as well as the base level of movements from which growth is forecast. In the future, demand for flight training activity at the Airport will be driven by the global requirement for commercial pilots.

Within the Asia-Pacific region especially, which Australia is well placed to serve, demand for pilots is expected to increase significantly over the next decade.

As a result, the forecasts presented in this 2015 Master Plan reflect a range of possible scenarios, as shown in **Figure 6.3 – Moorabbin Airport Forecast Total Annual Aircraft Movements, 2007-2035**:

- the 2010 Master Plan forecast of 1.5% pa growth commencing from 2007;
- growth at 1.5%, 2.0% and 2.5% pa from the estimated 2014 annual movement level. Growth rates of 1.5% to 2.5% per year are consistent with forecasts adopted in recent Master Plans by other major metropolitan general aviation airports conducting similar roles such as Bankstown, Parafield, Jandakot and Archerfield; and
- an initial higher rate of growth assuming that traffic levels are currently below the long-term trend and will return to the 2008 level of 350,000 movements by 2020. Thereafter, growth of 2.0% pa is indicated meaning that under this scenario, 2035 movements of approximately 370,000 are forecast.

Forecast Total Annual Aircraft Movement

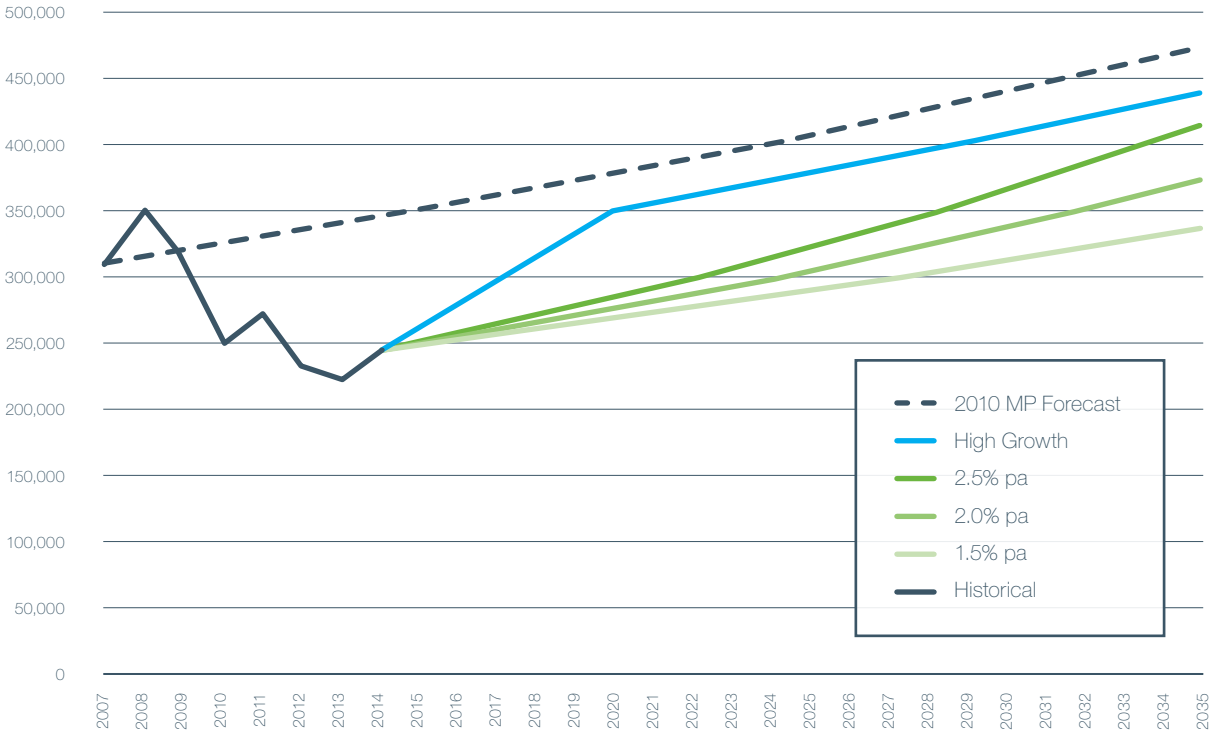

Figure 6.3 // Moorabbin Airport Forecast Total Annual Aircraft Movements, 2007-2035

None of the forecast scenarios anticipate that the long-range forecast of 500,000 movements will be reached within the 20-year period of this 2015 Master Plan. Depending on the actual growth experienced in practice, a level of 500,000 movements is expected to occur sometime between 2040 and 2060.

Nevertheless, MAC foresees an ultimate output of around 2,000 students per year from flight training organisations based at Moorabbin Airport. This is around 2.5 times the current number of students. Changes in training techniques, including an increase in the use of simulators, are likely to mean that growth in aircraft movements is not as high as the growth in annual students over time. This still suggests that capacity long-range forecast of 500,000 movements, roughly twice the 2014 movement level or around 50% more than the 2008 peak, is an achievable planning objective.

Over the last 14 years for which data are available, the proportion of helicopter movements has varied between 10 and 20% of the total aircraft movements, and has averaged 15.2%. MAC expects helicopter movements to grow in line with fixed-wing movements and therefore the proportion of helicopter movements is anticipated to remain constant at 15%.

Figure 6.4 – Long-Range Aircraft Movement Forecast Summary presents a breakdown of the long-range forecast by the main aircraft types.

Movement Type	Circuit Training		Arrivals & Departures	
Fixed-Wing	Single Engine Piston (eg, Cessna 172, Piper Warrior)	281,950	Single Engine Piston (eg, Cessna 172, Piper Warrior)	48,374
	Twin Engine Piston (eg Beech Baron)	50,050	Twin Engine Piston (eg Beech Baron)	30,862
			Light Turboprop (eg Beech King Air)	8,224
			Light Jet (eg Cessna Citation)	4,540
424,000		**332,000**		**92,000**
Helicopter	Single Engine Piston (eg Robinson R22, R44)	41,058	Single Engine Piston (eg Robinson R22, R44)	15,032
	Single Engine Turbine (eg Eurocopter EC130)	9,068	Single Engine Turbine (eg Eurocopter EC130)	3,320
	Twin Engine Turbine (Eg Bell 206, Sikorsky S76)	5,506	Twin Engine Turbine (Eg Bell 206, Sikorsky S76)	2,016
76,000		**55,632**		**20,368**
500,000				

Figure 6.4 // Long-Range Aircraft Movement Forecast Summary

6.2.3 Passengers

Previous Master Plans have anticipated the development of high-capacity RPT operations serving capital cities using modern regional turbo-prop and jet aircraft in the 70-100 seat range. MAC has been unable to develop this market in the last 15 years for a number of reasons.

The current high-capacity airline operators have their operations principally at Melbourne Airport, with some operations at Avalon Airport and Essendon Airports. Due to cost, these operators are reluctant to split their operations further by establishing a base at Moorabbin.

Historically, new entrants into high capacity RPT have found it difficult to establish and consolidate their operations (for example, Compass Mark I and II, and Tiger), even at Melbourne Airport where the infrastructure exists. The added difficulty of establishing infrastructure at Moorabbin Airport creates further difficulties for start-up airlines and has been a major factor in discouraging new entrants from establishing services at Moorabbin.

In the period since the 2010 Master Plan, MAC has taken the decision that high-capacity RPT operations are neither viable nor appropriate at Moorabbin Airport. Such activity is not operationally compatible with high-intensity ab-initio flight training, which is the predominant focus of the Airport. MAC no longer intends to pursue the development of RPT operations, nor are these seen as part of the long-term role of the Airport. Elements of the 2010 Master Plan which were incorporated with the objective of enabling high-capacity operations in the future, and which are not required to fulfil the Airport's primary role of flight training, have been removed from this 2015 Master Plan.

MAC will continue to support existing low-capacity RPT services by King Island Airlines. Further niche low-capacity passenger transport services serving other locations may develop. Provided these are consistent with the overall flight training role of the Airport, MAC would encourage these.

6.2.4 Private Light Jets & Light Jet Training Opportunities

In response to potential opportunities which may be presented by growth in Melbourne's south and east, the Airport is progressing a private light jet growth strategy. This is targeting aircraft capable of using existing Airport infrastructure and for which the use of Essendon Airport (where private and business jet operations are currently constrained) or Melbourne Airport may be unattractive due to potentially increasing operational restrictions or for geographical reasons. Where there is sufficient demand a private light jet precinct will be considered as a use in Precinct 2 in the mid-term. It is considered that the Airport has significant capacity to support private light jet activity within current forecasts.

Use of new light jets is an increasing trend for flight training operators. Light jet training opportunities will allow the Airport to further diversify its aviation activities and manage risk through exposure to a different segment of the aviation industry.

Runway extensions contemplated in the Airport's 2010 Master Plan are no longer proposed in this 2015 Master Plan. As a result, the size of jet aircraft that can operate at the Airport is limited to smaller types such as the Cessna Citation I/II or similar. Typically, these have a maximum passenger capacity of 7 – 9 and are used by private users or businesses.

The 2015 ANEF included in this 2015 Master Plan (see section 11.3.3) is premised on a long-term forecast of 4,500 annual movements of these types of aircraft – an average of 12 movements, or 6 flights, per day. This figure is unlikely to be reached early in the 20-year planning period for the 2015 Master Plan.

The 2010 ANEF and the Airport's 201 Master Plan forecast 11,000 annual jet aircraft movements, including larger and noisier jets for regular public transport (RPT) services, using the previously contemplated runway extensions.

Removal of the previously proposed runway extensions from this 2015 Master Plan, and the resulting removal of the potential for jet RPT services, means that the jet operations contemplated in this 2015 Master Plan are of a significantly smaller scale, and will have a significantly smaller impact, than jet aircraft operations which might have occurred under the 2010 Master Plan as approved.

6.3 Existing Airside Configuration

6.3.1 Runways

The 5 current runways serving the Airport, and their associated characteristics are set out in **Figure 6.5 – Existing Runway Configuration** and are shown in **Figure 6.6 – Existing Aviation Facilities**.

Runway 17L/35R	1,335m x 30m	Code 3B*	Instrument Non-precision	Medium intensity runway lighting
Runway 17R/35L	1,240m x 18m	Code 1B	Non-Instrument	
Runway 13L/31R	1,150m x 30m	Code 2C	Non-Instrument	Medium intensity runway lighting
Runway 13R/31L	1,060m x 18m	Code 1B	Non-Instrument	
Runway 04/22	571m x 18m	Code 1B	Non-instrument	

* Even though Runway 17L/35R is dimensionally a Code C runway, the associated taxiways are Code B.

MAC will regularly review runway coding, and will implement code changes as necessary to best match operational requirements. Appropriate protection of future runway codings for operational requirements will also be undertaken.

Figure 6.5 // Existing Runway Configuration

Runway 17L/35R is the preferred runway for Moorabbin Airport. This runway accommodates the majority of circuit training and movements of noisier aircraft such as private light jets and war birds.

Runway 17R/35L is primarily used for arrivals and overflow circuits from Runway 17L/35R.

The 13/31 direction is normally used when the cross wind becomes too high for the safe operation of the 17/35 direction. Both runways 13/31 (13R/31L, 13L/31R) are used in the same way as the 17/35 runways.

Runway 04/22 is used for emergencies and for those aircraft that have a small allowable cross wind component, and when the cross wind of the 13/31 or 17/35 directions exceed this.

The 17/35 direction accounts for approximately 77% of movements, with the 13/31 direction accounting for approximately 23% of movements. The 04/22 accounts for less than 0.5% of movements.

Given the above, there is no proposal to significantly change the airside configuration. MAC will continue to work with Government, agencies and authorities to determine the most efficient and safe airside configuration, particularly in light of the aviation growth strategy.

6.3.2 Taxiways

The existing runways are served by a comprehensive existing taxiway network which consists of two full length parallel taxiways serving Runways 17R/35L and 17L/35R (Taxiway A and Taxiway F) and two full-length parallel taxiways serving Runways 13L/31R and 13R/31L (Taxiway B and Taxiway E). A parallel taxiway also serves Runway 04/22 (Taxiway C). This taxiway also provides cross field connectivity between the main hangar and terminal precincts and Runways 13/31.

Taxiway F is suitable in width for Code C aeroplanes except for the section to the south of Taxiway A6, which is suitable in width for Code B aeroplanes. Similarly Taxiway E is suitable in width for Code C aeroplanes except for the section to the south of Taxiway B1 which is suitable for Code B. Taxiway C west of Taxiway B is suitable for Code A aeroplanes only. The remaining taxiways are all suitable for Code B aeroplanes.

Taxi lanes serving aircraft parking areas are a mix of Code A or Code B to suit the aircraft types accommodated in each area.

6.3.3 Aircraft Parking Areas

Areas for aircraft parking at Moorabbin Airport consist of sealed aprons, grassed areas, and hangars, as shown on **Figure 6.6 – Existing Aviation Facilities**.

The main terminal apron has 4 common-user parking positions for temporary use. There is also a small RPT apron adjacent to the King Island Airlines terminal. A small number of freight services provided by light aircraft are spread throughout the existing aviation areas on the western sector of the Airport.

Moorabbin Airport currently has the capacity to house approximately 580 aeroplanes and helicopters. This comprises approximately 230 in hangars, 160 on hard sealed parking areas and the remainder on open grassed land allocated to aircraft parking.

During the first 5 year period of this 2015 Master Plan, MAC will continue to work with CASA to ensure that all existing aircraft parking areas meet all relevant regulations.

6.3.4 Terminals

There are currently three passenger terminal buildings at Moorabbin Airport, all within Precinct 2:

- The King Island Airlines building which provides a simple passenger check-in area, limited seating and a freight handling capability. This is used exclusively by King Island Airlines.
- The MAC terminal building adjacent to the MAC Management Centre, which comprises approximately 200 square metres of area and can be used for a number of passenger processing purposes in relation to aircraft charters as well as for private flight training.
- A disused terminal building on Northern Avenue of approximately 200 square metres currently leased out for purposes other than passenger handling.

6.3.5 Aviation Business & Support

Flying Training

Flight training is the major aviation activity at Moorabbin Airport. Training is provided by 16 flight training organisations (12 fixed-wing and 4 rotary-wing) for approximately 800 students per year. Over 400 instructors are required to facilitate this.

Although no accommodation is provided on site for students, most flight training organisations have an operational building with airside access and a number have associated maintenance hangars. Future developments are planned for aviation related student accommodation.

As outlined in section 6.2.1 above, work is currently occurring under Heads of Agreement in relation to new flight training facilities (in Precinct 2) and the first 150-bed stage of a flight student accommodation facility (in Precinct 3).

In addition to these facilities, large flight training organisations require additional facilities to support their aviation activity. These include classrooms, simulators and administration offices. It is not essential that all of these facilities are located with airside access. Given the finite extent of the airside perimeter, in some cases it makes sense to locate these facilities within an adjacent landside precinct to preserve sites on the airfield perimeter for activities where direct airside access is essential.

The majority of aircraft used for flight training are not hangared and are parked on licensed hard-sealed parking areas.

Helicopters

Helicopter facilities are located to the south of the main terminal precinct and in the north-western area of the airfield. There is a dedicated helicopter landing site (helipad) for each area. These are illustrated in **Figure 6.6 – Existing Aviation Facilities**.

The majority of Airport-based helicopters are used for corporate, private or charter purposes, although 12-15 are primarily used in training. Helicopter circuit training constitutes the majority of helicopter movements and is undertaken as described in **Section 11.2.7**. Helicopter crew training is also performed at the southern end of the Airport using the non-operational runways and grass areas. There is occasional use of the Airport by emergency services (firefighting, police and air ambulance) helicopters.

6.3.6 Air Navigation Facilities

Air Traffic Control Tower

The current control tower at Moorabbin Airport is located in the central western zone of the Airport, adjacent to the MAC Management Centre and terminal on Bundora Parade.

A study into future requirements for the control tower at Moorabbin Airport was conducted for Airservices prior to the 2010 Master Plan. The study identified a preferred long-term site and optimum height for the control tower and concluded that if a new control tower was required, it would be sited close to the existing tower.

Navaids

At present, Airservices maintains a non-directional beacon (NDB) at Moorabbin Airport located on the western side of the Airport along Second Avenue. GA aircraft types use this facility as a means of training and navigation. The NDB will be retained in the Airservices network to provide a back-up to more recent satellite-based navigational systems, even though many newer aircraft no longer retain the avionics systems required to utilise it and students increasingly have access to GPS systems.

Moorabbin Airport currently has non-precision RNAV(GNSS) runway-aligned instrument procedures published to Runway 17L and Runway 35R and a non-precision RNAV (GNSS) circling approach for all runways.

6.3.7 Aviation Fuel Facilities

Currently both AVGAS and AVTUR (Jet A1) are available from a range of operators, with both fuel types being distributed by tanker vehicles. Self-serve AVGAS dispensers are also provided.

6.3.8 Circuit Training Report – 2011

A Circuit Training Report commissioned by MAC in 2011 made a series of recommendations in relation to improving circuit training operations at the Airport. See **Section 11.2.5** for a description of circuit training.

While later work has superseded many of the recommendations made in the 2011 report, some elements have been implemented or are ongoing. This 2015 Master Plan reflects those elements of the 2011 report which were seen as appropriate for adoption.

Moorabbin Airport has also worked closely with local communities regarding circuit design, operations and the regulatory environment within which training circuits are carried out. Residents have identified the opportunity for a more balanced sharing of circuit activity subject to safety and operational requirements of the airport. Moorabbin Airport will continue to work with residents to deliver improved outcomes.

6.4 Future Needs

For this 2015 Master Plan, the future needs for civil aviation users and airfield development have been identified based on the expected demands of:

- flight training organisations;
- helicopter operators;
- private light jet (low capacity) operators; and
- the existing RPT operator, King Island Airlines, and potential other niche passenger transport providers on a similar scale.

MAC is focusing on further developing its flight training offering in respect of which Moorabbin Airport has the following competitive advantages:

- good climate and weather;
- open uncongested airspace;
- supply of well-trained instructors;
- politically stable environment;
- low cost of flight training in relative terms compared to other countries; and
- high maintenance standards of aircraft.

Together with ongoing growth and investment in flight training, the future of aviation activity at the Airport is planned to include:

- aviation support services, including aircraft maintenance and avionics;
- charter operations;
- fixed base operations (including hangarage, refuelling and maintenance of aircraft) for corporate and private aircraft;
- enhanced commuter services, including regional scheduled services and niche offerings such as a helicopter link to Melbourne Airport and expansion of and improvements to the Australian National Aviation Museum;
- dedicated student accommodation; and
- a continued role as a base and staging ground for emergency service providers.

Importantly, subject to market demand, the Aviation Development Plan provides for significant growth in aviation maintenance and support services. As noted previously, Precinct 3 – Aviation Support Services & Industrial/Showroom has been earmarked to accommodate this expected growth.

Aviation-related developments planned for the next 5 years include new flight training facilities, aviation student accommodation and additional hangarage.

Heads of Agreement entered into in relation to flight training facilities and the first 150-bed stage of a flight student accommodation facility at the Airport will enable the Airport to begin meeting the demand for these new facilities.

6.4.1 Runways

The existing runway complex provides adequate capacity to accommodate the long-range forecasts of 500,000 aircraft movements. When operating circuits simultaneously on parallel runways, an hourly rate of around 150 movements per hour is considered sustainable during tower operating hours in daylight. Lower movement rates apply during hours of darkness and when the tower is not operational. On this basis, a maximum annual runway capacity of up to 650,000 movements is theoretically possible.

In fact, in the case of Moorabbin Airport, it is airspace constraints rather than runway infrastructure that limit the annual movement rate. Airspace structures and an uneven geographical spread of demand for non-circuit arrivals and departures put a limit on the number of aircraft that can simultaneously operate in the western circuit of approximately half that of the eastern circuit. When combined with adverse weather conditions such as strong crosswinds or reduced visibility and cloudbase, when circuit training cannot occur and which therefore further reduces the annual capacity, an overall annual practical capacity for fixed-wing movements of closer to 500,000 has been estimated.

The number, length and capability of the existing runways at Moorabbin Airport is adequate for the intended aviation operations in the future. Additional runway infrastructure is currently not required at the Airport. Extension and upgrade of Runway 13L/31R, or the possible construction of a future Runway 13C/31C, are no longer provided for in this 2015 Master Plan. Moorabbin Airport will continue

to review aviation infrastructure to ensure available procedures are optimised given our airport role and aircraft types. Matters for review may include threshold and runway end relocations. The intent of these reviews is to ensure aviation facilities best cater for future aviation needs.

6.4.2 Taxiways

An effective taxiway network is important to maximising runway system capacity. The current taxiway system provides multiple runway entry and exit points which helps to ensure that runway occupancy times are kept to a minimum. This in turn enables the safe and efficient operation of high-intensity circuit training.

Whilst the current taxiway system is effective from an operational capacity viewpoint, the airfield layout is highly complex by virtue of the closed 'V' arrangement of parallel runway pairs and the cross runway 04/22. Complex airfield layouts are not ideal in the context of ab initio flight training and this combination of factors can increase the risk of runway incursions.

MAC has recently taken the decision to close Taxiway A2, which had been identified as a potential runway incident hot spot. Over the next five years, MAC will continue to conduct a thorough operational assessment of the airfield layout in order to determine the optimum balance between operational efficiency whilst maximising safety outcomes. The existing taxiway system capability will be maintained pending the outcome of this assessment.

As part of the planning for the relocation of the Northern Helipad (see **Section 6.4.6**), MAC has identified that there will be a requirement to close sections of Taxiway G and G2 when the relocation occurs. This is necessary to remove potential conflicts between helicopters using the helipad and taxiing aircraft, and to maximise the safety of operations. As a result, an alternative taxi route to the northern end of the runways will be needed. An extension of Taxiway A is proposed to achieve this. This will also facilitate additional engine run-up bays as required by increases in flight training activity.

In the mid to long term to ensure that taxiway clearance requirements are satisfied the Aviation Develop Plan will deliver a facility and taxiway layout so as to facilitate the offering of additional aviation facilities and aircraft parking in Precinct 3.

6.4.3 Aircraft Parking Areas

The existing King Island Airlines apron and MAC Main Apron cater for niche low-capacity RPT operations and short-term parking. The capacity of these facilities will be continually assessed as the Airport grows.

The existing capacity of almost 580 aircraft parking positions adequately accommodates the current population of some 300 fixed-wing aeroplanes and 65 helicopters.

Although some increase in general aviation aircraft parking areas is likely to be required due to aviation activity growth, this is not expected to double in line with the ultimate aircraft movement capacity. This is because increased aircraft movements will result from greater utilisation of the existing aircraft fleet.

This 2015 Master Plan allows for a range of parking options to be provided including grassed and paved areas. Together with the development of additional hangar sites to allow for expansion of aviation business and support activities, this is estimated to take the number of aircraft which can be accommodated at the Airport to between 800 and 850. This is expected to be more than sufficient for the required demand.

During the first 5 year period of this 2015 Master Plan, MAC will continue to work with CASA to ensure that all existing aircraft parking areas meet all relevant regulations.

6.4.4 Terminals

No additional terminal facilities are anticipated. The existing facilities used by King Island Airlines will continue to be required and will be retained.

The existing common-user terminal facilities adjacent to the MAC Management Centre, or an equivalent facility, will continue to be required in order to serve itinerant users and some charter operations. MAC envisages that Airport management activities may be relocated within the landside precincts. The area adjacent to the existing air traffic control tower has been identified as suitable for aviation-related development. MAC will continue liaison with Airservices Australia to achieve redevelopment and upgrade of the existing air traffic control tower. MAC will consult with Airservices as soon as possible during the project planning phase in relation to any proposal which may have an impact on air traffic control operations (including during the construction phase of such proposals).

The disused terminal building on Northern Avenue is not anticipated to be required for passenger handling in the future. This building is within the precinct that has been allocated for growth in facilities dedicated to flight training organisations. Passenger operations, with their specific aviation safety and security requirements, would not be appropriate in this location in the future. Should additional passenger services require terminal facilities, these would be accommodated within the vicinity of the King Island Airlines terminal or the MAC Management Centre.

6.4.5 Aviation Business & Support

Additional facilities will be required to accommodate aviation business and support facilities for existing and new flight training organisations. These facilities will include hangars, licensed apron parking areas, offices and classrooms. Furthermore, other general aviation operators and support businesses, including maintenance, repair and overhaul providers, airframe and engine sales, and avionics, are likely to be attracted to the Airport to provide services to the flight training organisations.

Areas for expansion of aviation business and support facilities which require direct access to the airside have been identified in the following areas:

- north of Northern Avenue, adjacent to the commercial precinct;
- through rationalisation of existing facilities between Northern Avenue and First Avenue. Subject to demand, this could include possible expansion of hangar sites with airside access to the south of First Avenue with some re-configuration of the existing infrastructure and airside perimeter in this area;
- within the area occupied by the existing MAC Management Centre and terminal and extending southwards towards the threshold of Runway 35L; and
- within the area between Runway 17L/35R and Runway 13R/31L.

Detailed planning of the layout of lease lots and facilities within these precincts is ongoing and will continue to be refined in response to actual demand and specific opportunities as they become available.

6.4.6 Helipads

There are currently two helipad facilities at the Airport.

The Southern Helipad is located to the south of the main apron. This helipad is expected to be retained in its current location for the foreseeable future. In the long-term, as development of additional aviation lease sites in this area proceeds, some minor adjustment to the location of the southern helipad may be necessary to ensure continued compliance with applicable aviation planning guidance and regulatory requirements. Relocation of the helipad, if and when it occurs, will be subject to acceptance by CASA in accordance with the applicable standards in force at that time and will be implemented with the objective that relocation will minimise noise impacts on off-Airport land.

The Northern Helipad is located in the north west corner of the airfield. The relocation of this helipad will facilitate additional development sites in this area. A preferred location for relocation of this helipad closer to the engine run-up bays has been identified through a detailed assessment undertaken by MAC.

The proposed new location of this helipad is shown on **Figure 6.7 – Aviation Facilities Development Plan**.

6.4.7 Air Navigation Facilities

Air Traffic Control Tower

This 2015 Master Plan maintains the existing air traffic control tower. However, there may be an opportunity to provide a new control tower in an adjacent location. This would enable a newer, more technologically advanced facility which may help to reduce controller workload and enhance safety outcomes, thereby helping to facilitate the ultimate movement capacity for the Airport. MAC will investigate the potential benefits and issues associated with this solution in conjunction with Airservices over the next five years.

Navaids

The existing non-directional beacon (NDB) at Moorabbin Airport will be retained in the Airservices back-up navigation network. The NDB is also an important training aid and is used regularly as part of the pilot training syllabus. However, in the future all aircraft will be required to be capable of operating using global navigation satellite system RNAV(GNSS) procedures from 2016. The GNSS system will enable the current non-precision instrument procedures to be maintained (runway aligned for Runway 17L/35R, circling approach for the other runways).

With the advent of RNAV (GNSS) system, there has been a preference for runway aligned approaches instead of circling approaches, as these are considered to be safer. With this in mind, MAC has allowed for the introduction of runway aligned approaches to Runway 13L/31R.

6.4.8 Aviation Fuel Facilities

The current fuel facilities are anticipated to be of adequate capacity for future operations. The potential for any relocation will be kept under review in conjunction with detailed precinct layout planning.

The possibility of consolidating storage to a single joint-user facility could be investigated, however experience indicates that various operators do not support this approach at general aviation airports.

It is possible that if new precincts are developed to accommodate aviation business and support which are remote from the existing fuel facilities, that additional or satellite facilities might be required. The establishment of such facilities would be a decision for potential fuel suppliers, however provision for suitable fuel storage will be considered within the detailed planning of individual precinct layouts.

6.5 Aviation Facilities Development Plan

A plan showing the proposed development of aviation facilities is shown in **Figure 6.7 – Aviation Facilities Development Plan**. The main elements of aviation facilities development envisaged in this 2015 Master Plan are as follows:

- Creation of a new aviation maintenance precinct in Precinct 3;
- Provision for additional hangars and aviation facilities in the main apron area through relocation of the MAC Management Centre to a landside location;
- Additional hangars and aviation facilities to the north of Northern Avenue, facilitated by the relocation of the Northern Helipad;
- Long-term consolidation of the hangar layout between Northern Avenue and First Avenue, in discussion with relevant customers and in conjunction with applicable lease expiry, to enable more efficient use of land in this high-density aviation precinct;
- Provision for a new MAC terminal to serve itinerant users and charter services;
- Provision for additional hangars and aviation facilities for helicopter operators within a southern helicopter precinct incorporating the Southern Helipad;
- Provision of aviation student accommodation;
- Private light jet growth strategy. This is targeting aircraft capable of using existing airport infrastructure. Where there is sufficient demand, facilities suitable for private light jets will be accommodated in Precinct 2; and
- Provision for additional hangars and aviation facilities including aircraft parking areas in the area between Runway 17L/35R and Runway 13R/31L.

6.6 Consistency with State Planning Schemes

All elements of the Aviation Development Plan are consistent with State Planning Schemes, including the State Planning Policy Framework and the Local Planning Policy Framework. Relevant parts of those policy frameworks are outlined in **Sections 4.5 and 4.6**, respectively, of this 2015 Master Plan.

Specifically, the Aviation Development Plan:

- Entrenches and protects the Airport's position as Melbourne's key airport for general aviation;
- Gives effect to recognition in Plan Melbourne of the Airport as a general aviation airport with an aviation training function, scenic and commercial operations;
- Furthers the State Planning Policy Framework objective for the Airport to continue as an important regional and State aviation asset; and
- Contributes to realising the objective within the Municipal Strategic Statement (MSS) of the Kingston Planning Scheme for the continuation of the aviation functions of the Airport; and
- Recognises the importance of non-aviation development for the viability of, and continued improvement in. aviation development.

A Leading Centre for Aviation Learning

Moorabbin Airport will continue to expand its role as Australia's leading centre for flight training. The Airport already has an enviable reputation as a centre of excellence for flight training It has 16 flight training schools – the most of any airport in Australia – that train a diverse mix of Australian and international students. The training of pilots for regional airline operations is crucial to maintaining links between regional areas across Australia, and between regional areas and major cities. As well, there is the potential to expand into training for aircraft maintenance and related areas.

Moorabbin Airport will build on these existing and potential strengths to forge links with tertiary education institutions and fully realise its potential as an aviation training centre of excellence.

Victorian State Planning Policy for Moorabbin Airport

The metropolitan planning strategy, Plan Melbourne, expressly recognises the importance of the Airport as a transport, economic and employment hub for metropolitan Melbourne. In particular, Moorabbin Airport is recognised as an existing "Transport Gateway", and a Place of State Strategic Significance. In this context, the Airport is recognised for its city-shaping role and its existing and potential contribution to productivity and economic growth. Plan Melbourne also specifically recognises the role of Moorabbin Airport as a general aviation airport with an important aviation training function, scenic and commercial operations; and recognises the need to safeguard the Airport and its operations, consistent with the objectives of the National Airports Safeguarding Framework.

State planning policy also recognises Moorabbin Airport as an important regional and State aviation asset by supporting its continued use as a general aviation Airport, ensuring future development at the site encourages uses that support and enhance the State's aviation industry and supporting opportunities to extend activities at the Airport that improve access to regional Victoria.

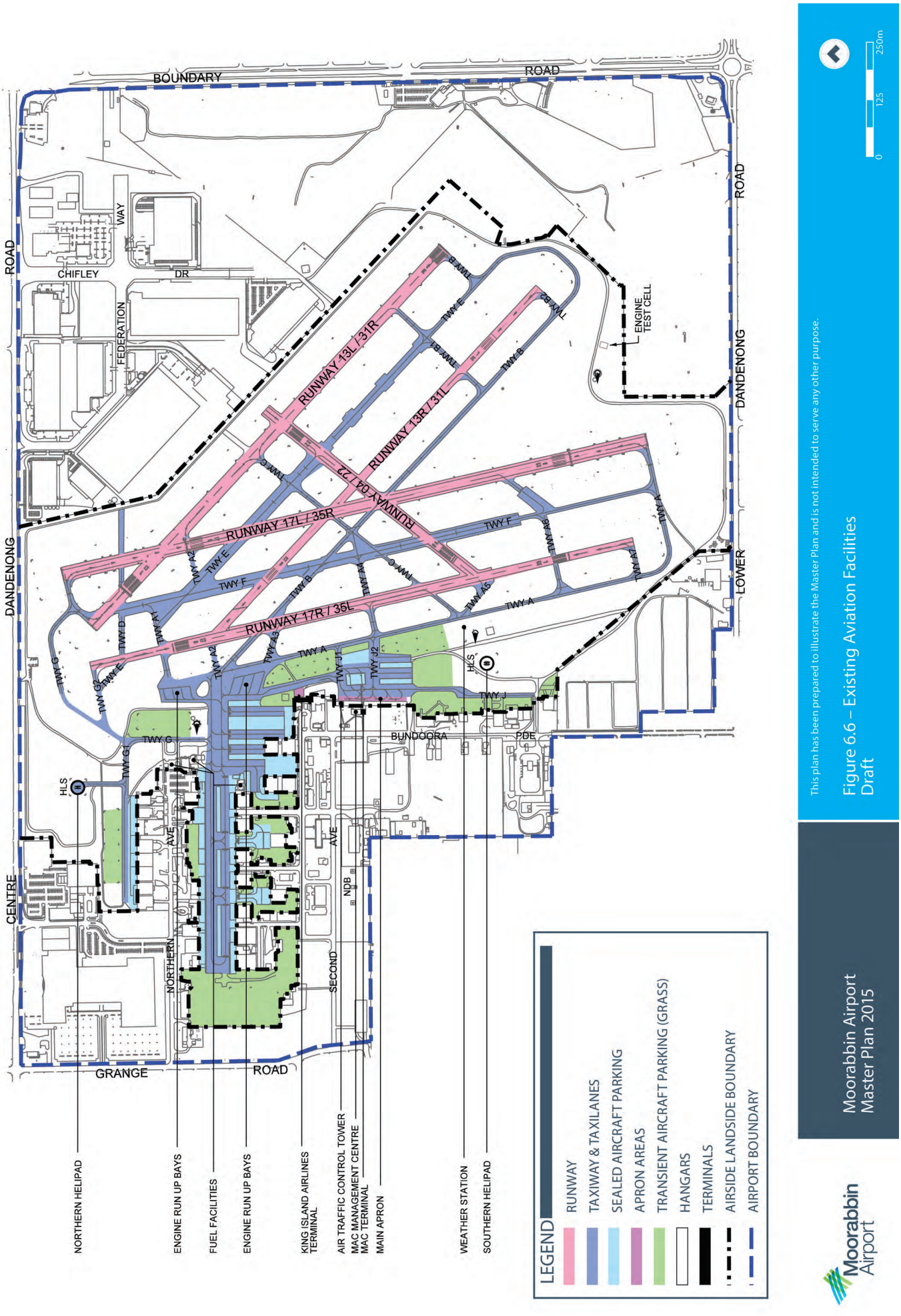

Figure 6.6 // Existing Aviation Facilities

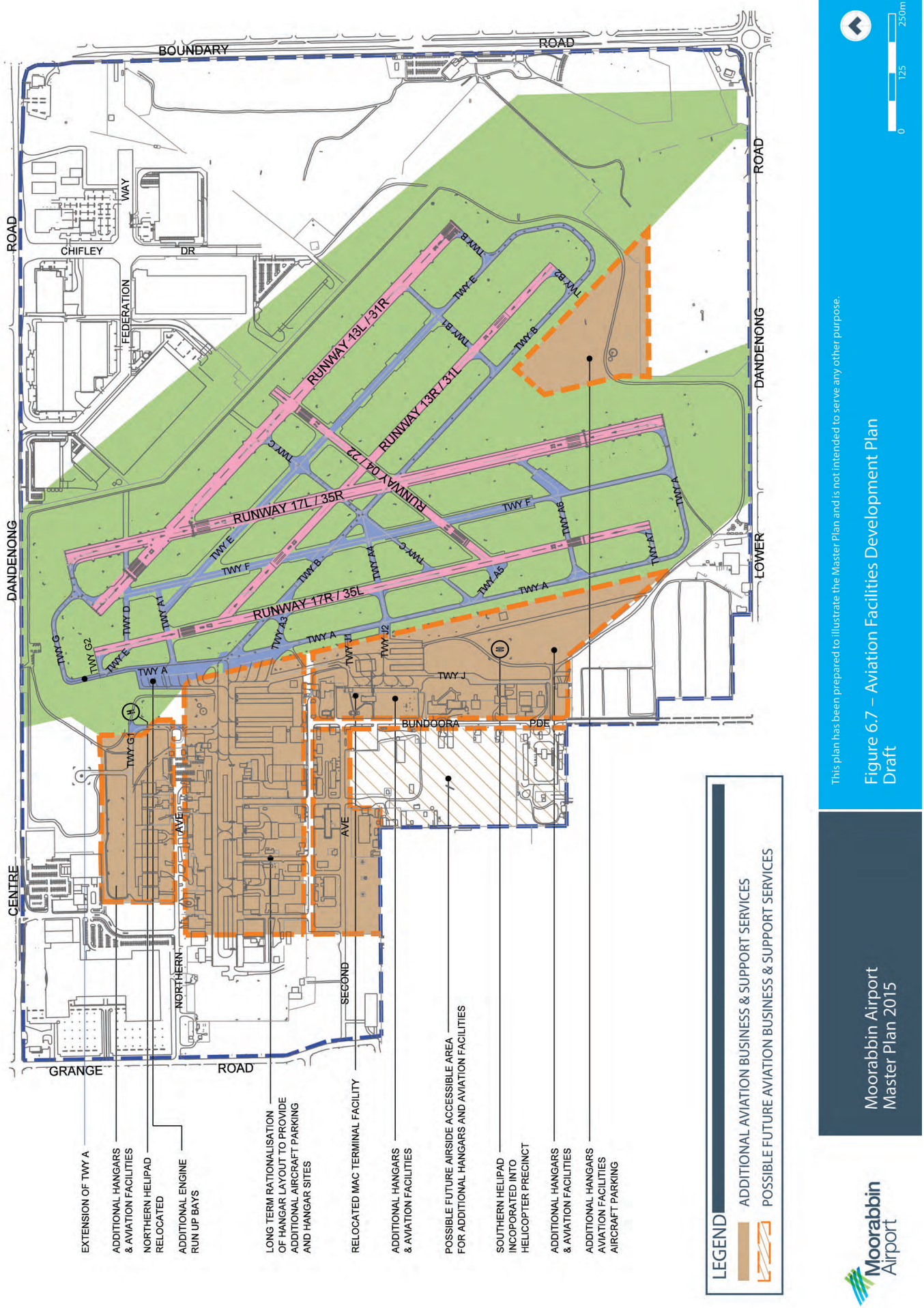

Figure 6.7 // Aviation Facilities Development Plan

7 // Non-Aviation Development Plan

- As a transport gateway and centre of economic activity, Airport development complements State infrastructure and responds to population growth and increased urban density.
- The Airport is a heavily modified site with over 75% of the 294 hectares already developed. Non-aviation activities are confined to 121 hectares or 40% of the Airport site.
- The Airport has attracted 200 non-aviation businesses including quality Australian and international brands and many small businesses.
- Successful non-aviation developments on the Airport site include Direct Factory Outlets, Kingston Central Plaza and Chifley Business Park.
- There is 57 hectares of employment land (19% of the Airport) available for immediate development. Moorabbin Airport offers large sites to accommodate businesses, and the associated jobs, that may otherwise be lost to the City of Kingston.
- Importantly, non-aviation development underpins the viability of the Airport's aviation function and diversifies the associated value and risk profile. General aviation infrastructure is expensive to construct, maintain and operate to compliant standards.
- Non-aviation activity represents 80% of forecast investment ($445 million of $570 million). Much of this investment will benefit the aviation sector which relies on the ongoing funding of infrastructure passing through non-aviation precincts.

7.1 Introduction

Moorabbin Airport is recognised by Plan Melbourne as a place of State significance and as a Transport Gateway. Continuing development of the Airport will fulfil employment and economic activity objectives under metropolitan planning strategy.

The Airport is well positioned to progress industrial, commercial, retail and office developments. It is one of the few locations in the region able to accommodate modern, high quality, large format offerings such as the Chifley Business Park, DFO and the Costco Warehouse (to open in 2015). These are examples of facilities that require large land areas and are not easily integrated into existing activity centres.

Non aviation development, particularly commercial, large format and industrial uses have had long standing policy and planning support.

Future industrial, commercial, retail and office developments will attract the community onto the Airport introducing them to the aviation industry. Visitors travelling to and from their home to the Airport will also pass other local businesses en-route resulting in increased passing trade.

Non-aviation development at Moorabbin Airport underpins the viability of the Airport's aviation operations and diversifies the risk profile for the Airport business. This cross-subsidy is important because there are only a handful of investment grade aviation customers whereas there are many in the non aviation sector.

Many medium and smaller aviation businesses are susceptible to changing market and industry trends. Further, it is challenging to relocate general aviation businesses from other airports due to the material sunk costs into their facilities. It is a niche market, flight training is a segment of that niche and aviation demand is subject to cyclical fluctuations.

Non-aviation development contributes to significant employment and other economic benefits for the local area. Of the 3,300 jobs on Airport in 2014, 80% were associated with non-aviation activities. Likewise, of the 5,200 additional forecast jobs by 2035, 85% will be in non-aviation developments.

7.2 Non-Aviation Development Plan

The non-aviation development plan provides a pipeline of developable land for industrial, office, retail and commercial uses which are compatible with ongoing aviation functions. Additionally, this development acts as a physical buffer between aviation operations and residential areas and is planned to complement other centres near the Airport.

Of the 121 hectares (40% of the Airport) set aside for non-aviation uses:

- 58 hectares has been developed or leases signed;
- 6 hectares will be developed for infrastructure (roads and drainage); and
- 57 hectares remains undeveloped. Under this 2015 Master Plan, 37 hectares has been set aside to be developed within the next 5 years. Two-thirds of this is currently planned for industrial use and one-third for commercial, retail, office and entertainment. The remaining 20 hectares is forecast to be developed between 2020 and 2035. It should be noted that there may be variations in the amount and type of development based on market demand.

The non-aviation development objectives for the Airport include:

- high quality, purpose-built facilities, infrastructure and landscaping;
- destination customer clusters (eg., Costco and DFO);
- the right mix of offerings and services (including retail);
- superior facilities maintenance; and
- customers having access to business expansion areas.

Chifley Business Park is an example of the application of the above objectives. It is an award winning, high amenity, landscaped business park for a variety of Australian and international brands (including three of the top 100 world brands). Many small businesses are also located within the business park. The integrated business park format is consistent with strategic objectives identified in State and local planning policy.

Moorabbin Airport is able to accommodate a range of non-traditional retailing forms which may have trade catchment areas that extend significantly further than traditional retail. An example that is operating successfully at the Airport is DFO. The Costco development (which opened in 2015) is another non-traditional retail format with a catchment area that covers large parts of Melbourne's bayside and the Southern Subregion.

MAC will work with the City of Kingston to jointly commission a Strategic Economic Analysis with a view to forming the basis for an agreed position as to the level of conventional retailing at the Airport.

The table below forecasts non-aviation developments proposed during 2015 to 2020 and as at 2035. Consideration has been given to existing landside uses, the policy and regulatory framework, the 2015 Master Plan objectives and the current commercial environment.

Site Area

Precinct	Total	2015	2015-2020	2021-2035	Predominant Use
Precinct 1	115	115	-	-	Airside Operations (Runway complex)
Precinct 2	48	39	4	5	Aviation Support Services
Precinct 3	10	-	-	10	Aviation Support Services & Industrial / Showroom
Precinct 4	29	13	9	7	Retail, Commercial & Industrial/ Showroom
Precinct 5	16	6	10	-	Retail & Commercial
Precinct 6	56	39	13	4	Industrial, Office, Retail, Commercial & Aviation Support
Precinct 7	20	-	11	9	Business, Commercial & Industrial including Aviation Support
Total	**294**	**212**	**47**	**35**	

Figure 7.1 // Non-aviation Forecast Developments

The Non-Aviation Development Plan covers the five year period from 2015 to 2020 (subject to demand) and builds on the precinct-based approach to landside and non-aviation development which originated in the 1999 Master Plan. Site Areas are forecasts that are dependent on a particular use. Forecasting for a mixed use precinct will be determined by the ratio of uses within that precinct. The table above applies reasonable mixed use ratios and industry standards.

Refer to **Chapter 6, Section 6.4** regarding future aviation developments.

The Non-Aviation Development Plan takes into account as necessary:

- relevant planning policy under the Victorian planning system;
- land use demand in relevant regional markets;
- Master Plan Amendments Guidelines 2012 (Commonwealth);
- Plan Melbourne's recognition that airports and other Transport Gateways are not only transport hubs, but also economic and employment hubs for metropolitan Melbourne; and
- the City of Kingston's local strategic policies – favouring large development sites and floor plates, on-site car parking and non-office floor space for functions – which are otherwise difficult to accommodate in established activity centres.

New retail development at Moorabbin Airport contemplated under this 2015 Master Plan has been planned in a manner to support the existing retail centres and is otherwise consistent with the planning framework for the region. Neither the current nor proposed developments have significant negative economic effects on off-Airport developments. Indeed, the current and proposed developments provide for substantial economic benefit to the surrounding region.

MAC will undertake the non-aviation Costco Major Development Plan which has been approved as consistent with the previous Master Plan.

New and upgraded infrastructure will continue to be provided with a focus on roads, drainage and utilities within the next 5 years to 2020. **Chapters 8 and 9** contain further details regarding infrastructure delivery.

The Airport is located in the north of the well-established Kingston Central and Braeside Economic Precinct. At 294 hectares, the Airport is the largest site in the Precinct and the only site with a 20 year Master Plan to better inform stakeholders regarding current and future development plans.

This important jobs and economic precinct covers 1,750 hectares in Melbourne's Southern Subregion. It employs more than 19,000 people in over 1,000 businesses and includes:

- successful retail and commercial areas;
- relatively new, large-scale industrial areas east and south of the Airport (at Redwood Gardens, around Woodlands Drive and Governor and Boundary Roads); and
- established, smaller-scale industrial areas at Cheltenham and Braeside, west and south of the Airport.

The large and diverse mix of new and old, small and large, owned and leased property provides an ideal basis to co-ordinate and enhance jobs growth and economic development. Some areas are fragmented and ageing, presenting an important opportunity for the community to embrace new, upgraded and redeveloped business and employment infrastructure to the benefit of the communities of the City of Kingston and of the Southern Subregion.

7.3 The Airport & Melbourne's Green Wedge

Development for non aviation activities is an approved use of Airport land. Airport zones as set out in this 2015 Master Plan guide and control Airport development.

Commonwealth owned airports (such as Moorabbin) are under a positive obligation to use the site as an airport. Airports cannot keep the site as a "vacant lot". Practically, building activity and development must occur on an airport site. Victorian planning policy recognises the important role and function of Moorabbin Airport and supports its continued use and development.

The majority of land surrounding the Airport has been developed for intensive urban uses:

- to the east – Light industrial – Redwood Gardens factories;
- to the south – Light industrial, Rubbish recycling and residential; and
- to the west – Light industrial Grange Road, Southern Rd industrial & residential.

The phrase "Green Wedge" has two very different meanings – one is a place, the other a zone or planning control.

- Green Wedge – The Place: The South East Green Wedge is a physical place comprised of nearly 10,000 Ha of land in South East Melbourne. To avoid confusion MAC refers to the "South East Green Wedge Place".
- Green Wedge – The Planning Control: Green Wedge is also a zone and planning controls designating the type of activity permitted. To avoid confusion MAC refers to this as the "Green Wedge Zone".

Once the distinction between place and zone is made, references to "Green Wedge" become less confusing. Stakeholders can then better identify when terms are used appropriately.

The South-East Green Wedge Place was first identified in the 1971 Board of Works Metropolitan Planning Policy Report. That report recognised the need at the time to preserve significant areas for sand resource extraction and to manage noise from the Airport.

As a consequence, the wider area was included in a Special Extractive Zone, parts of which were later rezoned Industrial (Redwood Gardens) and residential (Dingley West).

Since 1998, the Airport has been leased by the Australian Government to MAC and since 1999 it has been the subject of a series of approved master plans that have recognised future commercial and employment uses for land surplus to the core aviation functions.

Accordingly, the Airport's key land use themes and strategies predate the introduction of the Urban Growth Boundary concept in 2002 and the Planning and Environment (Metropolitan Green Wedge Protection Act (Victoria) in 2003. The Airport is not zoned in the Kingston Planning Scheme, and is identified as a white area in the planning maps – that is, an area in the ownership of the Commonwealth. Under section 112 of the Airports Act, the Airport is not subject to laws of the State relating to land use planning or the regulation of building activities.

Accordingly, governments have legislated that two different planning regimes apply in the South East Green Wedge Place. Both regime frameworks support the diverse range of uses that cannot readily be accommodated in an urban environment:

- The Airports Act planning regime is legislated to apply to the Airport. The approved Airport Master Plan sets out activities that are permitted. Aviation and non-aviation activity and development are approved activities.
- Victorian planning zones and other planning controls apply to the balance of the South East Green Wedge Place, that is to all off-Airport areas, as part of the Kingston Planning Scheme (but do not to apply to the Airport).

In relation to off-Airport sites, many important industry sectors, and associated large scale development, are within the South East Green Wedge Place. These industries include utilities (for example electricity, gas and water supply), extractive industry, aviation and agriculture. There is no blanket ban on development in the South East Green Wedge Place. Victorian Planning Zones and planning controls determine where development is allowed and encouraged.

Green Wedge Zones protect land with agricultural, environmental, historic, landscape, and recreational values. Green Wedge Zones encourage use and development that is consistent with sustainable land management practices.

Within the City of Kingston, the majority of the South East Green Wedge Place is not zoned as a Green Wedge Zone. Just under half of the South East Green Wedge Place is not zoned Green Wedge Zone (or Public Conservation and Resource Zone). Within this large part of the South East Green Wedge Place, other uses and activities are encouraged including development and activities that modify the land.

Off-Airport, more than 30 land use zones are within the South East Green Wedge Place. These land use zones provide for many activities that cannot be accommodated elsewhere in the region. One of the main purposes of the South East Green Wedge Place is to ensure there is always a place for airports, freeways, quarries and waste management centres.

The original designation of land in the vicinity of (but excluding) the Airport as "green wedge" was based on concerns with noise impacts arising from aircraft, and protecting sand resources for extraction, rather than because of any landscape or conservation value. Much of the land originally considered as being subject to these constraints has since been brought within the UGB and developed for commercial, residential or other urban purposes. Land which remains under the Green Wedge Zone – to the north of the Airport – buffers the Airport and the impact of flight operations from areas further north.

Many people believe Moorabbin Airport should not be included within the South East Green Wedge Place. This is because the Airport:

- Is an existing employment cluster with 3,300 people employed on site, 250 businesses operating and 800 students trained there every year, and this 2015 Master Plan aims to more than double the economic activity currently on-Airport over the next 20 years;
- Is a highly modified site with more than 75 hectares of paved runways, taxiways and aprons and building footprints;
- Was sculptured and engineered by large earth moving machinery to make the site a near level gradient to be suitable for aviation activities; and
- Has been operating for 65 years and was created before the South East Green Wedge Place existed.

MAC will continue to advocate for Moorabbin Airport to be within the Urban Growth Boundary which reflects existing non-aviation related activities at the Airport. It will also help Airport stakeholders to better understand "Green Wedge the Place" and "Green Wedge Zones".

MAC is aware of a perception that the Airport (as part of the "Green Wedge Place") should be subject to Clause 57 of the Kingston Planning Scheme, which restricts or prevents certain uses of land outside an urban growth boundary.

Because of section 112 of the Airports Act, Clause 57 (and other State laws in relation to land use planning) does not apply to the Airport. The land use controls of, and the non-aviation development contemplated in, this 2015 Master Plan may however be perceived as being inconsistent with some elements of planning schemes in force in Victoria.

MAC's view is that there is no such inconsistency. Clause 57 does not apply to land which is zoned Commercial 1 Zone (C1Z) or Commercial 2 Zone (C2Z) of the Victoria Planning Provisions. The Moorabbin Airport Commercial 1 Zone (applied to Precincts 4 and 5 under this 2015 Master Plan) and the Moorabbin Airport Commercial 2 Zone (applied to Precincts 6 and 7) correspond closely with the C1Z and C2Z zones, so even if Clause 57 could apply to the Airport, it would not do so on its terms.

Even if there is inconsistency between land use provisions of this 2015 Master Plan and Clause 57 of the Kingston Planning Scheme, that inconsistency is justified having regard to the factors identified by the AAT in February 2015, and discussed in detail in section 4.2 of this 2015 Master Plan.

7.4 Precinct 1 – Airside Operations

Precinct 1 is located in the centre of the Airport and is 115 hectares.

Details regarding Airside Operations are set out in the Aviation Development Plan in **Chapter 6**.

7.5 Precinct 2 – Aviation Support Services

Precinct 2 is located in the west of the Airport and is 48 hectares.

A significant portion of Precinct 2 (39 hectares or 81%) has been developed including with pavement, hangars and other buildings. It is predominantly aviation support and airport services, details of which are the Aviation Development Plan. Other, non-aviation uses within Precinct 2 are incidental to these aviation support services.

9 hectares of Precinct 2 is yet to be developed.

Precinct 2 will continue to be used for aviation support and Airport services over the course of this 2015 Master Plan. Over the next 5 years,

additional hangars will be constructed for fixed wing aircraft and helicopters along with additional aircraft parking spaces. Utilising these facilities will be additional flight training schools and flight training facilities (including a new training academy and simulator facility pursuant to Heads of Agreement entered into in 2015), aircraft maintenance businesses, premium general aviation and charter businesses, aircraft sale businesses and ancillary businesses such as pilot shops. Existing hangar and aircraft parking areas will be refurbished to enhance their function and amenity.

Precinct 2 includes the air traffic control tower and aviation navigational aids. Food and drink premises and convenience retail businesses may be developed in Precinct 2 to support aviation workers and students. Precinct 2 will be developed, airside and landside, to encourage linkages between the aviation and aviation support facilities located across the Airport. Additional north-south road linkages will be planned within Precinct 2 and/or Precinct 4 as required between Northern Avenue and Second Avenue.

7.6 Precinct 3 – Aviation Support Services & Industrial

Precinct 3 is located in the west of the Airport site and is 10 hectares. It is largely undeveloped.

The development plan for Precinct 3 includes additional aviation support and Airport functions, and complementary uses. Over the next 5 years, aviation maintenance businesses and flight training schools will be encouraged within Precinct 3.

A flight student acommodation facility consisting of 150 beds is currently being planned for Precinct 3 pursuant to a Heads of Agreement to develop Stage 1.

These businesses will abut Precinct 2, and support the aviation focused development. Ancillary aviation activities including education facilities, aircraft sales, avionics supply and pilot shops will be encouraged. These businesses will have good access to Lower Dandenong Road when a new access point is created at the south-western boundary to the Airport (from Precinct 7) and the approved western access road, planned since 1999, is constructed.

The use of Precinct 3 for aviation support and airport services is subject to demand and an alternative use for Precinct 3 remains industrial premises, showrooms, transport maintenance and vehicle storage facilities. Food and drink premises and convenience retail businesses may be developed in Precinct 3 to service the new businesses developed within Precinct 3.

7.7 Precinct 4 – Retail, Commercial & Industrial / Showroom

Precinct 4 is located in the north-west of the Airport, and is 29 hectares.

Nearly half of Precinct 4 (13 hectares or 45%) is developed as the Discount Factory Outlets, Kingston Central Plaza and a service station, all of which are successful retail uses.

16 hectares of Precinct 4 is available for development. An area to the east of Kingston Central Plaza was approved in the 2010 Master Plan for non aviation development following its identification as being surplus to aviation requirements.

Precinct 4 is suitable for a mix of traditional and non-traditional retail businesses including discount retailing. Medical suites and consultation rooms could also be incorporated into Precinct 4.

Entertainment businesses and "adrenaline–focused" activities such as indoor rock wall climbing, trampolining and theme based centres are envisaged. This will build on Precinct 4's current status as a destination activity centre with a variety of offerings for the community. It is anticipated that, subject to demand:

- 7-9 hectares in the southern part of Precinct 4 will be developed as described above during 2015-2020; and
- 7-9 hectares in the northern part of Precinct 4 will be developed after 2020.

Additionally there will be redevelopment of existing facilities including buildings and car parking in line with customer demand and opportunities over the next 5 years.

Precinct 4 is well serviced by Centre Dandenong and Grange Roads, making it highly suitable for retail, entertainment, commercial and office uses which will generate increased community visitations. Existing and new development will build up its current destination status for the region and provide break-out options for nearby flight training students and will service the Airport workforce. Other complementary uses and which may be developed in Precinct 4 include industrial businesses, car service centres and vehicle stores.

The middle and southern parts of Precinct 4, abutting the Aviation Support Services (Precinct 2), are planned for mixed developments.

MAC is also considering the development of medical facilities in Precinct 4, where such facilities will not provide in-patient services or otherwise act as a hospital. MAC may in the future also review the delivery of some aged care options, where those options will not however be a community care facility or residential dwelling for the purposes of the Airports Act (which limits the types of facilities that may be considered).

Consistent with Section 5.5 of this Master Plan, MAC may also consider medical and aged care facilities in this precinct.

MAC will not proceed with aged care land uses without the support of the State Government and the City of Kingston.

Precinct 4 will include a new internal airport road link. The extension of Kingston Central Boulevard, which commences at an existing signalised intersection on Centre Dandenong Road and services both the DFO and Kingston Central Plaza centres, will be investigated to determine whether it should be extended south by several hundred metres to ultimately link with the new western access road.

Additional north-south road linkages will be planned within Precinct 2 and/or Precinct 4 as required between Northern Avenue and Second Avenue, with detail to be determined during the first 5 years of the period of this 2015 Master Plan.

7.8 Precinct 5 – Retail & Commercial

Precinct 5 is in the north-east corner of the Airport, and is 16 hectares. Much of Precinct 5 is currently undeveloped. It has been approved as surplus to aviation requirements since the Airport's first approved Master Plan in 1999.

Precinct 5 has excellent road access and exposure, located on the corner of Boundary Road and Centre Dandenong Road. In addition, Chifley Drive will be extended from its current location (terminating in Precinct 6) to Boundary Road, which will further support development of Precinct 5 for major retail uses.

The high infrastructure costs associated with Precinct 5, including drainage, road works and intersection works, means higher-value uses are planned. All 16 hectares of Precinct 5 are planned to be developed by 2020, subject to demand and approvals.

The Costco Warehouse major development plan was approved and relates to a 6 hectare site in Precinct 5. The development was completed in 2015.

A retail proposal for a supermarket, bulky goods retail, discount department store and liquor outlet remains an opportunity for this Precinct.

Bulky goods and smaller businesses, including cafés and convenience retail shops, may complement larger developments on the Airport.

7.9 Precinct 6 – Industrial, Office, Retail, Commercial & Aviation Support

Precinct 6 is in on the eastern part of the Airport, stretching from north to south with frontages to Centre Dandenong Road, Lower Dandenong Road and Boundary Road. It excludes the north-eastern corner of the Airport site which is in Precinct 5. Precinct 6 is 56 hectares.

39 hectares (70%, or nearly three quarters) of Precinct 6 has been developed. Precinct 6 includes the successful Chifley Business Park, a modern, high-quality, fully landscaped business park housing Australian and international brands and a service station. High-quality internal roads and traffic management infrastructure service the business park.

17 hectares of Precinct 6 is available for a range of developments including warehousing, manufacturing, bulky goods and the ultimate relocation of the Australian National Aviation Museum to a newly created site on Boundary Road.

Precinct 6 represents a relocation opportunity for uses from neighbouring areas where councils are rezoning industrial, commercial and retail land to meet demand for increased residential space. This "brownfield" area rezoning is forecast to continue through the 20-year planning period of this 2015 Master Plan. Precinct 6 includes prime land available for off-Airport businesses to relocate within the region. Keeping jobs within the region will be a positive outcome and, as the ability of the Airport to undertake residential development is restricted by the Airports Act, is an excellent use of an available development site.

Future development in Precinct 6 is outlined below.

- Two thirds of the developable land in Precinct 6, or 13 hectares, mainly in the northern half and the middle western parts, will be developed during 2015-2020. Land near the existing Chifley Business Park is suitable for industrial and commercial development. This will complement existing uses and new developments are planned to include similar, high quality, large format built form. A hotel on Centre Dandenong Road, east of the business park, as contemplated within the approved 2010 Master Plan, remains an objective for Precinct 6.
- The remaining one third, or 4 hectares, in the south east of Precinct 6 will be developed by 2035. This includes a one hectare site with Boundary Road frontage for a future Australian National Aviation Museum facility. MAC continues to work with the leadership team of the Museum to secure additional government funding necessary for a new facility. The Airport is an ongoing sponsor and supporter of the Museum and continues to work closely with the Museum to increase Museum visitors from 5,000 5 years ago to nearly 40,000 today. Showrooms, fast food outlets, car sale businesses and supportive uses such as a car wash/car servicing are also suitable for Precinct 6.

The proximity of Precinct 6 to airside operations allows for possible aviation support services including research and development, avionics and aviation student accommodation. This would be subject to market demand.

7.10 Precinct 7 – Business, Commercial & Industrial

Precinct 7 is located on the southern boundary of the Airport. It is 20 hectares and comprised of two land parcels that are split by the north-south runways. 16 hectares or 80% of Precinct 7 has had little active development in recent times.

The larger of the two parcels is 11 hectares and is located in the south west of the Airport. This parcel has 4 hectares of current development and Airport-related storage. The development includes a garden supply business, several large sheds and a former warehouse with internal gantry used by a crane operator. This part of Precinct 7 is used for storage of Airport-related materials including sand, gravel, rock, vegetation mulch, soil and decommissioned airframes.

It is planned that 11 hectares of Precinct 7 will be developed during 2015-2020 with a further 9 hectares being developed in the remaining period to 2035. The ultimate concept for Precinct 7 is for warehouse, industrial and commercial development (depending on market demand). Precinct 7 will consist of modern, high-quality buildings and landscaping of a standard that exists elsewhere on the Airport. These uses leverage the proximity of Precinct 7 to Lower Dandenong Road and the employment and economic activity zone to the south of the Airport.

As part of the development of the initial 11 hectares in the 2015-2020 period a 13,500 square metre warehouse development (for the storage and distribution of goods) and associated works on a 2.5 hectare site is proposed for Precinct 7 to service a commercial customer. Development of this warehouse is planned for 2015. The western Airport access road, approved since the 1999 Master Plan, will commence construction in 2015. Further information is provided in the infrastructure section.

There remains strong competition in the industrial and warehouse market in the areas including Dandenong, Pakenham and Cranbourne. As governments deliver improved freeways, highways and arterial roads, the broader Southern Subregion becomes more convenient for businesses to access and an increasing number of new sites compete for developments.

The developments proposed for Precinct 7 partly fill a niche in service provision created as a result of population growth and increases in urban density around the Airport. Two off-Airport redevelopments within a 1.5 km radius of the Airport propose up to 70 hectares of land to be rezoned from non-residential to residential and related uses.

7.11 Consistency with State Planning Schemes

MAC's Non-Aviation Development Plan for the Airport is generally consistent with State Planning Schemes, including the Victorian Policy Framework and the Local Policy Framework. Specifically:

- development of the Airport as not only a transport, but also an economic and employment hub for metropolitan Melbourne, is in accordance with Plan Melbourne's designation of the Airport as a Transport Gateway with an important economic and employment generation function;
- non-aviation development at the Airport will further the SPPF objective of encouraging development which meets communities' needs for retail, entertainment office and other commercial services, and provides net community benefits in relation to accessibility, efficient infrastructure use and aggregation and sustainability of commercial facilities;
- non-aviation development will also further objectives of the draft PPF including through promoting a city structure that drives productivity, supports investment and creates more jobs, including at transport gateways as places of investment and employment; by ensuring the availability of land in suitable locations to meet the needs of industry; and by creating a competitive framework for the delivery of retail, entertainment, office and other commercial services;
- it is consistent with the recognition given in the Municipal Strategic Statement (MSS) of the Kingston Planning Scheme that Airport land not required for aviation purposes is becoming increasingly utilised for a diversity of retail and commercial activities; and
- it gives effect to the recognition within the Kingston Planning Scheme of the Airport as a site for commercial activity including "campus-style" office precincts and industrial land.

While there is potentially an inconsistency between the Non-Aviation Development Plan and Clause 21.06 of the MSS, any inconsistency is justified by the following factors:

- the developments proposed are consistent with Plan Melbourne's designation of the Airport as a "State Significant Element – Transport Gateway" and, as such "an economic and employment centre" providing "a significant economic and employment-generating role" - noting that Plan Melbourne provides the overriding planning policy context and has lessened the importance of focusing on the hierarchy of activity centres;
- the developments provide an overall net community benefit in any event;
- the fact that future retail (and other commercial) development of the kind contemplated by the Non-Aviation Development Plan is essential to the continued operation of the Airport and will provide an important income base to support investment in aviation infrastructure to ensure the ongoing viability and growth of the Airport and aviation activities at the Airport;
- that as retail development contemplated by the Non-Aviation Development Plan occurs, it will contribute to a net increase in employment in the local and regional economy at both its construction and operational stages;
- that retail development contemplated under the Non-Aviation Development Plan will provide an increased level of competition and choice for local residents and workers, including employees at the Airport;
- retail development as contemplated in the Non-Aviation Development Plan is unlikely to result in the immediate closure of any particular retail centre or facility; and
- the non-aviation development proposed will increase competition in the region in the relevant services and facilities contemplated under the Non-Aviation Development Plan.

These factors justifying the potential inconsistency are consistent with the factors identified by the AAT in its decision of February 2015 as justifying inconsistency between State planning schemes and a proposed major development proposal at the Airport. The AAT decision is discussed in more detail in **Section 4.2**.

8 // Ground Transport Plan

- Access to Moorabbin Airport by road is excellent. Within a 10 km radius there are tolled and toll-free motorways, 8 highways and 20 arterial roads. Quality access supports the Airport as a current Transport Gateway and being the cornerstone of an emerging employment and economic precinct.
- Two additional VicRoads strategic network projects are planned in the vicinity of the Airport, with the $156 million fully funded Dingley Bypass less than 2km from the Airport, being nominated as a “Future Preferred Traffic Route”.
- The extensive road network in South East Melbourne brings a residential population of over 500,000 within a 20 minute drive of the Airport.
- The Principal Freight Network runs along the southern and eastern Airport perimeter. Freight is also authorised by VicRoads along the north. The PFN road designations are key to the 1,250 jobs on-Airport in the industrial parks and the additional employment planned under this 2015 Master Plan.
- Public transport to the Airport includes 3 bus routes along the Airport perimeter. Within a 10km radius of the Airport there are 7 train stations and 12 bus routes.
- VicRoads data confirms the road network in the Airport vicinity is unsaturated and Airport-based developments have been included in VicRoads modelling. Roads on the north, east and south of the Airport are Primary Arterial Category 1 roads.

- Moorabbin Airport is investing in multiple new access points. 6 access points have been approved by VicRoads and 9 more are the subject of further investigation. The western access road, an internal airport road, will service the aviation precinct and is fully funded by the Airport.
- The Ground Transport Plan includes improvements to existing walking and cycling links through the Airport and creates new links to the surrounding network.
- Moorabbin Airport encourages multi-person vehicles to access the site with zero access charges for taxis, buses and hire cars.
- The Principal Bike Network designates cycling routes for the three roads on the Airport's north, east and south perimeter.
- Traffic management works are integral to the successful delivery of improved land uses, employment forecasts and economic activity within this 2015 Master Plan. Works include enhancements to the internal Airport road network, Airport perimeter intersections and access point upgrades.

8.1 Introduction

This Chapter explains the Airport's existing transport facilities and how MAC will invest in the Airport's ground transport system to ensure the efficient and orderly movement of people and freight. Traffic infrastructure will support MAC to deliver improved land uses, employment targets and economic activity within this 2015 Master Plan.

8.2 Existing Transport Context

Moorabbin Airport is characterised by excellent access to regional arterial road and freight networks. The comprehensive and high quality road network in South East Melbourne contributes to the success of the Airport as an employment and economic centre and a place of learning. Key road links to the Airport include Boundary Road which abuts the Airport to the east, Centre Dandenong Road to the north and Lower Dandenong Road to the south.

Further afield, the Airport has excellent access to freeways and motorways including Peninsula Link, the Monash Freeway and East Link via the arterial road network. As a result, the Airport has a residential catchment of approximately 500,000 people within a 20 minute drive during peak hour, which is comparable with other major employment and activity nodes in Melbourne. 60% of workers on airport live within 20 minutes' drive of the Airport.

The Airport's transport modal shares are comparable with levels in the Kingston Local Government Area (LGA). The Kingston LGA has a higher uptake of overall public transport compared to the Airport primarily due to the availability of two train services located 3 km to the east. The Victorian Government has not planned rail or tram linkages to Moorabbin Airport.

Anticipated development of a hotel and aviation student accommodation will reduce reliance on motor vehicle travel to the Airport for Airport users.

8.2.1 External Road Network

The Airport benefits from excellent access to the surrounding arterial road network, including signalised access to major on-Airport land uses from Centre Dandenong Road.

Additional signalised access points from Boundary Road and Lower Dandenong Road will be implemented to facilitate planned development at the Airport. These Airport access improvements are generally at an advanced stage of planning and design. Approvals from the relevant authorities have been, or will be, obtained for all works being delivered. The additional signalised access points provide for pedestrian access and linkages to off-Airport networks.

Key existing roads are shown in **Figure 8.1 – Existing Local Road Network and Hierarchy**.

Physical, operational and regulatory characteristics for key roads in the vicinity of the Airport are set out at **Figure 8.2 – Road Network Summary**. Theoretical daily mid-block traffic capacities are provided, enabling their current operation to be expressed in the form of a volume to capacity ratio. This ratio provides a measure of level of service and amenity for motor vehicles, with a value closer to zero indicating significant capacity, and up to a value of 1 being the 'ideal' limit beyond which point network performance deteriorates. The Primary Arterial Category 1 roads on the Airport perimeter to the north, east and south of the Airport well below capacity.

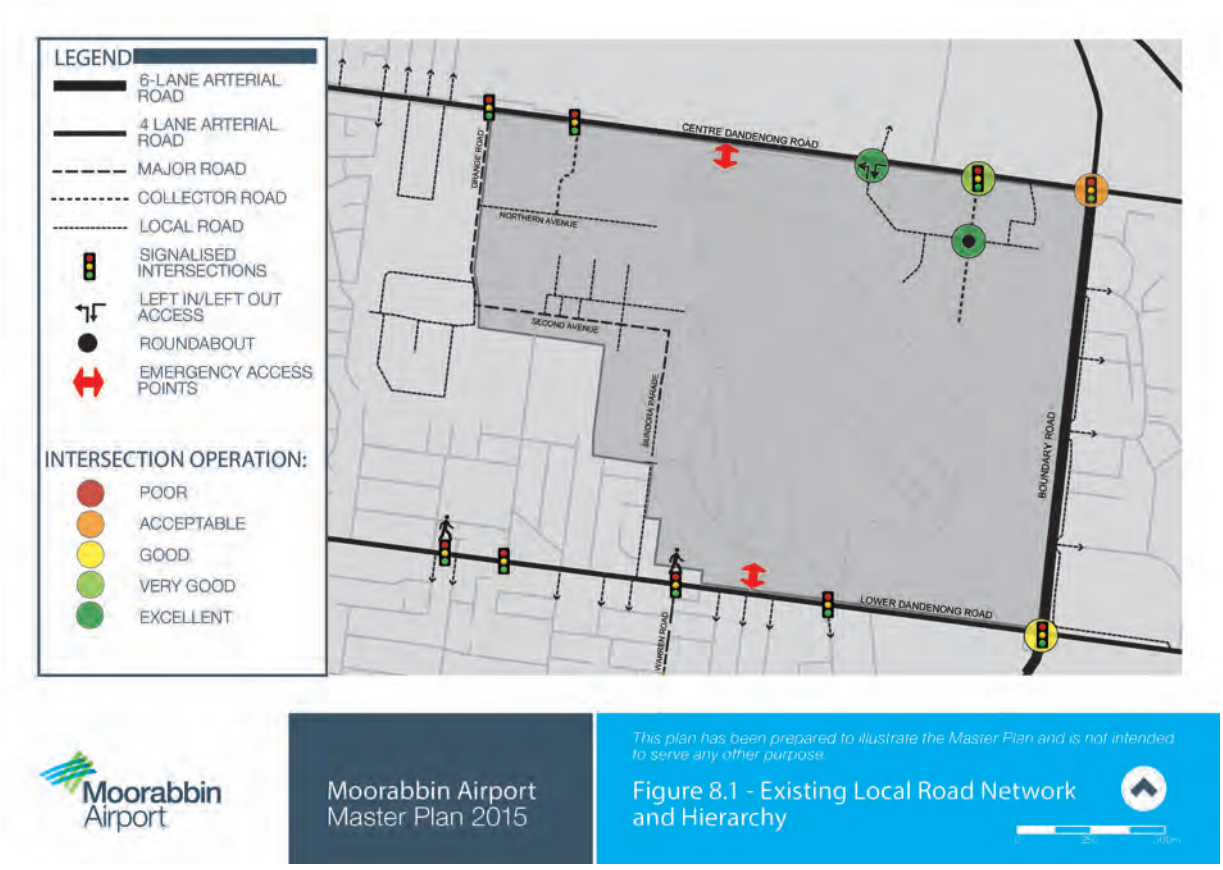

Figure 8.1 // Existing Local Road Network and Hierarchy.

Road Name	Road Characteristics	Road Type	Responsible Authority	Theoretical Daily Capacity	Existing Daily Volumes
Centre Dandenong Road	4 lanes with 2 lanes in each direction Median divided carriageway east of Federation Way 20.5m road reserve (approx.) 70 km/hr posted speed limit	Primary Arterial (Road Zone Category 1)	VicRoads	45,000 vpd	28,000 vpd
Boundary Road	6 lanes with 3 lanes in each direction Median divided carriageway 34m road reserve (approx.) Service lane on east side (Council controlled) 80 km/hr posted speed limit	Primary Arterial (Road Zone Category 1)	VicRoads	67,500 vpd	34,000 vpd
Lower Dandenong Road	4 lanes with 2 lanes in each direction Undivided carriageway 20.5m road reserve (approx.) 60 km/hr posted speed limit	Primary Arterial (Road Zone Category 1)	VicRoads	45,000 vpd	34,000 vpd
Grange Road	2 lanes with 1 lane in each direction 12m carriageway On street parking permitted on both sides	Major Road	Kingston City Council	18,000 vpd	-
Second Ave & Bundora Parade	2 lanes with 1 lane in each direction 10m carriageway On street parking permitted on both sides	Major Road	Moorabbin Airport	18,000 vpd	-

Road Name	Road Characteristics	Road Type	Responsible Authority	Theoretical Daily Capacity	Existing Daily Volumes
Chifley Drive	Dual 7.5m wide carriageways separated divided by median (north of Federation Way) Two-way 14.0m wide carriageway (undivided) (south of Federation Way) On street parking permitted on both sides south of Federation Way	Collector Road	Moorabbin Airport	18,000 vpd	3,200 vpd
Federation Way	Two-way 14.0m wide carriageway (undivided) west of Chifley Drive Dual 7.5m wide carriageways divided by median east of Chifley Drive On street parking permitted on both sides west of Chifley Drive	Local street	Moorabbin Airport	18,000 vpd	1,300 vpd
Kingston Central Boulevard	Two-way 10.0m wide carriageway On street parking not permitted Zebra crossings provided at north end	Collector Road	Moorabbin Airport	18,000 vpd	7,300 vpd

Figure 8.2 // Road Network Summary

8.2.2 Existing Traffic Volumes

Figure 8.3 – Existing Traffic Volume Summary has been prepared to summarise recently collected and publicly available daily traffic volume data along key links in the vicinity of the Airport. This figure should be read in conjunction with **Figure 8.2 – Road Network Summary**, which provides additional context in terms of overall capacity.

8.2.3 Existing Freight and Loading Traffic

Moorabbin Airport is well placed with respect to the wider arterial road network and Principal Freight Network (PFN), including Boundary Road, Lower Dandenong Road and, within a reasonable distance, the Monash Freeway, to facilitate heavy vehicle movements. This movement will also be served by the Dingley Bypass and possible Mornington Peninsula Freeway Extension (also known as the Mordialloc Bypass) when complete.

The Airport's internal road network accommodates service vehicles which undertake a variety of loading activities associated with existing commercial land uses. Moorabbin Airport's freight is predominantly driven by the large format non-aviation customers located in Chifley Business Park such as Coca Cola Amatil and Visy.

Airport based operators do not generate a significant amount of aviation associated road freight activities. A range of freight is carried to and from King Island, Flinders Island and the Northern Tasmanian Centres however given the aircraft size vans and the relatively low volume of freight, it does not have a significant impact on the PFN.

Given its excellent access to the arterial road network and to designated freight routes, the Airport is well placed to expand freight-generating land uses. Future increases in freight activity will be planned to access the Airport via the existing arterial road network, and responsibly manage any impacts to off-Airport residential areas.

Figure 8.4 – B-Double and Higher Mass Limit Approved Routes with Principal Freight Network shows VicRoads-approved Higher Mass Limit (HML) routes in the vicinity of the Airport.

8.2.4 Internal Road Network

The Airport's internal road network generally operates with significant spare capacity, and is capable of accommodating additional development traffic. Kingston Central Boulevard is near capacity however, and experiences some congestion during peak times from traffic accessing adjacent retail uses.

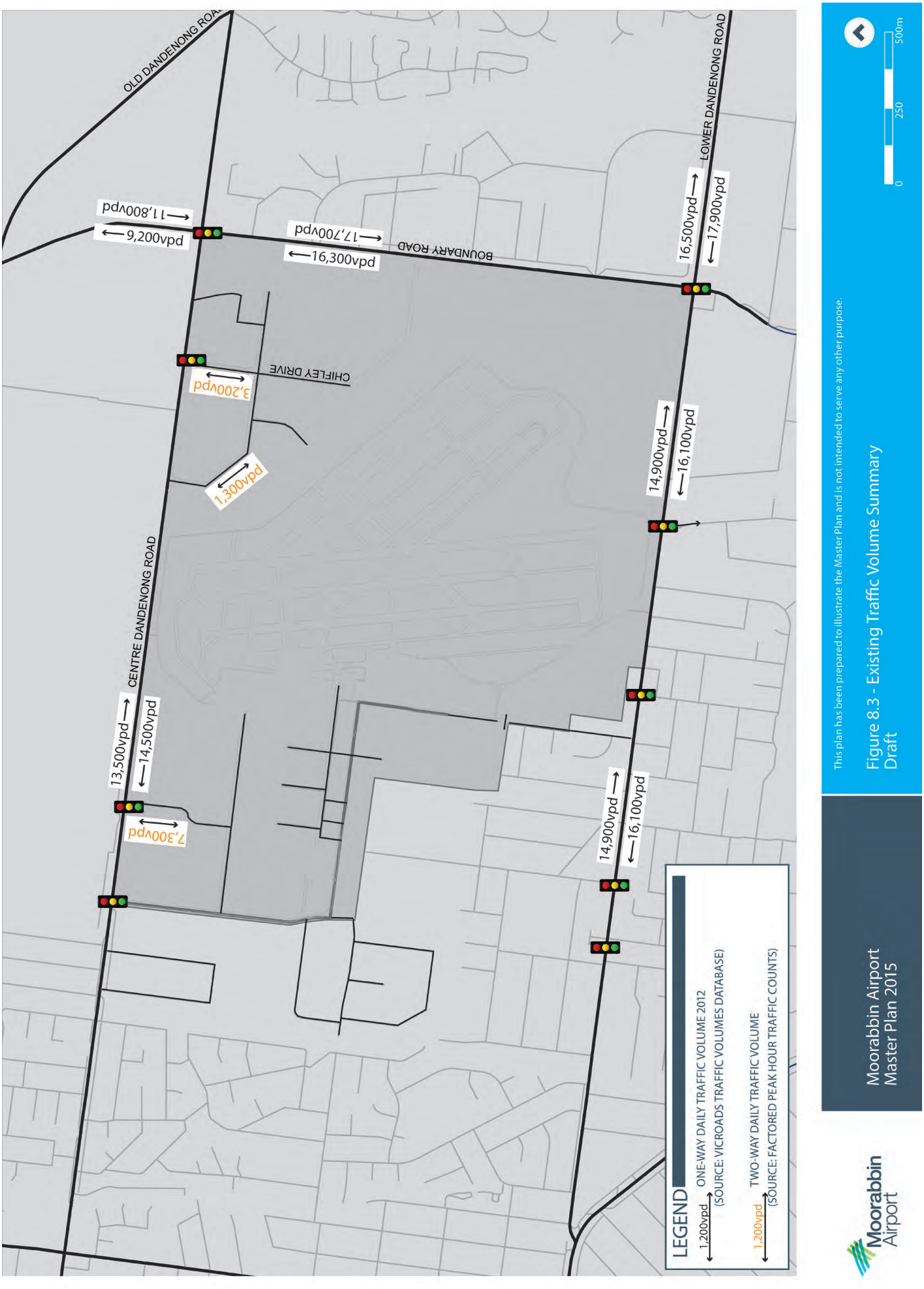

Figure 8.3 // Existing Traffic Volume Summary

8.3 Future Off-Airport Road Network

8.3.1 VITM Traffic Volume Forecasts

MAC has commissioned a review of the existing and future road network traffic volumes within the vicinity of Moorabbin Airport, based on the Victorian Integrated Transport Model (VITM).

The outputs of this model provide a useful indication of the overall level of service for the road network during peak periods; however it should be noted that:

- The VITM model is appropriate for assessing transport demands at an area or corridor level; as such individual links may not accurately represent observed conditions.
- Typically intersection capacity is a constraint on a network; however VITM typically considers link volumes. As such, while links may appear to be operating below capacity, intersections may be at or approaching capacity.

VITM provides models at five yearly intervals. For the purpose of this report, the 2011 "base" model, along with the 2021 and 2031 "future" models have been used to compare forecast changes to traffic volumes on key roads around the Airport.

The VITM Model indicates that:

- Traffic volumes on the east-west arterials which bound the Airport (Centre Dandenong and Lower Dandenong Roads) are expected to slightly decrease or at least remain stable during the short to medium term as the Dingley Bypass is completed.
- In the long term, a slight increase in traffic volumes on these east-west arterials is expected due to wider land use and population changes.
- Traffic volumes on Warrigal Road, which runs from north to south, west of the Airport, are expected to increase steadily over the medium and long term.
- A 13% increase in traffic volume on Boundary Road is expected by 2031. Beyond this time volumes are expected to decrease significantly due to the completion of the Mornington Peninsula Freeway Extension, which is assumed in the VITM to occur in 2036.

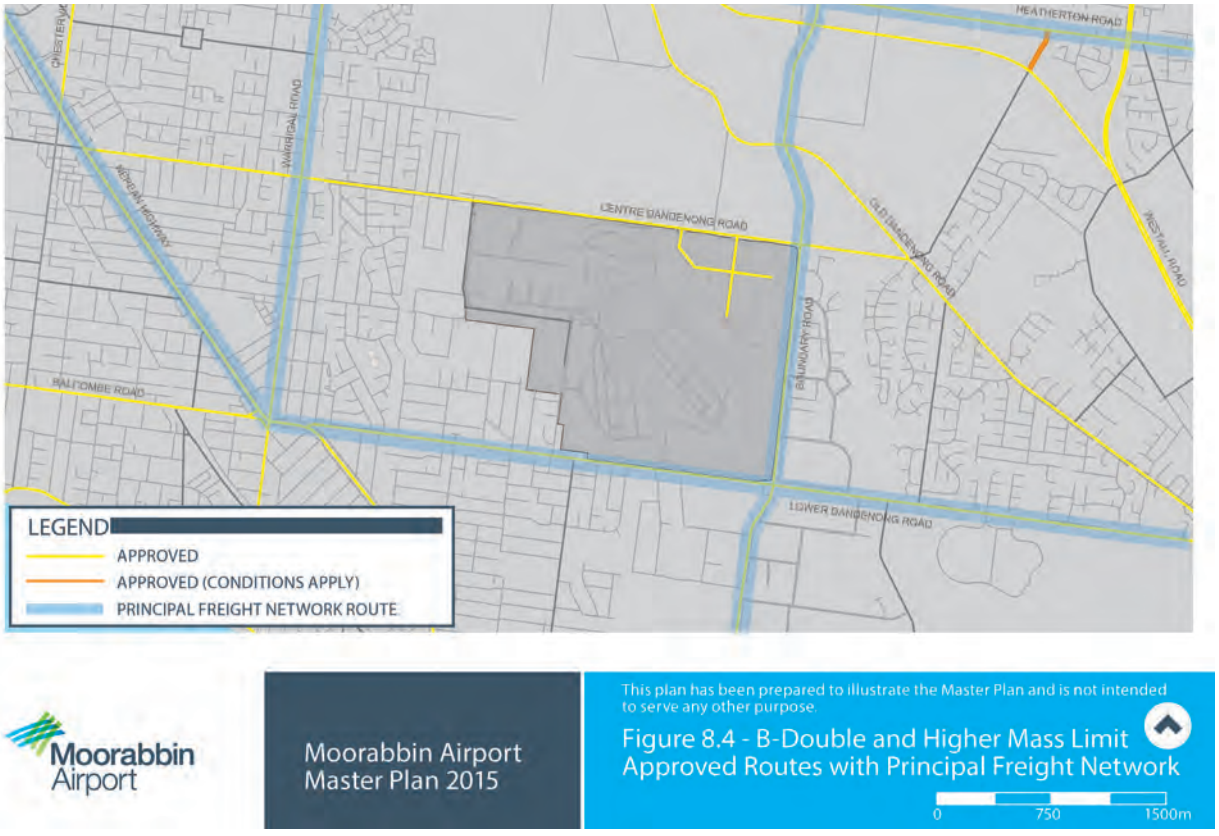

Figure 8.4 // B-Double and Higher Mass Limit Approved Routes with Principal Freight Network

A number of road projects are embedded into these VITM modelling results. These projects are not generally funded or committed, but rather form the basis for the Government's long-term transport and land use planning.

Some of these projects relate to new infrastructure (such as the Mornington Peninsula Freeway Extension and the Dingley Bypass) while others relate to capacity upgrades for existing roads (such as Warrigal Road).

8.3.2 Planned Road Network Projects

A number of strategic road network projects have the potential to change transport and access in the vicinity of the Airport and are shown at **Figure 8.5 – Strategic Road Network Projects**. The Dingley Arterial (also known as the Dandenong Bypass) opened to traffic in late 2013.

- Dingley Bypass to the north-east of the Airport is nominated as a 'Future Preferred Traffic Route', with a contract for construction awarded in July 2014 and completion expected in late 2016. The Bypass will link Warrigal Road at Moorabbin with Westall Road at Dingley Village, providing 3 lanes in each direction with adjacent shared cycle and pedestrian paths. The Bypass will include traffic signals at the intersection with Boundary Road.
- VicRoads is undertaking investigations into the Northern Mornington Peninsula Freeway Extension (also known as the Mordialloc Bypass), with an allocation of $10 million in the May 2014 State Budget. The funds will be used to finalise a concept design and undertake environmental assessments for the link. Previous planning for the link included a fully directional interchange at Lower Dandenong Road, and partial access at Centre Dandenong Road, however these are likely to be subject to further analysis and consultation with affected stakeholders.

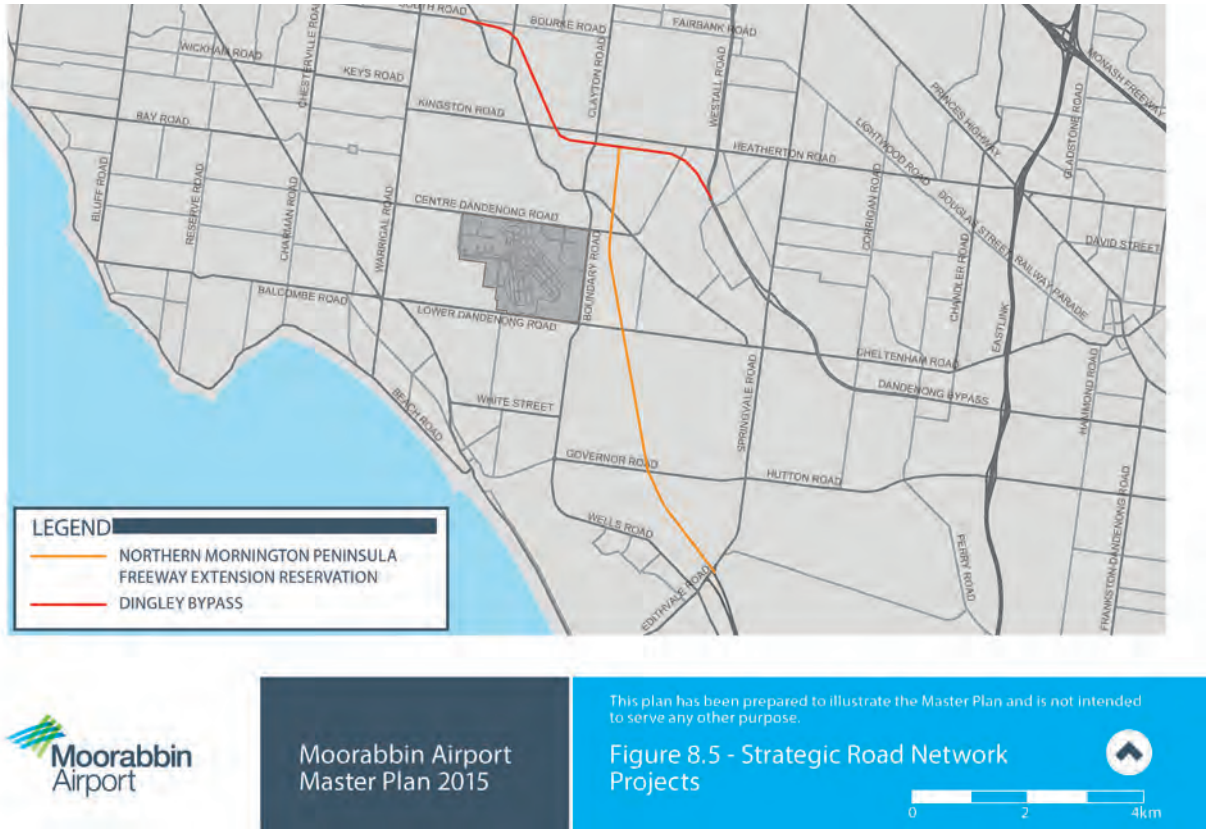

Figure 8.5 // Strategic Road Network Projects

8.4 Car Parking

Moorabbin Airport provides in the order of 3,300 off-street car parking spaces (an estimated based on aerial photography), most of which are associated with DFO and Kingston Central Plaza (approximately 1,800) and Chifley Business Park (approximately 1,300). On street parking and terminal access parking within the aviation support services areas are free to Airport operators and users, unlike other Melbourne airports which charge for parking.

The provision of adequate and conveniently located on-site car parking contributes to the economic objectives of the Airport, and particularly the retail centres. Moorabbin Airport is unique in the sense that there is very limited potential for adverse impacts of overspill parking into neighbouring residential (or commercial) areas, with the possible exception of Grange Road.

8.5 Public Transport

Existing public transport infrastructure (including routes and stops) within the vicinity of Moorabbin Airport is shown in **Figure 8.6 – Public Transport Services and Infrastructure**.

A number of bus services operate on the external arterial road network bordering the Airport. While there are no internal public transport connections, some routes such as bus route 828 along Centre Dandenong Road provide a reasonable alternative to the private vehicles during weekdays.

Travel to the Airport is predominantly by private vehicles, reflecting the Airport's strategic advantage of excellent access to the arterial road network and the resultant high degree of convenience.

Public transport currently represents less than 2% of work trips of workers at the Airport. This is in line with the Kingston LGA (excluding 1.6% for two train services) and comparable to the neighbouring Kingston Central and Braeside economic and employment precinct which has a similar land use mix.

The proposed construction of footpaths along the Chifley Drive extension will connect into the existing pedestrian network through the proposed Boundary Road/ Chifley Drive extension signalised intersection to access the existing bus stop in Redwood Gardens.

Figure 8.6 // Public Transport Services and Infrastructure

8.6 Pedestrians & Cycling

External pedestrian trip demands to the Airport are forecast to remain relatively low, generated primarily by surrounding residential areas and public transport stops along Centre Dandenong Road. Further land use development and changes to the road network may provide opportunities to improve the permeability and access to key land uses at the Airport by pedestrians, as well as increase the potential for internal trips to be undertaken by foot (for example, between flight training and retail uses).

The primary cycling network facilities surrounding the Airport include two off-road shared paths that run along the Airport's northern and southern boundaries (Centre Dandenong Road and Lower Dandenong Road). Centre Dandenong Road, Boundary Road and Lower Dandenong Road are all designated cycling routes on the Principal Bike Network (PBN).

8.7 Taxis

As the Airport caters for low capacity passenger flights and is not a significant generator of taxi demands.

The Airport does not charge an access fee for taxis, buses or hire cars.

8.8 Mode of Transport

How people get to Moorabbin Airport is a fundamental input to planning for future land use and transport infrastructure. Understanding people's current travel patterns also illustrates opportunities to capitalise on the Airport's accessibility, and address key gaps or limitations in the transport network.

Existing travel behaviour reflects the Airport's location, which is very well serviced by the arterial road network, but with a lower level of accessibility by public transport (including train stations), walking and cycling:

- the travel patterns to the Airport are consistent with similar areas such as Braeside Industrial Estate, and consistent with overall figures for the City of Kingston local government area; and
- travel to the Airport is dominated by private vehicles, with very low mode share for other forms of transport. This reflects the Airport's strategic advantages of having a high degree of convenience and access to the arterial road network and a large trade catchment.

A range of land uses at the Airport (including DFO, warehouse/factory uses and flight training facilities) may benefit from greater transport choice. Younger employees or those from lower socio-economic backgrounds are more likely to rely on public transport, walking and cycling to access employment opportunities at the Airport.

While the Airport's excellent vehicular accessibility supports its ongoing success as a key attractor in the local and regional economy, future planning for the Airport and surrounding networks will aim to improve the safety, convenience and amenity of sustainable and active forms of transport.

This will be a key factor in providing for access to a wide range of employees (both potential and existing), and ensuring the success of the Airport in complementing its historic and continuing focus on aviation and related activities with its emerging role as a specialised activity centre with a range of economic and employment-generating activities.

In determining the current transport mode shares for the Airport, the following sources have been used:

- the Australian Bureau of Statistics (ABS) 2011 Census Journey to Work data, including for the Moorabbin Airport Statistical Area Level 2 (SA2) as well as for the Kingston Local Government Area; and
- the Victorian Integrated Survey of Travel and Activity (VISTA) 2009-2010 data, to understand mode split for travel across all purposes by people living in the local area (Kingston – North Statistical Local Area).

The results are set out in table form in **Figure 8.7 – Mode Split Data – Moorabbin Airport and Surrounds**.

Data Source	Motor Vehicle [1]	Public Transport	Active Travel	Other [2]
Moorabbin Airport employees (ABS Method of Travel to Work data)	96.5%	1.4%	1.3%	0.8%
Kingston (LGA) [3] employees (ABS Method of Travel to Work data)	93.2%	3.1%	2.8%	1.0%
Kingston SLA [4] residents (VISTA Main Method of Travel)	78.1%	6.9%	14.4%	0.6%
Braeside SA2 [5] employees (ABS Method of Travel to Work data)	97.3%	1.3%	0.7%	0.8%

Source: ABS 2011 and VISTA09/10
[1] Includes truck
[2] Includes motorbike and 'Other' response
[3] City of Kingston Local Government Area
[4] Statistical Local Area
[5] Statistical Area Level 2

Figure 8.7 // Mode Split Data – Moorabbin Airport & Surrounds

The data indicates that MAC is on par with the City of Kingston for all modes of travel except for public transport which is due to the City of Kingston being serviced by two metropolitan train stations. Comparatively, if the effect of the two metropolitan train stations (1.6% of all trips) were excluded from the data above, MAC would be on par with the City of Kingston for all modes of transport, including public transport.

Further transport mode share data was obtained by a small-scale survey conducted for the purpose of this 2015 Master Plan in 2014. While the survey provides a useful insight into how people access the Airport and their origin, it does not include responses from students of the various flight schools, who tend to rely on public transport for access to the Airport.

While ease of access to the Airport by private motor vehicle will support its ongoing success as a key attractor within the local and regional economies, future planning for the Airport and its surrounding transport networks over the planning period of this 2015 Master Plan will aim to improve the safety, convenience and amenity of sustainable and active forms of transport.

8.9 Future Traffic Flows

8.9.1 Effect of Proposed Developments on Traffic Flows

This section sets out the effect that aviation and non-aviation developments envisaged in this 2015 Master Plan will have on ground transport and traffic flows at the Airport.

A specialist traffic study commissioned by MAC for the purposes of this 2015 Master Plan has found that the road network in the vicinity of the Airport is unsaturated, and will remain so taking into account development contemplated in this 2015 Master Plan. Off-Airport road projects now under construction and others being considered will see the capacity of roads in the vicinity of the Airport increase to meet growing demand.

The Airport is satisfied, based on the information available to it, that the off-Airport road network will have sufficient capacity to absorb passenger and freight vehicle movements through the planning period for this 2015 Master Plan.

8.9.2 Ground Transport Objectives

Four high level transport objectives have been developed to ensure that the transport network continues to support the ongoing growth and success of the Airport. These objectives are consistent with Commonwealth and State government policy, and have informed the development of detailed projects and actions for the Ground Transport Plan.

a. Road Network

Provide capacity for future increases in land use at the Airport and ensure that the internal and external network does not limit development:

- provide new internal roads and external road network access intersections to facilitate access to landside areas, including Chifley Drive extension, potential southern extension of Kingston Central Boulevard and the western Airport access road.
- provide a new east-west roadway in the vicinity of Kingston Central Plaza, within Precinct 4 (near or along its boundary with Precinct 2). This roadway is consistent with objectives for the area around Kingston Central Plaza as outlined in the Airport's 2010 Master Plan;
- additional north-south road linkages will be planned as required between Northern Avenue and Second Avenue;
- ensure that land use changes appropriately address impacts to the external road network, in consultation with VicRoads;
- continue to monitor the operation of existing external access intersections, in consultation with VicRoads;
- consistent with the Victorian Freight and Logistics Plan, and with the role of Lower Dandenong Road and Boundary Road as parts of the Principal Freight Network, investigate opportunities to use these roads to enhance the efficiency of freight movements to and from the Airport; and
- work with VicRoads to ensure future strategic road network projects such as the Mornington Peninsula Freeway Extension provide appropriate access to support the Airport's Transport Gateway, major employment, training and retail roles.

b. Public Transport

Advocate for improved public transport services to Moorabbin Airport, to cater for employees, aviation students and visitors, as well as future proofing the internal network for potential future bus services within the Airport:

- provide increased service frequencies, targeting bus route 828 and specifically addressing the deficiencies on weekends, to enable transport choice for students, workers and visitors to the Airport;
- enhance the bus stop infrastructure along Boundary Road to improve amenity for public transport users (including consideration of pedestrian crossing facilities);
- provide bus stop infrastructure at the new signalised intersection in the north west corner of the airport on Lower Dandenong Road, including new bus shelter and pedestrian crossing facilities; and
- investigate the possibility of public transport services running through the Airport following the extension of Chifley Drive and/or the western access road.

c. Car Parking

Ensure that the provision of car parking supports the operation of the various land uses at the Airport:

- ensure that where possible complementary land uses are able to share car parking to minimise overall provision requirements;
- ensure that car parking is appropriately located to service the main land uses in the various Airport precincts; and
- minimise vehicle circulation associated with finding car parking through centralised provision of parking, and associated signage.

d. Cycling & Pedestrian Infrastructure

Increase transport choice for employees and visitors to the Airport as development progresses, and improve upon the existing walking and cycling links both within the Airport and connecting to the surrounding network:

- advocate for improved pedestrian and cycling connections to the Airport through implementation of the Kingston Cycling Strategy and VicRoads' Principal Bicycle Network (PBN);
- facilitate movement through the Airport by extending the walking and cycling network and enhancing the permeability of the Airport as development progresses;
- provide a basic level of walking and cycling infrastructure as part of all new development, including footpaths and/or shared paths and bicycle lanes, as applicable;
- improve the connectivity and safety of the internal road network for crossing pedestrians, particularly for access to bus stops; and
- ensure that new development provides adequate end-of-trip facilities, including showers, lockers and bicycle parking facilities for both employees and visitors.

8.10 Ground Transport Plan

MAC has prepared a Ground Transport Plan for the landside area of the Airport in relation to the first five years of the planning period of this 2015 Master Plan, addressing the matters required by Section 71(2) of the Airports Act. This 2015 Master Plan also includes an assessment of the impact that proposed developments will have on the ground transport system over the first 5 years of the 2015 Master Plan planning period.

The Ground Transport Plan for the Airport is provided as **Figure 8.8 – Moorabbin Airport Ground Transport Plan**.

Internal and external road network improvements to support the land uses envisaged as part of the 2015 Master Plan are anticipated to include:

8.10.1 Access via Centre Dandenong Road

- provision of a new left-in, left-out, and a right-in access point to the Airport, on the corner of Boundary Road and Centre Dandenong Road (VicRoads approved); and
- investigation of a new left-in, left-out access point east of Kingston Central Boulevard to provide an additional access point to Kingston Central Plaza (subject to further investigation and VicRoads approval).

8.10.2 Access via Boundary Road

- provision of two new access points to support the development of Precinct 5 on the corner of Boundary Road and Centre Dandenong Road, including:
- a new left-in, left-out access point between Garden Boulevard and Centre Dandenong Road (VicRoads approved); and
- a new signalised access point at Garden Boulevard (VicRoads approved);
- extend Chifley Drive to the southeast and provide a new signalised intersection of Boundary Road and Chifley Drive (VicRoads approved); and
- investigate new left-in, left-out access points along Boundary Road to service Precincts 5 and 6 (subject to further investigation and VicRoads approval).

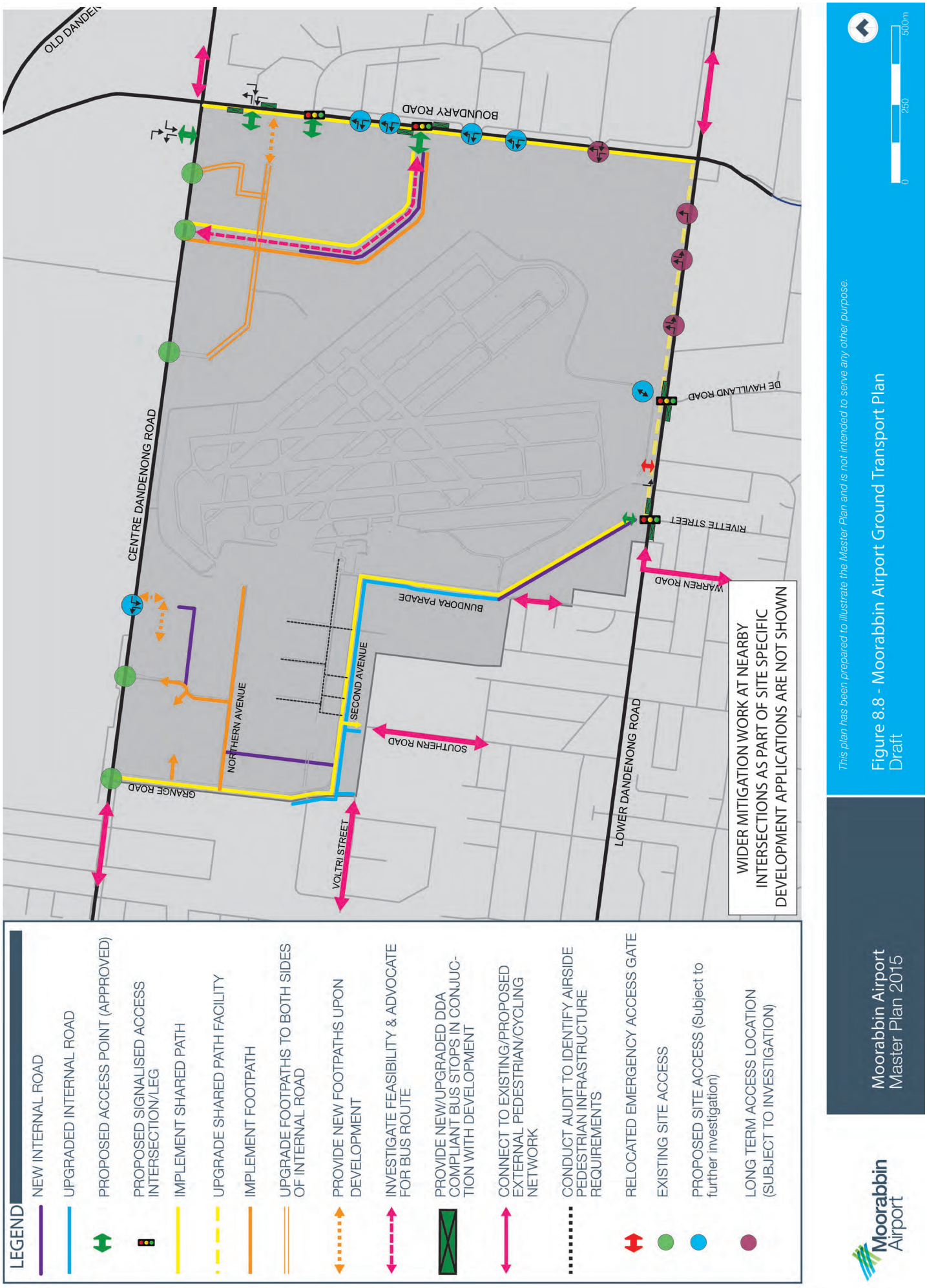

Figure 8.8 // Moorabbin Airport Ground Transport Plan

8.10.3 Access via Lower Dandenong Road

- extend Bundora Parade southeast toward Lower Dandenong Road (the western access road), and provide a new signalised intersection of Lower Dandenong Road, western access road Parade and Rivette Street (VicRoads approved);
- investigate a new signalised intersection of Lower Dandenong Road and De Havilland Street to gain access to parts of Precincts 2 and 7 (subject to further investigation and VicRoads approval); and
- investigate new left-in, left-out access points along Boundary Road to service Precinct 6 (subject to further investigation and VicRoads approval).

8.10.4 Car Parking

While the provision of on-site car parking will continue to accommodate demands generated by new development, there is scope to increase the efficiency of car parking provision through the sharing of parking resources and higher utilisation of on-street car parking areas.

8.10.5 Public Transport

- there are opportunities to improve pedestrian connectivity to existing and new land uses as part of new development proposals;
- the Chifley Drive extension has been designed to a standard capable of accommodating bus services in the future; and
- the Airport will continue to advocate for consideration of improved frequency and coverage of public transport services to the Airport in future, including investigating the potential for direct services onto and through the Airport.

8.10.6 Pedestrians and Cycling

- there is an opportunity to provide dedicated cycling facilities on key roads within the Airport, as well as end-of-trip facilities at major destinations. New internal roads such as the Chifley Drive extension and western access road will enhance the permeability of the Airport and increase the directness and convenience of active travel trips;
- new bicycle racks for bicycle parking to be installed in a couple of locations within the airport; and
- as part of the implementation of this 2015 Master Plan, the Airport will continue to work with the City of Kingston and VicRoads to advocate for improved external bicycle linkages to surrounding residential areas and the wider cycling network.

8.10.7 Taxi

Existing facilities are adequate to handle any taxi trips to the Airport and this is not expected to change in the future.

8.11 Ground Transport Plan Projects

Expected land use development as outlined in **Chapters 6 and 7** of this 2015 Master Plan over the next five years at the Airport are not of a scale that is expected to significantly alter the transport characteristics of the Airport. In addition, the detailed work undertaken to date by MAC with VicRoads to gain approval for proposed access changes has included consideration of external impacts to the transport network.

MAC will continue to liaise with VicRoads, the City of Kingston and Public Transport Victoria to ensure that external transport impacts of the Airport continue to be monitored throughout the planning period of this 2015 Master Plan.

In addition, before implementation of any road works and off-street parking near Second Avenue which may affect the NDB site, MAC will engage in early liaison with Airservices in relation to planning and analysis of siting considerations and construction activity to ensure the integrity of the NDB is protected and the building restricted areas are protected.

As development progresses within the Airport, MAC will continue to develop the internal footpath and bicycle network, including provision for end-of-trip facilities where appropriate, and extension and improvement of the internal road network. Airport roads are planned to minimise any propensity for "rat running" of external traffic through the Airport.

In the longer term, MAC will continue to investigate opportunities to better integrate the Airport with surrounding walking and cycling networks, and will advocate for the provision of improved public transport access to the Airport's key land uses.

Specific projects will include the following:

- implementing a minimum 2.5m wide shared path along the east side of Grange Road to facilitate improved access between public transport services and airside / flight training facilities;
- implementing a minimum 2.5m wide shared path along the north side of Second Avenue and the Western Access Road to Lower Dandenong Road, coinciding with the development of surrounding precincts;
- upgrade of the existing off-road path along Lower Dandenong Road to a higher quality shared path standard as development progresses along Lower Dandenong Road;
- providing a shared path on the west side of Boundary Road as development along Boundary Road progresses, including crossing points at new signalised intersections;
- providing improved pedestrian links into DFO and Kingston Central Plaza from Grange Road, to enhance access from residential areas to the south and west;
- advocating for improved pedestrian and cycling infrastructure to enhance access from the residential areas west of Grange Road via Voltri Street (works to be completed by others);
- conducting an audit of pedestrian facilities and the pedestrian environment within the Airport's internal, landside road network;
- providing footpaths on at least one side of all internal, landside roads;
- providing footpaths linking the aviation-related precincts of the Airport to DFO and Kingston Central Plaza;
- providing pedestrian footpaths to integrate the two Kingston Central Plaza development sites with the existing DFO and Kingston Central Plaza retail areas;
- providing an east-west pedestrian connection through the Precinct 5 development area connecting to Federation Way, to increase site permeability and walkability;

- ensuring that new development provides appropriate bicycle parking and end-of-trip facilities for staff and visitors;
- advocating for improved bus services (including enhanced service spans and frequencies), particularly on Centre Dandenong Road;
- investigating the feasibility of providing future bus services on the Chifley Drive extension, and advocate for its inclusion on the public transport network;
- providing new or upgraded bus stops, which are compliant with the Disability Discrimination Act 1992 (Commonwealth), as new development occurs, and ensuring that they include adequate lighting and shelter, and are appropriately linked to land use attractors by suitable pedestrian facilities;
- providing a 50km/hr speed limit on new internal roads including the Chifley Drive extension and any other road works;
- monitoring and reviewing traffic volumes and traffic speeds on the Chifley Drive extension and any other road works, to assess the level of through traffic and potential "rat-running";
- investigating the adequacy of the existing signalised intersection of the internal east-west Kingston Central Plaza access and Kingston Central Boulevard/Centre Dandenong Road to facilitate access to the two development sites located south and east of Kingston Central Plaza and additional access points off Centre Dandenong Road that may be required;
- investigating the staging of and requirements for upgrade of the Second Avenue cross section, including its re-alignment to alter priority at the Voltri Street intersection as development of the Airport occurs;
- encouraging the provision of adequate on-site car parking within new development, to ensure the ongoing efficiency and economic success of the Airport, noting that sharing of parking resources (including on-street parking) may be appropriate within some precincts;
- continuing to monitor the performance of Chifley Drive extension and any other road works to ensure they are not attracting excessive "rat running" traffic from the wider network;
- undertaking a detailed review of car parking supply and restrictions, to identify issues and opportunities for formalising off-street car parking or increasing on-street car parking availability;
- investigating the potential provision of signalised left-in/left-out access from Centre Dandenong Road east of Kingston Central Boulevard;
- investigating the suitability of providing a direct unsignalised left-in/left-out access point upon development of the central part of Precinct 6;
- reviewing the adequacy of the previously approved intersection layouts providing access to the Airport, to confirm their appropriateness relative to the scale and intensity of the associated land use development;
- MAC will consider proposals to link the Airport traffic network with the off-Airport network subject to satisfactory agreement with stakeholders; and
- it should be noted that MAC has not initiated any such proposals, for example owners of industrial lots in Southern Road have advocated for a linkage through the Airport.

8.12 Working with Government & Authorities

There are a number of statutory obligations to engage with State and local government, as well as the local community to deliver development in accordance with this 2015 Master Plan.

In addition to these current obligations, it is intended that a regular forum will be convened with representatives from Commonwealth, State and local governments to progress transport, land use and development issues at Moorabbin Airport. The following bodies would likely be represented:

- Australian Government:
- Department of Infrastructure and Regional Development
- Victorian Government:
  - Department of Economic Development, Jobs, Transport and Resources
  - Public Transport Victoria – Strategic Network Planning
  - VicRoads – Metro South East Strategic Planning.
- Local Government:
  - City of Kingston – Strategic and Transport Planning (continuation of regular meetings)
  - other local governments as may be necessary / desirable to advance the objectives of this 2015 Master Plan.

These forums will be initiated following adoption of this 2015 Master Plan, with meetings occurring as required to advance the transport projects and wider network integration issues and objectives of this 2015 Master Plan.

8.13 Consistency with State Planning Schemes

In relation to the first 5 years of the 2015 Master Plan, the Ground Transport Plan is consistent with State Planning Schemes.

Specifically, the Ground Transport Plan will further the objectives of:

- Clause 11.04-3 of the SPPF by improving landside transport links to the Airport; and
- Clause 18.04-2 by ensuring that the Airport can be developed as an efficient and functional contributor to the aviation needs of the State.

9 // Infrastructure Services

- MAC funds, designs and constructs Airport network infrastructure.
- Infrastructure is delivered to relevant authority design and approval standards.
- Non aviation precincts typically bear the expensive connection costs to external services and thereby support many additional aviation sites to be joined to trunk networks by secondary infrastructure networks.
- Land use planning is a key factor in infrastructure planning and delivery.
- Most Airport infrastructure networks support aviation and non-aviation precincts.

9.1 Introduction

Infrastructure services underpin the Airport's aviation and non-aviation operations, activities and development plans.

Land use on the Airport is a key factor in the determination of the type, timing and capacity of infrastructure. Airport land use planning continues to locate the aviation function in the centre of the airport site. Aviation precincts are ringed by non-aviation precincts to further shield offsite urban areas from ground based noise. Accordingly non-aviation precincts located on the Airport perimeter subsidise the investment required to service the centrally located aviation precincts. An example of this is the western Airport access road which is subsidised by a non-aviation (industrial) land use in the south west, and will ultimately support improved access, including public transport, to the western and main aviation precincts.

Major infrastructure trunk assets are embedded on the Airport site and connect to external services at the Airport perimeter. They often support secondary infrastructure so that services can be provided across large Airport precincts. Connection points require material head works by the Airport so external services owned by third party infrastructure entities can be accessed.

Most Airport stakeholders are aware of the special purpose aviation infrastructure including runways taxiways and aprons but Moorabbin Airport also plans and delivers infrastructure for stormwater drainage, sewerage, water reticulation, electricity, gas and telecommunications. A large portion of Airport infrastructure is below ground and services aviation and non-aviation outcomes – for instance over 4 km of stormwater drainage pipes lie beneath the Airport's runways, preventing water pooling airside and draining into landside drainage networks. Similarly power, water and sewer services to the aviation support precinct all connect to an infrastructure node in an adjacent non-aviation precinct.

With trunk infrastructure often required to straddle 1.5 km to 2 km across the Airport, strategic planning to ensure the Airport can meet current and future capacity efficiently is a major focus. The flat nature of the Airport, an essential requirement for the Airport's aviation role, means certain services that would otherwise be gravity fed require careful geotechnical assessment and engineering. Additional infrastructure, such as pumping stations, may be required and installed at various sites on the Airport.

In precincts being developed, infrastructure works are constructed in the initial stages. Works on the Airport perimeter are scheduled early so that necessary infrastructure connections can be constructed. Development projects are typically planned to be delivered at or about the same time as infrastructure is being constructed so that the revenue earning development projects generate an economic return to pay for the infrastructure investment. Infrastructure works are funded by the Airport and recovered over the long term from Airport customers and users.

The physical location of the Airport is an important consideration for Airport infrastructure services. The Airport is located in an urban setting adjacent to tracts of less developed land to the north. The terrain generally slopes from north to south and consequently up to 85% of the stormwater that flows across the Airport originates from land to the north of the Airport. The aviation function requires that MAC be able to efficiently manage such flows away from the runways and necessitates material drainage networks across the Airport.

9.2 Completed Infrastructure Works

Since the 2010 Master Plan, the key infrastructure works have included:

- realignment of the Mordialloc Settlement Drain and dry retarding basin;
- 200m extension of Federation Way within Chifley Business Park; and
- earthworks within the east precincts preparing employment and business land for future release.

Infrastructure design work has been completed for the south west precinct with 2015 works to include a segment of the approved western access road, intersection upgrade, stormwater works and connections for most infrastructure services. Design work for an additional 500m road extension of Chifley Drive through to Boundary Road in Precincts 5 and 6 is underway and construction is expected to be completed in mid-2015.

9.3 Drainage

9.3.1 Existing Infrastructure

The drainage network within the Airport is generally funded, owned and maintained by MAC. As outlined below, the Mordialloc Settlement Drain and the Sibthorpe Drain have been funded and constructed by the Airport and effective ownership rights transferred to drainage authorities in keeping with standard infrastructure development practices.

The MAC drainage network collects surface runoff (including from roads and roofs) and directs it to offsite drainage networks owned by Kingston City Council (KCC) and Melbourne Water Corporation (MWC). MAC continues to work closely with KCC and MWC regarding drainage infrastructure and overall drainage network capacity. Airport stormwater strategies are carefully planned to ensure Airport development meets all required standards.

Moorabbin Airport is divided into three broad catchments:

- the Eastern catchment that is directed to the MWC owned Mordialloc Settlement Drain;
- the Central catchment that is directed to the MWC owned Sibthorpe Drain; and
- the Western catchment that is directed in part to the KCC network, or potentially directly to a MWC retarding basin in Voltri Street.

In addition to the authority assets, MAC has its own drainage reticulation network throughout the road network of the Airport.

MAC has invested in significant drainage works at the Airport since the 2010 Master Plan. The $8 million realignment of the 1.5km Mordialloc Settlement Drain (MSD) and dry retarding basin has been completed at MAC's cost. The works were designed in accordance with MWC's standards and has underground culverts for the most northern 240m, transitioning to a fully landscaped 32m wide open swale with hydraulically designed channel in a new alignment, providing new drainage infrastructure for the south east. The MSD connects into the external drainage network of standard concrete open drains to the north and south of the Airport.

A 175,000 m3 dry retarding basin (the equivalent of 65 Olympic swimming pools) has been constructed in the south east of the Airport to manage stormwater on the Airport. MAC is responsible for maintaining these drainage assets for a period before they are transferred to MWC for ongoing maintenance.

9.3.2 Maintenance and Management

Both MAC and MWC own drainage assets at the Airport.

The major MWC asset is the MSD. The Moorabbin Airport Drain (also referred to as the Sibthorpe Drain) has its inlet on the Airport, before leaving the Airport to the south and crossing under Lower Dandenong Road.

All other drainage, including infrastructure within road reserves at the Airport, is the responsibility of MAC. MAC maintains and manages these assets and is required to provide any upgrades or renewals.

9.3.3 Risk Mitigation

The MAC drainage network is designed and constructed in accordance with MWC standards and approved by MWC. This mitigates flooding risk from the Airport drainage network. In addition, MAC undertakes regular inspections and maintenance on the system. The major Airport drainage connection points which belong to MWC are subject to an ongoing MWC maintenance regime.

9.3.4 Accommodating Airport Growth

New development at Moorabbin Airport will be designed with consideration of the major and minor drainage networks. The minor drainage network will be designed to cater for storms up to the design event and will convey collected stormwater underground to discharge points. The major network will cater for events above the design event and will convey stormwater overland, generally to the same discharge points.

MAC will be responsible for the construction of key trunk infrastructure as development progresses across the Airport precincts, while Airport customers will be responsible for the development of drainage infrastructure involving:

- connection of their premises to the relevant Airport trunk network;
- site drainage to collect site stormwater; and
- any onsite detention required by MWC.

Drainage infrastructure is designed in accordance with the following criteria:

- minor drainage networks for a 10 year Average Recurrence Interval (ARI) event;
- major drainage networks for the 100 year ARI event; and
- site discharges to be controlled to pre-development levels.

Early stage drainage works on the Costco site commenced in 2014. The south west precinct will include an additional 20,000 m3 dry retarding basin and a mix of open and underground drainage. As a minor drainage asset this new south west dry basin will remain a MAC asset and will be maintained by MAC.

There are opportunities within the drainage network for Water Sensitive Urban Design treatments as outlined in **Chapter 10** of this 2015 Master Plan

9.4 Sewerage

9.4.1 Existing Infrastructure

The sewerage network at Moorabbin Airport is a combination of private and authority owned assets. There are SEWL sewer assets traversing Chifley Business Park. Authority sewers which surround or pass through the Airport include the:

- Clayton Branch Sewer that runs from north to south through the Airport, parallel with the MSD; and
- Mentone Intercepting Sewer that runs from west to east along Lower Dandenong Road. While this is an MWC sewer, connections to it, including from the Airport, are managed by South-Eastern Water Limited (SEWL).

9.4.2 Maintenance & Management

The construction of the internal sewerage network at the Airport is managed and funded by MAC. The assets, once complete, are gifted to SEWL, and from then are managed and maintained by SEWL. Each Airport customer is responsible for building and maintaining its internal network, which connects to the SEWL network.

9.4.3 Risk Mitigation

Risks associated with the trunk sewerage network are the responsibility SEWL as asset owner.

9.4.4 Accommodating Airport Growth

Sewers for the Airport are designed to Water Services Association of Australia (WSAA) standards, and are approved by SEWL. SEWL estimates demand requirements and prescribes pipe sizes and infrastructure specifications, taking into consideration site and surrounding network requirements.

All future works associated with upgrades and new connections to the sewer network will be completed at MAC's cost. Airport customers will design their individual sites to discharge to the provided connection points, either via gravity, or by using an internal rising main.

9.5 Water

9.5.1 Existing Infrastructure

The water reticulation network at Moorabbin Airport comprises a combination of private and authority-owned assets. Authority water mains are available in all streets surrounding the Airport site. The majority of these mains are 150 mm in diameter or larger, except that water mains are:

- 375 mm in diameter in Lower Dandenong Road; and
- 225 mm and 300 mm diameter in Boundary Road.

9.5.2 Development, Maintenance & Management

Proposed networks will connect to SEWL assets at the Airport boundary, or to SEWL assets that are currently within the Airport site. The construction of the water network at the Airport is managed and funded by MAC. The assets, once complete, are gifted to SEWL are managed and maintained by SEWL.

Each Airport customer is responsible for building and maintaining its internal network, which connects to the SEWL network. This internal network remains the responsibility of the Airport customer. Key Airport customer water works on development sites include:

- property connections;
- firefighting assets such as fire tanks and pumps; and
- internal reticulation.

9.5.3 Risk Mitigation

Risks associated with water network are the responsibility of SEWL as asset owner.

9.5.4 Accommodating Airport Growth

As with the sewerage network, new water assets are designed and constructed to authority standards and on the basis they will be gifted to SEWL. Water main designs for the Airport meet WSAA standards and SEWL approval requirements. Further, SEWL estimates demand requirements and prescribes pipe sizes, taking into consideration site requirements, surrounding requirements and the influence of the existing network. SEWL estimates will take into account development envisaged in this 2015 Master Plan.

Assuming Grade 2 supply will be provided to the site, all buildings over 500m2 will require hydrant and hose reel coverage, and their own fire tanks and pumps, as exist at present at Chifley Business Park.

9.6 Electricity

9.6.1 Existing Infrastructure

There are existing high- and low-voltage power networks that surround the Airport. In addition, electricity is reticulated through a number of existing precincts including Chifley Business Park. The majority of electrical assets at the Airport are authority assets, owned by United Energy, and operated and maintained by ZNX and Tenix. The Airport is supplied by two zone substations, one controlled by Tenix and the other by ZNX.

9.6.2 Development, Management & Maintenance

MAC will be responsible for construction of the electricity network at the Airport, in line with development requirements. In the first instance works will be funded by MAC, however there are reimbursements available from United Energy for some electrical works. The nature, scope and scale of these reimbursements will be determined as each stage is constructed.

New infrastructure to service Airport precincts will be to authority requirements, in this case United Energy. New circuits for high voltage electricity (22 kV) and low voltage electricity will be reticulated to provide power to Airport customers and also for public lighting.

All public lighting within the Airport will be designed to allow for the requirements of the Manual of Standards 139 – Aerodromes, which specifies legal limits for light spill within an airport environment.

MAC intends to undertake a range of works associated with the existing network including undergrounding overhead power and relocating an existing backup generator. Care will be taken to ensure continuity of supply throughout any works period.

Works that will be required to meet Airport customer needs include:

- internal reticulation; and
- connection to United Energy high voltage or low voltage supply points.

Completed power assets are gifted to United Energy, and are then managed and maintained by United Energy.

9.6.3 Risk Mitigation

Overall risk mitigation for the electrical network is provided by United Energy, the asset owner.

A backup diesel generator at the Airport is able to provide power to the Airport tower and also the runway lighting, in the event of a disruption to the electrical supply.

9.6.4 Accommodating Growth

The 2010 Master Plan identified no issues with power capacity. Similarly, development planned in this 2015 Master Plan is not expected to encounter any issues with power capacity.

Some existing electrical infrastructure may be relocated to facilitate development at the Airport. The full extent of this work will be assessed during the more detailed phase of design for individual developments.

9.7 Gas

9.7.1 Existing Infrastructure

Natural gas reticulation networks surround Moorabbin Airport. Gas networks, both inside and outside the Airport, are owned and maintained by Multinet Gas and include:

- transmission-pressure gas reticulated along Centre Dandenong Road;
- high-pressure gas reticulated along Boundary Road;
- high- and low-pressure gas reticulated along Lower Dandenong Road; and
- low-pressure gas reticulated along Grange Road.

In addition to the external network, high pressure gas is reticulated in Chifley Business Park.

9.7.2 Development, Maintenance & Management

Gas is not an essential service for the development within this 2015 Master Plan. It is considered unlikely that gas will be installed as part of any Airport development, unless there is a known requirement for it. No works are required at this stage.

MAC will plan for suitable reserves in road sections that would allow a future gas network.

Irrespective of whether MAC or Multinet pays for the network, once constructed the assets are transferred to Multinet, which owns and operates the network.

9.8 Telecommunications

9.8.1 Existing Infrastructure

Significant Telstra assets exist in all of the streets that surround the Airport.

Previous Master Plans for the Airport have not placed a particular emphasis on telecommunications requirements, as MAC has not been seen as an intensive user of telecommunications. Plans for increased aviation training activities at the Airport may over time contribute to a much increased requirement for telecommunications infrastructure.

9.8.2 Development, Maintenance & Management

Provision of telecommunications into developments continues to be an area of change. NBN Co remains primarily responsible for the installation of the National Broadband Network (NBN). In December 2013 the Australian Government initiated a review of the NBN, particularly focussed on a cost benefit analysis and review of the regulation. The review reported in October 2014 and recommended a number of changes including:

- splitting NBN Co by technology, thus allowing different technologies to compete;
- divesting satellite and fixed wireless divisions; and
- allowing greater competition between broadband providers.

A significant change in telecommunications policy since the 2010 Master Plan is that developers, including MAC, are required to fund the design and installation of the pit, conduit and reticulation networks. Telstra or others are responsible for the design and installation of the cable network. The final network becomes an asset of the telecommunications provider. It is expected Telstra will continue to provide networks to the Airport precincts.

9.8.3 Risk Mitigation

Overall risk mitigation for the telecommunications network is provided by the asset owner, in this case Telstra.

9.8.4 Accommodating Airport Growth

It is not considered likely that capacity issues in the surrounding network will impact development at the Airport.

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10 // Environment Strategy

- MAC remains strongly committed to compliant and effective environmental management at the Airport.
- The Environment Strategy outlines the environmental direction, including management objectives and action plans for the next 5 years, which builds upon the Airport's existing environmental management framework.
- The MAC environmental management framework is comprised of a Policy, Strategy, Management System and Action Plans.
- The Airports Act regime provides a comprehensive environment regulatory regime overseen by the statutorily appointed Airport Environment Officer and administered by the Australian Government Departments.
- MAC's approach to the environment includes rigorous customer (tenancy) site audits, regular sampling and engagement of environmental experts to deliver day to day and project specific outcomes.
- Moorabbin Airport is a large, heavily modified site with multiple customers and users and has delivered an aviation function for 65 years.

- MAC environmental initiatives include:
  - Customer (tenancy) audit programme;
  - Water Sensitive Urban Design (WSUD) principals are incorporated into relevant Airport developments;
  - An airport preferred vegetation register has been developed that details species selections considered suitable for an airport having regard to their non-bird attracting features, height and safety characteristics;
  - vegetation plantings – 28,000 native trees, shrubs and ground cover plants have been planted since the 2010 Master Plan; and
  - Native offset planting agreement – MAC signed an offset credit agreement for a remnant Coast Manna Gum Tree.
- MAC's 'Fly Friendly' procedures were refreshed in 2013 with aviation customers agreeing to minimise aircraft noise impacts on the surrounding community.

10.1 Introduction

The Airport Environment Strategy 2015 – 2020 (AES) details Moorabbin Airport's environmental objectives and commitments, builds on the environmental achievements of the previous 5 years and promotes the continual improvement of environmental management at Moorabbin Airport.

This is the first AES to be incorporated into the Airport's Master Plan, in compliance with amendments to the Airports Act made in 2010.

The Airports Act provides the purpose of an AES is to:

- ensure that all operations at the Airport are undertaken in accordance with relevant environmental legislation and standards;
- establish a framework for assessing compliance at the Airport with relevant environmental legislation and standards; and
- promote the continual improvement of environmental management at the Airport.

The AES updates and replaces the 2010 – 2015 AES.

This 5 year AES, as with previous strategies, has been prepared to ensure the Airport complies with the Airports Act and has included extensive public consultation.

The local community and Airport users will be consulted (through the CACG and other community forums) as this AES is varied over time, updated or redrafted with any future Airport master plan. Furthermore, MAC will ensure that this AES is disseminated as contemplated under section 3.6 of this 2015 Master Plan, and will attempt to regularly brief relevant industry participants on this AES (and the plans under this AES) so as to attempt to ensure some level of compliance and acknowledgement with respect to the plans.

10.2 Airport Environment Strategy Overview

This AES outlines environmental objectives and action plans for the Airport. The AES will apply for a period of 5 years from approval by the Minister for Infrastructure and Regional Development. The AES incorporates and responds to key Commonwealth environmental legislation including:

- Airports Act 1996 (Commonwealth) (Airports Act);
- Airports (Environmental Protection) Regulations 1997 (Commonwealth) (Regulations); and
- Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth) (EPBC Act).

This Chapter 10 sets out MAC's assessment of environmental issues that might reasonably be expected to be associated with the implementation of the 2015 Master Plan. Sections 10.5 to 10.13 set out these issues in more detail, as well as MAC's plans for dealing with these environmental issues.

Requirements for an Environment Strategy are prescribed in Section 71(2)(h) of the Airports Act and Regulations 5.02A and 5.02B of the Airports Regulations. These provisions require an AES to include:

10.2.1 Environmental management objectives for the Airport

The Environment Policy establishes MAC's environmental management objectives and is set out at **Section 10.2.1** below. Issue specific objectives are established in each Environmental Action Plan (refer to **Sections 10.3 to 10.13** below).

10.2.2 Identification of environmentally significant areas

No areas of environmental, aboriginal or heritage significance have been identified during previous investigations at the Airport. MAC will consider, in consultation with the AEO, whether further investigations are undertaken where required as part of future major development proposals.

10.2.3 The source of environmental impacts associated with Airport operations

The MAC EMS contains a procedure for identifying the impacts associated with activities at the Airport, allowing identification of potentially significant environmental issues. The Environmental Action Plans included in **Sections 10.4 to 10.13** address these environmental matters.

10.2.4 Studies, reviews and monitoring to be carried out in connection with the environmental impact associated with Airport operations including timeframes for reporting

The Environmental Action Plans described in **Sections 10.4 to 10.13** include the environmental studies, monitoring and reporting MAC intends to undertake in order to prevent or minimise environmental impacts during the 5-year strategy period (and their timeframes).

10.2.5 The specific measures to be carried out for the purpose of preventing, controlling or reducing the environmental impact associated with Airport operations including timeframes for completion

The Environment Action Plans in **Sections 10.4 to 10.13** include the measures that MAC proposes to employ to prevent, control and reduce impacts associated with the operation of the Airport.

10.2.6 Details for consultation undertaken in preparing the strategy (including outcomes)

Further details are set out in **Chapter 3** of this 2015 Master Plan.

The AES also addresses the environmental issues that might reasonably be expected to be associated with the implementation of the 2015 Master Plan. The implementation of this 2015 Master Plan may involve a number of environmental considerations including the demolition of buildings, excavation of surface soils, construction of additional roads and buildings. These activities may all have some degree of impact on the environment and will be planned and monitored.

Not unexpected 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.

Processes and procedures to prevent, mitigate and manage potential environmental issues that could arise during the term of this 2015 Master Plan are included within the relevant Environment Action Plans.

Moorabbin Airport

Moorabbin Airport Corporation
Environment Policy

Moorabbin Airport Corporation (MAC) is the Airport-Lessee Company that operates the Moorabbin Airport aerodrome. It recognises that it has a responsibility to maintain, and where practicable, enhance the environmental condition at Moorabbin Airport.

This policy applies to aspects of the Airport over which MAC has control and influence.

With the commitment of the Board and senior management, MAC will seek to continually improve its environmental performance through:

- monitoring and evaluating its environmental performance, and applying this to the ongoing development and review of its environmental objectives and targets;
- preventing and/or minimising pollution from activities on airport by implementing pollution prevention and control measures and increasing the environmental awareness of airport stakeholders;
- complying with its statutory requirements with regard to existing laws, regulations, codes of practice and quality standards;
- adopting industry standards applicable to the environmental management of airports;
- implementing and maintaining the Environmental Policy by adopting the MAC Environment Management System;
- communicating this policy, its intent, implementation and responsibilities to all airport stakeholders including employees, contractors, airport customers, users and visitors;
- providing training and supervision; and
- implementing the Moorabbin Airport Environment Strategy and Environment Management System.

The Board and Senior Management will provide appropriate resources to enable MAC to succeed in meeting this commitment.

Figure 10.1 // Environment Policy

10.3 Implementing the Environment Strategy

10.3.1 Environmental Management Framework

The MAC environmental management framework is based on implementation, monitoring and review of four components – the MAC Environment Policy, AES, Environmental Management System (EMS) and Environmental Action Plans (EAPs).

10.3.2 Environment Policy

The Environment Policy endorsed by the MAC board sets out the overarching environmental objectives for the Airport. This policy is set out as **Figure 10.1 – Environment Policy**.

10.3.3 Airport Environment Strategy

This AES updates and replaces the previous 2010 – 2015 Environment Strategy. It sets out the management approach to monitor, report and prevent adverse environmental impacts and provides a framework to manage and implement procedures and environmental action plans. The AES key activities and tools are provided through:

- The Environmental Management System (EMS); and
- A series of Environmental Action Plans (EAPs).

AES Regulatory requirements are noted in **Section 10.2 "Airport Environment Strategy Overview"**.

10.3.4 Environmental Management System

The MAC EMS is the system applied to mitigate, manage and improve environmental impacts from operations carried out at the Airport. It is based on the AS/NZS ISO 14001:2004 "Environmental Management System – Specification with Guidance for Use" system of continuous improvement.

The EMS is discussed further in **Section 10.4** of this AES.

All existing pollution is being treated in accordance with the existing environmental management policies, and after approval of this 2015 Master Plan will be dealt with in accordance with applicable EAPs.

10.3.5 Environmental Action Plans

Environmental Action Plans (EAPs) have been developed to manage specific elements of the environment at the Airport. Each EAP incorporates environmental management objectives (long – term goals) and environmental actions (interim milestones, including timeframes) to be implemented as part of the 2015 – 2020 AES. EAPS have been developed for the following areas:

- Environmental Management System;
- Air Quality;
- Ground Based Noise;
- Stormwater & Waste Water Quality;
- Soil & Groundwater Quality;
- Hazardous Materials;
- Waste Management;
- Energy Management & Resource; Efficiency;
- Flora, Fauna & Landscape; and
- Aboriginal & European Heritage Management.

Each EAP includes:

Objectives and Overview

This section includes key objectives, which set the strategic direction for the environmental management of the Airport and includes general background information and an overview and current MAC management practices.

Current Management Practices

This section outlines the current and ongoing initiatives, management and mitigation measures implemented by MAC to address and manage potential hazards which have been identified for each of the relevant environmental risks.

Previous Achievements

This section summarises the major environmental achievements completed during the 2010 AES.

Environmental Actions – 2015-2020

This section describes the measures and actions MAC intends to complete to deliver the key objectives(s), during next 5 years (and their timeframes).

The EAPs that have been developed and that are referred to in this Chapter 10 also apply to, and will be implemented in, areas of the Airport that are, or could be, used for a purpose that is not connected with Airport operations.

10.4 Environmental Management System

10.4.1 Objectives & Overview

Environmental Management System objectives 2015-2020

- MAC will continue to implement an environment management system appropriate to the scale and size of its operations, which is based on and maintains consistency with AS/NZS ISO 14001:2004 Environmental Management Systems – Requirements with Guidance for Use.
- MAC will maintain and review the EMS and Environment Policy in line with AES commitments.

Environmental Management System Overview

The MAC EMS is the system developed and implemented to mitigate, manage and improve environmental impacts associated with operations carried out at the Airport. The MAC EMS Manual describes the processes for identifying and managing the key environmental risks associated with operations carried out at the airport. In developing the EMS, MAC considered the following:

10.4.2 Scope

The scope of the MAC EMS is specified in the MAC Environment Policy and applies to all aspects of Moorabbin Airport over which MAC has direct control or influence. Air pollution or noise generated by aircraft in flight, when landing, taking off or taxiing at the Airport are not controlled by MAC. These issues are managed by Air Services Australia, an Australian Government Agency under the Air Navigation Act and Regulations.

10.4.3 Planning

In order to implement the Environment Policy, the MAC EMS has established procedures for:

- systemic review of all MAC activities to identify the potential environmental impacts associated with these activities;
- identifying and staying current with legal and other requirements with which MAC must comply;
- establishing environmental performance objectives and targets to manage identified impacts (refer **Sections 10.5 to 10.13**); and
- preparing environmental action plans, improvement programmes and controls to meet these environmental objectives and targets Current Management Practices.

10.4.4 Implementation & Operation

Managing significant environmental issues requires operating systems and procedures, which include:

Responsibilities

The responsibilities of the various parties involved in managing environmental issues at Moorabbin Airport are defined, documented and communicated through the EMS. These are summarised below:

- the **MAC Board of Directors** are responsible for providing financial support to implement the environment strategy, and provide approval of the environment policy;
- **MAC CEO** is responsible for facilitating the Board's commitment to implement the Environment Policy and Environment Strategy;
- **MAC Management Team** is responsible for monitoring and initiating outcomes for the environmental management and performance of Moorabbin Airport. MAC management must nominate a team member responsible to maintain the EMS in accordance with the EMS Manual and procedures including updates. The management team is to be supported by appropriately qualified environmental professionals. The professional qualifications of persons responsible for carrying out the monitoring will be in accordance with relevant Australian Standards;
- **Department of Infrastructure and Regional Development** is responsible for enforcing the Airports Act and the Australian Government's aviation policy. DIRD monitors the environmental performance of Airports via AEO reports and the Annual Environmental Reports;
- **Airport Environmental Officer (AEO)**. The AEO is appointed by DIRD and is responsible for regulating environmental issues at Moorabbin Airport. The AEO is involved in regular meetings with MAC and conducts site inspections and facility audits;

- **Airport Building Controller (ABC)**. The ABC is also appointed by DIRD and is responsible for ensuring that activities at Moorabbin Airport meet the appropriate building and engineering standards; and
- **Moorabbin Airport customers and contractors**. The customers of Moorabbin Airport, that is operators on the airport including visitors to the airport, have a responsibility to assist Moorabbin Airport in achieving its environmental compliance and performance. Customers must adhere to environmental management requirements in accordance with the AES component of the 2015 Master Plan and comply with relevant legislation, standards and guidelines.

Competence, Training & Awareness

MAC Management and qualified consultants implement the MAC environmental management framework and ensure works are undertaken in compliance with relevant regulations and Airport standards, within the timeframe of the AES.

Project management of environmental work is undertaken by suitably qualified environmental consultants familiar with airport legislation and environmental issue management. The MAC EMS establishes a process for identifying and delivering the environmental training needs for stakeholders. Environmental training includes:

- induction training for new staff, contractors and other relevant stakeholders regarding MAC Environment Policy and EMS;
- training for all staff regarding implementation of procedures in the EMS; and
- Special training for staff with specific roles and responsibilities to ensure they have the skill and competences required to fulfil these.

This training will be in accordance with applicable standards appropriate for the environmental management of the Airport, as advised by relevant professionals and consultants engaged by MAC from time to time.

Communication & Consultation

Formal communication and consultation procedures are important for Moorabbin Airport and its ongoing operations. Management of internal and external communications is addressed within the MAC EMS which includes:

- monthly management meetings involving the AEO;
- quarterly meetings with relevant stakeholders and the Moorabbin Airport Community Aviation Consultation Group (CACG);
- Australian Airports Association (AAA) Environment forums;
- responding to public enquiries on environmental issues such as noise from the ground running of aircraft engines for maintenance purposes;
- community consultation on Major Development Projects;
- Environmental Review Programme (environmental assessments and audits);
- ongoing environmental training and education for MAC staff; and
- onsite Environmental Management for projects of environmental risk.

The preliminary draft of this AES was included within the Preliminary Draft 2015 Master Plan and was subject to the consultation process prior to submission of the 2015 Draft Master Plan to the Minister. Environmental issues raised by CACG were considered prior to finalisation of this AES.

Document Control

The MAC EMS, which comprises MAC Environment Policy, EMS Manual and Environmental Operating Procedures, will continue to be reviewed and revised. The EMS document control process ensures the issue, distribution, review, availability and disposal of EMS documents is appropriately managed and that revised documentation is appropriately approved, readily identifiable and issued in a legible form.

Operational Control

MAC EMS includes a process that ensures any activities associated with potential environmental impacts are identified and controlled. Procedures to avoid the potentially adverse environmental outcomes of these activities are developed and maintained.

Emergency Preparedness

MAC EMS includes a process for identifying and planning appropriate responses to incidents and emergency situations having potentially adverse environmental impacts. Planned responses to potentially polluting spills and fires involving chemical releases are incorporated into the Airport Emergency Plan. A live emergency exercise is undertaken very two years and a desktop emergency exercise is undertaken in the alternate years. The Airport Emergency Plan procedures are reviewed regularly in line with these exercises and revised as necessary.

Checking & Corrective Action

To ensure that operations occurring at the Airport are, and continue to comply with legislative requirements and the commitments of MAC, the following environmental monitoring and reporting actions are undertaken:

- Environmental Monitoring & Evaluation- the MAC EMS includes an ongoing environmental monitoring and assessment programme regarding the health of the environment at the Airport. Monitoring includes stormwater, Underground Storage Tank (UST) integrity assessments, groundwater at fuel depots sites and environmental reviews. Sampling is also undertaken following the occurrence of a suspected pollution event. Areas identified for monitoring are regularly reviewed in consultation with the AEO to ensure compliance. All monitoring and assessments are conducted by suitably qualified and experienced professionals, in accordance with relevant Australian Standards or National Association of Testing Authorities Australia (NATA) requirements;
- Non-Conformance and Corrective Action – the MAC EMS includes a process for investigating Non-conformances and instituting, corrective, and preventive action procedures. Outcomes of a non-conformance investigation may result in consultation with the AEO or other relevant government authority; amendment of an existing procedure; development and preparation of a new procedure; and/or additional training and work instructions;
- Records & Environment Registers – the MAC EMS incorporates a process for records to demonstrate overall environmental performance, compliance with the EMS and records are identified, stored, protected, retained and disposed in an appropriate manner. MAC's Environmental Site Register (ESR) is a requirement of the Airports (Environment Protection) Regulations 1997, and provides a record of the environmental condition of the Airport and its environmental management generally. MAC's ESR is largely electronic and supplements the day to day environmental management records. The ESR is comprised of the following:
    - Contaminated Sites Register –potential, actual and remediated contaminated sites;
    - Environmental Sites Register – for facilities that have potential environmental impacts;
    - Document Control Register – for management of environmental matters;
    - Preferred Plant Species Register – for species considered suitable for planting; and
    - Legal and other Requirements Register – for a summary of the statutory and other requirements for operations at Moorabbin Airport. This register is reviewed and updated by a suitably qualified external consultant in order to remain current.
- EMS Audit – The MAC EMS includes a process for annual audits of EMS elements, such that all elements of the EMS are audited at least once every AES period. An external audit of the MAC EMS in 2011 which assessed conformity with AS/NZS ISO 14001:2004 "Environment Management System – Requirements with guidance for use" recommended improvements that are in progress. MAC proposes to conduct internal EMS audits with the assistance of the AEO to verify the revised elements of the EMS adequately address the improvements .recommended by the external audit; and
- Management Review – the EMS requires the senior management team to annually review elements of the EMS to ensure its ongoing suitability, adequacy and effectiveness. The reviews include results of internal or external audits, progress towards meeting MAC environmental objectives and any changed circumstances and decide whether any revision of the EMS elements is warranted.

Annual Environmental Reporting

MAC is required to submit an Annual Environment Report (AER) to the AEO and DIRD. The AER details the environmental issues at the Airport and reports on the progress of the AES. The AER includes:

- details of occurrences of environmental significance (detrimental or beneficial);
- details of MAC's performance in achieving the policies and targets of the AES;
- details of MAC's progressive management of enduring pollution problems at the Airport;
- reports on any pollution incidents or other contraventions that have occurred; and
- monitoring and reporting of National Pollutant Inventory (NPI) reports from MAC customers.

MAC will also continue to update the AEO on a regular basis (expected to be monthly) concerning the results of testing and monitoring undertaken pursuant to this Chapter 10.

10.4.5 Environmental Site Reviews

Environmental Site Reviews are undertaken to:

- identify environmental risks prior to, or during development; and
- identify and monitor risks associated with operator activities and facilities at the Airport.

MAC has identified three Tiers of Operators at the Airport:

- Tier 1 – operator activities and facilities have potentially high environmental risks;
- Tier 2 – moderate risk; and
- Tier 3 – low risk.

Under the environment review system, Tier 1 and 2 operators, including MAC conduct self-audits annually, and submit them to MAC for review. MAC conducts follow up inspections to confirm audit findings. Tier 3 operator activities are inspected by MAC at least every three years.

10.4.6 Development Control

In accordance with the MAC Building Activities Approval Process, all building proposals are reviewed by MAC management and the AEO prior to development, to ensure compliance with the 2015 Master Plan and AES. Environmental site reviews are carried out (if required).

MAC requires the preparation of a Construction Environment Management Plan (CEMP) by contractors for any development projects on the Airport, to be completed during the construction phase. The CEMP Guidelines have been prepared to assist construction contractors with the identification and management of environmental risks associated with construction work at Moorabbin Airport.

CEMPs are prepared to manage potential environmental risks associated with the development of buildings, car parks and other major development and typically cover flora and fauna, dust, stormwater, run off, waste, contaminated soil and noise.

All new customers are required to develop Operational Environmental Management Plans (OEMP) to demonstrate how their day to day activities will comply with regulations. MAC customers are required to undertake activities in an environmentally responsible manner, in compliance with regulations and relevant legislations.

10.4.7 EMS Achievements 2010 -2015

Date	Initiative & Status
2010	The previous AES was approved.
Ongoing	MAC continued to provide advice to customers during site inspections and follow up environmental audit inspections.
2013	Environmental Self Audit Reviews were introduced in 2013. Follow up environmental audits and inspections were carried out by MAC and the AEO.
2010 – 2015	The Airport participated in a number of community activities, including Clean Up Australia Day.
Ongoing	Training and consultation amongst Airport staff, customers and operators was undertaken to increase awareness of environmental issues.
Ongoing	MAC continued to review and update CEMP's to manage and monitor potential risks to the environment associated with the development of sites at the Airport.
2013	The MAC CEMP template was updated to manage and monitor potential risks to the environment associated with the development of sites at the Airport.
2013	The Airport Emergency Procedures were updated as required by CASA.
2013	MAC staff participated in a desktop emergency exercise.
Ongoing	MAC has retained Airport Environmental Consultants, to assist with environmental matters on an ongoing basis.
2013	The Environmental Site Register (ESR) was overhauled and a Contaminated Sites Register, Environmentally Significant Facilities Register, Document Register, and a Legal and other requirements Register were developed to improve accessibility of this information. The ESR, including the various Registers, is routinely updated
Ongoing	MAC continued to report, as required, on the CACG meetings when environmental issues were raised.
Ongoing	MAC continued to carry out monthly AEO meetings and provide DoIRD with the Annual Environment Report.
2010	An Asbestos Management Plan was developed in 2010.
Ongoing	MAC included environmental information in the airport communications
2014	MAC updated the website to provide environmental information relevant to operators at the airport.
2014	In October 2014 the MAC Environment Policy was reviewed and updated.

10.4.8 EMS Environmental Actions – 2015 – 2020

Date / Responsibility	Initiative & Status
2015 – 2020 MAC	Environmental Management Framework – Continually improve systems appropriate to MAC's scale of operations, including review of the Environment Policy, EMS Manual and the Environmental Operating Procedures to ensure they remain current.
Ongoing MAC	Communication and Consultation ■ Continue quarterly Moorabbin Airport Community Aviation Consultation Group meetings. ■ Continue AEO monthly and issue-specific meetings. ■ Submit Annual Environment Reports to DoIRD that will include an annual EMP for the following Strategy year. ■ Report to customers, and MAC maintenance team and contractors following site visits and environmental audits. ■ MAC continually updates the website to provide environmental information relevant to operators at the airport..
Ongoing MAC	Environmental Registers – Regularly maintain the Environmental Registers for inclusion in the Airport Environment Reports
2015 – 2020 MAC	Environmental Training and Awareness MAC continues to raise environmental awareness of staff and contractors to ensure compliance with environmental objectives through: ■ training; ■ environmental site reviews; ■ face to face meetings; ■ airport newsletters; and ■ web based advice.
Ongoing MAC	Development Control ■ Continue to ensure all operators and projects that have the potential to cause environmental harm, produce and follow an OEMP and CEMP ■ Continue Annual Environmental Site Reviews to assess compliance of customers, contractors and MAC facilitates.
30 June each year MAC/AEO	Environmental Site Review – Environmental Site Reviews will be conducted on an annual basis by a representative of MAC and the AEO.
Annually MAC	EMS audit – MAC EMS includes a process that requires annual audits of EMS elements, such that all elements of the EMS are audited at least once every Strategy period.

10.5 Air Quality

10.5.1 Objectives & Overview

Air quality objectives for the Airport are to:

- minimise air emissions from ground based activities (including ozone depleting substances); and
- comply with the Airports Act and relevant State Environment Protection Policies (SEPPs) and other requirements for emissions.

Air emissions at the Airport occur from ground based operations and activities at the Airport. Airport data indicates that emission pollutants in the part of the regional airshed reasonably likely to be affected by Airport activities were one to two orders of magnitude lower than those from the neighbouring off-site sources (i.e. the surrounding major arterial roads on the Airport's boundaries).

Therefore, resultant data would not be of benefit in assessing the effect of the Airport, as it would be extremely difficult to differentiate between the higher level of pollutants from off-site sources and the lower level of pollutants generated from ground-based Airport activities.

Air emissions within the Airport boundary are regulated by the Airports Act and the Airports (Environment Protection) Regulations 1997. Air quality emissions outside the boundary are set in the State Environment Protection Policy (Ambient Air Quality). Ambient air quality is monitored by the Environment Protection Authority, in accordance with a monitoring plan developed under the Ambient Air Quality National Environment Protection Measure.

An AES is not required to address aircraft related noise or emissions during flight, take off, landing or taxiing.

Sources of air pollution within the Airport include construction activities (dust, demolition, asbestos removal and earth works), vehicle emissions, fuel storage and refuelling, ozone depleting substances and spray painting.

10.5.2 Current Management Practices

MAC maintains a number of ongoing air quality initiatives including:

- undertaking air monitoring and inspections;
- reviewing air monitoring results prior to the removal of asbestos as per Asbestos Management Plan (2010);
- providing advice to customers through the Environmental Site Review Programme on:
  - installing, maintaining and using air pollution control equipment when undertaking activities such as spray painting and degreasing; and
  - storage and handling of chemicals to minimise the potential for fugitive and/or process emissions;
- encouraging customers to assess the chemicals used and seek to minimise their use;
- advising fuel supply companies on the Airport of their National Pollution Inventory (NPI) reporting requirements; and
- monitoring MAC and Airport customer facilities for ozone depleting substances identified during site visits, and where required, assist in phasing out its storage and/or use.

10.5.3 Previous Achievements 2010 – 2015

Date	Initiative & Status
Ongoing	Maintenance of fleet vehicles to ensure emissions are minimised.
Ongoing	Developments works were undertaken so as to minimise dust generation.
2013	Carbon dioxide emissions and fuel consumption principles were considered prior to purchase of a new tractor.

10.5.4 Environmental Actions – 2015 – 2020

Date / Responsibility	Initiative & Status
Annually MAC	Training and Awareness – provide ongoing education, training and advice to staff, customers and Airport users on air quality improvement practices.
As required MAC/ AEO/Airport customer	Development Control – Ensure air quality issues, particularly dust suppression plans are included in CEMPs and OEMPs.
As required MAC	Monitoring – Ensure regular servicing of vehicles and equipment.
2015 – 2020 MAC	Environmental Site Reviews – Review facilities and operations on Airport to assess compliance with relevant legislation and opportunities for improvement in air emissions at the Airport.

10.6 Noise

10.6.1 Objectives & Overview

Airport noise management objectives include:

- to minimise potential noise nuisance associated with Airport ground operations; and
- to comply with the requirements of the Airports Act 1996 and the Airports (Environment Protection) Regulations 1997.

The Airports (Environmental Protection) Regulations do not apply to noise generated by aircraft in flight, taking off or taxiing at the Airport. The Airport is responsible for noise generated from ground running of aircraft, aircraft engine testing and construction works.

Noise which is generated from aircraft or manoeuvring at Moorabbin Airport is regulated by the Commonwealth through the Air Navigation (Aircraft Noise) Regulation 1984. As MAC is not a Commonwealth Statutory Authority it does not have a role in regulating aircraft noise, however as outlined in **Section 11.3** it has taken active measures to manage aircraft noise effects on areas beyond the Airport's boundaries.

The potential for noise to impact upon neighbouring areas is considered low, due to the distance to surrounding residential areas and the nature of commercial and aviation activities carried out at the Airport.

In 2013 MAC refreshed the Fly Friendly programme, to support flying activities that are considerate of local residents. The Fly Friendly programme identifies practical measures to decrease noise, such as using the least noise-sensitive runways, providing a special test area for aircraft maintenance, limited training hours and flights over residential areas, and promoting the good behaviour of pilots.

A dedicated engine test cell has been in place for a number of years, supported by a procedure outlining the time at which ground running can take place, to mitigate the noise generated from ground running activities. The engine test cell allows extended running of aircraft engines for maintenance and test purposes; with noise being channelled across non-residential areas. These initiatives have significantly diminished the potential to generate excessive noise emissions and are positively received by local community groups.

Construction works around the Airport require noise management control. MAC requires construction contractors to provide a CEMP, which includes noise management strategies and procedures. MAC conducts regular inspections to ensure they meet the CEMP's requirements.

Sources of ground based noise emissions include:

- testing of aircraft engines after maintenance;
- ground running of aircraft;
- road traffic;
- maintenance activities; and
- construction and demolition works.

10.6.2 Current Management Practices

Ground-based noise management and mitigation measures implemented at MAC include:

- consulting with government, local communities, Airport users, regulators, AEO and Airservices to provide solutions to mitigate noise impacts;
- undertaking regular inspections of major construction sites by MAC management, external consultants and the AEO where necessary, to ensure CEMP requirements are being met;
- implementing the 'Fly Friendly Programme'; and
- monitoring and reporting ground-based noise complaints.

10.6.3 Previous Achievements 2010 – 2015

Date	Initiative & Status
Ongoing	MAC has complied with legislative requirements with regards to the generation of noise
Ongoing	Relevant aviation customers were continually advised to adhere to MAC's ground running procedures that minimise potentially excessive noise emissions.
2013	MAC developed the Fly Friendly programme, to support flying activities that are considerate of local residents.
2013	MAC implemented a circuit design project to reduce noise impact on the community, while maintaining all safety regulations.
2000	In response to community concerns, access to the Airport site from the south via Bundora Parade was closed to reduce traffic flow and noise.

10.6.4 Environmental Actions – 2015 - 2020

Date / Responsibility	Initiative & Status
MAC / Customers	Communication and Consultation – consulting with government, local Council, local communities, Airport users, regulators, AEO and Airservices to provide solutions to mitigate noise impacts.
MAC / AEO / Airport customer	Development Control – ensure potential noise emissions, including mechanical equipment and noise during construction have been considered in CEMPs and OEMPs.
MAC	Training and Awareness – encourage all relevant Airport users to comply with the requirements of Ground Running Procedures and the Fly Friendly programme.

10.7 Stormwater Quality & Waste Water Management

10.7.1 Objectives & Overview

Stormwater objectives include to:

- minimise the potential impacts of Airport operations on stormwater;
- comply with the requirements of the Airports Regulations or SEPP (Water of Victoria);
- encourage Water Sensitive Urban Design (WSUD) principles to future developments;
- implement an Emergency Preparedness Incident Response Programme in the event of a spill;
- ensure all liquid waste are disposed in compliance with relevant legislation; and
- ensure disposal of liquid waste to sewer is appropriately licenced.

The flow of stormwater at the Airport is primarily directed through two Melbourne Water channels located along the Airports southern boundary. The channels collect surface run-off from major roads, market gardens, residential areas, and commercial and industrial areas to the north and northwest of the Airport. The quality of stormwater entering the Airport is subject to the activity occurring upstream. The stormwater channels discharge into Mordialloc Creek and eventually Port Philip Bay, approximately 4 kilometres downstream of the Airport.

To reduce the potential for stormwater contamination, MAC undertakes a comprehensive monitoring programme. This includes stormwater sampling on a biannual basis. Investigations have generally indicated that the quality of the stormwater leaving the Airport is comparable to the quality of water entering the Airport and continues to be consistent of the water quality found in urban environments.

As part of the ongoing redevelopment of MAC, Water Sensitive Urban Design (WSUD) features are incorporated into construction management and infrastructure design, aimed at protecting waterways and/or implementing rainwater harvesting. MAC WSUD principles address key sustainability values of water consumption, water recycling, waste minimisation and environment protection.

Moorabbin Airport is connected to Melbourne's reticulated sewer system that is managed by Southeast Water. MAC has trade waste agreements in place that allow for the discharge of industrial/ commercial waste water to the sewer system.

Activities that generate waste water typically include aircraft and vehicle washing, industrial processes and food outlets. These facilities are required to have trade waste agreements. The agreements ensure a minimum level of water quality is maintained and onsite wastewater treatment systems such are triple interceptor traps are installed and managed accordingly.

Potential sources of stormwater and waste water pollution at MAC include:

- flow of stormwater;
- runoff from major roads, market gardens, residential areas and commercial and industrial areas;
- detergents used in aircraft and vehicle washing and general cleaning;
- spills from refuelling and fuel testing;
- chemical and oil spills from aircraft and vehicle maintenance;
- runoff including soils, infrastructure materials from construction activities;
- corrosion of plumbing infrastructure, degradation of roadways;
- fertilisers; and
- leaks from inappropriate storage of chemical, oil and fuel.

10.7.2 Current Management Practices

MAC maintains a number of ongoing surface water and waste water management processes and procedures to manage stormwater quality, including:

- monitoring stormwater on a bi-annual basis;
- inspection of major construction sites by MAC management, external consultants and the AEO where necessary, to ensure CEMP and OEMP requirements for surface water and waste water are being met;
- monitoring waste water disposal practices to ensure it is directed to the sewer system through trade waste agreements or is disposed in accordance with Victorian EPA requirements; and
- Investigating, correcting and reporting any surface water and wastewater incidents.

10.7.3 Previous Achievements 2010 – 2015

Date	Initiative & Status
Ongoing	In consultation with the AEO, MAC has continued to undertake the bi-annual stormwater monitoring programme, assessing the quality of water entering and leaving the site.
2013	Notified operators of fuel depots of their obligations to monitor groundwater quality adjacent to their facilities as per the Victorian EPA UPSS management requirements.
2014	A review of the vehicle wash bay and triple interceptor was completed in March 2014. MAC continues to encourage the use of the dedicated wash bay facilities.

10.7.4 Environmental Actions – 2015 - 2020

Date / Responsibility	Initiative & Status
MAC (Biannually)	**Monitoring and Reporting** – undertake bi-annual storm water monitoring.
MAC / AEO	Prepare Stormwater Sampling Procedure in consultation with the AEO.
MAC	**Environmental Site Reviews** – undertake regular visual inspections of the stormwater systems including the wash bay and Airport customer facilities. Ensure there are adequate controls in place to minimise the potential for stormwater or waste water pollution.
MAC	**Training and Awareness** – encourage use of wash-down bay for aircraft and vehicle washing
MAC	**Operational Control** – review trade waste agreements with Southeast Water, as required by all new customers operating at the Airport.
MAC	**Development Control** – develop Water Sensitive Urban Design (WSUD) Guidelines for the Airport to manage run off.
MAC	**Emergency Preparedness** – review Emergency Preparedness Incident Response Programme to ensure MAC staff, customers, contractors and Airport users report and record all occurrences of water contamination and are aware of clean up procedures.

10.8 Soil & Groundwater

10.8.1 Objectives & Overview

Soil and groundwater objectives include to:

- prevent contamination of soil and groundwater occurring from Airport activities;
- manage areas of contaminated soil and groundwater in accordance with regulatory requirements; and
- comply with the requirements of the Airports (Environment Protection) Regulations 1997 and other relevant legislation with regard to groundwater and soil quality.

MAC and its customers are required to monitor groundwater and undertake soil testing when contamination has, or is likely to have occurred. The locations of groundwater monitoring bores to monitor groundwater quality are recorded on the Contaminated Site Register. Potential sources of soil and groundwater pollution at MAC include:

- historical landfilling activities;
- leakage from Underground Storage Tanks (UST);
- chemical, fuels and oil spills;
- inappropriate storage of chemical, oil and fuel;
- extant pollution – groundwater contamination plume, pesticides and herbicides that may have had an impact in earlier years; and
- construction and related works.

The USTs at the Airport are owned and/or controlled by MAC, various fuel companies or other Airport customers (principally aviation maintenance organisations). Controls are particularly required when managing USTs located around the Airport.

Groundwater and soil quality generally reflects the historic land use of the site.

Under Regulation 6.09 of the **Airports (Environment Protection) Regulations 1997**, the AEO may in specified circumstances direct MAC (or one of its sub-tenants) to examine the condition of soil in part of the Airport. No direction of this kind has been made as at the date this 2015 Master Plan was submitted for approval.

10.8.2 Current Management Practices

Soil and groundwater quality measures implemented at MAC include the following:

- in the event of a spill or leak, the following is required:
  - reporting all soil or groundwater quality pollution incidents to MAC and AEO if necessary;
  - an assessment of soil to investigate the extent of contamination;
  - groundwater bores installed and sampled to investigate contamination of groundwater (if necessary);
  - the results assessed by suitably qualified persons; and
  - remediation and reporting conducted as required.
- assessing soil contamination status prior to land development and if required undertake any remediation works;
- undertaking regular inspection of major construction sites by MAC management, external consultants and the AEO where necessary to ensure CEMP requirements for soil and groundwater management are being met; and
- monitoring customers with UST's to ensure they are monitored in accordance with relevant legislative requirements.

10.8.3 Previous Achievements 2010 – 2015

Date	Initiative & Status
2010 – 2015	MAC continued to provide advice on chemical storage and handling (both at Airport customer and MAC facilities).
2010 – 2015	Site contamination assessments were carried out by MAC in conjunction with the AEO during the reporting period.
2010 – 2015	Installation of groundwater monitoring wells at all facilities with underground fuel storage tanks in accordance with the Victorian EPA publication 888.2 "Guidelines on the design, installation and management requirements for underground petroleum storage systems (UPSSs)".
2014	A review of the refuelling facility and USTs, for which MAC is responsible, was completed in March 2014.

10.8.4 Environmental Actions – 2015 - 2020

Date / Responsibility	Initiative & Status
MAC/ AEO (Ongoing)	**Development Control** – ensure environmental site assessments have been conducted prior to construction works, where relevant.
MAC/ Airport customer (when required)	Ensure soil and groundwater contamination prevention principles are incorporated into CEMPs and OEMPs.
MAC (when required)	Manage installations of new USTs by ensuring compliance with Vic EPA Publication 882.2 Guidelines on the Design, Installation and Management Requirements for Underground Petroleum Storage Systems (UPSSs).
MAC (2015 – 2020)	Limit installations of new USTs where possible.
MAC (2015 – 2020)	Site contamination assessments will be carried out in conjunction with the AEO during the period 2015-2020.
MAC/Airport customer (Ongoing)	**Training and Awareness** – continue to advice customers (particularly fuel storage facilities) with USTs, that they continue to monitor in accordance with relevant State and Commonwealth legislative requirements.
MAC/Airport customer (Ongoing)	Emergency Preparedness – Ensure MAC staff, customers, contractors and Airport users report and record all occurrences of soil contamination and are aware of clean up procedures and reporting requirements should soil contamination occur.

10.9 Hazardous Materials

10.9.1 Objectives & Overview

Hazardous materials objectives include to:

- ensure that storage, transport and handling of hazardous materials is appropriate; and
- assist staff, customers, contractors and Airport users to comply with relevant legislative requirements.

The storage and handling of dangerous goods and hazardous substances is not covered by Commonwealth legislation for Airports. The management of hazardous materials including fuels, oils and solvent based chemicals is primarily an occupational health and safety issue. The relevant legislation for Moorabbin Airport is the Victorian Dangerous Goods Act 1985, the Dangerous Goods (Storage and Handling) Regulations 2012, the Occupational Health and Safety Act 2004 and the Occupational Health and Safety Regulations 2007.

The appropriate management of hazardous materials can minimise and/or prevent air, water and soil pollution. There may be adverse environmental impacts if they are poorly stored and handled. Hazardous substances stored at the Airport include fuel, degreasing agents, solvents, paints, herbicides, insecticides and other miscellaneous hazardous material storages.

10.9.2 Current Management Practices

MAC maintains a number of hazardous material management processes and procedures to ensure hazardous materials are appropriately managed. These include:

- undertaking regular inspection of major construction sites by MAC management, external consultants and the AEO where necessary to ensure CEMP requirements for soil and groundwater management are being met;
- inspection of chemical registers and Material Safety Data Sheets (MSDS) sheets, as well as the location of information at Airport customer and MAC facilities;
- assessing whether there are incident and emergency response procedures in place for facilities that have bulk storage and/or other chemicals; and
- Inspecting MAC buildings for the presence of potential asbestos containing materials in accordance with relevant legislative requirements.

10.9.3 Previous Achievements 2010 – 2015

Date	Initiative & Status
2010	An Asbestos Management Plan was completed in 2010
2013	A Hazardous Materials Risk Assessment for Moorabbin Airport and Kingston Shopping Centre was completed in January 2013
2014	An audit of chemical management practices at MAC was completed in March 2014.
Ongoing	Storage and handling of dangerous and hazardous goods is as per State guidelines.

10.9.4 Environmental Actions – 2015 - 2020

Date / Responsibility	Initiative & Status
MAC (Annually)	**Environmental Site Reviews** – monitor hazardous materials, including MSDS and hazardous waste disposal information through the Environmental Site Review Programme.
MAC / Airport customer (As required)	**Operational Control** – ensure sufficient bunding beneath any containers (as per Vic EPA Publication 347).
MAC / Airport customer	**Training and Awareness** – provide ongoing education, training and advice to staff, customers and Airport users on spill response and chemical handling.

10.10 Waste Management

10.10.1 Objectives & Overview

Waste management objectives include to:

- minimise the production of waste by promoting increased recycling and waste recovery; and
- assist staff, customers, contractors and Airport users comply with relevant legislative requirements.

Waste collection, treatment and disposal is subject to State legislation under the Environment Protection Act 1970. The Industrial Waste Management Policy (IWMP) (Prescribed Industrial Waste) (2000) outlines the Victorian Government's policy on the generation, management and disposal of prescribed wastes. The main objectives of the policy are to:

- protect human health, amenity and the environment from hazardous wastes;
- minimise the generation of wastes; and
- eliminate as soon as practicable the disposal of prescribed wastes to landfill.

The main sources of waste within the Airport include office waste, workshop waste and non-putrescible waste from retail operations. MAC continues to monitor and assist customers to improve their waste management through the regular site review programme in conjunction with the AEO.

10.10.2 Current Management Practices

MAC maintains a number of waste management processes and procedures to manage waste management, which include:

- undertaking regular inspections of major construction sites by MAC management, external consultants and the AEO where necessary to ensure CEMP requirements for waste management are being met;
- waste oil and the majority of waste solvents generated at the Airport continue to be recycled off-site through EPA approved facilities;
- other recycled wastes include metal scrap, cardboard and timber packaging, and office paper waste;
- encouraging customers to prepare and/ or maintain inventories of chemicals and waste chemicals stored and handled within each premises; and
- monitoring MAC maintenance facilities and work practices, ensuring that storage and handling of waste is adequately controlled and maintained to prevent pollution.

10.10.3 Previous Achievements 2010 – 2015

Date	Initiative & Status
Ongoing	MAC continued to provide advice on the following: ■ assessing the potential to re-use and/or recycle as much as practicable; ■ the storage and handling of wastes; and ■ assessing waste management options (and documentation requirements) in terms of off-site disposal requirements.
Ongoing	Airport customer audits are undertaken to ensure general wastes and hazardous waste is disposed of correctly.
Ongoing	Airport customer audits are undertaken to ensure wastewater emissions to sewer have a Trade Waste agreement in place.

10.10.4 Environmental Actions – 2015 - 2020

Date / Responsibility	Initiative & Status
MAC / Airport customer (As required)	**Operational Control** – ensure asbestos waste is removed and handled as per the Asbestos Management Plan (2010) and relevant legislation.
MAC / AEO (As required)	**Development Control** – ensure waste minimisation principles including storage and management of waste on site is included in CEMPs and OEMPs.
MAC / Airport customer (2015 – 2020)	**Training and Awareness** – continue to work with staff, customers contractors and Airport users to ensure waste management practices are in place, through the environmental site audit programme.

10.11 Energy Management & Resource Efficiency

10.11.1 Objectives & Overview

Energy Management and Resource Efficiency objectives include to:

- promote energy and resource efficiency to Airport users;
- minimise the use of resources across the Airport; and
- assist staff, customers, contractors and Airport users to comply with relevant legislative requirements.

MAC understands the importance of being actively engaged in increasing energy and resource efficiency alongside proposed Airport expansion plans. MAC will continue to develop initiatives to assess and manage its impact associated with existing operations and significant construction works, with regard to energy and resource efficiency across the Airport.

10.11.2 Current Management Practices

MAC maintains a number of ongoing energy and resource efficiency practices to manage energy and resource efficiency. These include:

- promoting efficient use of energy and resources through dissemination of information provided by the Victorian EPA, Melbourne Water and other relevant agencies; and
- undertaking an assessment of its annual energy usage and associated calculated greenhouse gas emissions.

10.11.3 Previous Achievements 2010 – 2015

Date	Initiative & Status
Ongoing	Details of energy and fuel usage, as well as CO2 emissions from the facility continued to be provided in the AER.
Ongoing	MAC continued to assess its usage of power, fuel and water using processes under the National Greenhouse and Energy Reporting Act 2007, and Melbourne Water's Water Map.

10.11.4 Environmental Actions – 2015 - 2020

Date / Responsibility	Initiative & Status
MAC	**Monitoring and Reporting** – regularly maintain fleet vehicles to minimise its use of fuels.
MAC	Select most energy efficient vehicles adequate for the task required.
MAC	Seek to increase its efficiency with regard to energy-use associated with existing operations and significant construction works.
MAC	Monitor annual energy usage and associated greenhouse gas emissions, to improve efficiency and reduce greenhouse emissions.
MAC / Developer (As required)	**Development Control** – encourage inclusion of recycled materials, energy conservation and water capture within building design.
MAC / Airport customer	**Training and Awareness** – provide ongoing education, training and advice to staff, customers and Airport users and encourage new and existing customers to minimise energy use and increase resource efficiency.
MAC / Developer	**Operational Control** – encourage water sensitive urban design landscaping techniques to minimise water requirements for gardens.

10.12 Flora, Fauna & Landscape

10.12.1 Objectives & Overview

Flora, fauna and landscape objectives include to:

- maintain and improve the overall Airport landscape; and
- minimise impacts of Airport activities on the environment.

The Airport comprises 294 hectares of relatively flat, open land used for a variety of both aviation and non-aviation uses. The natural environment has been highly modified due to development of this area.

Three site flora and fauna assessments have been conducted at the Airport since 2008 to support the preparation process for various site upgrades and future development works. Findings concluded that flora and fauna values of the site are very low, consistent with the modified landscape and its land use history.

With specific regard to flora, no plant species or vegetation communities listed under the Victorian Flora and Fauna Guarantee Act 1988 (FFG Act) or the Commonwealth Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) were identified.

With regard to fauna, the species recorded through assessment comprised off 33 bird species, 5 mammal species and 2 frog species, of which 11 bird and mammal species were exotic. One additional frog species the regionally common Spotted Marsh Frog was recorded at a pond. The fauna habitats recorded were highly modified, degraded or anthropogenic. No species listed under the EPBC Act or the FFG Act have previously been recorded, or considered likely to occur.

Species and communities identified by the EPBC Act change with the passage of time (species and communities may be added or removed from the Act's lists). Where amendments to EPBC lists are made MAC will amend its environmental assessment processes to ensure that the organisation's legal obligations to protect new listings are met.

The Flora, fauna and landscape at MAC has the potential to be affected by:

- development;
- weed and pest invasion;
- stormwater and drainage runoff and water quality;
- climate change;
- fire including bushfire and wildfire;
- changes to surrounding land use; and
- lack of information to manage flora and fauna values.

To the extent applicable and practicable, MAC will attempt to ensure that operators of undertakings also have regard to and attempt to implement the goals and objectives set out in this section.

10.12.2 Current Management Practices

MAC maintains a number of ongoing flora, fauna and landscape management processes and procedures to manage environmental impacts. These include:

- undertaking regular inspections of major construction sites by MAC, external consultants and the AEO where necessary to ensure CEMP requirements for flora, fauna and landscape management are being met; and
- implementing the Moorabbin Airport Preferred Plant Register that details species selections which are considered suitable species for planting at Moorabbin Airport due to their non-bird attracting features, to help prevent bird strikes on aircraft.

10.12.3 Previous Achievements 2010 – 2015

Date	Initiative & Status
2014	MAC signed an offset credit trading agreement for the remnant Coast Manna Gum Tree.
2013	MAC implemented the Moorabbin Airport Preferred Plant Register that details species selections that are considered suitable species for planting at Moorabbin Airport due to their non-bird attracting features.
2010 – 2015	Approximately 28,000 native trees, shrubs and ground cover plants have been planted since the previous Master Plan was approved in 2010.

10.12.4 Environmental Actions – 2015 - 2020

Date / Responsibility	Initiative & Status
MAC / Developer (As required)	**Development Control** – ensure ecological surveys including vegetation mapping and species surveys are considered or undertaken, where appropriate, in areas of new development.
MAC (As required)	Consultation with the AEO and Airport Building Controller, when necessary, to assess application for new building works to ensure landscaping information is provided and implemented.
MAC (2015 – 2020)	**Environment Register** – continue to implement the MAC Preferred Plant Register, which is used to provide strategic guidance on landscape issues.
MAC (2015 – 2020)	**Operational Contro**l – produce an Airport Landscape Plan that draws together the available information and provides detailed guidance for the management and activities across MAC.
MAC (As required)	**Monitoring and Reporting** – where amendments to EPBC lists are made MAC will amend its environmental assessment processes to ensure that the organisation's legal obligations to protect new listings are met.

10.13 Aboriginal & European Heritage Management

10.13.1 Objectives & Overview

MAC's Aboriginal and European heritage management objectives include to ensure that any confirmed Aboriginal or European heritage sites are managed and protected as required by relevant legislation.

An archaeological survey of the Airport was first carried out in 1998 and reassessed in 2008 by Biosis Research. The aim of the studies were to identify any areas that may have had Aboriginal or heritage significance, and provide recommendations concerning the potential future management of any area identified.

The reports identified that the Airport has been extensively disturbed by past land use practices and modified to make it suitable for its present purpose. It follows that the potential for sites of Aboriginal or European heritage values is considered to be unlikely at the Airport. Both report findings concluded that as there is no evidence of Aboriginal or historic cultural heritage at the Airport, therefore no management regimes are currently necessary.

Areas for proposed future development may be subject to archaeological assessments, as considered appropriate in consultation with the AEO.

To the extent applicable and practicable, MAC will attempt to ensure that operators of undertakings also have regard to and attempt to implement the goals and objectives set out in this section.

10.13.2 Current Management Practices

Although no areas of Aboriginal or historic cultural heritage significance has been found at the Airport, MAC maintains practices to continue to manage Aboriginal or heritage value sites, including an undertaking to ensure that should the Airport uncover any areas of Aboriginal or heritage significance, management procedures included in the project development works will be implemented.

10.13.3 Previous Achievements 2010 – 2015

Date	Initiative & Status
Ongoing	MAC have continued to promote and provide non-monetary assistance to the Australian National Aviation Museum located on the Airport, to help with the preservation of Australia's aviation history

10.13.4 Environmental Actions – 2015 - 2020

Date / Responsibility	Initiative & Status
MAC (As required)	**Monitoring and Reporting** – ensure that archaeological surveys are considered or undertaken where required as part of major development proposals.
MAC (As required)	**Monitoring and Reporting** – if any archaeological sites, artefacts or objects are discovered at any time during development a qualified personnel shall be contacted to further assess the significance of the findings, as per section 5.02B of the Airports Regulations.

11 // Airport Safeguarding Strategy

- Moorabbin Airport is recognised as an airport of significance and is the third-busiest airport in the country.
- As the main role of the Airport is flight training, most of the aviation activity is undertaken within designated circuit paths around the Airport.
- The primary role of Moorabbin Airport is flight training. This involved day and night close-in flight circuit activity. Remaining curfew-free is an important underpinning of this aviation business.
- The land under the circuits and the approach paths will be subject to aircraft noise.
- Residents within a 5.5 kilometre radius of the Airport will be subject to high levels of aircraft activity. Residents should be aware that aircraft activity in this area will increase over the period of this 2015 Master Plan.
- It is important to reach a balance between the aviation businesses, the community, other developments in the surrounding region and the policy objectives of Commonwealth, State and local governments.
- Protection of airspace surrounding the Airport from intrusion is necessary for both the immediate and the long-term operation of the Airport and is provided for by a statutory and regulatory framework which includes Obstacle Limitation Surfaces (OLS) and Procedures for Air Navigation Services (PANS-OPS). The National Airport Safeguarding Framework (NASF), as it is implemented within the Victorian planning system, will further enhance airport safeguarding.

- The Kingston Planning Scheme implements an airport safeguarding planning control, the Airport Environs Overlay (AEO). This relates specifically to aircraft noise and limiting noise-sensitive uses (e.g. houses) where aircraft noise is a potential problem. The AEO does this by implementing the Airport's ANEF and the Australian Standard AS2021-2015: Acoustics – Aircraft Noise Intrusion – Building Siting and Construction.
- Airservices and CASA have regulatory responsibility for airspace and aircraft movements. Moorabbin Airport does not control aircraft. The Airport applies noise abatement measures by way of a local "Fly Friendly" programme.
- Safeguarding of Airport operations will only be effective where aviation, aircraft and noise information and impacts are communicated to the community.
- Given the shortcomings of the ANEF system, MAC's view is that ANEF contours should be supplemented by information from other sources, such as flight path charts and "number above" contours, to provide a more detailed and accurate reflection of potential noise effects around the Airport.
- Improvements can be made both to protecting surrounding communities, and the Airport's ongoing fulfilment of its role as an aviation Transport Gateway, through appropriate and necessary changes to the Kingston Planning Scheme.
- These changes involve implementing the NASF; including within the Victorian planning system a mechanism to identify proposals which may affect prescribed airspace; and recognition (alongside the existing recognition of ANEF and AS2021-2015) of "number above" (N) contours as a tool for understanding and controlling the impact of aircraft noise.

11.1 Introduction

11.1.1 Importance of Airport Safeguarding

As a recognised Transport Gateway and a centre of economic activity for metropolitan Melbourne and Victoria, the long-term and effective safeguarding of Moorabbin Airport is critical to maintain the social and economic benefits it provides, and to ensure that surrounding communities are developed in a responsible and sustainable manner.

The Airport's ongoing operation is supported by a range of legislation, planning controls, studies, strategies and other measures. These include:

- legislation and associated regulations, including the Airports Act, the Civil Aviation Act 1988, the Planning and Environment Act 1987 (Victoria) and local planning schemes;
- national policies including the National Airports Safeguarding Framework;
- State Government policies including the State Planning Policy Framework and Plan Melbourne, the State Government's strategic plan for metropolitan Melbourne;
- planning controls embedded in the Victoria Planning Provisions and local planning schemes, including the Urban Growth Boundary, Green Wedge Zones and the Airport Environs Overlay;
- aircraft noise management measures such as the Australian Noise Exposure Forecast, Australian Standard AS2021-2015, the Airport Environs Overlay and noise monitoring systems;
- airspace protection measures, particularly the Airports (Protection of Airspace) Regulations 1996 and the Civil Aviation (Building Control) Regulations 1988;
- measures to deal with hazards to aircraft operations such as birdstrikes, dangerous lighting and interference with air navigation aids;
- environmental protection measures including the Moorabbin Airport Environment Strategy;
- economic and social impact assessments that highlight the significant contribution the Airport makes at the local, State and national levels in creating economic value, generating employment and connecting communities; and
- education and communication measures designed to inform and consult with interested parties about the Airport and issues associated with it, including the Moorabbin Airport Community Aviation Consultation Group.

These measures form a safeguarding framework that helps maintain, protect and support Moorabbin Airport's ongoing operations, as well as balance the needs of communities surrounding the Airport. The two most important components of this framework are the aircraft noise and airspace protection measures, which are discussed in more detail below.

Safeguarding the Airport is an ongoing and shared responsibility between all levels of government, the Airport, and the community (including residents, developers and real estate agents). There is strong support from government for airport safeguarding, but is has become clear that improvements can be made to Moorabbin Airport's safeguarding framework. The National Airports Safeguarding Advisory Group has highlighted the need to improve airport safeguarding measures around Australia. This issue is discussed further in **Section 11.7**.

The objectives of the Airport Safeguarding Strategy are:

- to strengthen Moorabbin Airport's role within the State's economic and transport infrastructure and protect its ongoing aviation operations;
- to enable the Airport to effectively and competitively operate at national and international levels;
- to ensure that any new land use or development around the Airport supports safe and long-term operations, and avoids or minimises incompatible land uses;
- to manage and, where possible, minimise the impact of Airport and aircraft operations on surrounding areas and communities;
- to ensure that strategic planning for metropolitan Melbourne and for the City of Kingston recognises and protects the Airport, and that land use decisions are integrated, appropriate land use buffers are in place and provision is made for future growth and development; and
- to continue to respect the safeguarding role of Green Wedge areas and restrict incompatible land uses in these areas.

11.1.2 National Airports Safeguarding Framework

The NASF is a national land use planning framework, which aims to:

- improve community amenity by minimising aircraft noise-sensitive developments near airports; and
- improve safety outcomes by ensuring aviation safety requirements are recognised in land use planning decisions, through guidelines being adopted by jurisdictions on various safety-related issues.

The NASF comprises the following elements:

- Principles for National Airports Safeguarding Framework
- Guideline A: Measures for Managing Impacts of Aircraft Noise
- Guideline B: Managing the Risk of Building Generated Windshear and Turbulence at Airports
- Guideline C: Managing the Risk of Wildlife Strikes in the Vicinity of Airports
- Guideline D: Managing the Risk of Wind Turbine Farms as Physical Obstacles to Air Navigation
- Guideline E: Managing the Risk of Distractions to Pilots from Lightning in the Vicinity of Airports
- Guideline F: Managing the Risk of Intrusions into the Protected Airspace of Airports

Commonwealth, State and Territory Ministers considered the Framework at the Standing Council on Transport and Infrastructure meeting on 18 May 2012. The Framework was agreed at that meeting, but was subject to the Australian Government's intention to seek a review of AS2021 by Standards Australia.

Each State and Territory jurisdiction is responsible for implementing the NASF and aligning their planning processes with the NASF principles and guidelines, as appropriate.

11.1.3 Overview of Existing Framework

The existing airport safeguarding framework comprises the following elements:

- Aircraft noise – the ANEF / AS2021 system, which forecasts various degrees of exposure to aircraft noise for areas surrounding an airport and provides guidance for land use planning. Measures taken to manage aircraft noise are discussed in detail in **Section 11.3**.
- Regulation of prescribed airspace – prescribed airspace is the airspace above either an Obstacle Limitation Surface (OLS) or Procedures for Air Navigation Services (PANS-OPS) surface. The safeguarding framework in relation to prescribed airspace is discussed in **Section 11.4**.
- Planning Policies and Controls – At State, metropolitan and local levels, strategic and land use planning policies and controls recognise the need to strengthen and improve airport safeguarding. Further detail of these planning policies and controls, and the importance of reviewing some of them, is set out in **Section 11.6**.

11.2 Flight Paths

11.2.1 Introduction

Moorabbin Airport operates under Class D airspace when the ATC tower is operational. Outside of ATC tower hours, the Airport operates as a non-towered aerodrome under Class G airspace. This is an operational arrangement mandated by the Civil Aviation Safety Authority and allows for high-intensity operations of light aircraft and enhanced operational safety.

The majority of aircraft movements at Moorabbin Airport are in the training circuit. Aircraft which are flying to or from other destinations do so via established reporting points. Whilst in the immediate vicinity of the Airport, aircraft follow standard traffic patterns depending on the relevant runway and reporting point. This procedure ensures that safe separation between aircraft can be maintained and defines the flight paths associated with Moorabbin Airport.

Flight paths are designed by Airservices Australia in consultation with industry. MAC does not approve or design the flight paths.

11.2.2 Moorabbin Airspace

The Control Zone (CTR) for Moorabbin Airport extends for a 3 nautical mile (approximately 5.5km) radius from the Airport and reaches Centre Road to the north, Reserve Road to the west, Aspendale to the south and Chapel Road, Keysborough to the east. The CTR includes areas of Mentone, Mordialloc, Chelsea, Parkdale, Dingley, Springvale, Heatherton, Oakleigh, Highett and Bentleigh. Within this area, aircraft are controlled directly by Moorabbin ATC tower (when operational) and are normally in the act of take-off, landing or circuit training. The highest concentration of aircraft operations are within the CTR.

11.2.3 Runway Usage

At Moorabbin Airport, Runways 17L/35R and 17R/35L are the preferred runways for reasons of safety and operational efficiency. These runway directions are used 75-80% of the time.

Light aircraft, which operate the vast majority of movements at Moorabbin Airport, typically have a limit on the maximum crosswind component they can safely accept. This is normally around 10 knots. When the crosswind exceeds this limit for Runways 17L/35R and 17R/35L, the preferred runway directions, Runways 13L/31R and 13R/31L will be used. This occurs around 20-25% of the time, however because of seasonal wind patterns there may be extended periods of several days when operations use these runways continuously.

Runway 04/22 is used only for landing operations during rare occasions when strong crosswinds preclude operations of light aircraft to other runways. It is used for only a very few movements each year. It is not available for circuit training.

11.2.4 Arrival & Departure Flight Paths

Flight paths into and out of Moorabbin Airport are established to ensure arriving and departing traffic is integrated with other aircraft operating within the training circuit.

Flight paths for Runways 17L/35R and 17R/35L are shown on **Figure 11.1 – Runways 17L, 17R, 35L and 35R – Arrival, Departure and Training Flight Paths**. Flight paths for Runways 13L/31R and 13R/31L are shown on **Figure 11.2 – Runways 13L, 13R, 31L and 31R – Arrival, Departure and Training Flight Paths**.

i. Visual Flight Paths

Aircraft approaching Moorabbin Airport are required to make an initial call to Moorabbin tower (or, outside of tower operating hours, pilots should broadcast their intention) at four visual reporting points. These points are:

- Brighton Marina;
- Police Academy in Mount Waverley;
- The old GMH factory in Dandenong; and
- The Carrum River mouth.

Depending on other traffic, aircraft may also be required to make further position reports at Moorabbin Oval, Monash, Sandown, Parkmore Shopping Centre, or Mordialloc Pier. These locations are chosen as they are easy to detect visually and permit effective sequencing into the operational circuit. From these points the arriving aircraft is directed in to the Moorabbin Airport traffic pattern.

Aircraft then track by visual reference to the ground and should maintain track within 1nm (1.9km) either side of their nominal flight path. Most of the flight paths are common for all runways, except closer to the Airport where aircraft manoeuvre to align with the active runway.

ii. Instrument Flight Paths

Aircraft approaching Moorabbin Airport under Instrument Flight Rules (IFR) can conduct an instrument approach using either the Moorabbin Non-Directional Beacon (NDB) located on the Airport site, or by using a global positioning system (GPS) fitted to an aircraft and operated by a suitably qualified pilot.

The NDB approach path takes aircraft from a point in Port Phillip Bay (Bay west) on a direct track to the Moorabbin Airport NDB, flying over Black Rock, Beaumaris and Mentone before joining the circuit for the active runway.

A GPS approach from the north tracks directly to land on Runway 17L, and also straight in from the south to land on Runway 35R. Only Runway 17L/35R is certified for GPS runway-aligned, straight-in approaches.

Both NDB and GPS approaches are frequently practiced in good weather as they form an important part of pilot training.

11.2.5 Circuit Training

Aircraft undertaking circuit training fly the same standard pattern. This pattern is common worldwide and occurs in response to the basic imperatives of this training exercise, which are to conduct repeated practice take-offs, approaches and landings in an efficient manner. Above all, as with everything in aviation, this must be done safely.

A typical circuit as taught to students involves an initial climb to 500 feet (the upwind leg). On reaching 500 feet, a left or right 90-degree turn is initiated.

The pilot then climbs through 700 feet (the crosswind leg) before a further left or right 90-degree turn to establish the aircraft on a course parallel to the runway (downwind leg). The downwind leg should be flown at an altitude of 1,000 feet above ground level. The end of the downwind leg is usually judged when the threshold of the landing runway is 45-degree behind the pilot. Here a third left or right 90-degree turn is made and the aircraft descends towards the extended runway centreline (the base leg). Once approaching the centreline, the pilot turns onto final approach and conducts the landing.

Although the procedure for flying a circuit is standardised, the actual course flown at any point as a result of executing the procedure will vary depending on a wide range of influencing factors. These include aircraft type and climb performance, wind and other meteorological conditions, the pilot's capability and level of experience and the amount of traffic in the circuit. As a result there is often a wide variation in the actual path flown by aircraft from circuit to circuit. This can be seen on **Figure 11.3 – Actual Aircraft Training Circuits based on Airservices radar position data**, which shows actual circuit training tracks of aircraft based on radar position data provided by Airservices.

The number of aircraft allowed in the circuit for any one runway during tower hours is discretionary and subject to many variables, with guidance provided by local air traffic control. When the tower is not operational a maximum of 5 aircraft is allowed. A typical circuit would take 8 to 10 minutes to complete. Each completed circuit generates 2 movements – a take-off and a landing – and generally there are 600 to 1,000 movements a day.

The majority of circuit training is conducted to the east of the Airport. Most of the arriving and departing traffic occurs to the west and so needs to be sequenced into the western circuit. This makes this circuit suitable only for more experienced pilots who are better able to make the adjustments necessary to work in with arriving and departing traffic. Airservices has confirmed that the western circuit remains available for circuit training. As traffic increases, and the eastern circuit reaches capacity, it is expected that a greater proportion of circuit movements will occur to the west. This will always be limited by the need to maintain capacity for arrivals and departures. Discussion with Airservices suggests that a maximum of 3 aircraft conducting circuit training is possible whilst maintaining safe separations between all aircraft needing to use this circuit.

A Circuit Training Report commissioned by MAC in 2011 made a series of recommendations in relation to improving circuit training operations at the Airport. While later work has superseded many of the recommendations made in the 2011 report, some elements have been implemented or are ongoing. Further work has been undertaken with local communities regarding circuit design, operations and the regulatory environment within which training circuits are carried out. This 2015 Master Plan reflects those elements of the 2011 report which were seen as appropriate for adoption.

11.2.6 Moorabbin Training Area

Most aircraft operating from Moorabbin Airport use an area to the south east of the Airport for general training activities. Within these areas, standard altitude requirements apply, requiring aircraft to maintain a minimum altitude of 1,000 feet above ground level over populous areas or 500 feet above ground level elsewhere.

An aerobatic area has been established in a lightly populated area near Cranbourne for aerobatic manoeuvres. However a pilot may also perform such manoeuvres in any suitably equipped aircraft in open airspace such as over the sea.

11.2.7 Helicopter Flight Paths

Helicopters operating at Moorabbin conduct arrival and departure operations as well as training circuits.

In addition, emergency services helicopter aircraft frequently operate at low level in the general vicinity of the Airport. These operations can be intense, but this is not an activity related to Moorabbin Airport. Increased traffic is forecast during the summer months as more than a dozen helicopters are based at Moorabbin Airport for use in fire management services.

Helicopter arrival, departure and training flight paths are shown in **Figure 11.4 – Helicopter Arrival, Departure and Training Flight Paths**.

i. Helicopter Arrival/Departure Flight Paths

Helicopters arriving and departing Moorabbin Airport will generally operate to one of the two designated helipads on the Airport, depending on the location of the helicopter operator on the Airport.

Helicopters arriving and departing to the west of the Airport will follow Centre Dandenong or Lower Dandenong Road when transiting into or out of the tower control area. Helicopters then mainly transit to and from Melbourne using the coastal transit route, which is established just off the coastline to allow aircraft not operating to the Airport to transit the Moorabbin control area. Helicopters departing to or arriving from the north-east will transit via the Police Academy visual reporting point.

ii. Helicopter Training Circuits

Helicopter circuits are conducted inside and slightly below the fixed wing circuit to maintain safe separation of traffic. Helicopter circuits are normally performed at an altitude of 700 feet above ground level.

Two separate circuits operate for helicopters at Moorabbin. The 17/35 circuit occurs when Runways 17L/35R and 17R/35L are in use. The circuit operates only to the east of Runway 17L/35R. Helicopters can conduct approaches to and take-offs from anywhere in the triangle formed by Runways 17L/35R, 13L/31R and the southern perimeter fence.

The 13/31 circuit operates when Runways 13L/31R and 13R/31L are in use. Helicopters operate in the area to the west of Runway 17L/35R and south of the main apron.

Helicopter training is also performed at the southern end of the Airport using the non-operational runways and grass areas. A major part of helicopter training involves exercises such as simulated engine failure, mustering practice and winching exercises which take place entirely within the Airport site.

11.3 Managing Aircraft Noise

11.3.1 Noise Abatement Measures

MAC does not control aircraft in flight and this 2015 Master Plan cannot directly address operational issues or procedures relating to aircraft noise.

However, there are a number of existing noise abatement measures that constitute a local "Fly Friendly" programme which aims to mitigate some areas of concern that have been raised. MAC issues educational and advisory posters and other material pertaining to noise abatement to flying training organisations and other operators based at Moorabbin Airport. Noise abatement procedures are published in the Aeronautical Information Package

– En-Route Supplement Australia (AIP-ERSA). These measures are periodically reviewed and an important part of the discussions of the Moorabbin Airport Community Aviation Consultation Group (CACG) relates to noise issues. The CACG's membership includes representatives of local government bodies, airlines and Airport users.

MAC also participates in regular meetings with the City of Kingston, Airservices Australia and with groups such as the Dingley Village Community Association. Issues in relation to noise and potential noise abatement measures are frequently discussed at these meetings.

In summary, the current noise abatement procedures are:

- circuit training at Moorabbin is only allowed between 8am and 9pm (winter) or 10pm (summer) on weekdays and until 6pm or last light, whichever is earlier, at weekends and on public holidays, year round;
- aircraft departing from Runway 17R are requested to delay any turn until they have flown past Woodland Golf Club to minimise noise intrusion over residential areas of Parkdale;
- aircraft departing Runway 35L are requested to delay any turn until over Kingston Centre, to minimise noise intrusion to residential property immediately to the north west of the Airport; and
- pilots are at all times encouraged to be sensitive to the needs of local residents, to minimise throttle setting changes and to fly smoothly and avoid abrupt changes in power whilst in the circuit area of Moorabbin Airport.

These aircraft noise management measures were developed taking into account a number of relevant factors, including Australian Standard AS 2021-2000 (Acoustics – Aircraft Noise Intrusion – Building Sites and Construction).

The "Fly Friendly" measures are advisory, and not mandatory, and there are other factors which will determine where aircraft operate.

Airspace management is provided by Airservices Australia. Airservices operates a Noise Enquiry Service on telephone number 1800 802 584.

11.3.2 Circuit Options Study

In response to concerns raised at the CACG and by residents to the east of the Airport, MAC has undertaken a feasibility study to investigate potential options for adjusting the circuit flight paths. The objective of the concept feasibility was the identification of potential circuit paths which:

- are safe to operate;
- comply with all relevant regulations;
- provide best noise outcomes for local residents;
- are consistent with existing Noise Abatement measures;
- could deliver the aviation outcomes of the 2010 Master Plan; and
- would be supported by responsible aviation operators.

A number of possibilities were considered in consultation with key flight training organisations based at Moorabbin Airport. Overall, the study confirmed that aircraft operators endeavour to conduct circuit training safely, whilst remaining mindful of the Moorabbin Airport "Fly Friendly" programme. However, no single solution was identified that would satisfy both the noise concerns raised by the community and the need for operators to safely provide effective and cost efficient flight training.

11.3.3 Australian Noise Exposure Forecast

i. ANEF System

An Australian Noise Exposure Forecast (ANEF) is a forecasting methodology that is used throughout Australia to produce a contour map representing various degrees of exposure to aircraft noise for the areas surrounding an airport. The contours produced result from calculations based upon forecast aircraft movements and the noise levels generated by each movement. Under the ANEF system, movements in the period 7pm to 7am are given additional weight to reflect the increased annoyance noise in this period is likely to produce.

The ANEF system is one way of representing aircraft noise. It is used to provide guidance for land use planning in accordance with AS 2021-2015 Acoustics – Aircraft noise intrusion – Building siting and construction. The Airports Act requires that a master plan must include an ANEF.

While accepting that the ANEF system is an established land use planning tool used by State planning authorities, MAC is of the view that the ANEF should be used in conjunction with other noise metrics. Such an approach will help to ensure that any limitations of the ANEF are mitigated and the most appropriate development decisions are made in order to minimise noise exposure for residents. In this context, the limitations of the ANEF system include:

- community values have moved on such that use of the ANEF system alone is no longer appropriate when planning decisions are made with respect to noise sensitive developments;
- land use planning around airports should ideally take into consideration the range of noise information relevant to the local community including the location of flight paths, types of aircraft activity, numbers and timing of aircraft movements, the intensity of noise events from those movements and the comparison to ambient noise levels;
- the ANEF Contours are only averages, based on a complex formula. While the formula does consider factors such as noise frequency and volume, it is based on a forecast of aircraft activity and assumes standard flight routes:
- the ANEF Contours do not take into account how bad aircraft noise may be at particular times of day or year, or the frequency of occasional loud events, the impact of seasonal and daily weather conditions on aircraft noise or the impact of aircraft noise where aircraft deviate from flight paths;
- the ANEF Contours for an airport are focused on the landing and take-off trajectories of aircraft, but they do not indicate the noise along flight paths in and around the airport;
- AS2021-2015 assumes that aircraft noise above acceptable levels can be mitigated when in reality this may not be the case. For example, building insulation is of no use when residents are outside, utilising outdoor living spaces or have their windows or doors open; and
- the use of the ANEF as the sole metric for aircraft noise gives a false impression that noise stops at the ANEF contour barrier, when in fact it can and does change on an hourly, daily and monthly basis.

Given the above, other metrics are also used by MAC to assess aircraft noise. In particular, MAC is of the view that "Number above" contours should be adopted. These contours are considered by the Department of Infrastructure and Regional Development, Airservices Australia and many airports to provide a more meaningful summary of aircraft flight movements. These "Number above" contours are further discussed in **Section 11.3.4**.

ii. Development of the new ANEF – the Integrated Noise Model

Notwithstanding MAC's concerns with the ANEF, a new ANEF for Moorabbin Airport has been developed for this 2015 Master Plan, using the latest version of the Integrated Noise Model (INM) software. INM is developed by the US Federal Aviation Administration (FAA) and incorporates noise data for all commercially produced aeroplanes and many helicopters. The noise information is derived from measurements of actual noise produced by each aircraft type and the INM software has been extensively validated over time. The use of INM to produce the ANEF contours is an industry standard methodology and is accepted by Airservices Australia.

Advances in the INM from Version 6.2 to Version 7.0d have also affected the resulting ANEF contours. Best practices for modelling aircraft noise in the vicinity of airports have continued to evolve, and Version 7.0d contains several enhancements to remain consistent with these best practices. The majority of the new methods employed in Version 7.0d come from international guidance documents and reflect changes to the manner of calculation of lateral attenuation, which relates to how quickly noise levels reduce either side of an aircraft's path. In releasing Version 7.0, the FAA acknowledged that these changes could have significant impacts on calculated noise contour shapes and areas, with the degree of impact being study-dependent. INM Version 7.0 also introduced a new methodology for modelling helipads, which would be expected to have an impact on the extent of the ANEF contour.

iii. Endorsement for Technical Accuracy

The ANEF is produced on behalf of MAC and endorsed for technical accuracy by Airservices Australia. Endorsement of ANEFs must be undertaken in a manner approved by the Minister for Infrastructure and Regional Development.

This process ensures that the modelling undertaken to prepare the ANEF is appropriate and reflects the forecasts of aircraft movements which the Airport expects will occur in future. However, the Airport operator must demonstrate that the forecast number of aircraft movements, operating times and the aircraft types used to produce the ANEF are not greater than the physical capacity of the runway system, using accepted and published methodologies.

iv. Moorabbin Airport ANEF

MAC has decided to adopt a 'long-range ANEF' for Moorabbin Airport, rather than a rolling 20-year forecast. This approach is more relevant to an Airport like Moorabbin where it is relatively easy to assess the expected long-range number of movements but the timeframe for reaching that forecast is uncertain (but unlikely to be within 20 years).

While the capacity of Moorabbin Airport is assessed as being in the region of 650,000 movements annually, during the preparation of the 2010 Master Plan it was determined after consultation with State and local governments that a long-range ANEF based on 500,000 movements was appropriate. Based on traffic levels since the previous ANEF was prepared in 2008, this long-range forecast of total movements remains applicable and has been adopted for the revised ANEF incorporated within this 2015 Master Plan.

The modelling used to produce the revised ANEF incorporates several changes from the modelling included in the 2010 Master Plan. The main differences are:

- removal of proposed extension of Runway 13L/31R;
- removal of Embraer 170 regional jet and Bombardier Dash 8 turboprop aircraft operations;
- adjustment of helicopter operations to represent the historical proportion of total movements. This results in a slight increase in total helicopter movements and a corresponding decrease in fixed-wing movements within the total 500,000 annual movement forecast;
- adjustment of the range of helicopter types included in the model to better reflect the actual range of helicopters currently operating and expected to operate into the future;
- inclusion of the Northern Helipad (in its proposed long-term location) which did not feature in the 2010 Master Plan;
- adjustment of the helicopter training circuit for 17/35 operations within the model to better reflect actual operations;

- minor adjustments to the circuit training flight paths within the model to reflect the distribution of aircraft tracks derived from historical radar track data; and
- application of the latest version of the Integrated Noise Model software.

While (as indicated in **Section 6.4.6**) MAC is likely to investigate options for relocation of the Southern Helipad, the helipad is expected to be retained in its current location for the next 5 years, and the revised ANEF for the Airport is based on the Southern Helipad remaining in its current location.

The revised ANEF for the Airport, produced for the purpose of this 2015 Master Plan and endorsed by Air Services Australia on 27 January 2015, is shown in **Figure 11.5 – Moorabbin Airport 2015 Endorsed ANEF**.

v. ANEF Contours

A comparison of the ANEF contours from the Airport's 2010 Master Plan, and the new ANEF endorsed by Air Services Australia on 27 January 2015, is shown in **Figure 11.6 – Moorabbin Airport 2010 and 2015 ANEF Comparison**.

For the reasons described in **Sections 11.3.3 (ii) and (iv)** above, there are a number of changes to the ANEF contour as compared to the previous ANEF within the 2010 Master Plan. The main differences are:

- a large reduction in the extent of the 20 ANEF contour to the east of the Airport. This is despite the fact that large numbers of aircraft are still expected to operate within this area, as illustrated in **Figures 11.1 – Runways 17L, 17R, 35L and 35R – Arrival, Departure and Training Flight Paths** and **11.2 – Runways 13L, 13R, 31L and 31R – Arrival, Departure and Training Flight Paths**, and by the Number Above contours discussed below;
- a reduction in the extent of the 20 ANEF contours to the north and south of the Airport; and
- a slight increase in the extent of the 20 ANEF, 25 ANEF and 30 ANEF contours to the west of the Airport.

11.3.4 Number-Above Contours

The National Airports Safeguarding Advisory Group (NASAG), comprising Commonwealth, State, and Territory transport and planning officials, has overseen a process to quantify a range of frequency-based aircraft noise events that might act as triggers in future land use planning processes. This has been done recognising the limitations of the ANEF system discussed under **Section 11.3.3**.

MAC is supportive of the effective disclosure of aircraft noise in accordance with the principles established by NASAG and set out in the National Airports Safeguarding Framework (NASF), particularly Guideline A – Measures for Managing the Impact of Aircraft Noise. MAC supports the NASAG recommendation and has prepared "number-above" contours as part of this 2015 Master Plan. These contours represent the number of noise events above a defined noise level which it is expected will be experienced at any point on an average day based on the long-range forecast of movements. For example, the 50 N-60 contour connects all the points on the ground where 50 events with a noise level of 60 dB(A) or louder would occur on an average day.

Number-above contour maps are shown in **Figures 11.7 – "Number above" contours – N60 contour map**, **11.8 – "Number above" contours – N65 contour map** and **11.9 – "Number above" contours – N70 contour map**. These maps clearly show areas where residents are likely to experience frequent exposure to noise events from aircraft operations. Importantly, there are large areas which are outside the 20 ANEF contour and yet which can still be expected to receive frequent exposure to audible aircraft operations.

In addition to "number above" contours, as noted previously, MAC believes that the community should be aware that in addition to the metrics described in this section, there will be significant and increasing activities within the CTR Zone.

11.4 Airspace Protection

Prescribed airspace is defined under the Airports Act as airspace where it is in the interests of the safety, efficiency or regularity of existing or future air transport operations into or out of an airport for the airspace to be protected. Prescribed airspace consists of Obstacle Limitation Surfaces (OLS) and Procedures for Air Navigation Services – Aircraft Operations (PANS-OPS) surfaces.

The powers for airspace to be prescribed are granted under the Airports Act and the Airports (Protection of Airspace Regulations) 1996.

The objective of protecting prescribed airspace is to ensure that use of the relevant airport is not adversely affected by the building of structures or the conduct of other activities in areas where they may affect the safety of aircraft operations. New structures should be designed and other activities controlled to ensure they remain below the prescribed surfaces.

Under section 182 of the Airports Act, activities that result in intrusions into an airport's prescribed airspace are called "controlled activities", and cannot be carried out without the prior approval of the relevant airport operator and Department of Infrastructure and Regional Development. The operator or the Department must assess applications to carry out controlled activities, and may impose conditions on approval.

The extension of Runway 13L/31R to accommodate high-capacity RPT operations is no longer proposed, as no market demand for the infrastructure upgrade has arisen in the past 17 years (or indeed ever). Similarly, development of a central runway 13C/31C has been ruled out as part of this 2015 Master Plan process. However, provision for a possible future non-precision instrument approach to existing Runway 13L/31R has been incorporated.

The future requirements for prescribed airspace therefore reflect very closely the Airport's existing operational airspace. This represents a relaxation of previous restrictions on building heights around the Airport, in certain areas.

Protection of relevant airspace allows for the continued growth in the Airport's core business of pilot training and this provides the basis for future planning of the Airport to meet aviation, commercial and legislative requirements.

The Airport's proposed future airspace surfaces are shown in **Figure 11.10 – Future OLS** and **Figure 11.11 – Future PANS-OPS**.

It is important to note the distances covered by the prescribed airspace. In some areas the prescribed airspace extends up to 17 kilometres from the Airport, with at least 6 municipalities in Melbourne's south and east either wholly or partly affected by the Airport's prescribed airspace.

11.4.1 Obstacle Limitation Surfaces (OLS)

The OLS is usually the lowest of the two surfaces that make up prescribed airspace, and is designed to provide protection for visual flying, or VFR (when the pilot is flying by sight). The OLS consists of a number of virtual reference surfaces in the airspace which determine when an object may become an obstacle to aircraft manoeuvring in the vicinity of an airport, or during landing or take-off. The OLS is designed to assist pilots in avoiding obstacles in situations where they have external visual reference to the ground, to obstacles or to other aircraft.

In some circumstances the OLS may be infringed, if they are deemed by the relevant authorities not to pose any impact to aircraft operations. Infringements may involve a requirement to mark and/or light the obstacle in a particular way to ensure it is sufficiently visible to pilots.

Elements of the OLS included in the 2010 Master Plan associated with protecting Code 3 non-precision instrument approaches to 13C/13R, along with possible precision approaches to a future runway 13C/31C, have been removed. However, the existing OLS has been adjusted to ensure protection is maintained for possible future Code 2 non-precision instrument approaches to Runway 13L/31R.

The proposed future OLS applicable to Moorabbin Airport are illustrated in **Figure 11.10 – Future OLS**.

11.4.2 PANS-OPS Surfaces

The PANS-OPS surface is usually higher than the OLS and provides protection for instrument flying, or IFR (when the pilot is flying by instruments). These surfaces may also protect airspace around the navigational aids that are critical for instrument flying.

PANS-OPS surfaces are intended to safeguard an aircraft from collision with obstacles when the pilot is flying solely by reference to instruments. Protection of these surfaces is critical, as pilots may be navigating without any visual reference outside the aircraft.

These surfaces are established by the instrument procedure designer to ensure that an aircraft will have a specified minimum clearance to any obstacle in those situations where the pilot may have no external visual reference to the ground, to obstacles or to other aircraft.

Any proposal that would result in an intrusion into PANS-OPS airspace cannot be approved, except where the proposal is for a short term controlled activity. Regulation 14.5 of the Airports (Protection of Airspace) Regulations 1996 states that a short term controlled activity may be approved by the Secretary of the Department of Infrastructure and Regional Development where the relevant airport operator supports the approval.

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

- 5 GNSS arrival procedures (being the global navigation satellite system, GPS);
- an approach procedure to a circling minima using the Moorabbin Non Directional Radio Beacon (NDB); and
- a runway 17L and 35R Global Positioning System RNAV (GNSS) approach procedure.

In line with the removal of provision for future high-capacity RPT services, the need for precision instrument approaches is no longer considered necessary. Since the development of a central runway 13C/31C has also been ruled out, the associated airspace protection has also been removed from the OLS and PANS-OPS included in this 2015 Master Plan.

It is envisaged that the currently published instrument approach procedures will be retained into the future. Since there are not planned infrastructure changes to be undertaken, the current procedures will remain effectively in their current form subject to routine maintenance undertaken by Airservices (as the custodian of the procedures) through its periodic review process.

In addition to the various pre-existing PANS-OPS surfaces applicable to these procedures, the Runway 17L and Runway 35R GNSS also incorporate protection of the visual segment surfaces as now mandated by CASA in accordance with international civil aviation requirements. A full set of PANS-OPS surfaces associated with possible future non-precision instrument approaches to Runway 13L/31R are also incorporated within the proposed future PANS-OPS surfaces.

In addition to the instrument approach procedures, protection of airspace is also included for future Standard Instrument Departures (SIDs) for Runways 17L, 13L, 31R and 35R.

The proposed future PANS-OPS surfaces applicable to Moorabbin Airport are illustrated in **Figure 11.11 – Future PANS-OPS**.

11.4.3 Any Change to OLS or PANS-OPS Surfaces Likely to Result if Development Proceeds in Accordance with the Master Plan

The OLS and PANS-OPS shown in **Figures 11.10 – Future OLS** and **11.11 – Future PANS-OPS** reflect the prescribed airspace necessary to accommodate development in accordance with this 2015 Master Plan.

These will be subject to technical review and agreement by Air Services prior to declaration under the relevant regulations on approval of this 2015 Master Plan.

11.4.4 Other Controls on Obstacles & Hazards

In addition to the Airports (Protection of Airspace) Regulations 1996, the Civil Aviation (Building Control) Regulations 1988 and the Civil Aviation Safety Regulations 1988 are also relevant to controlling obstacles and hazards around airports. Under the Civil Aviation Safety Regulations 1998, a person who proposes to construct a building or structure of 110 metres or more above ground level must inform the Civil Aviation Safety Authority.

Under the Airports Act, building authorities (including local councils) with boundaries that fall within an airport's protected airspace are required to review all building and development applications they receive for any infringement of prescribed airspace, and refer any potential controlled activities to the airport operator.

It is an offence to carry out a controlled activity without approval, or to breach a condition of a controlled activity approval. Such approval must be obtained by the proponent of the controlled activity from the Secretary of the Commonwealth Department of Infrastructure and Regional Development. Approval for a controlled activity is separate to any local authority building approval.

11.5 Other Safeguarding Matters

MAC takes a number of other safeguarding considerations into account when assessing applications for development at the Airport. During the first 5-year planning period of this 2015 Master Plan, MAC will work collaboratively with the State Government and the City of Kingston with the objective of giving these considerations appropriate recognition in State and local planning policy. Such recognition will enable all relevant implications to be taken into account when off-Airport developments are being assessed.

11.5.1 Building Generated Windshear (NASF Guideline B)

Building-induced windshear can be a problem for aviation operations in cases where structures are situated close to airport runways. When a significant obstacle is located in the path of a crosswind to an operational runway, the wind flow will be diverted around and over the building and can cause the crosswind speed to vary along the runway.

Guideline B presents a layered risk approach to the siting and design of buildings near airport runways to assist land use planners and airport operators to reduce the risk of building-generated windshear and turbulence.

MAC has considered the impact of building-generated windshear in relation to development proposals in this 2015 Master Plan, and has concluded the compliance with NASF guidelines will be achieved.

11.5.2 Wildlife Strikes (NASF Guideline C)

Wildlife strikes and/or avoidance can cause major damage to aircraft and/or compromise aircraft safety. Whilst the Civil Aviation Safety Authority has well-established safety requirements for wildlife management plans on-airport, wildlife hazards also occur outside the airport fence.

Guideline C provides advice to help protect against wildlife hazards originating off-airport. Many existing airports are surrounded by areas that are attractive to wildlife, especially birds, but appropriate land use planning decisions and the way in which existing land use is managed in the vicinity of airports can significantly reduce the risk of wildlife hazards.

11.5.3 Lighting (NASF Guideline E)

Pilots are reliant on the specific patterns of aeronautical ground lights during inclement weather and outside daylight hours. These aeronautical ground lights, such as runway lights and approach guidance lights, play a vital role in enabling pilots to align their aircraft with the runway in use. They also enable the pilot to land the aircraft at the appropriate part of the runway.

It is therefore important that lighting in the vicinity of airports is not configured or is of such a pattern that pilots could either be distracted or mistake such lighting as being ground lighting from the airport.

Guideline E provides advice on the risks of lighting distractions and how these can be minimised or avoided.

11.6 Planning Policies & Controls

11.6.1 Implementation of NASF

Plan Melbourne, Melbourne's metropolitan planning strategy, recognises the need to strengthen airport safeguarding, consistent with the objectives of the NASF. Clause 12.09 of the proposed Planning Policy Framework includes the NASF as a background document.

11.6.2 State Planning Policy (SPPF & Plan Melbourne)

State planning policy, which includes aims and objectives expressly recognising the need to protect the Airport and its airspace, is described in **Section 4.5**, above. In outline:

- Plan Melbourne provides for the transport function of Moorabbin Airport (and of transport gateways generally, including other metropolitan airports) to be protected from incompatible land uses.
- The current State Planning Policy Framework includes (in Clause 18.04-2) strategies for protecting airports from incompatible land uses.
- The proposed draft Planning Policy Framework, once implemented, will include an objective to safeguard airports and aviation operations, including through management of adverse noise impacts and the use of buffers to protect airports from incompatible land uses and development.

11.6.3 Local Planning Policies & Controls

Within the Kingston Planning Scheme, the following provisions assist in safeguarding the Airport as a transport gateway and help ensure that the use and development of land around the Airport is sensitive to the long-term operation of the Airport:

- Clause 22.05 – Moorabbin Airport Environs Policy.
- the Airport Environs Overlay, and Schedule 1 to that overlay (AEO1) which applies to areas adjoining the northern, southern and eastern boundaries of the Airport.
- the Design and Development Overlay, and Schedules 4 and 5 to that overlay (DDO4 and DDO5), which implement height controls on buildings and works in areas in the vicinity of the Airport.

These provisions are discussed in more detail in **Section 4.6**.

The Airport will continue to work with Kingston City Council to determine the implications for these planning controls of changes to the noise contours and prescribed airspace outlined in this 2015 Master Plan.

Specifically in relation to the Airport Environs Overlay under the Kingston Planning Scheme, MAC believes it is appropriate for existing Schedule 1 (AEO1) to be retained in its current location, pending further review once due consideration has been given to options for relocation of the Southern Helipad during the first 5-year period of this 2015 Master Plan.

MAC also believes it is appropriate for Council to apply Schedule 2 to the Airport Environs Overlay (AEO2) to areas not subject to the current AEO1, but within the ANEF 20 contour under the Airport's endorsed 2015 ANEF.

11.7 Improving Airport Safeguarding

Given the Airport's social and economic importance to the local region and the State, planners and the planning system should adopt a precautionary approach to protecting this significant asset and surrounding communities. For this reason the Airport believes that significant improvements can be made to safeguard the Airport and its aviation operations.

During the first 5-year planning period of this 2015 Master Plan, MAC will work collaboratively with the State Government and the City of Kingston with the objective of giving priority to the following initiatives:

11.7.1 Implementation of NASF

Moorabbin Airport supports the NASF guidelines and has already started using them to guide the consideration of on-Airport developments and as the basis of responses to off-airport development proposals.

For these guidelines to be fully effective, Moorabbin Airport believes they should be incorporated into the Victorian planning system, specifically through amendment of the Victoria Planning Provisions. It is the responsibility of each jurisdiction to implement the Framework into their respective planning systems. Policy 12.09 within the proposed Planning Policy Framework, once implemented, will make some progress in this regard. However, further work will be required to implement specific planning policies and controls for each of the NASF guidelines.

MAC is committed to, and fully supportive of, appropriate regional development in and around the Airport. Development of the area will provide economic stimulus and increased social and community resources for residents and the broader community. However, to ensure that noise impacts are accurately forecast, assessed and communicated, MAC believes it is important that development decisions are made in accordance with the ANEF and NASF guidelines.

There are currently 2 planning decisions that should be noted:

- Green Wedge zones – certain land to the north of Moorabbin Airport is zoned as a green wedge, to provide a corridor of non-urban land that is utilised as a flight path for Moorabbin Airport. The flight paths are only over a limited section of the Green Wedge zone.

  While not necessarily opposed to development within that corridor, MAC looks forward to receiving further information regarding any development to ensure compliance with ANEF and NASF guidelines.

- Amendment C111 – As part of the proposed Kingston Planning Scheme Amendment C111, the Southern Road North Precinct was to have been designated for long-term redevelopment from an industrial area to housing and/or mixed use. This precinct is adjacent to the Airport and is directly under Airport flight paths. While Amendment C111 was abandoned, in the case of any future proposal for rezoning of this area MAC would expect that due consideration would be given to ensuring that such development is in compliance with the NASF Guidelines.

In relation to the Southern Road North Precinct, and other areas adjacent to the Airport and/or under flight paths, MAC recognises and supports the strategies set out in Clause 18.04-2 – Planning for Airports of the State Planning Policy Framework, in particular:

- Ensuring that in the planning of airports, land-use decisions are integrated, appropriate land use buffers are in place and provision is made for associated businesses that service airports;

- Ensuring that the planning of airports identifies and encourages activities that complement the role of the airport and enables the operator to effectively develop the airport to be efficient and functional and contribute to the aviation needs of the State.

11.7.2 Implementation of Prescribed Airspace Requirements

While the Airport's prescribed airspace is protected by the Airports Act and Airports (Protection of Airspace) Regulations 1996, this is not widely known or understood by developers, the community or other stakeholders.

The Design and Development Overlay Schedules 4 and 5 (DDO4 and DDO5) within the Kingston Planning Scheme provide some limited control over the height of structures that may impact on the Airport's prescribed airspace. These overlay controls may be reviewed by Council, in collaboration with MAC, in light of the revised prescribed airspace charts contained in this 2015 Master Plan.

The Airport supports a more uniform, consistent and coherent approach to protection of prescribed airspace at Moorabbin and other airports being implemented through the Victoria Planning Provisions to better identify proposals with the potential to impact on prescribed airspace and ensures that greater certainty and rigour. It is noted that the State Government has commenced work in this area which the Airport will continue to support.

11.7.3 Implementation of N Contours

In accordance with NASF Guideline A, the ANEF contours, as a source of aircraft noise information, should be supplemented by information from other sources, such as flight path charts and "number above" contours, to provide a more detailed and accurate reflection of the potential aircraft noise effects around Moorabbin Airport. This information, combined with the ANEF contours, should be used to better inform planning and land use decisions around the Airport.

The N60/N65/N70 contours contained in this 2015 Master Plan should be used as an additional consideration over and above the ANEF contours and the AEO, particularly when changes to zoning or the Urban Growth Boundary are proposed near the Airport or its flight corridors.

While the "N" contours do not yet have statutory effect, they are provided to better inform stakeholders and to give the community a better tool to understand the impact of aircraft noise.

MAC will work collaboratively with State planning authorities, and with the City of Kingston, with the objective of giving priority to resolving the exact role of "N" contours in land use planning.

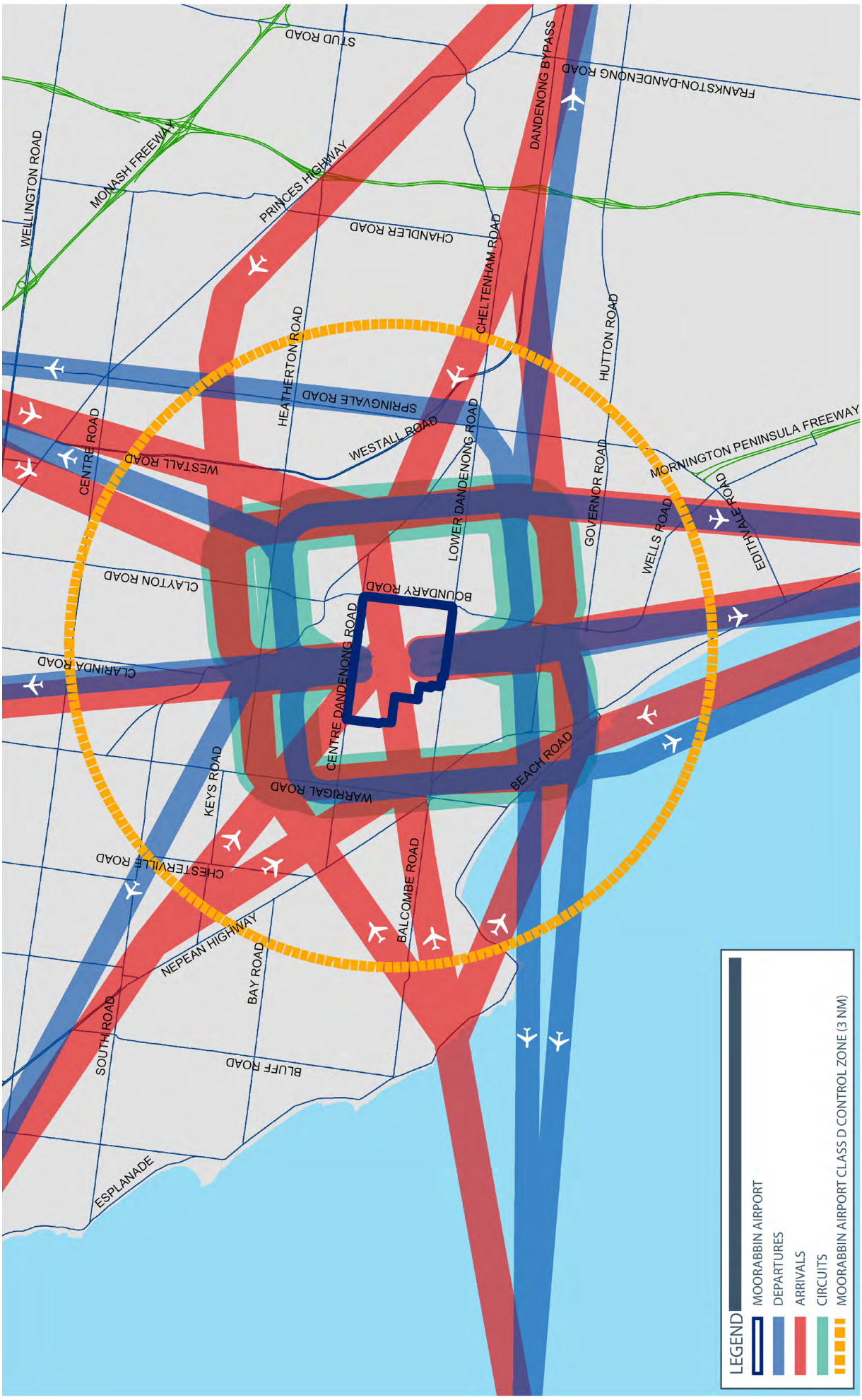
Fly Friendly Programme

Moorabbin Airport is committed to being a good neighbour in the sky and to undertaking aviation operations in a noise-aware, 'Fly Friendly' manner to lessen the noise impact on the local community.

MAC expects aircraft pilots operating into and from Moorabbin Airport to undertake operations in a manner which is considerate of local residents. The safe operation of an aircraft must be maintained at all times.

The Fly Friendly programme identifies practical measures to decrease noise, such as using the least noise-sensitive runways, providing a special test area for aircraft maintenance, limiting training hours and flights over residential areas, and promoting the good behaviour of pilots.

The programme is voluntarily entered into by the Airport's aviation customers and airport users to minimise the impact of aircraft operations on the surrounding community.



This plan has been prepared to illustrate the Master Plan and is not intended to serve any other purpose.

Figure 11.1 - Runways 17L, 17R, 35L and 35R
Arrival, Departure and Training Flight Paths

Moorabbin Airport
Master Plan 2015

Moorabbin Airport

Figure 11.1 // Runways 17L, 17R, 35L and 35R – Arrival, Departure and Training Flight Paths

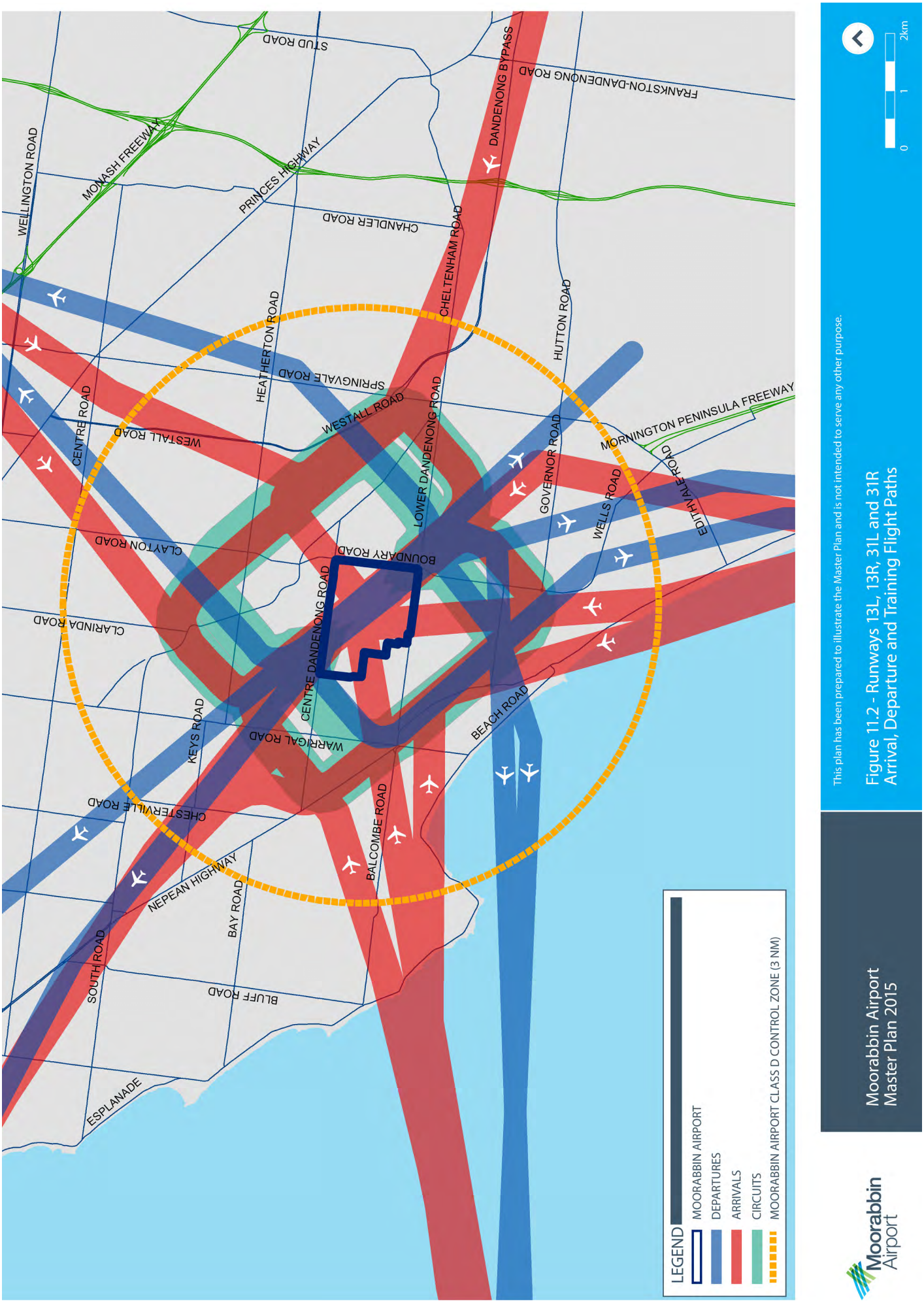


Figure 11.2 // Runways 17L, 17R, 35L and 35R – Arrival, Departure and Training Flight Paths

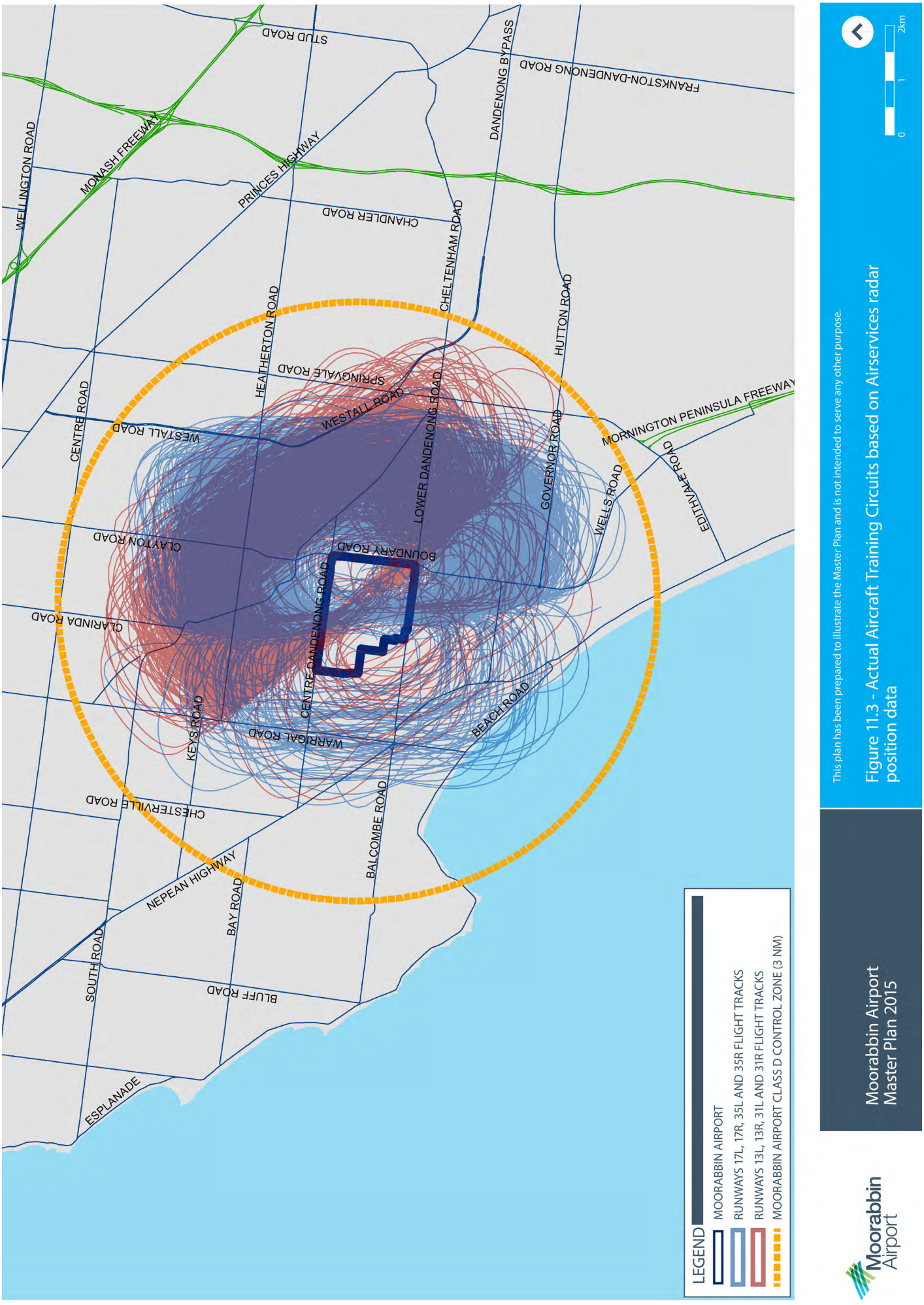


Figure 11.3 // Actual Aircraft Training Circuits based on Airservices radar position data

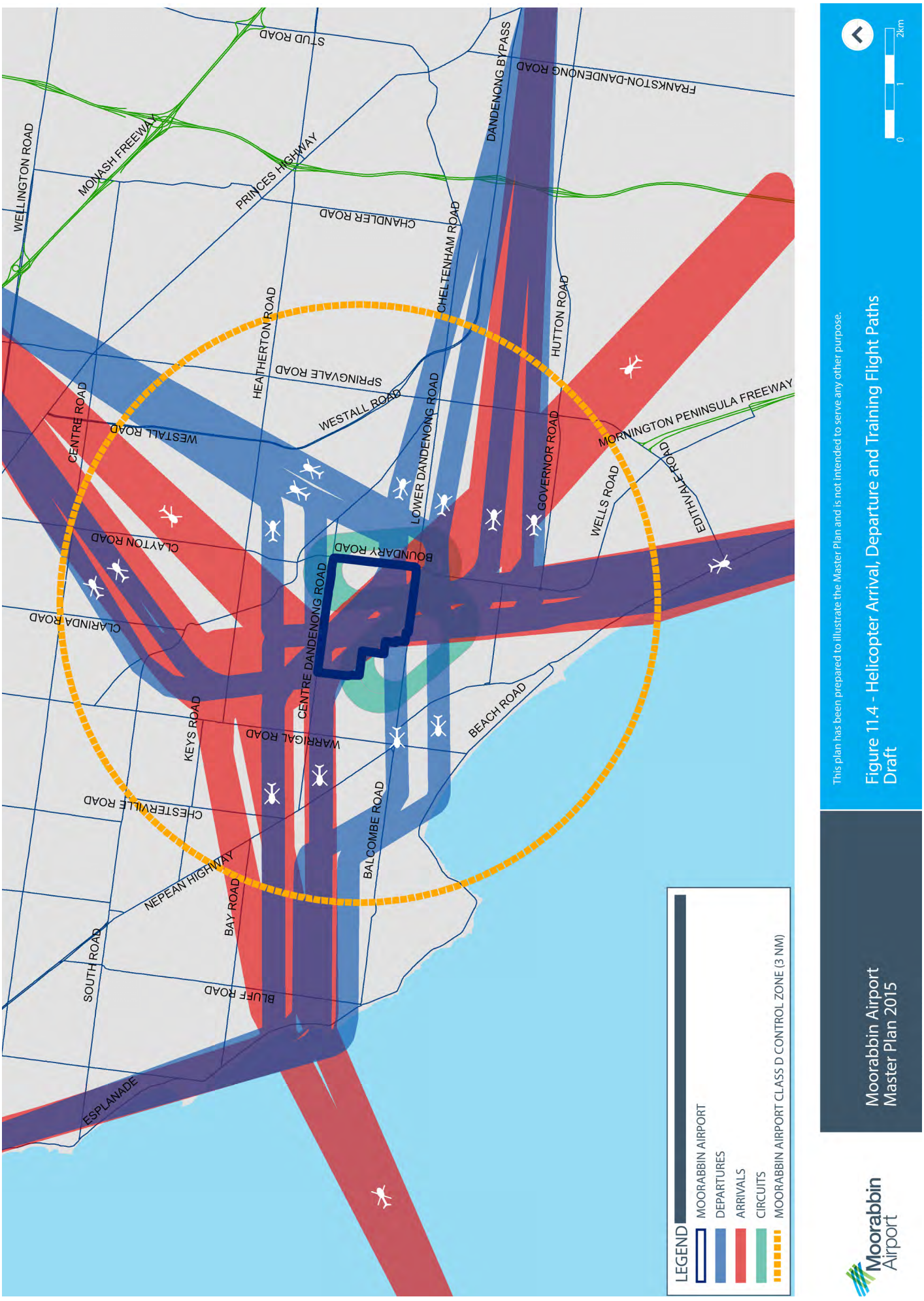
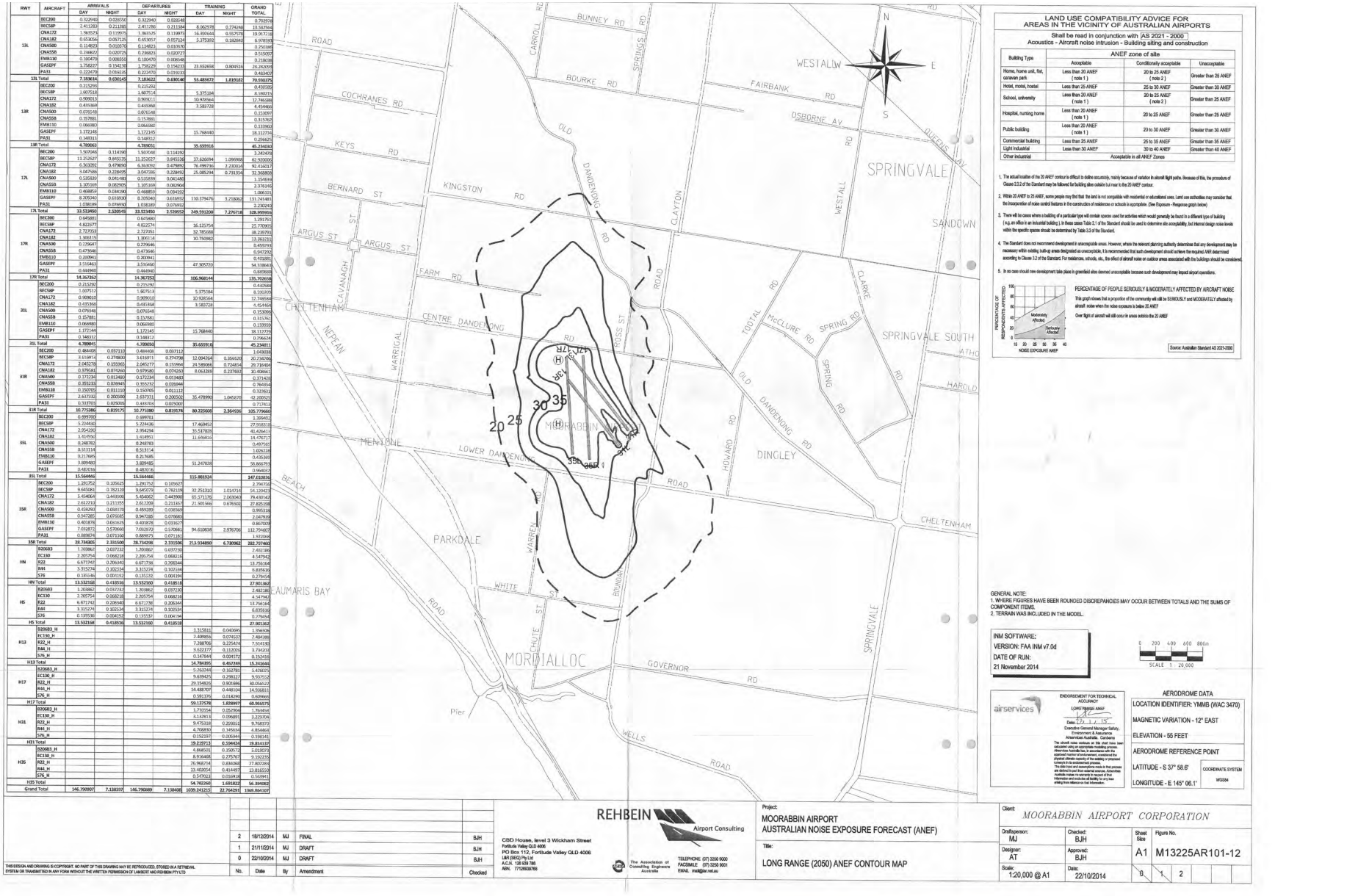


Figure 11.4 // Helicopter Arrival, Departure and Training Flight Paths



RWY	AIRCRAFT	ARRIVALS DAY	ARRIVALS NIGHT	DEPARTURES DAY	DEPARTURES NIGHT	TRAINING DAY	TRAINING NIGHT	GRAND TOTAL
13L	BEC200	0.122940	0.008700	0.312940	0.008148			0.702928
	BEC58P	2.411283	0.211385	2.411286	0.211384	8.062978	0.774246	13.582564
	CNA172	1.365573	0.113975	1.363535	0.113973	16.350644	0.357576	19.917218
	CNA182	0.658056	0.057125	0.657857	0.057124	1.375392	0.182468	6.978938
	CNA500	0.114823	0.010070	0.114823	0.010070			0.250186
	CNA550	0.236822	0.020725	0.236823	0.020727			0.515092
	EMB110	0.100470	0.008550	0.100470	0.008548			0.218038
	GASEPF	1.756227	0.154230	1.756229	0.154233	23.652658	0.804516	28.262093
	PA31	0.222470	0.019218	0.222470	0.019218			0.483472
13L Total		7.193614	0.630145	7.189622	0.630146	53.483672	2.119102	70.930275
13R	BEC200	0.215269		0.215252				0.430585
	BEC58P	1.607516		1.607514		5.375184		8.590215
	CNA172	0.909013		0.909011		10.909564		12.746189
	CNA182	0.453869		0.453868		3.383728		4.454466
	CNA500	0.076548		0.076548				0.153097
	CNA550	0.157881		0.157881				0.315762
	EMB110	0.066980		0.066980				0.133960
	GASEPF	1.172145		1.172145		15.768440		18.112730
	PA31	0.148313		0.148312				0.296625
13R Total		4.789063		4.789053		35.659916		45.234030
17L	BEC200	1.507046	0.114190	1.507040	0.114193			3.242470
	BEC58P	11.252627	0.845535	11.252627	0.845536	37.626994	1.066988	62.920000
	CNA172	6.363092	0.478090	6.363092	0.479895	76.499736	2.230314	92.416027
	CNA182	3.047586	0.228695	3.047586	0.228693	25.085294	0.731304	32.368808
	CNA500	0.535839	0.041488	0.535839	0.041480			1.154639
	CNA550	1.105169	0.082909	1.105169	0.082904			2.376148
	EMB110	0.468858	0.034190	0.468858	0.034192			1.006131
	GASEPF	8.205940	0.616930	8.205940	0.616932	110.379476	3.238062	131.261481
	PA31	1.081895	0.078930	1.081889	0.078952			2.282043
17L Total		33.523450	2.520545	33.523450	2.520552	249.591200	7.276716	328.959916
17R	BEC200	0.649881		0.649880				1.299761
	BEC58P	4.822277		4.822274		16.125754		25.770853
	CNA172	2.727053		2.727051		32.785688		38.239793
	CNA182	1.365115		1.365114		10.750982		13.863211
	CNA500	0.229647		0.229646				0.459293
	CNA550	0.473646		0.473646				0.947292
	EMB110	0.200941		0.200941				0.401881
	GASEPF	3.514463		3.514460		47.305701		54.118643
	PA31	0.449940		0.449940				0.899880
17R Total		14.367257		14.367252		106.968144		135.703658
31L	BEC200	0.215292		0.215292				0.430584
	BEC58P	1.607517		1.607518		5.375184		8.590209
	CNA172	0.909010		0.909010		10.926564		12.745564
	CNA182	0.453868		0.453868		3.383728		4.454466
	CNA500	0.076548		0.076546				0.153090
	CNA550	0.157881		0.157881				0.315763
	EMB110	0.066980		0.066980				0.133959
	GASEPF	1.172144		1.172145		15.768440		18.112729
	PA31	0.148312		0.148312				0.296624
31L Total		4.789045		4.789050		35.655916		45.234011
31R	BEC200	0.484408	0.037110	0.484408	0.037112			1.043038
	BEC58P	3.619815	0.274824	3.619815	0.274786	12.094264	0.356529	20.236306
	CNA172	2.045278	0.155965	2.045277	0.155964	24.589066	0.724814	29.716470
	CNA182	1.025581	0.078260	1.025580	0.078260	8.063269	0.237692	10.408961
	CNA500	0.172234	0.013486	0.172234	0.013483			0.371426
	CNA550	0.355233	0.026945	0.355232	0.026944			0.764354
	EMB110	0.150705	0.011518	0.150705	0.011512			0.323618
	GASEPF	2.637332	0.200990	2.637331	0.200502	35.478990	1.045870	42.280025
	PA31	0.337701	0.025009	0.337701	0.025003			0.717413
31R Total		10.773386	0.819175	10.773380	0.819176	80.225608	2.364936	105.776660
35L	BEC200	0.699700		0.699701				1.399402
	BEC58P	5.224430		5.224436		17.469452		27.918318
	CNA172	2.954292		2.954294		35.517828		41.426413
	CNA182	1.414950		1.414951		11.646816		14.476717
	CNA500	0.248782		0.248783				0.497565
	CNA550	0.513114		0.513114				1.026228
	EMB110	0.217695		0.217685				0.435380
	GASEPF	3.809483		3.809485		51.247828		58.866793
	PA31	0.482016		0.482016				0.964032
35L Total		15.564466		15.564466		115.881924		147.010836
35R	BEC200	1.291752	0.105625	1.291752	0.105627			2.794756
	BEC58P	9.645081	0.782130	9.645079	0.782119	32.253310	1.014714	54.129429
	CNA172	5.454064	0.443900	5.454062	0.443900	65.573176	2.069040	79.430142
	CNA182	2.612316	0.211655	2.612309	0.211657	21.503366	0.678302	27.825198
	CNA500	0.459260	0.038378	0.459289	0.038369			0.995318
	CNA550	0.947285	0.076685	0.947285	0.076682			2.047938
	EMB110	0.403876	0.031625	0.403878	0.031627			0.867008
	GASEPF	7.032872	0.570660	7.032870	0.570661	94.610638	2.976706	112.794607
	PA31	0.889874	0.071166	0.889873	0.071161			1.922068
35R Total		28.734365	2.331506	28.734298	2.331506	213.934997	6.738962	282.797660
HN	B206B3	1.203862	0.037232	1.203862	0.037230			2.482186
	EC130	2.205754	0.068218	2.205754	0.068216			4.547942
	R22	6.671742	0.206348	6.671738	0.206344			13.756164
	R44	3.315274	0.102534	3.315274	0.102534			6.835616
	S76	0.195536	0.004052	0.195537	0.004194			0.279454
HN Total		13.532168	0.418516	13.532160	0.418518			27.901362
HS	B206B3	1.203862	0.037232	1.203862	0.037230			2.482186
	EC130	2.205754	0.068218	2.205754	0.068216			4.547942
	R22	6.671742	0.206348	6.671738	0.206344			13.756164
	R44	3.315274	0.102534	3.315274	0.102534			6.835616
	S76	0.195536	0.004052	0.195537	0.004194			0.279454
HS Total		13.532168	0.418516	13.532160	0.418518			27.901362
H13	B206B3_H					1.115811	0.040995	1.256806
	EC130_H					2.489859	0.076537	2.894388
	R22_H					7.388706	0.225474	7.514180
	R44_H					3.622177	0.112026	3.734203
	S76_H					0.147844	0.004572	0.152416
H13 Total						14.784395	0.457249	15.241644
H17	B206B3_H					5.263746	0.162781	5.426025
	EC130_H					9.699475	0.298127	9.997602
	R22_H					29.154826	0.901696	30.056522
	R44_H					14.488707	0.448104	14.936811
	S76_H					0.581376	0.018290	0.609666
H17 Total						59.137578	1.828997	60.966575
H31	B206B3_H					1.770554	0.052904	1.764458
	EC130_H					3.132613	0.096891	3.229504
	R22_H					9.475318	0.293013	9.768370
	R44_H					4.708892	0.145614	4.854466
	S76_H					0.192297	0.005944	0.198141
H31 Total						19.219713	0.594424	19.814137
H35	B206B3_H					4.868501	0.150572	5.019073
	EC130_H					8.916468	0.275767	9.192235
	R22_H					26.968714	0.834068	27.802782
	R44_H					13.402654	0.414497	13.817151
	S76_H					0.547023	0.016918	0.563941
H35 Total						54.702960	1.691822	56.394082
Grand Total		146.790807	7.138337	146.790889	7.138408	1039.343251	32.764391	1368.864107

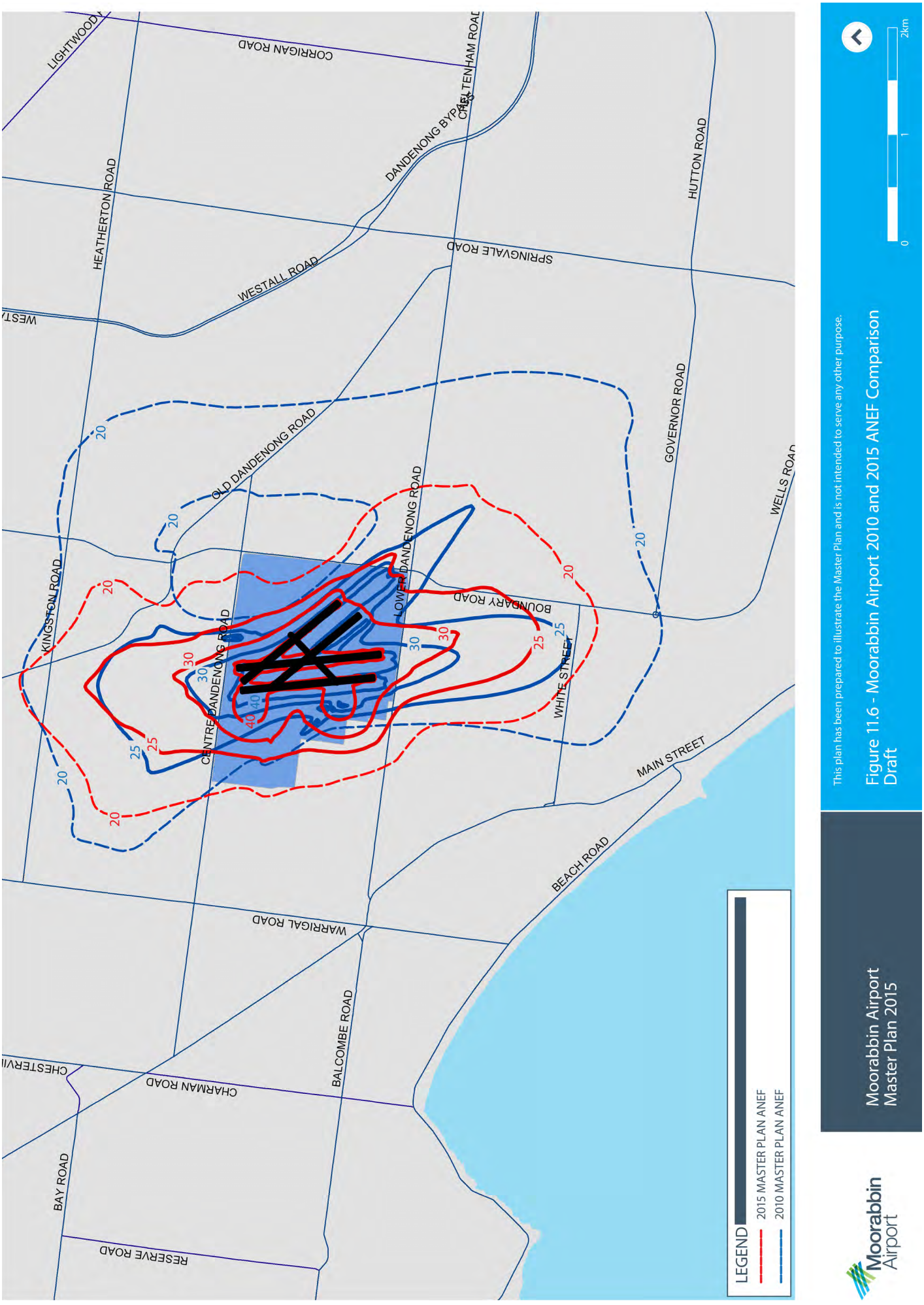


Figure 11.6 // Moorabbin Airport 2010 and 2015 ANEF Comparison

This plan has been prepared to illustrate the Master Plan and is not intended to serve any other purpose.

Figure 11.7 - "Number above" contours - N60 contour map
Draft

Moorabbin Airport
Master Plan 2015

Moorabbin Airport

Figure 11.7 // "Number above" contours – N60 contour map

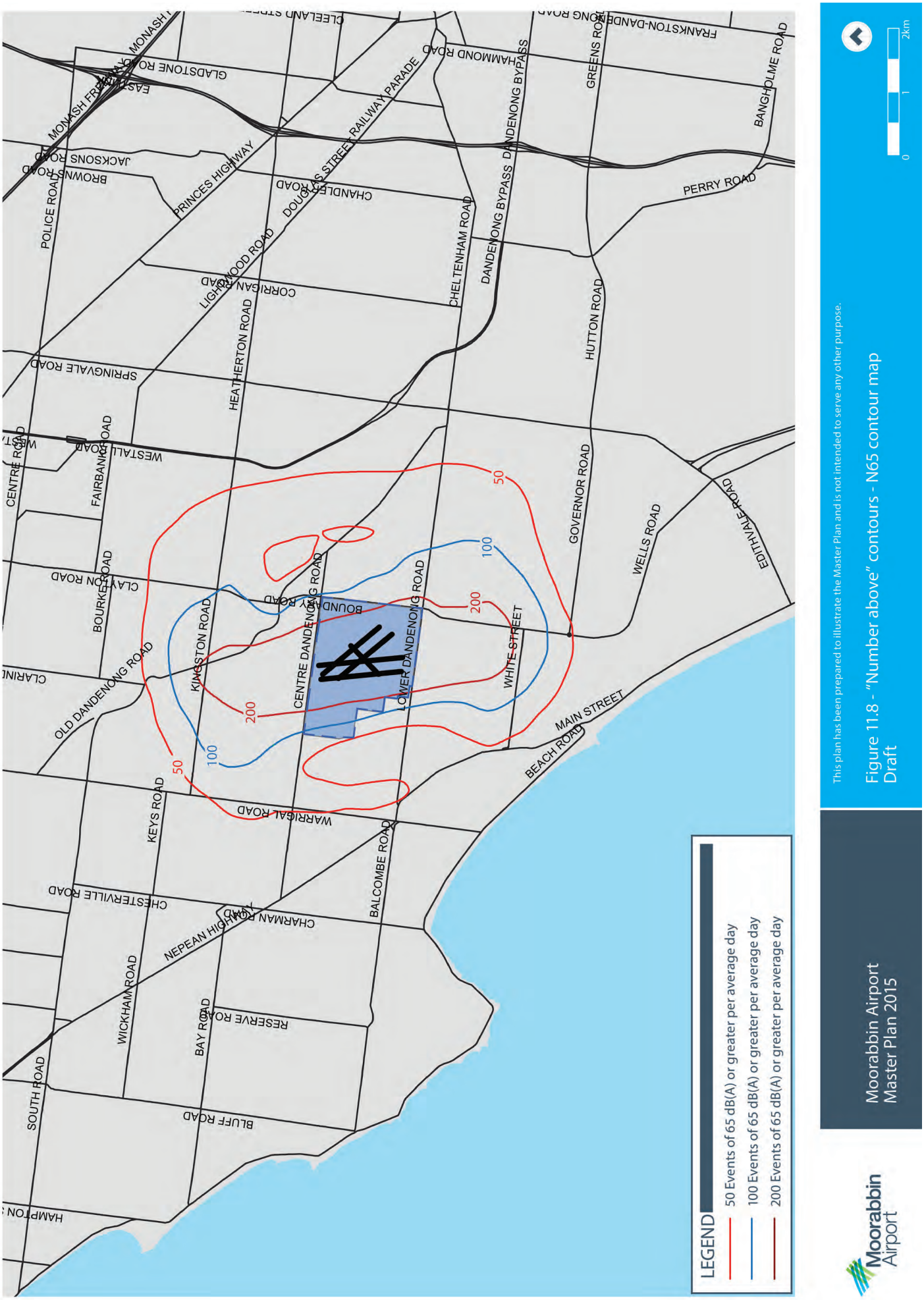


Figure 11.8 // "Number above" contours – N65 contour map

Figure 11.9 // "Number above" contours – N70 contour map

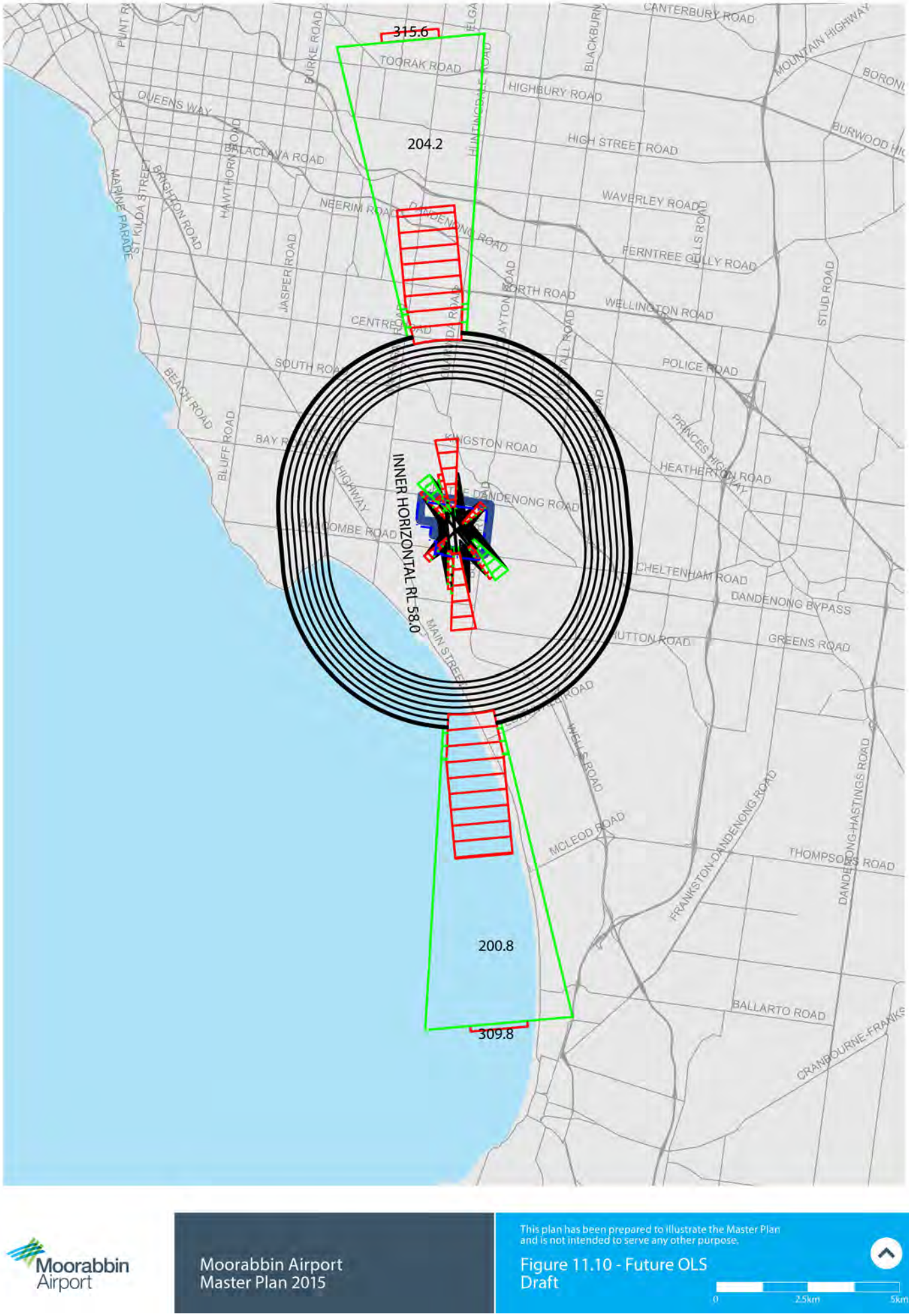


Figure 11.10 // Future OLS

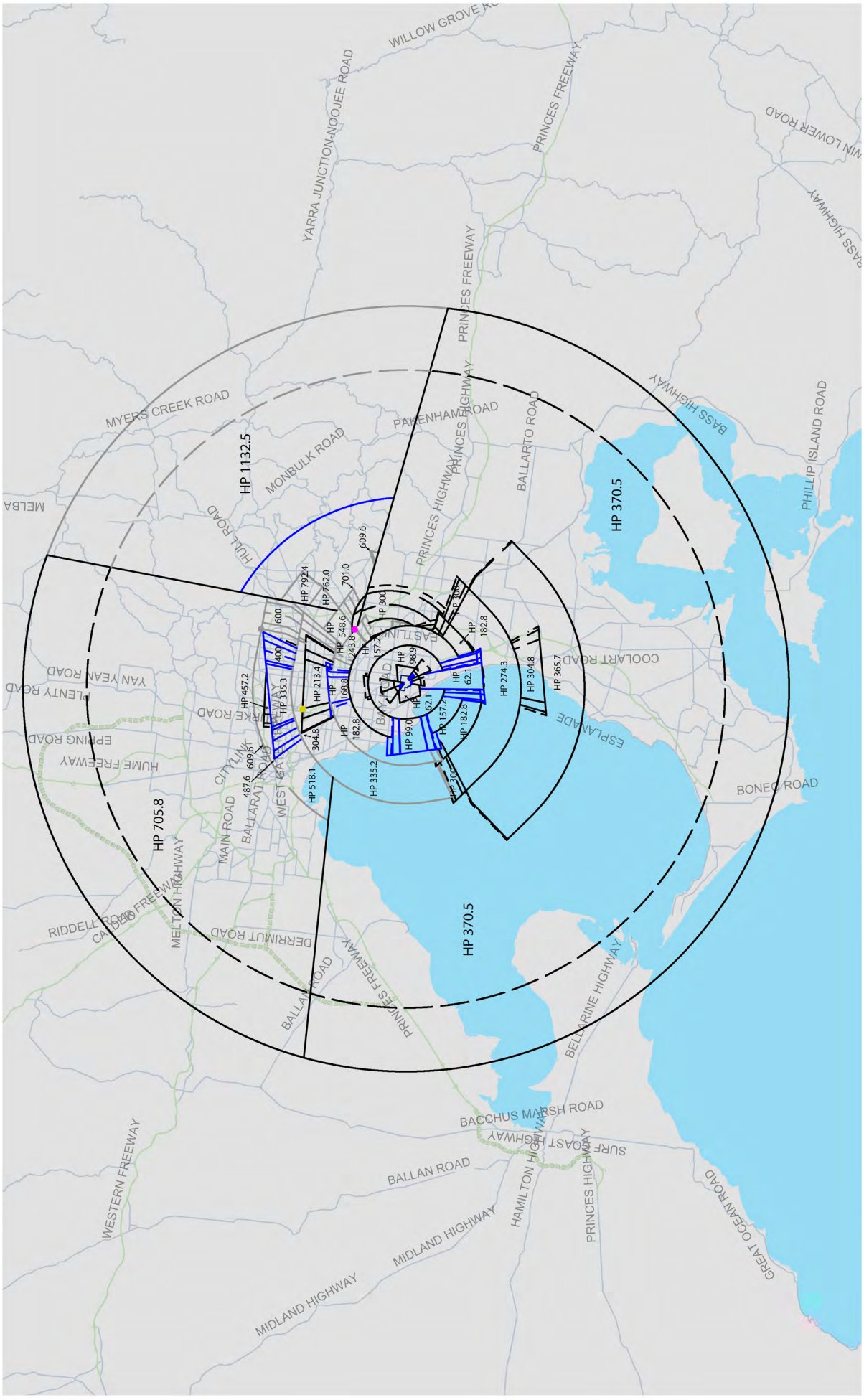


Figure 11.11 // Future PANS-OPS

12 // Implementing The 2015 Master Plan

- Objectives and strategies in this 2015 Master Plan are will be implemented and realised over the next 20 years.
- This 2015 Master Plan is a 20 year plan and will be reviewed and replaced with a new Master Plan in 2020.
- Implementation and capital expenditure in this 2015 Master Plan will be demand-driven and matched with infrastructure and support improvements.
- Implementation will address relevant laws and policies, and will be managed using appropriate project delivery, safety and environmental management systems.
- MAC will continue to actively engage stakeholders throughout the planning period of this 2015 Master Plan.

12.1 Introduction

This 2015 Master Plan for Moorabbin Airport establishes the direction for aviation and non-aviation activities over the next 20 years. Once approved, this 2015 Master Plan will remain in effect for a period of 5 years as prescribed under the Airports Act.

The implementation of this 2015 Master Plan will be demand driven and matched by appropriate infrastructure and support improvements. This programme of implementation will respond to and address all relevant Commonwealth, State and local laws and policies.

12.2 Capital Program

Capital works improvements across Moorabbin Airport's aviation and non-aviation precincts will align with development priorities outlined in this 2015 Master Plan and will be funded by MAC.

12.3 Project Delivery

MAC's management team and its external consultants will ensure effective and appropriate project management and project delivery practices.

To achieve consistent business outcomes, relevant standards, policies and procedures will be adopted to:

- help MAC deliver on its commitment to capital investment for the Airport;
- track and communicate progress on proposed and current projects;
- enable MAC to build its capability to run successful projects and programmes; and
- continuously improve the way MAC runs projects and programmes.
- MAC will aim to ensure that in delivering each project and programme:
- the expectations of all project and business stakeholders are appropriately managed;
- a transparent process is provided to those affected by the project;
- a governance process is established so that those delivering the project understand what is required, by whom and when;
- provides increased clarity to ensure that the project provides the best outcome for the business;
- provides increased consistency and quality of information for efficient and effective communication;
- stakeholder buy-in is increased and project objectives are aligned to strategic goals;
- projects progress seamlessly through the funding and design approval stages;
- the ability of the business to plan and evaluate workload is increased; and
- the ability of the business to prioritise projects is increased.

12.4 Development Approval Process

The development approval process for Moorabbin Airport is set down in the Airports Act 1996 and described in **Section 5.4.3** of this 2015 Master Plan.

12.5 Safety Management Systems

Developments at the Airport are subject to an aviation risk assessment through the Moorabbin Airport Safety Management System (SMS) where appropriate. Developments are assessed to ensure safe aircraft operations are maintained and that any risk mitigation action is taken prior to the development commencing, where appropriate

12.6 Environmental Management System

Moorabbin Airport's Environmental Management System is described in **Chapter 10.4** of this 2015 Master Plan. This system provides a comprehensive, structured approach to managing environmental protection measures.

12.7 Community & Stakeholder Engagement

MAC maintains extensive involvement in a large number of consultative processes between itself, the community, customers and authorities.

12.7.1 Moorabbin Airport Community Aviation Consultation Group

MAC operates a Community Aviation Consultation Group (CACG), which meets quarterly.

MAC, community bodies and government agencies provide information to the CACG on issues and policies that may affect future operations of the Airport.

Issues regarding aircraft noise management and flight paths are able to be discussed and suggestions made to the responsible authorities, CASA and Airservices Australia, regarding noise abatement procedures and safety measures where these are applicable. These issues are reviewed and discussed as part of the CACG's meetings.

The CACG acts as a forum so that key participants in the operation of the Airport, and representatives of communities surrounding the Airport, can understand each other's activities and concerns.

The CACG has an independent Chair and comprises the following:

- MAC;
- City of Kingston: Councillors and Executive;
- State Member for Mordialloc;
- State Government Departments;
- Federal Member for Isaacs;
- Federal Member for Hotham;
- Airservices Australia;
- Civil Aviation Safety Authority;
- Airport customers: normally 3-4 flying organisations;
- Moorabbin Airport Residents Association (MARA);
- Dingley Village Community Association (DVCA); and
- Heatherton and Dingley Village Committee.

The terms of reference of the CACG have regard to various issues and concerns of the community at large and Airport customers regarding the operation of the Airport.

Individual members of the CACG may raise issues that affect them and can be actioned within their area of authority. MAC provides information from time to time regarding forthcoming plans for land use and activities at the Airport.

A major feature of discussions of the CACG relates to issues of aircraft noise. This issue is further discussed in **Chapter 11 – Airport Safeguarding Strategy**.

12.7.2 Additional Consultation

MAC undertakes extensive consultation with industry bodies and with local, State and Australian governments in relation to a large number of matters affecting aviation safety and security as well as land use and land use planning. These include:

- MAC having detailed and ongoing consultation with local and State service authorities since the purchase of the Airport. As a result comprehensive infrastructure and road network upgrade plans have been developed. Further information is contained in **Chapter 8 – Ground Transport Plan**;
- MAC has had detailed and ongoing consultation with Commonwealth and State authorities, Airport customers and stakeholders, and the community in relation to the Environment Strategy as explained further in **Chapter 10 – Environment Strategy**;
- The Airport Emergency Planning Committee, which comprises membership from Airport customers, airlines, airspace authorities and emergency services. This committee reviews the operation of the Airport Emergency plan (AEP). This is a statutory committee required under the certification of Moorabbin Airport by CASA;
- Municipal Emergency Management Planning Committee. MAC maintains representation on the Municipal Emergency Management Planning Committee convened by the City of Kingston that deals with all emergency planning matters relating to events in the local area;
- Airport Security Committee. Convened under the terms of the Aviation Transport Security Act 2004, this committee represents key stakeholders in the security of the Airport including Airport customers and airlines, airspace authorities and representatives from Victoria Police; and
- Aviation Obstacle Protection. MAC holds delegated authority under the Airports (Protection of Airspace) Regulations 1996 for approval of temporary obstructions affecting Moorabbin prescribed airspace and is a referral authority under the Kingston Planning Scheme for all building proposals within the Aviation Obstacle Referral Height Area to ensure that the flight paths associated with the Airport are protected from the encroachment of inappropriate obstacles which may affect the safe and effective operation of the Airport. This process is undertaken in consultation with relevant authorities.

12.8 Periodic Reviews

This 2015 Master Plan will remain in force for 5 years as prescribed in the Airports Act. The Act also allows the Minister to direct an airport-lessee to replace an existing Master Plan with a new Master Plan.

MAC also undertakes regular internal reviews of aviation and non-aviation development and infrastructure requirements and assessments against the directions outlined in this 2015 Master Plan.

Other reviews focus on noise contours and airspace surfaces to ensure that the airport safeguarding strategies are being appropriately implemented.

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13 // Conclusion

Moorabbin Airport is a key transport and economic hub for metropolitan Melbourne and regional Victoria.

The Airport is Australia's largest centre for commercial flight training for both fixed and rotary-wing aircraft and trains around 800 commercial pilots per annum at well-regarded, high-profile flight training colleges. The Airport has an international reputation for training excellence and is an emerging centre of training in aviation support and maintenance services.

Moorabbin Airport currently accommodates a working population of 3,300 "on-Airport" with another 6,035 indirect, "off-Airport" working population. Direct employees are 5% of all employment within the City of Kingston. It is anticipated that the Airport will see anticipated employment growth to 8,500 direct workers by 2035, which will then be approximately 10% of all employment in Kingston.

This 2015 Master Plan has been prepared to address the requirements of the Airports Act and establishes:

- the strategic direction for efficient and economic development at the Airport over the next 20 years;
- the location and nature of additional uses at the Airport;
- means by which potential conflicts between uses of the Airport site are reduced;
- that uses of the Airport site are compatible with the areas surrounding the Airport;
- procedures to ensure all operations at the Airport are undertaken in accordance with relevant environmental legislation and standards; and
- a structure to provide for the continual improvement of environmental management at the Airport.

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Glossary & List of Abbreviations

AAT	Administrative Appeals Tribunal (Commonwealth)
ABC	Airport Building Controller
ABS	Australian Bureau of Statistics
ACN	Aircraft Classification Number
ADP	The Aviation Development Plan set out in Chapter 6 of this 2015 Master Plan
AE Officer	Airport Environment Officer
AEO	Airport Environs Overlay
AES	Airport Environment Strategy
AEP	Airport Emergency Plan
Airports Act (or the Act)	Airports Act 1996 (Commonwealth)
Airports Regulations (or the Regulations)	Regulations made under the Airports Act
ANEF	Australian Noise Exposure Forecast
AS2021	Australian Standard AS2021-2015 – Acoustics – Aircraft noise intrusion – Building siting and construction
ATC	Air Traffic Control
CAAP	Civil Aviation Advisory Publication
CASA	Civil Aviation Safety Authority
CASR	Civil Aviation Safety Regulations 1998
CACG	Community Aviation Consultation Group
CTR	Control Zone
DIRD	Commonwealth Department of Infrastructure and Regional Development
DME	Distance Measuring Equipment
DVCA	Dingley Village Community Association
EAP	Environmental Action Plan
EMS	Environmental Management System
EPBC	Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth)
ERSA	Enroute Supplement Australia
FAA	Federal Aviation Administration of the United States of America
GA	General Aviation
GAAP	General Aviation Aerodrome Procedures
GPS	Global Positioning System
HLS	Helicopter Landing Site
IATA	International Air Transport Association
ICAO	International Civil Aviation Organisation
IFR	Instrument Flight Rules
KCC	Kingston City Council
MAC	Moorabbin Airport Corporation
MAACC	Moorabbin Airport Aviation Consultative Committee

MARA	Moorabbin Airport Residents Association
MDP	Major Development Plan
MOS 139	CASA Manual of Standards Part 139 – Aerodromes
MTOW	Maximum Takeoff Weight
Minister	The Minister for Infrastructure and Regional Development of the Commonwealth of Australia
MWC	Melbourne Water Corporation
NASF	National Airports Safeguarding Framework
NDB	Non Directional Radio Beacon
OLS	Obstacle Limitation Surface
PANS-OPS	Procedures for Air Navigation Services – Aircraft Operations
PCN	Pavement Classification Number
PPF	the draft Planning Policy Framework proposed for the Victoria Planning Provisions
RNAV (GNSS)	Area Navigation (Global Navigation Satellite System)
RPT	Regular Public Transport
RVAC	Royal Victorian Aero Club
SEWL	South Eastern Water Limited
Southern Subregion	The Southern Subregion of metropolitan Melbourne as defined in Plan Melbourne
SPPF	State Planning Policy Framework (within the Victoria Planning Provisions)
VITM	Victorian Integrated Transport Model
VPP	Victoria Planning Provisions

NOTE – Wherever data has been specifically commissioned by MAC for the purposes of preparing this 2015 Master Plan, it has been prepared by reference to the 5 year (to 2020) or 20 year (to 2035) planning periods. Where data from other sources has been used which does not correspond to either of these planning periods, the closest available data has been used.

Unless otherwise stated, the base period for financial and employment impacts and comparisons is the 2014 calendar year.

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Appendix 1 - Moorabbin Airport Planning Controls - 2015 Master Plan

1.0 ZONES

This section sets out the zones which apply to land at the Airport.

1.1 MOORABBIN AIRPORT SPECIAL USE ZONE

Shown on the Zoning Plan (**Figure 5.9**) as **MA**-**SUZ** with a number.

Purpose

To protect airside land and uses for aviation operations.

To preserve and enhance the aviation capacity and functions of Moorabbin Airport.

To reinforce the role of Moorabbin Airport as a transport gateway of State significance.

To recognise or provide for the use and development of land for specific purposes as identified in a schedule to this zone.

1.1-1 Table of uses

Section 1 – Approval not required

USE	CONDITION
Any use in Section 1 of the schedule to this zone	Must comply with any condition in Section 1 of the schedule to this zone

Section 2 – Approval required

USE	CONDITION
Any use in Section 2 of the schedule to this zone	Must comply with any condition in Section 2 of the schedule to this zone.
Any other use not in Section 1 or 3 of the schedule to this zone	

Section 3 – Prohibited

USE
Any use in Section 3 of the schedule to this zone

1.1-2 Use of land

Any requirement in the schedule to this zone must be met.

If the use of land is for "sensitive development" as defined in the *Airports Act 1996,* then that use of land must not occur without the approval of the Minister as required under section 89A of the Act.

Application requirements

An application to use land or any part thereof must be accompanied by, amongst other information, the following, as appropriate:

- A description of the proposed use and the types of activities which will be carried out.
- A description of the proposed staging of use and activities on the land.

- Plans drawn to scale and dimensioned showing:
  - The location of the proposed uses and activities
  - The location and use of buildings on adjoining land
- A traffic management plan.
- Details of any car parking required and provided in conjunction with the proposed use.
- Details of any amenity impacts arising as a consequence of the proposed use.
- A written statement describing the likely effects, if any, on aircraft operations.
- An economic assessment.
- A written statement providing an assessment of the proposal's consistency with the 2015 Moorabbin Airport Master Plan.

Decision Guidelines

Before deciding on an application, Moorabbin Airport Corporation must consider, as appropriate:

General

- The consistency of the proposal with the 2015 Moorabbin Airport Master Plan.
- The Airports Act 1996 and Regulations.
- The compatibility of the proposed use with adjoining and nearby land use and development.
- Whether the proposal contributes to the protection of airside land at the Airport.
- Whether the proposal contributes to the amenity of the Airport.

Aircraft operations

- Whether the proposal impacts on the safe and secure operation of the Airport.
- Whether the proposal complies with the prescribed airspace requirements (protection of OLS and PANS-OPS surfaces).
- Whether the proposal addresses the Australian Noise Exposure Forecast (ANEF) requirements.
- Whether the proposal complies with the NASF guidelines.
- Whether the proposal is consistent with Part 139 of the *Civil Aviation Safety Regulations 1998*.

1.1-3 Leasing

As all Airport land is owned by the Commonwealth of Australia and leased to the Airport Operator, land is subject to either a lease, sub-lease, licence or other occupancy agreement.

1.1-4 Buildings and works

Approval is required to develop land, including to construct a building or construct or carry out works, unless the schedule to this zone specifies otherwise.

Any requirement of the Airport Building Controller and/or in the schedule to this zone must be met.

If buildings or works are of a nature specified in Section 89 of the *Airports Act 1996*, then the relevant requirements of Sections 90 to 94 of the *Airports Act 1996* apply.

If the proposal is a "sensitive development" as defined in the *Airports Act 1996,* then the development must not be carried out without the approval of the Minister as required under section 89A of the Act.

Maximum height of buildings or works must not exceed the relevant Obstacle Limitations Surface standards.

Application requirements

An application to construct a building or construct or carry out works must be accompanied by, amongst other information, the following, as appropriate:

- Plans drawn to scale and dimensioned showing:
  - The boundaries and dimensions of the site.
  - Adjoining roads.
  - The location and height of buildings and works on adjoining land.
  - Levels of the site and the difference in levels between the site and surrounding properties to a defined point at the site boundaries or to Australian Height Datum (AHD).
  - The layout of existing and proposed buildings and works.
  - The internal layout and use of the proposed development.
  - All vehicular, bicycle and pedestrian access arrangements including driveways, paths, parking, bicycle storage and loading facilities.
  - External storage and waste management areas.
  - The location of easements and services.
- Elevation plans drawn to scale and dimensioned showing:
  - The building form and scale.
  - The colour and materials of all buildings and works.
  - Setbacks to property boundaries.
  - Finished floor levels and building heights to Australian Height Datum (AHD).
- Construction details of all drainage works, driveways, vehicle parking and loading areas.
- A landscape layout which includes the description of vegetation to be planted, its source, the surfaces to be constructed, site works specification and method of preparing, draining, watering, maintaining and monitoring the landscape area.
- Details of any amenity impacts arising as a consequence of the proposed use.
- A written statement describing the likely effects, if any, on aircraft operations.

- Pre- and post-construction environmental and works plan.
- A written statement providing an assessment of the proposal's consistency with the 2015 Moorabbin Airport Master Plan.

Decision guidelines

Before deciding on an application, Moorabbin Airport Corporation must consider, as appropriate:

General

- The consistency of the proposal with the 2015 Moorabbin Airport Master Plan.
- The consistency of the proposal with the *Airports Act 1996* and Regulations.
- The compatibility of the proposed buildings and works with adjoining and nearby land use and development.
- Whether the proposal contributes to the protection of airside land at the Airport for aviation purposes.
- Whether the proposal enhances the amenity of the Airport.

Aircraft operations

- Whether the proposal impacts on the safe and secure operation of the Airport.
- Whether the proposal complies with the prescribed airspace requirements (protection of OLS and PANS-OPS surfaces.
- Whether the proposal addresses the Australian Noise Exposure Forecast (ANEF) requirements.
- Whether the proposal is consistent with the National Airports Safeguarding Framework (NASF).
- Whether the proposal is consistent with Part 139 of the *Civil Aviation Safety Regulations 1998*.

1.1-5 Advertising signs

Advertising sign requirements are at Section 3.1 of these Moorabbin Airport Planning Controls – 2015 Master Plan.

1.1-6 Car Parking

Car parking requirements are at Section 3.2 of these Moorabbin Airport Planning Controls – 2015 Master Plan.

1.1-7 Loading and Unloading Vehicles

Requirements for the loading and unloading of vehicles are at Section 3.3 of these Moorabbin Airport Planning Controls – 2015 Master Plan.

1.1-8 Design Principles

Design Principles for New Development are at Section 3.4 of these Moorabbin Airport Planning Controls – 2015 Master Plan.

1.1.1 MOORABBIN AIRPORT SPECIAL USE ZONE – SCHEDULE 1

Shown on the Zoning Plan **(Figure 5.9)** as **MA-SUZ1**.

Airside Operations

Purpose

To protect airside land and uses for aviation operations.

To preserve and enhance the aviation capacity and functions of Moorabbin Airport.

To minimise flooding risk to Airport operations.

1.1.1-1 Table of uses

Section 1 – Planning Approval not required

USE	CONDITION
Air traffic control facility	
Aircraft operations	
Airport	
Airport operations facilities	
Apron	
Helipad	
Heliport	
Minor utility installation	
Navigational aids including weather station	
Road	
Runway	
Runway approach aid	
Taxiway	

Section 2 – Planning Approval required

USE	CONDITION
Aviation maintenance facility	
Aviation support facility	
Car park	
Fuel facility	
Passenger terminal and associated facilities	
Transport terminal	
Utility installation (other than Minor utility installation)	
Any other use not in Section 1 or 3	

Section 3 – Prohibited

USE
Corrective institution
Gambling premises
Intensive animal husbandry
Major sports and recreation facility
Shop
Any use which is a Sensitive Development (as defined in the *Airports Act 1996*) unless a Major Development Plan is approved for that use in accordance with the Act

1.1.2 MOORABBIN AIRPORT SPECIAL USE ZONE – SCHEDULE 2

Shown on the Zoning Plan **(Figure 5.9)** as **MA-SUZ2**.

Aviation Support Services

Purpose

To support the long-term aviation needs of the Airport including aviation expansion, aviation operations and terminal areas.

To provide for and encourage an efficient and capable base for a range of aviation functions.

To encourage linkages with aviation support services elsewhere on the Airport.

To provide for aviation and non-aviation business facilities and employment growth.

To provide additional employment opportunities for the region and local area.

To recognise adjacent off-Airport areas designated for residential land use as at 17 June 2015.

1.1.2-1 Table of uses

Section 1 – Planning Approval not required

USE	CONDITION
Air traffic control facility	
ATC associated facilities	
Aircraft operations	
Airport	
Airport operations facilities	
Apron	
Aviation maintenance facility	
Aviation support facility	
Car park	
Flight Training Education Centre	
Helipad	
Heliport	
Industry	Must not be a purpose shown with a Note 1 or Note 2 in the table to Clause 3.5. For a purpose listed in the table to Clause 3.5 (but not otherwise), the land must be at least the threshold distance (as specified in the table to Clause 3.5) from land (not a road) which as at 17 June 2015 is in a residential zone or the Commercial 1 Zone under the Kingston Planning Scheme, or land which as at that date is used for a hospital or an education centre. Must be appropriately designed and located so as not to cause offence or unacceptable risk to the neighbourhood.

USE	CONDITION
Minor utility installation	
Navigational aids including weather station	
Road	
Runway	
Runway approach aid	
Taxiway	
Warehouse	

Section 2 – Planning Approval required

Commercial Display Area	
Fuel Facility	
Motor racing track	
Passenger terminal and associated facilities	
Retail Premises (other than Gambling premises)	Must be: - a Convenience shop; - Food and drink premises; or - a Shop providing aviation-related goods and/or services.
Student Accommodation	
Transport terminal	
Utility installation (other than Minor utility installation)	
Any other use not in Section 1 or 3	

Section 3 – Prohibited

USE
Adult sex bookshop
Corrective institution
Gambling premises
Intensive animal husbandry
Major sports and recreation facility
Retail Premises (if the Section 2 condition is not met)
Any use which is a Sensitive Development (as defined in the *Airports Act 1996*) unless a Major Development Plan is approved for that use in accordance with the Act

1.1.3 MOORABBIN AIRPORT SPECIAL USE ZONE – SCHEDULE 3

Shown on the Zoning Plan **(Figure 5.9)** as **MA-SUZ3**.

Aviation Support Services & Industry

Purpose

To provide for aviation and non-aviation business facilities and employment growth.

To support the long-term aviation needs of the Airport including aviation expansion, aviation operations and terminal areas.

To provide for and encourage an efficient and capable base for a range of aviation and industrial functions.

To encourage linkages with aviation support services elsewhere on the Airport.

To provide additional employment opportunities for the region and local area.

1.1.3-1 Table of uses

Section 1 – Planning Approval not required

Aircraft operations	
Airport	
Airport operations facilities	
Apron	
Aviation maintenance facility	
Aviation support facility	
Car park	
Commercial Display Area	
Flight Training Education Centre	
Industry	Must not be a purpose shown with a Note 1 or Note 2 in the table to Clause 3.5. For a purpose listed in the table to Clause 3.5 (but not otherwise), the land must be at least the threshold distance (as specified in the table to Clause 3.5) from land (not a road) which as at 17 June 2015 is in a residential zone or the Commercial 1 Zone under the Kingston Planning Scheme, or land which as at that date is used for a hospital or an education centre. Must be appropriately designed and located so as not to cause offence or unacceptable risk to the neighbourhood.
Minor utility installation	
Office	
Road	
Student Accommodation	
Service Industry	
Vehicle Store	
Warehouse	

Section 2 – Planning Approval required

USE	CONDITION
Commercial Display Area	
Fuel facility	
Leisure and recreation (including Motor racing track)	
Passenger terminal and associated facilities	
Retail Premises (other than Gambling premises)	Must be: - a Convenience shop; - Food and drink premises; - Restricted retail premises; or - a Shop providing aviation-related goods and/or services.
Student Accommodation	
Transport terminal	
Utility installation (other than Minor utility installation)	
Any other use not in Section 1 or 3	

Section 3 – Prohibited

Adult sex bookshop
Corrective institution
Gambling premises
Intensive animal husbandry
Major sports and recreation facility
Retail Premises (if the Section 2 condition is not met)
Any use which is a Sensitive Development (as defined in the *Airports Act 1996*) unless a Major Development Plan is approved for that use in accordance with the Act

1.2 MOORABBIN AIRPORT COMMERCIAL 1 ZONE

Shown on the Zoning Plan (**Figure 5.9**) as **MA-C1Z**.

Purpose

To reinforce the role of Moorabbin Airport as a transport gateway of State significance.

To encourage a range of retail, office, business, entertainment and commercial uses.

To accommodate industrial uses where consistent with existing and prospective retail, office, business, entertainment and commercial uses.

To allow for medical and (subject to the support of the State Government and the City of Kingston) aged care uses as appropriate.

To provide additional employment opportunities for the region and local area.

1.2-1 Table of uses

Section 1 – Approval not required

USE	CONDITION
Accommodation (other than Corrective institution)	
Child care centre	
Education centre	
Exhibition centre	
Home occupation	
Informal outdoor recreation	
Motor racing track	
Minor utility installation	
Office	
Place of worship	
Railway	
Retail premises (other than Gambling premises and Shop)	
Shop (other than Adult sex bookshop)	
Telecommunications facility	
Tramway	

Section 2 – Approval required

USE	CONDITION
Agriculture (other than Apiculture and Intensive animal husbandry)	
Cinema	Must have the support of the State Government and the City of Kingston.
Cinema based entertainment facility	Must have the support of the State Government and the City of Kingston.
Hospital	Where required a Major Development Plan must be approved in accordance with the *Airports Act 1996*.
Industry	Must not be a purpose listed in the table to Clause 3.5.
Leisure and recreation facility (other than Informal outdoor recreation, Motor racing track and Major sports and recreation facility)	
Place of assembly (other than Cinema, Exhibition centre and Place of worship)	
Utility installation (other than Minor utility installation)	
Warehouse	
Any other use not in Section 1 or 3	

Section 3 – Prohibited

Adult sex bookshop
Corrective institution
Gambling premises
Intensive animal husbandry
Major sports and recreation facility
Any use which is a Sensitive Development (as defined in the *Airports Act 1996*) unless a Major Development Plan is approved for that use in accordance with the Act

1.2-2 Use of land

If the use of land is for "sensitive development" as defined in the *Airports Act 1996,* then that use of land must not occur without the approval of the Minister as required under section 89A of the Act.

Application requirements

An application to use land or any part thereof must be accompanied by, amongst other information, the following, as appropriate:

- A description of the proposed use and the types of activities which will be carried out.
- A description of the proposed staging of use and activities on the land.

- Plans drawn to scale and dimensioned showing:
  - The location of the proposed uses and activities
  - The location and use of buildings on adjoining land
- A traffic management plan.
- Details of any car parking required and provided in conjunction with the proposed use.
- Details of any amenity impacts arising as a consequence of the proposed use.
- A written statement describing the likely effects, if any, on aircraft operations.
- An economic assessment (if required in a schedule to this zone).
- A written statement providing an assessment of the proposal's consistency with the Moorabbin Airport 2015 Master Plan.

Decision Guidelines

Before deciding on an application, Moorabbin Airport Corporation must consider, as appropriate:

General

- The consistency of the proposal with the Moorabbin Airport 2015 Master Plan.
- The consistency of the proposal with the *Airports Act 1996* and Regulations.
- The compatibility of the proposed buildings and works with adjoining and nearby land use and development.
- Whether the proposal contributes to enhancing the amenity of the Airport.

Aircraft operations

- Whether the proposal impacts on the safe and secure operation of the Airport.
- Whether the proposal complies with the prescribed airspace requirements (protection of OLS and PANS-OPS surfaces).
- Whether the proposal addresses the Australian Noise Exposure Forecast (ANEF) requirements.
- Whether the proposal complies with the NASF guidelines.
- Whether the proposal is consistent with Part 139 of the *Civil Aviation Safety Regulations 1998*.

1.2-3 Leasing

As all Airport land is owned by the Commonwealth of Australia and leased to the Airport Operator, land is subject to either a lease, sub-lease, licence or other occupancy agreement.

1.2-4 Buildings and works

Approval is required to develop land, including to construct a building or construct or carry out works.

If buildings or works are of a nature specified in Section 89 of the *Airports Act 1996*, then the relevant requirements of Sections 90 to 94 of the *Airports Act 1996* apply.

If the proposal is a "sensitive development" as defined in the *Airports Act 1996,* then the development must not be carried out without the approval of the Minister as required under section 89A of the Act.

Maximum height of buildings or works must not exceed the relevant Obstacle Limitations Surface standards.

Application requirements

An application to construct a building or construct or carry out works must be accompanied by, amongst other information, the following, as appropriate:

- Plans drawn to scale and dimensioned showing:
  - The boundaries and dimensions of the site.
  - Adjoining roads.
  - The location and height of buildings and works on adjoining land.
  - Levels of the site and the difference in levels between the site and surrounding properties to a defined point at the site boundaries or to Australian Height Datum (AHD).
  - The layout of existing and proposed buildings and works.
  - The internal layout and use of the proposed development.
  - All vehicular, bicycle and pedestrian access arrangements including driveways, paths, parking, bicycle storage and loading facilities.
  - External storage and waste management areas.
  - The location of easements and services.
- Elevation plans drawn to scale and dimensioned showing:
  - The building form and scale.
  - The colour and materials of all buildings and works.
  - Setbacks to property boundaries.
  - Finished floor levels and building heights to Australian Height Datum (AHD).
- Construction details of all drainage works, driveways, vehicle parking and loading areas.
- A landscape layout which includes the description of vegetation to be planted, its source, the surfaces to be constructed, site works specification and method of preparing, draining, watering, maintaining and monitoring the landscape area.
- Details of any amenity impacts arising as a consequence of the proposed use.
- A written statement describing the likely effects, if any, on aircraft operations.
- Pre- and post-construction environmental and works plan.
- A written statement providing an assessment of the proposal's consistency with the Moorabbin Airport 2015 Master Plan.

Decision guidelines

Before deciding on an application, Moorabbin Airport Corporation must consider, as appropriate:

General

- The consistency of the proposal with the Moorabbin Airport 2015 Master Plan.
- The consistency of the proposal with the *Airports Act 1996* and Regulations.
- The compatibility of the proposed buildings and works with adjoining and nearby land use and development.
- Whether the proposal contributes to enhancing the amenity of the Airport.
- Whether the proposal contributes to or enhances the Airport as a centre of employment and economic activity.

Aircraft operations

- Whether the proposal impacts on the safe and secure operation of the Airport.
- Whether the proposal complies with the prescribed airspace requirements (protection of OLS and PANS-OPS surfaces.
- Whether the proposal addresses the Australian Noise Exposure Forecast (ANEF) requirements.
- Whether the proposal complies with the NASF guidelines.
- Whether the proposal is consistent with Part 139 of the *Civil Aviation Safety Regulations 1998*.

1.2-5 Advertising signs

Advertising sign requirements are at Section 3.1 of these Moorabbin Airport Planning Controls – 2015 Master Plan.

1.2-6 Car Parking

Car parking requirements are at Section 3.2 of these Moorabbin Airport Planning Controls – 2015 Master Plan.

1.2-7 Loading and Unloading Vehicles

Requirements for the loading and unloading of vehicles are at Section 3.3 of these Moorabbin Airport Planning Controls – 2015 Master Plan.

1.2-8 Design Principles

Design Principles for New Development are at Section 3.4 of these Moorabbin Airport Planning Controls – 2015 Master Plan.

1.3 MOORABBIN AIRPORT COMMERCIAL 2 ZONE

Shown on the Zoning Plan (**Figure 5.9**) as **MA-C2Z** with a number.

Purpose

To reinforce the role of Moorabbin Airport as a transport gateway of State significance.

To provide for aviation and non-aviation business, office, industrial and commercial facilities.

To encourage commercial areas for offices, appropriate industries, bulky goods retailing, certain other retail uses and associated business and commercial services.

To provide for aviation support services and encourage linkages with aviation activities and aviation support services elsewhere on the Airport.

To provide additional employment opportunities for the region and local area.

To recognise adjacent off-Airport areas designated for residential land use as at 17 June 2015.

1.3-1 Table of uses

Section 1 – Approval not required

USE	CONDITION
Food and drink premises	
Industry (other than Materials recycling and Transfer station)	Must not be a purpose shown with a Note 1 or Note 2 in the table to Clause 3.5. For a purpose listed in the table to Clause 3.5 (but not otherwise), the land must be at least the threshold distance (as specified in the table to Clause 3.5) from land (not a road) which as at 17 June 2015 is in a residential zone or the Commercial 1 Zone under the Kingston Planning Scheme, or land which as at that date is used for a hospital or an education centre. Must be appropriately designed and located so as not to cause offence or unacceptable risk to the neighbourhood.
Informal outdoor recreation	
Mail centre	
Minor utility installation	
Motor racing track	
Museum	

USE	CONDITION
Office	
Postal agency	
Railway	
Restricted retail premises	
Shop (other than Adult sex bookshop, Restricted retail premises, Supermarket and Department store (including a Discount department store))	Must adjoin, or be on the same land as, a supermarket when the use commences. The combined leasable floor area for all shops adjoining or on the same land as the supermarket must not exceed 500 square metres.
Supermarket	The leasable floor area must not exceed 1,800 square metres.
Telecommunications facility	
Trade supplies	
Tramway	
Warehouse (other than Mail centre)	

Section 2 – Approval required

USE	CONDITION
Agriculture (other than Apiculture and intensive animal husbandry)	
Caretaker's house	
Cinema	Must have the support of the State Government and the City of Kingston.
Cinema based entertainment facility	Must have the support of the State Government and the City of Kingston.
Education centre	
Hospital	Where required a Major Development Plan must be approved in accordance with the *Airports Act 1996*.
Leisure and recreation (other than Informal outdoor recreation, Motor racing track and Major sports and recreation facility)	
Materials recycling	
Motel	
Place of Assembly (other than Museum and Cinema)	
Residential hotel	

Retail premises (other than Gambling premises, Food and drink premises, Postal agency, Restricted retail premises, Supermarket, Trade supplies and Department store (including a Discount department store))	
Transfer station	The land must be at least 30 metres from land (not a road) which is in a residential zone, land used for a hospital or an education centre.
Utility installation (other than Minor utility installation)	
Any other use not in Section 1 or 3	

Section 3 – Prohibited

USE
Accommodation (other than Caretaker's house, Motel, Residential hotel and Student accommodation)
Adult sex bookshop
Department store (including a Discount department store)
Gambling premises
Intensive animal husbandry
Major sports and recreation facility
Supermarket – if the Section 1 condition is not met
Any use which is a Sensitive Development (as defined in the *Airports Act 1996*) unless a Major Development Plan is approved for that use in accordance with the Act

1.3-2 Use of land

If the use of land is for "sensitive development" as defined in the *Airports Act 1996,* then that use of land must not occur without the approval of the Minister as required under section 89A of the Act.

Application requirements

An application to use land or any part thereof must be accompanied by, amongst other information, the following, as appropriate:

- A description of the proposed use and the types of activities which will be carried out.
- A description of the proposed staging of use and activities on the land.
- Plans drawn to scale and dimensioned showing:
  - The location of the proposed uses and activities
  - The location and use of buildings on adjoining land
- A traffic management plan.
- Details of any car parking required and provided in conjunction with the proposed use.
- Details of any amenity impacts arising as a consequence of the proposed use.
- A written statement describing the likely effects, if any, on aircraft operations.
- An economic assessment (if required in a schedule to this zone).
- A written statement providing an assessment of the proposal's consistency with the Moorabbin Airport 2015 Master Plan.

Decision Guidelines

Before deciding on an application, Moorabbin Airport Corporation must consider, as appropriate:

General

- The consistency of the proposal with the Moorabbin Airport 2015 Master Plan.
- The consistency of the proposal with the *Airports Act 1996* and Regulations.
- The compatibility of the proposed buildings and works with adjoining and nearby land use and development.
- Whether the proposal contributes to enhancing the amenity of the Airport.

Aircraft operations

- Whether the proposal impacts on the safe and secure operation of the Airport.
- Whether the proposal complies with the prescribed airspace requirements (protection of OLS and PANS-OPS surfaces).
- Whether the proposal addresses the Australian Noise Exposure Forecast (ANEF) requirements.
- Whether the proposal complies with the NASF guidelines.
- Whether the proposal is consistent with Part 139 of the *Civil Aviation Safety Regulations 1998*.

1.3-3 Leasing

As all Airport land is owned by the Commonwealth of Australia and leased to the Airport Operator, land is subject to either a lease, sub-lease, licence or other occupancy agreement.

1.3-4 Buildings and works

Approval is required to develop land, including to construct a building or construct or carry out works.

If buildings or works are of a nature specified in Section 89 of the *Airports Act 1996*, then the relevant requirements of Sections 90 to 94 of the *Airports Act 1996* apply.

If the proposal is a "sensitive development" as defined in the *Airports Act 1996,* then the development must not be carried out without the approval of the Minister as required under section 89A of the Act.

Maximum height of buildings or works must not exceed the relevant Obstacle Limitations Surface standards.

Application requirements

An application to construct a building or construct or carry out works must be accompanied by, amongst other information, the following, as appropriate:

- Plans drawn to scale and dimensioned showing:
  - The boundaries and dimensions of the site.
  - Adjoining roads.
  - The location and height of buildings and works on adjoining land.
  - Levels of the site and the difference in levels between the site and surrounding properties to a defined point at the site boundaries or to Australian Height Datum (AHD).
  - The layout of existing and proposed buildings and works.
  - The internal layout and use of the proposed development.
  - All vehicular, bicycle and pedestrian access arrangements including driveways, paths, parking, bicycle storage and loading facilities.
  - External storage and waste management areas.
  - The location of easements and services.
- Elevation plans drawn to scale and dimensioned showing:
  - The building form and scale.
  - The colour and materials of all buildings and works.
  - Setbacks to property boundaries.
  - Finished floor levels and building heights to Australian Height Datum (AHD).
- Construction details of all drainage works, driveways, vehicle parking and loading areas.
- A landscape layout which includes the description of vegetation to be planted, its source, the surfaces to be constructed, site works specification and method of preparing, draining, watering, maintaining and monitoring the landscape area.
- Details of any amenity impacts arising as a consequence of the proposed use.
- A written statement describing the likely effects, if any, on aircraft operations.
- Pre- and post-construction environmental and works plan.

- A written statement providing an assessment of the proposal's consistency with the Moorabbin Airport 2015 Master Plan.

Decision guidelines

Before deciding on an application, Moorabbin Airport Corporation must consider, as appropriate:

General

- The consistency of the proposal with the Moorabbin Airport 2015 Master Plan.
- The consistency of the proposal with the *Airports Act 1996* and Regulations.
- The compatibility of the proposed buildings and works with adjoining and nearby land use and development.
- Whether the proposal contributes to enhancing the amenity of the Airport.
- Whether the proposal contributes to or enhances the Airport as a centre of employment and economic activity.

Aircraft operations

- Whether the proposal impacts on the safe and secure operation of the Airport.
- Whether the proposal complies with the prescribed airspace requirements (protection of OLS and PANS-OPS surfaces.
- Whether the proposal addresses the Australian Noise Exposure Forecast (ANEF) requirements.
- Whether the proposal complies with the NASF guidelines.
- Whether the proposal is consistent with Part 139 of the *Civil Aviation Safety Regulations 1998*.

1.3-5 Advertising signs

Advertising sign requirements are at Section 3.1 of these Moorabbin Airport Planning Controls – 2015 Master Plan.

1.3-6 Car Parking

Car parking requirements are at Section 3.2 of these Moorabbin Airport Planning Controls – 2015 Master Plan.

1.3-7 Loading and Unloading Vehicles

Requirements for the loading and unloading of vehicles are at Section 3.3 of these Moorabbin Airport Planning Controls – 2015 Master Plan.

1.3-8 Design Principles

Design Principles for New Development are at Section 3.4 of these Moorabbin Airport Planning Controls – 2015 Master Plan.

2.0 OVERLAYS

This section sets out overlays which apply to specified areas or sites within the Airport.

2.1 MOORABBIN AIRPORT DESIGN AND DEVELOPMENT OVERLAY

Shown on the Design and Development Overlay Plan (**Figure 5.10**) as **MA-DDO**.

Purpose

To provide for the use and development of the land in accordance with the Moorabbin Airport Land Use Plan.

To identify areas which are affected by specific requirements arising under National Airport Safeguarding Framework (NASF) guidelines B, C, E and F.

Buildings and works

Planning Approval requirement

Planning approval is required to:

- Construct a building or construct or carry out works.
- Construct a fence.

Planning approval will be granted only for buildings and works which will, to the satisfaction of MAC be constructed generally in accordance with:

- NASF guideline B – Managing the Risk of Building Generated Windshear and Turbulence at Airports
- NASF guideline C – Managing the Risk of Wildlife Strikes in the Vicinity of Airports
- NASF guideline E – Managing the Risk of Distractions to Pilots for Lighting in the Vicinity of Airports
- NASF guideline F – Managing the Risk of Intrusions into the Protected Airspace of Airports

Notes: *Check the requirements of the zone which applies to the land.*

For the purposes of this clause buildings and works include radio masts, television antenna and flagpoles.

Other requirements may also apply. These can be found at Particular Provisions.

2.2 MOORABBIN AIRPORT AIRPORT ENVIRONS OVERLAY

Shown on the Moorabbin Airport Airport Environs Overlay Plan (**Figure 5.11**) as **MA-AEO** with a number.

Purpose

To provide for the use and development of the land in accordance with the Moorabbin Airport Land Use Plan.

To identify areas which are or will be subject to high levels of aircraft noise, including areas where the use of land for uses sensitive to aircraft noise will need to be restricted.

To ensure that land use and development are compatible with the operation of the Airport in accordance with the Moorabbin Airport 2015 Master Plan and with safe air navigation for aircraft approaching and departing the airfield.

To assist in shielding people from the impact of aircraft noise by requiring appropriate noise attenuation measures in noise sensitive buildings.

Use of land

Any requirement in a schedule to this overlay must be met.

Construction of buildings

Any new building must be constructed so as to comply with any noise attenuation measures required by Section 3 of Australian Standard AS 2021-2015, Acoustics – Aircraft Noise Intrusion – Building Siting and Construction, issued by Standards Australia International Ltd.

Notes: *In Section 3 of Australian Standard AS 2021-2015, Table 3.3 refers to both building types and activities within those buildings. Each building type listed has its ordinary meaning and should not be interpreted as defined in these Moorabbin Airport Planning Controls – 2015 Master Plan.*

Check the requirements of the zone which applies to the land.

Other requirements may also apply. These can be found at Particular Provisions.

2.2.1 SCHEDULE 1 TO THE MOORABBIN AIRPORT AIRPORT ENVIRONS OVERLAY

Shown on the Moorabbin Airport Airport Environs Overlay Plan (**Figure 5.11**) as **MA-AEO1**.

Requirements

Despite the provisions of the zone, land must not be used and planning approval must not be granted to use the land for any of the following uses:

- Accommodation (other than Backpackers lodge, Dwelling, Dependent persons unit, Host farm and Residential hotel, and other than Student accommodation primarily intended for accommodation of students of a Flight training education centre).
- Child care centre.
- Drive in theatre.
- Education centre (other than a Flight training education centre).
- Hospital.

Planning approval is required to use land for any of the following uses:

- Art and craft centre.
- Backpackers lodge.
- Dependent person's unit provided no more than one is established on any lot.
- Display home.
- Dwelling provided no more than one is established on any lot.
- Host farm.
- Hotel.
- Office.
- Place of assembly (except Drive-in theatre).
- Research and development centre.
- Research centre.
- Residential hotel.
- Restricted recreation facility.
- Tavern.

Planning approval may not be granted for a use that is prohibited under the zone.

2.2.2 SCHEDULE 2 TO THE MOORABBIN AIRPORT AIRPORT ENVIRONS OVERLAY

Shown on the Moorabbin Airport Airport Environs Overlay Plan (**Figure 5.11**) as **MA-AEO2**.

Requirements

Planning approval is required to use land for the following uses:

- Accommodation
- Art and craft centre.
- Child care centre.
- Display home.
- Education centre.
- Hospital.
- Hotel.
- Office.
- Place of assembly.
- Research and development centre.
- Research centre.
- Restricted recreation facility.
- Tavern.

3.0 PARTICULAR PROVISIONS

This section sets out Particular Provisions which apply to the matters specified.

3.1 ADVERTISING SIGNS

The purpose of this section is:

To allow adequate and effective signage at Moorabbin Airport.

To ensure signs do not contribute to excessive visual clutter or visual disorder.

To ensure that signs do not cause loss of amenity or adversely affect the natural or built environment or the safety, appearance or efficiency of the Airport.

3.1.1 Requirements

Advertising controls

The control for the display of advertising signs is divided into three sections:

- A sign in Section 1 may be displayed without approval, but a condition opposite the sign must be met. If the condition is not met, the sign requires approval unless specifically included in Section 3 as a sign that does not meet the Section 1 condition.
- A sign in Section 2 may be displayed only with approval and a condition opposite the sign must be met. If the condition is not met, the sign is prohibited.
- A sign in Section 3 is prohibited and must not be displayed.

If a sign can be interpreted in more than one way, the most restrictive requirement must be met.

Expiry of approval

Approval for a sign other than a major promotion sign expires on the date specified in the approval. If no date is specified, the expiry date is 15 years from the date of issue of the approval.

3.1.2 Advertising Sign Controls

Section 1 – Approval not required

SIGN	CONDITION
Business identification sign	The total advertisement area of all signs to each premises must not exceed 8 square metres. This does not include a direction sign.
Direction sign	Only one to each premises.

Section 2 – Approval required

SIGN	CONDITION
Floodlit sign Internally Illuminated sign	Must comply with the requirements of the Airports Act and regulations, the Civil Aviation Safety Regulations 1998 and Guideline E of the NSAF in relation to lighting around Airports.
Any other sign not in Section 1	

Section 3 – Prohibited

SIGN	CONDITION
Nil	

3.1.3 Application requirements

An application to display an advertising sign must be accompanied by the following information, as appropriate and to the satisfaction of MAC:

- A site context report, using a site plan, photographs or other methods to accurately describe:
  - The location of the proposed sign on the site or building and distance from property boundaries.
  - The location and size of existing signage on the site including details of any signs to be retained or removed.
  - The location and form of existing signage on abutting properties and in the locality.
  - The location of closest traffic control signs.
- The dimensions, height above ground level and extent of projection of the proposed sign,
- The height, width, depth of the total sign structure including method of support and any associated structures such as safety devices and service platforms.
- Details of associated on-site works.
- Details on any form of illumination including details of baffles and the times at which the sign would be illuminated.
- The colour, lettering style and materials of the proposed sign.
- The size of the display (total advertising area including all sides of a multi-sided sign).
- The location of any corporate logo box and proportion of display area occupied by such a logo box.
- For animated or electronic signs, a report addressing the decision guidelines at Section 3.1.4 relating to aviation and road safety.
- Any landscaping details.
- For any sign over 18 square metres in area:
  - A description of the existing character of the area including built form and landscapes.
  - The location of any other signs over 18 square metres, or scrolling, electronic or animated signs within 200 metres of the site.
  - Any existing identifiable advertising theme in the area.
  - Photo montages or a streetscape perspective of the proposed sign.
  - Level of illumination including:
    - Lux levels
    - The dwell and change time for any non-static images.

- The relationship to any significant or prominent views and vistas.

3.1.4 Decision Guidelines

Before deciding on an application to display a sign, MAC must consider, as appropriate:

- The requirements of the Airports Act and regulations in relation to lighting around Airports.
- The impact on aircraft movements and safety.
- The relationship to the streetscape, setting or landscape.
- The relationship to the site and building.
- The impact of structures associated with the sign.
- The impact of glare and illumination.
- The need for identification and the opportunities for adequate identification on the site or locality.
- The impact on aviation and road safety.

3.1.5 Signs not requiring approval

Approval is not required to display the following signs:

- A sign identifying the functions or property of a government department, public authority or municipal council, but not a promotion sign displayed at the direction of any of these bodies.
- A sign controlling traffic on a public road, railway, tramway, water or in the air, provided it is displayed at the direction of MAC, a government department, public authority or municipal council.
- A sign in a road reserve which gives direction or guidance about a tourist attraction, service or facility of interest to road users. The sign must be displayed to the satisfaction of MAC and any relevant road authority.
- A sign required by statute or regulation, provided it is strictly in accordance with the requirement.
- A sign inside a building that cannot generally be seen outside.
- A sign with an advertising area not exceeding 5 square metres publicising a local educational, cultural, political, religious, social or recreational event not held for commercial purposes. Only one sign may be displayed on the land, it must not be an animated or internally-illuminated sign and it must be not displayed longer than 14 days after the event is held or 3 months, whichever is sooner. A sign publicising a local political event may include information about a candidate for an election.
- A sign publishing a special event on the land or in the building on which it is displayed, provided no more than 8 signs are displayed in a calendar year and the total number of days the signs are displayed does not exceed 28 in that calendar year. The sign must be removed when the event is finished.

- A sign with an advertisement area not exceeding 2 square metres publicising the sale of goods or livestock on the land or in the building on which it is displayed, provided the land or building is not normally used for that purpose. Only one sign may be displayed, it must not be an animated or internally-illuminated sign and it must not be displayed longer than 3 months without approval.

- A sign with an advertisement area not exceeding 10 square metres publicising the sale or letting of the property on which it is displayed. Only one sign may be displayed, it must not be an animated sign and it must not be displayed longer than 7 days after the sale or letting date. Approval may be granted for:

  – The advertisement area to exceed 10 square metres if the sign concerns more than 20 lots.

  – The sign to be displayed longer than 7 days after the sale or letting date.

No approval is required to fly the Australian flag or to display the flag on a building, painted or otherwise represented, provided it is correctly dimensioned and coloured in accordance with the Flags Act 1953.

3.1.6 Existing Signs

A sign that was lawfully displayed on the approval date of the Moorabbin Airport Planning Controls – 2015 Master Plan or that was being constructed on that date may be displayed or continued to be displayed and may be repaired and maintained.

A lawfully displayed advertisement may be renewed or replaced. However, approval is required:

- To renew or replace the advertisement of an animated or internally-illuminated sign.

- If the advertisement area is to be increased.

- If the renewal or replacement would result in a different type of sign.

A sign that is reconstructed must meet the relevant advertising sign requirements.

3.2 CAR PARKING

The purpose of this section is to ensure that appropriate car parking facilities are provided at Moorabbin Airport.

3.2.1 Car Spaces

Provision of car spaces

A new use must not commence or the floor area of an existing use must not be increased until the required car spaces have been provided on the land.

Where the floor area occupied by an existing use is increased, the parking requirement only applies to the floor area of any extension of the use or site area provided the existing number of car spaces is not reduced.

Number of car spaces required

The table at Section 3.2.4 sets out the number of car spaces required for particular uses. The requirement for car spaces for a use listed in column 1 of the table is the product of columns 2 and 3 of the table.

Approval may be granted to reduce or to waive the number of car spaces required by the table.

Where a use is not specified in the table at Section 3.2.4, an adequate number of car spaces must be provided to the satisfaction of MAC.

Decision guidelines

Before a requirement for car spaces is reduced or waived, the applicant must satisfy MAC that the reduced provision is justified due to:

- An assessment of the existing and future number of persons working at or visiting the premises
- An empirical assessment of car parking demand.
- The availability of car parking in the locality.
- The proximity of public transport.
- Any reduction in car parking demand due to the sharing of car spaces by multiple uses, either because of variation of car parking demand over time or because of efficiencies gained from the consolidation of shared car parking spaces.
- Any car parking deficiency or surplus associated with the existing use of the land.
- Any credit which should be allowed for a car parking demand deemed to have been provided in association with a use which existed before the change of parking requirement.
- Local traffic management.
- Local amenity including pedestrian amenity.
- Any other relevant consideration as determined by MAC.

3.2.2 Design and construction

Car parking plan

Before any use commences or any new building is occupied, the car spaces, access lanes, driveways and associated works and landscaping shown on the plan must, to the satisfaction of MAC, be provided and available for use and be:

- Formed to such levels and drained so that they can be used in accordance with the plan.
- Treated with an all-weather seal or some other durable surface.
- Line-marked or provided with some other adequate means of showing the car spaces.

Decision guidelines

Before deciding that any car parking plan is satisfactory, MAC must consider:

- Whether the layout of car spaces and access lanes are consistent with Section 3.2.3 or a variation generally in accordance with Australian Standard AS2890.1 – 1993, Parking facilities, Part 1: Off-street car parking; or a variation agreed with MAC.
- The protection and enhancement of the streetscape.
- The provision of landscaping for screening and shade.
- The design and construction standards proposed for paving, drainage, line marking, signage, lighting and other relevant matters.
- The provision for pedestrian movement within and around the parking area.
- The measures proposed to enhance the security of people using the parking area.
- The provision of parking facilities for cyclists and disabled people.
- The type and size of vehicle likely to use the parking area.
- The ease and safety with which vehicles gain access to the site and circulate within the parking area.
- The need for the required car spaces to adjoin the premises used by each occupier, if the land is occupied by more than one occupier.

3.2.3 Design of car spaces and accessways

Design requirements

Accessways should:

- Be at least 3 metres wide.
- Provide a turning space so that cars can exit the site in a forward direction as necessary to the satisfaction of MAC.

Car spaces and accessways should have the following minimum dimensions:

Angle of car spaces to accessway	**Accessway width**	**Car park width**	**Car park length**
Parallel	3.6 m	2.3 m	6.7 m
45°	3.5 m	2.6 m	4.9 m
60°	4.9 m	2.6 m	4.9 m
90°	6.4 m	2.6 m	4.9 m
	5.8 m	2.8 m	4.9 m
	5.2 m	3.0 m	4.9 m
	4.8 m	3.2 m	4.9 m

A building may project into the space if it is at least 2.1 metres above the space.

If entry to the car space is from a road, the width of the accessway may include the road.

Variation of requirement

Approval may be granted to vary any dimension or requirement of this clause.

3.2.4 Car parking table

The application of the rates described in this table will be subject to the decision guidelines contained in Section 3.2.1.

Use	Car Space Measure	Rate
Residential building, other than specified in this table	Car spaces to each lodging room	1
Caretaker's house	Car spaces to each dwelling	1
Shop other than specified in this table	Car spaces to each 100 sq metres of leasable floor area	8
Restaurant	Car spaces to each seat available to the public	0.6
Office Postal agency	Car spaces to each 100 sq metres of net floor area	3.5
Hotel or Tavern	Car spaces to each 100 sq metres of bar floor area available to the public, plus Car spaces to each 100 sq metres of lounge floor area available to the public	60 30
Motel	Car spaces to each unit, plus Car spaces to each resident employee, plus Car spaces to each 100 sq metres of motel service floor area not available for use by guests	1 1 2
Industry other than specified in this table Mail centre	Car spaces to each 100 sq metres of net floor area	2.9
Materials recycling Fuel depot Milk depot Motor repairs	Percentage of site area to be set aside for car spaces and access lanes, but not driveways	10
Restricted Retail premises	Percentage of site area to be set aside for car spaces and access lanes, but not driveways	10
Warehouse	Car spaces to each 100 sq metres of net floor area	1.5
Place of assembly Funeral parlour	Car spaces to each seat or to each 10 sq metres of net floor area, whichever is greater	0.3
Convenience shop	Car spaces to each premises	10

3.3 LOADING AND UNLOADING OF VEHICLES

Purpose

To set aside land for loading and unloading commercial vehicles to prevent loss of amenity and adverse effect on traffic flow and road safety.

Requirements to be met

No building or works may be constructed for the manufacture, servicing, storage or sale of goods or materials unless:

- Space if provided on the land for loading and unloading vehicles as specified in the table below.
- The road that provides access to the loading bay is at least 3.6 metres wide.

Approval may be granted to reduce or waive these requirements if either:

- The land area is insufficient.
- Adequate provision is made for loading and unloading vehicles to the satisfaction of MAC.

Floor Area of Building	Minimum Loading Bay Dimensions	
2,600 sq metres or less in single occupation	Area	27.4 sq metres
	Length	7.6 sq metres
	Width	3.6 sq metres
	Height clearance	4.0 sq metres
For every additional 1,800 sq metres or part	Area	Additional 18 sq metres

3.4 DESIGN PRINCIPLES FOR NEW DEVELOPMENT

In addition to other matters, all applications submitted to Moorabbin Airport Corporation are considered having regard where appropriate to the following design principles:

Objective

To achieve high quality urban design and architecture that:

- Recognising the Airport's role as a Transport Gateway and a centre of aviation and flight training, complies in all relevant respects with the National Airport Safeguarding Framework (NASF) guidelines.
- Reflects the role and operation of the Airport
- Enhances liveability, visual amenity and safety of the public realm
- Minimises detrimental impact on neighbouring properties

Context

All development should take account of its natural and man-made setting, particularly in the context of its location in the vicinity of an Airport.

A detailed site analysis should accompany an application for development and should form the basis of consideration of the height, scale and massing of new development.

Public Realm

All development should seek to respect and enhance the visual amenity and safety of the public realm.

Enjoyment of the public realm should be enhanced by an appropriate balance of sunlight and shade.

Entry Nodes and Streetscape Design

Proposals should present a sense of clear public entry to the site.

Streetscape and site landscaping should be coordinated to present a consistent appearance and assist in the identification of site access. .

Building design should have regard to neighbouring building height and proportion. Where more than one building is proposed, buildings should be sited relative to one another in order to ensure a modulation and rhythm of streetscape, which is harmonious with the context.

Streetscape elevations should be designed in a manner which reinforces the order of the street network. Principal building elevations should, accordingly, be aligned parallel to streets.

Site Coverage

Building footprints should allow sufficient land on the balance of the site to accommodate appropriate landscaping and setbacks, including the provision of appropriate footpaths and other pedestrian spaces

Building Height

Building heights are limited in terms of Airport runway clearance and aviation safety. All building proposals are assessed and referred specifically to MAC's Operations Aviation Manager for separate approval to ensure they are within height limitation parameters.

Setbacks

Setbacks should take into account the setbacks of adjoining buildings, the opportunity for streetscape modulation, and ensure that sufficient land is available for landscaping.

Carparking areas should setback relative to all road frontages in a manner which ensures a generous landscape buffer to carparks and the public domain.

Building Design, Details and Materials

New development should aspire to high standards in architecture and urban design.

Any rooftop plant, lift over-runs, service entries, communication devices and other technical attachments should be treated as part of the overall building design.

Where proposed buildings are located adjacent to existing buildings, designs should be well proportioned and scaled in terms of architectural positions.

Building materials should be 'clean' and contemporary in nature such as metal panel, baked paint finished particle panel, anodized or powdercoat metal window framing, light glass tones and well-articulated precast concrete forms. Concrete panels and glass should be in muted colours and glass should be non-reflective.

Energy and Resource Efficiency

All building and engineering works should promote the more efficient use of resources and energy efficiency. Buildings should demonstrate the application of best practice measures in relation to Ecologically Sustainable Design (ESD).

Carparking

Appropriate levels of car parking must be provided in conjunction with all new land uses to the satisfaction of MAC.

Loading Bays

Loading areas should be located to be easily accessed, yet should be designed to be screened or remote from unsightly public view.

Landscape Architecture

Landscape architecture should be considered as an integral part of site and building design.

Landscaping plans must include specifications, and planting species schedules should be submitted as part of any application. Generally landscaped areas should be water efficient and include a mixture of mature tree planting, low-medium shrubs, lawns and planting beds as appropriate.

In terms of aviation safety, mature tree heights must conform to mandatory building height limits in terms of runway clearance zones and all plant species should be selected to discourage bird life on site.

3.5 USES WITH ADVERSE AMENITY POTENTIAL

Purpose

To define those types of industries which if not appropriately designed and located may cause offence or unacceptable risk to the neighbourhood.

Definition

The threshold distance referred to in the table to this clause is the minimum distance from any part of the land of the proposed use or buildings and works to land (not a road) which as at 17 June 2015 is in a residential zone or the Commercial 1 Zone under the Kingston Planning Scheme, or land which as at 17 June 2015 is used for a hospital or an education centre.

NOTE 1 of the table: The threshold distance is variable, dependent on the processes to be used and the materials to be processed or stored.

NOTE 2 of the table: An assessment of the risk to the safety of the people located off the land may be required.

Table to Clause 3.5

Type of Production or Use (Purpose)	Threshold Distance (Metres)	Notes
Basic Metal Products		
Production of non-ferrous metals as:		
▪ aluminium by electrolysis	2,000	
▪ other non-ferrous metals in amounts:		
· up to 100 tonnes a year	100	
· between 100 & 2,000 tonnes a year	300	
· exceeding 2,000 tonnes a year	500	
Works producing iron or steel products in amounts:		
▪ up to 1,000,000 tonnes a year	100	
▪ exceeding 1,000,000 tonnes a year	1,000	
Chemical, Petroleum & Coal Products		
Ammunition, explosives and fireworks production:	1,000	Note 2
Biocides production and storage:	1,000	
Briquette production:	300	
Chemical Fertiliser production:	1,000	Note 2
Chemical products other than those listed within this group:	300	Note 2
Cosmetics and toilet preparations production:	100	
Formaldehyde production:	300	Note 2
Industrial gases production:	1,000	Note 2
Inks production:	300	
Inorganic industrial chemicals production other than those listed within this group:	1,000	Note 2

Type of Production or Use (Purpose)	Threshold Distance (Metres)	Notes
Organic industrial chemicals production other than those listed within this group:	1,000	Note 2
Other petroleum or coal production:	500	Note 2
Paints and inks :		
▪ manufacture	1,000	Note 2
▪ blending and mixing only	300	
Petroleum refinery:	2,000	Note 2
Pharmaceutical and veterinary production:	1,000	
Polyester resins production	1,000	Note 2
Soap and other detergents production:	300	
Synthetic resins & rubber production other than those listed within this group:	1,000	Note 2
Fabricated Metal Products		
Abrasive blast cleaning:		Note 1
Boiler makers	100	
Structural or sheet metal production:	500	
Works producing iron or steel products in amounts:		
▪ up to 1,000,000 tonnes per year	100	
▪ exceeding 1,000,000 tonnes per year	1,000	
Food, Beverages & Tobacco		
Abattoir:	500	
Bakery (other than one ancillary to a shop):	100	
Flour mill:	300	
Food or beverage production other than those listed within this group:		Note 1
Freezing and cool storage	150	
Maltworks:	300	
Manufacture of milk products:	300	
Milk depot	100	
Poultry processing works	100	
Production of vegetable oils and fats using solvents:	300	
Seafood processor:	500	
Smallgoods production	100	
Tobacco and cigarette production:	500	
Miscellaneous Manufacturing		
Fibreglass production:	200	
Leather and artificial leather goods production:	300	
Leather tanning and dressing:	300	
Printing and coating works with heated curing ovens:	500	
Rendering and casings works:	1,000	

Type of Production or Use (Purpose)	Threshold Distance (Metres)	Notes
Rubber production, using either organic solvents or carbon black:	300	Note 2
Non-metallic Mineral Products		
Bitumen batching plant:	500	
Cement production in amounts:		
▪ up to 5,000 tonnes a year	300	
▪ between 5,000 & 150,000 tonnes a year	500	
▪ exceeding 150,000 tonnes a year	1,000	
Clay bricks, tiles and pipe refractories, with a design production rate exceeding 10,000 tonnes a year:	200	
Concrete article or stone article production:	100	
Concrete batching plant:	300	
Glass and glass production including glass wool:	500	
Plaster or plaster articles production:	100	
Rock wool manufacture:	500	
Other Premises		
Panel beating:	100	
Rural industry handling, processing or packing agricultural produce:	300	
Paper & Paper Products:		
Paper or paper pulp production:		
▪ involving combustion of sulphur or sulphur containing materials	5,000	Note 2
▪ from semi-processed materials	100	
▪ from prepared cellulose & rags	200	Note 1
▪ by other methods than above		
Recreation, Personal & Other Services		
Dry cleaning for commercial and institutional customers, or in bulk quantities:	100	Note 2
Laundry for commercial and institutional customers, or in bulk quantities:	100	
Recycling and Resource Recovery		
Advanced resource recovery technology facility		Note 1
Combustion, treatment or bio-reaction of waste to produce energy		Note 1
Commercial and Industrial materials recycling		Note 1
Composting and other organic materials recycling.		Note 1
Construction and demolition materials recycling		Note 1
Other resource recovery or recycling operations		Note 1

Type of Production or Use (Purpose)	Threshold Distance (Metres)	Notes
Refuse and used material storage, sorting and recovery in a transfer station:		
• Accepting organic wastes		Note 1
• Other	100	
Sanitary and garbage disposal in landfill		Note 1
Soil conditioning or blending		Note 1
Used metals treatment or processing		Note 1
Used paper and cardboard treatment or processing		Use distances *in Paper & Paper Products*
Used plastics treatment or processing		Note 1
Textiles		
Carpet backing with latex:	300	
Dyeing or finishing of cotton, linen and woollen yarns and textiles:	300	
Production of artificial fibres & textiles:		
• cellulose nitrate or viscose fibre, cellophane or artificial rubber	1,000	Note 2
• other synthetic fibres and textiles	500	Note 2
Rope, cordage and twine production:	100	
Treatment or production of textiles:		
• using carbon disulphide	500	Note 2
• using other substances		Note 1
Wool scouring:	200	
Transport and Storage		
Depot for refuse collection vehicles	100	
Grain elevators:	300	
Storage of bulk volatile organic compounds in quantities greater than 1,000 tonnes:	1,000	Note 2
Storage of petroleum products and crude oil in tanks exceeding 2,000 tonnes capacity:	300	
• with fixed roofs	100	Note 2
• with floating roofs		
Storage of wet-salted or unprocessed hides:	300	
Temporary storage of industrial wastes:	300	Note 2
Treatment of aqueous waste:	200	Note 2
Waste incinerator for:		
• Woodwaste	300	
• Plastic or rubber waste	500	Note 2
• Chemical, biomedical or organic waste		Notes 1, 2

Type of Production or Use (Purpose)	Threshold Distance (Metres)	Notes
Wood, Wood Products & Furniture		
Charcoal production:		
▪ by the retort process	500	
▪ other than by the retort process	1,000	
Joinery:	100	
Sawmill:	500	
Wood preservation plant:	100	
Wood-fibre or wood-chip products:	1,500	

4.0 DEFINITIONS

The land use terms used in the Moorabbin Airport Planning Controls – 2015 Master Plan take their meaning from the Victoria Planning Provisions where they are defined therein.

A land use term used in the Moorabbin Airport Planning Controls – 2015 Master Plan, and not defined in the Victoria Planning Provisions, has the meaning set out beside that term in the following table.

Term	Meaning
Advertising sign	Any kind of graphics created to display information to a particular audience typically on streets, outside or inside of buildings.
Air traffic control facility	A facility from which ground-based controllers direct aircraft on the ground and in the air.
ATC associated facilities	Any facility or equipment used to assist or support in the operations of an Air traffic control facility.
Aircraft operations	Flight, pre-flight and post-flight operations, including freight and passenger loading and unloading, taxiing, take-off and landing.
Airport operations facilities	Areas or objects set aside for the function of the Airport. These include the following: (a) Air traffic control (b) Traffic patterns (c) Navigational aids (d) Guidance (e) Lighting (f) Airstrip
Apron	Land used for aircraft to stand while loading, unloading, fuelling, maintenance or parking operations are in progress.
Aviation maintenance facility	A facility in which aircraft maintenance is undertaken.
Aviation support facility	Premises used to support aviation, aircraft and Airport operations.
Discount department store	A Department store other than: ▪ a Myer or David Jones store ▪ any other Department store of over 10,000 square metres leasable area.
Flight training education centre	Land used for training or education of pilots of fixed-wing or rotary aircraft.
Fuel facility	Land used to store, sell and distribute fuel.
Helipad	A landing place or area for helicopters.
Navigational aids including weather station	Mechanical or electronic equipment used to assist pilots to navigate aircraft, or an Air traffic control facility to direct aircraft, on the ground or in the air.
Passenger terminal and associated facilities	A facility at which passengers may board and/or alight from an aircraft.
Road	A way or path between places, typically paved or prepared to allow easy travel.

Term	Meaning
Runway	A way or path used by aircraft for take-off and landing including a runway strip.
Runway approach aid	A navigational aid specifically to assist a pilot in a landing approach to a Runway
Student accommodation	Accommodation primarily used or intended for use by a person who is a student.
Taxiway	A way or path used by aircraft for access to or egress from a runway.

Appendix 2 - Legislative Compliance Checklist

Moorabbin Airport 2015 Master Plan
Airport Act 1996 - Section 71 Checklist
Contents of Draft or final Master Plan

Legislative Requirements	Master Plan Section Reference
Airports Act 1996	
Section 71 – Contents of draft or final master plan	
1. This section specifies the matters that must be set out in each draft or final master plan for an airport.	Not applicable
2. In the case of an airport other than a joint-user airport, a draft or final master plan must specify: **a.** The airport-lessee company's development objectives for the airport; and	Chapter 5 (Land Use Plan) Chapter 6 (Aviation Development Plan) including section 6.5 (Aviation Facilities Development Plan) Chapter 7 (Non-Aviation Development Plan) including section 7.2 (Non-Aviation Development Plan)
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	Section 6.4 (Future Needs)
c. the airport-lessee 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	Chapter 5 (Land Use Plan) Chapter 6 (Aviation Development Plan) Chapter 7 (Non-Aviation Development Plan) Appendix 1 (Moorabbin Airport Planning Controls – 2015 Master Plan)
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	Section 11.3.3 (Australian Noise Exposure Forecast)
da. flight paths (in accordance with regulations, if any, made for the purpose of this paragraph) at the airport; and	Section 11.2 (Flight Paths)
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 the significant ANEF levels; and	Section 11.3 (Managing Aircraft Noise)
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	Chapter 10 (Environment Strategy)

Legislative Requirements	Master Plan Section Reference
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); and	Environmental Action Plans within the following sections: ■ 10.5 – Air Quality ■ 10.6 – Noise ■ 10.7 – Stormwater ■ 10.8 – Soil and Groundwater Quality ■ 10.9 – Hazardous Materials ■ 10.10 – Waste Management ■ 10.11 – Energy Management and Resource Efficiency ■ 10.12 – Flora, Fauna and Landscape ■ 10.13 – Aboriginal and European Heritage Management
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:	Section 8.2 (Existing Transport Context)
i. a road network plan; and	Section 8.3 (Future Off-Airport Road Network) Section 8.10 (Ground Transport Plan)
ii. the facilities for moving people (employees, passengers and other airport users) and freight at the airport; and	Section 8.2 (Existing Transport Context) Section 8.3 (Future Off-Airport Road Network) Section 8.5 (Public Transport) Section 8.6 (Pedestrians & Cycling) Section 8.10 (Ground Transport Plan)

Legislative Requirements	Master Plan Section Reference
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	Section 8.2 (Existing Transport Context) Section 8.3 (Future Off-Airport Road Network) Section 8.4 (Car Parking) Section 8.5 (Public Transport) Section 8.6 (Pedestrians & Cycling) Section 8.7 (Taxis) Section 8.11 (Ground Transport Plan Projects)
iv. the arrangements for working with the State or local authorities or other bodies responsible for the road network and the public transport system; and	Section8.12 (Working with Government and Authorities)
v. the capacity of the ground transport system at the airport to support operations and other activities at the airport; and	Section 8.2 (Existing Transport Context) Section 8.3 (Future Off-Airport Road Network) Section 8.4 (Car Parking) Section 8.5 (Public Transport) Section 8.6 (Pedestrians & Cycling) Section 8.7 (Taxis) Section 8.8 (Mode of Transport) Section 8.9 (Future Traffic Flows) Section 8.10 (Ground Transport Plan)
vi. the likely effect of the proposed developments in the master plan on the ground transport system and traffic flows at, and surrounding, the airport; and	Section 8.9.1 (Effect of proposed developments on traffic flows)
gb. in relation to the first 5 years of the master plan-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	Chapter 7 (Non-Aviation Development Plan)
gc. In relation to the first 5 years of the master plan-the likely effect of the proposed developments in the master plan on: **i.** employment levels at the airport; and	Section 2.2 (Employment)

Legislative Requirements	Master Plan Section Reference
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; and	Section 2.1 (Introduction) Section 2.4 (Economic Benefits) Sections 2.7 and 2.8 (Current Social Impacts and Future Social Impacts) Section 2.9 ("Fit" with planning schemes)
h. An environment strategy that details: **i.** the airport-lessee company's objectives for the environmental management of the airport; and	Environmental management objectives for specific matters are stated within the following sections: ■ 10.4.1 – Environmental Management System ■ 10.5.1 – Air Quality ■ 10.6.1 – Noise ■ 10.7.1 – Stormwater ■ 10.8.1 – Soil and Groundwater Quality ■ 10.9.1 – Hazardous Materials ■ 10.10.1 – Waste Management ■ 10.11.1 – Energy Management and Resource Efficiency ■ 10.12.1 – Flora, Fauna and Landscape ■ 10.13.1 – Aboriginal and European Heritage Management
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	Section 10.2.2 (Identification of environmentally significant areas)

Legislative Requirements	Master Plan Section Reference
iii. the sources of environmental impact associated with airport operations; and	Section 10.5.1 – Air quality Section 10.6.1 – Noise Section 10.7.1 – Stormwater Section 10.8.1 – Soil and groundwater Section 10.9.1 – Hazardous materials Section 10.10.1 – Waste Section 10.11.1 – Energy management and resource efficiency Section 10.12.1 – Flora, fauna and landscape Section 10.13.1 – Aboriginal and European heritage
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	Section 10.5.4 – Air quality Section 10.6.4 – Noise Section 10.7.4 – Stormwater Section 10.8.4 – Soil and groundwater Section 10.9.4 – Hazardous materials Section 10.10.4 – Waste Section 10.11.4 – Energy management and resource efficiency Section 10.12.4 – Flora, fauna and landscape Section 10.13.4 – Aboriginal and European heritage
v. the time frames for completion of those studies and reviews and for reporting on that monitoring; and	As above
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	As above
vii. the time frames for completion of those specific measures; and	As above

Legislative Requirements	Master Plan Section Reference
viii. details of the consultations undertaken in preparing the strategy (including the outcome of the consultations); and	Sections 3.2 and 3.3 Section 12.7.2 (Additional Consultation)
ix. any other matters that are prescribed in the regulations; and	See Airports Regulations 1997 below
j. such other matters (if any) as are specified in the regulations.	See Airports Regulations 1997 below
3. Joint-user airports	Not applicable
4. The regulations may provide that the objectives, assessments, proposals, forecasts and other matters covered by subsection (2) or (3) may relate to one or more of the following: **a.** the whole of the planning period of the plan; **b.** one or more specified 5-year periods that are included in the planning period of the plan; **c.** subject to any specified conditions, a specified period that is longer than the planning period of the plan.	See Airports Regulations 1997 below
5. The regulations may provide that, in specifying a particular objective, assessment, proposal, forecast or other matter covered by subsection (2) or (3), a draft or final master plan must address such things as are specified in the regulations.	See Airports Regulations 1997 below
6. In specifying a particular objective or proposal covered by paragraph (2)(a), (c), (ga), (gb) or (gc) or (3)(a), (c), (ga), (gb) or (gc), a draft or final master plan must address: **a.** the extent (if any) of consistency with planning schemes in force under a law of the State in which the airport is located; and **b.** if the draft or final master plan is not consistent with those planning schemes-the justification for the inconsistencies.	Paragraph (2)(a) – Sections 6.6 (Aviation Development) and 7.11 (Non-Aviation Development) Paragraph (c) – Section 5.6 Paragraph (ga) – Section 8.13 Paragraph (gb) – Section 7.11 Paragraph (gc) – Section 2.9. Not applicable in relation to paragraph (3) or any of its sub-paragraphs
7. Subsection (6) does not, by implication, limit subsection (5).	Not applicable
8. In developing plans referred to in paragraph (2)(e) and (3)(e), an airport-lessee company must have regard to Australian Standard AS 2021--2000 (“Acoustics--Aircraft noise intrusion--Building siting and construction”) as in force or existing at that time.	Section 11.3 and Appendix 1 – Moorabbin Airport Planning Controls – 2015 Master Plan – clause 2.2 Airport Environs Overlay (AEO)

Legislative Requirements	Master Plan Section Reference
9. Subsection (8) does not, by implication, limit the matters to which regard may be had.	Not applicable
10. In this section: "airport service" means a service provided at an airport, if the service is necessary for the purposes of operating or maintaining civil aviation services at the airport, and includes the use of facilities at the airport for those purposes.	Not applicable
Section 71A – Draft or final master plan must identify proposed sensitive developments	
1. A draft or final master plan must identify any proposed sensitive development in the plan.	Section 5.5
Section 71A – Draft or final master plan must identify proposed sensitive developments	
1. A draft or final master plan must relate to a period of 20 years. This period is called the planning period.	Section 1.6
2. However, the environment strategy in a draft or final master plan must relate to a period of 5 years.	Section 1.6 Section 10.1
Airports Regulations 1997	
Regulation 5.02 – Contents of draft or final master plan – general	
1. For paragraphs 71(2)(j) and (3)(j) of the Act, the following matters are specified:	
a. any change to the OLS or PANS-OPS surfaces for the airport concerned that is likely to result if development proceeds in accordance with the master plan;	Section 11.4.3
b. for an area of an airport where a change of use of a kind described in subregulation 6.07 (2) of the Airports (Environment Protection) Regulations 1997 is proposed:	Section 10.8 (Soil and Groundwater)
i. the contents of the report of any examination of the area carried out under regulation 6.09 of those Regulations; and	
ii. the airport-lessee company's plans for dealing with any soil pollution referred to in the report.	
2. For section 71 of the Act, 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.	Chapter 5 (Land Use Plan) Appendix 1 (Moorabbin Airport Planning Controls – 2015 Master Plan)
3. For subsection 71(5) of the Act, a draft or final master plan must:	Section 5.7
a. address any obligation that has passed to the relevant airport-lessee company under subsection 22(2) of the Act or subsection 26(2) of the Transitional Act; and	
b. address any interest to which the relevant airport lease is subject under subsection 22(3) of the Act, or subsection 26(3) of the Transitional Act.	

Legislative Requirements	Master Plan Section Reference
Regulation 5.02A – Contents of draft or final master plan – matters to be specified in environmental strategy	
1. For subparagraphs 71(2)(h)(ix) and (3)(h)(ix) of the Act, the matters in this regulation must be specified in an environment strategy.	
2. The environment strategy must specify any areas within the airport site to which the strategy applies that the airport-lessee company for the airport has identified as being a site of indigenous significance, following consultation with: **a.** any relevant indigenous communities and organisations; and **b.** any relevant Commonwealth or State body.	Section 10.13 – Aboriginal and European Heritage Management
3. The environment strategy must specify the airport-lessee company's strategy for environmental management of areas of the airport site that are, or could be, used for a purpose that is not connected with airport operations.	Chapter 10 – Environment Strategy
4. The environment strategy must specify: **a.** the training necessary for appropriate environment management by persons, or classes of persons, employed on the airport site by the airport-lessee company or by other major employers; and **b.** the training programs, of which the airport-lessee company is aware, that it considers would meet the training needs of a person mentioned in paragraph (a).	Section 10.3 – Implementing the Environment Strategy Section 10.4.4 – Implementation and Operation
Regulation 5.02B – Contents of draft or final master plan – things to be addressed in environment strategy	
1. For subsection 71(5) of the Act, a draft or final master plan must address the things in this regulation.	
2. In specifying its objectives for the airport under subparagraph 71(2)(h)(i) or (3)(h)(i) of the Act, an airport-lessee company must address its policies and targets for: **a.** continuous improvement in the environmental consequences of activities at the airport; and	Section 10.3.1 – Environmental Management Framework Section 10.3.4 – Environmental Management System Section 10.4 – Environmental Management System
b. progressive reduction in extant pollution at the airport; and	Section 10.3.4 – Environmental Management System Sections 10.4.7, 10.5.3, 10.6.3, 10.7.3, 10.8.3,10.9.3, 10.10.3 and 10.11.3 - Previous achievements Sections 10.4.8, 10.5.4, 10.6.4, 10.7.4, 10.8.4, 10.9.4, 10.10.4, 10.11.4 - Environmental Action Plans
c. development and adoption of a comprehensive environmental management system for the airport that maintains consistency with relevant Australian and international standards; and	Section 10.4 – Environmental Management System

Legislative Requirements	Master Plan Section Reference
d. identification, and conservation, by the airport-lessee company and other operators of undertakings at the airport, of objects and matters at the airport that have natural, indigenous or heritage value; and	Section 10.12 – Flora, Fauna and Landscape, and Section 10.13 – Aboriginal and European Heritage Management
e. involvement of the local community and airport users in development of any future strategy; and	Sections 3.4 and 3.6 Section 10.1 (Introduction)
f. dissemination of the strategy to sub-lessees, licensees, other airport users and the local community.	Sections 3.4 and 3.6 Section 10.1 (Introduction)
3. In specifying under subparagraph 71(2)(h)(ii) or (3)(h)(ii) of the Act, the areas within the airport site it identifies as environmentally significant, an airport-lessee company must address: **a.** any relevant recommendation of the Australian Heritage Council; and	Section 10.2.2 (Identification of Environmentally Significant Areas)
b. any relevant recommendation of the Department of Environment regarding biota, habitat, heritage or similar matters; and	Not relevant.
c. any relevant recommendation of a body established in the State in which the airport is located, having responsibilities in relation to conservation of biota, habitat, heritage or similar matters.	Not relevant.
4. In specifying the sources of environmental impact under subparagraph 71(2)(h)(iii) or (3)(h)(iii) of the Act, an airport-lessee company must address: **a.** the quality of air at the airport site, and in so much of the regional airshed as is reasonably likely to be affected by airport activities; and	Section 10.5 – Air Quality
b. water quality, including potentially affected groundwater, estuarine waters and marine waters; and	Section 10.7 – Stormwater and Section 10.8 – Soil and Groundwater
c. soil quality, including that of land known to be already contaminated; and	Section 10.8 – Soil and Groundwater
d. release, into the air, of substances that deplete stratospheric ozone; and	Section 10.5– Air Quality
e. generation and handling of hazardous waste and any other kind of waste; and	Section 10.9– Hazardous Materials
f. usage of natural resources (whether renewable or non-renewable); and	Section 10.11– Energy Management and Resource Efficiency
g. usage of energy the production of which generates emissions of gases known as 'greenhouse gases'; and	Section 10.11– Energy Management and Resource Efficiency
h. generation of noise.	Section 10.6- Noise

Legislative Requirements	Master Plan Section Reference
5. In specifying under subparagraph 71(2)(h)(iv) or (3)(h)(iv) of the Act the studies, reviews and monitoring that it plans to carry out, an airport-lessee company must address:	Sections 10.4.7, 10.5.3, 10.6.3, 10.7.3, 10.8.3,10.9.3, 10.10.3, 10.11.3 - Previous achievements
a. the matters mentioned in subregulation 5.02A(2) and subregulations 5.02B(3) and (4); and	Sections 10.4.8, 10.5.4, 10.6.4, 10.7.4, 10.8.4, 10.9.4, 10.10.4, 10.11.4 - Environmental Action Plans
b. the scope, identified by the airport-lessee company, for conservation of objects and matters at the airport that have natural, indigenous or heritage value; and	Section 10.12 – Flora, Fauna and Landscape Section 10.13 – Aboriginal and European Heritage Management
c. the approaches and measures identified by the airport-lessee company as its preferred conservation approaches and measures; and	Sections 10.4.8, 10.5.4, 10.6.4, 10.7.4, 10.8.4, 10.9.4, 10.10.4, 10.11.4, 10.12.4 – Environmental Action Plans
d. the professional qualifications that must be held by a person carrying out the monitoring; and	Section 10.4.4– Implementation and Operation – Responsibilities and Training and Awareness
e. the proposed systems of testing, measuring and sampling to be carried out for possible, or suspected, pollution or excessive noise; and	Sections 10.4.8, 10.5.4, 10.6.4, 10.7.4, 10.8.4, 10.9.4, 10.10.4, 10.11.4 – Environmental Action Plans
f. the proposed frequency of routine reporting of monitoring results to the airport environment officer (if any) for the airport, or to the Secretary.	Section 10.4.4 (Implementation and Operation) Sections 10.4.8, 10.5.4, 10.6.4, 10.7.4, 10.8.4, 10.9.4, 10.10.4, 10.11.4 – Environmental Action Plans
6. In specifying under subparagraph 71(2)(h)(vi) or (3)(h)(vi) of the Act, the measures that it plans to carry out for the purposes of preventing, controlling or reducing environmental impact, an airport-lessee company must address: **a.** the matters mentioned in subregulations (2) to (4); and	Section 10.4 – Environmental Management System Sections 10.5.3, 10.6.3, 10.7.3, 10.8.3, 10.9.3, 10.10.3, 10.11.3 (Previous Achievements 2010-2015) Sections 10.4.8, 10.5.4, 10.6.4, 10.7.4, 10.8.4, 10.9.4, 10.10.4, 10.11.4 (Environmental Actions 2015-2020)
b. the means by which it proposes to achieve the cooperation of other operators of undertakings at the airport in carrying out those plans.	Section 10.4.4– Environmental Management System Implementation and Operation – Responsibilities
7. An airport-lessee company, in specifying the company's strategy for environmental management under subregulation 5.02A(3), must address the matters in subregulations (2) to (6).	Section 10.4– Environmental Management System

Moorabbin Airport

Today Moorabbin Airport is...

- Australia's premier flight training centre, with 175,000 flight training movements and 800 students from Australia and overseas trained every year.
- One of Australia's busiest airports and a leading general aviation airport, with a total of 230,000 aircraft movements in 2014.
- A vital economic and social asset for the City of Kingston, metropolitan Melbourne, Victoria and the whole of Australia.
- The location for 3,300 jobs, one of the most significant concentrations of employment in metropolitan Melbourne.
- At the centre of a wider economic precinct, with retail, commercial, industrial and other activity accounting for 30% of total employment within the City of Kingston.

As this Moorabbin Airport 2015 Master Plan is implemented, Moorabbin Airport will...

- Secure and enhance its national and international prominence as a centre of flight training, with 1,600 to 2,000 flight training students by 2035.
- Build on this success to become a place of learning, training, education and research in a wide range of aviation-related activities.
- Fulfil its recognised role as a Transport Gateway and a place of State significance within Melbourne and Victoria.
- Play an increasingly important economic role within the City of Kingston and the Southern Subregion of metropolitan Melbourne, as the heart of a diverse, integrated economic and employment precinct, with direct employment at the Airport increasing to 8,500 by 2035 and indirect employment of more than 15,000.
- Accommodate large-scale, master planned development, including retail, industrial and office activities of a scale not readily accommodated elsewhere in the region, with total investment of $570 million (in 2014 dollars) by 2035.