



Moorabbin Airport

MOORABBIN AIRPORT

2021 MASTER PLAN



2021
2041

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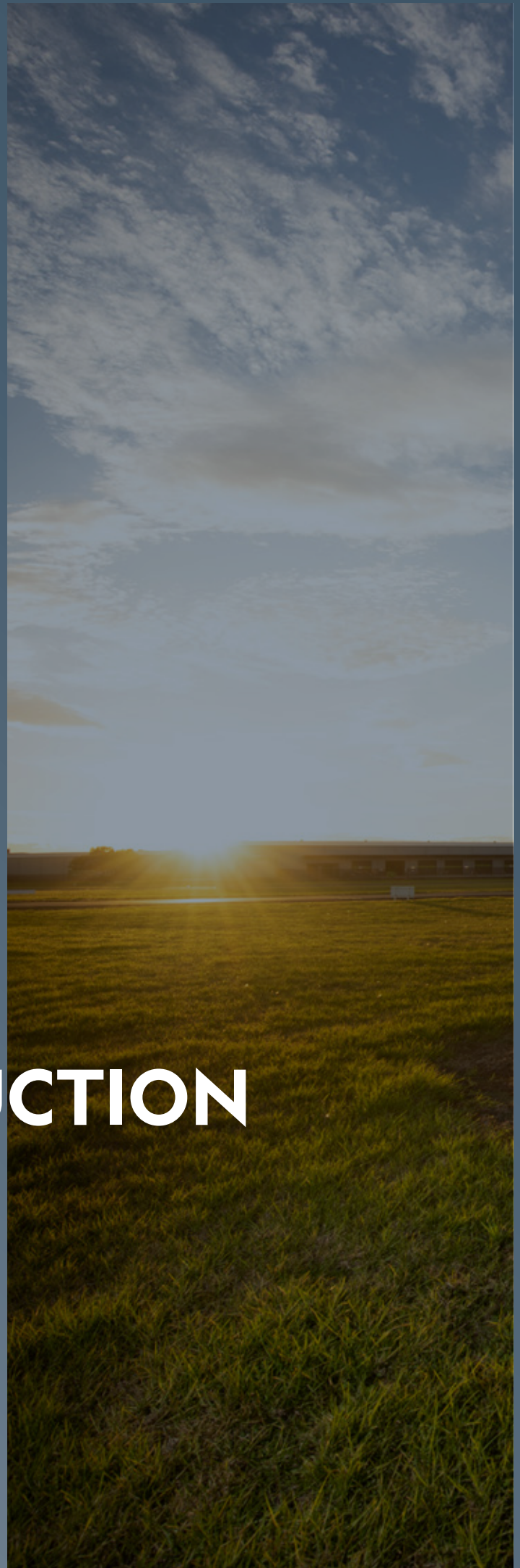


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01

INTRODUCTION







Moorabbin Airport is foremost known for safe aviation, but it is much more than that. We are committed to catering to the needs of our customers and our communities, businesses and partners that interreact with us every day.

We believe in the importance of establishing a sense of place. Through our infrastructure, facilities, amenity, services and operations, we provide an environment where people can connect. We also value education and training, leisure and business, and we have created a place that facilitates the diverse eco-systems that exist and engage with our site. We achieve this safely, reliably, collaboratively, sustainably, in a way that supports all of our customers.

We are now preparing for the future – our future – a future that can more effectively meet the needs of our customers. We will achieve this by working with partners including government, council, businesses and locals, to ultimately improve the foundations that were established 73 years ago.

At Moorabbin Airport we are committed to sustainable outcomes seeking to minimise our environmental impact by being active corporate citizens. Our team are experts and knowledgeable with diverse professional and social backgrounds, much like the communities and customers we work with.

We embrace change, and we look ahead to the future to assess how the needs of the community and industry are evolving, and how our 2021 Master Plan strives to meet these needs, to ensure our viability and safeguard our future.

Stakeholders play a pivotal role in Moorabbin Airport. They help us to shape the future aviation, non-aviation and community activities. Taking on board feedback from Federal, State, Local and Community stakeholders, the 2021 draft Master Plan has been updated to reflect a commitment to:

- greater collaboration with key stakeholders
- providing key economic activities and employment for Melbourne and Victoria
- no longer planning to move the existing western apron airside fence
- increasing sustainability-led development and practices
- enhancing engagement with local community
- increased support for aviation customers
- increased aviation training and services
- expansion of the Moorabbin Air Museum.

Moorabbin Airport is safely building a sustainable future for aviation, business, and our local communities.

We are trusted experts committed to providing the infrastructure and facilities to promote positive outcomes that add value to our customer's and communities' lives.

Our proactive approach to collaboration ensures the viability of the airport through safe operations and economic prosperity for businesses and the community. Our commercial, industrial and retail precincts provide valuable employment opportunities that support the wider City of Kingston.

1.1

MOORABBIN AIRPORT MASTER PLAN 2021

1.1.1 – Overview

Moorabbin Airport is recognised as:

- a safe and responsible airport
- an education hub for aviation universities, registered training organisations, and a site for interaction with aircraft museum displays and restoration projects
- a State Significant place for Victoria
- a place for aviation growth
- a place that generates employment, investment, and business activity
- a mature, urban site, featuring high-quality large format warehousing and campus-style offices occupied by premium customers
- an industry leader in public safety, airport planning and investment generating increased employment.

Land use in this Master Plan 2021 is framed around aviation. The airport is planned with safety, airspace, flight training and aviation infrastructure in mind. Areas that are non-aviation will help to upgrade legacy infrastructure to benefit aviation and non-aviation customers.

This Master Plan 2021 has been updated following feedback received from the Commonwealth minister of Infrastructure, Transport, Regional Development and Local Government (Commonwealth Minister) and other stakeholders. One update is that the airfield layout approved under Master Plan 2015 will continue to facilitate aviation activities during this Master Plan 2021. This means that the airside fence on the western boundary

of Main Apron will remain in the same location as under the Master Plan 2015.

Moorabbin Airport is one of the four purpose-built aviation flight training airports in Australia. Aviation movements are poised to grow per year to 375,000 by the end of 2041. Flight training operations account for 90% of movements. Land use under this Master Plan 2021 does not impact this forecast in any way. Safety and airspace for flight training in a metropolitan location is the prime limiting factor.

Under this Master Plan 2021, Moorabbin Airport continues to meet the current and future needs of aviation and non aviation users.

Ensuring our stakeholders are communicated with proactively and that their core informational needs are met and responded to has shaped the Master Plan 2021 consultation. Our process follows Airports Act requirements and has involved engagement with Federal, State, Local and Community stakeholders.

Moorabbin Airport is community-centric, dedicated to making a positive impact on local communities, the environment, the economy, and the aviation sector.

1.1.2 – Objectives

Key objectives of Master Plan 2021 include:

Safety, aviation and aircraft noise

- enhancing our safe airport reputation, including managing Airport activities within our industry best safety framework and continuing the collaborative approach to aviation safety
- growing flight training activity to 1,800 students per year – an increase of 450 students from 2020 levels and is forecast to be the safe maximum achievable number within the airspace capacity constraints of the Airport. Aviation student numbers exclude training conducted online and offsite, which are expected to grow.
- continuing to implement national frameworks including safeguarding airspace protection, regulatory compliance and public safety areas
- continuing to renew aviation infrastructure, improve efficiency of aircraft operations on aprons and leverage new services infrastructure already constructed and planned in non-aviation precincts
- implementing current aviation safety frameworks to support the current and future generation of aircraft and general aviation operations and procedures
- continuing to actively manage aircraft noise and community concerns including, through the Fly Friendly program, aircraft operator engagement and stakeholder collaboration
- seeking to introduce electric aircraft operations towards the end of the period for this Master Plan 2021.

Sustainable planning and development

- planning and delivering innovative aviation and non-aviation development programs that lead the way in safety design, customer amenity and sustainability. Non-aviation development continues to subsidise future investment in the Airport's aviation activities, while generating further employment for the region
- investing a further \$285 million in aviation and non-aviation activities by 2029. \$500 million has already been invested by Moorabbin Airport and its customers from privatisation to 2020
- simplifying the Airport's planning framework by reducing the number of land use precincts from seven to five and aligning associated zoning and planning controls for aviation and non-aviation areas. This rezoning supports key aviation activities and nearby residents
- facilitating improvements to the ground transport network at the Airport including future proofing access as described in the updated Ground Transport Plan. As a long-term option to improve ground traffic access, Moorabbin Airport continues to consider the proposal to locate a station of the Suburban Rail Loop at the Airport
- enhancing visual amenity at the Airport by promoting best built-form design for developments and safeguarding designated green spaces at the Airport
- integration of Indigenous recognition and progressive planting of native flora species.

Economics, community contribution and sustainability

- achieving 9,050 direct jobs by 2029, from 600 direct jobs at privatisation in 1998. Over the last five years, the Airport contributed to 30% of new jobs created in the City of Kingston and has transformed into an urban centre of major economic activity and opportunity in South East Melbourne
- generating \$1.2 billion of economic activity by 2029, and supporting 11 million visitations
- achieving the Airport's sustainability initiatives via the Airport's Green Plan with environmental commitments including waste management, renewable energy generation, greenhouse gas emissions reduction, water conservation, and actively managing supply chains
- enhancing our community focus and volunteer culture by expanding the Australian National Aviation Museum site by 50% to 12,000 sqm at a peppercorn rent, making it one of the largest aviation sites, and continuing long-term support for Fareshare operations
- practicing safe, compliant and effective environmental management, including continuing to green the Airport site through responsible management of environmental issues (legacy pre-privatisation traces of per- and poly-fluoroalkyl substances (PFAS)). Potential environmental issues will continue to be managed in cooperation with the Commonwealth and other authorities responsible for environmental regulation at the Airport.

Moorabbin Airport



**Safely building a sustainable
future for aviation, business
and our local communities.**

11.3 – Key Achievements

Since the Master Plan 2015, Moorabbin Airport has:

- facilitated the largest number of safe flight training aircraft movements by any Australian general aviation airport
- generated an increase of aviation students trained by 40%, from 800 to 1,350 per year
- modernised 46% of aviation facilities floorspace. The largest facility developed was the four-hectare CAE project, co-funded by Moorabbin Airport, which supports 25% of aircraft activity and pilots trained
- airfield infrastructure projects including creating or improving of 135,000 sqm of runway pavement, runway and taxiway lighting, airfield markers and construction of 175,000 m³ of new airport stormwater retarding basins
- generated local economic activity and employment within the 145,000 sqm of new retail, commercial and industrial floor space at the Airport site (as at December 2022). In particular, expansion of Kingston Central Plaza to support and attract new retail customer offerings for quality, value and additional choices in a way that complements rather than competes with off site centres
- developed Chifley Business Park South which is a premium employment precinct for our food, health, motor vehicle, lighting and manufacturing customers
- delivered 10 kilometres of infrastructure associated with street lighting, drainage and sewer networks, telecommunications cabling and electrical substation upgrades
- delivered our first five-star green star as-built building, rolled out 1,700kW (as of December 2022) of solar and 2,000 drought tolerant trees
- been recognised as having an industry leading building activity approval process including safe implementation of the National Airport Safeguarding Framework guidelines
- generated more than \$250 million of direct investment.



Moorabbin Airport has delivered the following aviation infrastructure projects since privatisation:

Year	Development
2006	Construction of an aircraft maintenance hangar
2006	19 Second Avenue renovation and delivery of Kingston Central Boulevard stage 1
2008	Construction of security mandated airside fence
2013	Airfield upgrades to taxiways improving safety design
2015	Resealing of taxiway Juliet
2015	Refurbishment of refueller area pavement
2016	Construction of stormwater retarding basins and drainage
2016	Stage 1 of the Airfield Lighting Project and resealing of 85,000 sqm of runway
2017	Co-development and funding of a four hectare customer precinct for CAE's flight training school
2017	Stage 1 of the Airfield Lighting Project and continued installation of five kilometres of new taxiway edge lights for alpha, bravo and golf and four runway thresholds
2018	Expansion of Terminal Apron to support flight training
2018	Upgrade of electrical and signals wiring to the airport backup generator from the Air Traffic Control and airfield
2018	Replacement of airfield markers including cones and gables
2019	Installation of 39 movement area guidance signs
2020	Apron pavement infill of 3,000 sqm surrounding Hangar 3
2020	Re-engineered 1.5 kilometres of airfield perimeter stormwater drains
2021	Apron pavement expansion in the Southern Rotary of 4,500 sqm
2021	Construction of two new aviation hangars
2022	Completing 135,000 sqm of runway pavement resealing
2022	Winner of AAA Metro Airport of the Year (located in the greater metropolitan area of a capital city)
2022	Airside fencing and gate upgrades

Figure 1.1 – Infrastructure improvements since privatisation of the Airport in 1998

1.2

AVIATION SUPPORT LAND USE

Our aviation precincts are industry leading, built around safety, general aviation and industry renewal, resilience, and growth. Aviation activities at the Airport are, and will continue to be, supported by:

- a centrally located airfield with five runways and supporting taxiways
- separation of fixed wing and rotary operations
- optimised locations for the Air Traffic Control (ATC) tower, weather, communication and navigational infrastructure.

Improvements to our aviation precincts will be made by:

- increasing apron pavement by 25,000 sqm and redesign to activate more airside sites proximate to runways
- developing new services and trunk infrastructure (power, water, sewer, communications and storm water) to replace legacy infrastructure in an efficient modern layout
- identifying new hangar and classroom sites having regard to service and infrastructure availability, nearby existing uses and efficient aviation access to the airfield
- working with aviation customers to expand existing ageing and smaller facilities on their sites
- concept planning for electric aircraft operations

- installing a new aerodrome beacon to heighten pilot awareness of the airfield
- creating options for aviation activity requiring warehousing, workshops or office/classroom space in non-aviation precincts that do not require airside access.

1.3

AVIATION

Moorabbin Airport has 44 hectares of aviation support land. This Master Plan 2021 provides detail about the aviation land, including plans for existing and new aviation operators. Key points include:

- the amount of aviation land is not a constraint for aviation activity at the Airport. Safe airspace procedures remain the major constraint and reduce the theoretical unconstrained capacity from 650,000 movements to an Ultimate Practical Capacity of 375,000 (noting that 368,000 movements were supported in 2008 under different airspace (GAAP) and aviation procedures for circuit training at the Airport prior to CASA airspace restrictions and with 25% less available aviation floorspace)
- 1,360 sqm of additional classroom floorspace is required by our operators to grow flight training activity to our forecast maximum of 1,800 students per year
- five hectares is to be provided for flight training sites – this Master Plan 2021 identifies up to an additional two hectares for future growth.

This Master Plan 2021 sets out the following aviation initiatives:

- 25% of aviation activity is supported by the 2,700 sqm CAE site – with 2,200 sqm of classroom over two levels, the site is capable of training 350 students per year and has been operational since 2018
- since 2020 the second-largest flight training site has been vacant. The 3,400 sqm site has historically supported 15% of aviation activity and has 1,320 sqm of fully refurbished classrooms/offices
- 50% of flight training sites could be redeveloped to add a second storey or ground floor extension and remain compliant with relevant safety rules and regulations
- Master Plan 2015 delivered two new Maintenance Repair Organisations (MRO) hangars on the Northern Apron funded by Moorabbin Airport
- Master Plan 2021 plans for new MRO sites.
- Currently 320 aircraft are based at Moorabbin Airport and this number is expected to rise to 420 over the course of Master Plan 2021. The Master Plan 2021 outlines aircraft parking plans including:
- Aviation Development Plan will progressively activate additional parking options
- additional aircraft parking is to be provided at the Airport
- although flight training aircraft require 99 sqm per parking area, Moorabbin Airport's standard parking will provide 120 sqm of parking area for these aircraft.



1.4

STRUCTURE OF MASTER PLAN 2021

Master Plan 2021 sets out our strategic approach and objectives for:

- Aviation Safety
- Economic and Employment Contribution
- Sustainability, Corporate Responsibility and Community Contribution
- Land Use
- Aviation Development
- Non-Aviation Development
- Ground Transport Plan
- Infrastructure
- Environmental Strategy
- Airport Safeguarding Strategy.

In this Master Plan 2021:

- the term 'Moorabbin Airport' refers to Moorabbin Airport Corporation as the manager of the Moorabbin Airport site and 'the Airport' refers to the airport site only
- data provided is pre- COVID or at June 2020, unless otherwise noted
- statistics, assumptions, forecasts and other quantitative data are based on information available to Moorabbin Airport as at the date of the Master Plan, and may include estimates based on available data

- Economics and Employment
- Moorabbin Airport currently provides 6,500 jobs, representing 7% of employment in the City of Kingston. By 2029, there will be more than 9,050 jobs on site and the Airport will support a total of 23,100 throughout the economy
- Developments and renewal are essential to the Airport. This is consistent with the Commonwealth's policy of "commercial development at airports is essential to their operational and financial viability"
- The Airport generates \$870 million of economic benefit per year, forecast to increase to \$1.2 billion over the next eight years
- As one of the largest private sector investment projects in the City of Kingston, Moorabbin Airport and its customers have invested \$500 million into the Airport including \$250 million in the last five years. A further \$285 million will be invested over the next eight years
- 8.4 million visitations occur at the Airport each year, with the community taking advantage of aviation, industrial, commercial and retail opportunities. It is a major centre of economic activity in south-east metropolitan Melbourne
- Moorabbin Airport is home to 250 mixed used, large and small businesses. We continue to deliver our strategy of attracting businesses with an e-commerce focus and complement local activity.
- The Airport a hub for training, transport and economic growth. Customers have fit-for-purpose, sustainable and purpose designed product where 46% of aviation facilities have been renewed since privatisation
- Moorabbin Airport provides economic activity that complements the broader metropolitan area
- The Airport is designed for general aviation (fixed wing and rotary). Large aviation operations including corporate jet facilities are suited to Essendon and Melbourne Airport.





02

ECONOMICS AND EMPLOYMENT





Moorabbin Airport is forecast to generate \$1.2 billion of economic activity by 2029 and record 11 million visitations

- Moorabbin Airport currently provides 6,500 jobs, representing 7% of employment in the City of Kingston. By 2029, there will be more than 9,050 jobs on site and the Airport will support a total of 23,100 jobs in the economy.
- Developments and renewal are essential to the Airport. This is consistent with the Commonwealth's policy of commercial development at airports is essential to their operational and financial viability.
- The Airport generates \$870 million of economic benefit per year, forecast to increase to \$1.2 billion over the next eight years.
- As one of the largest private sector investment projects in the City of Kingston, Moorabbin Airport and its customers have invested \$500 million into the Airport including \$250 million in the last five years. A further \$285 million will be invested over the next eight years.
- 8.4 million visits occur at the Airport each year, with the community taking advantage of aviation, industrial, commercial and retail opportunities. It is a major centre of economic activity in metropolitan Melbourne.
- Moorabbin Airport is home to 250 mixed used, large and small businesses. We continue to deliver our strategy of attracting businesses with an e-commerce focus and complement local activity.
- The Airport is a hub for training, transport and economic growth. Customers have fit-for-purpose, sustainable and purpose designed product. 46% of aviation facilities have been renewed since privatisation.
- Moorabbin Airport provides economic activity that complements the broader metropolitan area.
- The Airport is designed for general aviation (fixed wing and rotary). Large aviation operations including corporate jet facilities are suited to Essendon and Melbourne Airport.

We're committed to Moorabbin Airport's growth as a state significant place, a centre of activity for the City of Kingston and broader metropolitan Melbourne area, and a reputation as Australia's leading aviation base for student training.

2.1 INTRODUCTION

Master Plan 2021 seeks to continue the positive contribution to the City of Kingston and broader metropolitan area, progressing our \$250 million of direct investment into Moorabbin Airport and local initiatives since privatisation targeting aviation, youth, aviation history and the local community for wider community benefit.

Master Plan 2021 promotes industry growth through advocacy, youth engagement and participation elements. This will develop sustainable pathways for student pilots and engineers.

Since privatisation, we have invested \$250 million establishing a State significant place for Victoria. Moorabbin Airport supports 30+ community initiatives each year.



Figure 2.1 – Urban characteristics



2.2

FACTORS SUPPORTING ECONOMIC CONTRIBUTION

Moorabbin Airport's success as an urban centre for economic activity is the result of 20 years of strategic planning, delivery, safety, and customer support.

Over the last five years, Moorabbin Airport has:

- developed aviation areas in the south-west of the Airport including a new flight school precinct with student accommodation
- expanded the Kingston Central Plaza retail offering, nearly doubling its floor space and attracting new retail, food and beverage and leisure customers
- developed new international retailing opportunities, including large-scale retail outlets
- expanded Chifley Business Park South with 72,000 sqm of industrial floor space occupied by large, stable local and international customers who have made long-term commitments to the local economy.

The unique blend of aviation, retail, commercial and industrial activities at the Airport positions it as a major urban destination and activity, education and employment hub in metropolitan Melbourne. A snapshot of Moorabbin Airport's urban characteristics is set out at Figure 2.1.

The strategy since privatisation is based on a solid platform of planning, aviation safeguarding delivery and ongoing management of all developments and investment at the Airport. We work with our customers, to ensure all projects are delivered safely and in accordance with building requirements and the Master Plan.

The Airport is:

- a key urban destination with a unique mix of retail, commercial, industrial and aviation activities and a focus on providing high-quality flight training and general aviation with regional connections

- well positioned to generate thousands of new jobs and stimulate economic activity by leveraging the increased population growth and density in Melbourne's South-East Growth Corridor
- a major centre of economic activity and a fundamental component of the futureproofing of the south-east metropolitan Melbourne economy. Many Airport customers are engaged in emerging business trends and opportunities, such as e-commerce and e-fulfilment, setting Moorabbin Airport up for continued growth
- an innovative developer that undertakes sustainable developments that complement other activity and employment hubs in the City of Kingston
- working with our customers and operators to support them to win industry-leading contracts and supply arrangements
- continuously evaluating and assessing land use in order to support the future growth of the Airport
- responsive to, and consistent with, State and local planning schemes to continue to fulfil the policy objectives of the City of Kingston and the Victorian Government
- a key business hub that supports 8.4 million visitations each year, with a forecast increase to over 11 million visitations in the next eight years anticipated as the investment and development objectives of this Master Plan 2021 are delivered.

From privatisation, the long-term strategy has developed and progressively modernised the Airport, and will continue to do so, because of:

Aviation activities – Moorabbin Airport's investment in and funding of services and infrastructure is critical for the success of the Airport. Significant upgrades have been delivered, with targeted investment in new aviation facilities to modernise and redesign the aviation support precinct, including reconfigured taxiways. Works consistently assist with delivering airspace safety and efficiency while progressively upgrading Airport service infrastructure networks.

Planning processes – the master plan process and associated land use plan (as the key planning document applicable to the Airport) provides the long-term certainty needed to invest in and develop the Airport with both brownfield developments of existing commercial or industrial facilities and greenfield projects for the development of brand-new facilities, while maintaining flexibility through the updates to the master plan on an eight-yearly cycle.

Investment – Moorabbin Airport has the funding required to deliver proposed developments at the Airport. Moorabbin Airport will continue to deliver jobs, infrastructure, sustainable development and services for the City of Kingston, the south-east metropolitan Melbourne region and Victoria.

Infrastructure investment – Moorabbin Airport has taken a whole of site approach to safely improve and grow all aspects of the Airport. High-quality, safe and sustainable developments have involved direct investment into services, infrastructure, roads, landscaping and utilities upgrades for the entire Airport site. This approach has provided a premium sustainable product for all customers.

Local and State Government relationships – Moorabbin Airport engages with all levels of government in formulating its long-term safety, development strategy and delivery approach. As a Commonwealth leased site, Moorabbin Airport informs and consults with government stakeholders. Underpinning this government engagement is a proactive approach of engagement, consultation, collaboration and commercial agreements with customers.

Aviation investment delivered to support economic activity:

- four hectares flight training consolidated site comprised of aircraft parking, student accommodation, classrooms, lecture theatres and simulators
- upgrade all 92 hectares of airfield (runways, taxiways, aprons, signage)
- hangars and other facilities – 13 customers now operating 15 new or renovated premises
- apron lighting and airside access systems
- 10,000 sqm of new pavement.

**From
privatisation,
our long-term
strategy has
delivered a
world-leading,
sustainable,
mixed-use
urban Airport.**



2.3 EMPLOYMENT

6,500 people work at Moorabbin Airport today. By 2029 this will grow by 40% to 9,050 people. 23,100 jobs, direct and indirect, by 2029.

73% of workers live within 10 kilometres or 20 minutes of the Airport. 4,240 or 65% of jobs at Moorabbin Airport are supported by industrial and commercial activity.

\$484 million annual wages paid to Airport-based workers today will grow to \$676 million by 2029.

Details of the employment generated by Moorabbin Airport are provided in Figure 2.2 (below).

Employment	2014	2020	2029 (forecast)
Jobs – direct	3,300	6,500	9,050
Jobs – indirect	6,000	10,000	14,050
Jobs – total	9,300	16,500	23,100

Figure 2.2 – Employment supported by Moorabbin Airport.



Moorabbin Airport is a long-term major contributor to the growth of the City of Kingston. Jobs at the Airport increased by approximately 12% annually between 2014 and 2020 – compared to 2% per year for the City of Kingston. As a result, jobs at the Airport accounted for 30% of the City of Kingston job growth.

Based on the industry benchmark for job years created by investment in construction (that is, where a job year is the equivalent of one year of employment for one person) and the construction – related activities contemplated by this Master Plan 2021, 665 job years of construction-related employment will be provided during the term of this Master Plan 2021.

Employment in the industrial/warehousing, commercial office and retail sectors delivers an important social benefit for the local community, providing residents of the City of Kingston with a range of employment opportunities including entry level and graduate jobs. This will contribute to lowering the unemployment rate in the City of Kingston, which is currently 5.6% (EconomyID, 2020).

Jobs at the Airport also contribute to youth employment and the reduction of unemployment and under-employment in the region. In 2016, the youth unemployment rate was 14.9% (EconomyID, 2016).

Moorabbin Airport supports City of Kingston and Victorian Government policy initiatives to create jobs that allow younger workers to enter the workforce for the first time, or to obtain additional employment to support their ongoing education. Flight training remains a key employment pathway for youth which Moorabbin Airport supports through various initiatives.

A range of employment opportunities exist at the Airport. Figure 2.3 summarises employment at Moorabbin Airport by use.

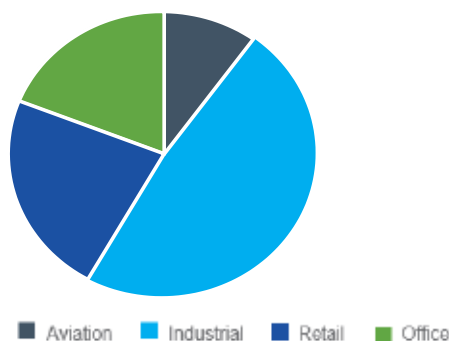


Figure 2.3 – Employment at Moorabbin Airport by use

44% of Airport workers live within five - kilometres of the Airport, 73% live within 10 kilometres, and 98% live within 20 kilometres. Their wages – currently valued at \$484 million and anticipated to increase to \$676 million in 2029 – are spent in the local community, further driving the local economy.

Moorabbin Airport, with an area of 294 hectares, is the largest privately managed site in the City of Kingston. In 2020, there were 33 hectares of vacant industrial employment land at the Airport (compared to 76 hectares in the City of Kingston), representing 43% of available vacant industrial land in the City of Kingston. This vacant land is a significant opportunity to meet demand for local employment and future development.

Density of jobs at Moorabbin Airport compared to surrounding areas, is seen in Figure 2.4. Employment at Moorabbin Airport forms a key part of the Dingley and Braeside Business Area.

Our proactive approach to collaboration aids the viability of the airport through safe operations and economic prosperity for businesses and the community. Our commercial, industrial and retail precincts provide valuable employment opportunities that support the wider City of Kingston.





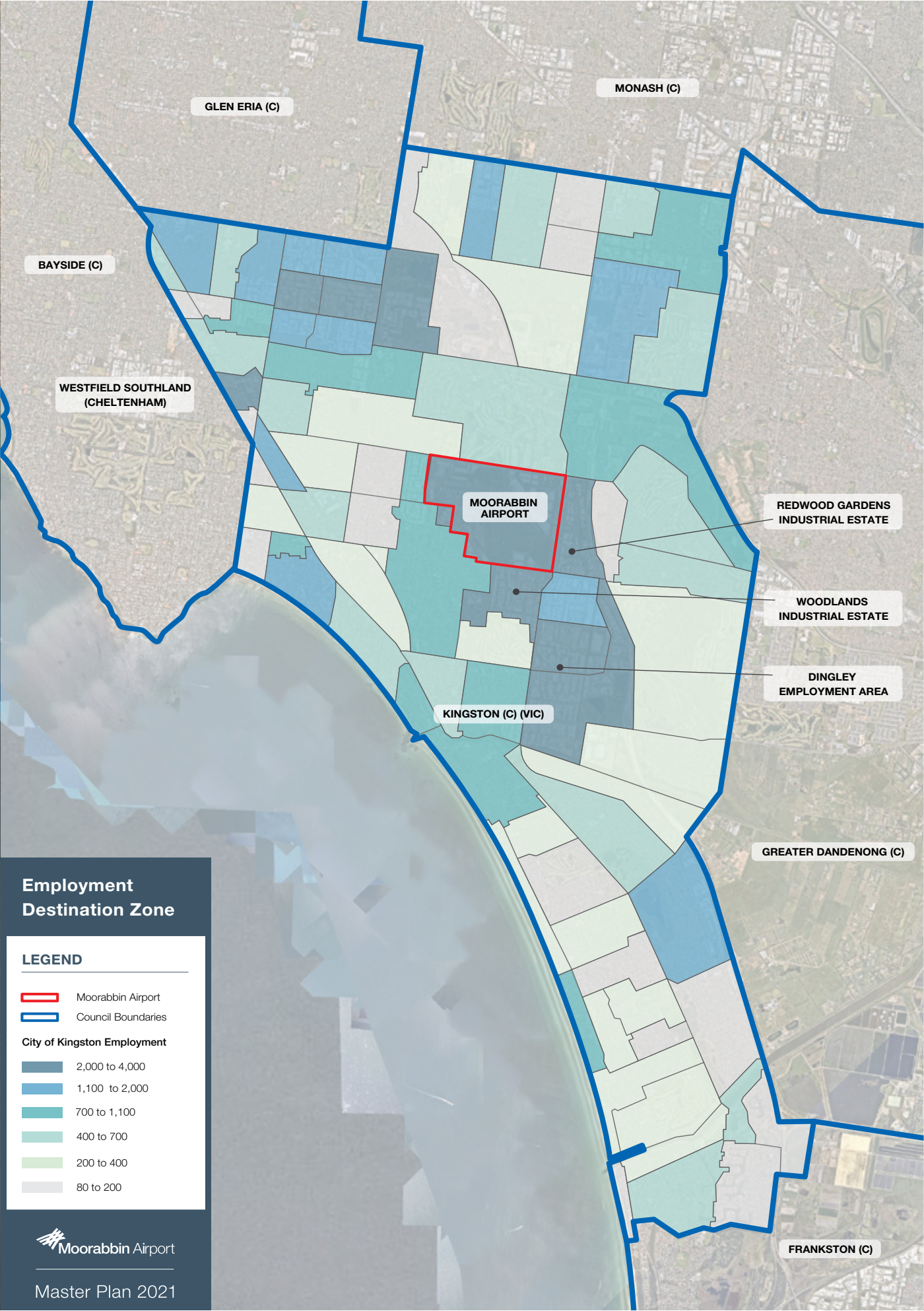


Figure 2.4 – Employment by destination zone in City of Kingston, 2016 (ABS Census 2016, Ethos Urban)

2.4 INVESTMENT

Moorabbin Airport has invested **\$250 million** in aviation, non-aviation and sustainable projects since 2015, with Airport customers and other stakeholders contributing **\$70 million** for their business requirements. A further **\$285 million** will be invested during this Master Plan.

Moorabbin Airport provides **9%** of City of Kingston's economic activity across each year.

Non-aviation activity is important to the aviation activity at the Airport.

\$870 million in economic benefit is currently generated from Moorabbin Airport, and this is forecast to increase to **\$1.2 billion** over the next eight years.

Investment by Moorabbin Airport since privatisation has reached \$500 million. A further \$285 million is anticipated to be delivered on shovel-ready and future planned aviation and non-aviation development during the term of this Master Plan 2021. By 2041, Moorabbin Airport forecasts that over \$785 million will have been invested in the Airport.

In the five years since the approval of Master Plan 2015, over 145,000 sqm of gross leasable area was developed. 170,000 sqm of land has been earmarked for development for multiple aviation and non-aviation purposes in the next eight years, as set out in Chapter 6 – Land Use Plan.

As set out in Chapter 7 – Aviation Development Plan, Moorabbin Airport will continue to support and invest in major aviation projects, development and redevelopment of aviation precincts and further aircraft parking opportunities.

Non-aviation development and activities will be supported during the term of this Master Plan 2021 with new investment in retail, commercial and industrial floor space, as set out in Chapter 8 – Non-Aviation Development Plan. Current investment in the Airport has generated \$870 million of value-added economic activity as of 2020. This represents 9% of the \$9.4 billion of total value-added economic activity across the City of Kingston each year. By 2029, value-added economic activity from the Airport is forecast to reach \$1.2 billion. This means there will be a 38% increase in the value of the economic activity generated by the Airport over the next eight years, further driving economic growth in the City of Kingston and south-east metropolitan Melbourne. An overview of the economic contribution provided by the Airport is set out at Figure 2.5.

Investment at Moorabbin Airport	Economic activity (value added)	Gross Leasable Area developed
\$250 million invested between 2015 and 2020	The Airport generated over \$870 million in 2020	Over 160,000 sqm was developed between 2015 and 2020
Forecast further investment of \$285 million during the term of this Master Plan 2021	In 2029, the Airport is forecast to generate \$1.2 billion	170,000 sqm has been earmarked for development between 2021 and 2029

Figure 2.5 – Overview of economic contribution of Moorabbin Airport

Moorabbin Airport will increase its contributions to economic value over the term of this Master Plan 2021. This is particularly important as Victoria is recovering from the effects of the COVID-19 pandemic. The opportunity for Moorabbin Airport to perform a significant role in the economic recovery for the City of Kingston and Melbourne's south-east is further highlighted by the Airport being the largest consolidated site in the region that can accommodate retail, commercial and industrial development.

Commonwealth Government policy has long recognised the opportunity for airports to derive revenue from land not required for aeronautical use, as identified in the Commonwealth Government's Aviation White Paper (December 2009). This was recently affirmed by the Minister who noted that commercial development at airports is essential to their operational and financial viability.

Commercial development is essential to the continued operation of Moorabbin 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. Moorabbin Airport uses the revenue it generates from non-aviation activities and development to support and facilitate aviation activities and development.

Moorabbin Airport does not rely on, has sought, Victorian or Commonwealth Government funding support. Future investment in Moorabbin Airport will continue to be driven by the private sector.



Figure 2.6 – Investment projects planned or underway in the local region

Figure 2.6 illustrates the magnitude of the investment at the Airport in comparison to other local projects planned or underway. Since privatisation, the Airport is one of the largest private sector investment projects in the City of Kingston and ranks favourably against all major projects in the area, noting all comparable projects were either fully or partly funded by Government.

Moorabbin Airport acknowledges that its investment and growth has been facilitated by significant public investment in the surrounding region. The Local and Victorian Governments have 43 projects totalling investment of \$1.2 billion in the development pipeline for the local region (Ethos Urban, 2020). Current and future development at the Airport leverages and enhances the economic contributions supported by these publicly funded investments (see Figure 2.7 for select key road infrastructure investments).

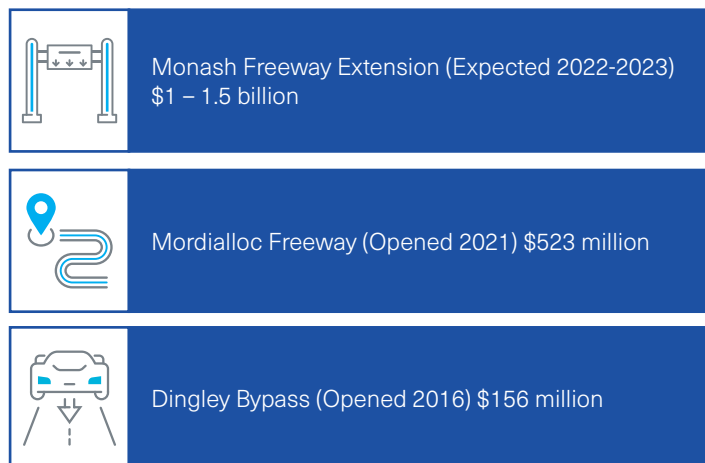


Figure 2.7 – Road infrastructure investments benefiting the local region

Improved connectivity of the local ground transport network to the wider region supports economic activity at the Airport, noting:

- large format retail, commercial and industrial developments are not easily integrated into other areas in south-east metropolitan Melbourne
- customers prefer to locate their business in well-connected and easy to access areas
- broad catchment areas of Airport-based businesses extend beyond the local community to the broader region and State. For example, existing large format retail stores at the Airport serve an area that encompasses almost 1.5 million people, extending from the Mornington Peninsula in the south, to Malvern in the north and Pakenham in the south-east
- these developments trade optimally where there are efficient ground transport networks that support customer access, logistics and freight operations to receive and dispatch goods and provide employee access.

Economic activity and benefits generated by the expansion of Local and State Government infrastructure is important for further investment by Moorabbin Airport.

Moorabbin Airport contributes to employment and economic activity by investing in new infrastructure, major aviation projects, and high-quality large format retail, commercial and industrial developments for customers. The Airport's role as a mixed-use site has cemented its position as a vibrant urban destination and activity, education and employment hub that facilitates investment in the City of Kingston region. Moorabbin Airport will continue to deliver its vision for future development and economic growth.





03

**SUSTAINABILITY,
CORPORATE
RESPONSIBILITY
AND COMMUNITY**





Moorabbin Airport's Green Plan outlines environmental commitments including waste management, renewable energy generation, carbon emissions reduction, water conservation and actively managing supply chains.

Moorabbin Airport provides sustainable and functional aviation, retail and business facilities that support our customers. Sustainability is integral to our operations and decision-making

- We have invested \$250 million in new developments since 2015, with Airport customers and other stakeholders contributing \$70 million for their business requirements
- We delivered our first five star, green star built building and rolled out 2,100kW of solar generation which provides enough energy to power to over 420 homes per year
- The Airport's Green Plan aims to increase solar on Airport rooftops to more than 2,800kW by 2025
- We practice safe, compliant and effective environmental management, including continuing to green the Airport site and through responsible management of environmental issues
- Moorabbin Airport encourages and supports innovative and sustainable development that complements other activity centres in the City of Kingston
- Pleasingly, aviation customers delivering 25% of aviation activity have achieved carbon neutrality by reducing their own emissions and investing in projects that offset their remaining annual carbon emissions.
- Moorabbin Airport is increasingly one of the most sustainable estates within the City of Kingston and metropolitan Melbourne
- We're committed to ongoing sustainability initiatives via Moorabbin Airport's Green Plan with environmental commitments including waste management, renewable energy generation, carbon emissions reduction, water conservation, and actively managing supply chains
- Moorabbin Airport sponsors multiple aviation-related youth programs and facilitates education and industry events
- The Moorabbin Airport Green Plan for the next eight years is outlined in this chapter
- Long-term sustainability initiatives for aviation are future proofed in this Master Plan 2021, including a transition to bio-fuels and electrification of aircraft
- The Moorabbin to Melbourne expansion via the Suburban Rail Loop will be a major community asset.

Moorabbin Airport is committed to building on its current sustainable practices and these are outlined in the Moorabbin Airport Green Plan. We're also committed to working with and supporting the local community.

As part of the Goodman Group, Moorabbin Airport is delivering sustainability and corporate social responsibility objectives, as set out in Goodman Group's 2030 Sustainability Strategy. This strategy adopts an industry best, market-leading approach to sustainability and corporate social responsibility and is based on Goodman Group's three pillars of sustainable properties, people and culture, and corporate performance.

The Goodman Group achieved carbon neutrality in June 2021.

3.1

INTRODUCTION

The Airport's sustainability initiatives, as part of the Goodman Group, include targets for:

- delivery of 2,800kW of solar capacity in operation by 2025
- 100% renewable energy use within operations by 2025
- maintaining greater than 95% overall occupancy rate.

These initiatives are guided by the United Nations Sustainable Development Goals – identified as most material to the Airport's business, customers and charity partners. These goals act as a universal call to action to address the world's most significant challenges including addressing climate change, poverty, gender equality and good health and wellbeing for all.

Embracing sustainability and corporate responsibility – through sustainable properties, people and culture, and corporate performance – builds the long-term value and resilience of Moorabbin Airport and provides a stable platform for further growth. The Moorabbin Airport Green Plan provides a clear direction for the Airport's sustainability initiatives. The Airport will be a sustainable, resilient and low-carbon business, incorporating sustainability in all aspects of its operations and activities, making it one of the largest sustainable sites in the City of Kingston.

Airport sites are naturally more likely to give rise to heat island issues given that the infrastructure and site layout required at the Airport (for example, asphalt hardstand, short grass and a flat site topography) has the propensity to attract and trap heat. This

means that surface temperature at the Airport can be warmer than the regional average. During cooler months of the year, some features of the Airport result in producing cooler temperatures.

Under the previous Master Plan, Moorabbin Airport introduced cooling initiatives such as drought tolerant plants, and solar and LED lighting upgrades. Around 400 trees were planted in the Chifley Business Park where these trees were selected for their wide canopy, which helps to cool nearby buildings, roads, and shared pathways. As part of the upgrade to the airfield lighting network, the previous lights on the airfield were switched with new LEDs, which generate less heat, use less power and operate using solar energy.

Under Master Plan 2021, new surface treatments and coolant materials for landside roads will be assessed as another way to mitigate the urban heat island effects.

Executive members of Moorabbin Airport's management team will also continue to assist in relation to community sustainability initiatives, including by advising on industry issues (such as by participating in the committees for RMIT and Swinburne University), contributing to the Australian Airports Association (AAA) and Aviation/Aerospace Australia (A/AA) through supporting youth programs, industry summits and conferences and collaborating with other airports to develop sustainability best practice and initiatives.

Moorabbin Airport has been an adopter of planning for future electric aircraft operations and is a member of the GreenSkies Committee (which promotes action on sustainability in the aviation, aerospace and space sectors in Australia).

3.2

SUSTAINABILITY AND CORPORATE RESPONSIBILITY

Sustainability is the ability to maintain healthy environmental, social and economic systems in balance on a global and local scale. In addition to natural resources, sustainable development practices take into account the management of economic and social resources. Moorabbin Airport is committed to embedding sustainability within its corporate culture and cultivating employee commitment to achieving our long-term environmental objectives.

Moorabbin Airport's long-term environmental objectives are underpinned by three key principles:

Sustainable Properties

- investing in renewable energy generation and reductions in energy consumption
- seeking opportunities to mitigate greenhouse gas emissions and manage the effects of a changing climate
- minimising the production of waste and increasing water saving measures
- enhancing the local natural environment and community wellbeing.

People and Culture

- creating an inclusive and transparent work environment that is free of harassment and discrimination in addition to prioritising employee wellbeing and safety
- responsibly managing the natural environment in a way that contributes to community health and wellbeing
- being an active participant in the local community through community organisations and initiatives.

Corporate Performance

- ensuring that the Airport remains financially resilient allowing long-term, fully-funded, operations
- implementing commitments to environmental, sustainable and social governance
- undertaking obtaining Tier 3 Airport Carbon Accreditation under Airports Council International Europe.



As proactive corporate citizens, we work closely with residents, surrounding community groups, charities and programs to give back in a way that has a positive impact on people's lives.



3.2.1 – Existing initiatives

Moorabbin Airport has implemented sustainability and corporate responsibility initiatives, as set out in Figure 3.1.

Principle	Initiative
Reduced energy consumption	<p>100% renewable electricity powers the Airport's operations</p> <p>100% of the lights on the airfield are now LED</p> <p>Delivering improvements in energy efficiency by transitioning some buildings to LED lighting systems and installing insulation during the 2019 Moorabbin Airport Office refurbishment</p> <p>40 solar panels generating 1,700kW (as of December 2022) providing renewable electricity currently operate on seven buildings at the Airport (importantly this included consultation with the Civil Aviation Safety Authority (CASA) and Airservices Australia (Airservices) and to ensure that such installations do not adversely affect aviation operations due to glare).</p>
Reducing greenhouse gas emissions and mitigating the effects of climate change	<p>The new circuit booking slot system has reduced waiting times on ground running, resulting in shorter waiting times (with an average reduction of 20 minutes in peak periods) and reduced fuel consumption, saving 36,000L of aviation fuel per year</p> <p>The circuit booking slot system has also reduced speculative ground taxiing to run-up bays when airspace is not immediately available and resulted in fewer aerial go-arounds, reducing fuel burn during final approach</p> <p>Redevelopment of the aviation precinct to improve access to the runway network has reduced the fuel required for aircraft to taxi from hangars</p> <p>Charging points for electric vehicles have been installed at the Airport in new developments</p> <p>GreenSkies Committee membership which promotes action on sustainability in the aviation industry.</p>
Water saving measures	<p>Water-sensitive urban design (WSUD) features have been included in the design and construction of buildings and infrastructure at Moorabbin Airport and in developing landscape choices</p> <p>New developments at Moorabbin Airport have been fitted with rainwater tanks for water collection and retention.</p>
Responsible waste management	<p>Waste oil and most waste solvents generated at the Airport have been recycled off-site through Victorian Environment Protection Agency approved facilities</p> <p>Developers are encouraged to recycle and reuse building materials such as furniture, carpet, tiles and structural steel</p> <p>80% of construction and demolition waste is diverted from landfill</p> <p>Moorabbin Airport facilitated additional recycling through scrap metal recycling, Drum Muster and office recycling initiatives.</p>
Building materials and supply chain	<p>Moorabbin Airport's supply chains use sustainable and ethically sourced products, where appropriate.</p>

Principle	Initiative
Biodiversity and habitat	<p>Greening the Airport site with 2,000 trees and over 100,000 shrubs and ground cover, actively managed by Moorabbin Airport. This has contributed significantly to increasing the overall tree canopy such as Chifley Business Park which now includes 700 trees</p> <p>We complete a tree audit every year that identifies the location, type and condition of trees and vegetation</p> <p>We require three trees to be established for every one tree removed during new developments at the Airport.</p>
Diversity and workplace	Moorabbin Airport implemented corporate policies directed at creating and maintaining an inclusive and transparent work environment.
Community	<p>Moorabbin Airport has supported 30 community initiatives each year, targeting aviation, youth, aviation history and the local community</p> <p>Moorabbin Airport also provided in-kind support such as rent waivers, use of facilities and participation initiatives.</p>

Figure 3.1 – Moorabbin Airport's existing sustainability initiatives



3.2.2 – Future initiatives – the Moorabbin Airport Green Plan

In this Master Plan 2021, Moorabbin Airport will increase its investment in sustainability and corporate responsibility, setting ambitious targets and implementing new initiatives in the Moorabbin Airport Green Plan. Moorabbin Airport seeks to:

- obtain Tier 3 Airport Carbon Accreditation under Airports Council International Europe
- save more than 100,000 litres of water through water conservation initiatives including rainwater harvesting, smart irrigation and drought resistant landscaping by 2030
- have 2,800kW of CASA approved solar PV installed on rooftops at Moorabbin Airport by 2025
- continue to provide wide green corridors, public pocket parks with seating, wide footpaths and bike paths for community use
- support our local community organisations and initiatives with financial and in-kind support
- investigate and safeguard the use of sustainable bio-fuels and the electrification of aircraft.

Moorabbin Airport remains committed to implementing safe sustainability practices and initiatives.

We will continue to liaise with stakeholders to progress our sustainability initiatives. These initiatives will be responsive to a changing climate and aim to prioritise the Airport's impact on climate change.

Figure 3.2 provides details of the Moorabbin Airport Green Plan.

Principle	Initiative
Renewable energy generation	<p>Support installation of further solar on rooftops at the Airport to generate 2,800kW of renewable energy to the Airport's customers by 2025</p> <p>Moorabbin Airport will work with CASA to ensure all installations are compliant.</p>
Reducing energy consumption	<p>Moorabbin Airport will investigate the rollout of more energy efficient LED lights in and around all buildings at the Airport (this builds on the use of LED lights as part of the runway lighting upgrades)</p> <p>In the future, Moorabbin Airport will seek to ensure that new developments have appropriate insulation to maximise energy efficiency. Where possible, existing developments will be retrofitted with insulation</p> <p>Moorabbin Airport will consider increasing fuel efficiency when upgrading its vehicle fleet.</p>
Biodiversity and habitat	<p>Moorabbin Airport is committed to continuing to enhance the local natural environment, with more than 2,500 trees and 150,000 shrubs and ground covers by 2029</p> <p>Moorabbin Airport will continue to rejuvenate green corridors.</p>
Water saving measures	<p>Moorabbin Airport will continue to fit new developments at the Airport with rainwater tanks to harvest rainwater and recycle it for use in landscaping and Airport amenities</p> <p>Other water-saving measures include continued prioritisation of drought-tolerant landscaping and maximising hardy native flora and/or using rock ballast as an additional conservation measure. The installation of smart irrigation systems to monitor and control water use and fitting water efficient fixtures in new and existing developments will be assessed and surveyed.</p>
Reducing greenhouse gas emissions and mitigating the effects of climate change	<p>Moorabbin Airport will consider the potential for use of biofuels for Airport maintenance equipment and vehicles and, subject to market demand and operations support, will continue to install charging points for electric vehicles</p> <p>5% of car parking is reserved for use by electric vehicles, where this can be increased in line with the community's uptake of electric vehicles</p> <p>Public transport options will continue to be identified and promoted including the four current bus routes providing access to Hampton and Cheltenham train stations</p> <p>Importantly, Moorabbin Airport will continue to monitor how climate change may manifest at the Airport and take prudent steps (informed by other market approaches) to mitigate impacts.</p>
Building resilience and adaption	<p>Moorabbin Airport will respond to customer needs for sustainably designed properties. For example, a property development delivered by Moorabbin Airport in conjunction with a customer in 2020 achieved a 5 star Green Star As Built NABERS rating</p> <p>Planning for and use of mass timber warehouses with cross laminated timber instead of traditional steel materials.</p>
Waste management	<p>Moorabbin Airport is exploring ongoing improvement of waste management practices including specific waste targets</p> <p>Future waste management initiatives at Moorabbin Airport may include encouraging and educating customers to manage waste in accordance with best practice and implement recycling practices and further development of Moorabbin Airport's recycling practices.</p>
Diversity and workplace	<p>Moorabbin Airport is committed to advancing gender equality through equal opportunities, with 40% of the staff being female.</p>
Building materials and supply chain	<p>Moorabbin Airport will continue to work with our suppliers to ensure we procure goods and services from ethical sources.</p>
Community wellbeing	<p>Moorabbin Airport will continue to support the local community including the Fareshare Garden, Australian National Aviation Museum and local sporting groups.</p> <p>Moorabbin Airport will continue to align itself with and contribute to Local and State Government policies.</p>
Sustainable values	<p>Moorabbin Airport attracts smart engaged people whose values are aligned with the Airport's commitment to sustainability and corporate social responsibility.</p> <p>Implementing sustainability initiatives at Moorabbin Airport will be balanced with prioritising the safety of aviation operations. Moorabbin Airport remains committed to implementing safe sustainability practices and initiatives.</p>

Figure 3.2 – Moorabbin Airport's Green Plan

3.3

COMMUNITY CONTRIBUTION

Moorabbin Airport plays a significant role in the local community.

We acknowledge the importance of working with the community to maximise benefits to the community and minimise adverse impacts. This is important given the Airport's metropolitan location surrounded by industrial, residential and recreational land uses.

Over the last five years, Moorabbin Airport has supported community initiatives that have benefited 15,000 people, 100 organisations, and 120 events via financial contributions or in-kind support to youth, charities, Airport customers, local emergency services, aviation industry, Australian National Aviation Museum and Fareshare Garden.

We are active corporate citizens and provide support to a range of aviation and non-aviation community groups which deliver social benefits.

3.3.1 – Community Snapshot

The Airport is located in the City of Kingston Local Government Area adjacent to Heatherton, Mentone, Parkdale, Mordialloc, Braeside and Dingley Village. The areas around the Airport are used for residential and industrial with significant industrial precincts at the Airport, Moorabbin, Braeside and Clayton South.

Figure 3.3 sets out key social indicators for the local, regional and State social context relevant to understanding the social context in which Moorabbin Airport operates.

Social indicators	Postcode 3194 (Moorabbin Airport/Mentone)	City of Kingston
Population (2016 / projected 2036)	12,967 / 17,778	151,389 / 186,967
Employment (full-time or part-time)	94.7%	94.7%
Diversity (born overseas)	27.4%	31.0%
Disability (help in day-to-day lives)	4.6%	5%
Health and wellbeing ('good, very good or excellent' physical health)	90.2%	90.8%
Community (% voluntary work)	20.1%	17.6%
Disadvantage (socio-economic indexes for areas)	1,060.8	1,044

Figure 3.3 – Relevant social indicators



3.3.2 – Current Community Contribution

Moorabbin Airport contributes to the local community economically and socially.

Employment

Moorabbin Airport provides job opportunities for the entire region, generating employment for new pilots, youth employment in the retail sector, and employees in industry including the transport and construction sectors. As outlined in Chapter 2 – Economic and Employment Contribution, there are currently 6,500 jobs located at the Airport. These aviation and non-aviation employment opportunities provide material social benefits, supporting the reduction of unemployment in the City of Kingston and providing social benefit to Greater Melbourne and regional Victoria.

In the City of Kingston, employment in manufacturing has decreased while employment in construction, wholesale and retail trade and professional services has increased. Moorabbin Airport has supported this growth in construction, wholesale and retail trade through non-aviation developments undertaken at the Airport. Moorabbin Airport's retail and commercial job offerings continue to support the livelihoods of thousands of workers.

Community Life

As well as being a thriving economic and employment hub, the Airport plays a key role in the public life of the local community. It integrates and engages with the local community by supporting a range of aviation organisations and initiatives, with a particular focus on education and training, and exposing the younger generations to aviation.

Moorabbin Airport's community and social contributions include:

- sponsoring local school fetes
 - hosting local arts experiences and supporting youth art competitions
 - supporting Blue Ribbon Day.
- Moorabbin Airport, in conjunction with Goodman Foundation, supports community organisations and initiatives delivering education and training, food security, recreation, arts and culture. A snapshot of this charity and community involvement includes:
- supporting the food security charity Fareshare by funding a farm-hand specialist, providing Meals for the Mob and a 3,000 sqm kitchen garden. This land produces up to 20 tonnes of vegetables annually and contributes 100,000 side meals to the nutritious meals Fareshare provides to Melbournians in need. 150 volunteers maintain the garden year-round. Moorabbin Airport provides on-going support through payment of utilities, bills and additional annual financial donations
 - staff participation in Clean Up Australia Day
 - partnering with St Kilda Football Club to run a landmark schools program facilitating Indigenous participation in AFL – the Moorabbin Airport Next Generation Academy
 - supporting the Sandringham Hospital's fundraising appeals for critical medical equipment to benefit the local community.
- supporting the Australian National Aviation Museum at public events including open days and family days
 - supporting flight training organisations at key milestone events including graduations and open days
 - facilitating and supporting RSL activities such as ANZAC and Remembrance Day events
 - participating in aviation education and industry events
 - sponsoring Indigenous affiliated athletes in the Kimberley and their participation in local Victorian athletic events
 - sponsoring multiple aviation-related youth programs – including the Royal Victorian Aero Clubs Young Eagles program
 - providing Airport tours to local primary and secondary schools and Universities
 - supporting participation in community charity events including lifesaving carnivals and the Beachside Gift



Australian National Aviation Museum

Founded in 1962, the Museum boasts one of the largest collections of Commonwealth Aircraft Corporation manufactured aircraft in Australia. The Museum plays an important role in aviation education and engagement and attracts over 40,000 visitations each year including young people who visit as part of school trips and aviation interest programs.

The Museum is the largest volunteer run aviation museum in Australia. 500 dedicated members contribute their time to restore historically significant aircraft and make them available for the general public to appreciate. Many of the younger members have gone on to careers in aviation including as pilots, engineers and in the Australian Defence Force.

The Museum actively promotes diversity through displays such as Women in Aviation, celebrating the important contributions of women to Australia's aviation industry. Numerous community events and charitable functions are also hosted by the Museum throughout the year.

Under Master Plan 2021, Moorabbin Airport has increased the Museum site by 50% enabling it to incorporate additional displays of aircraft currently being restored in off-site storage.

Continued visitations by community members results in a broader understanding of historic aviation events.



Moorabbin Airport – St Kilda NextGeneration Academy

Moorabbin Airport supports StKilda's Next Generation Academy, encouraging young people from Indigenous and multicultural communities in the West Dandenong Region to participate in AFL. The program encourages inclusion promoting harmony, breaking down barriers within Indigenous and multicultural communities, and the AFL supports healthy living. This program was first undertaken in 2019.

Over 10,000 students from 65 schools across south-east Melbourne have participated in St Kilda Academy programs in the last five years – a number that Moorabbin Airport will seek to grow as the partnership continues.

The All Nations Development Hub provided further support for 30 young people aged between 12 and 16 to undertake a four-week program to build both football and life skills including mental welfare, nutrition, mindfulness and resilience.

Moorabbin Airport presented 15 Next Generation Academy Scholarships to culturally diverse young people in Melbourne's south-east region. These scholarships support further football and personal development, including leadership sessions, AFL Match Day experiences and work placement opportunities.

Finally, one All Nations Traineeship (in collaboration with AFL SportsReady) was provided as a career pathway introduction to the sports industry for young people with diverse cultural backgrounds.

Consultation

Moorabbin Airport encourages, seeks, and facilitates open and transparent communications with all stakeholders. We continue to engage with the community on all Airport activities including economic and social activities as well as the impact of aviation operations.

We undertook additional consultation activities regarding this Master Plan to ensure that all parties and community members were given an opportunity to review and comment on our future initiatives. This unprecedented level of consultation was important to Moorabbin Airport because the wider community and Airport stakeholders play an important role in the future development and operation of the Airport (further details in Chapter 4 – Master Plan Process).

In addition, the Moorabbin Airport Community Aviation Consultation Group (CACG) was established in 1998 as an independently chaired forum that meets quarterly to discuss issues relating to operations at the Airport. The CACG enables an effective exchange of information between Moorabbin Airport, local authorities, Airport users and broader communities. Membership of the CACG consists of a broad representation from industry, regulators and the community. Over the last 23 years, 70 meetings of the CACG have been held.

Beachside Gift

The local Beachside Gift is one of Victoria's largest annual athletic events and provides a unique experience for spectators, athletes and participants. Over the last three years, more than 2,500 athletes have entered with more than 10,000 spectators - with significant representation from local secondary schools. Moorabbin Airport has supported more than 15 young aspiring Indigenous athletes to travel from remote communities in Western Australia and Northern Territory to participate in the Beachside Gift. Moorabbin Airport's support of the Beachside Gift helps bring the local community together.

Location of Social Infrastructure for the Region

The Airport is home to significant social infrastructure and provides benefits for the local community and the wider region, including:

- retail centres operating since the early 1990s – including the Moorabbin Airport Direct Factory Outlet (DFO) and Kingston Central Plaza
- campus-style Chifley Business Park operating from the early 2000s
- the Joseph Avenue Early Learning Centre providing childcare support for the Airport workers
- Royal Victorian Aero Club – an aviation club operating since 1914 and at Moorabbin Airport since 1949
- development of drainage and other infrastructure that benefits the surrounding community
- open spaces for community events or passive recreation.

3.3.3 – Future Community Contribution

The Airport will remain an important social asset for the 20-year planning period of Master Plan 2021.

Future social benefits and impacts arising from activities at the Airport are identified below.

Increased Employment Generation

Moorabbin Airport is seeking to increase employment (with associated regional increases in economic activity) and increase flight training activity (with associated contributions to regional economic activity). Forecast employment trends are set out in Chapter 2 – Economic and Employment Contribution.

Community Centred Development

Further development opportunities at the Airport will result in substantial improvements in both the appearance and amenity of the Airport. Development opportunities include the further activation of the Boundary Road frontage by undertaking retail, commercial and industrial developments, the potential for leisure and recreation businesses to be located at the Airport, and further investment in modern, high-quality industrial, retail and commercial developments with attractive landscaping. For example, Moorabbin Airport is currently undertaking presentation improvements through the installation of palisade and farm fencing at the Airport.

Community centred developments also provide greater incentives for the surrounding community to integrate with and enjoy the Airport.

Subject to market demand, Moorabbin Airport will prioritise installing facilities like bicycle storage racks and cages, fitness equipment and end-of-trip change rooms at its properties to promote health and wellbeing among Moorabbin Airport's workforce, users, and the community.

Aircraft Noise

Moorabbin Airport will continue to work with the community to achieve improved social outcomes and is committed to ongoing development of strategies directed at mitigating noise impacts. As part of this commitment, Moorabbin Airport will:

- continue to operate its Fly Friendly program and engage with operators to minimise noise
- encourage inclusion of appropriate design responses during the construction of residential developments near the Airport
- encourage home purchasers in the area to conduct due diligence regarding noise impacts at different times of the day and in different weather events
- work with community groups through the CACG on aviation operations and continue to look for ways to improve effectiveness of the CACG.

Aviation Safety

Moorabbin Airport has the safety and wellbeing of aviation, local business industry and communities at its core – we are committed to safety for all.

We're committed to maintaining our upstanding safe aviation practices and we actively seek to minimise safety concerns and possible incidences through the adoption of national frameworks including for airspace protection, regulatory compliance and public safety areas.

Moorabbin Airport works collaboratively with industry organisations and regulators including CASA, Airservices Australia, Australian Airports Association (AAA) and Aviation/Aerospace Australia (A/AA) to deliver safe outcomes for users and local residents.

We engage in safety forums, including the Airport Emergency Planning Committee, the Municipal Emergency Management Planning Committee and the Airport Security Committee.

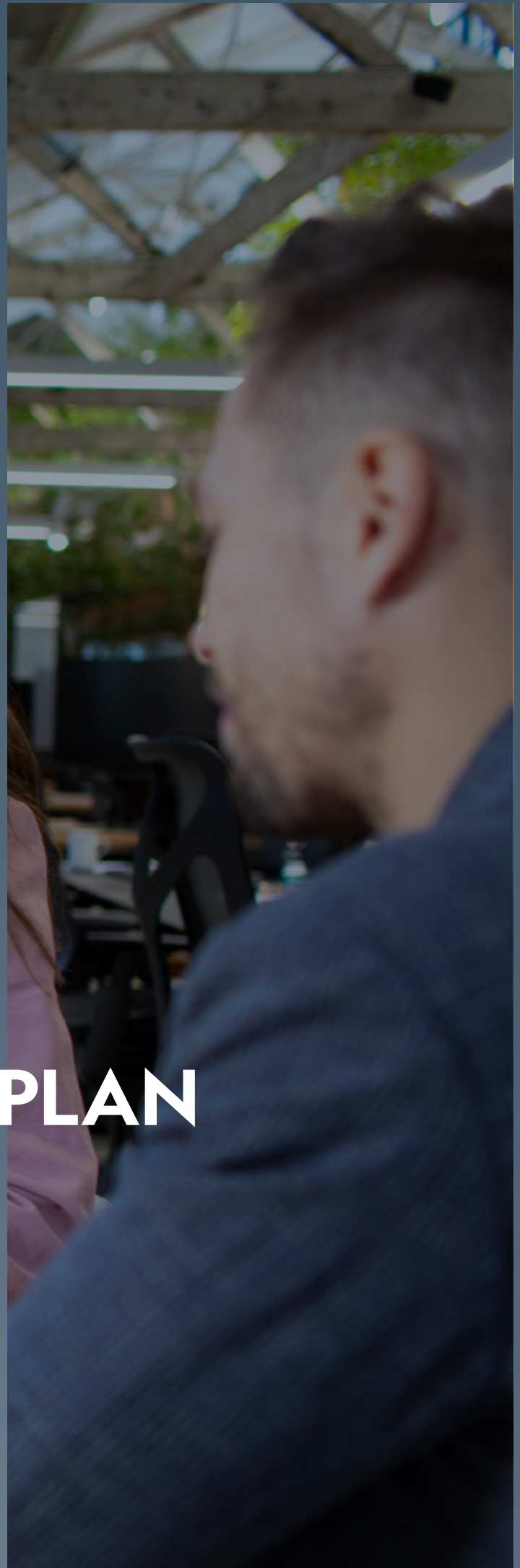




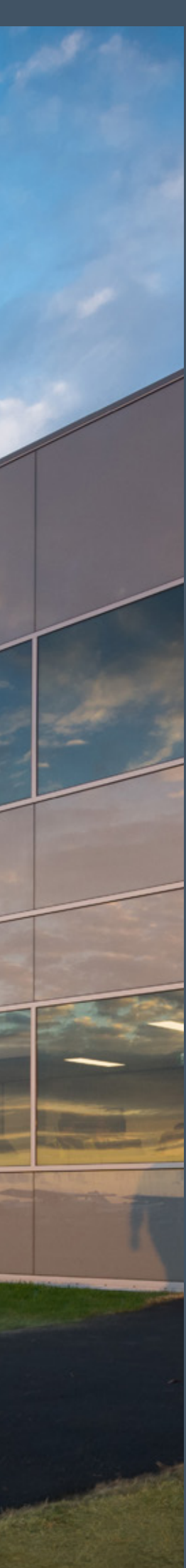


04

MASTER PLAN PROCESS







Master Plan 2021 builds on the strong foundations of Master Plan 2015 and was informed by planning, stakeholder consultation and technical studies undertaken by Moorabbin Airport.

The initial Draft Master Plan 2021 was submitted for approval to the Commonwealth Minister in February 2022, and following further engagement with the Minister, the fresh Draft Master Plan 2021 was submitted complying with section 81(8) of the Airports Act. Master Plan 2021 came into effect upon Commonwealth Ministerial approval.

Master Plan 2021 outlines the Airport’s short, medium and long-term vision.

4.1 INTRODUCTION

The Master Plan was developed through:

- initial planning, reviews and technical studies undertaken by Moorabbin Airport
- consultation with the community and other stakeholders (including Airport customers), and further consultation in preparation of the fresh Draft Master Plan 2021
- statutory process to receive approval from the Commonwealth Minister for this Master Plan 2021 as the final master plan for the Airport
- the submission of a fresh Draft Master Plan by Moorabbin Airport in accordance with the Airports Act, following further consultation with the Commonwealth Minister.

Since Master Plan 2015, the Airports Act has been amended to extend the term of Moorabbin Airport’s master plans from five to eight years.

4.2 INITIAL PLANNING

Master Plan 2021 builds on the strong foundation established by master plans. This Master Plan 2021 has been informed by the extensive consultation including:

- quarterly CACG meetings
- monthly meetings with the Airport Environment Officer (AEO) and quarterly meetings with the Airport Building Controller (ABC)
- targeted consultation with stakeholders during developments at the Airport
- participation in consultative bodies on issues like planning, emergency management and aviation security
- regular engagement with Airservices and CASA
- bi-annual meetings with Airports Planning Consultation Group (MAPCG)
- regular engagement with City of Kingston and State Government
- key aviation industry bodies and representatives
- aviation customers, operators and users
- ongoing engagement with Department of Infrastructure, Transport, Regional Development, Communications and the Arts (Department of Infrastructure) (including annual review processes).

Preparation of Master Plan 2021 involved identifying key objectives for the future of the Airport set out in Chapter 1 – Introduction, including a focus on aviation safety, training and education, enhancing economic growth and community connections, efficient aviation operations and capacity, sustainability and responsible environmental management and efficient ground transport.

Master Plan 2021 was also informed by technical studies. Moorabbin Airport commissioned technical consultants to review and advise on land use planning, transport and traffic modelling, economic and social analysis, aviation and airspace planning, noise assessments, infrastructure services studies, and environmental assessments.

As a result of this initial planning, reviews and technical studies, specific plans and strategies were developed for the Airport. Details of these are set out in Chapters 6 to 12. Moorabbin Airport made submissions to the Planning Panels Victoria Melbourne Airport Environs Safeguarding Standing Advisory Committee and joined proceedings regulating a proposed off-Airport development to improve City of Kingston and Victorian Government planning.

4.3

COMMUNITY AND STAKEHOLDER CONSULTATION PROCESS

Moorabbin Airport comprehensively consulted stakeholders about the Preliminary Draft Master Plan 2021 in advance of the prescribed 60 business day consultation period required under the Airports Act. Input received from the community and other stakeholders was critical to this Master Plan 2021.

The following key stakeholders were consulted with during this process:

- Airport customers – including aviation users
- ABC and AEO
- Airservices and CASA
- Commonwealth Government officers and government agencies
- Victorian Government officers and government agencies
- Local Government councillors, administrators and officers
- community members, industry groups, Moorabbin Airport Chamber of Commerce (MACCI), MAPCG and CACG.

Moorabbin Airport also undertook site tours with stakeholders and responded to a number of submissions, queries or comments on the Preliminary Draft Master Plan 2021.

This Master Plan 2021 was developed during the COVID-19 pandemic in Australia. We used innovative approaches to ensure responsible consultation on Master Plan 2021 in this context, including:

- a focus on online engagement with the community and other stakeholders
- video and tele-conference meetings with key stakeholders
- video and 'town hall' style information sessions
- leafletting residences adjacent to the Airport
- leafletting Airport customers
- website 'Frequently asked questions'.

4.4

PUBLIC EXHIBITION

Prior to releasing the Preliminary Draft Master Plan 2021 for public consultation, Moorabbin Airport advised the following people, in writing, of the Preliminary Draft Master Plan 2021:

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

Preliminary Draft Master Plan 2021 was publicly exhibited for an initial period of 60 business days. The Preliminary Draft Master Plan 2021 was publicly exhibited for an additional 60 business days from 3 August to 28 October 2021 after the Commonwealth Minister granted Moorabbin Airport an extension of time to submit the draft Master Plan 2021. For each period, newspaper notices were published inviting the public to give written comments.

The additional period of public consultation was undertaken to ensure effective community engagement even with the challenges presented by the COVID-19 pandemic. Moorabbin Airport also prepared and published frequently asked questions and answers on their

website which addressed key themes from the responses received during the initial consultation period and undertook a significant program of targeted briefings and engagements.

Following completion of the additional period of public consultation, Moorabbin Airport undertook further engagement with particular stakeholders to address concerns raised, including aviation industry representatives (and the City of Kingston).

While not a requirement under the Airports Act, additional consultation was undertaken by Moorabbin Airport in preparing the fresh Draft Master Plan 2021 to be submitted under section 81(8) of the Airports Act. This consultation considered the Commonwealth Minister's feedback on the initial Draft Master Plan 2021 and included discussions with:

- Commonwealth Departments
- aviation regulators and authorities (including Airservices and CASA)
- Victorian Government
- City of Kingston
- aviation customers and users
- community, industry groups and local members.

A further survey of aviation customers was undertaken to help shape elements of this Master Plan 2021 – in particular regarding the future needs of aviation users at the Airport.

The Preliminary Draft Master Plan 2021 was available for viewing from 14 April 2021 to 12 July 2021 and 3 August 2021 to 28 October 2021:

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

By responding and adapting to change, we seek to improve the facilities, amenities, and infrastructure of our site through positive development to create a vibrant urban destination that safeguards our collective future.





4.5 COMMENTS AND SUBMISSIONS

Under the Airports Act, Moorabbin Airport was required to consider any comments received during the public exhibition periods. The first public exhibition period ended at 5:00pm, Melbourne time, on Monday 12 July 2021 and the additional period commenced at 9:00am, Melbourne Time, on 3 August 2021 and ended at 5:00pm, Melbourne time, on Thursday 28 October 2021.

After the public exhibition periods, Moorabbin Airport reviewed and assessed all comments and, where appropriate, made changes to the Preliminary Draft Master Plan 2021 to address this feedback. Further steps were taken when preparing the fresh Draft Master Plan 2021 to demonstrate Moorabbin Airport’s engagement with all comments received, particularly those that raised concerns with non-aviation development taking place at the Airport.

As a result of this process, the airfield layout on the Main Apron will be kept the same as under the approved Master Plan 2015. Therefore, the airside fence on the western boundary of Precinct 2 will remain in the same location as under Master Plan 2015.

4.6 SUBMISSION TO COMMONWEALTH MINISTER

The Preliminary Draft Master Plan 2021 was updated to produce the initial Draft Master Plan 2021. The initial Draft Master Plan 2021 was submitted to the Commonwealth Minister for approval.

The submission of the initial Draft Master Plan 2021 to the Commonwealth Minister was accompanied by a Supplementary Report which compiled:

- copies of comments on the Preliminary Draft Master Plan 2021 received from members of the public
- a written certificate signed on behalf of Moorabbin Airport containing:
 - list of names of the people or organisations who provided written comments to the Preliminary Draft Master Plan 2021
 - a summary of the comments received
 - evidence that Moorabbin Airport has given due regard to those comments.

In March 2022, the Commonwealth Minister provided feedback and requested further updates in relation to the initial Draft Master Plan 2021. As a result, a fresh Draft Master Plan 2021 was submitted to the Commonwealth Minister for approval on 24 March 2023. This submission was accompanied by additional supplementary materials which highlighted changes made to the previous initial Draft Master Plan 2021 to address the Commonwealth Minister’s feedback.

4.7 PUBLICATION OF FINAL MASTER PLAN

On approval by the Commonwealth Minister, the fresh Draft Master Plan 2021 came into effect as the final Master Plan 2021 for Moorabbin Airport. In accordance with the Airports Act, Moorabbin Airport will:

- publish a notice in a Victorian newspaper and on its website advising that Master Plan 2021 has been approved
- make copies of Master Plan 2021 available for inspection in person at the Airport
- make a copy of Master Plan 2021 available on our website.

Master Plan 2021 will also be disseminated to community and other stakeholders (including Airport customers) through electronic direct mail, and the CACG.





05

**PLANNING
FRAMEWORK
AND CONTEXT**





- Moorabbin Airport is subject to a rigorous planning regime outlined in the Airports Act and Airports Regulations. This planning regime applies to the exclusion of the State and local planning schemes that normally apply in Victoria.
- While not directly applicable, State and local planning schemes and policies were considered and implemented where appropriate in this Master Plan 2021. We have endeavoured to minimise inconsistencies with State and local planning schemes and policies. Although the City of Kingston's development application process does not apply to the Airport, Moorabbin Airport setbacks seek to comply with all City of Kingston and Victorian planning scheme requirements where possible.
- The proposed development at Moorabbin Airport set out in this Master Plan 2021 is guided by provisions in Plan Melbourne, the Kingston Planning Scheme and other City of Kingston policies that designate Moorabbin Airport as a State significant asset and a centre of economic, education and employment generating activity.
- The planning controls at the Airport have been publicly available to all residents since privatisation. We encourage prospective new residents to review the planning framework of the Airport before purchasing a dwelling that is adjacent to the Airport or under controlled airspace.

Moorabbin Airport’s revised Master Plans seeks to continue the positive contribution to the City of Kingston and broader metropolitan area, progressing our \$250 million of direct investment into Moorabbin Airport and local initiatives since privatisation in 2015. By 2029, Moorabbin Airport will have a total of \$513 million invested since privatisation.

5.1 INTRODUCTION

Master Plan 2021 outlines how the Airport will continue its role as a major centre for aviation activity, economic activity, education, employment and investment in south-east metropolitan Melbourne.

5.2 LEGISLATIVE FRAMEWORK

5.2.1 – Overview

Land use, developments and building activities at the Airport are governed by a comprehensive legislative framework that includes:

- Airports Act and Airports Regulations
- *Environment Protection and Biodiversity Conservation Act* 1999 (Cth) (EPBC Act), and associated regulations
- long-term lease of the Airport from the Commonwealth to Moorabbin Airport (Airport Lease)
- relevant Victorian State land use planning and regulation of building activity laws which are either:
 - not excluded by the Airports Act, for example in relation to occupational health and safety
 - not directly applicable but required to be considered by the Airports Act, for example in relation to consistency with State and local planning schemes.

5.3 NATIONAL POLICY FRAMEWORK

5.3.1 – Master Plan Amendments Guidelines

In January 2012 the former Department of Infrastructure produced the Master Plan Amendments – Guidelines to assist airport lessee companies to address new requirements for Master Plans, particularly in respect of consultation. The Master Plan Amendments – Guidelines have been considered in the preparation of this Master Plan 2021 as well as the reports and studies that informed it.

5.3.2 – Airports Amendment Act 2018 Guidelines

In September 2018, the Airports Act was amended to change the processes for master plans and major airport developments. Key changes included:

- introduction of differential submission cycles for master plans
- requirement for a new endorsed Australian Noise Exposure Forecast (ANEF) to be included in new draft master plans
- an adjustment to the trigger to undertake a major development plan from \$20 million to \$25 million for non-terminal buildings, roads, taxiways and rail developments, with provision for further increases.

The former Department of Infrastructure also issued the *Airports Amendment Act 2018 Guidelines*. The *Airports Amendment Act 2018 Guidelines* have been considered in the preparation of this Master Plan 2021.

5.3.3 – National Airports Safeguarding Framework Guidelines

The National Airports Safeguarding Framework (NASF) Guidelines is a national land use planning framework consisting of a series of principles and attachments, which aim to:

- improve community amenity by minimising aircraft noise-sensitive developments near airports
- 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.

Commonwealth, State and Territory Ministers initially endorsed the NASF Guidelines at the Standing Council on Transport and Infrastructure meeting in 2012. This included guidelines for:

- measures for managing intrusion by aircraft noise (Guideline A)
- risk of building-generated windshear and turbulence at airports (Guideline B)
- risk of wildlife strikes in the vicinity of airports (Guideline C)
- risk of wind turbine farms as physical obstacles to air navigation (Guideline D)
- risk of distractions to pilots from lighting in the vicinity of airports (Guideline E)
- risk of intrusions into the protected operational airspace of airports (Guideline F).

In November 2018 three new NASF Guidelines were added relating to:

- Communication, Navigation and Surveillance (CNS) equipment (Guideline G)
- strategically important helicopter landing sites (Guideline H)
- public safety areas at the ends of runways (Guideline I).

Each jurisdiction is responsible for implementing the NASF Guidelines within its planning processes.

Moorabbin Airport continues to implement NASF Guidelines in this Master Plan 2021 for on-airport developments and uses NASF Guidelines to respond to off-airport developments near Moorabbin Airport. Please see Chapter 12 – Airport Safeguarding Strategy for details.

In October 2015 Amendment VC128 implemented NASF Guidelines as policy documents to consider as relevant via an amendment to clause 18.04-2 (Planning for airports) of the Victorian Planning Provisions (VPPs). Since then, Amendment VC148 on 31 July 2018 relocated the implementation of the NASF Guidelines to clause 18.04-1S (Planning for airports and airfields). On 18 May 2022, Amendment VC218 further relocated the implementation of the NASF Guidelines to clause 18.02-7S (Airports and airfields). Amendment VC218 also made the references to airport safeguarding considerations clearer and more prominent.

As a result, NASF Guidelines have been implemented in the Kingston Planning Scheme that applies to off-airport land proximate to Moorabbin Airport.

Moorabbin Airport is committed to and supportive of appropriate off-airport development in accordance with the NASF Guidelines.

5.4

CONSISTENCY WITH STATE PLANNING SCHEMES

The Airports Act requires this Master Plan 2021 to address:

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

The Administrative Appeals Tribunal has indicated the following regarding consistency with State planning schemes and appropriate justifications for inconsistencies (in the context of major

development plans):

- a proposal will be consistent with a planning scheme if it is not antipathetic or contradictory to, or discordant or incompatible with, that planning scheme
- the following matters were considered relevant when assessing the justification for inconsistency with a planning scheme:
 - the Airport is on Commonwealth land and subject to the Airports Act, Airport Lease and the approved Master Plan
 - Moorabbin Airport is not governed by the Local Planning Scheme or any other State Planning Scheme (the Local Planning Scheme does not allocate a zoning to Moorabbin Airport – see Figure 5.1)
 - the now current Plan Melbourne identifies Moorabbin Airport as a place of State significance and a key area for employment and economic activity, supporting economic activity and new jobs with a significant economic and employment –generating role
 - the approved Master Plan is effectively the primary planning instrument for Moorabbin Airport and establishes a planning framework for the use of land at the Airport site
 - commercial development is essential to the continued successful operation of Moorabbin 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
 - that net employment will be increased
 - that it was not likely to cause immediate closure of any off-Moorabbin Airport retail centre or facility.

The Chapter details how this Master Plan 2021 is consistent with State planning policy and laws and provides justification for any inconsistencies identified.

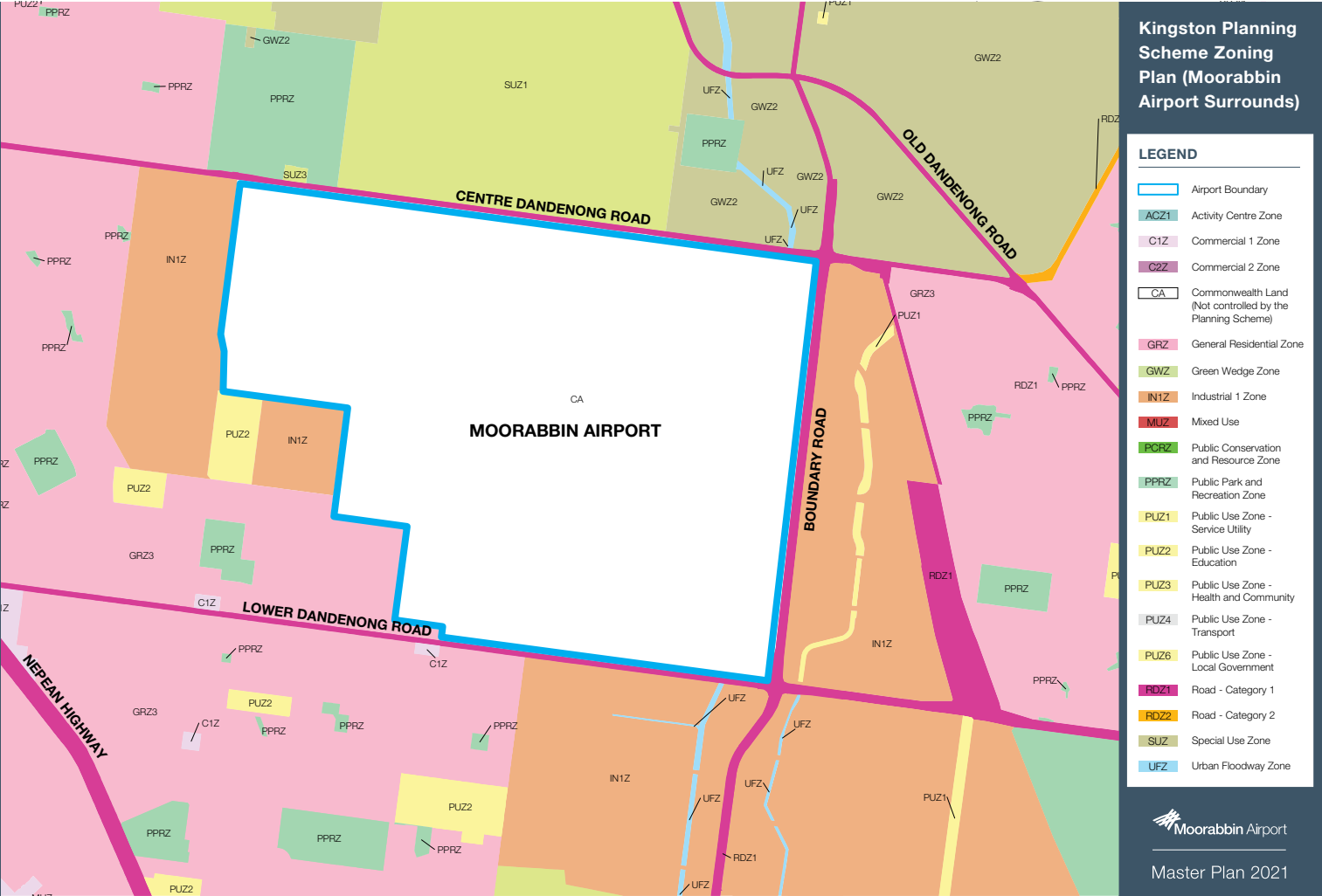


Figure 5.1 – Kingston Planning Scheme – Zoning Plan (Moorabbin Airport and Surrounds)

5.5

STATE POLICY FRAMEWORK

This section outlines the key Victorian planning policies considered when developing this Master Plan 2021.

5.5.1 – Plan Melbourne 2017 to 2050

Plan Melbourne was developed by the Victorian State Government in 2014 and later revised in 2017. It outlines the vision and plan for managing Melbourne's growth to 2050. Plan Melbourne seeks to integrate long-term land use, infrastructure and transport planning, and, in doing so, meet [Melbourne's] future environmental, population, housing and employment needs. It is metropolitan Melbourne's key strategic planning document.

Plan Melbourne expressly recognises that:

- airports are major economic assets with important economic and employment-generating functions
- adjacent complementary uses and employment-generating activities will be encouraged at airports
- Moorabbin Airport is a general aviation airport that supports other airports in Melbourne
- airports have a city-shaping role, with existing and potential contributions to productivity and economic growth.

By acknowledging that airports are key areas for employment and economic activity, Plan Melbourne contemplates a broad approach to land use and the operations occurring at airports alongside aviation services. The development and operation of commercial, industrial and retail uses on airport land is clearly intended to be part of the broader suite of uses which will drive economic growth and prosperity in Melbourne and across Victoria.

This Master Plan 2021 implements relevant objectives of Plan Melbourne by incorporating commercial, industrial and retail uses at the Airport. Such uses are complementary to the Airport's primary use for general aviation and aviation education services and will underpin and support the continuation of the Airport's primary function.

Master Plan 2021 recognises the employment-generating opportunities available at the Airport, including through:

- ongoing support for vibrant retail offerings such as Kingston Central Plaza, Decathlon, Costco and DFO
- development of large format commercial and industrial developments
- potential for land-intensive retail formats (e.g. restricted retail) that are not easily accommodated in other parts of the City of Kingston
- ongoing support for specialised aviation businesses.

Developments contemplated by this Master Plan 2021 will not adversely affect aviation operations at the Airport. They will be undertaken in a manner that is compatible with aviation activities (e.g. developments which are not vulnerable to air traffic noise).

5.5.2 – Victorian Planning Provisions and Planning Policy Framework

Victorian Planning Provisions and Planning Policy (VPP), whilst not enforceable, are used as a template to inform planning schemes in Victoria, by:

- outlining the planning provisions that are mandatory in all planning schemes (including State policies as well as particular provisions, general provisions and operational provisions)
- providing planning provisions for use in planning schemes (including relevant regional policies, zones, and overlays).

On 31 July 2018, Amendment VC148 removed the State Planning Policy Framework and replaced it with a new integrated Planning Policy Framework (PPF) in Clauses 10 to 19 of the VPP.

The PPF provides the policy content for planning schemes and includes State, regional and local planning policy. While the PPF in the VPPs is not a planning scheme and not enforceable, it is incorporated into planning schemes in Victoria. Where the PPF is incorporated into relevant planning schemes, it is not applicable to the development of Moorabbin Airport because this Master Plan 2021 is the relevant planning document for the Airport. Some provisions of the PPF refer to the Airport and – as required by the Airports Act and associated Airports Regulations – the PPF has been considered in preparing this Master Plan 2021.

18.04-1S of the PPF (now located in 18.02-7S following Amendment VC218), for airports and airfields, has the objective of strengthening the role of Victoria's airports and airfields within Victoria's economy, facilitating their siting and expansion and protecting their ongoing operation. One of the stated strategies is to:

Ensure land use and development complements the role of [Moorabbin Airport] including as a general aviation airport that is an important regional and State aviation asset supporting the State's aviation industry and access to regional Victoria.

This Master Plan 2021 reflects the objective for airports in the PPF by:

- outlining a program for continued investment in aviation infrastructure to enhance the Airport's key purpose as a metropolitan airport (see Chapter 7 – Aviation Development Plan)
- outlining Moorabbin Airport's vision of the Airport as an employment and economic hub within Victoria (see Chapter 2 – Economics and Employment)
- protecting existing aviation operations through the considered future development in the Land Use Plan (see Chapter 6 – Land Use Plan) and the implementation of airport safeguarding strategies as set out in Chapter 12 – Airport Safeguarding Strategies
- future proofing the Airport for increased public transport accessibility, including the potential to support part of the new Suburban Rail Loop (see Chapter 9 – Ground Transport Plan).

Master Plan 2021 also engages with the above strategy in the PPF, through continued investment in aviation infrastructure and operations to support general aviation. Moorabbin Airport will continue to play an important role in the Victorian aviation industry as a leading flight training airport and home to specialised aviation businesses. The Airport is integrated with a network of complementary regional airports. Moorabbin Airport is committed to growing its regional connections and investing in regional airports that can provide complementary aviation operations – including as secondary airports for flight training operations.





Other PPF provisions, while not referring specifically to the Airport, outline relevant general policy objectives which have been considered in Master Plan 2021. These include:

- Clause 11.01-1R, Settlement – Metropolitan Melbourne, with strategies to focus on investment and growth in places of State significance
- Clause 11.01-1R, Green Wedges – Metropolitan Melbourne, with strategies to plan and protect major State infrastructure and resource assets, such as airports with their associated access corridors
- Clause 11.02-1S, Supply of urban land, with the objective to ensure a sufficient supply of land is available for, among other things, commercial, retail and industrial uses
- Clause 11.03-1S, Activity centres, with the objective of encouraging the concentration of major retail, residential, commercial, administrative, entertainment and cultural developments into activity centres that are highly accessible to the community. Correspondingly, Clause 17.02-2S, Out-of-centre development, has the objective of managing out-of-centre development, with strategies to discourage proposals for the expansion of single use retail, commercial and recreational facilities outside activity centres, and to ensure that out-of-centre proposals are of net benefit to the community in the region served by the proposal or provide small-scale shopping opportunities that meet the needs of local residents and workers in convenient locations. While acknowledging these clauses, Moorabbin Airport notes that:
 - while the Victorian planning scheme does not apply to the Airport, this Master Plan 2021 acknowledges the ongoing role that the Airport plays as an Activity Centre for the local and regional community through MA-ACZ zoning in Precinct 4 – given this, Moorabbin Airport should be considered an activity, education and employment hub for the purposes of assessing inconsistency with the PPF

- as discussed in Section 5.4, the significance and implications of the provisions regarding activity centres described in the VPPs have been lessened following the introduction of Plan Melbourne and the designation of the Airport as a State significant key employment area that will be a focus for jobs, investment and growth
- the Administrative Appeals Tribunal has recognised that net benefit to the community in the region of Moorabbin Airport will justify any inconsistency with the objective of Clause 17.02-2S
- the development vision outlined in this Master Plan 2021 is strategic, planned and funded and is not a single use, stand-alone facility that Clause 17.02-2S seeks to discourage.

This justifies investment, growth, use and development at the Airport which may otherwise be seen as inconsistent with policy provisions such as Clauses 11.03-1S and 17.02-2S of the PPF.

- Clause 13.07 – 1S, Land Use Compatibility, with the objective to safeguard community amenity while facilitating appropriate commercial, industrial or other uses with potential off-site effects. This clause seeks to ensure the compatibility of a use or development as appropriate to the land use functions and character of the area by:
 - directing land uses to appropriate locations
 - using a range of building design, urban design, operational and land use separation measures.
- Clause 17, Economic Development, highlights that planning is to contribute to the economic wellbeing of the State and foster economic growth by providing land, facilitating decisions and resolving land use conflicts, so that each region may build on its strengths and achieve its economic potential

- Clause 17.01-1S, Diversified Economy, aiming to strengthen and diversify the economy by protecting and strengthening both existing and planned employment areas
- Clause 17.01-1R, Diversified Economy – Metropolitan Melbourne, with strategies to plan for industrial land in suitable locations to support employment and investment opportunities and facilitating investment in Melbourne's outer areas to increase local access to employment
- Clause 17.01-2S, Innovation and Research, to create opportunities for innovation and the knowledge economy within existing and emerging industries, research and education, with strategies to encourage the expansion and development of logistics infrastructure and support the development of business clusters and enterprise precincts
- Clause 17.02-1S, Business, with the objective of encouraging development which meets the community's needs for retail, entertainment, office and other commercial services, with strategies to ensure commercial facilities are aggregated and provide net community benefit in relation to their viability, accessibility and efficient infrastructure
- Clause 17.03-1S, Industrial Land Supply, ensuring availability of land for industry, with strategies to provide an adequate supply of industrial land in appropriate locations including sufficient stocks of large sites for strategic investment
- Clause 17.03-2S, Sustainable Industry, encouraging manufacturing and storage industries that generate significant volumes of freight to locate close to air, rail and road-freight terminals
- Clause 18.02-7S, Planning for Airports and Airfields, including strategies to protect airports from incompatible land uses, and to enable the operator to effectively contribute to the aviation needs of the State and the efficient and functional operation of the airport or airfield.

- NASF (as agreed by Commonwealth, State and Territory Ministers at the meeting of the Standing Council on Transport and Infrastructure on 18 May 2012) is a policy document referred to in this clause
- Clause 18.02-7L, Moorabbin Airport, ensuring that the use and development of land around the Airport is sensitive to the long term operation of the airport and protecting the flight paths of the Airport from the further encroachment of incompatible land uses
- Clause 18.02-5S, Freight, aiming to facilitate an efficient, coordinated, safe and sustainable freight and logistics system that enhances Victoria's economic prosperity and liveability. Strategies include supporting the development of freight and logistics precincts in strategic locations within and adjacent to Principal Transport Gateways and along the Principal Freight Network (PFN) movement corridor
- Clause 19, Infrastructure, aiming to minimise the impact of use and development on the operation of major infrastructure of national, State and regional significance.

This Master Plan 2021 has been prepared acknowledging the general policy objectives in the PPF as they are relevant to the Airport.

Moorabbin Airport notes that a new PPF is being drafted to integrate the Local Planning Policy Framework providing for consolidation of planning schemes into a single policy. As this is in progress, it has not been adopted for the purposes of this Master Plan 2021.





5.5.3 – Victorian Freight Plan: Delivering the Goods

Published in July 2018, the Victorian Government's Freight Plan sets out the Victorian Government's vision for Victoria through short, medium and long-term priorities aiming to support Victoria's freight and logistics system through a period of unprecedented growth in freight volumes and rapid change in the broader environment, while allowing for new opportunities in the future. The Victorian Freight Plan acknowledges the importance of Victoria's road and rail networks, seaports and airports and the long-term planning by governments for the freight sector and Victoria's freight needs.

The Victorian Freight Plan recognises that:

- (airports) air freight will play a key role for Victoria in 2050, with regional airports performing roles as freight hubs, using areas of available adjacent land for freight operators and allied businesses. Agricultural production centres will link to airports through efficient landside connections to allow fresh produce to be exported
- (e-commerce) e-commerce changes mean that consumers are expecting greater levels of service and faster delivery of products, resulting in significant growth in urban freight volumes
- (existing freight corridors) managing existing and proposed freight corridors and places in conjunction with urban form changes is a priority area to improve freight efficiency, capacity and amenity.

As outlined in Chapter 7 – Aviation Development Plan, Moorabbin Airport contributes to small niche air freight services such as King Island that will remain at existing levels during this Master Plan 2021.

As set out in Chapter 8 – Non-Aviation Development Plan, many businesses at the Airport have adopted, or were established to serve, the e-commerce market. Support for these businesses is consistent with the Airport's access to the designated PFN and approved B-Double routes (discussed in Chapter 9 – Ground Transport Plan) and will be a continuing competitive advantage for the Airport. The continuing use of these freight corridors supports one of the priority areas identified in the Victorian Freight Plan.

5.5.4 – Melbourne Industrial and Commercial Land Use Plan

The Melbourne Industrial and Commercial Land Use Plan (MICLUP) was prepared by the Victorian Government in 2020 and builds on Plan Melbourne. The MICLUP responds to issues raised by a changing economy, industry trends, pollution growth and the supply and demand for land to provide principles and guide strategic planning for industrial and commercial land in metropolitan Melbourne.

Moorabbin Airport is located in the Southern Region of the MICLUP. The zoning of precincts at the Airport as including industrial use in this Master Plan 2021 in Chapter 6 – Land Use Plan and the anticipated industrial development in Chapter 8 – Non-Aviation Development Plan is considered to be consistent with the MICLUP.

Moorabbin Airport is a significant source of industrial land in the City of Kingston. 72 hectares of industrial land have already been developed, as part of the premium business premises offered to Moorabbin Airport's customers. There are a further 33 hectares of land available for premium industrial use at the Airport. This represents more than 43% of the land available for industrial use in the City of Kingston and is characterised by the potential for high-quality and sustainable properties in a strategic location. This makes the Airport an important asset for the City of Kingston when attracting new industrial development and businesses (and the associated employment opportunities and economic activity).

5.5.5 – Local Policy Framework

Moorabbin Airport is within the municipal area of the City of Kingston. This section outlines the key planning policies adopted by the City of Kingston which were considered when developing this Master Plan 2021.

5.5.6 – City of Kingston 'Our Roadmap' Council Plan 2021-2025

The City of Kingston's Council Plan for 2021 – 2025, 'Our Roadmap' (Council Plan) sets out the Council's vision for a community to protect and enhance the wellbeing of current and future generations. The Council Plan recognises the City of Kingston's role as a major employment centre and industrial base, with a skilled labour force. It notes there are 17,000 businesses operating and 95,000 people working within the City of Kingston.

The Council Plan also recognises that:

- the Airport is one of Australia's busiest airports located within 294 hectares of land within the City of Kingston's boundaries
- investment at Moorabbin Airport supports the City of Kingston's economic value
- Moorabbin Airport is a partner in achieving the City of Kingston's goal of being a well-planned, liveable city supported by infrastructure to meet future needs.

To foster a strong local economy and deliver a prosperous and dynamic city, the Council Plan includes the following vision statements:

- our city will be a vibrant, enjoyable, and easy place to live
- we will embrace the concept of a 20-minute neighbourhood, support the ongoing process of decentralisation and support people to live and work locally
- we are progressive, inclusive and prioritise the wellbeing of all members of our community
- our community will feel safe and be safe, in all aspects of their lives.

Moorabbin Airport encourages, seeks and facilitates open and transparent communications with all stakeholders.

This vision supports the implementation of Plan Melbourne at a local level, encouraging investment in the City of Kingston and South-East Melbourne to deliver a strong local economy, resilient local businesses and new employment opportunities as well as investment in civil infrastructure, traffic management and community participation.

This Master Plan 2021 seeks to further implement the goals of the Council Plan by:

- providing a diverse offering of compatible commercial, industrial and retail businesses within the Airport, while continuing to maintain the Airport's operation as an urban airport with aviation-related businesses that support a strong local economy and deliver employment opportunities
- contributing to the goal of a connected learning community through extensive training and education opportunities provided by numerous flight schools
- contributing to the 20-minute neighbourhood by creating local jobs and providing access to businesses and services
- undertaking infrastructure projects that both minimise the impact of the Airport on the surrounding community and have standalone benefits to the surrounding community
- supporting the Australian National Aviation Museum
- hosting a childcare centre that can be utilised by the airport community
- providing open recreational space for the local community
- implementing sustainability initiatives including harnessing solar energy and a tree management program.

Master Plan 2021 is aligned with the strategic vision and objectives highlighted in the Council Plan.

5.5.7 – Prosperous Kingston: A Framework for Economic Sustainability

In 2016 the City of Kingston prepared Prosperous Kingston: A Framework for Economic Sustainability (Prosperous Kingston). Prosperous Kingston identifies the following eight priority areas for the City of Kingston to focus its economic resources on:

- strategic economic planning – including for the economic viability of both retail and industrial precincts
- regional collaboration and partnerships
- including research organisations, businesses, neighbouring municipalities, government agencies and State and Commonwealth Governments
- fostering innovation and technology adoption
- including using new technologies to drive business efficiencies and process change
- vibrant retail and services precincts – including providing destinations that offer a variety of experiences and provide meeting places for the community
- business education and skill development – including taking advantage of the diverse mix of education facilities within the municipality and broader region
- business networking – including opportunities to develop mutually beneficial relationships in a supportive environment
- business sustainability – including management and coordination of environmental, social and financial demands to ensure responsible, ethical and on-going success
- an effective voice for the business community – including promoting the diversity and strengths of the business community and the local economy.

Moorabbin Airport contributes to a range of priority areas identified in Prosperous Kingston, and the outcomes sought by the City of Kingston. Moorabbin Airport's is aligned with Prosperous Kingston as follows:

- Master Plan 2021 ensures that the Airport is developed as a planned and self-funded site. This strategic planning maintains the Airport as an economically viable precinct with a range of highly resilient business customers
- The Airport is managed in a collaborative manner including ongoing consultation with the City of Kingston, the Victorian Government and the Commonwealth Government through the Master Plan process and at other junctures
- Moorabbin Airport's customers are future focused with the ability to succeed in a changing economy with many businesses using state-of-the-art technology to service e-commerce and other emerging markets
- The Airport is a vibrant urban destination. It is an activity, education and employment hub that supports a range of aviation, retail, commercial and industrial activity and attracts over 8.4 million visitations each year
- The Airport's high-quality flight training organisations contribute to the mix of education facilities within the City of Kingston
- The Airport site is committed to sustainability initiatives, outlined in Chapter 3 – Sustainability and Community Contribution including drought-tolerant plants, tree audits and management, and solar and energy efficiency initiatives.

The vision for Moorabbin Airport in this Master Plan 2021 is consistent with the priorities of the City of Kingston.

5.5.8 – Kingston Retail/Commercial Development Strategy

In 2006 the City of Kingston commissioned a Retail/Commercial Development Strategy to guide the future direction of retail, commercial and office investment in the municipality. While prepared some time ago, the Retail/Commercial Development Strategy includes analysis of:

- retailing context in the City of Kingston
- traditional retailing and demand for further traditional retailing
- strategic assessment of Principal and Major Activity Centres
- supply of commercial office space and trends towards new business park environments
- bulky goods retail
- key strategic development sites in the City of Kingston that could support future economic activity.

The Retail/Commercial Development Strategy recognises the Airport's significance as a current and future centre of activity within the City of Kingston and the wider region. Reflecting on this strategic document, there are observations relevant to the Airport including:

- the City of Kingston's office market was seen to be in transition with corporate customers increasingly choosing new business park environments over traditional office precincts. Strong growth in the business services sector also increased demand for smaller strata office suites close to facilities within activity centres
- Chifley Business Park is acknowledged as accommodating existing and new corporate customers in a contemporary campus style environment that offers a range of support facilities. It is recognised 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

- DFOs are an established, distinctive retail format that attract consumers from a wide catchment area. DFO Moorabbin may address the gap in the retail hierarchy represented by the lack of subregional shopping centres in Melbourne's bayside area
- there is potential for 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.

Importantly, appropriate retail activities at Moorabbin Airport are consistent with the Retail/Commercial Development Strategy.

5.6

KINGSTON PLANNING SCHEME

5.6.1 – General

Pursuant to the Airports Act and Airports Regulations, the Kingston Planning Scheme does not apply to development of Moorabbin Airport. However, as required by the Airports Act and Airports Regulations, consistency with State and local planning schemes has been considered, with any inconsistencies justified.

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.

There are planning controls in the Kingston Planning Scheme which recognise the potential adverse amenity impacts associated with Moorabbin Airport and its operation. These existing controls make the Airport an ideal location for industrial, commercial, retail and other land uses (which are either not sensitive uses or may have potential amenity impacts) as they have ensured that large areas of the Airport are well separated from uses with the potential to be affected by these impacts.

Setbacks at the Airport are determined following assessment and are not less than the Kingston Planning Scheme requirements or Victorian Planning Provisions. In addition, the Airport's Building Activity process, requires assessment of the following:

- overlooking matters
- solar, over shadowing and light and shade
- massing, visual bulk and amenity.

Moorabbin Airport consults with nearby residents and the City of Kingston on contiguous development proposals.

As the Council undertakes future reviews of relevant parts of the PPF, Moorabbin Airport will take advantage of any opportunities which arise to reinforce its existing role as an activity, education and employment hub for the local and regional

community, the future development potential of the Airport, and the Airport's relationship with the Braeside Industrial Area as part of the emerging Kingston Central and Braeside Economic Precinct.

5.6.2 – Municipal Planning Strategy (MPS)

Clause 21 of the Kingston Planning Scheme contains the Municipal Planning Strategy (MPS), which contains planning, land use and development objectives for the municipality and strategies for implementing the objectives:

- Clause 01.01 Context, recognises the major role played by Moorabbin Airport within Victoria's economic and transport infrastructure, stating "... regional prominence is also heightened by the presence of the Moorabbin Airport, which is recognised as one of the busiest airports in Australia"
- Clause 02.02, Vision, sets out the strategic land use principles for Kingston
- Clause 02.03-1, Settlement, sets out a strategy of protecting the Airport from conflicting land uses, including the green wedge to protect flight paths at the Airport and recognising Moorabbin as a major activity centre
- Clause 02.03-2, Environmental and landscape values, includes environmental objectives including retaining the green wedge and the planting of trees and native flora
- Clause 02.03-3, Environmental risks and amenity, includes ensuring that the use and development of land around the Airport is sensitive to the long-term operation of the Airport. Specific strategies include ensuring appropriate buffers between the Airport and the community and avoiding intensifying development and sensitive uses in areas subject to high levels of aircraft noise
- Clause 02.03-4, Natural resource management, includes consideration of agricultural land and water management strategies
- Clause 02.03-51, Built environment and heritage, includes ensuring a high standard of design forms the cornerstone of future development,

siting and designing residential development taking into account interfaces with sensitive and strategic land and using and managing signage to facilitate business communication while complementing the local setting

- Clause 02.03-6, Housing, includes the Airport's flight paths as a relevant factor for determining preferred residential development outcomes
- Clause 02.03-7, Economic development, sets out considerations for guiding economic development in Kingston including promoting sustainable development, protecting industrial areas and managing amenity impacts from industry
- Clause 02.03-8, Transport, includes Moorabbin Airport's major role within Victoria's economic and transport infrastructure and strategies including ensuring protection of the flight paths and environs of the Airport
- Clause 02.03-9, Infrastructure, includes considerations and strategies for community and development infrastructure.

Elements of the MPS were revised by Amendment C75 in 2009. Among the recommendations of the Planning Panel which considered and reported on Amendment C75 was that Kingston's MPS 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 Planning Panel in Amendment C75 accords with Victorian Government planning policy as expressed in Plan Melbourne. The designation of Moorabbin Airport in Plan Melbourne acknowledges that the Airport is a place of State significance with important economic and employment-generation functions.



This Master Plan 2021 is designed to continue to enhance Moorabbin Airport's role in the municipality. Moorabbin Airport has considered how best to invest in developments at the Airport while protecting aviation operations when preparing Chapter 6 – Land Use Plan. This includes using non-aviation developments to buffer aviation developments and implementing the NASF Guidelines (refer to Chapter 12 – Airport Safeguarding Strategy).

5.6.3 – Local Planning Policy – Moorabbin Airport – Airport Environs Policy

Within the Local Planning Policies, Clause 18.02-7L-02, Moorabbin Airport environs, applies to a specific area near the Airport in the City of Kingston. The policy area is depicted in Clause 18.02-7L-02, but excludes land affected by the Airport Environs Overlay control (see Figure 5.2).

The Moorabbin Airport Environs Policy confirms the significant role played by Moorabbin Airport in both the local and regional economies. Based on the principles of the Airport Environs Overlay, the policy was formed in response to the need to ensure that the use and development of land adjacent to the Airport is sensitive to its long-term operation.

When considering applications for specified uses within the policy area (including, but not limited to accommodation, office, childcare, education, hospital and hotel), as well as applications for subdivision of land, the City of Kingston will take into account present and future Moorabbin Airport operations (in accordance with the ANEF as amended from time to time). The City of Kingston will consider the views of the Department of Infrastructure regarding the impact of the development on the Moorabbin Airport environs.

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 2021-2015, Acoustics – Aircraft Noise Intrusion – Building Siting and Construction.

Moorabbin Airport will work with the City of Kingston to ensure that the area subject to the Moorabbin Airport Environs Policy

incorporates changes to the ANEF at Moorabbin Airport from time to time, as appropriate.

5.6.4 – Airport Environs Overlay

Clause 45.02, Airport Environs Overlay, and Schedule 1 (AEO1), is an overlay imposed by the Kingston Planning Scheme. The Airport Environs Overlay and AEO1 are the result of a co-operative agreement between Moorabbin Airport and the City of Kingston that has been in place since the mid-1990s.

The areas impacted by AEO1 are set out in the Kingston Planning Scheme (see Figure 5.3).

The Airport Environs Overlay requires the area impacted by the overlay to:

- meet any requirement in a schedule to the overlay
- be constructed in compliance with any noise attenuation measures required by Section 3 of Australian Standard AS 2021-2015, Acoustics – Aircraft Noise Intrusion – Building Siting and Construction
- obtain a permit to subdivide the land (where an application for a permit must be referred to Moorabbin Airport).

In AEO1, regardless of the zone provisions, land must not be used for specified uses such as accommodation, education centre and hospital, and a permit is required for nominated uses including dwelling, office and residential hotel. An application for a permit must be referred to Moorabbin Airport unless it complies with requirements or conditions previously agreed with Moorabbin Airport.

In future it may be appropriate for new Airport Environs Overlay boundaries to be agreed based on the endorsed ANEF contours and other factors outlined in this Master Plan 2021.

While the Airport Environs Overlay within the Kingston Planning Scheme is mapped to include substantial areas inside Moorabbin Airport's boundaries, the Airport Environs Overlay does not apply to Moorabbin Airport land.

5.6.5 – Design and Development Overlay – Schedules 4 and 5 (DDO4 and DDO5)

Clause 43.02, Design and Development Overlay, is an overlay imposed by the Kingston Planning Scheme to implement the MPS and the PPF and identify areas impacted by specific requirements relating to the design and built form of new developments.

The Design and Development Overlay contains generic requirements, but these do not apply if a schedule to the Design and Development Overlay provides otherwise. Two schedules to the Design and Development Overlay are relevant to the Airport – Schedule 4 (DDO4) and Schedule 5 (DDO5).

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

The purpose of DDO4 and DDO5 is to ensure:

- the heights of all buildings and works are constrained within specified limits to avoid creating a hazard to aircraft in the vicinity of the Airport and to facilitate safe aircraft operations
- flight paths associated with Moorabbin Airport are protected from the encroachment by inappropriate obstacles which may affect the safe and effective operation of the Airport.

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

Before deciding on an application for buildings and works, the responsible authority must consider the views of the Department of Infrastructure.

A plan showing DDO4 and DDO5 is included at Figure 5.4. The Airport Environs Overlay, DDO4 and DDO5 within the Kingston Planning Scheme are mapped to include areas inside Moorabbin Airport's boundaries. Again, these overlays do not apply to Moorabbin Airport land.

5.6.6 – Development Plan Overlay Schedule 1 (DPO1)

Clause 43.04, Development Plan Overlay, is an overlay imposed by the Kingston Planning Scheme to:

- implement the MPS and the PPF
- identify areas which require the form and conditions of future use and development to be shown on a development plan before a permit can be granted to use or develop the land
- exempt an application from notice and review if a development plan has been prepared to the satisfaction of the responsible authority.

Schedule 1 to DPO (being DPO1) applies to the former Epsom Training Facility, on land bounded by White Street, Boundary Road, Governor Road and McDonald Street, Braeside (located 1.5 kilometres south of the Airport's southern boundary).

Any development plan prepared for the area subject to DPO1 must include an assessment of noise impacts on the site with reference to existing industrial development adjacent to the site and the impact of ANEFs associated with the Airport. The assessment should be prepared by a qualified acoustic engineer and should identify any noise mitigation treatments required to ensure a high standard of residential amenity on the site.

A plan showing DPO1 is included at Figure 5.5.

Moorabbin Airport has accounted for a 30% increase in job growth in the City of Kingston from 2014 to 2020. With this Master Plan, an additional 2,500 jobs will be made available for the local community.



Figure 5.2 – Kingston Planning Scheme – Airport Environs Overlay

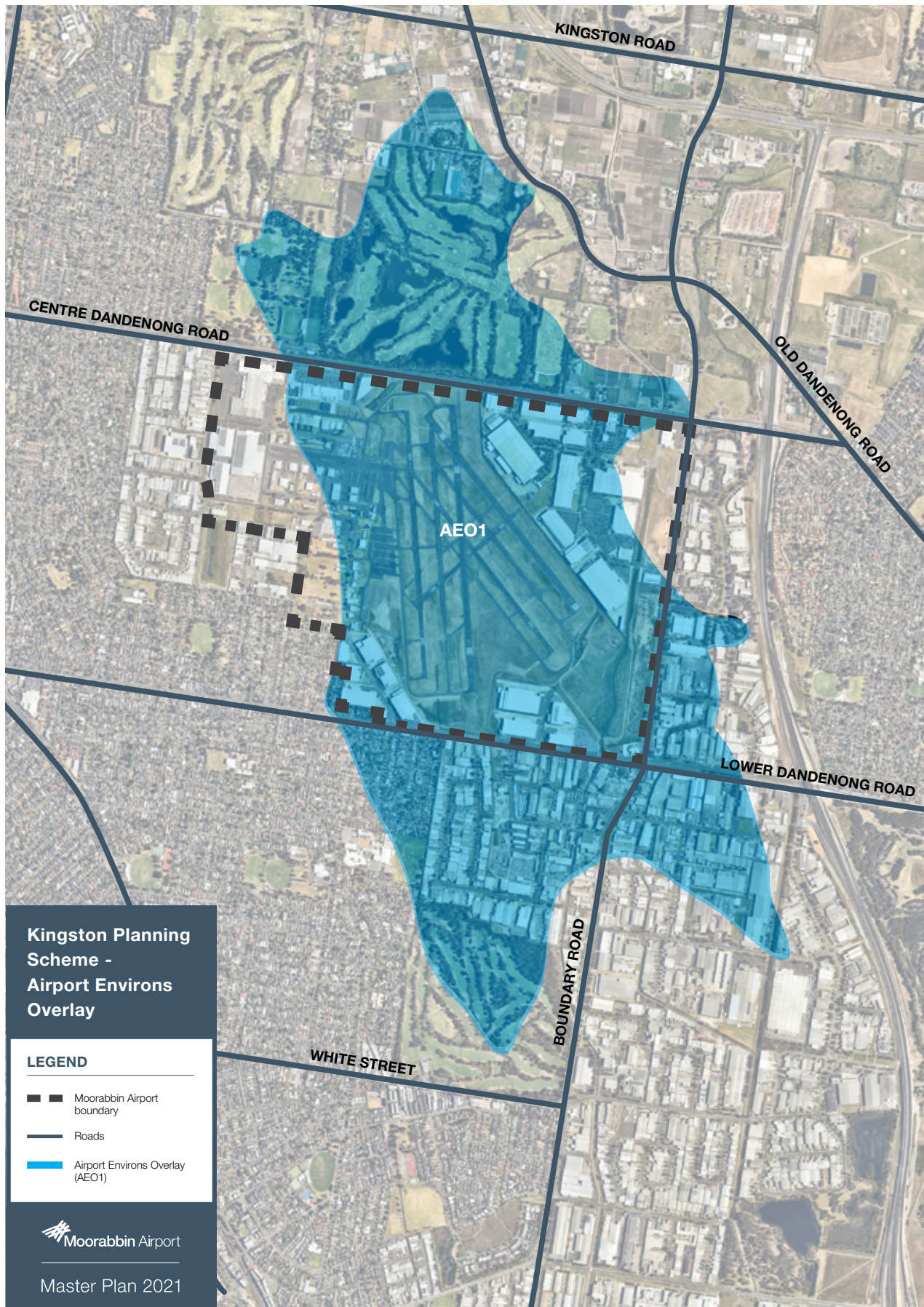


Figure 5.3 – Kingston Planning Scheme – Airport Environs Overlay – AEO1

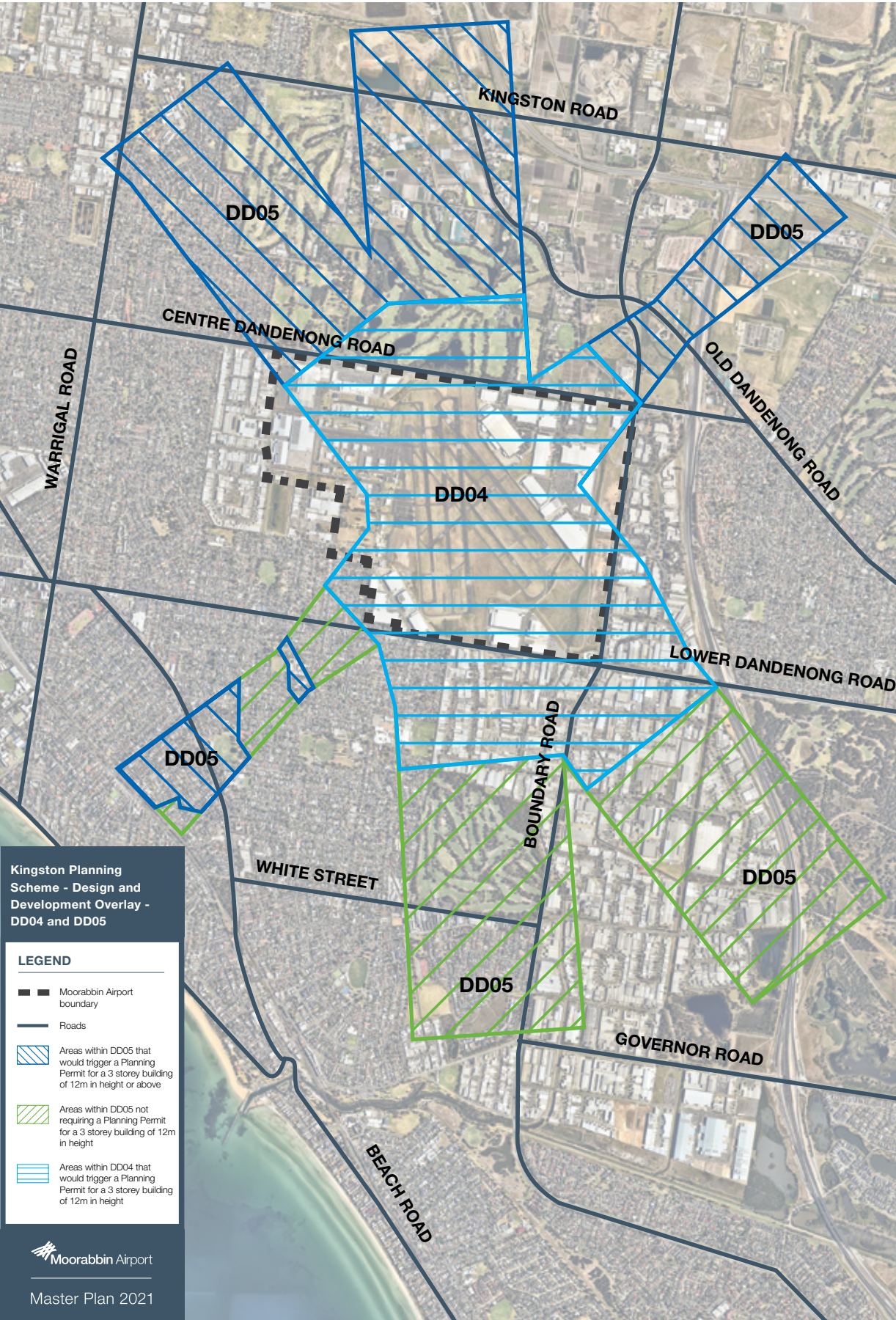


Figure 5.4 – Kingston Planning Scheme – Design and Development Overlay – DDO4 and DDO5

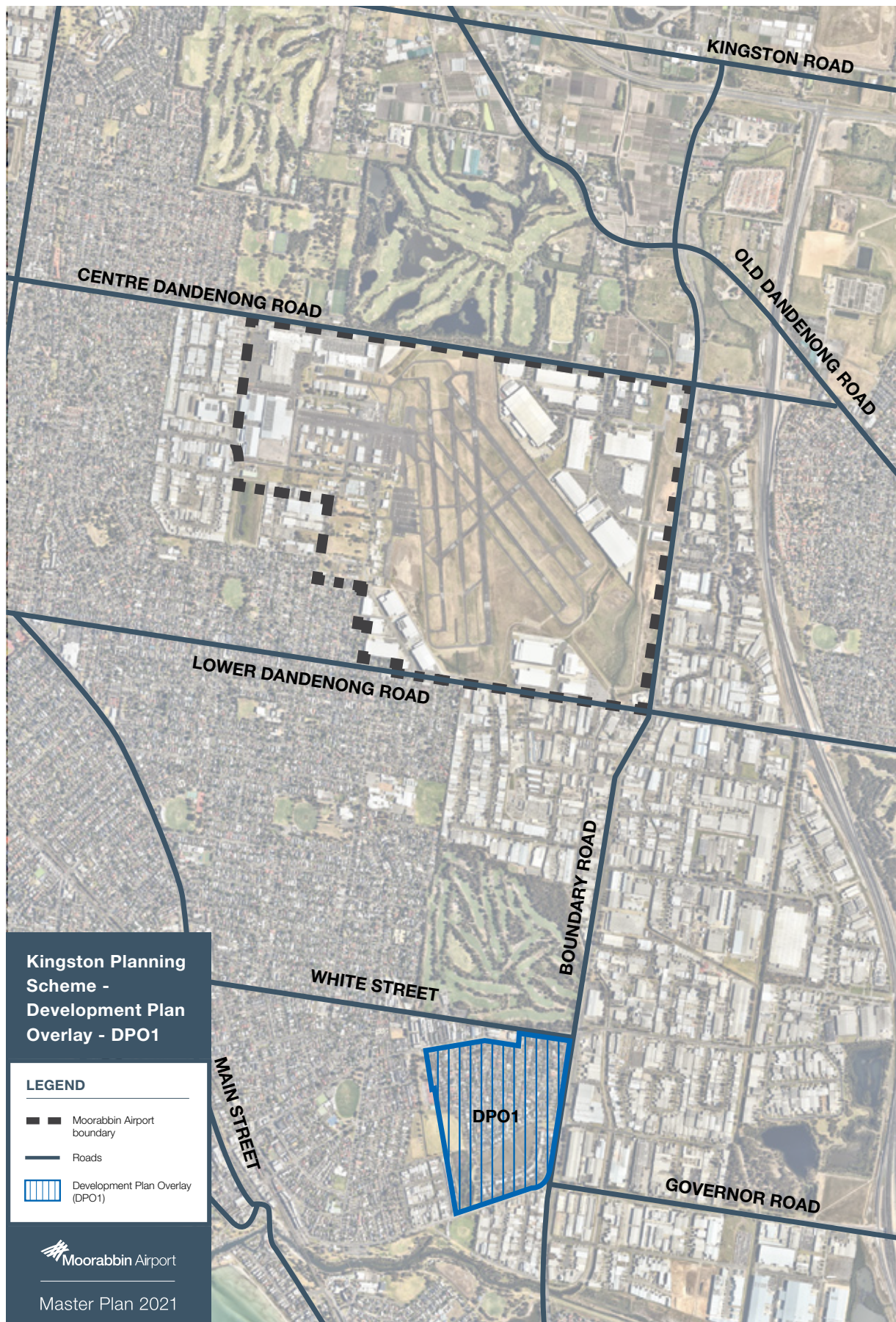


Figure 5.5 – Kingston Planning Scheme – Development Plan Overlay – DPO1



An aerial photograph of the Moorabbin Airport tarmac. Several small, white, high-wing aircraft are parked in rows on the asphalt. Two ground crew members in high-visibility vests are walking near a larger aircraft at the top of the frame. The tarmac is marked with yellow and white lines. The text is overlaid on the lower right portion of the image.

Our vision at Moorabbin Airport is to continue to develop an efficient and fully functioning Airport of Regional and State significance, which we have been committed to since privatisation in 1998.

5.7

OTHER AVIATION PLANNING REQUIREMENTS

5.7.1 – Aviation Planning Standards

International Civil Aviation Organisation (ICAO) determines international standards and recommended practices for aviation operations. In Australia, most aerodrome standards are based on the ICAO standards and recommended practices.

CASA is responsible for developing and disseminating appropriate aerodrome safety standards including:

- Part 139 of the *Civil Aviation Safety Regulations 1998* (Cth) (CASR Part 139) dealing with aerodromes
- Part 139 (Aerodromes) Manual of Standards 2019 (MOS Part 139) providing technical details for aerodromes
- relevant circular advisory notes from CASA.

CASA expects that all facilities at the Airport will meet the standards set out in CASR Part 139 and MOS Part 139. Given this, changes to facilities will need to be acceptable to CASA.

Ordinarily the dimensions, shape and layout of key 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. Planning and design begins by identifying the most demanding or critical aircraft that the facilities are intended to serve.

The objective in planning for aerodrome facilities is to accommodate the critical design aircraft as efficiently as possible. Individual facilities at an airport, such as Regular Public Transport (RPT) facilities and flight 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.

In Australia, like most countries, the identification of critical aircraft 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. At the 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 12 metres or less (reference code 1A)
- twin turboprops for freight, RPT, charter and aeromedical operations, typically with a wingspan of 18 metres or less (reference code 2B).

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

5.7.2 – Helicopter Facilities

The MOS Part 139 contains specific requirements for helicopter areas on aerodromes and includes specific markings for helicopter touchdown and lift-off, taxiway, apron and parking positions.

In May 2018 the Commonwealth issued NASF Guideline H, directed at protecting strategically important Helicopter Landing Sites (HLS). However, NASF Guideline H does not apply to HLS on aerodromes and does not apply to the Airport.

There is currently an absence of specific Australian legislation covering physical and flight path protection requirements for HLS in Australia. The relevant provisions in the *Civil Aviation Safety Regulations 1998* (Cth) (CASR) place the onus on the helicopter pilot to determine the suitability of a landing site. CASA is continually reviewing its standards for HLS to enhance safety. NASF Guideline H suggests that this is expected to include the certification of off-airport HLS into the CASR.

CASA has provided guidelines to pilots for the identification of suitable HLS through its Civil Aviation Advisory Publication 92-2(2) Guidelines for the establishment and use

of HLS. This document provides advice on the minimum physical parameters required to assist helicopter pilots and operators in meeting their obligations. It reflects closely to the international standards and recommended practices established by ICAO in relation to helicopter facilities at aerodromes in Annex 14 Volume II – Heliports (4th Edition).

5.7.3 – Airport Roads

The Airport's internal road network is built on Commonwealth land. As the lessee of the Airport, Moorabbin Airport 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 Road Design series, providing relevant Australian standards, guidelines and codes of practice.

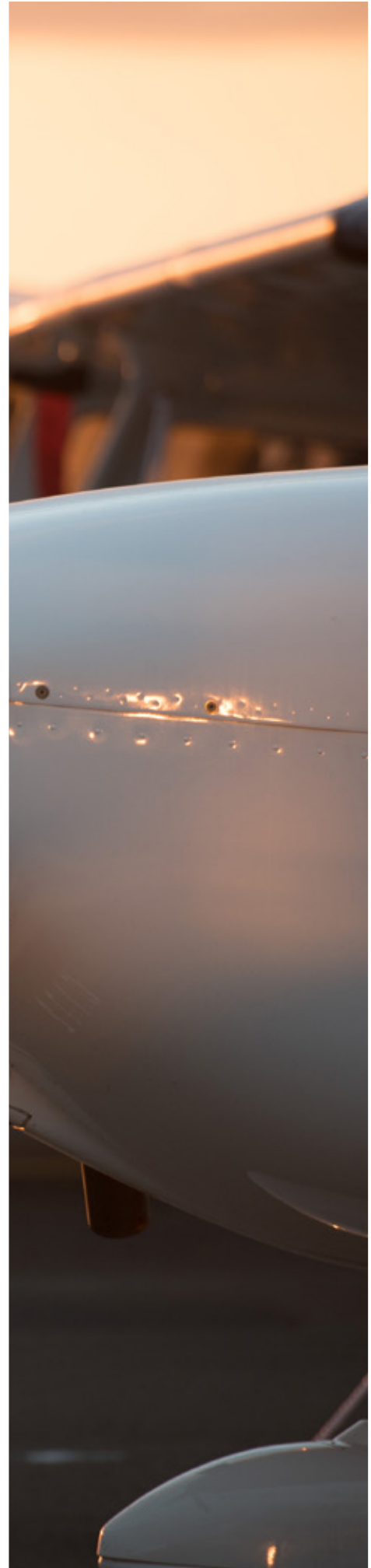
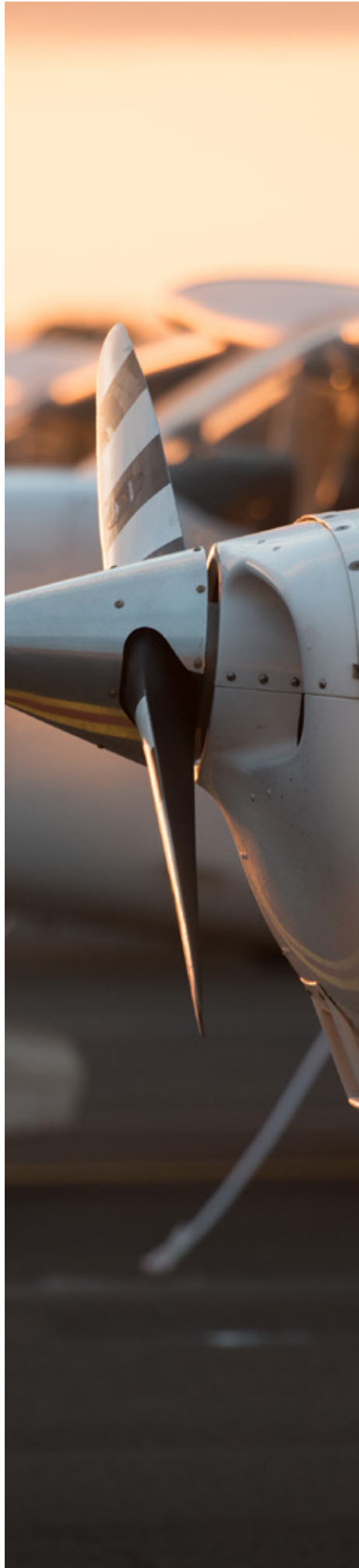
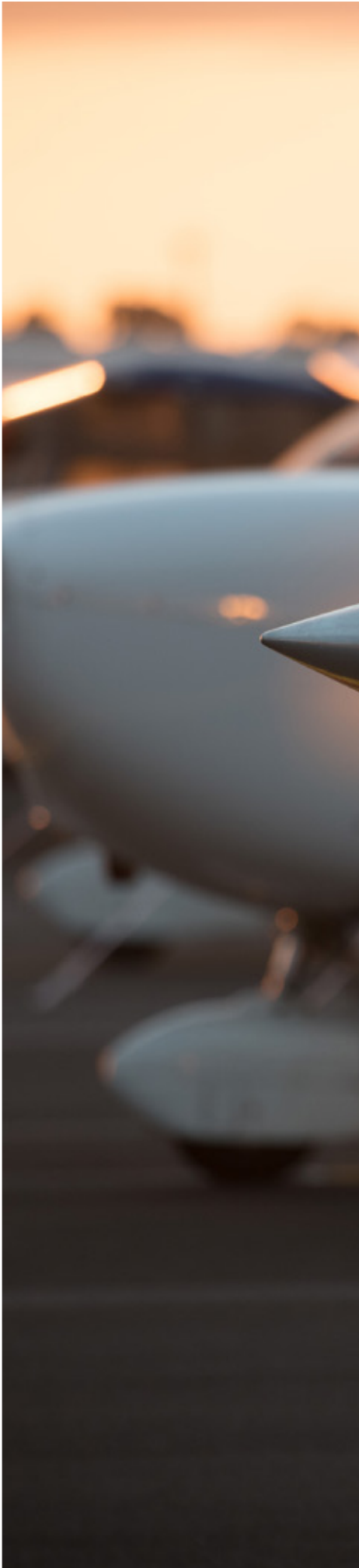
Roads and access planning will follow State road planning standards which include:

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

Moorabbin Airport is committed to working with the Victorian Department of Transport to collaboratively manage the interconnection between the on – Airport and off-Airport road network, including ensuring appropriate consistency of the road planning standards applied.

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

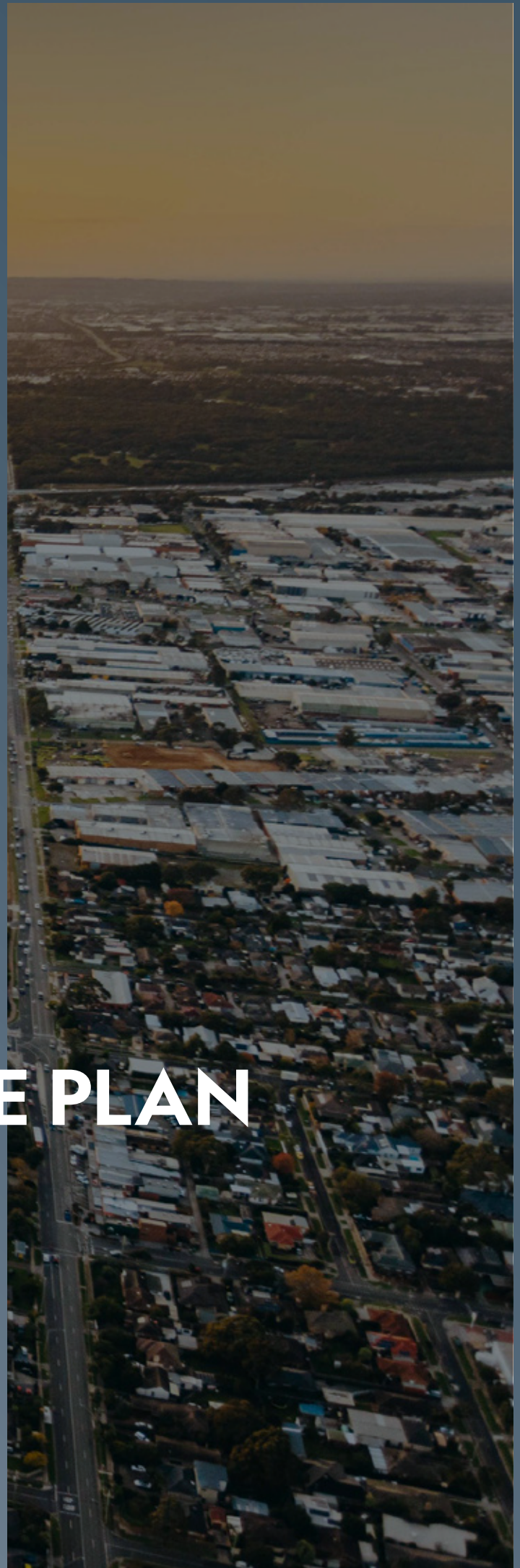
Further information on Airport roads, including Moorabbin Airport's commitment to undertake road capacity assessments, is in Chapter 9 – Ground Transport Plan.

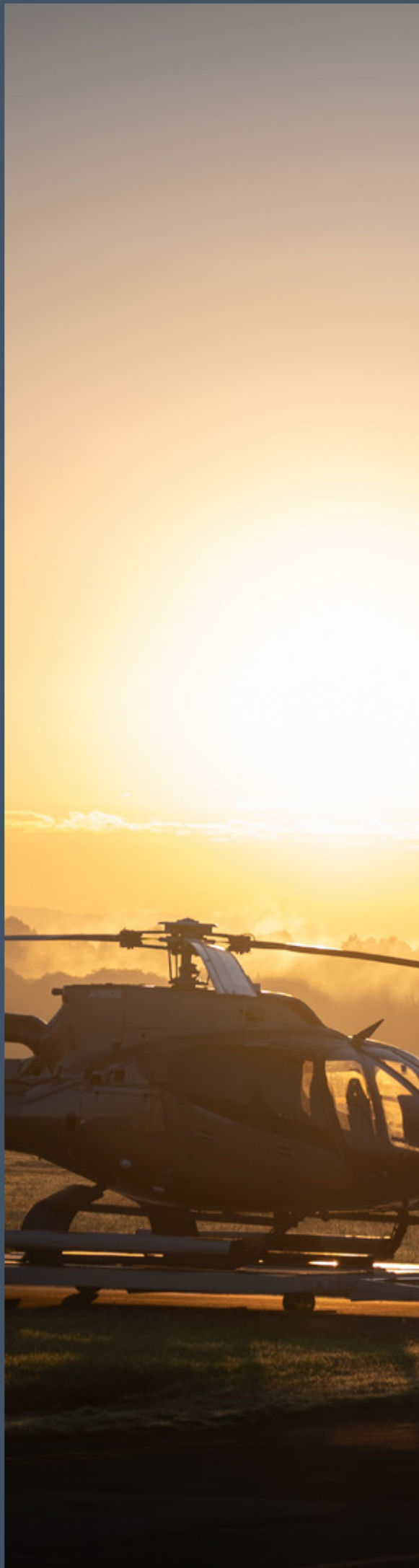
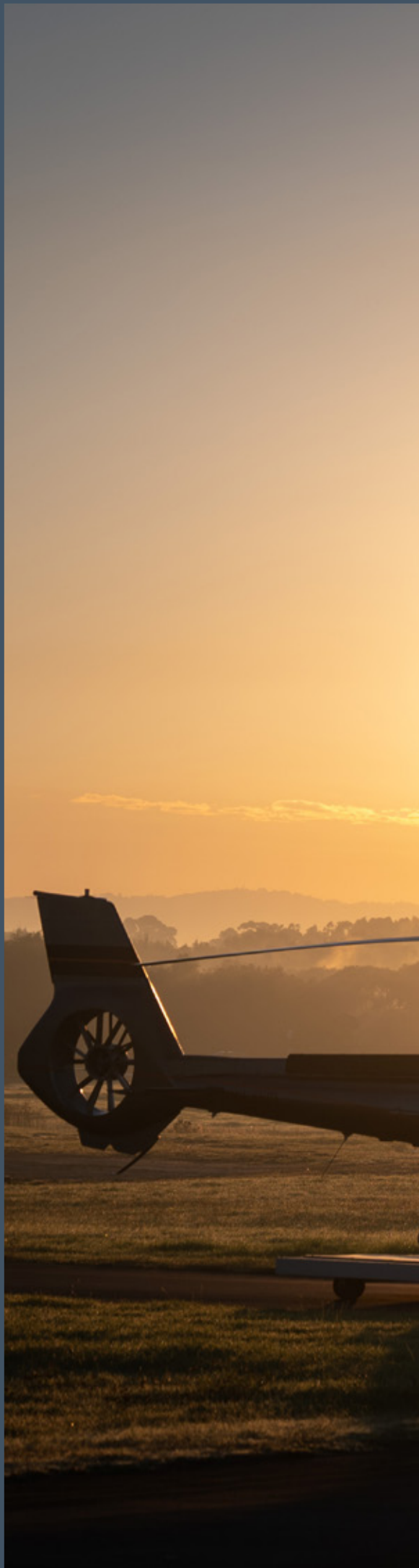





06

LAND USE PLAN







This Land Use Plan outlines the policies, guidelines and procedures for land use decisions and development at the Airport. The Land Use Plan responds to Commonwealth, State, local frameworks, and stakeholder consultation.

Although Moorabbin Airport is Commonwealth land, the Master Plan does have regard to and is generally consistent with the VPP and Kingston Planning Scheme.

This Land Use Plan divides the Airport into five precincts accommodating aviation, retail, employment, commercial, industrial, services and community uses. Planning zones, that determine the land use, have been applied to each precinct.

This Land Use Plan identifies land required to deliver aviation safely and efficiently.

We continuously endeavour to improve our development guidelines. We publish precinct zoning in our Master Plans, and these are available to all residents. There has been no change to the precinct zoning adjoining residential areas since the privatisation of the Airport.

The Land Use Plan has been updated to provide further clarity on land uses in response to the Commonwealth Minister's feedback.

6.1

INTRODUCTION

This Land Use Plan comprises:

- policies on development objectives and strategies for each precinct
- land use and development controls
- a land use management framework.

The concepts, structure, language, and objectives of the VPPs have been adopted for the Land Use Plan where practicable.

Proposed developments that are consistent with the Land Use Plan are not automatically approved for construction. Developments must be approved in accordance with the Moorabbin Airport building application process where proposals may be distributed to authorities for comment. Where appropriate, Moorabbin Airport will inform and consult with residents likely to be affected by building activity and will consider their feedback in determining whether to approve or refuse building activity.

Developments at the Airport play a significant role in the city and beyond and are recognised within the Victorian planning system. The VPPs set out objectives and strategies for strengthening airport operations and protecting ongoing operations. This extends to off-airport operations, adjoining land uses, and aviation safety. The tools and frameworks assessing off-airport impacts are provided through NASF. This is a critical process with 90% of the aviation activity at Moorabbin Airport conducted above surrounding off-Airport areas with urban uses. Effective planning mechanisms under the VPPs for aviation safety will apply to all uses near the Airport and improve planning outcomes.

The Master Plan 2021 has reduced the precincts from seven to five, to simplify and reflect current uses.

6.1.1 – Strategic Policy Considerations

The following strategic issues have informed this Land Use Plan:

- aviation safety
- airport and aviation policy
- aviation objectives, aircraft types and airspace capacity
- State and local planning policy
- precinct identification for specified users
- mix of activities, uses and services
- quality built form and presentation
- increasing amenity
- structure heights and location
- environmental issues and impacts
- transport infrastructure
- services infrastructure
- market demand for services and facilities
- consultation
- off-Airport land use and planning controls
- supporting the City of Kingston.

6.1.2 – Land Use Areas

i. Airside

Airside land is defined by the Airports Act as the part of the Airport grounds and Airport buildings that the non-travelling public cannot access freely. Special rules apply to security and safety on airside land.

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

Aviation support land use areas are:

- contiguous with fixed aviation infrastructure, while still having access to non-aviation infrastructure (roads, water, sewer and power)
- placed in central locations
- designed to be ringed with high-quality built-form respecting the nature of activities within those areas
- seeking to introduce electric aircraft operations towards the end of the master planning period for this Master Plan 2021.

The location of the airside fence will determine the airside boundary. Following feedback from stakeholders on the Preliminary Draft Master Plan 2021, there will be no change to the airside boundary on the western end of the main apron under this Master Plan 2021. As a result, no precinct in this Master Plan 2021 will undergo any substantial planning changes. Precincts 1 and parts of Precincts 2 and 5 are airside.

Aviation operators and Moorabbin Airport customers whose businesses involve access to airside land will be required to operate within the Airports Act regime.

This Master Plan delivers safe and efficient airside land uses, airfield infrastructure and services. Details of Moorabbin Airport's plans for developments that impact the airside area are in Chapter 7 – Aviation Development Plan.

Land uses permitted in each precinct are in Section 6.2 and Appendix 1.

ii. Landside

Landside is defined by the Airports Act as the part of the Airport grounds and Airport buildings that the non-travelling public can freely access.

Precincts 3, 4, and parts of Precincts 2 and 5 are in the landside area, which has aviation and non-aviation facilities.

The aviation facilities and services include passenger terminals, aircraft hangars, maintenance depots, fuel depots, and aviation related businesses. Aviation support services are also provided from landside areas, and it is important they have easy access and efficiency to airside land.

Landside areas are also used for commercial, industrial, retail and business operations, including DFO, Kingston Central Plaza, Chifley Business Park, and the Australian National Aviation Museum. Airport infrastructure is partly located landside including the Mordialloc Settlement Drain and retarding basin, roads, pedestrian paths and utility services.

Details of Moorabbin Airport's plans for development that impact the landside area are in Chapter 7 – Aviation Development Plan and Chapter 8 – Non-Aviation Development Plan.

Permitted land uses within landside areas are in Section 6.2 and Appendix 1.



6.2

PRECINCT PLAN

Each of Moorabbin's five precincts (shown in Figure 6.1) is focused on a specific land use, however flexibility is retained for complementary land uses if appropriate.

Moorabbin's Precinct Plan supports the Airport and surrounding region by:

- facilitating safe and efficient aviation functions
- ensuring the Airport continues to meet present and future requirements of civil aviation users, including optimisation of land and provision for growth
- refreshing Moorabbin Airport's aviation precinct
- retaining long-standing and value-creating aviation and non-aviation businesses and employment for the aviation industry, the City of Kingston and the wider community, including:
 - aviation businesses that have been based at Moorabbin Airport for decades
 - a mature large-format market and DFO that has operated at the Airport for more than 20 years
 - industrial and warehousing customers who have grown with Moorabbin Airport since its privatisation
- constructing new and redeveloped spaces where facilities reach end-of-life or are supported by customer investment
- identifying infrastructure for on and off-Airport users including storm water management and environmental repositories
- providing opportunities for large development sites to attract new and retain businesses within the City of Kingston and broader metropolitan area
- safeguarding land for Airport infrastructure for aviation and non-aviation uses.

Master Plan 2021 reduced the precincts from seven to five, to simplify and reflect current uses. It provides clarity about the intent of each precinct and delivers a plan that reflects the mature nature of the Airport site

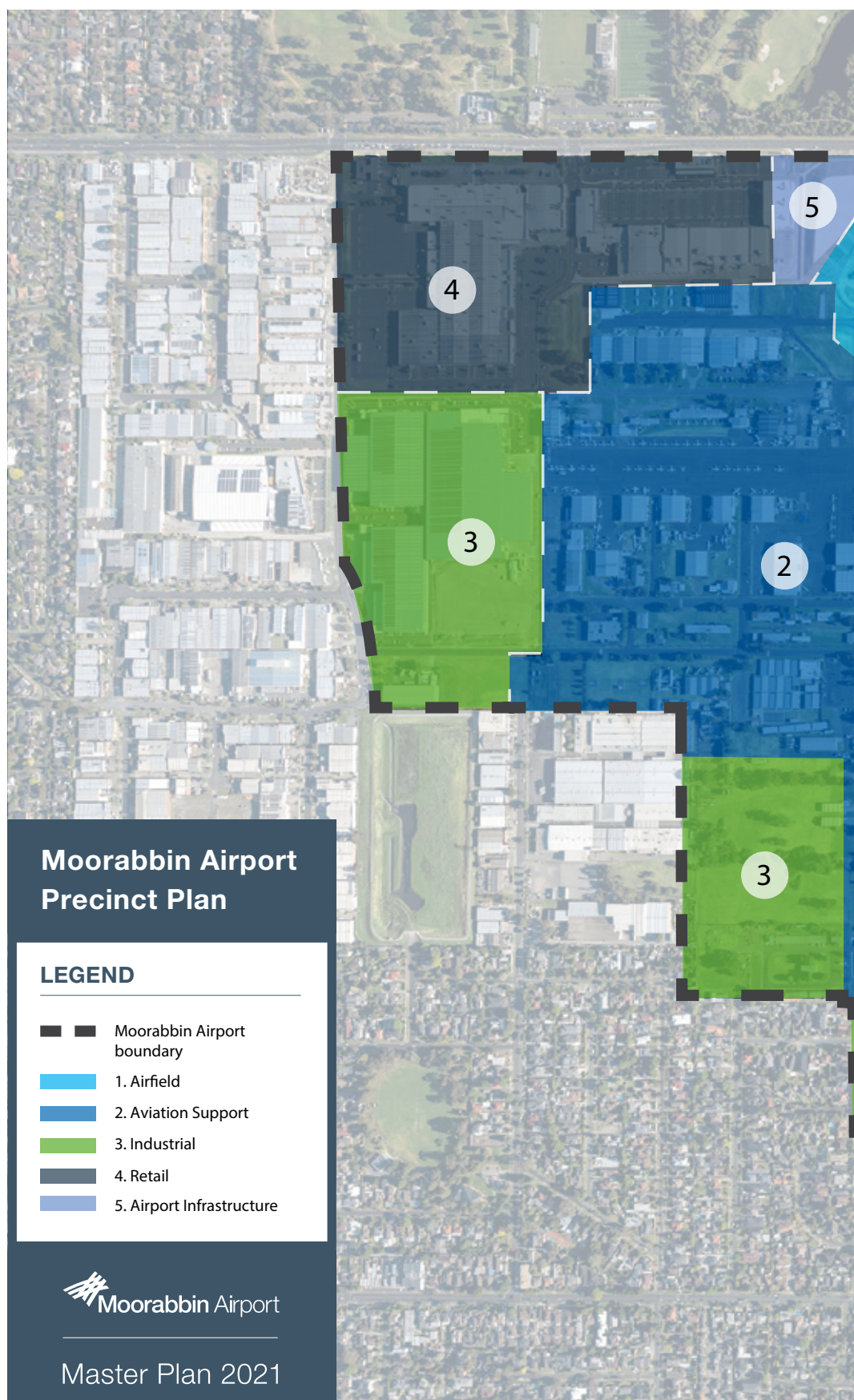


Figure 6.1 – Moorabbin Airport Precinct Plan

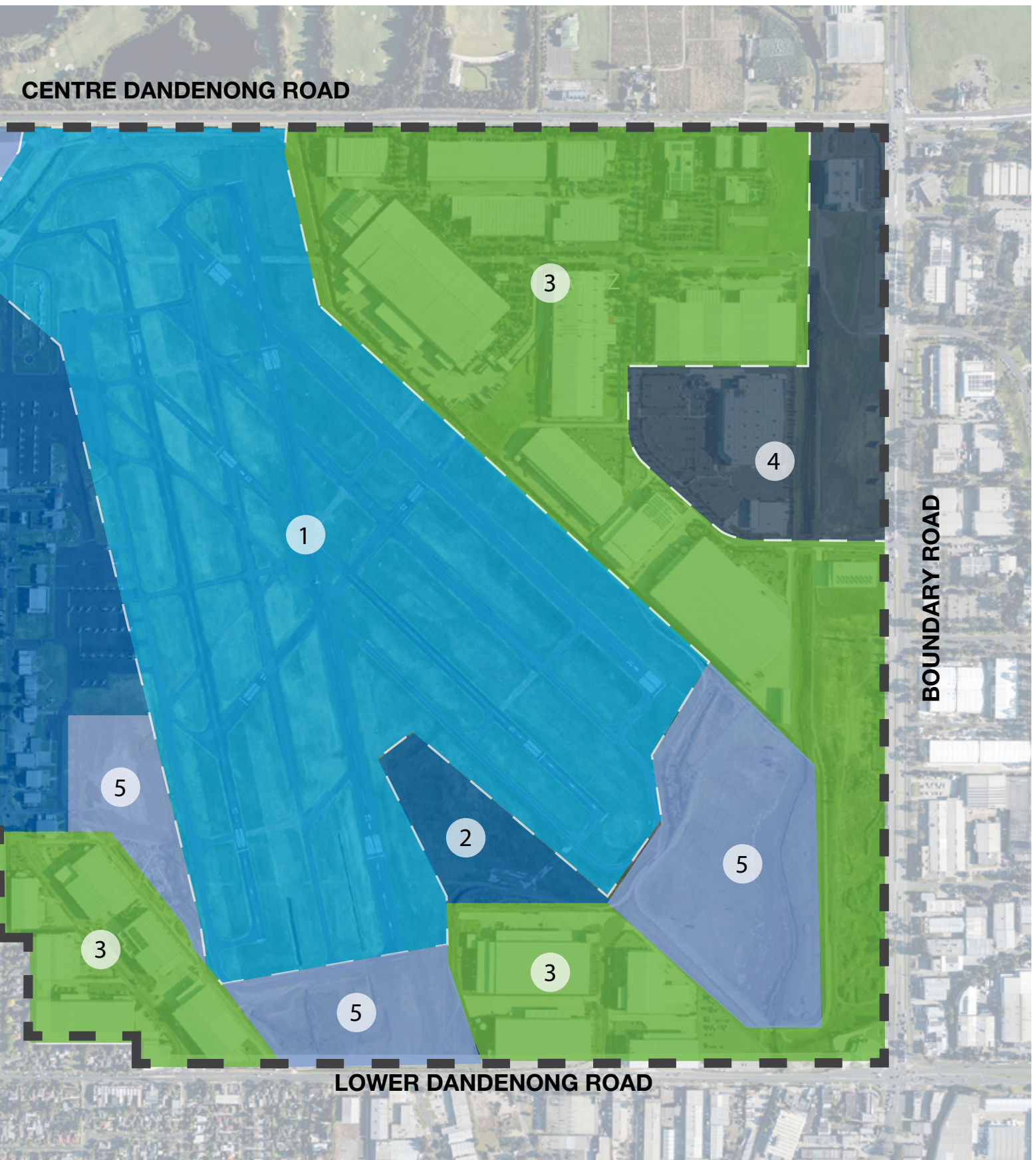
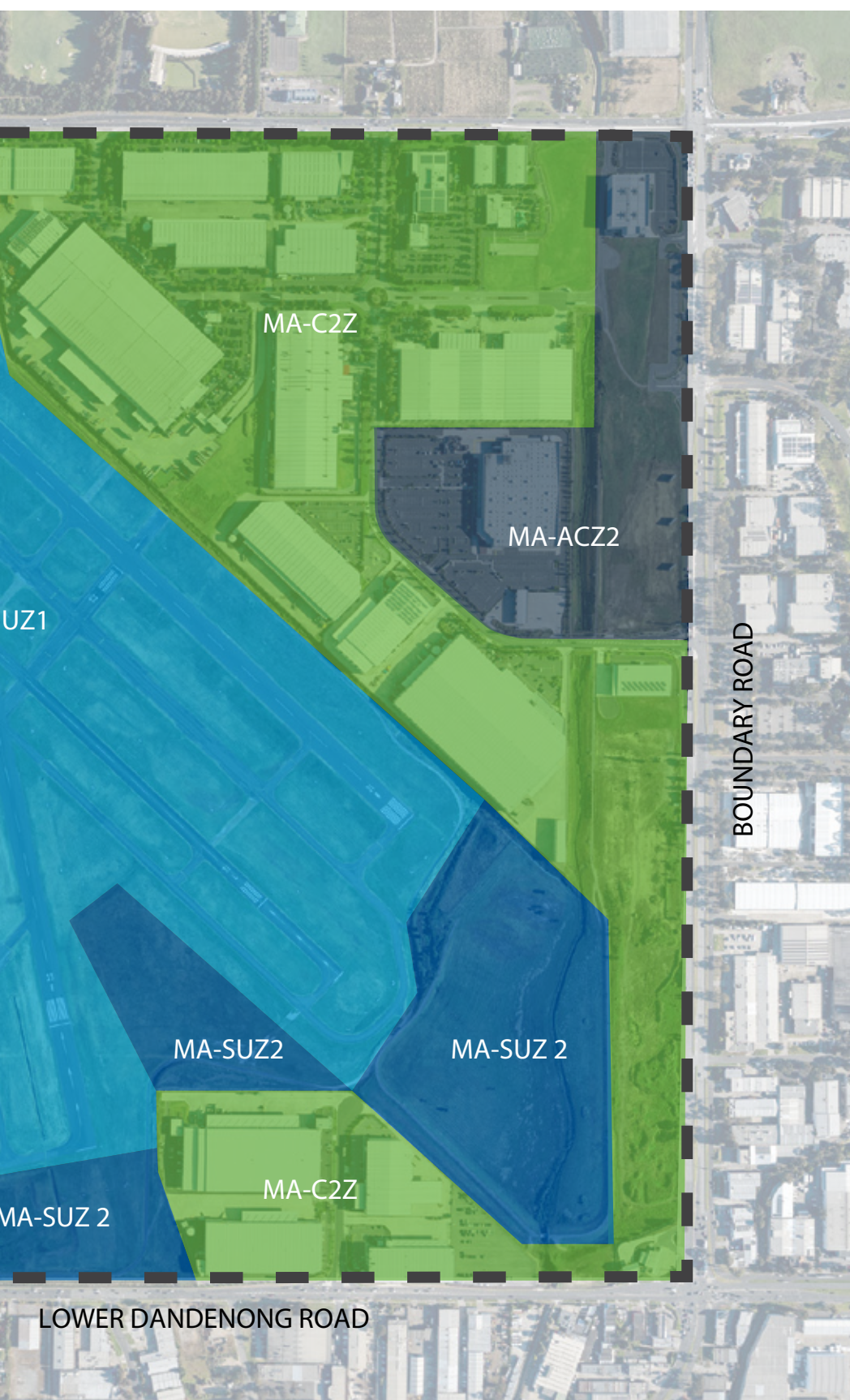




Figure 6.2 – Moorabbin Airport Zoning Plan



6.3

LAND USE AND DEVELOPMENT CONTROLS

Including development controls in this Master Plan 2021 provides a tool for implementing the Airport's strategic direction, policies and development objectives. The controls should be read alongside the Master Plan objectives and aims in Chapter 7 – Aviation Development Plan and Chapter 8 – Non-Aviation Development Plan.

Development proposals across Moorabbin Airport will be prepared and assessed against the land use zone and overlays, as well as the planning provisions for signage, parking, and vehicle loading and unloading. Design principles and siting of new buildings at the Airport are part of the development controls.

Development controls will be given precedence if there are inconsistencies with the strategic direction and precinct policies.

There are a limited number of long standing non-aviation businesses operating from airside sites. It is intended that these businesses will be able to continue to operate (including the transfer, assignment, extension or sale of the business) notwithstanding the changes to land use policy from Master Plan 2015

LAND USE ZONES

Land use zones are key to planning, and directly control land use and development at the Airport. Their implementation is outlined in the Precinct Plan (Section 6.2).

Each Airport zone is set out in Appendix 1 and includes detail of the uses, main purposes, and the requirements that apply for land use, construction, and buildings and works.

Land use zones and boundaries have been updated since Master Plan 2015, and are illustrated in Figure 6.2.

Following ongoing aviation customer consultation, a surplus area west of Bundora Parade has been included in Precinct 3 and rezoned as part of the Commercial 2 Zone. The rezoning will support non aviation developments funding construction of new and upgraded services infrastructure that will directly benefit existing and proposed aviation sites to the east of Bundora Parade.

25 years after privatisation, all primary aviation opportunities have been identified, explored and either delivered or established they are not viable.

Since privatisation aviation uses which Moorabbin Airport has established and enhanced in the area include international student pilot accommodation, airfield back up generators, an aviation museum, aviation support precinct car parking, and aviation support precinct water, sewer, electrical and communications infrastructure.

The surplus area is not able to be connected by “boom gates” to create a “satellite security controlled area” to allow aircraft to taxi across Bundora Parade and access airside. Further, the concept taxiway and boomgate location, through existing Gate 1 and surrounding area, would compromise the release of additional airside hangar sites. Consultation has established a strong preference for these airside hangar sites.

Prior to Master Plan 2015, including under Commonwealth ownership, the surplus area was identified for industrial and employment uses because it is:

- unserviced by utilities infrastructure and practically only large scale developments can fund the infrastructure required;
- has no access to airside (a requirement for most aviation users); and
- not suitable for aircraft maintenance activity including engine running due to proximity to residents.

The continued non-aviation uses proposed for the relevant area remain consistent with supporting aviation activity including warehousing for aviation spare parts, logistics, engineering activities and all aviation businesses that are of a light industrial nature. This approach allows

for non-aviation uses that support and facilitate emerging and next generation aviation activities, such as manufacture of drone components, communications elements for next generation (electric) aircraft, aircraft IT support businesses and sustainable fuel related activities.

There are three categories for Moorabbin Airport land use zones:

- Section 1: the zoned area not requiring additional planning approval from Moorabbin Airport, however conditions attached to the relevant use must be met. If the condition is not met, the development is treated as though it is a use set out in Section 2 of the relevant zone
- Section 2: zoned area requiring additional Moorabbin Airport planning approval and consideration. Any condition attached to the use must be met. If the condition is not met, the use is prohibited and the development may not proceed
- Section 3: use that is prohibited within the area.

Land uses that are not listed in a zone are considered to be Section 2 land uses, requiring Moorabbin Airport approval.

Figures 6.3 to 6.7 set out the as of right Section 1 uses for the Moorabbin Airport land use zones. Section 2 and Section 3 land uses and the details for each Moorabbin Airport land use zone and in Appendix 1.

Moorabbin Airport approval requirements referred to above are in addition to any approvals or consents required under the Airports Act regime and do not limit Moorabbin Airport's rights as lessee of the Airport.

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

6.4

POLICY AND DEVELOPMENT CONTROLS BY PRECINCT AND ZONE

6.4.1 – Precinct 1 Policy and Development Controls – Airfield

Precinct 1 is in the centre of the Airport and includes land required for airside activities. It provides land and infrastructure for existing and future aviation activities and is consistent with the Aviation Development Plan and regulatory regimes. Precinct 1 is essential to the long-term sustainability of airside operations.

Precinct 1 is used for airside operations; it is not an appropriate location for non-aviation development. However, some infrastructure in Precinct 1 may, by its nature, support aviation and non-aviation activities at the Airport (for example, establishing soil management repositories for responsible management of PFAS impacted soil).

i. Precinct Objectives

- protect airfield operations
- provide land to protect and develop the Airport's core aviation infrastructure and services
- provide land to develop and operate runways, taxiways, training areas, aircraft parking areas, apron areas, aviation buildings and runway clearance and protection areas
- provide for, and encourage, general aviation functions focused on flight training, in the context of a metropolitan airport
- facilitate compliance with relevant regulatory requirements
- implement NASF Guidelines when undertaking building activities and developments to safeguard aviation operations
- facilitate further integration of services and infrastructure across Airport precincts
- deliver high-quality infrastructure.

ii. Precinct Strategies

- reserving land for runways, taxiways and other infrastructure for aviation growth
- protecting land required for airside activities and safe compliant operations
- developing an overall strategy for the long-term sustainable operation of the Airport, infrastructure and services
- securing sustainable aviation businesses
- supporting efficient delivery of flight training outcomes including at regional airports, general aviation activity, navigational aid sites and advanced aerial training areas
- implementing NASF Guidelines when assessing and approving developments and building activities
- ensuring new development activity considers sustainable aviation business growth.

iii. Precinct Development Controls

Applicable Moorabbin Airport Land Use Zone	Section 1 Uses (No additional Moorabbin Airport Corporation Approval required)	Applicable Precincts
Moorabbin Airport Special Use Zone 1 (MA SUZ1)	Aircraft operations	Minor utility installation
	Airport	Road
	Airport operation facilities	Runway
	Apron	Runway approach aid
	Helicopter Landing Surface	Taxiway
	Heliport	

Figure 6.3 – Moorabbin Airport Land Use Zones Section 1 (planning approval not required)

Precinct 1 is shown in **Figure 6.1** and Planning Controls in **Figure 6.2**







Moorabbin Airport holds a reputation for positive contribution to the City of Kingston and metropolitan Melbourne, evidenced by increasing flight student numbers, employment generation and investment.

6.4.2 – Precinct 2 Policy and Development Controls – Aviation Support Services

Precinct 2 is to the west of Precinct 1 and is dedicated for the aviation industry including employment, support facilities, hangars, aviation-related business, offices, pavement, and aircraft parking. It includes land that is currently undeveloped.

Precinct 2 provides land for aviation activities, buildings and infrastructure that protect, support and facilitate the aviation activities in Precinct 1.

Precinct 2 will accommodate expanded aviation activities including hangars, additional aircraft parking and support uses. Pursuant to executed leases, the Airport has developed new aviation maintenance facilities in Precinct 2 on the Northern Apron. The southern part of Precinct 2 will accommodate aviation expansion and support uses.

Since the Master Plan 2015, a flight student accommodation facility has been developed on the west side of Bundora Parade in Precinct 2.

Precinct 2 is dedicated to protect, support and facilitate aviation activities. Therefore only businesses with strong links to aviation (as outlined in Appendix 1 - 1.1.2-1) will

be considered for future location within Precinct 2 (whether airside or landside).

i. Precinct Objectives

- support long-term aviation operations, facilities, infrastructure and terminal areas at the Airport
- implement NASF Guidelines when undertaking building activities and developments to safeguard aviation operations
- encourage high-quality, market leading, infrastructure and built form
- provide for, and encourage, an efficient and capable base for aviation functions
- ensure taxiway clearances and aircraft parking satisfy regulatory requirements
- facilitate integration of services and infrastructure across Airport precincts
- clearly identify areas where public access needs to be restricted
- provide additional employment opportunities to support the City of Kingston and broader metropolitan Melbourne area.

ii. Precinct Strategies

- protect aviation activities by ensuring NASF Guidelines are implemented, including appropriate review and

design of buildings and structures

- dedicate land to develop and expand aviation facilities including hangars, aircraft parking areas, fuel depots, taxiways, flight training education centres and maintenance facilities
- support opportunities for new and existing aviation businesses including flight training, engineering, student accommodation, general aviation activities, avionic and other aviation business related land uses
- implement NASF Guidelines when assessing and approving developments and building activities
- encourage aviation-related industry including education, research and technology.

6.4.3 – Precinct 3 Policy and Development Controls – Industrial, Office, Retail and Commercial

Precinct 3 has several parcels of the Airport site to the east, south and west of the runway complex. Since the approval of the Master Plan 1999 this land has been developed with high-quality large format warehouses and campus-style offices. It also includes undeveloped land.

iii. Precinct Development Controls

Applicable Moorabbin Airport Land Use Zone	Section 1 Uses (No additional Moorabbin Airport Corporation Approval required)	Applicable Precincts
Moorabbin Airport Special Use Zone 2 (MA-SUZ2)	ATC facility	Precinct 2 - Aviation Support Services
	ATC associated facilities	
	Aircraft operations	Precinct 5 - Services, Utilities and Associated Infrastructure
	Airport	
	Airside Road	
	Apron	
	Aviation maintenance facility	
	Aviation support facility including earthworks, repositories and water management basins	

Figure 6.4 – Moorabbin Airport Land Use Zones Section 1 (planning approval not required)
Precinct 2 is shown in Figure 6.1 and Planning Controls in Figure 6.2

Precinct 3 provides for and encourages use of land for non-aviation activities, particularly industrial, warehouse, office, restricted retail, showrooms, motor vehicle related uses and a service station. Supermarkets in Precinct 3 are limited to 1,800 sqm leasable floor area (max). Traditional and discount department stores are excluded.

Under this Master Plan, there will be no change to the location of the airside fence in the eastern part of Precinct 3.

Within the eastern part of Precinct 3, Moorabbin Airport has completed one of the largest privately funded infrastructure developments within the City of Kingston – the Mordialloc Settlement Drain. The drain connects off-Airport drainage to the north and runs south through Precinct 3 to a dry retarding basin and the drainage outfall in Precinct 5. Other infrastructure works proposed for this precinct are outlined in Chapter 10 – Infrastructure Services.

i. Precinct Objectives

- industrial, office, commercial and business facilities, and employment growth
- promote opportunities for employment to contribute to the high-profile, high-quality environment on site

- promote the use of warehouses by on the Airport
- facilitate integration of services and infrastructure across Airport precincts
- deliver high-quality infrastructure and built form for the market
- deliver journey-to-work opportunities through public transport facilities
- support the role of the Airport as an important regional destination
- provide employment opportunities to support the City of Kingston and broader metropolitan Melbourne area
- promote aviation businesses that do not require direct airside access
- implement NASF Guidelines when undertaking building activities and developments to safeguard aviation operations.

ii. Precinct Strategies

- promote business, commercial and industrial uses in a high-quality landscaped environment
- provide services and facilities for the growing employee population at the Airport and in the region

- protect airside and aviation activities by ensuring appropriate building location and design
- through strong landscaping and well-designed urban form, enhance the prominence of the precinct fronting Lower Dandenong Road
- encourage activities and services to boost local and regional economies and provide employment opportunities to retain the Airport's role as a significant generator of employment in the City of Kingston
- promote opportunities for industrial and warehouse use, to be consistent with Precinct 3
- ensure activities within this precinct consider the interfaces with other precincts
- implement NASF Guidelines when assessing and approving developments and building activities
- promote aviation engineering and skills businesses that do not require direct airside access through the provision of large industrial space
- deliver sustainable developments
- promote greening of the Airport with more trees, shrubs, and ground cover

iii. Precinct Development Controls

Applicable Moorabbin Airport Land Use Zone	Section 1 Uses (No additional Moorabbin Airport Corporation Approval required)	Applicable Precincts
Moorabbin Airport Commercial 2 Zone (MA-C2Z)	Aviation engineering facility	Precinct 3 – Industrial, Office, Retail, Commercial and Aviation Support
	Aviation support facility	
	Businesses that protect, support or facilitate emerging and next generation aviation activities	
	Car park	
	Flight Training Education Centre	
	Cafe and canteen premises	
	Industry (other than Materials and Transfer station) refer to condition set out in MA-C2Z in Appendix 1	
	Minor utility installation	
	Logistics	
	Office	
	Postal agency	
	Restricted retail premises	
	Road	
	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	
	Spare parts warehousing	
	Student Accommodation (for flight training)	
	Supermarket (the leasable floor area must not exceed 1,800 sqm).	
	Telecommunications facility	
	Trade supplies	
	Warehouse	

Figure 6.5 – Moorabbin Airport Land Use Zones Section 1 (planning approval not required)

Precinct 3 is shown in **Figure 6.1** and Planning Controls in **Figure 6.2**



6.4.4 – Precinct 4 Policy and Development Controls – Retail, Commercial and Industrial/Showroom

Precinct 4 is in the north-western and north-eastern corners of the Airport occupied by DFO, Kingston Central Plaza, Costco, Decathlon, service station, other retail and car parking areas. It includes undeveloped land. It provides buildings and infrastructure for retail activities, including development of non-traditional warehouse style and large format outlets, other business and commercial uses.

Precinct 4 has the characteristics of an Activity Centre under the Kingston Planning Scheme, as it supports a full range of retail and commercial activities, and areas of intensive, mixed-use employment (over 87,000 sqm of floorspace, more than 155 businesses and 2,250 jobs).

Descriptions of Precinct 4 as an Activity Centre in this Master Plan 2021 will recognise this existing role and function for the local and regional community and support the continued integration of the Airport with the City of Kingston and south-east metropolitan Melbourne.

We encourage retail outlets, other business, commercial, industrial, and showroom uses where appropriate, in Precinct 4.

iii. Precinct Development Controls

i. Precinct Objectives

- provide a mix of uses for convenience shopping to serve the needs of the local and broader community
- facilitate use and development of land in accordance with the Development Framework (see Appendix 1)
- promote retail uses which support the Airport as an important regional destination
- promote entertainment, leisure and recreation uses
- allow for medical and aged care uses subject to State Government and City of Kingston support
- maximise use of the Principal Public Transport Network
- provide employment opportunities to support the City of Kingston and broader metropolitan Melbourne area
- facilitate integration of services and infrastructure across Airport precincts
- deliver high-quality infrastructure and built form for the market, through good urban design and an attractive, safe and stimulating environment
- develop a place that meets the needs of the City of Kingston and broader metropolitan Melbourne area

- promote retail, commercial and service activities to complement Chifley Business Park and support the employee base
- implement NASF Guidelines when undertaking building activities and developments to safeguard aviation operations.

ii. Precinct Strategies

- encourage the provision of retail premises to support the future employment base of the Airport
- encourage activities and services to support the local economy and provide employment opportunities
- promote opportunities for industrial and warehouse use to be consistent with development
- promote opportunities for entertainment, leisure and recreation
- allow for medical and aged-care facilities. Moorabbin Airport will only proceed with aged-care land use with the Victorian Government and City of Kingston support
- encourage pedestrian access and use of the Principal Public Transport Network along Centre Dandenong Road adjoining Precinct 4
- implement NASF Guidelines when assessing and approving developments and building activities.

Applicable Moorabbin Airport Land Use Zone	Section 1 Uses (No additional Moorabbin Airport Corporation approval required)	Applicable Precincts
Moorabbin Airport Activity Centre Zone 1 and 2	Accommodation (other than Corrective institution)	Precinct 4 – Retail, Commercial and Industrial/Showroom
	Childcare centre	
(MA-ACZ1 and MA-ACZ2))	Education centre	
	Exhibition centre	
	Home based business	
	Informal outdoor recreation	
	Motor racing track	
	Minor utility installation	
	Office	
	Place of worship	
	Railway	
	Retail Premises (other than Gambling Premises and Shop)	
	Road	
	Shop (other than Adult sex bookshop)	
	Telecommunications facility	
	Tramway	

Figure 6.6 – Moorabbin Airport Land Use Zones Section 1 (planning approval not required)

Precinct 4 is shown in **Figure 6.1** and Planning Controls in **Figure 6.2**



6.4.5 – Precinct 5 Policy and Development Controls – Airport Services, Utilities and Associated Infrastructure

Precinct 5 is for Airport services, utilities, and associated infrastructure, which support the long-term needs of aviation and non-aviation activities.

It provides land directly required for Airport services, utilities and associated infrastructure servicing aviation and non-aviation activities and delivers benefits for those areas immediately adjacent to the Airport.

The services in Precinct 5 are delivered safely and are consistent with the Aviation and Non-Aviation Development Plans, and regulations.

This includes providing land:

- for significant drainage infrastructure
- to facilitate environmental management zones
- to protect utility assets
- for clear areas to facilitate safe aviation operations.

Airport services, utilities and associated

infrastructure in Precinct 5 help the off-Airport infrastructure networks which enhance safety and infrastructure capacity. The off-airport benefits are provided at Moorabbin Airport's cost.

i. Precinct Objectives

- provide services, utilities and associated infrastructure for aviation and non-aviation activities
- provide sufficient land for the Airport's core services, utilities and infrastructure to support growth
- provide land to develop Airport services, utilities, infrastructure, runway clearance and protection areas
- facilitate compliance with regulatory requirements
- facilitate integration of services, utilities and infrastructure across the Airport
- deliver high-quality services, utilities and infrastructure for the market and for aviation operations
- implement NASF Guidelines when undertaking building activities and developments to safeguard aviation operations.

ii. Precinct Strategies

- reserve land for Airport services, utilities and infrastructure to enable growth
- protect land required for Airport services, utilities and infrastructure
- ensure that new infrastructure considers sustainable business growth
- store and manage spoil
- implement NASF Guidelines when assessing and approving infrastructure and associated building activities
- accommodate the Mordialloc Settlement Drain reserve and Clayton sewer
- reserve part of the precinct's south-eastern corner for the dry retarding basin to alleviate flooding.

iii. Precinct Development Controls

Applicable Moorabbin Airport Land Use Zone	Section 1 Uses (No additional Moorabbin Airport Corporation Approval required)	Applicable Precincts
Moorabbin Airport Special Use Zone 2 (MA-SUZ2)	ATC facility	Hangars and aircraft parking
	ATC associated facilities	Helicopter Landing Surface
	Aircraft operations	Minor utility installation
	Airport	Navigational aids including weather station
	Airside Road	Runway
	Apron	Runway approach aid
	Aviation maintenance facility	Taxiway
	Aviation support facility including earthworks, repositories and water management basins	Terminal

Figure 6.7 – Moorabbin Airport Land Use Zones Section 1 (planning approval not required)
Precinct 5 is shown in **Figure 6.1** and Planning Controls in **Figure 6.2**

6.4.6 – Overlays

In accordance with the VPPs, Moorabbin Airport has applied overlays, listed below, to target a single issue or set of issues.

- Moorabbin Airport Airport Environs Overlay (MA-AEO), shown in Figure 6.8
- Moorabbin Airport Design and Development Overlay (MA-DDO), shown in Figure 6.9.

Each overlay has a strategic justification and is linked to policies and development objectives described in this Master Plan 2021.

Planning Provisions

Planning provisions for signage, parking and vehicle loading and unloading are in Appendix 1. Additional principles for the design and review of buildings are in Appendix 1.

Development controls have been included to:

- implement policies and development objectives described in this Master Plan 2021;
- provide consistency with the VPPs on specific issues at the Airport, where appropriate.

Moorabbin Airport has departed from the table of car parking requirements contained in clause 52.06 of the VPPs (and Kingston Planning Scheme) for warehouse use. Car parking requirements in this Master Plan 2021 consider:

- Transport Impact Assessments provided by applicants of previous warehouse developments
- Moorabbin Airport’s assessment of car parking demand for previous warehouse developments
- empirical car parking demand rates at similar warehouses in metropolitan Melbourne provided in the Transport Impact Assessments
- transport accessibility characteristics and car parking analysis (see Chapter 9 – Ground Transport Plan).

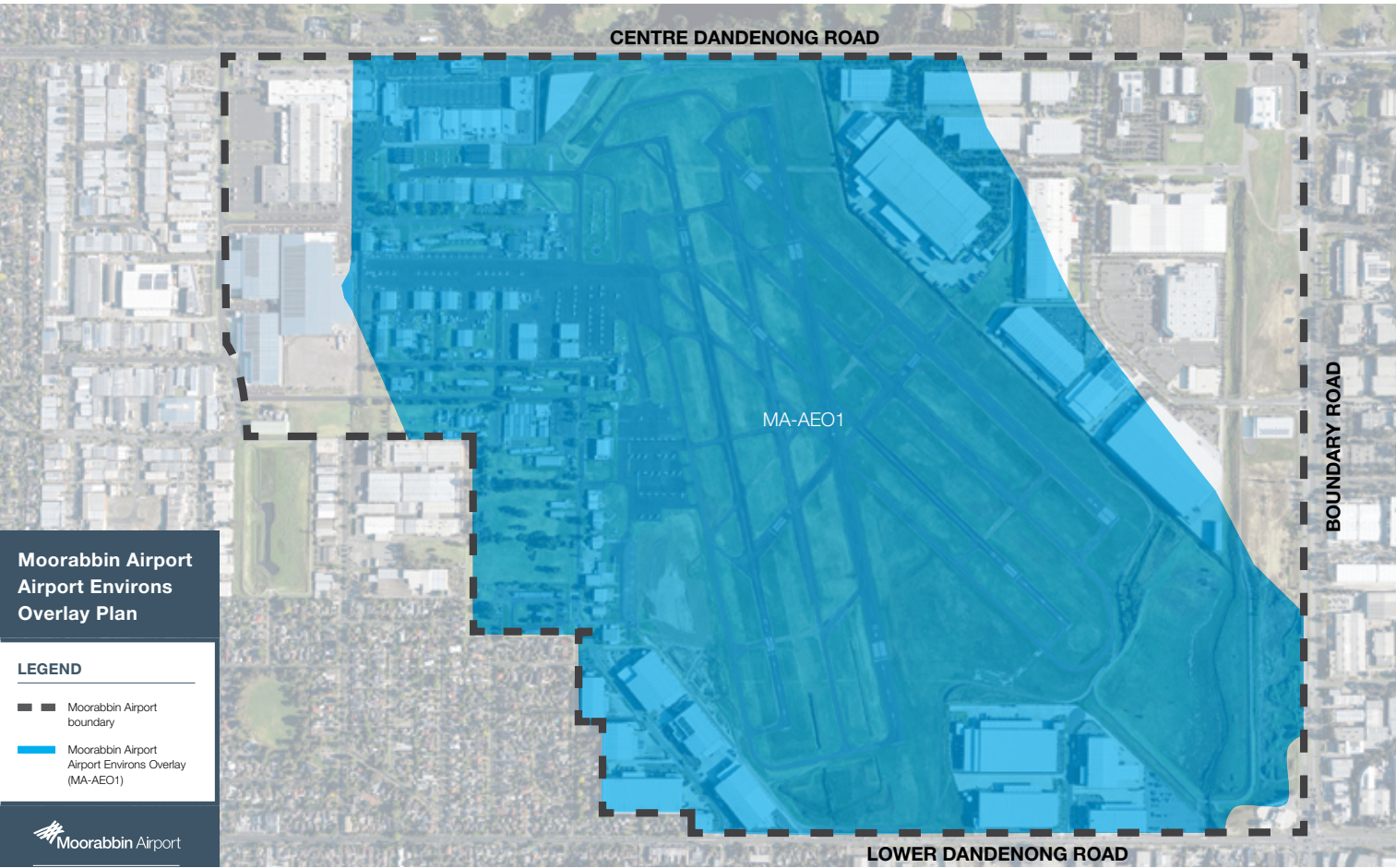


Figure 6.8 – Moorabbin Airport Environs Overlay Plan – MA-AEO1

Moorabbin Airport is the City of Kingston's major employment land location and has the potential to be a key feature of the City of Kingston's economic recovery over the 2021 to 2029 period due to the extent of investment planned.

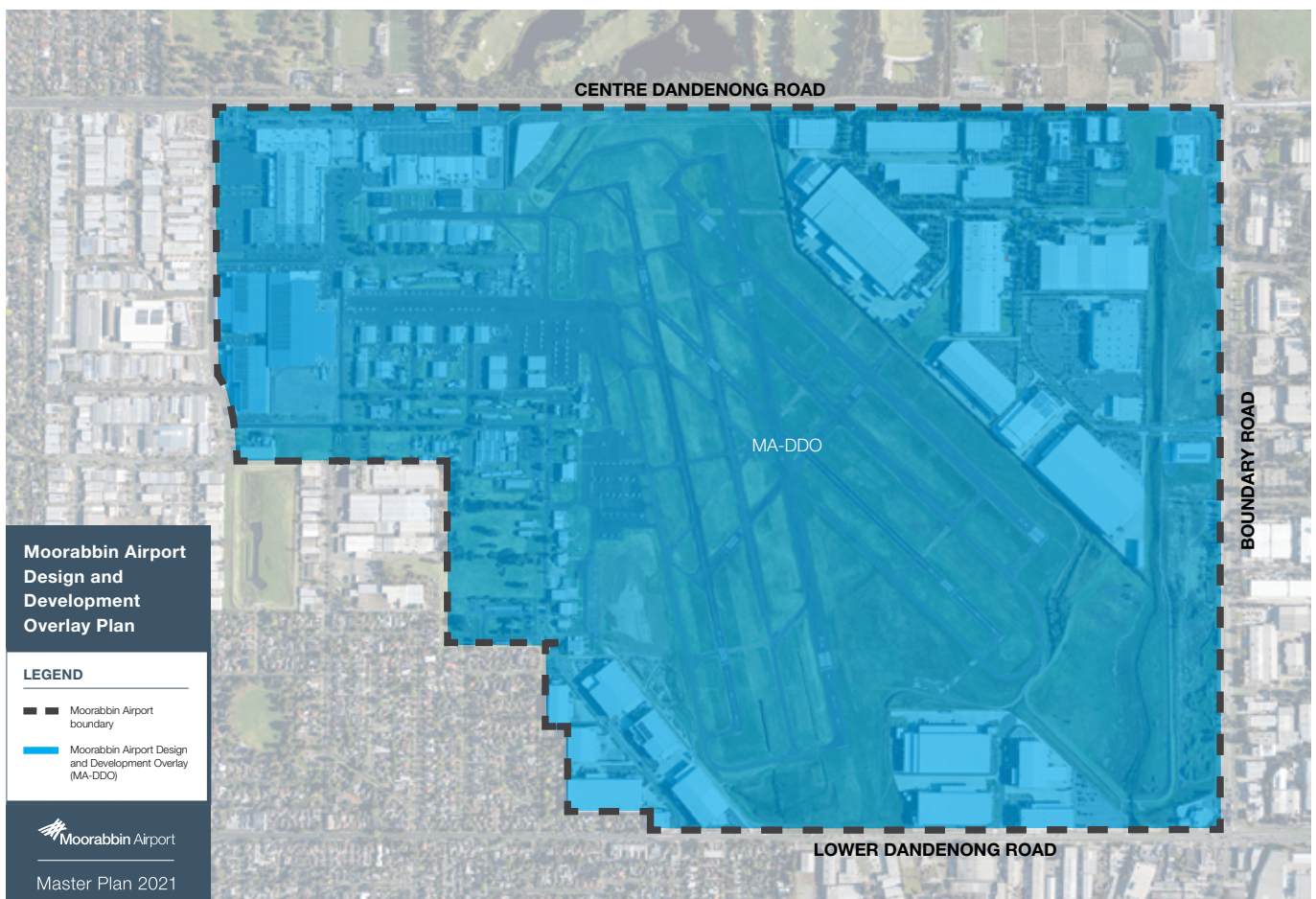


Figure 6.9 – Moorabbin Airport Design and Development Overlay Plan – MA-DDO



6.4.7 – Interface Amenity Design Responsibility

A change in zoning or land use and development controls to off-Airport land has the potential to impact Airport land (for example, placing a sensitive land use close to a potential source of noise, visual impact or other amenity impact on or off Airport land).

While Moorabbin Airport has recently assisted the City of Kingston with off-Airport assessments, we believe that where a change in zoning or land use and development control is proposed, the proponent of the change should be responsible for design measures to address amenity impacts at or near the Airport. Moorabbin Airport will continue to encourage sustainable, best-practice design to improve amenity at the Airport.

This may include the proponent taking into consideration:

- the effect that the use has on nearby residential areas or other uses which are sensitive to industrial off-site effects
- streetscape character
- built form
- landscape treatment
- interface with non-industrial areas
- parking and site access
- loading and service areas
- outdoor storage
- lighting
- storm water discharge
- the effect of nearby industries.

Moorabbin Airport is supportive of recent amendments to Clause 18.02-7S of the PPF that provide noise requirements for proposed developments surrounding the Airport. However there remains an opportunity for the Council to incorporate NASF principles regarding safety and risk into the PPF.

Moorabbin Airport is supportive of the introduction of Clause 18.02-7L-02 of the PPF which requires the City of Kingston to consider this Master Plan 2021 as relevant for planning decisions.

For this section 6.4.8, a change in zoning or land use and development controls means a change from Airport land zoning or land use and development controls in this Master Plan 2021. For off-Airport land, it means a change from the zoning or control in the Kingston Planning Scheme when this Master Plan 2021 was prepared.

6.5

LAND USE MANAGEMENT FRAMEWORK

6.5.1 – Background

The Airports Act provides a comprehensive building activity and development approval regime at federally leased airports. In summary:

- “building activities” not undertaken by Moorabbin Airport require Airport Lessee Company Consent from Moorabbin Airport prior to obtaining a Building Permit
- “building activities” at the Airport require a Building Permit (or Works Permit or Demolition Authorisation) from the ABC. There are limited exemptions
- “major airport developments” require a Major Development Plan (MDP) to be approved by the Commonwealth Minister
- “sensitive developments” are prohibited except in exceptional circumstances where the Commonwealth Minister gives approval for a MDP
- all federally leased airports are subject to the same building activity and development regime.

The Airports Act classifies the planning requirements for building activities of federally leased airports.

6.6

AIRPORT LESSEE COMPANY CONSENT

6.6.1 – The Role of Airport Lessee Company as Approval Authority

Airport Lessee Company Consent (by Moorabbin Airport as the Airport Lessee Company) is a prerequisite for obtaining a Building Permit (or Works Permit or Demolition Authorisation) from the ABC for building activities.

Moorabbin Airport may:

- grant Airport Lessee Company Consent
- grant Airport Lessee Company Consent subject to conditions it considers appropriate
- refuse to grant Airport Lessee Company Consent.

6.6.2 – Airport Lessee Company Consent Process

Moorabbin Airport has established a comprehensive process to assessment building activities. The process is set out below and summarised in Figure 6.10.

Moorabbin follows this process for external applications when preparing and reviewing its own proposals, as necessary.

i. Applicant Preliminary Information Review

The initial stage of an approval process involves the applicant providing preliminary information for the proposed building activity including preliminary plans, an explanation of the works, and proposed use. This stage ensures appropriate information is collated prior to a pre-assessment discussion.

Moorabbin Airport has developed forms, which identify considerations and potential issues, to assist applicants undertake this process.

ii. Pre-Assessment Discussion

Once the applicant has collated the preliminary information material, a pre-assessment discussion with Moorabbin Airport is recommended, to resolve any issues apparent at an early stage of the approvals process. This is also a forum for Moorabbin Airport to request more information about the building activity and ensure that a robust assessment can be undertaken. This may require applicants to engage technical consultants for reports examining specific impacts of the building activity, including aviation and environmental impacts.

iii. Lodgement of the Application

Following the pre-assessment review and once the required information has been agreed, the application is lodged with Moorabbin Airport at:

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

Or, email:
Development@moorabbinairport.com.au

Unless otherwise agreed by Moorabbin Airport, the following information should be included:

- site plan drawn to scale
- application form developed by Moorabbin Airport, completed with details of use/development the applicant is applying for
- scaled elevation drawings to identify colour and materials of all buildings and works
- construction details of all drainage works, driveways, vehicle parking and loading areas
- landscape layout including description of vegetation to be planted, its source, the surfaces to be constructed, site works specification and method of preparing, draining, watering, and maintaining and monitoring the landscape area
- details relating to access, vehicle parking, noise, visual amenity and height limitations

- details relating to compliance with relevant NASF Guidelines including windshear and turbulence
- details of technical assessments required by Moorabbin Airport and commissioned by the applicant
- pre-and-post-construction environmental and works plans dealing with issues such as waste management and sustainability in design, construction and operation
- any other information required by the Moorabbin Airport Planning Controls – Master Plan 2021 (contained in Appendix 1).

A preliminary assessment of the proposal will be undertaken by Moorabbin Airport and any further information that may be required will be requested in writing from the applicant.

iv. Consultation regarding the application

Upon lodgement of the application, Moorabbin Airport may distribute it to authorities for comment. Relevant technical reports provided by applicants are also provided to authorities to assist their consideration of the proposed building activities.

Authorities may include:

- State Government authorities
- Airservices and CASA (aviation authorities)
- City of Kingston
- South East Water (water and sewer)
- Jemena (electricity)
- Telstra (telecommunications)
- VicRoads (roads)
- Melbourne Water Corporation (storm water and drainage).

Moorabbin Airport considers all feedback received in the requested timeframe (14 days) when determining an application.

When Moorabbin Airport assesses an application that is not subject to major airport development or sensitive use regime (see Section 6.5), there is no formal obligation to inform or consult with

residents in the vicinity of the Airport. However, where appropriate, Moorabbin Airport will inform and consult with residents likely to be affected by the building activity and will consider their feedback in determining whether to approve the building activity.

The CACG plays an important role reviewing building activities at the Airport. We recognise that this forum provides an excellent vehicle for consultation with key stakeholders and ensures that regular progress reports are made to the committee.

Moorabbin Airport will also consult with CASA and Airservices regarding any proposed building activities (including plant and crane operations), so that they have sufficient time to conduct technical and operational assessments to protect safety-critical zones, reviewing criteria around navigational aids and PANS-OPS/flight procedures.

v. Consideration of the application

In reviewing the application, Moorabbin Airport considers:

- the relevant provisions of this Master Plan 2021 (including the Precinct Plan and policies, Zoning Plan (as set out at Figure 6.2) and other land use and development controls)
- applicable statutory requirements including under the Airports Act regime and Airports Regulations and civil aviation safety legislation
- NASF Guidelines and other aviation safety considerations.

Moorabbin Airport's planning, environmental and aviation teams undertake a comprehensive assessment of the proposed building activity based on the application materials. If necessary, Moorabbin Airport may seek additional materials and comments from technical consultants to help its consideration of the application.

Where the proposed building activity can be modified or amended to better align with planning, aviation and environmental objectives, Moorabbin Airport will work with the applicant to achieve the optimal outcome.

Further details of Moorabbin Airport's approach to aviation safety in relation to building activities and developments is in Chapter 12 – Airport Safeguarding Strategy.

vi. Decision on the application

Moorabbin Airport will issue a decision to the applicant approving or rejecting the application for Airport Lessee Company Consent. Any approval granted may contain conditions such as:

- ABC approved Work Permit
- building design, materials and colour
- access and parking
- sustainability and landscaping
- amenity
- infrastructure.

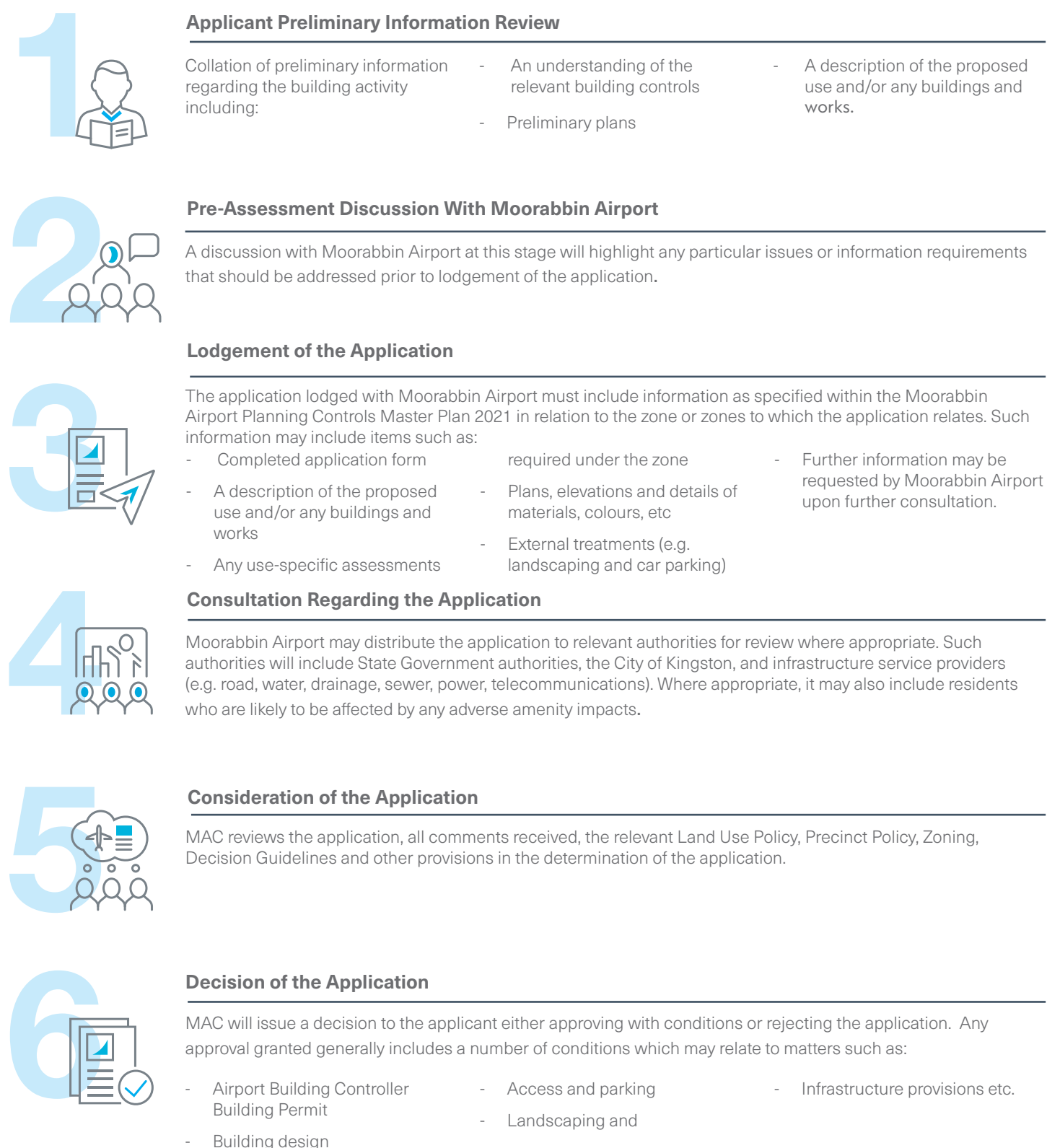
Standard conditions are imposed on most approvals, however, application specific conditions may also be appropriate. All decisions are notified in writing. Where an approval is issued, plans must be finalised and approved prior to any proposal proceeding.

vii. Post Airport Lessee Company Consent requirements

Where an approval is issued subject to conditions, those conditions must be complied with at the required stage of the development.

Moorabbin Airport provides most applicants with an On-Site Commencement Approval when they have complied with all conditions that must be complied with prior to construction (e.g. obtained Building Permit from the ABC, plans have been finalised and approved by Moorabbin Airport).

Once the building activity has been completed, Moorabbin Airport must approve the completion in writing through a Building Activity Completion letter. The letter issued by Moorabbin Airport is provided to the ABC for certification.



This figure is for illustrative purposes only as part of the Moorabbin Airport Master Plan 2021. It is not intended, nor should it be relied upon, for any other purpose.

Figure 6.10 – Moorabbin Airport Planning Approvals Process Flowchart

6.7

AIRPORT BUILDING PERMITS

i. Role of the Airport Building Controller (ABC)

The ABC is a statutory officer appointed by the Commonwealth Government and is independent of Moorabbin Airport.

The ABC is responsible for technical approval of all buildings and works on the Airport. The ABC must assess all proposed building activities, including demolitions, to ensure compliance with building and engineering standards (such the Building Code of Australia), the Airports Act and this Master Plan 2021.

Applicants commencing works without ABC approval are subject to statutory penalties under the Airports Act regime.

ii. Permit Process

The applicant must lodge an application for a Building Permit (or Works Permit or Demolition Authorisation) using the application process required by the ABC.

The ABC must not issue a Building Permit for building activities at the Airport that are not undertaken by Moorabbin Airport unless the applicant has obtained Airport Lessee Company Consent from Moorabbin Airport.

iii. Post Building Permit requirements

After completing the building activity, the Applicant must lodge a request for a Certificate of Compliance or completed works notice (COC) with the ABC.

The ABC issues a COC for compliant building activities to the applicant. Once a COC has been issued, the applicant can occupy the works.

iv. The Role of the Airport Environment Officer (AEO)

The AEO is an environmental regulator for Airport land. Like the ABC, the AEO is a statutory officer appointed by the Commonwealth Government and is independent of Moorabbin Airport.

The AEO is responsible for reviewing land use proposals against environmental criteria and investigating incidents which have or may have caused pollution or issues of contamination. The AEO also advises the ABC about potential environmental issues during the Building Permit process.

If necessary, the AEO can issue an infringement notice to any operator on the Airport site, if the operator has committed an offence against the *Airport (Environment Protection) Regulations 1997* (Cth).

6.8

MAJOR DEVELOPMENTS AND SENSITIVE DEVELOPMENTS

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

For sensitive developments, an Airport Lessee Company may not prepare a MDP for the relevant development unless and until the Commonwealth Minister has consented to the production and submission of the relevant plan.

An MDP relating to a sensitive development will be approved by the Commonwealth Minister in certain circumstances.

Although there are no specific proposals for sensitive developments in this Master Plan 2021, the provisions of some zones applicable to the Airport (see Appendix 1) will allow certain sensitive developments to be considered in the future, subject to the Airports Act requirement to obtain approval from the Commonwealth Minister and prepare a draft MDP.

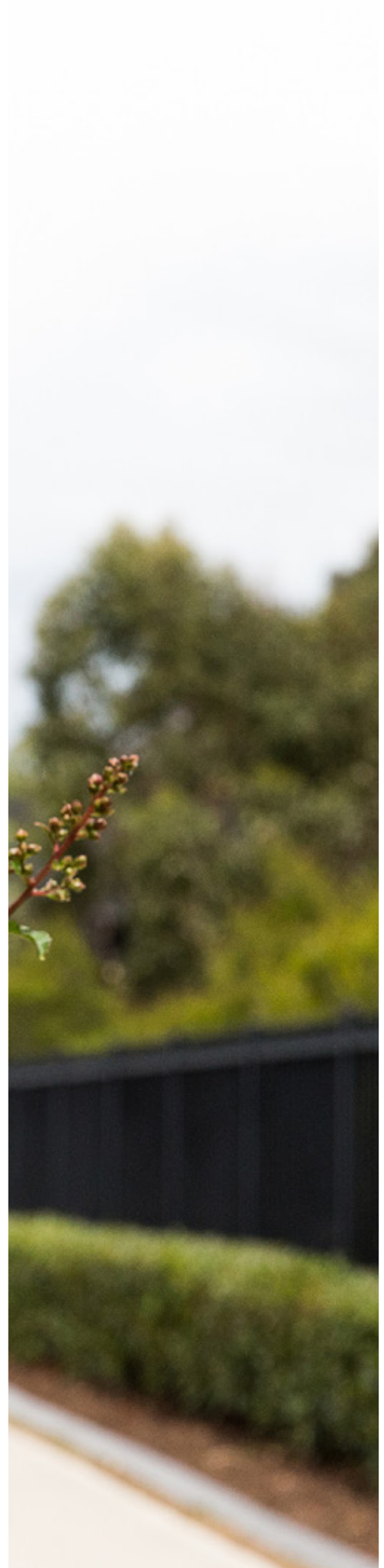
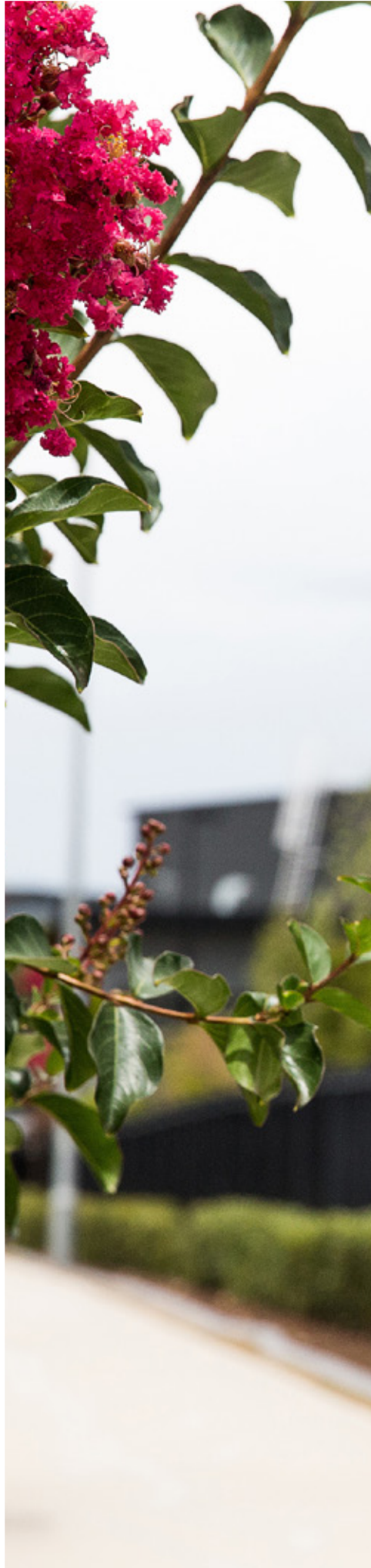
6.9

PRE-EXISTING INTERESTS

In developing this Master Plan 2021 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 between these interests and any proposals in this Master Plan 2021.

Moorabbin Airport will continue to ensure that any Airport development contemplated will not interfere with the rights granted under any pre-existing interest.

With 8.4 million visitors per year, valued-added activity currently sits at Moorabbin Airport \$870 million (9% of the City of Kingston area) and is anticipated to grow to \$1.2 billion by 2029 - a forecast growth of 3.3%.





6.10

CONSISTENCY WITH STATE PLANNING SCHEMES

This section sets out how Moorabbin Airport's intentions for land use and related Airport development, embracing airside, landside, surface access and land planning/zoning aspects, are consistent with State planning schemes and provides justification for any identified inconsistencies.

Below are key considerations. A detailed discussion is in Chapter 5 – Planning Framework and Context.

6.10.1 – Application of Moorabbin Airport Special Use Zone to Precincts 1, 2 and 5

The Airport is recognised as a “Place of State Significance” in Plan Melbourne, the planning strategy for metropolitan Melbourne. This is the same recognition given to other airports in metropolitan Melbourne including Melbourne, Avalon and Essendon Airports.

As well as its role as a passenger and freight movement Airport, under Plan Melbourne, Moorabbin Airport is an economic and employment centre with a significant economic and employment-generating function.

The Airport's transport function (noting its flight training focus), is to be protected from incompatible land uses, but adjacent complementary land uses and employment generating activity are encouraged. Continued growth of aviation, aviation support and Airport services as provided in Precincts 1, 2 and 5, is consistent with Plan Melbourne.

The MA-SUZ is applied under this Master Plan 2021 to precincts designated for aviation, aviation support and airport uses. It is based on the Special Use Zone which forms part of the VPPs with some changes made to ensure consistency with the Airports Act regime.

The VPP Practice Note 03 of May 2022 regarding application of the Special Use Zone states 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. However, the Special Use Zone can be considered when a combination of other available zones, overlays and local policies cannot give effect to the desired objectives or requirements.

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

The application of the MA-SUZ to Precincts 1, 2 and 5 under this Master Plan 2021 is consistent with zoning applied in Master Plan 2015.

6.10.2. – Application of Moorabbin Airport Commercial 2 Zone to Precinct 3

Non-aviation development at the Airport complements aviation operations and is consistent with urban planning arrangements for the southern metropolitan Melbourne area, including Plan Melbourne and Kingston Planning Scheme. It is acknowledged by industry and government, including the Commonwealth, that appropriate non-aeronautical development underpins the operational and financial viability of the Airport's operations.

The MA-C2Z, based on the Commercial 2 Zone as set out in the VPPs, has been applied to Precinct 3, with changes made to reflect the Airport's circumstances.

Use of the MA-C2Z is consistent with the PPF and VPPs given the role that Moorabbin Airport has as an economic and employment centre under Plan Melbourne. It is consistent with the function and contemporary application of the VPP Commercial 2 Zone as a zone which provides opportunities for

offices, commercial businesses, restricted retail and bulky goods premises and forms of retail activity, to create new opportunities for office and retail growth – including “non-traditional” retail.

The use of MA-C2Z for Precinct 3 is consistent with the “net community benefit test” approach outlined in the Kingston Planning Scheme.

The application of MA-C2Z to Precinct 3 under this Master Plan is consistent with Master Plan 2015

6.10.3 – Application of Moorabbin Airport Activity Centre Zone to Precinct 4

The MA-ACZ is based on the Activity Centre Zone (ACZ) and forms part of the VPPs, with changes made to ensure consistency with the Airports Act. For example, purpose statements regarding housing have been removed, as most forms of housing are “sensitive developments” and not allowed at the Airport without Commonwealth Ministerial approval.

Moorabbin Airport considers part of Precinct 4 to have the characteristics of an Activity Centre under the Victorian planning scheme. Designation of Precinct 4 as an Activity Centre in this Master Plan 2021 recognises the retail, office and other commercial land uses generating employment and economic investment which this precinct is suited and already used for.

While these centres are not formally designated in the Kingston Planning Scheme, applying the MA-ACZ to these parts of the Airport is consistent with the PPF and the VPPs and reflects a contemporary application of commercial zones under the VPPs. It is consistent with

the function of the ACZ in the VPPs as a zone which supports a full range of retail and commercial activities and areas of intensive, mixed-use employment.

The Planning Practice Note relating to the ACZ (June 2015) states that this zone was developed to apply to Metropolitan Activity Centres and Major Activity Centres in metropolitan Melbourne and may be considered for application at large Neighbourhood Centres. It is also noted

that Melbourne Airport has applied the ACZ to its landside areas in the last 2013 and 2018 Master Plans and its Preliminary Draft Master Plan 2022. Use of the MA-ACZ for Precinct 4 is consistent with the net community benefit test approach outlined in the Kingston Planning Scheme.

Any inconsistency between Clause 02.03-1 of the Kingston Planning Scheme, and the application of the MA-ACZ to parts of the Airport, is addressed in Chapter 5 – Planning Framework and this Master Plan 2021.



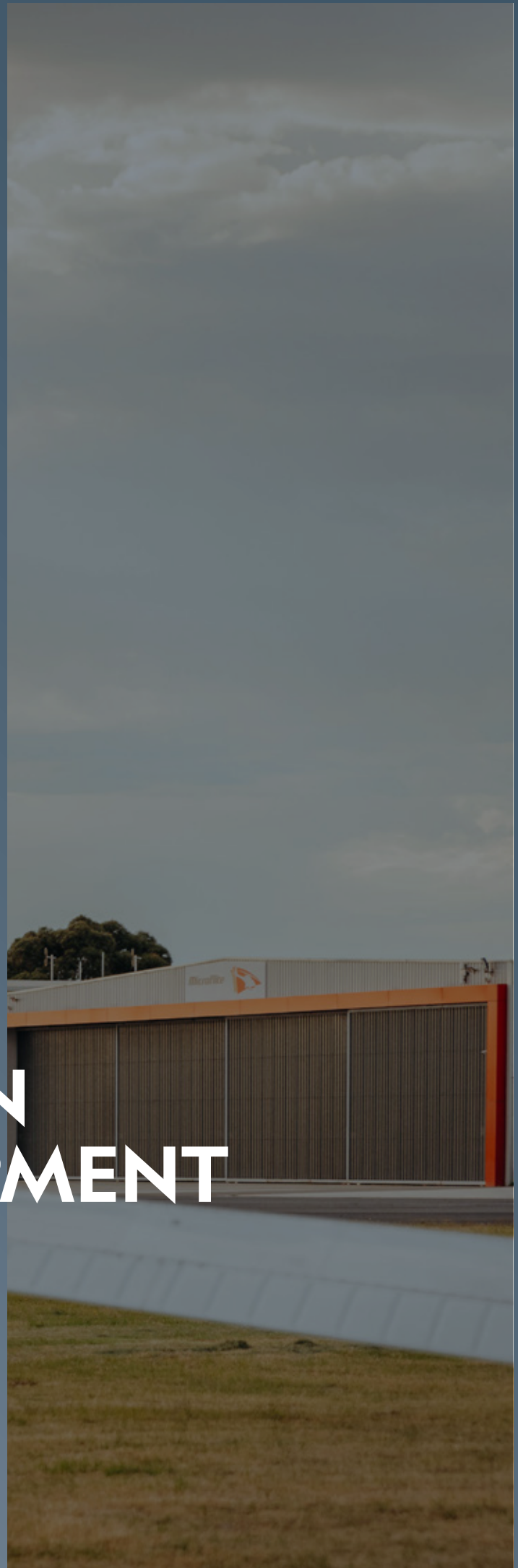
Moorabbin Airport is one of four purpose-built dual aviation flight training airports. Our extensive experience in aviation training and education continues to provide economic benefits to the aviation section, the City of Kingston and its people.

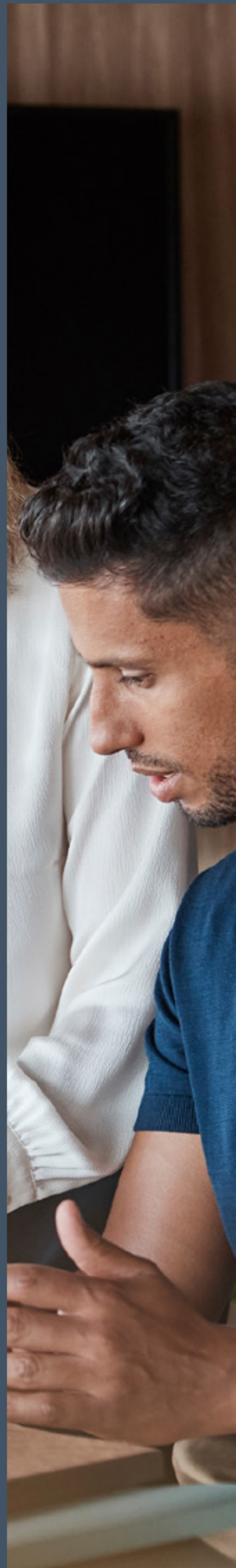




07

AVIATION DEVELOPMENT PLAN







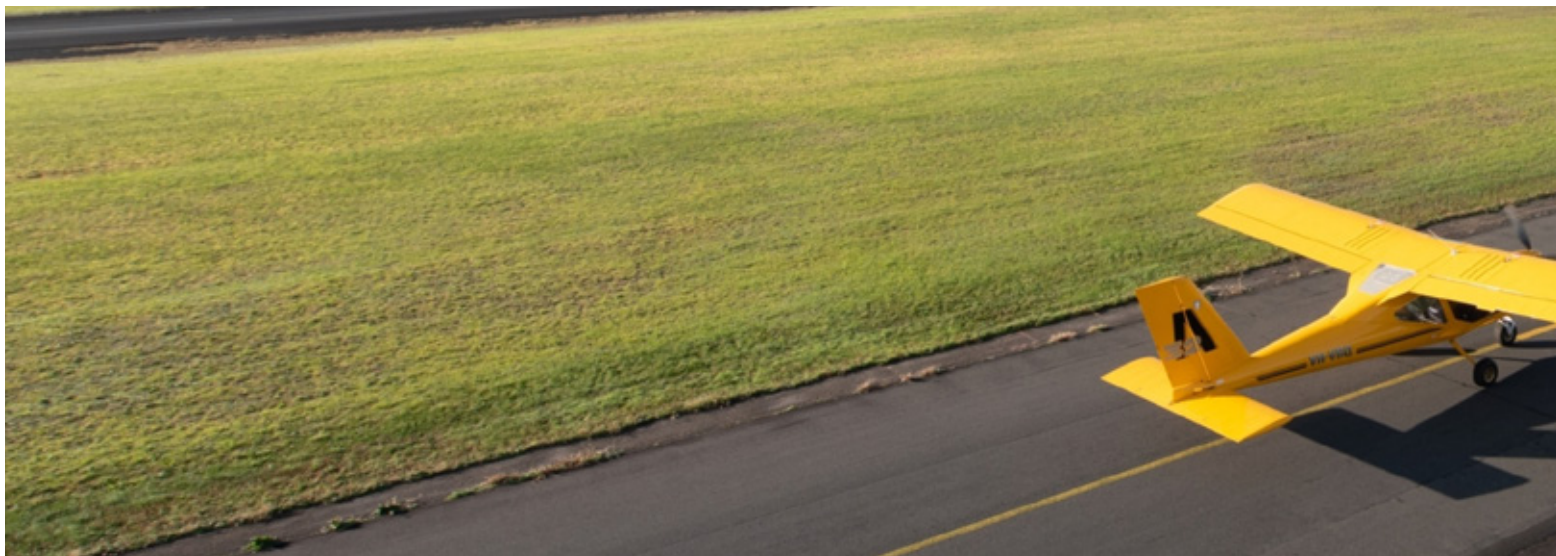
CONSULTATION OUTCOME

Moorabbin Airport has sought to collaborate with key stakeholders (Federal Government, City of Kingston, aviation industry organisations) to address concerns raised in the preliminary draft Master Plan.

Following public consultation on the Master Plan 2021 and feedback from the Commonwealth Government and other stakeholders, we have updated the plan, retaining the existing western boundary on the main apron in situ.

Aviation Development Plan 2021

- This Aviation Development Plan (ADP) is the fifth since privatisation. Core elements of the ADP are safety, general aviation, industry renewal, resilience and growth.
- Our vision is to create a world-leading, sustainable, mixed-use urban site with safe aviation, training and education facilities while supporting commercial, industrial and retail operations to drive employment growth and local community prosperity. We will fulfil our vision by safeguarding the airport via growth and positive development and through collaboration within our community.
- Moorabbin Airport will continue to deliver infrastructure, services and general aviation such as fixed wing and rotary aircraft for training, charter operations and private flying.
- Five runways and four full-length taxiways have been specifically designed for general aviation aircraft. The runways are rated for aircraft weighing less than 5.7 tonnes (aircraft weighs 1.1 tonnes are most common at Moorabbin).
- Flight training is a strategic driver of this ADP. Fixed wing and rotary flight training operations account for 90% of aircraft movements at Moorabbin. Private flying, charter, freight and passenger services are also important activities.
- Four of Moorabbin's five sub-precincts are consistent with best airport land use. Sites meet the needs of the aviation business requirements including proximity to the airfield, access to airside and landside, and ensuring safe separation of fixed wing and rotary operations. Public consultation indicated that a redesign of the fifth sub-precinct is not supported by aviation customers.
- Continued customer collaboration will identify improved aviation land use outcomes. Opportunities remain in the Main Apron sub-precinct including four vacant sites, underutilised or reaching their end of life.
- Aviation floorspace will continue to increase. The Airport has the most aviation floorspace since opening, and 20% more than pre-privatisation. 43% of aviation floorspace has been renewed since privatisation.
- Investment in aviation has continued to grow including developing two state-of-the-art general aviation hangars on the Northern Apron and an industry-best flight training facility on the Terminal Apron. Renewal of general aviation fleet customers is strong with 15% of aircraft at the Airport today being new or low-hour aircraft.
- Apron pavement will continue to increase under this ADP. Grassed, damp and less accessible airside areas will be improved to industry best standards. 10,000 sqm of new pavement will be constructed adding to the 20,000 sqm of apron constructed during the Master Plan 2015.
- Non-aviation developments have been funding the expansion of services, utilities and associated infrastructure from the Airport's perimeter. This allows for progressive release of further land on the Airport for aviation use (previously not viable for 70 years due to prohibitive infrastructure connection costs). New infrastructure connections facilitate construction of fully serviced aviation facilities.
- Moorabbin Airport is increasingly one of the most sustainable estates within the City of Kingston. Emissions will be reduced by implementing design features that decrease aircraft fuel burn, including constructing parking aprons closer to the airfield and retaining the Circuit Booking slot System. All 460 airfield lights are now LED. Moorabbin Airport will obtain Tier 3 Airport Carbon Accreditation and introduce systems for monitoring, managing and reducing emissions.
- We are mindful of industry changes such as general aviation electrification and hydrogen fuelling. We have considered provisions for the next generation of aircraft including wider taxi lanes, parking flexibility and electric vertical take-off and landing (eVTOL). We note that training airports with strong environmental, sustainability and governance objectives are best placed to attract student pilots.



Moorabbin Airport Airfield Precinct Overview

CASA certified aerodrome

92 hectare, five runways, two lit runways, three lit taxiways

Improved airfield – runways resealed, 460 airfield lights upgraded to LED and storm water infrastructure upgraded to accommodate 1 in 100-year events

Two sets of parallel runways and one support crosswind runway are designed for flight training operations

Taxiway system efficiently connects aprons to the airfield and all areas are connected by safe, sealed and compliant taxiways

Three major aircraft parking extensions with proximity to airfield, including Terminal Apron (fixed wing), Southern Rotary (rotary) and between runways for unairworthy and long-term aircraft (fixed wing)

International Civil Aviation Organization (ICAO) compliant aiming points for rotary activities

Air Traffic Control Tower and non-directional beacon operated by Airservices



7.1

DATA AND ATTRIBUTES

Aviation outcomes for this Master Plan are below (Figure 7.1):

Runway	2020	2041
Movements	268,000	375,000
Students	1,350	1,800
Aviation pavement	36 hectares	40 hectares
Aviation jobs	700	1,000
Aircraft based on airport	320	420
Aircraft parking	490	720+
FTO classrooms	9,260 sqm	10,620 sqm
Hangars	33	45

Figure 7.1



The factors informing the ADP are:

1. Ultimate Practical Capacity

An Ultimate Practical Capacity (UPC) of 375,000 movements per year has been adopted. The Circuit Booking System, used since 2017, models CASA aircraft limits, circuit airspace, control tower operational hours and aircraft performance.

The UPC provides increased certainty for investment, public safety information, precinct planning and community noise impacts.

2. Community Impacts

Aircraft noise impacts the local community and is managed by aviation regulators. Moorabbin Airport's Fly Friendly program limits aircraft activity including weekends and nights (refer Section 11.9.1).

3. Safety

- Safety remains the prime focus.
- Moorabbin Airport is an industry leader in public safety and airport planning and has implemented a general aviation risk-based approach (refer to section 12.11).
- The safety reputation of the Airport supports aviation customers to differentiate the airfield from other airports and to attract student pilots. This reputation is crucial for the ab-initio training environment.

4. Airspace

- Safe Class D airspace regulations restrict aircraft movements by imposing separation distances between aircraft, proximity to airport whilst flying, circuit design conventions and limiting access to circuit airspace.
- The Circuit Booking System has improved efficiency, increased use and accurate determination of airspace capacity.

5. General Aviation Planning

- Precinct planning improves site layouts, plans sites closer to the airfield, has regard to aircraft size and type, activates underutilised land, standardises site areas and improves aprons and aircraft parking.

- Aviation uses inform hangar design including floorspace, floor weight ratings, roof heights, door widths, power infrastructure, lighting and access points. Classroom design responds to average space per student, visual and amenity preferences and proximity to aircraft.

6. Aviation Support

Moorabbin Airport has provided rent relief, aeronautical charge reductions, easing of debt repayment and revised aviation customer leases.

This ADP promotes industry growth through advocacy, youth engagement and participation elements. This will develop sustainable pathways for student pilots and engineers.

As Australia's third busiest airport, Moorabbin Airport is committed to growing Moorabbin Airport's status as a leader in aviation services and training in Australia, and plans to keep the existing aviation footprint, with the further additional initiatives to support aviation services ongoing.

7.2

INDUSTRY ENGAGEMENT AND SUPPORT

This ADP has been developed following consultation with industry. The core objectives are:

- facilitating job creation and ongoing investment in the aviation industry
- identifying the next generation of pilots and safeguarding the Airport's flight-training function for the benefit of the Australian aviation industry
- supporting other airports requiring advice, access to precedent documents, training and airport staff cover
- supporting aviation industry bodies including the Australian Airports Association, Aviation/Aerospace Australia, aviation tertiary education forums, industry advisory committees and panels
- briefing all levels of government on aviation and airport issues
- supporting initiatives and community groups to increase participation of women in aviation
- supporting local schools with an interest in aviation
- sponsoring aviation student prizes at graduation events and discussion panels
- providing aero charge discounts of up to 75% to operators
- providing reduced aero charges for eligible project and unairworthy aircraft
- improving site presentation initiatives including landscaping and palisade fencing and signage
- constructing pedestrian walkways on three quarters of the airport perimeter
- expanding the site and facilities for the Australian National Aviation Museum.

7.3

ACHIEVEMENTS

Under Master Plan 2015, Moorabbin Airport has achieved:

Safety

- 100% operational availability
- Compliance and collaboration with CASA and Airservices
- Circuit Booking System implemented
- Building approval process incorporating NASF and expert assessments
- 57% reduction in runway incursions since 2007
- 1,000,000 aircraft movements made safer with our Circuit Booking System
- 99.5% of movements controlled by the ATC tower with personnel having 300+ years of combined ATC experience.

Growth, Investment and Renewal

- \$25 million invested in aviation precincts
- Best Metro Airport Award from the AAA for the airfield renewal project
- 135,000 sqm+ of runway pavement laid and 12 kilometres of airfield lighting
- \$40 million invested in utilities and services infrastructure in non-aviation precincts, improving connections with aviation precincts
- 46% of legacy aviation facilities rebuilt or renovated
- 20,000 sqm+ of aviation building improvements
- 6,000+ students trained and 1,300,000+ aircraft movements
- 4,500 sqm of rotary aircraft apron pavement.

Community

- 18 CACG forums
- 600+ Consultation events

- Victoria's leading aviation museum expansion project
- Indigenous Reconciliation Action Plan implemented
- Youth engagement and health initiatives partnership with St Kilda FC reached 10,000 students.

Regional Network

- 100,000+ aircraft movements to regions
- 30+ regional forums and events supported
- 50,000+ passengers travelled to regional areas.

Industry/Operations

- 10% increase in aircraft movements
- Busiest ab-initio training airport in Australia
- Emergency services – 20+ aircraft for fire management, lifesaving and aero medical
- 100+ general aviation aircraft assembled at Moorabbin Airport.

Resilience

- General aviation businesses range from the world's largest to single person owner-operators
- Student pilots for flight training come from varied sources
- Invested into successful aviation activity delivery models.

7.4

AVIATION SAFETY

7.4.1 – Safety Framework

We have implemented an industry-leading approach to aviation safety. Master Plan 2021 continues to supply safe airport infrastructure and services.

Moorabbin Airport's safety framework supports and incorporates a mix of high volume fixed-wing and rotary activity, the controlled airspace classification, the urban location of the Airport and flight training for both ab-initio and experienced pilots. Elements of this framework include:

- Safety Management System
- Aerodrome Manual
- Airport Emergency Plan (AEP)
- Airport Surveillance, Inspection, Reporting and Maintenance Regime
- Transport Security Program
- Airside Vehicle Control Handbook
- Drug and Alcohol Management Plan.

7.4.2 – Safety Features

Moorabbin Airport supports safe aviation by:

- **Runways** – the 1,335 metres long main runway supports a 175 metre landing for design aircraft (Cessna 172). Five runways are configured to local wind conditions. The two main runways support 86%+ of movements and are 30 metres wide (166% of the required width).
- **Taxiways** – taxiways are configured to reduce unauthorised aircraft entry to runways. Movement area guidance signs have been installed to assist pilots to identify their exact location on the airfield.
- **Air Traffic Control (ATC)** – Airservices operate an ATC tower at Moorabbin. ATC personnel work in shifts from 8:00am to 10:00pm, with two teams of active controllers managing east and west airspace, circuits, approaches, departures and ground-based aircraft movements. Melbourne Airport controllers manage after-hours operations.

- **Weather infrastructure** – the Bureau of Meteorology operates an anemometer (wind speed and direction), ceilometer (laser cloud height), barometer (air pressure), humidity, temperature probes and a rain gauge.
- **Airspace** – eastern circuit flight training operations are limited to seven aircraft at a time. The western circuit is limited to an average of one aircraft to facilitate arrival and departure operations.
- **Operators** – 90% of aviation activity is provided by regulated flight training organisations. These organisations have senior safety managers, qualified instructors, approved safety and operational manuals, regulated aircraft maintenance programs and medical certifications.
- **General aviation support industries** – aircraft serviceability is supported by leading fixed wing and rotary maintenance providers, aero-electricians, aero-refuellers and aircraft parts distributors.
- **Emergency response** – Moorabbin Airport's best practice AEP is supported by emergency personnel event familiarisations, training exercises and dedicated airport infrastructure (emergency gates, assembly areas and airfield roads).
- **Location** – terrain surrounding the Airport has low topographical variation on the South-East Port Phillip Basin coastal plains and has 50+ years of lower variance weather patterns.

7.4.3 – Safety Outcomes

Safety initiatives introduced since the 2015 Master Plan are outlined below.

Circuit Booking System (CBS)

A CBS for airspace slots has been implemented for flight training aircraft. The CBS is a fixed-wing industry collaboration using Airservices booking applications and procedures to improve safety, efficiency and reliable airspace access and use. The CBS saves time and cost for flight trainers. Key features are detailed below.

- **High volume movements** – one million aircraft movements have been safely managed since 2017. Greater transparency of aircraft activity has seen reduced speculative ground taxiing, fewer aerial go-arounds and less fuel burn during final approach and ground running.
- **Online booking application** – trainee pilots book timeslots to carry out circuit training.
- **Pilot benefits** – additional airspace use, dedicated time for ab-initio pilots and solos, aircraft type separation, operator training for aircraft scheduling and rotary operation coordination.

National Aviation Safeguarding Framework

A key safety initiative has been implementation of NASF (refer to 5.5.2 and 12).

Industry Collaboration

More than 150 safety meetings are convened annually with agendas that include: weather patterns, airspace and circuit procedures, radio calls, airfield hot spots, non-towered hours, and regional operations.

Rotary Precinct Design and Layout

Moorabbin Airport has developed an airfield design to achieve separation of aircraft, minimise the risk of on-ground conflicts and increase the ease with which aircraft can access taxiways and runways.

Rotary operations are designed to enhance safety, including:

- a re-engineered rotary precinct with contouring to increase safe, usable land surfaces
- widening of Taxiway Juliet and increasing the rotary apron area
- Category A compliant aiming points and air taxi routes
- separating training activities – rotary aircraft train at 700ft, 300ft below fixed-wing aircraft
- dedicated advanced rotary training areas – advanced handling and low-level manoeuvring is conducted between the 17/35 and 13/31 runways and south-east airport land.

Grandfathering

Changes in aviation regulations may allow historical layouts, practices or procedures to be retained.

Where possible Moorabbin Airport brings the Airport into compliance with current standards. Runway coding, runway lighting, aircraft parking and airfield markings are examples of how we have implemented regulatory standards. Compliance remains regulated and surveilled by CASA.

7.5

THE AIRPORT TODAY

7.5.1 – Overview

Moorabbin Airport is a mature flight training airport with infrastructure, systems and regulatory regime delivering, high volumes of aviation activity safely. The Airport is the busiest in Victoria and the busiest training airport in Australia.

There were 268,000 movements in 2020. This was still above the 10-year average of 256,000 movements and is consistent with airport forecasts following the pandemic. Future movements are forecast to grow at a rate of 2% until ultimate practical capacity of 375,000 movements.

It is expected that the movements at the Airport will reach pre-pandemic levels by 2024. This is consistent with an increase in aviation university enrolments, training aircraft acquisitions, enquiry for classroom space and international student growth. Projected aviation operations are:

Moorabbin Airport’s revised Master Plan promotes industry growth through advocacy, youth engagement and participation elements. This will develop sustainable pathways for student pilots and engineers.

Categories	Actual	Actual	Forecast
	FY15	FY20	FY40
Number of students and aircraft			
Students	800	1,350	1,800*
Aircraft	300	320	420
Number of movements			
Fixed-Wing	200,000	236,000	330,000
Rotary	35,000	32,000	45,000
Total	235,000	268,000	375,000



7.5.2 – Aircraft Today

Since privatisation, aircraft type and mix at the Airport has remained consistent:

- 60% of aircraft at Moorabbin are used for flight training and 15% are new or low-hour aircraft
- fixed-wing, single-engine piston aircraft (Cessna 172 and Piper PA-28 Warrior) are the main types at the Airport
- 10% of total aircraft are light sport aircraft, a sector that has been growing since 2015
- flight training helicopters are also used at the Airport, including the Robinson R22 and R44.

7.5.3 – Current Operations

There is a mix of aircraft operations at the Airport, where:

- 88% of operations are by fixed-wing aircraft, 12% are rotary aircraft and 99% of aircraft movements are during daylight hours
- 175 training movements per student per year is the industry average
- low volume RPT and freight movements at the Airport preserve the airspace for safe circuit training and are consistent with the Airport’s runway characteristics
- charter operations fly to regional and major centres and support tourism and regional events.

7.5.4 – Aircraft Parking

490 aircraft parking positions will increase to over 720, which will be delivered as additional hangars are constructed, aprons extended, design efficiencies implemented, and grassed areas are paved or improved for all weather conditions.

7.5.5 – Hangars

There is 50,000 sqm of aviation gross leased area on the Airport, and 60% of this is hangar space.

Hangars are used for maintenance and low volume charter operations. Private hangarage is provided as an additional service within many hangars and is suitable for small, medium or niche operators.

Before privatisation, the layout, construction and planning of hangars at the Airport was adhoc, reactive and of varied built form. This means legacy hangars are less accessible.

Today, we have vacant and underused hangar sites. Moorabbin Airport plans to deliver improved and consistent sites with features like access to landside and airside, high roofs, wide doors, internal office and storage areas, fully serviced sites, on site car parking, street frontage and public access.

7.5.6 – Helicopters


Rotary Activity accounts for 12% of activity, and two of Australia’s largest rotary operators are based at the Airport.

Rotary operations support emergency, corporate, charter and training services throughout Australia. Four rotary maintenance facilities are based at the Airport.


50% of helicopter movements are generated from circuit training and occur to and from dedicated helicopter training areas, which is consistent with the flight training focus provided by this ADP.

Moorabbin Airport will continue to review rotary operations, safety procedures and flight paths, including monitoring noise impacts. It is expected that relocating the Southern HLS to Southern Aiming Point position (refer Section 12.3.2) will reduce noise impact on residents.


Moorabbin Airport’s shareholders donated a state-of-the-art firefighting helicopter in November 2021 to the NSW Rural Fire Fighting Service to make a tangible difference to search and rescue operations.




15 flight training businesses (12 fixed wing and 3 rotary)




1,350 students trained in 2020.




Over 450 flight instructors / Grade 1 – 3, multi – engine, aircraft type, instrument rated advanced and specialist (including night work, fire management and heavy load) instructors.




180 flight training aircraft.
9,260 sqm of flight training classroom and office floorspace.




12 aircraft maintenance businesses (8 fixed-wing and 4 rotary)



2 newly constructed sites for MROs of 4,500 sqm



13,500 sqm of MRO floorspace



50-100 aircraft undergoing maintenance at any time

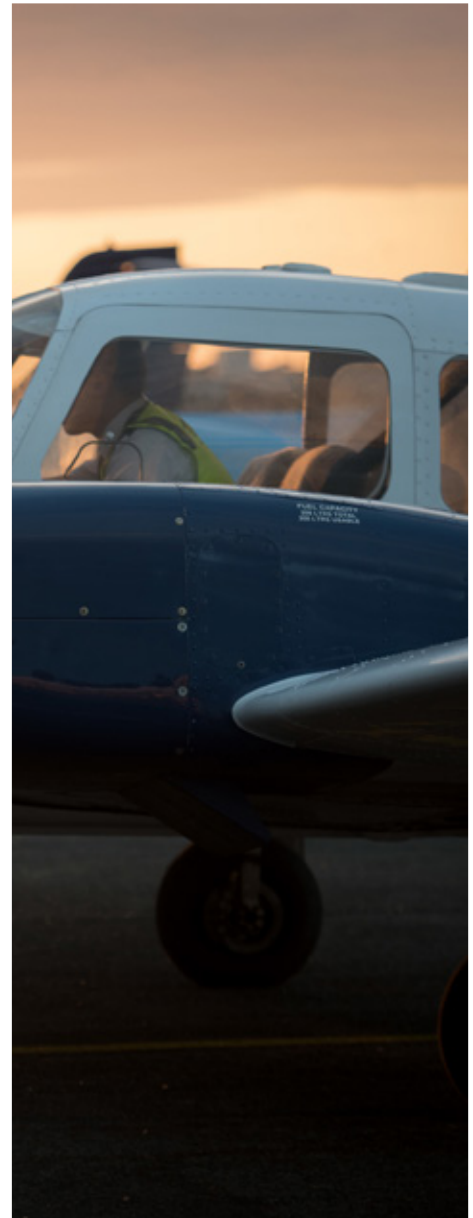
7.5.7 – Emergency Services

Moorabbin will continue to provide a base for emergency services functions, including:

- **Victorian Command Centre** – supporting an operating area over 40% of Victoria
- **Firefighting support** – 20+ firefighting aircraft, including an Erickson Airplane
- **Surf Life Saving** – rotary aircraft providing 200km+ coastline coverage.

7.5.8 – Regular Public Transport

Low volume and capacity RPT services operate from the Airport for safe ab-initio flight training. These services operate from a dedicated apron per requirements of the Department of Home Affairs.





7.6

AIRPORT FACILITIES AND INFRASTRUCTURE

7.6.1 – Aviation Land Use

Precinct Overview and Objectives

Under this Master Plan 2021, the airfield precinct is 92 hectares, and aviation support precinct is 44 hectares. The infrastructure precinct is actively used by aviation operators. Airspace over the 10 hectare retarding basin at the south-east end of the Airport is used for rotary ab-initio and advanced training.

The aviation support precinct comprises of sites and facilities, vacant and underused land, apron pavement, taxi lanes and run-up bays. 1.5 hectares is allocated for community purposes including the Australian National Aviation Museum and the Fareshare Kitchen Garden.

Five aviation support sub-precincts are identified in this ADP – Northern Apron, Main Apron, Terminal Apron, Southern Rotary and Aviation Support. Each sub-precinct provides hangars, offices, aviation classrooms, maintenance operations, aircraft parking, aircraft ground access and additionally support infrastructure. Detail of this is in Figure 7.5 below.

Figure 7.5





Figure 7.6

Planning Principles

The aviation support precinct layout considers the following:

- safety and regulatory compliance
- delivery of general aviation, flight training activities and airspace capacity
- legacy airside infrastructure including runways, taxiways, aprons, security perimeter fence, services infrastructure and perimeter roads
- availability of new network services infrastructure in non-aviation precincts and an understanding of infrastructure upgrades required
- lifecycle condition of existing aviation facilities and infrastructure
- aviation user requirements including lease sites, licensed areas and aircraft parking
- colocation of complementary aviation businesses including aviation use, aircraft size and type
- separation of rotary activities in northern and southern clusters
- community impacts, including appropriately minimising aircraft noise
- streetscape improvements including landscaping, pathways and infrastructure
- collaborating with customers and stakeholders
- zero government funding from airport-related grant schemes.

7.6.2 – Runways

Moorabbin has five runways consisting of two sets of parallel runways and one support crosswind runway. This configuration is engineered for flight training. Runway orientations are aligned to wind patterns, procedural separations and regulatory requirements.

The eastern runways are predominantly used for circuit training and the western runways are used for arrival and departure operations. The crosswind runway has less than 0.0001% of total movements, however has been retained due to aviation user feedback.

The existing airfield configuration and the Airport's aviation infrastructure are shown in Figure 7.6. The characteristics of these runways are outlined in Figure 7.7.

iii. Precinct Development Controls

Runway	Dimensions	Coding	Instruments	Lighting	Use Percentage
17L/35R	1,335m x 30m	Code 2	Instrument	Medium intensity	68%
17L/35R	1,240m x 18m	Code 1	Non-precision	runway lighting	18%
13L/31R	1,150m x 30m	Code 2	Non-Instrument	Unlit	11%
13L/31R	1,060m x 18m	Code 1	Non-Instrument	Medium intensity	3%
04/22	571m x 18m	Code 1	Non-Instrument	runway lighting	0%
			Non-Instrument	Unlit	
				Unlit	

Figure 7.7 – Physical characteristics of runways

7.6.3 – Runway planning and Use

The Airport is planned with safety as a priority. On-airport development and building activity has been planned with runway alignments, general aviation aircraft and safety requirements in mind. The runways and surrounds are subject to safety regulations like gradients, heights, inspections, and maintenance.

The airfield zone extends to the northern and southern boundaries. Developments are not planned in this area. The “north – south” (or 17/35) runways support 86% of aircraft movements. Two of the five runways have less than 3% of total movements. A crosswind runway (04/22) is available at the request of pilots-in-command and is coordinated with Airservices.

There is a dry retarding basin with capacity for one-in-100 year events in the south-east of the Airport.

Runway Operations

The Take Off Run Available (TORA) and Landing Distance Available (LDA) at the Airport exceeds aircraft manufacturer requirements. TORA and LDA distances are up to 500% of required distances for the most commonly used aircraft types for aircraft take-off, ground roll and landing ground roll.

The Airport’s runways are un-rated, meaning aircraft above 5.7 tonnes require Moorabbin Airport’s permission to operate. It is rare for aircraft above 10 tonnes to operate from the Airport for safety and operational reasons.

Four of the Five runways’ extended centrelines continue over off-site golf courses, parks, or industrial precincts.

Runway codes

Runway codes are important as they provide guidance for aircraft that can safely use a runway. Moorabbin Airport runways are either Code 1 or Code 2.

Moorabbin Airport’s runways were constructed pre-privatisation for aircraft weighing less than 5.7 tonnes. This has not changed and reflects Moorabbin’s ongoing role as a general aviation airport.

Master Plan 2021 has unchanged runway lengths, strengths, and widths.

In August 2020, CASA introduced new aerodrome standards for runway coding which align with ICAO standards. A new runway coding consideration was added for aircraft outer main gear wheel span. Consequently, airports are required to reassess their runway codes and inform CASA, the Department of Infrastructure and aviation users of airport codes. All runways will be classified as Code 1 or 2 under this Master Plan 2021.

There has been a change of coding for Runway 17L/35R from Code 3 to Code 2 and Runway 17R/35R from Code 2 to Code 1, due to:

- 70+ years of smaller general aviation operations
- ADP retains a flight training focus and training is carried out by aircraft requiring a runway Code of 1 or 2
- Airport’s runways are rated at 5.7 tonnes and were designed for light general aviation aircraft
- Code 3 aircraft cannot safely operate from the Airport due to runway characteristics
- Code 3 runways generally support Code C aircraft, larger aircraft carrying 80+ passengers and a weight of 30+ tonne. No aviation customers operate Code C aircraft at the Airport
- additional safety issues arise where Code C aircraft are scheduled with smaller and slower flight training aircraft and ab-initio flight training pilots
- there is limited community support for larger aircraft, and early morning or evening passenger flights of 80+ seater aircraft.

7.6.4 – Taxiways and Aprons

Moorabbin has a comprehensive taxiway network including four full-length taxiways which are parallel to the runways. The taxiway network provides safe and efficient aircraft ground movements to and from runways, aprons and aviation facilities.

There are six taxiways, including three lit taxiways and 26 taxiway sections for runway access and egress aligned with

aircraft performance characteristics.

Each apron considers regulatory requirements and caters to aviation activities, hangars, classrooms and proximate aircraft parking.

7.6.5 – Helicopter aiming points

This Master Plan 2021 provides two ICAO Annex 14 compliant Helicopter Landing Site (HLS) aiming points for customers. Aiming points are designated further away from residential areas.

Previous Airport helipads were used as aiming points due to adjacent aprons and rotary parking fingers. Northern-based rotary operations currently use Taxiway Golf and transition to a northern aiming point to the west of Runway 17R/35L.

The HLS design at the Airport services helicopter operations. Larger helicopter arrivals and departures, including fire management support, will continue to safely use runway points.

7.6.6 – Terminals

Moorabbin Airport currently operates a general aviation passenger common use terminal, and this will be retained. Recently renovated, the air conditioned building seats up to 100 people and has public amenities. The terminal is free-of-charge to general aviation users.

Increasingly, operators based at the Airport prefer to use their own terminal facilities. Many private flyers will use aero club facilities or make their way to or from aircraft.

7.6.7 – Air Navigation Facilities

Air Traffic Control Tower

The ATC tower is in the central-western area of the Airport on the Terminal Apron. The tower has a clear line of sight to all aircraft accessing runways, run-up bays or helicopter aiming points. Airservices provides aviation services including safe and efficient use of runways and airspace control.

Nav aids

Airservices maintains a non-directional beacon (NDB) on the western side of the Airport. The NDB, a radio signal transmitter, is used by general aviation aircraft as a training aid for navigation. Aircrafts fitted with an automatic direction finder use the signal to determine the bearing of the NDB station relative to the aircraft. NDB approaches remain part of the curriculum of certain flight training organisations and airlines.

7.6.8 – Refuellers

AVGAS and AVTUR (Jet A1) are available from three fuel providers. Both fuel types are distributed by tanker vehicles, and three self-serve AVGAS dispensers are also provided. Moorabbin Airport supports the safe introduction of sustainable aviation fuels and battery powered aircraft (hydrogen and electric).

7.6.9 – Airport Network – Metropolitan and Regional

Ab-initio training is centred near the airport when a student pilot is learning aircraft handling and control, take-off and landing techniques, basic airmanship and circuit practice. Once these skills are mastered, the student progresses to navigation exercises, advanced manoeuvre training, instrument approach and departure practice to and from regional airports.

There are more than 10 general aviation airports within 100 kilometres of Moorabbin and a flight time of under an hour. Regional airport infrastructure has been

progressively upgraded with government assistance for works, including re-sheeting and lengthening runways, installing airfield lighting and navigational aids and improving aviation fuel facilities.

Navigational flight training exercises from Moorabbin use up to four regional airports within a 200 kilometre radius and are essential for training.

Australian metropolitan-based flight schools established satellite operations in regional areas, including three operators from Moorabbin. When metropolitan airports experience regulatory or operational restrictions, regional airports provide additional options for student pilots and the flight training industry.

Advanced manoeuvre pilot training is undertaken in a training area 20 minutes' flight time south-east of the airport. This training element is being phased to regional areas further east due to urban encroachment beneath the existing aerial training area.

Moorabbin Airport provides advice to regional airports regarding safety initiatives, mentoring for newly appointed airport team members, airport planning, aeronautical charges and conditions of use. Moorabbin Airport works with many regional airports, and the Australian Airports Association forums, to grow general aviation and attract flight training providers to regional centres. More flight training opportunities at regional airports is a key objective of this ADP.

Moorabbin Airport is one of four purpose built dual aviation flight training airports. Our extensive experience in aviation training and education continues to provide economic benefits to the aviation sector, the City of Kingston and its people.

Moorabbin Airport is dedicated in its core role to support safe general aviation flight training operations and we are investing in the airport's future through positive redevelopment.

7.6.10 – Aviation Investment – 2015 to 2020

In addition to a \$40 million investment in network services, utilities, roads and drainage for Airport operations, \$25 million has been invested into aviation infrastructure and facilities in the Master Plan 2015 period (refer Figure 7.8). This record amount represents a 333% uplift of spending in the Master Plan 2010 period.

The last five years has seen upgrades to runway surfaces, airfield lighting, aviation facilities, airside fencing, and airport network infrastructure. Infrastructure network upgrades on the western non-aviation precincts benefit aviation precincts. Trunk infrastructure for power, water, sewer, stormwater, and communications conduits have also been improved.

New roads and footpaths have constructed during the last five years. The \$3 million Duigan Drive project created the airport's north-south internal connector road for access to aviation precincts from the south, reducing the distance by nearly three kilometres.

Aviation investment is set out in Figure 7.8.

Since privatisation, these major projects have been delivered:

Flight Training Zone

- Four-hectare precinct constructed for the largest aviation customer on the Terminal Apron
- \$10 million invested into a new two-level training campus, 176 bed student pilot village, services infrastructure, pavement aircraft parking areas and precinct landscaping
- industry-best flight training precinct supporting the largest Victorian University aviation course and the largest airline flight training contract delivered by a FTO in Australia. More than \$50 million in exports (training services) generated since March 2018 completion
- purpose designed educational facilities, 2,200 sqm over two levels including

lecture theatres, simulator rooms, operations centre, breakout areas and corporate offices. Customer operations were relocated to provide easier taxiway access and a direct line of sight of the ATC tower

- 25,000 sqm parking area for 40 aircraft created through a Terminal Apron extension
- electrical and signals wiring to the airport backup generator from the ATC and airfield was upgraded.

Airfield lighting

- 460 LED airfield lights were installed with 12 kilometres of wiring for both lit runways and taxiways, supporting 10% of total aircraft activity required
- runway edge lighting was enhanced with 60 metre light separation.

Runway Reseal

- \$1.6 million invested in 135,000 sqm of runway renewal works with a 7-millimetre bituminous aggregate seal overlay.

Office upgrade

- \$500,000 upgrade to Moorabbin Airport offices and terminal building
- new meeting and office spaces
- increased passenger amenity in new terminal building
- suitable for future repurposing for flight training operations from the Terminal Apron.

Hangars

- \$4 million invested by Moorabbin Airport and customers
- ownership of eight hangars transferred to customers on ground rent lease structures
- non-aviation use hangars progressively converted to aviation uses
- two vacant hangars leased to active aviation customers
- construction of two new MRO hangars on the Northern Apron completed in 2021.

Item	Value	Comment
Aviation support facilities	\$17 million	Pilot classrooms, accommodation and offices
Aviation equipment and operations	\$1 million	Machinery, vehicles, electrical safety units, facilities upgrades
Hangars	\$4 million	Mix of airport and customer funded
Airside infrastructure	\$3 million	Runways reseal, Airfield lighting, airfield drainage, airside security fencing

Figure 7.8 – Investment into airport infrastructure in the Master Plan 2015 period





7.7

AVIATION FUTURE

7.7.1 – Moorabbin Airport Vision

Moorabbin Airport is safely building a sustainable future for aviation, business and our local communities.

We are trusted experts committed to providing the infrastructure and facilities to promote positive outcomes that add value to our customers' and communities' lives. Our proactive approach to collaboration ensures the viability of the airport through safe operations and economic prosperity for businesses and the community. Our commercial, industrial and retail precincts provide valuable employment opportunities that support the wider City of Kingston.

We are community-centric; dedicated to making a positive impact on local communities, the environment, the economy, and the aviation sector.

Our aviation vision remains to grow a State Significant place into Australia's leading Metropolitan Airport and be recognised as a centre of excellence for General Aviation and flight training. The aviation support precinct will be progressively modernised with new flight training, aircraft maintenance and ancillary aviation facilities. Aircraft parking pavement will be extended, near the airfield and smart taxilane redesign will improve hangar access, aircraft parking and safety. We will continue to improve aviation employment pathways through collaboration and community engagement.

7.7.2 – Overview

Future aviation activity at the Airport will include:

- retention of all runways and continued support for taxiways, ATC tower, NDB and weather instruments
- focus on ab-initio flight training and safely supporting general aviation uses
- airspace that will safely train 1,800 student pilots every year
- parking for up to 720 aircraft
- aviation sites, floorspace, hangars and classrooms
- development of aircraft maintenance, fabricators and specialist aviation support businesses
- rotary operations with increased use of sustainable aviation fuels and eVTOL capability
- charter and fixed-base operations
- airport infrastructure that supports sustainability objectives including power networks, airfield design for vertiports, apron and taxiway design for new aircraft types and sustainable aviation fuel storage
- important base for emergency services including Victoria Police, firefighting and aeromedical
- the reimagined Australian National Aviation Museum on an expanded site gifted by Moorabbin Airport will further drive aviation awareness and connect the community with the Airport
- promoting aviation as a youth employment path and collaborating with customers.

Planned infrastructure works for these activities is shown in Figure 7.9.

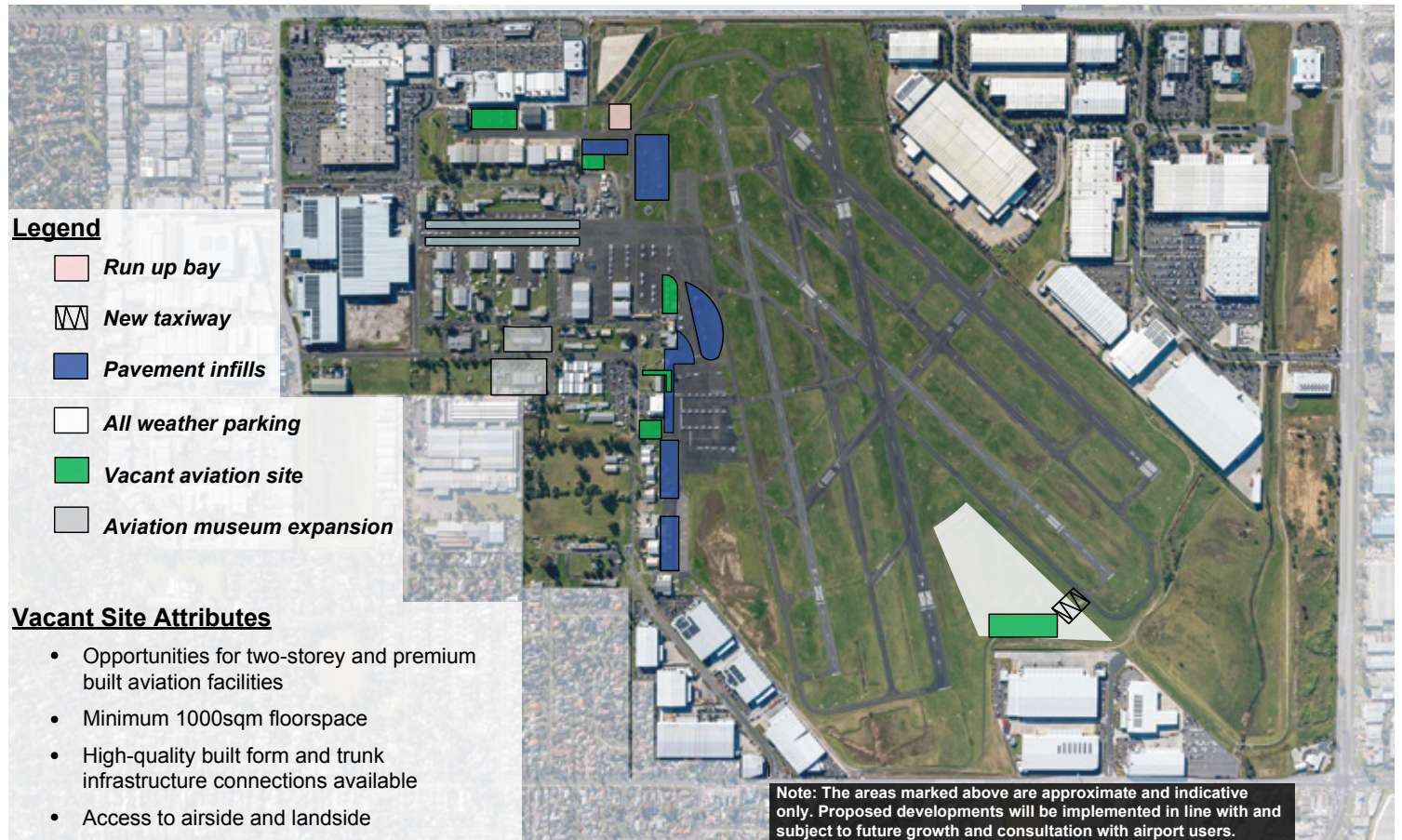


Figure 7.9 Future Airfield configuration and Aviation Infrastructure

7.7.3 – Runways – Future

The Airport will retain two sets of parallel runways with a crosswind runway. The purpose designed runway configuration supports general aviation and is optimised for flight training.

The runway capacity will exceed aircraft movements forecasts, and the infrastructure renewal, like resealing runways, will continue to support safe aircraft activity.

The longevity of the runways has been enhanced by storm water works, like swales, dry retarding basins and headwork connections with offsite drains. The improvements have protected runway sub-bases from flood events that used to inundate the runways.

7.7.4 – Taxiways – Future

The existing taxiway system is well planned and provides efficient access to the airfield and apron. Further planned improvements include:

- relocation of Taxiway Juliet to the eastern side of the Terminal and Main Aprons. This will improve the legacy layout of Taxiway Juliet which disconnected hangars from extended aircraft parking. Additional aircraft parking was a key theme in consultation for Master Plan 2021
- Main Apron taxi lanes will be widened following removal of centre aircraft parking positions as required to meet CASA's manual of Standards

- additional taxiways are planned for access to the aviation support precinct that lies between the runway pairs. Initial design work is being undertaken for a new taxiway from the southern section of Taxiway Bravo. In line with market demand this will facilitate the development of new hangars.

7.7.5 – Aprons and Aircraft Parking – Future

This ADP provides for a fifth apron in the southern Aviation Support sub-precinct, and timing will be aligned with demand for new hangars .

Existing aprons in the four established sub-precincts will be improved and enlarged to provide for 720+ parking positions (from 490), by:

- continued pavement infill projects in the Main and Northern Apron sub-precincts
- relocation of Taxiway Juliet to better connect hangar sites with expanded contiguous parking areas
- development of the Southern Support precinct to provide long-term parking for unairworthy, infrequently used and aircraft
- continued expansion of the unairworthy and long-term maintenance parking area
- redesign of the western end of the Main Apron to create larger aircraft licence zones (although the airside fence will not be relocated)
- hangar development (indoor parking) on vacant available sites including apron extensions on non-paved areas.

Most parking positions on the airport will be hardstand and proximate to facilities, operationally meeting the demands of aviation customers. Aircraft parking design remains estimated conservatively at 120 sqm per aircraft and supports access and maneuvering for aircraft not parked in hangars.

Planned and potential pavement infill and parking improvements include 10,000-sqm of areas north of the ATC Tower, at the northern windsock and south east of the Northern Apron and the Southern Support Precinct.

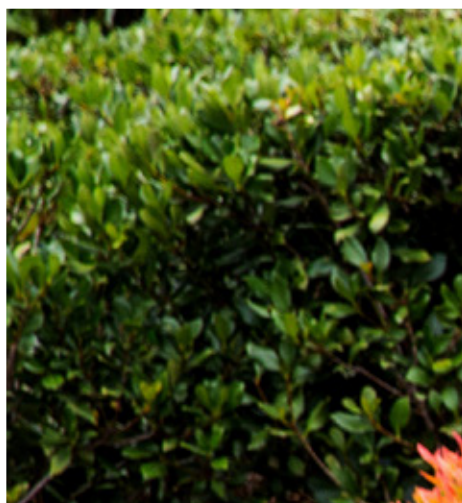
Aircraft parking planning and design retains the objective for parking positions to be 150% of based aircraft.

Parking options are available to suit different customer needs, including single space, blocked areas, power in/power out, "dove tail", mixed customer group parking, large aircraft parking and itinerant parking.

Apron layouts and aircraft parking positions will be designed in collaboration with customers as they expand their fleets, or new entrants base more aircraft at the Airport, legacy aircraft parking layouts can be flexibly redesigned for active and passive use requirements.

7.7.6 – Aviation Support Land and Sites – Future

Airside aviation support land remains the same as approved under the Master Plan 2015. The airside boundary on the western end of the Main Apron remains in situ and there is no proposal to rezone aviation land in that area.



Multiple land use and planning efficiencies will be achieved in the aviation support precinct. Importantly this will require collaboration with aviation customers to identify solutions for their business needs. Floorspace delivery will be driven by demand and facility solutions required by customers.

This plan for development includes:

- release of new sites – 10 vacant airside sites have been identified that will each support standard 1,000 sqm hangars. Most will require network infrastructure upgrades. These sites have a range of benefits including close proximity to the airfield, access to contiguous aircraft parking, support for larger aircraft operations (charter, freight, training, maintenance), low ground taxi movements, high profile areas, landside and airside access, support for full sized general aviation hangars and better service from existing infrastructure (power, water, sewer, storm water and communications)
- redesign of customer sites – customers seeking to extend the area of their sites (such as more contiguous aircraft parking or exterior office space on hangars) or reduce sites (due to constraints such as limited wingtip clearances, distance from airfield or no landside access)
- Flight Training facility– a premium flight training opportunity is available on the Terminal Apron. If this opportunity arises, Moorabbin Airport's Management Centre could be relocated and terminal facilities would

be provided by aviation customers subject to demand

- modern classroom design and multi-story construction on efficiently sized sites that model the two-story 2,200 sqm modern flight training office built by Moorabbin Airport in 2017. This aviation development sets the standard for smart design incorporating lecture theatres, open plan offices, kitchen and breakout areas, external balconies and simulator rooms.

Planned aviation infrastructure works to support these activities is shown in Figure 7.9.

7.7.7 – Rotary – Future

Rotary operations at the Airport remain an important aviation activity. The Airport's urban setting assists critical rotary activities like flight training, emergency services, fire management, aero medical, surveillance, surveying, reseeding, life saving, charter, military and refueling for transiting helicopters.

Consultation with rotary operators confirmed activity accounts for 12% of total movements and the current mix of training, charter and emergency services operations is forecast to increase by 2%.

Proposed developments, based on customer demand, under this Master Plan include:

- pavement infill works on the Northern Apron and Southern Rotary sub-precincts to support additional rotary parking positions

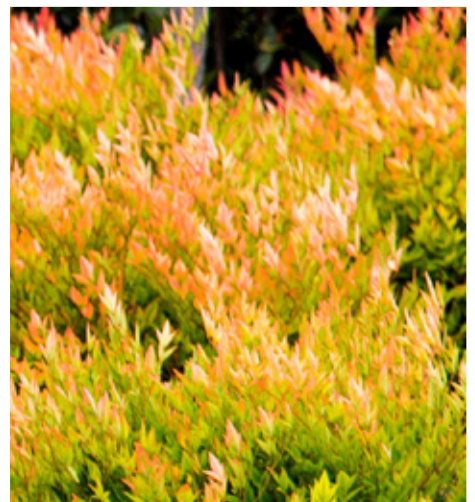
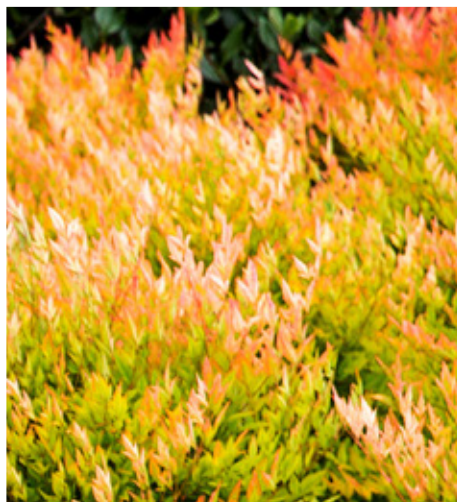
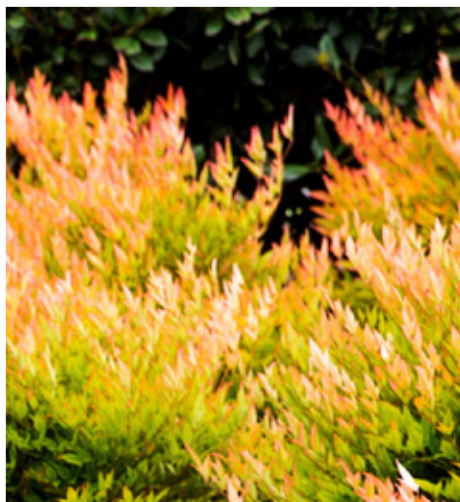
- continued development of ICAO compliant aiming points in the north of the airfield
- redesign of airside roads for the release of additional airside sites and helicopter parking
- improved drainage and surface treatments and contouring.

The first widespread electric aircraft solutions are forecast to be delivered by rotary operators. Moorabbin Airport will collaborate with customers, regulators and industry to support the safe introduction of this emerging aviation opportunity. The aviation support precinct will be assessed for suitability of eVTOL operations.

7.7.8 – RPT – Future

Moorabbin Airport will continue to support low-capacity complementary RPT services including regional destinations.

Following ongoing industry consultation from 1998, Moorabbin Airport is yet to identify a viable high-capacity RPT opportunity for the Airport. Relevant factors include the limited airport size, low rated runways inherited at privatisation, other existing infrastructure including dry retarding basins, public safety implications and community amenity impacts (including aircraft noise). To date, airline operators have been unwilling to enter commercial arrangements to upgrade the whole of the airfield, terminal, car parking and airport precincts for RPT services at the Airport.





08

NON-AVIATION DEVELOPMENT PLAN







Moorabbin Airport's Non-Aviation Development Plan demonstrates our commitment to the future. We understand the Airport's potential to positively impact the lives of the customers, businesses, users and communities who engage with us.

Our Plan responds to change as we seek to improve the facilities, amenities and infrastructure of our site through positive development to create a vibrant urban destination that safeguards our future.

We are active participants in reducing the environmental impact we have in and around our site, and we value the environment and renewal of local eco-systems.

Proposed non-aviation development and its businesses enables the Moorabbin Airport to be resilient in the face of any future economic shocks.

8.1 INTRODUCTION

Non-aviation development continues to subsidise future investment in the Airport’s aviation activities, including generating employment for the region – forecast to increase from 6,500 today to 9,050 in 2029.

With 8.4 million visitations each year, and \$500 million direct investment into local initiatives since privatisation, Moorabbin Airport continues to positively contribute to the City of Kingston and the broader metropolitan area.

Moorabbin Airport is committed to deliver an Airport site equipped for future growth and sustainable outcomes seeking to minimise our environmental impact.

This chapter provides:

- more detail about the Non-Aviation Development Plan
- details of planned and future non-aviation developments
- detail about how non-aviation development at the Airport relates to Victorian planning concepts including Activity Centres, the Urban Growth Boundary and the Green Wedge
- consistency of the Non-Aviation Development Plan with State planning schemes.

8.2 NON-AVIATION DEVELOPMENT PLAN

This Non-Aviation Development Plan identifies land that can be developed for industrial, warehouse, office, retail and commercial uses that are compatible with Moorabbin Airport’s existing and future aviation and non-aviation functions. The Airport has 39 hectares of land planned and funded for future development.

This Non-Aviation Development Plan builds on previous master plans for Moorabbin Airport. It is strategically planned, engineered, and coordinated between precincts. It retains the flexibility to adapt to local business needs. It is part of Moorabbin Airport’s whole of site approach which includes non-aviation development, aviation development and direct investment in services, infrastructure, roads, landscaping, and utilities upgrades (see Chapter 10 – Infrastructure Services).

Non-aviation development underpins the viability of the Airport’s aviation operations.

Non-aviation development at the Airport complements other activity, education and employment in the City of Kingston and broader metropolitan areas. With large land footprints, this development attracts premium business customers and stimulates the local and regional economy, creating an environment for job growth and economic activity.

8.2.1 – Non-Aviation Development

Core non-aviation development objectives include:

- delivering high-quality business spaces that meet customer requirements and provide market-leading infrastructure, sustainability features and landscaping
- attracting and retaining premium customers – including e-commerce, new technology and sustainability
- curate a consumer “destination” to increase visitation through offerings like the Australian National Aviation Museum, Costco, Decathlon, DFO and Kingston Central Plaza
- offering the right mix of customer opportunities (including business park and retail) that complements the surrounding land use
- ensuring assets are maintained to an exceptional standard for ongoing resilience
- providing additional employment opportunities to support the growing local and regional area
- facilitating the integration of services and infrastructure across the site
- reducing environmental impacts by implementing sustainability initiatives such as solar, smart irrigation and tree management.

All non-aviation developments are built to customer needs, and are undertaken in accordance with Airport safeguarding requirements. See more in Chapter 12 – Aviation Safeguarding Strategy.

8.2.2 – Non-Aviation Development Forecasts

Moorabbin Airport has:

- developed **117 hectares** for non-aviation land uses
- delivered **145,000 sqm** of industrial, commercial and retail floor space since 2015
- increased total jobs from **600** in 1999 to **6,500** today
- identified 39 hectares of undeveloped land for potential non-aviation uses.

This Non-Aviation Development Plan covers the period of 2021 to 2029. In the next eight years, two thirds of the undeveloped land will be realised for industrial use and one third for commercial, retail, office and entertainment.

Details of non-aviation developments proposed to be undertaken between 2021 to 2029, and 2029 to 2041 are provided in Figure 8.1.

Refer to Chapter 7 – Aviation Development Plan regarding future aviation precinct developments.

The Non-Aviation Development Plan considers the following:

- existing landside uses at the Airport and land uses adjacent to the Airport
- anticipated land use demand in regional markets
- Master Plan 2021 objectives
- Commonwealth planning policy

- Victorian planning policy – including Plan Melbourne's view that the Airport is an economic, education and employment hub for metropolitan Melbourne
- 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 difficult to accommodate in other activity, education and employment hubs
- the current commercial environment.
- Non-aviation developments in this Master Plan 2021 will prioritise sustainability (more detail in Chapter 3) through:
 - transitioning to more renewable energy through installation of solar panels
 - reduced energy consumption
 - installation of electric vehicle charging stations
 - smart irrigation systems, rainwater harvesting and drought tolerant landscaping
 - tree audits and management.

New and upgraded infrastructure will continue to be provided with a focus on roads, drainage and utilities through to 2029. Chapter 9 – Ground Transport Plan and Chapter 10 – Infrastructure Services contain further details regarding infrastructure delivery.

Precinct	Total area	2020	2021-2029	2029-2041	Precinct Policy
Precinct 3	100	72	28		Industrial, Office, Retail, Commercial
Precinct 4	32	25	7		Retail, Commercial and Industrial/ Showroom
Precinct 5	24	20	4		Airport Utility Infrastructure
Total	156	117	39		

Figure 8.1 – Non-Aviation Development Forecasts

8.3

PRECINCT OVERVIEW

8.3.1 Precinct 3 – Industrial, Office, Retail and Commercial

Precinct 3 is 100 hectares of land around the perimeter of the Airport.

72 hectares of Precinct 3 have been developed with high-quality large format warehouses and campus-style offices occupied by premium customers. Many of these customers will continue to enhance Moorabbin Airport's role as a centre of economic and employment activity. Land to the east and south of the Airport site has been extensively developed and includes Chifley Business Park North and South. Land to the west of the Airport site, along Grange Road, is being developed to accommodate high-quality, sustainable properties that attract premium customers.

28 hectares of land in Precinct 3 are undeveloped. Future development will include industrial, warehousing, retail, and aviation. It is anticipated that land in the:

- south of the Airport site will be developed into new industrial warehouses
- west of the Airport site, adjacent to Bundora Parade, will be developed as warehouses

- east of the Airport along the Boundary Road will include wholesale, retail and office.

Precinct 3 has a restriction on supermarkets larger than 1,800 sqm. Therefore, a full-line supermarket cannot be part of this precinct.

The Victorian Government's Melbourne Industrial and Commercial Land Use Plan (2020) highlights that only 76 hectares of vacant industrial land is available in the City of Kingston. The 28 hectares of undeveloped industrial and commercial land at Moorabbin Airport is equivalent to 43% of this land, illustrating the important role the Airport plays in providing industrially zoned developable land in the region.

As identified in Master Plan 2015, the Airport represents an important relocation opportunity for neighbouring areas where local councils are rezoning industrial, commercial and retail land to meet demand for increased residential space. This ensures the employment and economic activity benefits are retained in the local area. This brownfield area rezoning is forecast to continue through the 20-year planning period of this Master Plan 2021.

8.3.2 Precinct 4 – Retail, Commercial and Industrial/Showroom

Precinct 4 is 32 hectares and encompasses land in the north-western and north-eastern corners of the Airport.

25 hectares of Precinct 4 have been developed. The north-western area is a vibrant urban precinct occupied by DFO and Kingston Central Plaza with the characteristics of an Activity Centre under the Kingston Planning Scheme. The north-eastern area is occupied by Costco and Decathlon and includes future development opportunities which will consolidate the characteristics of an Activity Centre. This is indicated by the MA-ACZ1 and MA-ACZ2 zoning that has been applied to Precinct 4 in this Master Plan 2021.

Seven hectares in Precinct 4 remain undeveloped, however future development opportunities include:

- north-western area of Precinct 4 – a one-hectare piece of land suitable for an entertainment offering and complementary to nearby retail



- north-eastern area of Precinct 4 – high exposure retail offerings fronting Boundary Road including potential car yards, large-format retailing or warehousing with adjacent offices.

New development has been planned to complement off-Airport activity, and will support the existing retail centres by providing diverse offerings not currently in the region, and is consistent with the City of Kingston planning framework.

Existing buildings and car parking will be redeveloped in line with customer demand and opportunities over the next eight years.

8.3.3 Precinct 5 – Airport Services, Utilities and Associated Infrastructure

Precinct 5 is 24 hectares (as of December 2022), is fully developed, and includes land in discrete areas on the Airport. It's a new precinct that provides essential services, utilities and associated infrastructure to support aviation and non-aviation activities. Infrastructure in this precinct includes stormwater retention basins and soil management repositories.

8.4

MOORABBIN AIRPORT'S ROLE AS AN ACTIVITY, EDUCATION AND EMPLOYMENT HUB

Moorabbin Airport provides community value via its vibrant shopping precinct and business hub that contributes to increased employment opportunities and supports 20-minute neighbourhoods.

Currently:

- there are 8.4 million annual visitations to the Airport
- 5,790 people are employed in retail, commercial and industrial sectors operating at the Airport
- non-aviation activities generate a significant part of the net \$870 million value added by the Airport.

Precinct 4 of the Airport – including at Kingston Central Plaza and DFO – is currently functioning as an Activity Centre for the local and regional community.

As set out in Plan Melbourne, Activity Centres are a long-standing part of Melbourne's pattern of development. These centres provide a focus for investment, services, employment and social interaction for local and regional communities outside the Melbourne Central Business District.

Plan Melbourne outlines three different types of Activity Centre, seen in Figure 8.2.

Plan Melbourne indicates that opportunities to partner with the private sector to enable future diversification, investment and employment growth at Activity Centres should be explored and, where appropriate, facilitated through planning provisions.

The Airport will continue to fulfil its role as an Activity Centre over the term of this Master Plan 2021.

The Activity Centre functions provided by Precinct 4 are described in Figure 8.3.

Metropolitan Activity Centres

Regional centres that provide access to a broad range of goods and services. They play a major role, including government, health, justice and education services, as well as retail and commercial opportunities.

Major Activity Centres

Suburban centres that provide access to a wide range of goods and services. They have different attributes and provide different functions, with some serving larger subregional catchments.

Neighbourhood Activity Centres

Local centres that provide access to local goods, services and employment opportunities and serve the needs of the surrounding community.

Figure 8.2 – Types of Activity Centre



Non-aviation development continues to subsidise future investment in the Airport's aviation activities, while generating further employment for the region.



Characteristics of Activity Centres	Features of Precinct 4 at Moorabbin Airport
Local and weekly convenience shopping	Destination for local and weekly convenience shopping, accommodating several retailers and speciality customers (i.e. supermarket, food, beverages, chemist, cosmetics, clothing, homemaker).
Access to goods and services	Access to a wide range of goods (including supermarket, warehouse, food, beverages, chemist, cosmetics, clothing, homemaker and fuel station) and services (i.e., gym, capacity for healthcare providers including GPs, childcare, chemist and leisure facilities).
Serving the needs of the surrounding community	<p>Utilised by both the surrounding community and subregional community through local convenience offerings (i.e. supermarket, food, beverages, fuel station) and regionally significant retailing (i.e. DO, Costco and large-format retail offerings).</p> <p>Users include local residents, businesses and employees on the Airport including Chifley Business Park and nearby industrial areas.</p> <p>Offering electric vehicle charging points in conjunction with new developments.</p>
Access to employment opportunities	<p>Significant employment generated by retail, commercial/office (i.e. business park) and specialised aviation employment opportunities. 6,500 direct jobs are currently supported by Moorabbin Airport, accounting for 7% of all jobs in the City of Kingston.</p> <p>44% of employees at the Airport live within a 5km drive, indicating that the Airport generates employment for the local community. 98% of employees live within a 20km drive (see Chapter 2 – Economics and Employment).</p>
Focal point for community and social interaction	Provides cafes and restaurants, public amenities (i.e. undercover seating areas) and enhances the urban realm through high-quality landscaping and built form.
Promotion of walking, cycling and local public transport use	<p>Located on the Principal Public Transport Network and serviced by two local bus routes.</p> <p>Supports cycling through the provision of bicycle facilities.</p> <p>Located at a convenient walking distance from surrounding residential areas and connected by shared pathways.</p>
Focal point for services	Provides access to gym, chemists and leisure facilities and has the capacity for healthcare providers including GPs.
Supports housing	<p>Limited student accommodation is provided adjacent to Precinct 3 at the Airport.</p> <p>Located at a convenient walking distance from surrounding residential areas.</p>

Figure 8.3 – Features of Precinct 4 at the Airport

The Airport's Activity Centre characteristics are consistent with future Suburban Rail Loop development in the region. The Suburban Rail Loop is expected to generate activity around station locations which will develop precincts of employment, education, economic activity, and accommodation in metropolitan Melbourne. The Airport is well placed to support development of the Suburban Rail Loop in the future (including connection with potential stations) given:

- the relative density of employment at the Airport compared to surrounding areas
- the regionally significant retail offerings at the Airport
- that 8.4 million people currently visit the Airport (this number is expected to increase with new developments)
- the availability of land for large transport infrastructure (such as stations) on a site managed by a single entity.

The important role that Moorabbin Airport plays in the retail and commercial context of the City of Kingston and south-east metropolitan Melbourne is highlighted by recommendations of the Victorian Planning Panel which considered and reported on Amendment C75 in 2009 (see Section 5.7.2).

In accordance with the requirements of the Airports Act and Airports Regulations, and reflecting the range and scale of development, the Airport has used the Activity Centre Zone from the VPPs so Precinct 4 is subject to MA-ACZ1/MA-ACZ2 zoning. While the provisions of State planning schemes such as the Kingston Planning Scheme do not apply to the Airport, identifying Precinct 4 as an Activity Centre ensures that diverse non-aviation activities take place.

Using the Activity Centre Zone from the VPPs is consistent with the planning approach taken at other Victorian airports such as Melbourne (Tullamarine) Airport.

A comparison of local areas designated as Activity Centres and features is shown in Figure 8.4.

This clearly signals Moorabbin Airport's vision for this area as a vibrant destination that plays an important role in local and regional economic activity, education, employment and investment opportunities.

We believe this designation should be adopted in the State and local planning policy and planning schemes.

Moorabbin Airport generates local economic activity and employment within 345,000sqm of retail, commercial and industrial floor space.

Centre	Activity Centre Classification	Existing Retail Floor Space	Indicative Catchment	Visitation (where available)
Apendale	Neighbourhood Activity Centre	4,000 sqm	Local	N/A
Cheltenham	Major Activity Centre	15,000 sqm	25,000 persons	N/A
Cheltenham Southland	Major Activity Centre	129,000 sqm	Almost 600,000 persons	14.6 million
Clarinda	Neighbourhood Activity Centre	5,500 sqm	Local	N/A
Dingley Village	Neighbourhood Activity Centre	5,300 sqm	Local	N/A
Mentone	Major Activity Centre	10,000 sqm	45,000 persons	N/A
Moorabbin Airport	Not classified (not in scheme as Commonwealth site)	61,000 sqm	1.5 million persons	8.4 million
Thrift Park	Neighbourhood Activity Centre	6,000 sqm	Local	N/A

Figure 8.4 – Local Activity Centres



8.5

MOORABBIN AIRPORT AND MELBOURNE'S URBAN GROWTH BOUNDARY

8.5.1 - Urban Growth Boundary

The Airport has matured into a medium-density mixed-use urban site, supporting aviation, industrial, commercial, and retail activities. It is integrated with the local community and surrounded by other urban uses.

We retain the view that the Urban Growth Boundary (UGB) should be reconsidered to include the Airport. This would recognise the role the Airport plays in the region and position it in a similar planning position to Essendon Airport. Essendon Airport, Bankstown, Archerfield and other general aviation airports, are entirely located within urban areas. Many similarities from landside and airside exist between the Airport and Essendon Airport.

The current UGB is shown in Figure 8.5 and excludes the Airport (however includes areas surrounding the Airport).



Figure 8.5 – Current Urban Growth Boundary

The UGB was established in Melbourne 2030 – Planning for Sustainable Growth (2002) and reviewed as part of Melbourne @ 5 million (in 2010 and 2012). The boundaries of the UGB were confirmed in Plan Melbourne (policy 2.1.1).

Excluding the Airport from the UGB reflects historical assumptions about development at some airports. Essendon Airport is within the UGB, however Moorabbin and Melbourne Airport are outside the UGB.

When the UGB was first implemented, it was used as a planning tool to protect ongoing aviation operations at airports in metropolitan Melbourne through:

- safeguarding by limiting incompatible land uses surrounding airports
- contributing to aviation safety by prioritising lower-density land uses adjacent to airports.

Since implementation, however, industrial, commercial and residential uses have been developed in the surrounding area. Figure 8.6 illustrates that most land surrounding the Airport has been developed for intensive urban uses, including light industrial, recycling and residential.

This planning mechanism has had little impact on the development surrounding the Airport (including residential, commercial and industrial development) and how aviation operations interact with it. For example, the UGB has not limited urban uses being developed adjacent to the Airport. Currently 90% of the Airport's aviation activity at lower altitudes occurs above urban land uses, and 10% over land outside the UGB. Similarly, the Airport's circuit training flight paths are mostly located over urban areas to the east of the Airport, with the arrival and departure leg directed over non-urban land outside the UGB, indicating that the UGB has limited impact on reducing aviation over urban areas.

Since the UGB was implemented, more effective planning mechanisms – like NASF guidelines – have been introduced.

Over the past two decades State and Commonwealth policy has evolved to

explicitly support aviation and non-aviation development at airports. For example:

- The Commonwealth Government's National Aviation Policy White Paper (2009) indicates that the Government accepts the potential and necessity for an element of non-aviation land use at airports (pg. 65)
- Plan Melbourne indicates that adjacent complementary uses and employment – generating activity will be encouraged at Transport Gateways such as Melbourne Airport, Avalon Airport, Moorabbin Airport, and Essendon Airport (page 15)
- The Melbourne Industrial and Commercial Land Use Plan (2020) identifies that the Airport supports a range of aviation, light industry, logistics, office and retail uses
- The Commonwealth Minister's feedback on the initial draft Master Plan 2021 recognised that there has been no change in the Commonwealth supporting the policy consideration set out in the National Aviation Policy White Paper (2009) (as referred to above).

Non-aviation developments at the Airport are integrated into the surrounding urban areas within the UGB, and:

- have contributed a significant part of the 30% new jobs in the City of Kingston over the last five years
- provide goods and services for the local community
- have contributed to attracting 8.4 million annual visitations to the Airport.

Locating the Airport inside the UGB would provide a greater degree of clarity for off-Airport development proposals, remove perceptions of the Airport as a low-density site, better manage stakeholder expectations, and help deliver integrated planning decisions. This will drive safer outcomes and better protect the Airport as the City of Kingston continues to grow. We confirm that it will be important to revisit the position of the UGB over the term of this Master Plan 2021 to ensure that Moorabbin Airport's current uses are recognised.

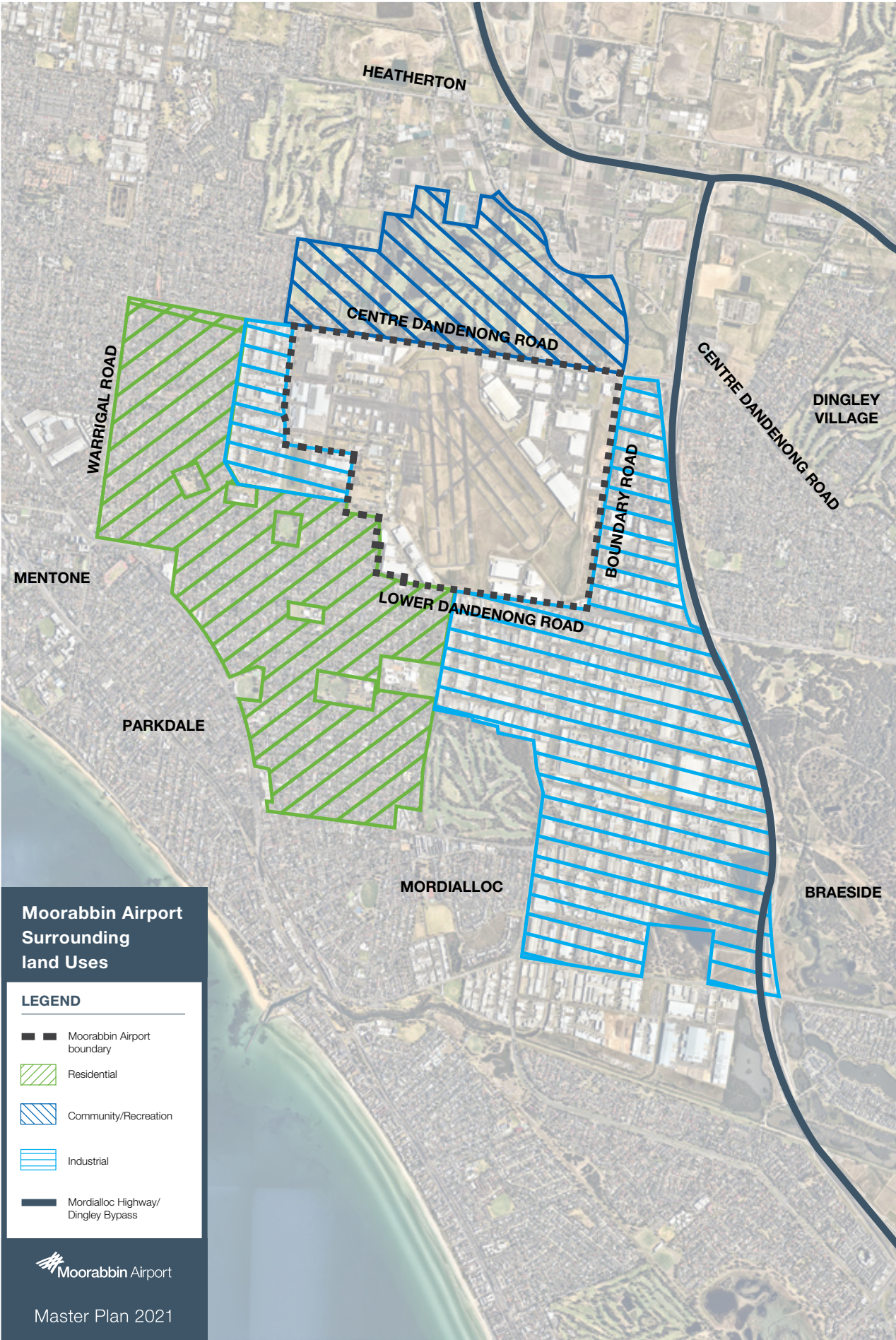


Figure 8.6 – Land uses surrounding the Airport (Ethos Urban)

8.6

MOORABBIN AIRPORT AND MELBOURNE'S GREEN WEDGE

The phrase Green Wedge has two meanings within State and local planning:

- Green Wedge Places: physical non-urban areas of metropolitan Melbourne that lie outside the UGB. The South East Green Wedge at the Airport comprises nearly 10,000 hectares of land (South East Green Wedge Place)
- Green Wedge Zone: the VPPs include the Green Wedge Zone (GWZ) and Green Wedge A Zone (GWAZ) as land use zones (with associated development controls) that designate the type of activity permitted.

In preparing this Master Plan 2021 and Non-Aviation Development Plan, we have carefully considered the balance of aviation and non-aviation development currently and proposed. Given the Airport's characteristics as a medium-density mixed-use urban site, we acknowledge that the Airport should be removed from Melbourne's Green Wedge.

8.6.1 – South East Green Wedge Place

There are 12 Green Wedge Places in Melbourne that support a mix of agriculture and low-density activities outside the UGB. The South East Green Wedge Place includes land within the council areas of Kingston, Greater Dandenong, Frankston, Casey and the Airport.

Historically, the South East Green Wedge Place was preserved to maintain areas of sand resource extraction and protect the Airport's flight paths. Much of the original land has been brought within the UGB and developed for commercial, residential or other urban purposes. The Airport site is highly modified and developed with no environmental values on the site warranting protection or inclusion within the South East Green Wedge Place. The South East Green Wedge Place within the City of Kingston is referred to as the Kingston green wedge which includes regional open space networks, nature conservation, active and passive recreation facilities, protection of the Airport's flight paths, and agriculture and urban related uses (cl 02.03-1).

Schedule 1 to Clause 74.02 of the Kingston Planning Scheme also notes that further strategic work is required to implement policy to guide decision making in relation to discretionary uses and building design in the green wedge.

While located within the South East Green Wedge, the Airport accommodates non-aviation development and a range of urban uses including a Kingston Central Plaza, a DFO, Costco and Chifley Business Park.

We don't believe there are any other examples in metropolitan Melbourne where urban uses of this scale are in a Green Wedge Place. Being in the South East Green Wedge Place has little or no practical effect on the Airport's flight paths as most flight paths are over urban areas within the UGB

If Moorabbin were to be included in the UGB, the Airport would be removed from the South East Green Wedge Place – while the South East Green Wedge would continue to operate as a planning mechanism to restrict development, provide open spaces, and support and resource extraction.

8.6.2 – Green Wedge Zone

The intent of the Green Wedge Zones is to provide important development buffers around infrastructure and assets.

The GWZ and GWAZ are land use zones (with associated development controls) in the VPPs that are used to:

- recognise, protect and conserve green wedge land for its agricultural, environmental, historic, landscape, recreational and tourism opportunities, mineral and stone resources, and protect infrastructure (such as airports) that support urban areas
- protect, conserve and enhance the heritage significance and character of open rural and scenic non-urban landscapes
- protect and enhance biodiversity in the area.

The areas subject to the South East Green Wedge Place within metropolitan Melbourne are not always subject to Green Wedge zoning. For instance, the Capital Golf Club north of the Airport is within the South East Green Wedge Place, however is a Special Use Zone Schedule 1 in the Kingston Planning Scheme.

The Airport is not subject to the VPPs or Kingston Planning Scheme. Nonetheless, Moorabbin Airport aims to use land zoning that is consistent with the VPPs and Kingston Planning Scheme.

Land use zoning for the Airport in this Master Plan 2021 includes land use based on the Activity Centre Zone, Commercial 2 Zone, Special Use Zone Schedule 1 and Special Use Zone Schedule 2. There are minor differences primarily associated with specialised aviation land uses which are not included in the VPPs.

We believe that the land use zones in this Master Plan 2021 balance productive use of industrial and commercial land to generate jobs and economic activity for south-east metropolitan Melbourne, and safeguarding aviation land and viability.

8.7

CONSISTENCY WITH STATE PLANNING SCHEMES

This Non-Aviation Development Plan is consistent with State and local planning schemes. Considerations are summarised below, and further detail is in Chapter 5 – Planning Framework and Context.

Development of the Airport for non-aviation is in line with State planning policy. Specifically:

- development of the Airport as an economic, education and employment hub for metropolitan Melbourne reflects Plan Melbourne
- continuing industrial and warehousing development is consistent with supplying industrial land identified in the Melbourne Industrial and Commercial Land Use Plan 2020
- support for warehousing development on the Airport is consistent with the Victorian Freight Plan.

Non-aviation development proposed in this Master Plan 2021 is consistent with State and Kingston Planning Schemes. Specifically:

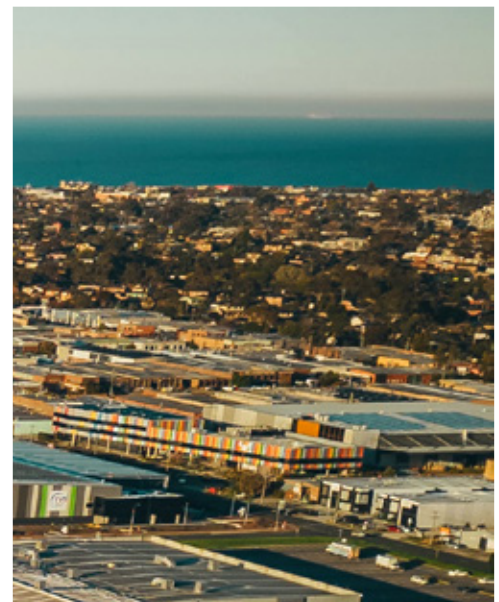
- non-aviation developments proposed are responsive to aviation operations and protect aviation operations at the Airport from intrusion of inappropriate development (cl 02.03-1)

- industrial and commercial land uses buffer the noise generated by the Airport to reduce impacts on surrounding residential areas (cl 02.03-4)
- the Kingston Planning Scheme recognises the guiding of economic development in Kingston, including promoting sustainable development (cl. 02.03-7).

Despite the Airport being outside the UGB and inside the South East Green Wedge Place, non-aviation development in this Master Plan 2021 is consistent with these planning mechanisms. We acknowledge that the approach to the Airport in these planning mechanisms could be amended to better support the Airport's development potential and urban uses.

In the event of any inconsistency with State and local planning schemes, this is justified by the following:

- non-aviation developments proposed are consistent with Plan Melbourne, which provides the overriding planning policy context
- future retail, commercial and industrial development contemplated by the Non-Aviation Development Plan is essential to the operation of the Airport and will provide an important income base for aviation activities
- Moorabbin's non-aviation development will contribute to the City of Kingston and south-east metropolitan Melbourne
- non-aviation development at the Airport complements Activity Centres in the City of Kingston and surrounding area.
- These factors justifying the potential inconsistency with the factors identified by the Administrative Appeals Tribunal (AAT) in its decision of February 2015. The AAT decision is discussed in more detail in section 5.4 of this Master Plan 2021.






09

GROUND TRANSPORT PLAN







MAC works closely with the Office of Transport Security, airport customers and airport users to ensure compliance with Aviation Transport Security Act 2004 and other regulations, controlled by highly-regulated and stringent safety protocols.

Moorabbin has a comprehensive ground transport network which supports the Airport's role as a centre of economic activity, education and employment.

The Ground Transport Plan is based on expert assessments of the Airport roads and car parks. Further assessments, including truck movements, will be carried out as required during the life of this Master Plan 2021.

The Airport is accessible by public transport using three main bus routes along the perimeter, or by cycling and walking paths around the Airport.

The Airport's internal road network has regard to residential areas and mitigates impacts on surrounding communities.

Ground transport network infrastructure is delivered within authority design standards, and it considers how transport will be integrated with Victorian and local government infrastructure objectives. We will continue to work with government stakeholders on the ground transport networks.

Moorabbin Airport supports the development and augmentation of the future Suburban Rail Loop.

9.1

INTRODUCTION

Ground transport infrastructure will allow Moorabbin to deliver improved land uses, more employment opportunities and ongoing economic activity. We have outlined a comprehensive Ground Transport Plan to provide efficient access to and from the Airport for the next eight years, addressing requirements in section 71(2) of the Airports Act.

These plans have been developed considering the broader ground transport network, and Victorian and Local Government investment.

Freeway, Eastlink, and the Monash Freeway upgrades. This helps accessibility and contributes to the success of the Airport, which is demonstrated by:

- 8.4 million people visit the Airport per year
- a residential population of over 1,500,000 within a 20-minute drive of the Airport
- 44% of workers at the Airport live within five kilometres of the Airport
- 73% of workers at the Airport live within 10 kilometres or a 20-minute drive of Moorabbin Airport – contributing to the use of ground transport each day and supporting the City of Kingston's "20 minute neighbourhood" objective
- large retail outlet stores such as the DFO, Costco and Decathlon attract visitors from a broader catchment who make use of the regional road network
- there are eight kilometres of internal road network that support 6,500 jobs on the Airport.
- The Airport has significant trip generating land uses that create demand for ground transport, including:

- retail activities and employment at the DFO, Kingston Central Plaza and large retail outlet stores
- aviation activities, including flight schools, aviation museum and charter businesses
- employment at industrial and office buildings at Chifley Business Park
- commercial activity at industrial warehouse developments at the Airport.

These land uses generate a range of transport demands including peak hour movements, afternoon, evening, and weekends – associated with retail and ongoing freight movements for commercial and industrial.

New trends in transport are also emerging, including increased use of electric vehicles (sales increased by 8% in 2019) (GTA, 2020), increased ride share (which may reduce private vehicle ownership in the future), and increased adoption of "click and collect" shopping and food deliveries. Moorabbin Airport is installing electric vehicle charging points at all new developments at the Airport.

9.2

EXISTING TRANSPORT CONTEXT

Within 10 kilometres of the Airport, five major roads have received over \$1.5 billion of Victorian Government investment including the Dingley Bypass, Mordialloc



9.3

MODE OF TRANSPORT

9.3.1 Existing Mode Shares

How people get to the Airport is important to the planning of future land use and ground transport infrastructure. Figure 9.1 shows current transport modes for the Airport and surrounding suburbs.

Existing journey to work behaviour indicates that travel to the Airport is dominated by private vehicles. This reflects the Airport’s location, which is well serviced by arterial roads, and has opportunities to improve public transport, walking and cycling accessibility.

There has been a 2% reduction in motor vehicle travel since the Master Plan 2015. This indicates that transport modes are changing:

- Moorabbin Airport is consistent with the City of Kingston for modes of travel, noting the difference in public transport can be attributed to the availability of train services in the City of Kingston (represents 1.6% of trips to work)
- residents in the surrounding City of Kingston have a higher reliance on public transport.

DFO, Kingston Central Plaza, retail precincts, industrial, warehouse, and flight training facilities may benefit from greater transport choice. Younger employees or those from lower socioeconomic backgrounds are more likely to use public transport, walking and cycling to get to work at the Airport.

9.3.2 Future Mode Shares

While the Airport’s excellent vehicular accessibility support its ongoing attractiveness to the local and regional economy, future planning for the Airport and surrounding networks aims to improve the safety, convenience and amenity by adopting a multi-modal transport approach.

Walking, cycling and public transport will be promoted to complement the private vehicle network.

The Airport will benefit from a Suburban Rail Loop station located west of the Airport, to facilitate 23,100 expected jobs at the Airport by 2029 (see Chapter 2 – Economics and Employment). The Victorian Government is proceeding with the first stage of the Suburban Rail Loop (SRL) stations.

Like all developments, the SRL needs to comply with safety, airspace and other regulator requirements.

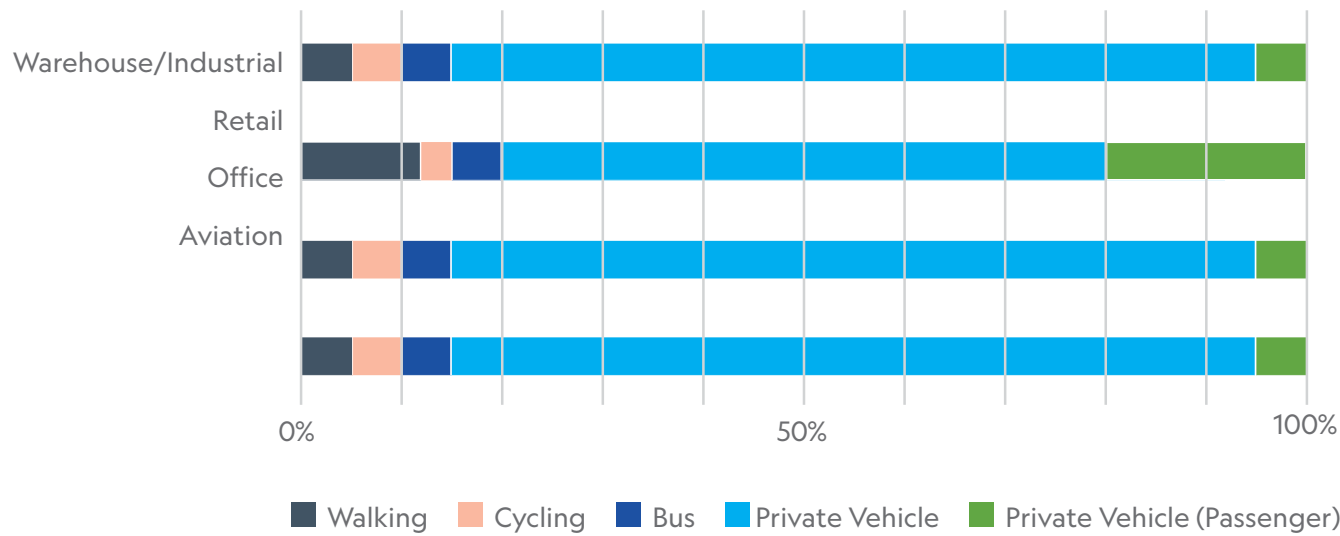
Moorabbin Airport has commissioned a review of expected future transport based on existing mode shares. The Airport currently generates approximately 8,532 trips during the afternoon peak. Future land use is expected to generate 12,933 trips during the afternoon peak – an increase of 60% (which has been considered in VicRoads modelling).

To address this increase, Moorabbin is implementing future mode share targets as seen in Figure 9.2. This approach aims to accommodate the expected increase in trips at Moorabbin Airport across several transport modes. The impact of mode share targets is illustrated in Figure 9.3. While private vehicle trips will still be dominant, the share of private vehicle trips compared to other transport modes is reduced.

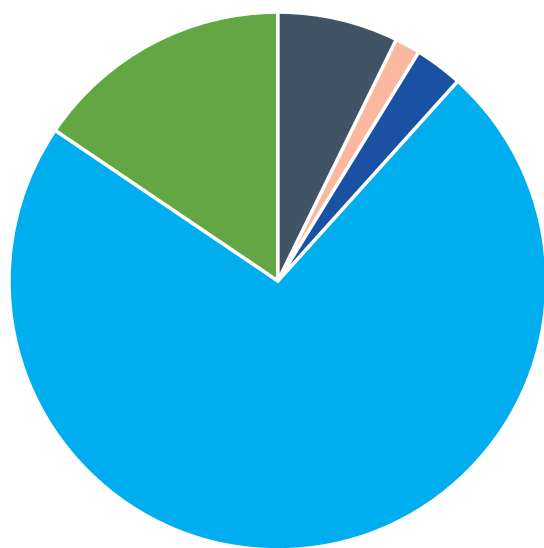
Data Source	Motor Vehicle (incl. Truck)	Public Transport	Active Travel	Other (incl. Motorbike)
Moorabbin Airport (SA2) employees	94.7%	3.6%	1.0%	0.7%
Kingston (LGA) employees	91.7%	5.0%	2.5%	0.8%
Kingston (LGA) residents	80.7%	15.4%	2.9%	1.0%
Surrounding SA2 employees	91.6%	5.1%	2.4%	0.9%
Surrounding SA2 residents	80.1%	15.1%	3.6%	1.2%

Figure 9.1 – Transport Mode Shares – Moorabbin Airport and Surrounds
(Source: Australian Bureau of Statistics (ABS) 2016 Census Journey to Work)

Figure 9.2 – Future Mode Share Targets

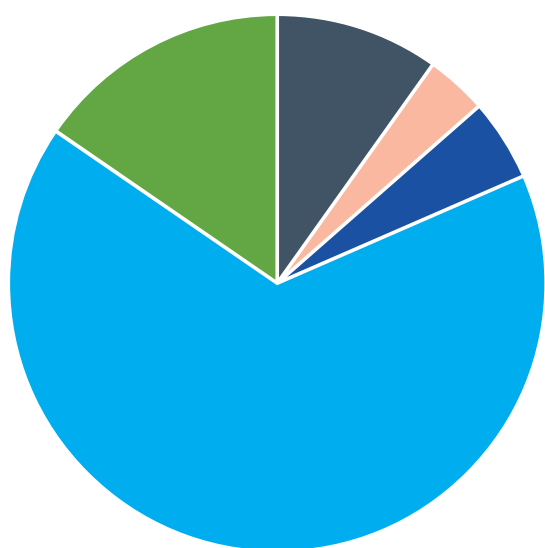


Future mode share – Based on Existing



- Walking (984)
- Cycling (129)
- Bus (349)
- Private Vehicle (driver) (9,464)
- Private Vehicle (passenger) (2,007)

Future mode share – Based on Target



- Walking (1,287)
- Cycling (465)
- Bus (647)
- Private Vehicle (driver) (8,534)
- Private Vehicle (passenger) (2,007)

Figure 9.3 – Future mode shares of trips at Moorabbin Airport – based on existing mode share and target mode share.

9.4

EXISTING ROAD NETWORK

9.4.1 – Existing External Road Network

Key road links to the Airport include:

- Centre Dandenong Road to the north
- Boundary Road to the east
- Lower Dandenong Road to the south.

Moorabbin Airport has excellent access to freeways and motorways including the Peninsula Link, the Monash Freeway,

East Link, Nepean Highway, Monash Freeway, Frankston Freeway, Mordialloc Freeway and Dingley Bypass. The relationship between Moorabbin Airport and existing roads is shown in Figure 9.4.

Changes in the last six years to the external road network include:

- construction of additional signalised access points to the Airport from Centre Dandenong Road, Boundary Road and Lower Dandenong Road

- construction of Mordialloc Freeway connecting the Dingley Bypass to the north and Mornington Peninsula Freeway to the south
- removal of three level crossings near the Airport.

An assessment of available traffic signal data indicates that there has been a marginal increase in traffic volumes on the road network adjacent to the Airport in the last six years prior to 2022. This stabilisation of traffic volumes occurred despite significant developments being undertaken at the Airport, indicating that development has not resulted in adverse traffic impacts.



Figure 9.4 – Existing Local Road Network and Hierarchy (Source: GTA)

9.4.2 – Existing Internal Road Network

There is a comprehensive internal road network that provides access to key land uses at Moorabbin Airport.

Since Master Plan 2015, Moorabbin Airport has delivered two kilometres or 46,000 sqm of new and upgraded road infrastructure at and adjacent to the Airport, including to support developments being undertaken. This has included the construction of:

- Duigan Drive to the south of Bundora Parade, providing access to the west of the Airport from Lower Dandenong Road via a signalised intersection
- Hargrave Place, providing access to Chifley Business Park South via a signalised intersection to Lower Dandenong Road
- Hangar Lane, a new access way providing car park access and back-of-house loading for Kingston Central

Plaza via a left-in/left-out access on Centre Dandenong Road

- the extension of Kingston Central Boulevard from Northern Avenue to Second Avenue via the provision of a new roundabout intersection to service the aviation precinct
- the extension of Chifley Drive connecting Centre Dandenong Road to Boundary Road via a signalised intersection to service retail and other industrial business park customers
- the extension of Federation Way providing a new access lane behind Decathlon.

Moorabbin Airport’s internal road network accommodates different transport demands including:

- access to retail offerings
- employee travel to work at aviation, retail, commercial and industrial land uses

- service vehicles and trucks which undertake a variety of loading activities associated with existing commercial land uses.

Details of the daily traffic volumes on the road network at and near the Airport are in Figure 9.5, to be read in conjunction with Figure 9.6, which provides context of overall capacity.

Most roads surrounding or within the Airport are within their theoretical traffic capacity. No roads are beyond their theoretical capacity within the Airport and its surrounds.

External roads adjacent to Moorabbin Airport take most of the traffic for the Airport – indicating that people enter the Airport’s internal road network if they are visiting the Airport, not as a shortcut to elsewhere. Traffic modelling shows the new Mordialloc Freeway, which opened in November 2021, will not increase the traffic on external roads immediately adjacent to the Airport.

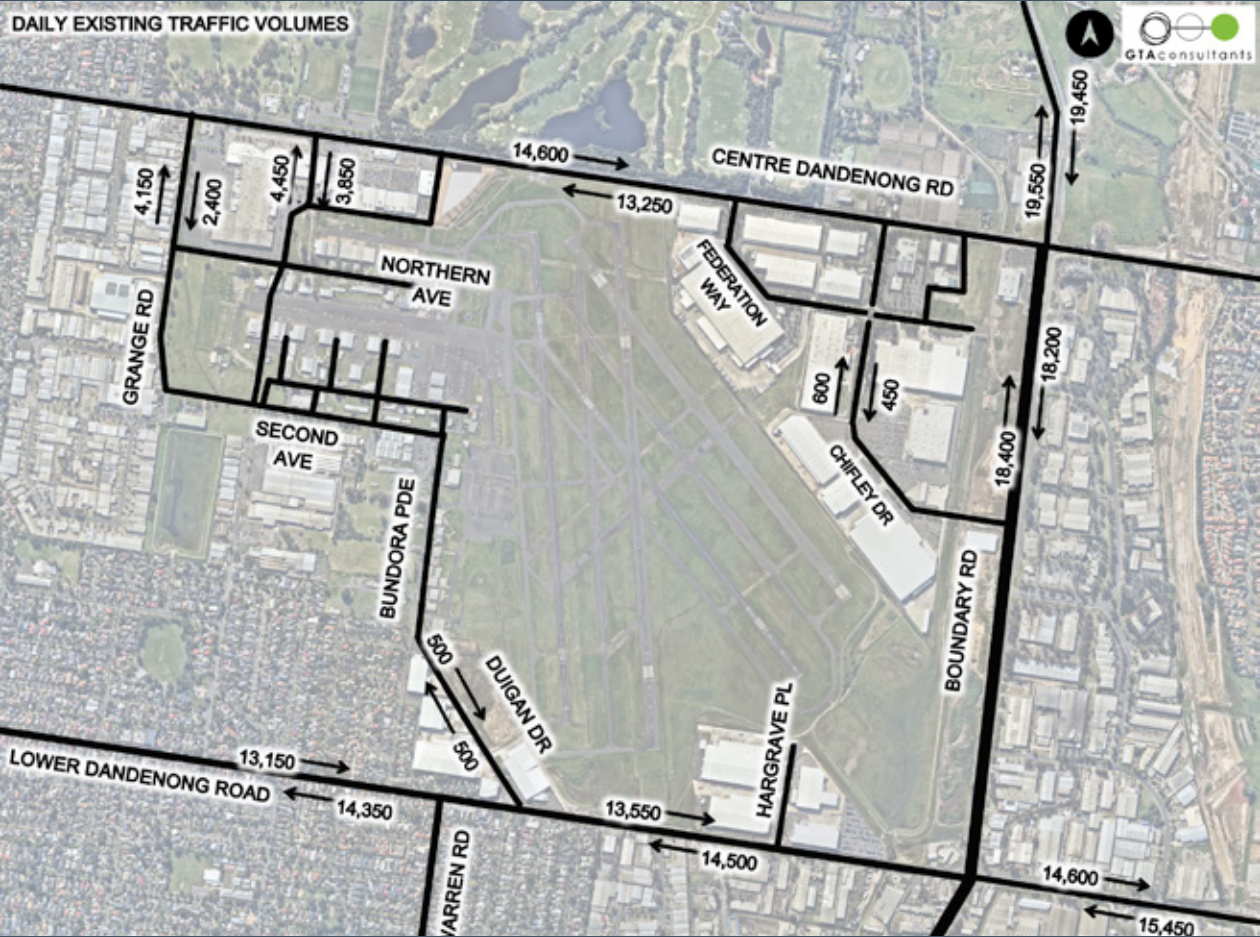


Figure 9.6 – Existing Traffic Volume Summary

Road Name	Road Characteristics	Road Type	Responsible Authority	Existing Daily Volumes (vehicles per day)	Peak performance
Centre Dandenong Road	Four lanes with two lanes in each direction. 70km/hr posted speed limit.	Arterial	Department of Transport	28,000 vpd	Approaching capacity
Boundary Road	Six lanes with three lanes in each direction. Median divided carriageway. 80km/hr posted speed limit.	Arterial	Department of Transport	37,000 vpd	Within theoretical capacity
Lower Dandenong Road	Four lanes with two lanes in each direction. 60km/ hr posted speed limit.	Arterial	Department of Transport	28,000 vpd	Approaching capacity
Grange Road	Two lanes with one lane in each direction. 50km/ hr posted speed limit.	Major Road	City of Kingston	7,000 vpd	Within theoretical capacity
Second Avenue and Bundora Parade	Two lanes with one lane in each direction. 50km/ hr posted speed limit.	Major Road	Moorabbin Airport	-	Within theoretical capacity
Duigan Drive	Two lanes with one lane in each direction. 50km/ hr posted speed limit.	Major Road	Moorabbin Airport	1,000 vpd	Well within theoretical capacity
Chifley Drive	Two lanes with one lane in each direction. 50km/ hr posted speed limit.	Local Street	Moorabbin Airport	1,100 vpd	Well within theoretical capacity
Federation Way	Two lanes with one lane in each direction. 50km/ hr posted speed limit.	Local Street	Moorabbin Airport	-	Within theoretical capacity
Kingston Central Boulevard	Two lanes with one lane in each direction. 50km/ hr posted speed limit.	Local Street	Moorabbin Airport	8,300 vpd	Within theoretical capacity

Figure 9.6 – Road Network Summary (Source: GTA, based on SCATS traffic movement data obtained from VicRoads at nearby intersections for November 2019)

9.5

FUTURE ROAD NETWORK

9.5.1 – Future External Road Network

Strategic road network projects have the potential to change transport modes and access near the Airport, including removal of level crossings near the Airport and south-east metropolitan Melbourne.

An overview of these projects is shown in Figure 9.7. Closer to Moorabbin Airport, future external network improvements include developing extra access points between the Airport and Lower Dandenong and Boundary Roads.

9.5.2 – Future Internal Road Network

Internal road network improvements to support the anticipated land uses of the Master Plan 2021 are expected to include:

- an improved road from Second Avenue southwards to service future development of Precinct 3
- provision of further site access points along Boundary Road

- integration of internal Airport roads with external roads where appropriate to better connect industrial, commercial or retail precincts off-Airport (including possible further extension of Kingston Boulevard)
- provision of further site access points along Lower Dandenong Road
- a potential service road adjacent to Boundary Road
- potential upgrade of Second Avenue.

- there will have been traffic growth in most roads surrounding the Airport
- there is, however, expected to be a decrease in traffic along Boundary Road because of the completion of the Mordialloc Freeway
- the network immediately surrounding the Airport will not exceed capacity
- there will be capacity for further growth.

Several road and transport projects are embedded into the VITM modelling results. These projects form the basis for the Victorian Government's long-term transport and land use planning. Therefore, the model is indicative.

9.5.3 – VITM Traffic Congestion Forecasts

Moorabbin Airport has commissioned a review of future road network traffic congestion near the Airport based on the Victorian Integrated Transport Model (VITM) and outputs sourced from the Mordialloc Freeway Environment Effects Statement.

Outputs of this review provide an indication of the potential future road congestion during peak periods in 2031, noting:

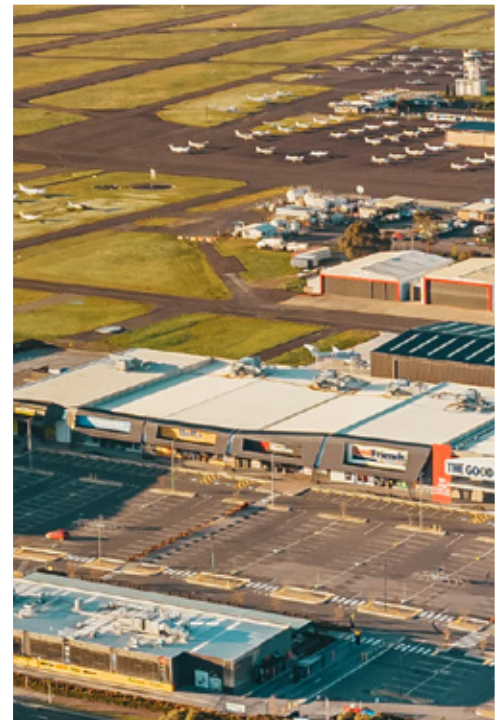
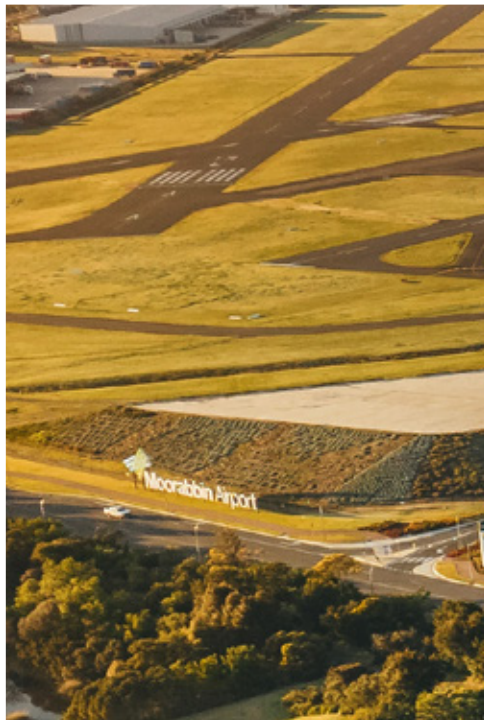
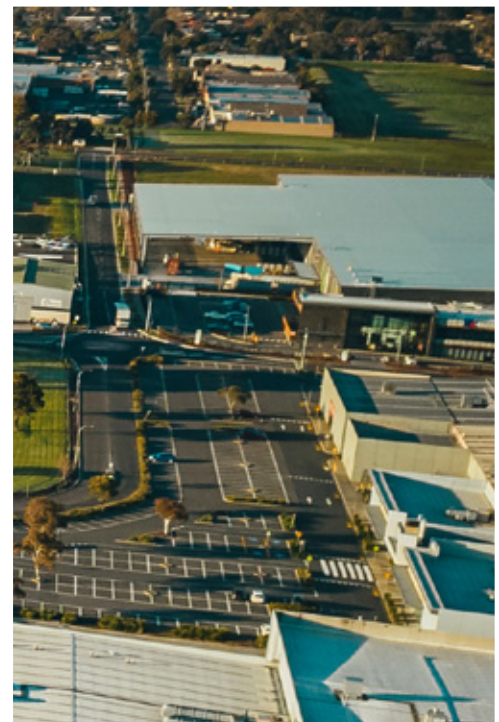




Figure 9.7 – Strategic Road Network Projects

Closer to Moorabbin Airport, future external network improvements include developing extra access points between the Airport and Lower Dandenong and Boundary Roads.





We provide community value via our vibrant shopping precinct and business hub that contributes to increased employment opportunities and supports 20-minute neighbourhoods.





9.6

FREIGHT AND LOADING TRAFFIC

9.6.1 Existing Freight and Loading Traffic

Moorabbin Airport is well placed for the arterial road network and Victoria's Class 2 approved Performance Based Standards (PBS) Level 2 network (see Figure 9.8 for an overview of the PBS Level 2 network for B-Double and Higher Mass Limit Approved Routes). Heavy vehicle movements are facilitated by Boundary Road, Lower Dandenong Road, Dingley Bypass, the Monash Freeway and the Mordialloc Freeway.

A significant proportion of jobs and economic activity at the Airport are dependent on these networks to efficiently move goods.

Moorabbin Airport's internal road network accommodates service vehicles and freight requirements of large format non-aviation customers like Coca-Cola Amatil and Visy at Chifley Business Park. Aviation 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 Northern Tasmanian Centres, however given the size of the vans and the relatively low volume of freight, it does not have a significant impact on the ground transport network.

9.6.2 Future Freight and Loading Traffic

With excellent access to the arterial road network and the PBS Level 2 network, the Airport is well placed to expand freight-generating land uses. Any future increases in freight activity will be planned to access the Airport via the existing arterial road network, and responsibly manage impacts to residential areas.

Further traffic assessments will be undertaken as needed to confirm the capacity of the Airport roads, including truck traffic from freight activities at the Airport.

Heavy vehicle movements will be facilitated by the Mordialloc Freeway which will replace Springvale Road on the PFN.

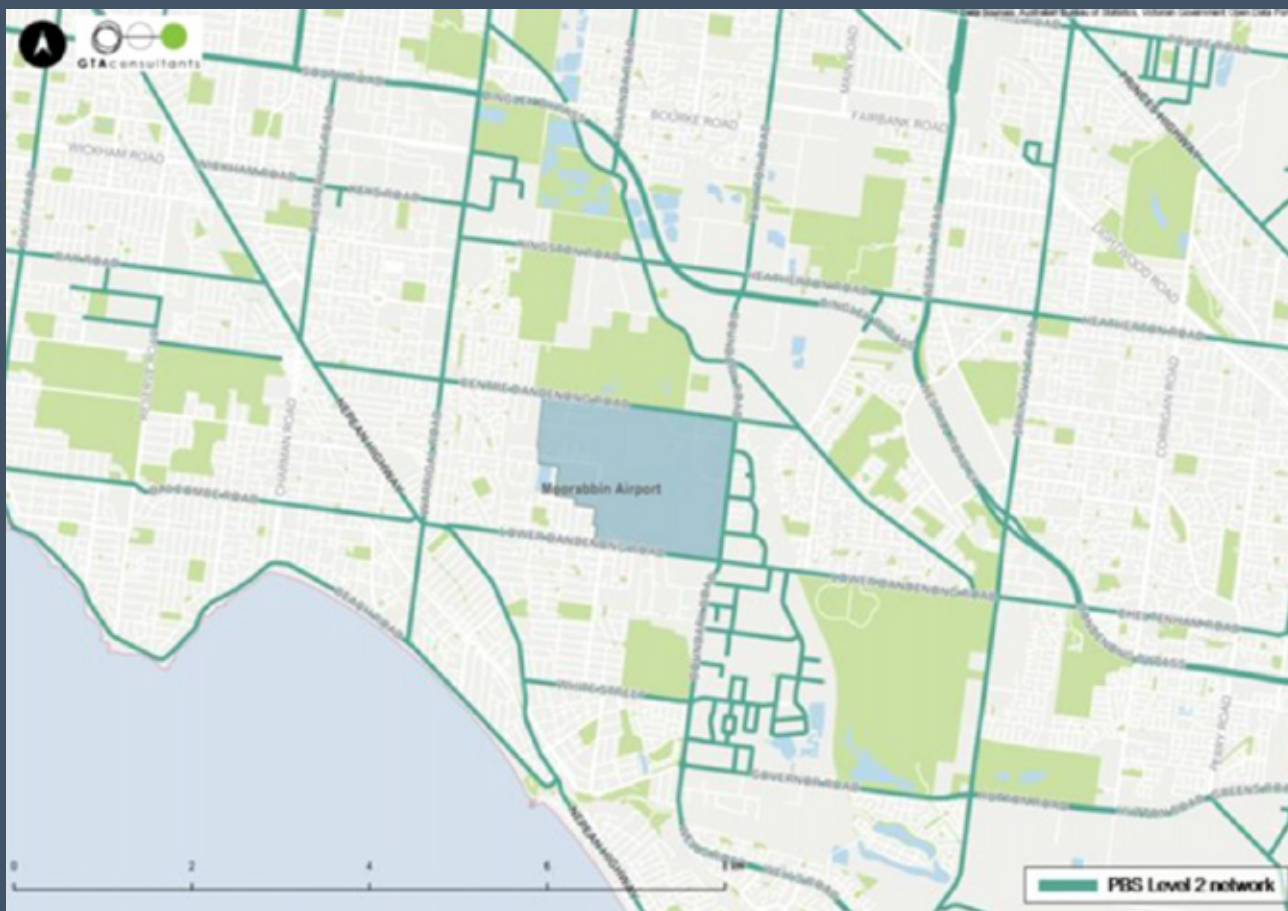


Figure 9.8 - PBS Level 2 network for B-Double and Higher Mass Limit Approved Routes

9.7

CAR PARKING

9.7.1 – Existing Car Parking

Moorabbin Airport provides 5,350 off-street car parking spaces, which are distributed across the Airport (as seen in Figure 9.9) so that retail, business and aviation activities can provide sufficient car parking to meet user demand.

Adequate and conveniently located on-site car parking contributes to the economic objectives of the Airport and encourages visitation to the Airport. We consider the suitability of car parking for each new development at the Airport.

There is limited potential for overspill parking into neighbouring residential (or commercial) areas.

Electric vehicle charging stations have been installed at Moorabbin Airport, and will continue to be installed with all new developments.

9.7.2 – Future Car Parking

Appropriate on-site car parking will be provided to meet future demand for parking because of new industrial, commercial and retail development at the Airport (see Chapter 8 – Non-Aviation Development Plan for details of proposed industrial, commercial and retail developments).

Car parking for new developments and future vehicle use is assessed by a qualified technical traffic consultant so the right amount of car parking is provided at the Airport. Please note, the Airport has excess capacity to meet the needs of current Airport visitors and users.

Where possible, demand for car parking will be addressed by increasing the efficiency of land use and car parking areas through sharing car parking resources. It is expected that the State will provide sufficient car parking to address Suburban Rail Loop users who want to use Cheltenham Station and any future station located at the Airport.

9.8

PUBLIC TRANSPORT

9.8.1 – Existing Public Transport

Existing public transport infrastructure (including routes and stops) near Moorabbin Airport is shown in Figure 9.10. There are currently no internal public transport connections at the Airport.

Multiple bus services operate on the external arterial road network; as they have a frequency of 15 minutes or longer, they are not considered 'turn-up-and-go' services. The 828 bus along Centre Dandenong Road provides a regular service during weekdays.

As shown in Section 9.3, public transport represents 3.6% of trips for workers at the Airport, which is lower than the average for workers in the City of Kingston (Kingston (LGA) employees) and surrounding SA2 areas. Providing improved and more extensive public transport infrastructure would incentivise greater use of public transport in the future.

Public transport is important given Moorabbin Airport's focus on flight training – where students at the Airport use public transport as they may not have private vehicles.

9.8.2 – Future Public Transport

Promoting public transport is important because:

- it facilitates access to employment and services for the community
- it contributes to socially connected, liveable communities – places where people walk, cycle and use public transport are likely to perform better on a range of social indicators. This includes access for all members of the community
- of transport efficiency – increased use of sustainable transport has environmental and economic benefits through reduced greenhouse emissions, and reduced vehicle movement and storage.

The proposed future Suburban Rail Loop is a 90 kilometre orbital rail loop that will link rail lines from the Frankston line to the Werribee line via Melbourne Airport. The Suburban Rail Loop is planned to service Cheltenham Station, approximately 11 minutes away from the Airport using the 828-bus route. Construction of the Suburban Rail Loop will improve accessibility to the Airport by public transport.

Moorabbin Airport will work with the Victorian Department of Transport to investigate opportunities for bus service improvements that align with the Airport's future growth as a centre of economic activity and employment, an attractive place for flight training students, and provide a direct connection to the SRL station at Cheltenham. Moorabbin Airport will also continue to advocate for improved frequency and coverage of public transport services to the Airport including the potential for Suburban Rail Loop station connections.

Construction of a Suburban Rail Loop station at the Airport is supported by:

- the Land Use Plan (see Chapter 6)
- demand because of the 6,500 existing jobs at the Airport and the 23,100 expected jobs to support the economic activity at the Airport over the next eight years (see Chapter 2 – Economics and Employment)
- demand for better public transport offerings from young people and flight students who may not have access to private vehicles
- the existing 8.4 million people who come to the Airport each year – with this number expected to increase.

The extension of Chifley Drive has been designed to accommodate bus services in the future.



Figure 9.9 – Existing off-street car parking



Figure 9.10 – Public Transport Services and Infrastructure (Source: GTA)

9.9

ACTIVE TRANSPORT – CYCLING NETWORK

9.9.1 – Existing Cycling Network

The primary cycling network facilities surrounding the Airport include two off-road 2.5-metre-wide shared paths that run along the Airport's northern and southern boundaries (Centre Dandenong Road and Lower Dandenong Road). There is also an off-road shared path on part of Boundary Road.

Centre Dandenong Road, Boundary Road and Lower Dandenong Road are all designated cycling routes on VicRoads' Principal Bike Network (PBN).

These paths provide cycling infrastructure near the Airport. However, connectivity to the broader ground transport network could be improved to enable active transport trips to the Airport from greater distances.

9.9.2 – Future Cycling Network

The Victorian Department of Transport and City of Kingston have included future route planning for cycling infrastructure near the Airport, which would improve connectivity to public transport, local destinations and residential areas. We note that Centre Dandenong Road and Lower Dandenong Road are currently designated as C2 Strategic Cyclic Corridors, and the Mordialloc Freeway is designated as a C1 Strategic Cycling Corridor.

Moorabbin Airport will work with the Victorian Department of Transport and City of Kingston to progress these future routes during the term of the Master Plan 2021 and continue to advocate for improved external bicycle links to surrounding residential areas and the wider cycling network. This may include better connectivity for cyclists to Dingley Village.

On the Airport, we will:

- continue to promote dedicated cycling facilities on key roads within the Airport, as well as end-of-trip facilities at major destinations
- consider installing new racks for bicycle parking at the Airport
- consider developing new cycling infrastructure to enhance the convenience of the Airport.

9.10

ACTIVE TRANSPORT – PEDESTRIAN NETWORK

9.10.1 – Existing Pedestrian Network

Infrastructure for pedestrian travel at the Airport is primarily focused within the Airport's northern and southern boundaries. Access to public transport and the DFO and Kingston Central Plaza retail precincts, which are in walking distance of residential areas.

Developing pedestrian fencing and crossings during the term of Master Plan 2015 improved the safety of pedestrian access and increased the potential for internal trips at the Airport to be done by foot.

We have actively enhanced the pedestrian network at the Airport over the last five years by constructing more than 10 kilometres of footpaths. We look forward to working with the City of Kingston to deliver improved pedestrian infrastructure and connectedness in and around the Airport in the future.

A map of existing pedestrian infrastructure is provided at Figure 9.11.

9.10.2 – Future Pedestrian Network

There is potential for further pedestrian infrastructure to be provided in areas of the Airport that are not currently used or require upgraded infrastructure, such as:

- along the southern part of Boundary Road
- within parts of Chifley Business Park
- at the pedestrian crossings on Duigan Drive
- through construction of new pedestrian crossings on Duigan Drive and near Bundora Parade
- at areas of the Airport used for aviation activities.

Moorabbin Airport will consider enhancing pedestrian infrastructure in these areas as part of new development proposals.

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.

9.11

TAXIS/RIDE SHARING

9.11.1 – Existing Taxis / Ride Sharing

The Airport caters for low-capacity passenger flights. Therefore, it doesn't generate enough demand for pick-up or drop-off travel that use taxis, buses, hire cars and ride sharing cars. The Airport does not charge an access fee for taxis, buses, hire cars or ride sharing cars.

9.11.2 Future Taxis / Ride Sharing

Demand for taxis, buses, hire cars or ride sharing cars is unlikely to change during the term of this Master Plan 2021. As a result, existing infrastructure is adequate.

9.12

APPROACH TO GROUND TRANSPORT NETWORK

9.12.1 – Ground Transport Objectives

Consistent with Master Plan 2015, Moorabbin Airport has adopted four high level ground transport objectives so the ground transport network is able to support the ongoing growth and success of the Airport. These objectives are consistent with Commonwealth and Victorian Government policy.

We have also identified projects and actions to improve the ground transport network during this Master Plan 2021, and these are set out at Figures 9.12–9.15.

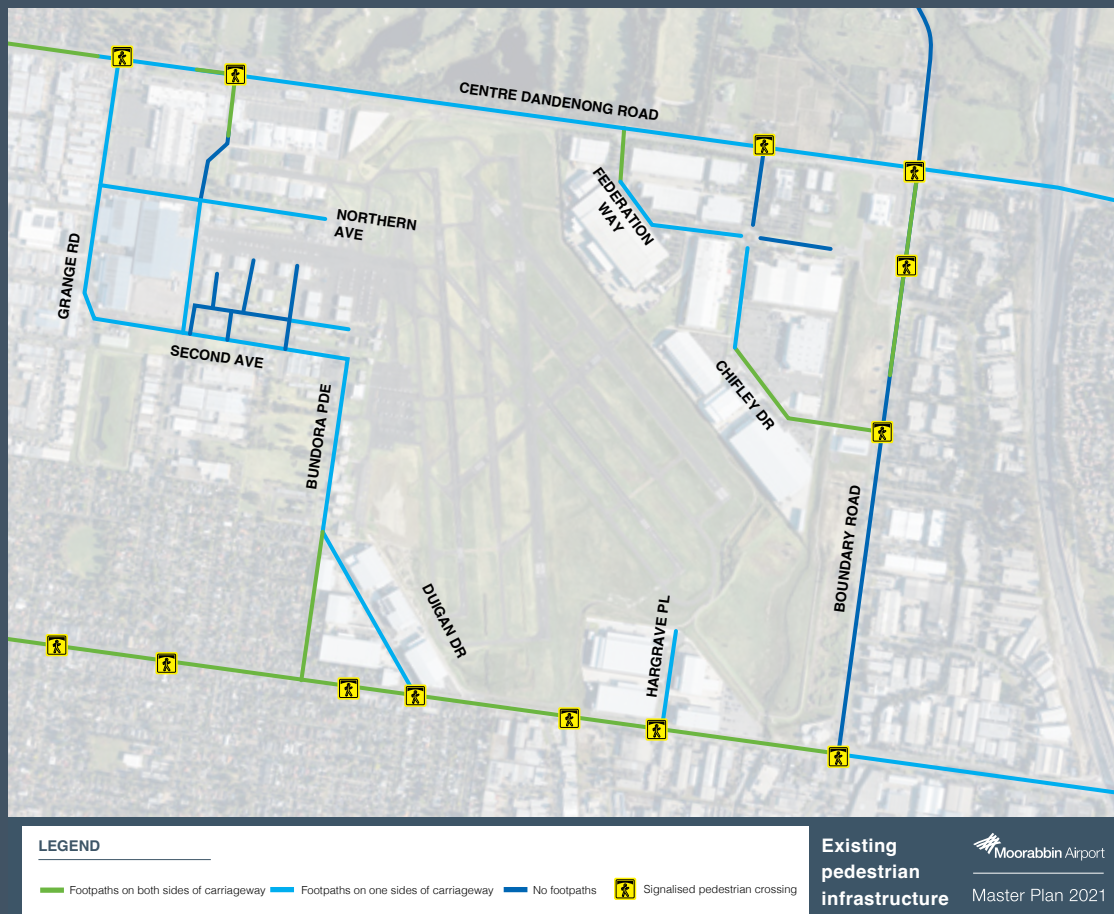


Figure 9.11 - Existing pedestrian infrastructure

A. Road Network

Objectives

- provide capacity for future increases in land use at the Airport and ensure the internal and external network does not limit development
- provide appropriate access to the Airport supporting the Airport's role as an activity, education and employment hub with significant roles in generating employment, economic activity and providing education
- plan internal roads to minimise any propensity for "rat running" of external traffic through the Airport and include local traffic management measures if required
- consistent with the *Victorian Freight Plan: Delivering the Goods*, and with the role of Central Dandenong Road, 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
- 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
- ensure new developments contribute to achieving the Victorian Department of Transport's Movement and Place minimum standards for freight, bus and general traffic
- seek to reduce reliance on private motor vehicle travel where appropriate.

Projects / Actions

- implement a 50km/hr speed limit on new internal roads
- work with VicRoads to ensure future strategic road network projects increasing access are undertaken
- provide new internal roads and external road network access intersections to facilitate access to landside areas
- 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
- maximise the opportunities arising from the replacement of Springvale Road with the upgraded Mordialloc Freeway as part of the PFN
- monitor and review traffic volumes and speeds on new internal roads, to assess the level of through traffic and potential rat-running
- investigating the suitability of access to Boundary Road upon further development, including a direct un-signalised left-in/left-out access point and/or provision of a service road.

Figure 9.12 - Road network objectives and projects and actions

B. Public Transport

Objectives	Projects/Actions
<ul style="list-style-type: none"> - work with the State to improve public transport services to The Airport, to cater for employees, aviation students and general visitations - future proof for the possibility of public transport services running through the Airport - consider how the Airport can contribute to the development and augmentation of the future Suburban Rail Loop (including as a potential station location). 	<ul style="list-style-type: none"> - liaise with the Victorian Department of Transport to obtain bus services that meet a minimum 20-minute service frequency, enhance the interface with the new Suburban Rail Loop at Cheltenham Station, specifically increase the frequency of bus routes 811/812 and 828 and address deficiencies on weekends. In this respect, Moorabbin Airport notes that both Centre Dandenong Road and Lower Dandenong Road are classified as lower frequency bus routes – however we understand that there are opportunities that Moorabbin Airport can investigate with the Victorian Department of Transport - investigate the feasibility of providing future bus services on the internal Airport road network (such as connecting Grange Road to Duigan Drive and on Chifley Drive) and liaise with Public Transport Victoria about this - upgrade public transport infrastructure at and near the Airport – including ensuring infrastructure is compliant with the <i>Disability Discrimination Act 1992</i> (Cth), includes adequate lighting and shelter, and is appropriately linked to land use attractors by suitable pedestrian facilities - advocate to enhance the bus stop infrastructure along Boundary Road, Lower Dandenong Road and Centre Dandenong Road to improve amenity for public transport users and pedestrians - advocate to update the Victorian Department of Transport's Movement and Place bus classification for roads surrounding the Airport.

Figure 9.13 – Public transport objectives and projects and actions

C. Car Parking

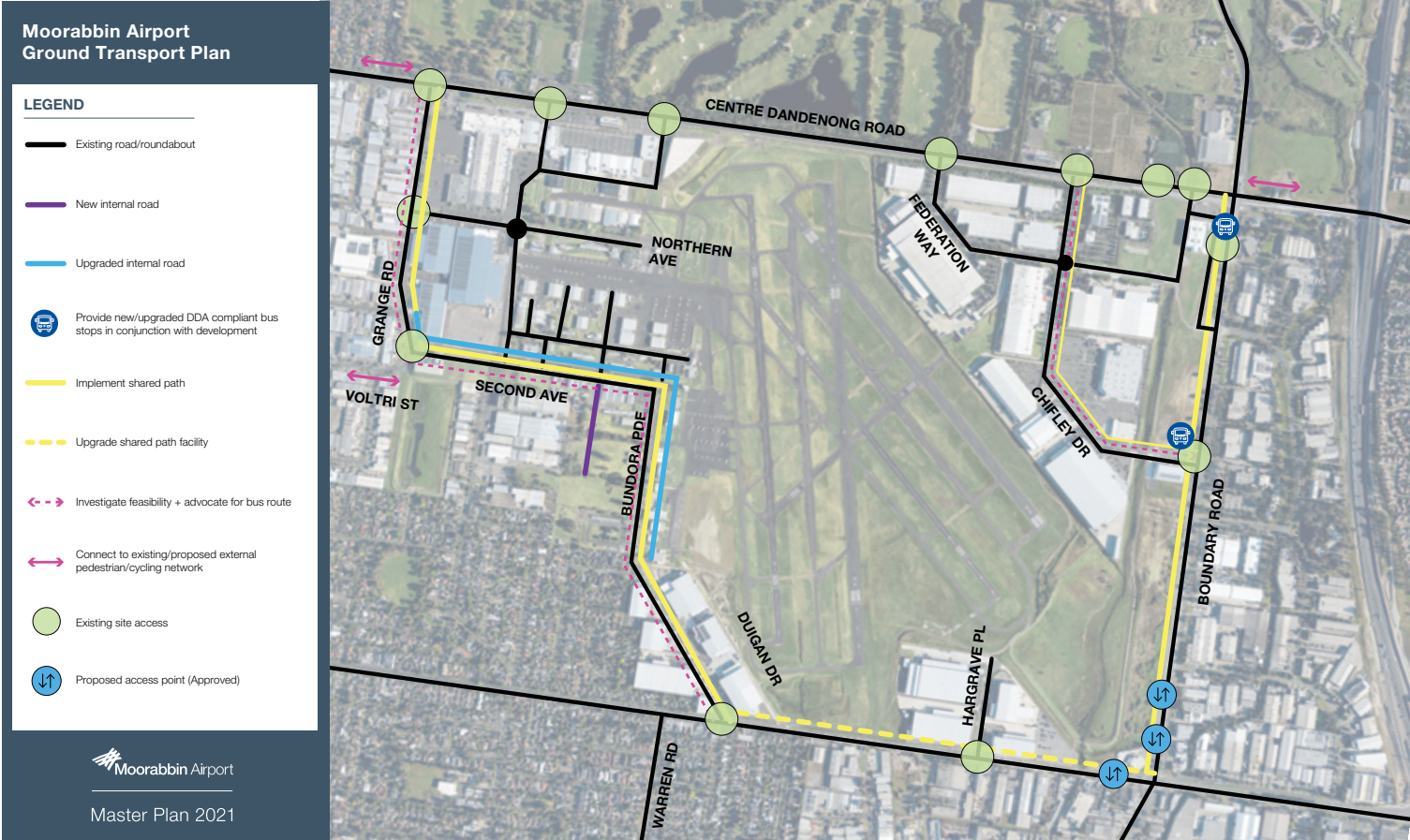
Objectives	Projects / Actions
<ul style="list-style-type: none"> - ensure the provision of car parking supports operating land uses at the Airport; - ensure that car parking is located to service the main land uses in all precincts - minimise vehicle circulation associated with finding car parking through centralised provision of parking, and associated signage - accommodate increased take-up of electric vehicles. 	<ul style="list-style-type: none"> - encourage the provision of adequate on-site car parking within new developments, to ensure the ongoing efficiency and economic success of the Airport, noting that sharing of parking resources may be appropriate within some precincts - continue to assess the sufficiency of the provision of car parks in relation to each new development - continue to install charging stations for electric vehicles.

Figure 9.14 – Car parking objectives and projects and actions

D. Active Transport

Objectives	Projects/Actions
<ul style="list-style-type: none"> - increasing transport choice for Airport employees and general visitations as development progresses - improving upon the existing walking and cycling links both within the Airport and connecting to the surrounding network - including through referencing elements of the Kingston Cycling Strategy - considering improving cycling facilities on key roads within the Airport - facilitating movement through the Airport and enhancing the permeability of the Airport as development progresses - providing a basic level of walking and cycling infrastructure as part of all new development, including footpaths, shared paths and bicycle lanes (as appropriate) - improving the connectivity and safety of the internal road network for crossing pedestrians, particularly for access to bus stops - ensure new developments contribute to achieving the Victorian Department of Transport's Movement and Place minimum standards for pedestrian and cycling activity - ensure new development provides adequate end-of-trip facilities, including showers, lockers and bicycle parking facilities for both employees and general visitations where appropriate. 	<ul style="list-style-type: none"> - provide footpaths on at least one side of all internal, landside roads (including specific projects noted below) where opportunities are available - install appropriate measures to ensure a low-speed environment is created on internal roads with appropriate cyclist markings - implement local area traffic management measures at the pedestrian crossing located on Duigan Drive - increase coordination as between Moorabbin Airport and the Victorian Department of Transport in relation to strategic cycling linkages - advocate 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) - consider end-of-trip facilities when assessing applications for Airport Lessee Company consent.

Figure 9.15 – Active transport objectives and projects and actions



9.13

FUTURE GROUND TRANSPORT PLAN

The Ground Transport Plan for the Airport is provided as Figure 9.16.

9.13.1 – Effect of Proposed Developments on Traffic Flows

This section sets out the effect the aviation and non-aviation developments, as envisaged in this Master Plan 2021 over the next eight years, will have on ground transport and traffic flows at the Airport.

Expected land use development is not expected to significantly alter the ground transport characteristics of the Airport. A specialist traffic study commissioned by Moorabbin Airport for this Master Plan 2021 found that the road network near the Airport is unsaturated and will remain so considering development contemplated in this Master Plan 2021. Off-Airport road projects under construction and others being considered will see the capacity of roads near the Airport increase to meet growing demand.

We are 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 Master Plan 2021.

In addition, the detailed work with VicRoads to get approval for proposed access changes has considered external impacts to the transport network. Moorabbin Airport will continue to liaise with the Victorian Department of Transport, City of Kingston and Public Transport Victoria so that external transport impacts continue to be monitored throughout the planning period of this Master Plan 2021 (see Section 9.12).

9.14

WORKING WITH GOVERNMENT AND AUTHORITIES

Moorabbin Airport works with the Victorian and Local Governments and service authorities responsible for the road network and the public transport system, including:

- Statutory consultation: Moorabbin Airport has statutory obligations under the Airports Act to engage with Victorian and Local Governments as well as the local community and other stakeholders when delivering developments in accordance with this Master Plan 2021
- Moorabbin Airport Planning Consultation Group: Moorabbin Airport undertakes regular consultation at different levels of Government through the MAPCG. Membership of the MAPCG includes City of Kingston planners and the Victorian Government Department of Transport and Planning (including VicRoads). Moorabbin Airport will continue to have meaningful engagement with relevant government entities in relation to those matters arising out of this Master Plan 2021.
- Development: Moorabbin Airport undertakes detailed and regular consultation with Local and Victorian Governments and service authorities as part of the process for designing and approving new infrastructure and developments at the Airport. Moorabbin Airport may distribute applications for Airport Lessee Company consent to building activities at the Airport to City of Kingston planners, Victorian Government Departments and VicRoads for comment. Moorabbin Airport considers any comments received in the requested timeframe when determining an application.

9.15

CONSISTENCY WITH VICTORIAN PLANNING SCHEMES

The Ground Transport Plan is consistent with the Victorian policy framework and Victorian planning schemes, and supports the objectives of the following PPF Victorian planning scheme clauses:

- Clause 18.02-7S, Airports and airfields – by contributing to the strengthening of the role of Moorabbin Airport within Victoria's economic and transport infrastructure
- Clause 18.02-7L, Moorabbin Airport, protecting the flight paths of the Moorabbin Airport from the further encroachment of incompatible land uses
- Clause 11.03-1S, Activity centres – as Moorabbin Airport Precinct 4 plays a role as an activity centre, increased accessibility is consistent with the objective of activity centres being highly accessible to the community
- Clause 17, Economic development – by enhancing economic growth through increased accessibility at Moorabbin Airport
- Clause 18.025S, Freight – facilitating an efficient, coordinated, safe and sustainable freight and logistics system that enhances Victoria's economic prosperity and liveability through supporting ongoing freight opportunities at Moorabbin Airport.

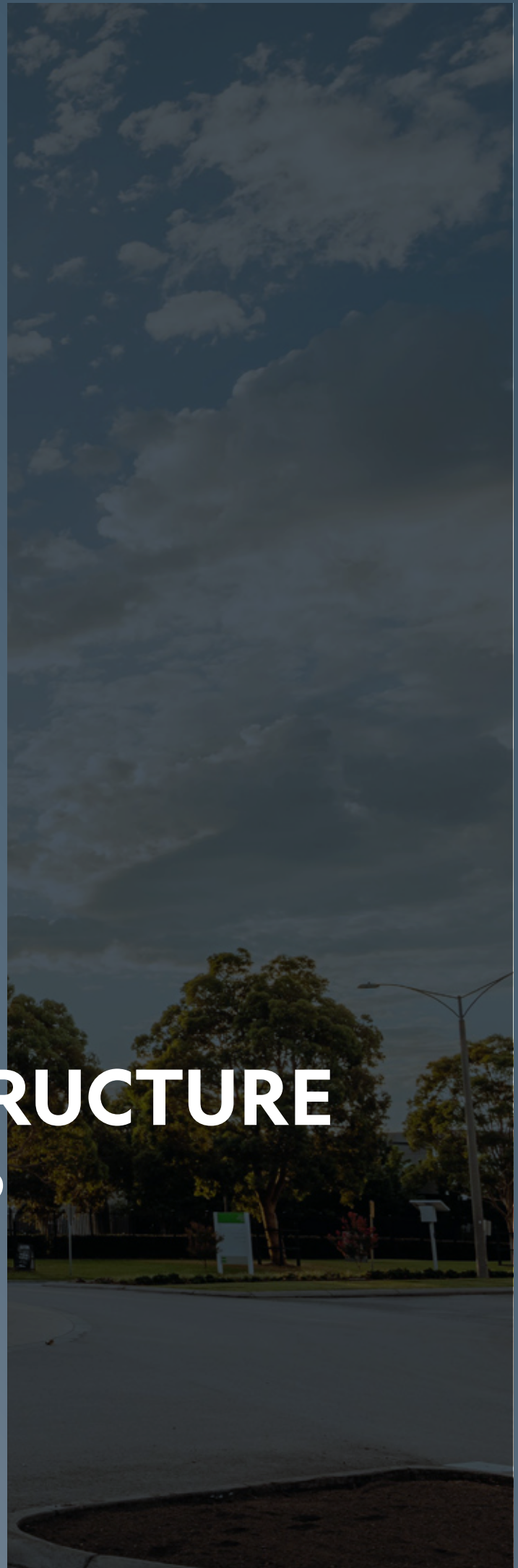
This Ground Transport Plan is consistent with the Victorian Freight Plan: Delivering the Goods (2018) and continuing use of freight corridors.

For more details, see Chapter 5 – Planning Framework and Context.



10

INFRASTRUCTURE SERVICES







At Moorabbin, we plan, design, construct and fund infrastructure networks that support the ongoing viability of the Airport precinct and surrounds.

Our infrastructure has been analysed and approved by Federal safety regulations, alongside the Victorian and local government infrastructure objectives.

Most infrastructure networks at the Airport support both aviation and non-aviation developments. Non-aviation developments bear the costs of connecting to external infrastructure networks, which provides a connection point and in turn benefits aviation developments.

10.1

INTRODUCTION

Comprehensive airport infrastructure networks support all of Moorabbin's operations and development plans. We take a whole of site approach to infrastructure networks and invest in:

- special purpose aviation infrastructure (such as runways, taxiways and aprons)
- general infrastructure for storm water drainage, sewerage, water reticulation, electricity, gas and telecommunications services that support non-aviation and aviation developments.

Moorabbin is home to:

- five runways with lighting that supports aviation safety
- 37 hectares of apron, runway and airside paving to support aviation operations
- four kilometres of storm water drainage pipes beneath the runways for water drainage
- 175,000 cubic metre retarding basin (equivalent of 65 Olympic swimming pools) in the south-east and a 20,000 cubic metre retarding basin (equivalent

of eight Olympic swimming pools) in the south-west to manage Airport storm water

- more than 10 kilometres of high and low voltage electrical cables and 10 kilometres of telecommunications cables across the Airport to service new aviation and non-aviation buildings
- a sewerage network across the Airport.

These infrastructure networks benefit the Airport and surrounding areas. The \$8 million realignment of the 1.5 kilometre Mordialloc Settlement Drain and installation of a 175,000 cubic metre retarding basin in the south-east of the Airport were funded by Moorabbin Airport, and mitigate storm water impacts in the broader area around the Airport.

A major focus for Moorabbin Airport is strategic planning to enable us to service current and future aviation and non-aviation developments efficiently. This often requires specialised geotechnical assessments and engineering solutions.

Proposed developments and land use at the Airport are key to determining the type, timing and capacity of infrastructure required. As outlined in Chapter 6 Land

Use Plan, Moorabbin Airport will continue to locate aviation developments in the centre of the Airport, ringed by non-aviation developments. This has benefits to the community, however non-aviation developments around the perimeter of the Airport subsidise the investment.

For example, sewer, water and electricity services to Precinct 2 Aviation Support Services connect to an infrastructure node in the adjacent Precincts 3 or 4.

This chapter outlines infrastructure works which have been undertaken at the Airport since Master Plan 2015, and:

- what existing networks and assets are in place
- who is responsible for infrastructure development, maintenance and management
- who is responsible for risk mitigation
- how infrastructure services will accommodate growth at Moorabbin Airport (including future works).

An overview of infrastructure networks and likely future works to be undertaken during the Master Plan 2021 are shown in Figure 10.1 – Precinct Servicing Plan.





10.2

RECENT INFRASTRUCTURE DELIVERY

Moorabbin Airport has invested \$11 million in the Airport infrastructure network during the term of Master Plan 2015, including:

- upgrades to existing lighting on runways with safer and more efficient LED lights and decreased spacing as part of Moorabbin Airport's whole of Airport Runway Lighting Upgrade Program
- resealing runways as part of Moorabbin Airport's whole of Airport Runway Resealing Program
- significant upgrading of telecommunication capacity (with National Broadband Network (NBN) access) and extension of the telecommunications network to service aviation customers in Precinct 2
- construction of Duigan Drive to provide a new western access road to the Airport
- construction of the Chifley Drive extension, providing access from Centre Dandenong Road through to Boundary Road
- construction of the Kingston Central Boulevard extension, providing access from Northern Avenue through to Second Avenue
- upgrade and augment infrastructure networks to service new student accommodation and educational facilities
- infrastructure to service developments along Grange Road, Northern Avenue and Second Avenue
- infrastructure to service developments at Chifley Business Park South.

Investments made by Moorabbin Airport have resulted in a comprehensive infrastructure network.

10.3

DRAINAGE

10.3.1 – Existing Infrastructure

Moorabbin Airport has a drainage reticulation network which runs throughout the road network at the Airport. This includes open and underground drainage systems and major and minor drainage networks.

The drainage network collects road and surface runoff, as well as roof storm water, and directs it to broader off-site drainage networks owned by the City of Kingston and Melbourne Water Corporation. The Airport has three broad drainage catchments:

- eastern catchment – directed to the Mordialloc Settlement Drain
- central catchment – directed to Sibthorpe Drain (also known as the Moorabbin Airport Drain) which has its inlet on the Airport site and leaves the Airport site to the south and crosses under Lower Dandenong Road
- western catchment – directed in part to the City of Kingston drainage network and in some cases directly to a retarding basin in Voltri Street.

There are retarding basins as follows:

- 175,000 cubic metre dry retarding basin in the south-east
- 20,000 cubic metre southern retarding basin in the south-west
- Melbourne Water Corporation retarding basin in Voltri Street.



We're trusted experts committed to providing the infrastructure and facilities to promote positive outcomes that add value to our customers' and communities' lives.



10.3.2 – Development, Maintenance and Management

A summary of responsibility for development, ownership, maintenance and management of drainage infrastructure at the Airport is in Figure 10.2. Moorabbin Airport is responsible for funding and developing major drainage infrastructure, and ownership rights are provided to drainage authorities (such as City of Kingston and Melbourne Water Corporation) which is standard practice.

Moorabbin Airport is responsible for developing all other drainage on the Airport site, including infrastructure in road reserves. We maintain and manage these drainage assets and procure all necessary upgrades or renewals, which is important to ongoing aviation development and operations. The steps Moorabbin Airport is taking to ensure access for aviation activities is outlined in Chapter 7 – Aviation Development Plan.

Moorabbin Airport customers are responsible for the following drainage infrastructure:

- connecting their premises to trunk networks
- site drainage for storm water collection at the premises
- on-site detention as required by Melbourne Water Corporation.

10.3.3 – Risk Mitigation

The Moorabbin Airport drainage network is designed and constructed in accordance with Melbourne Water Corporation standards, and is subject to approval by Melbourne Water Corporation. These measures mitigate risks associated with the flooding of the drainage network.

We also undertake regular inspections and maintenance on the drainage network. The major drainage connection points at the Airport which belong to Melbourne Water Corporation are subject to ongoing maintenance by Melbourne Water Corporation.

10.3.4 – Accommodating Airport Growth

Moorabbin Airport works closely with the City of Kingston and Melbourne Water Corporation regarding drainage infrastructure and overall drainage network capacity. Moorabbin Airport plans stormwater strategies carefully so that new and existing developments meet all authority design and approval standards.

To cater for storms, Moorabbin Airport will be mindful of major and minor drainage networks when designing new developments. Drainage infrastructure at the Airport is designed in accordance with the following criteria:

- minor drainage network design is to allow for the 10-year Average Recurrence Interval (ARI) event
- major drainage network design is to allow for the 100-year ARI event

- site discharges are to be controlled to predevelopment levels to avoid impacts to the surrounding drainage network.

Moorabbin Airport will continue to design and upgrade the drainage network to account for new developments during Master Plan 2021, based on modelling and subject to authority approval when required. Future developments of the drainage network at the Airport are likely to include:

- new connections to the existing drainage network including Moorabbin Airport and Melbourne Water Corporation assets
- extensions of the drainage network
- reticulation of drainage through roads.
- Where appropriate, WSUD treatments as outlined in Chapter 3 – Sustainability, Corporate Responsibility and Community and Chapter 11 – Environment Strategy of this Master Plan 2021 will be applied to the Airport drainage network.

Infrastructure	Developed/Funded	Effective Licensee	Maintenance and management
Mordialloc Settlement Drain and associated 175,000 sqm retarding basin	Moorabbin Airport	Melbourne Water Corporation	Melbourne Water Corporation
Sibthorpe Drain (Moorabbin Airport Drain)	Moorabbin Airport	Melbourne Water Corporation	Melbourne Water Corporation
General drainage network	Moorabbin Airport	Moorabbin Airport	Moorabbin Airport
20,000 sqm southern retarding basin	Moorabbin Airport	Moorabbin Airport	Moorabbin Airport

Figure 10.2 – Responsibility for drainage infrastructure at and near Moorabbin Airport







10.4

SEWERAGE

10.4.1 – Existing Infrastructure

The sewer network at the Airport includes external sewers maintained by South East Water that pass through the Airport site and internal sewers that are funded by Moorabbin Airport. The sewerage network at the Airport includes:

- Clayton Branch Sewer that runs north to south through the Airport parallel with the Mordialloc Settlement Drain
- Mentone Intercepting Sewer that runs west to east along Lower Dandenong Road
- internal sewage network throughout the Airport including at the Chifley Business Park and along Grange Road.

There are two sewer pumps on the Airport site to pump sewerage south from Kingston Central Plaza and DFO on Northern Avenue to the pumping station on Bundora Parade, as the natural flow of the Airport site doesn't generate enough gradient to move the sewage from north to south. This is infrastructure that remains effective.

10.4.2 – Development, Maintenance and Management

The sewer network includes privately owned and authority (South East Water) owned sewer assets. Moorabbin Airport manages and funds the construction of the internal sewerage network. Once built, the assets are gifted to South East Water who is responsible for their maintenance and management. Although the Mentone Intercepting Sewer is a Melbourne Water Corporation sewer asset, connections to the sewer including from the Airport are managed by South East Water.

Moorabbin Airport customers are responsible for building and maintaining their internal networks, which connect to the South East Water network.

10.4.3 – Risk Mitigation

As asset owner of the trunk sewerage network, South East Water is responsible for mitigating risks associated with the sewer network.

The sewerage network is designed to Water Services Association of Australia (WSAA) standards, approved by South East Water – who estimates demand requirements and prescribes pipe sizes, considering site and surrounding network requirements.

10.4.4 – Accommodating Airport Growth

Moorabbin Airport will fund and undertake upgrades and new connections to the sewer network required to provide access to new developments at the Airport. These works will connect to South East Water assets within the Airport or at the Airport boundary.

Moorabbin Airport customers will design their respective premises to discharge to the connection points provided, using gravity or an internal rising main.

Future developments of the Airport sewer network are likely to include:

- new property connections to the existing sewerage network
- reticulation of sewer assets to connect to existing sewerage assets
- new sewerage assets to provide coverage to areas under development.

The impacts on and treatment of existing private sewage assets will also be assessed during any new developments.

10.5

WATER

10.5.1 – Existing Infrastructure

There are water mains in all surrounding streets at the Airport, and most are 150 millimetres in diameter, except for the following larger mains:

- 375 millimetre diameter main in Lower Dandenong Road
- 225 millimetre and 300 millimetre diameter mains in Boundary Road
- 280 millimetre diameter main in Chifley Drive
- 225 millimetre diameter main in Duigan Drive.

There are two water mains on the Airport site. One is on the corner of Centre Dandenong Road and Grange Road, and the other is on the corner of Second Avenue and Bundora Parade.

10.5.2 – Development, Maintenance and Management

The water reticulation network at the Airport comprises privately owned and authority (South East Water) owned assets. Moorabbin Airport manages and funds construction of the water network. Once built, the assets are gifted to South East Water, who is responsible for their maintenance and management.

Moorabbin Airport customers are responsible for building and maintaining their respective internal networks, which connect to the South East Water network. This includes:

- connection of premises to the existing network
- works to meet fire safety requirements (this is expected to include the installation of assets such as fire tanks and pumps)
- internal reticulation.

10.5.3 – Risk Mitigation

South East Water, as asset owner of the water reticulation network, is responsible for mitigating risks associated with the network.

The water reticulation network is designed to WSAA standards and subject to approval by South East Water. South East Water also estimates demand requirements and prescribes pipe sizes, taking into consideration site and surrounding network requirements.

It is assumed that Grade 2 supply will be provided across the Airport. Given this, all buildings over 500 sqm will require hydrant and hose reel coverage and will likely require their own fire tanks and pumps.

10.5.4 – Accommodating Airport Growth

Moorabbin Airport will fund and undertake the upgrades and new connections to the water reticulation network required to provide potable water to new developments at the Airport.

Proposed water reticulation networks will connect to South East Water assets either within the Airport or at the Airport boundary.

Future developments of the water network at the Airport are likely to include:

- reticulation of water assets to facilitate new connections
- construction of new mains which will connect to existing water mains
- property connections to existing water mains.

10.6

ELECTRICITY

10.6.1 – Existing Infrastructure

There is an existing network of high and low voltage electricity surrounding the Airport. The Airport is supplied by two zone substations. Electricity is reticulated through the existing precincts at the Airport including Chifley Business Park, and includes overhead and underground infrastructure.

10.6.2 – Development, Management and Maintenance

Most electrical assets at the Airport are assets owned by United Energy and operated and maintained by ZNX Energy Ltd. Moorabbin Airport, however, also owns electrical assets at the Airport.

In the future, Moorabbin Airport will be responsible for construction of the electricity network in line with development requirements. Works will be funded by Moorabbin Airport, noting that reimbursements may be available from United Energy for some electrical works.

Once completed, electrical assets are gifted to United Energy who is responsible for their management and maintenance.

10.6.3 – Risk Mitigation

United Energy (as asset owner) is responsible for risk mitigation strategies for the electrical network at Moorabbin Airport. In the event of a disruption to the Airport's electrical supply, there is a backup diesel generator available to provide power to the ATC tower and runway lighting.

New infrastructure to service developments at the Airport will be designed and constructed to United Energy requirements. All public lighting at the Airport will be designed in accordance with the design specifications in the MOS 139, which outlines the legal limit for light spill in an Airport context.

10.6.4 – Accommodating Airport Growth

Future developments of the Airport electrical network are likely to include:

- establishing new connections to the high or low voltage electrical assets owned by United Energy
- internal reticulation of high and low voltage power to provide power to Moorabbin Airport customers and public lighting across the Airport
- upgrading two substations – in conjunction with United Energy as part of its upgrade program
- undergrounding existing overhead power cables
- removal of the electricity network from areas where it is no longer required
- relocation of an existing backup generator.

Care will be taken for continuity of supply throughout any works on the electrical network. The airfield has two lit runways and two lit associated taxiways and any change to the electricity that supplies those lights will be managed very closely and in conjunction with Airservices.

Moorabbin Airport notes that the existing electricity network did not encounter any capacity issues during the development carried out during Master Plan 2015.

10.7

GAS

10.7.1 – Existing Infrastructure

There is a natural gas reticulation network surrounding the Airport. Significant gas assets near Moorabbin Airport include:

- transmission pressure gas in Centre Dandenong Road
- high-pressure gas in Boundary Road
- high-and low-pressure gas in Lower Dandenong Road
- high-pressure gas reticulated in Grange Road.

There are also existing gas assets at Chifley Business Park at the Airport.

10.7.2 – Development, Maintenance and Management

The gas reticulation network is owned and maintained by MultiNet Gas. Installation of further gas assets may be funded by Moorabbin Airport or MultiNet Gas. Once complete, the assets would be transferred to MultiNet Gas, who would own, maintain and manage them.

10.7.3 – Risk Mitigation

MultiNet Gas (as asset owner) is responsible for risk mitigation strategies for the gas network near and at the Airport.

10.7.4 – Accommodating Airport Growth

MultiNet Gas has indicated that it currently does not have plans to relocate or extend the network. Gas is not considered an essential service in this Master Plan. It is unlikely that natural gas infrastructure will be installed in future developments at the Airport during this Master Plan unless it is required by a Moorabbin Airport customer.

Moorabbin Airport will plan for suitable reserves in road sections which would allow for installation of a future natural gas network.

10.8

TELE-COMMUNICATIONS

10.8.1 – Existing Infrastructure

Existing infrastructure at and near the Airport includes:

- Telstra assets in all streets surrounding the Airport
- Telstra and NBN assets within the Airport.

There is also an Airservices Non-Directional Beacon on the western side of the Airport used by general aviation aircraft for navigation and training, and this is maintained by Airservices.

10.8.2 – Development, Maintenance and Management

Moorabbin Airport is responsible for funding, designing, and installing the telecommunications network including NBN infrastructure at the Airport, including reticulation of pits and conduits to allow for cables.

Telecommunication providers (such as NBN) are responsible for reviewing and approving network plans and designs and installing cables. Telecommunications providers then take ownership of the asset once it is complete. NBN will take ownership of future telecommunications assets at the Airport.

Moorabbin Airport customers may also undertake works relating to telecommunications, depending on the nature of the building, such as installation of CCTV and security systems.

10.8.3 – Risk Mitigation

Telstra and NBN (as the asset owners) are responsible for risk mitigation strategies for the telecommunications network at the Airport.

10.8.4 – Accommodating Airport Growth

Future developments of the electrical network at the Airport are likely to include:

- installing and reticulating new conduits and pits in roads
- extending and reticulating conduits and pits in roads
- establishing new connections to existing cables.

It is considered unlikely that capacity issues in the surrounding telecommunications network will impact development at the Airport.

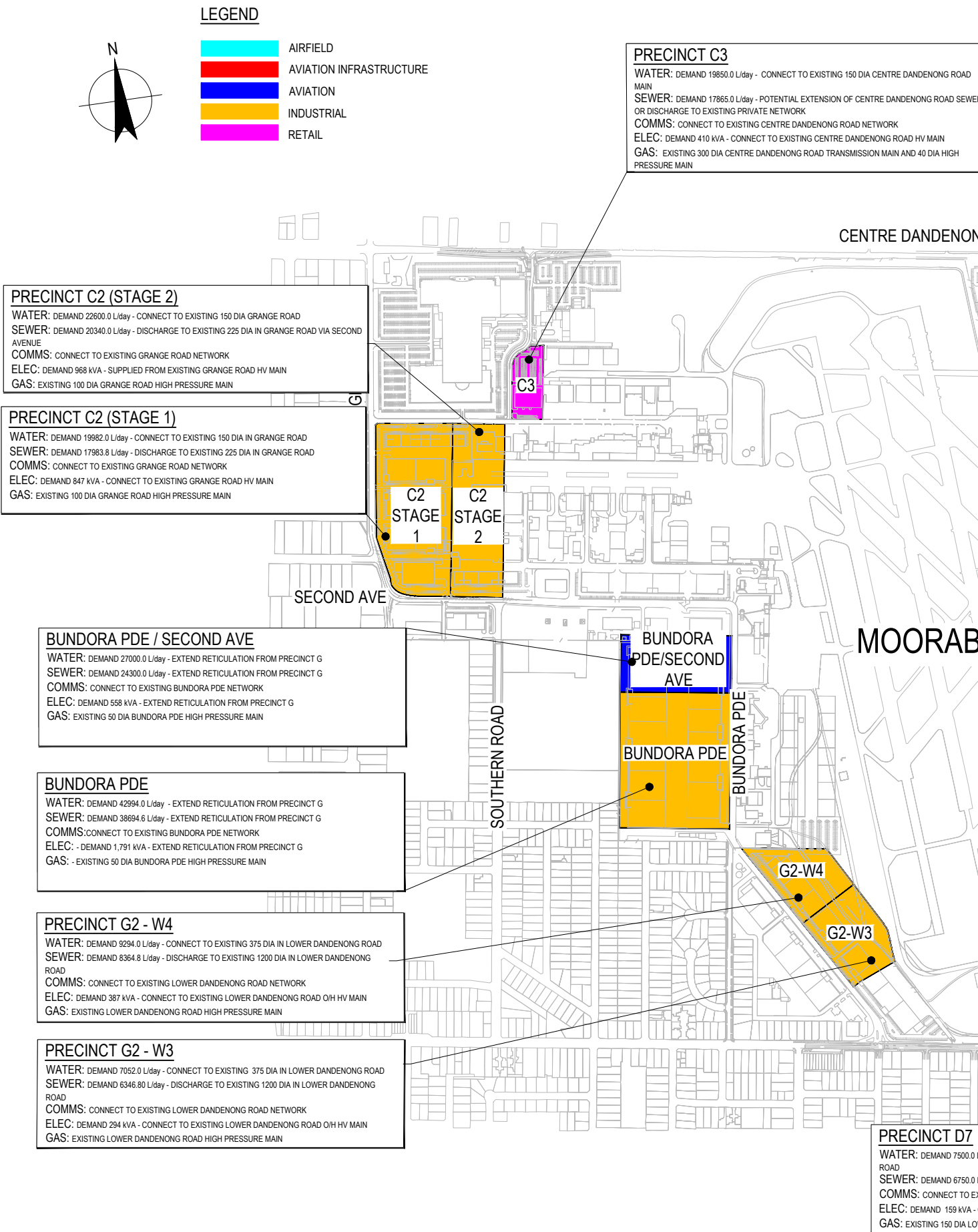
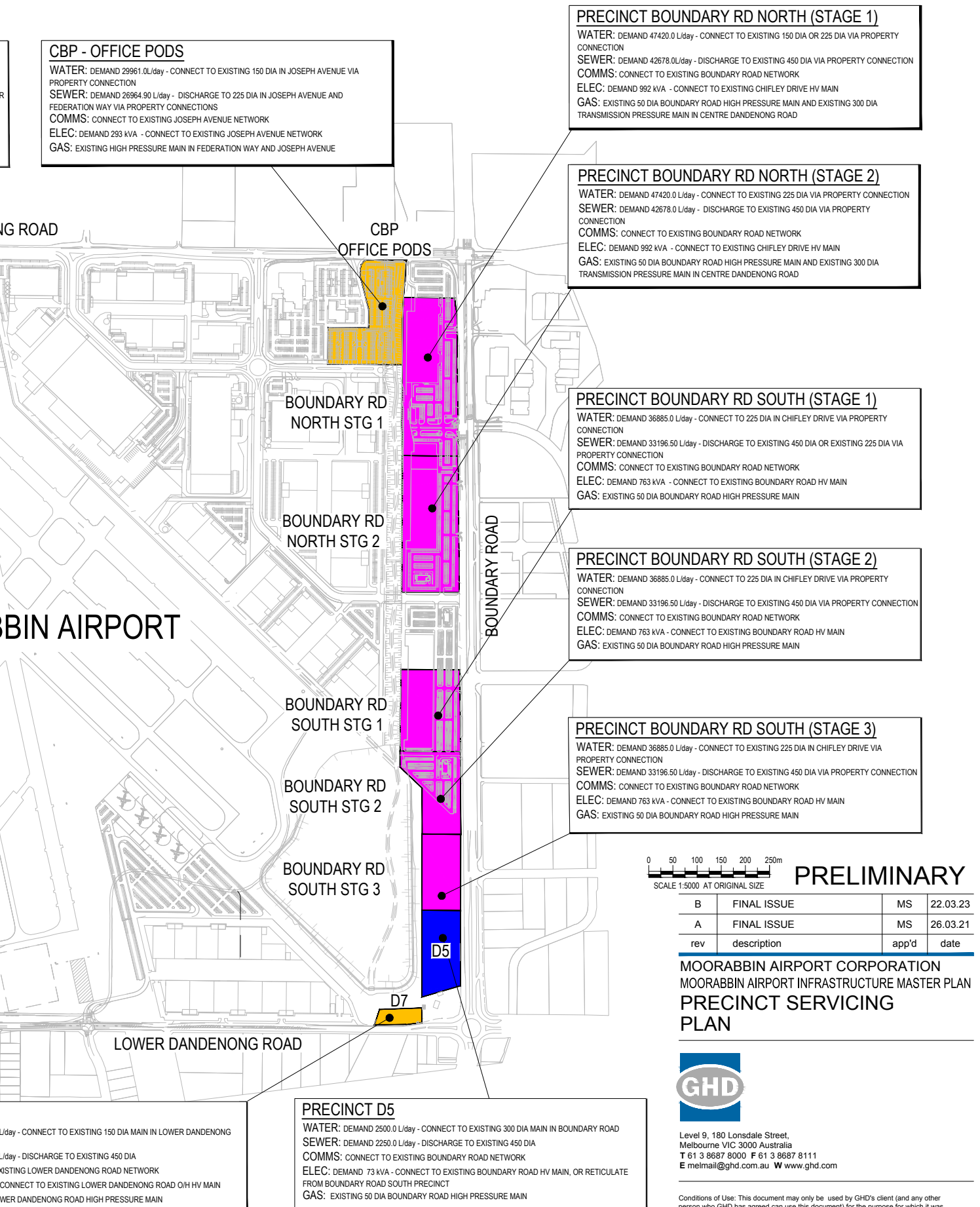


Figure10.1w – Types of Activity Centre

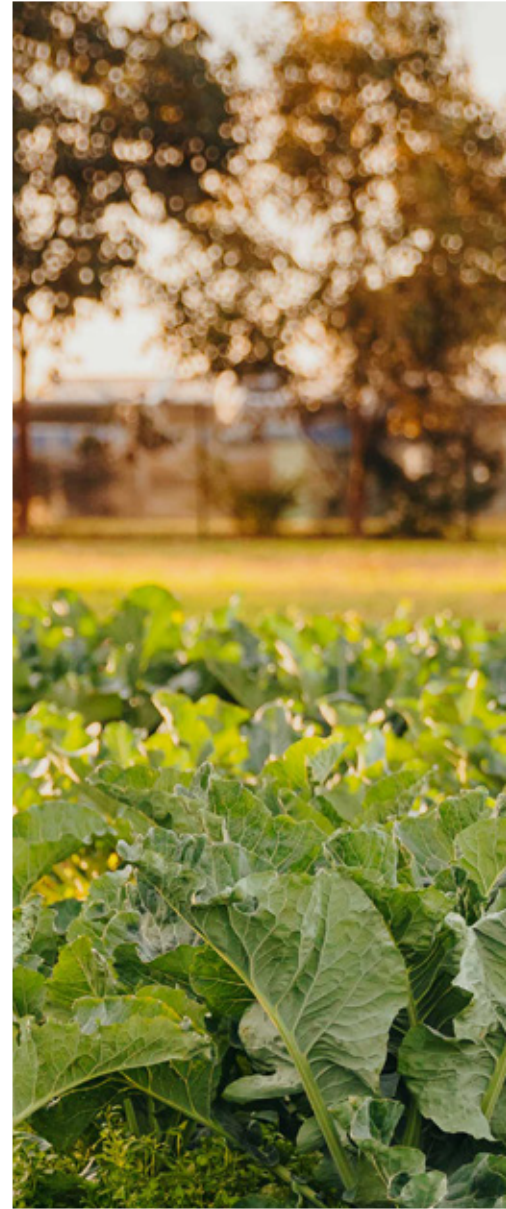




11

AIRPORT ENVIRONMENT STRATEGY

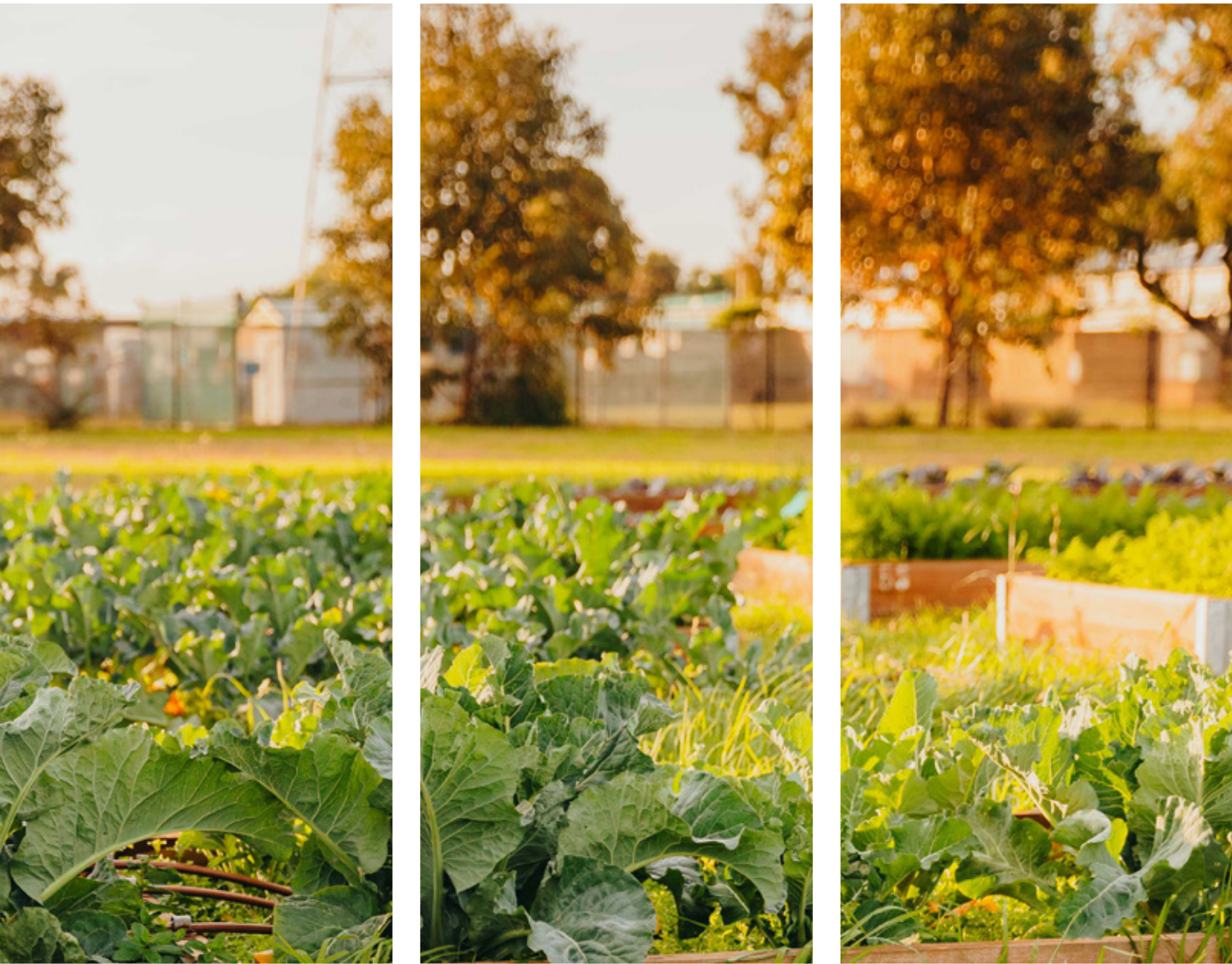




At Moorabbin Airport, we're committed to ongoing sustainability initiatives via our Green Plan with environmental elements including waste management, renewable energy generation, carbon emissions reduction, water conservation, and actively managing supply chains.

We practice safe, compliant and effective environmental management, and we encourage innovative and sustainable development that complements other urban sites in the City of Kingston.

Moorabbin Airport, as part of the Goodman Group, achieved carbon neutral operations in 2021 and we have maintained this status under the Climate Active Carbon Neutral Standard. Pleasingly, aviation customers delivering 25% of aviation activity have achieved carbon neutrality by reducing their own emissions and investing in projects that offset their remaining annual carbon emissions.



Moorabbin Airport has:

- planted 560 trees in the last five years
- another 500 trees will be planted during this Master Plan
- Moorabbin Airport implements and complies with a total of 60 Environmental Action Plans including 10 direct and 50 sub-action plans every year
- the Airports Act regime provides a comprehensive environment regulatory regime overseen by the statutorily appointed Airport Environment Officer and administered by Commonwealth Departments
- ongoing environmental management will retain the safe reputation of the Airport site including through responsible PFAS management.

11.1

11.2

INTRODUCTION

AIRPORT ENVIRONMENT STRATEGY OVERVIEW

Moorabbin’s Environment Strategy 2021 to 2029 (AES) details the Airport’s environmental objectives and commitments, building on environmental achievements from Master Plan 2015.

The Airports Act provides that an AES:

- sets out Moorabbin Airport’s objectives for environmental management
- oversees that all operations at the Airport are undertaken in accordance with relevant environmental legislation and standards
- establishes a framework for assessing compliance at the Airport with relevant environmental legislation and standards
- promotes the continual improvement of environmental management at the Airport.

Moorabbin is a safe, premium, green site, and the AES is part of delivering this.

The AES replaces the 2015 to 2020 AES.

The eight-year AES which included extensive public consultation, has been prepared so that the Airport complies with the Airports Act.

The community and Airport users will be consulted for updates to any future master plans through the CACG and other community forums. For ongoing compliance and awareness, stakeholders will be briefed, as outlined in Chapter 13 – Implementing Master Plan 2021.

The AES, approved by the Commonwealth Minister, is valid for eight years, and outlines environmental objectives and action plans for the Airport. It incorporates key Commonwealth environmental legislation including:

- Airports Act
- *Airports (Environmental Protection) Regulations 1997* (Cth)
- EPBC Act.

Chapter 11, Sections 11.7 to 11.16 sets out environmental issues relating to this Master Plan including the approach to its implementation.

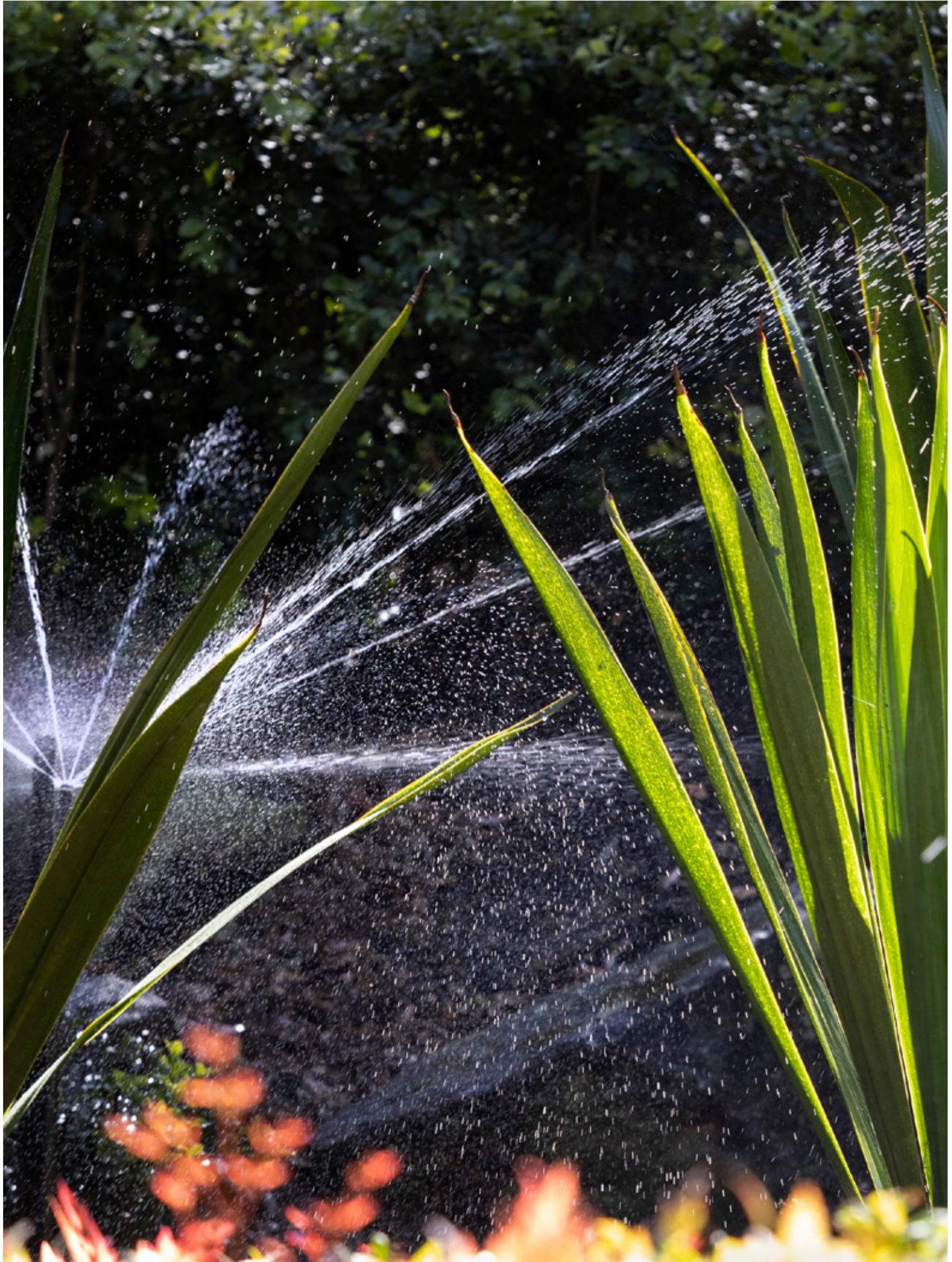
Requirements for an Environment Strategy are prescribed in section 71(2)(h) of the Airports Act and regulations 5.02A and 5.02B of the *Airports (Environmental Protection) Regulations 1997* (Cth), which require an AES to include:

- The Airport’s environmental management objectives
- specific objectives which are set out in each Environmental Action Plan (EAP)
- identification of environmentally significant areas (nil at the Airport)
- sources of environmental impacts relating to Airport operations that are captured through the Environmental Management System (EMS)

- studies, reviews and monitoring to be carried out
- specific measures to be carried out for preventing, controlling or reducing the Airport’s environmental impact
- details of consultations, and outcomes, undertaken in preparing the strategy (see Chapter 4 Master Plan Process).

Processes and procedures to prevent, mitigate and manage potential environmental issues that could arise during the term of this Master Plan 2021 are in the EAPs.





11.3

KEY ACHIEVEMENTS

Significant progress has been made since Master Plan 2015 including:

- continued greening of the Airport site with 1,440 trees increased to 2,000, as well as shrubs and ground cover increased from 50,000 to 100,000 over the last five years
- two kilometres of new planting along the street side of Duigan Drive, Northern Avenue, Second Avenue and Boundary Road
- upgrading aviation landscape including installing smart irrigation and drought tolerant plants
- creating a Vegetation Management Plan
- biannual testing and reporting of storm water
- testing of soil and groundwater
- clearing two kilometres of drain and placing geo fab to increase water flow and lower maintenance
- opening new western connector road, Duigan Drive, delivering on the plan to build a road closer to the airfield and keeping Bundora Parade closed to through traffic.

containing PFAS has resulted in elevated PFAS levels being found in soils, surface water and groundwater in most urban areas.

Moorabbin Airport has never used PFAS on the Airport site. However, PFAS is present on the Airport due to Commonwealth agencies having historically used firefighting foams containing PFAS (prior to privatisation) when undertaking aviation rescue and firefighting activities.

Despite having no responsibility for the occurrence of elevated legacy levels of PFAS at the Airport, Moorabbin Airport has invested over \$3 million in assessment, management and remediation of elevated legacy levels of PFAS. Moorabbin Airport expects to incur further costs in the assessment, management and remediation of elevated legacy levels of PFAS in the future.

Elevated levels of PFAS originating at the Airport will be managed in accordance with relevant legislative and regulatory framework (including the PFAS National Environmental Management Plan (NEMP) 2.0 as updated from time to time) and in a manner that minimises any potential risk to the wider environment – while maintaining the operations and activities being carried out at the Airport. At the date of this Master Plan 2021, public consultation had closed on the draft NEMP 3.0.

Moorabbin Airport conducts significant testing to identify elevated legacy levels of PFAS at the Airport. In consultation with the AEO, Moorabbin Airport has undertaken surface water, groundwater and soil testing. Moorabbin Airport also incorporates testing for PFAS in our development processes. On the basis of risk assessments, technical consultants are required to assess whether there are any analytes (including PFAS) with concentrations above relevant guidelines present in the soils prior to commencing a development.

Moorabbin Airport continues to engage with the AEO to arrange an appropriate remediation response and identify the actions that the AEO could require of the

responsible polluter. While the AEO has not ordered any remedial action to date, Moorabbin Airport will continue to work with the AEO to ensure the proactive and responsible management and remediation of any elevated legacy PFAS levels at the Airport.

Moorabbin Airport has invested in establishing AEO-approved stockpile repositories of soil with elevated legacy levels of PFAS in suitable locations where it can be appropriately managed. All stockpiles have been engineered (including with geofab) to minimise any transmission of legacy PFAS and any effect on Airport operations Moorabbin Airport has taken an industry leading approach to the management of elevated levels of PFAS..

Moorabbin Airport will continue to conduct testing for elevated legacy PFAS at the Airport (as required) and engage with the AEO to ensure media with elevated levels of PFAS are appropriately managed and remediated, including to continue to ensure that PFAS levels do not pose a threat to human health.

We are also continuing to work with Airservices, the Department of Infrastructure, and other relevant authorities in relation to responsibility for the elevated legacy PFAS levels at the Airport and the ongoing management and remediation of elevated legacy PFAS levels. Moorabbin Airport has not been involved in the use of firefighting foam containing PFAS or aviation rescue and firefighting activities at the Airport.

11.4

PFAS MANAGEMENT

Moorabbin Airport responsibly manages Airport environmental issues, having regard to best practice, the views of regulators and the needs of aviation users and the community. This includes management of elevated PFAS levels at the Airport, where we have taken an industry leading approach, in conjunction with Airservices, the Commonwealth Government and the AEO.

PFAS are a group of manufactured chemicals previously used in firefighting foams and other industrial products. PFAS are persistent chemicals that do not break down easily. Historical use of products

11.5

ENVIRONMENTAL POLICY

The Environment Policy endorsed by the Moorabbin Airport Board sets out the overarching environmental objectives for the Airport.

Moorabbin Airport Corporation
Environment Policy

Moorabbin Airport 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 the Moorabbin Airport.

This policy applies to parts of the Airport which we control and influence.

With the commitment of the Board and senior management, Moorabbin Airport 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 Airport activities by implementing pollution prevention and control measures and increasing the environmental awareness of Airport stakeholders
- complying with statutory requirements about existing laws, regulations, codes of practice and quality standards
- adopting and exceeding industry standards applicable to the environmental management of Airports
- implementing and maintaining the Environmental Policy by adopting the Moorabbin Airport 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
- cultivating employee commitment to achieving environmental objectives
- implementing the Moorabbin Airport Environment Strategy and Environment Management System.

The Board and Senior Management will provide appropriate resources to enable Moorabbin Airport to succeed in meeting this commitment.

11.6

IMPLEMENTING THE ENVIRONMENT STRATEGY

The Moorabbin Airport environmental management framework is based on implementing, monitoring and reviewing four components - Moorabbin Airport Environment Policy, AES, EMS and EAPs.

The AES sets out management's approach for monitoring, reporting and preventing adverse environmental impacts and provides a framework to manage and implement procedures and EAPs.

The Moorabbin Airport EMS is the system applied to mitigate, manage and improve environmental impacts from Airport operations. It's based on the AS/NZS ISO 14001:2015 Environmental Management Systems – Requirements with Guidance for Use system of continuous improvement.

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 2021 – 2029 AES. EAPs have been developed for:

- Environmental Management System
- Air quality
- Ground based noise
- Stormwater and wastewater quality
- Soil and groundwater quality
- Hazardous materials
- Waste management
- Energy management and resource efficiency
- Flora, fauna and landscape
- Aboriginal and European heritage management.

Moorabbin Airport is committed to sustainable outcomes seeking to minimise our environmental impact by taking action - targeting net zero by 2050.



Moorabbin Airport is increasingly one of the most sustainable estates within the City of Kingston and metropolitan Melbourne.

11.7

ENVIRONMENTAL MANAGEMENT SYSTEM

11.7.1 – Objectives and Overview

Environmental Management System objectives from 2021 to 2029 are:

- Moorabbin Airport will continue to implement an environmental management system (EMS) appropriate to the scale and size of its operations, which is based on and maintains consistency with AS/NZS ISO 14001:2016 (to be updated in this Master Plan 2021) Environmental Management Systems – Requirements with Guidance for Use
- Moorabbin Airport will maintain and review the EMS and Environment Policy in line with AES commitments.

Environmental Management System Overview

The Moorabbin Airport EMS is the system developed to mitigate, manage and improve environmental impacts associated with Airport operations. The EMS Manual describes the processes for identifying and managing the environmental risks associated with Airport operations.

11.7.2 – Scope

The Moorabbin Airport EMS scope is specified in the Moorabbin Airport Environment Policy and applies to all aspects where Moorabbin Airport 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 Moorabbin Airport. These are managed by Airservices, a Commonwealth Government Agency under the *Air Navigation Act 1920* (Cth) and *Air Navigation Regulations 2016* (Cth).

11.7.3 – Planning

To implement the Environment Policy, the Moorabbin Airport EMS has established procedures for:

- systemic review of all activities to identify the potential environmental impacts
- identifying and staying current with legal and other requirements with which the Airport must comply
- establishing environmental performance objectives and targets to manage identified impacts (see sections 11.7 to 11.16)
- preparing EAPs, improvement programs and controls to meet environmental objectives and targets.

11.7.4 – Implementation and 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:

- Moorabbin Airport Board of Directors are responsible for providing financial support to implement the AES, and provide approval of the Environment Policy
- Moorabbin Airport CEO is responsible for facilitating the Board's commitment to implement the Environment Policy and Environment Strategy
- Moorabbin Airport Management Team is responsible for monitoring and initiating outcomes for the environmental management and performance of The Airport. Moorabbin Airport management will nominate a team member to maintain the EMS manual, procedures and updates. The management team will be supported by qualified environmental professionals. The professional qualifications of persons responsible for carrying out the monitoring will be in accordance with Australian Standards.

- Department of Infrastructure is responsible for enforcing the Airports Act and the Commonwealth Government's aviation policy. Department of Infrastructure monitors the environmental performance of airports via AEO reports and Annual Environmental Reports
- Airport Environmental Officer is appointed by Department of Infrastructure and is responsible for regulating environmental issues at Moorabbin Airport. The AEO is involved in regular meetings with Moorabbin Airport and conducts site inspections and facility audits
- Airport Building Controller is appointed by Department of Infrastructure and is responsible for ensuring activities at Moorabbin Airport to meet building and engineering standards
- Moorabbin's customers and contractors have a responsibility to assist the Airport achieve its environmental compliance and performance. Customers must comply with environmental management requirements in accordance with the AES part of Master Plan 2021 and with legislation, standards and guidelines.

Competence, Training and Awareness

Our management team and qualified consultants implement the Moorabbin Airport environmental management framework in compliance with regulations and Airport standards, within AES timeframes.

Project management of environmental work is undertaken by qualified environmental consultants familiar with airport legislation and environmental issues management. The Moorabbin Airport EMS establishes a process for identifying and delivering environmental training which includes:

- induction training for new staff, contractors and other stakeholders regarding Moorabbin Airport Environment Policy and EMS
- training for all staff on implementation of procedures in the EMS





- special training for staff with specific roles and responsibilities to provide the skill and competences required to fulfil these.

All training is done in accordance with applicable standards appropriate for the environmental management of the Airport as advised by consultants engaged by Moorabbin Airport.

Communication and 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 EMS and includes:

- monthly management meetings involving the AEO
- quarterly meetings with relevant stakeholders and the CACG
- participation in the Australian Airports Association
- participation in environmental forums including with other airports
- responding to public enquiries on environmental issues such as noise from aircraft on the ground for maintenance purposes
- community consultation on major airport development
- Environmental Review Program (environmental assessments and audits)
- ongoing environmental training and education for Moorabbin Airport staff
- on-site environmental management for projects of environmental risk.

The preliminary draft AES was included in the Preliminary Draft Master Plan 2021 and was subject to consultation from the Commonwealth Minister.

Environmental issues raised by the CACG were considered prior to finalising this AES.

Document Control

The Moorabbin Airport EMS comprising Moorabbin Airport Environment Policy, EMS Manual and Environmental Operating Procedures, will continue to be reviewed and revised. The EMS document control

process gives guidance on the distribution, review, availability and disposal of EMS documents.

Operational Control

Moorabbin Airport EMS includes a process for identifying and controlling activities associated with potential environmental impacts. Procedures to avoid adverse environmental outcomes are developed and maintained.

Emergency Preparedness

Moorabbin Airport EMS includes a process for identifying and planning responses to incidents and emergency situations that may have adverse environmental impacts. A live emergency exercise is undertaken every two years and a desktop emergency exercise is undertaken in the alternate years. Based on these exercises, the procedures are reviewed regularly and revised as necessary.

Checking and Corrective Action

The following environmental monitoring and reporting actions are undertaken so the Airport complies with legislative requirements:

- Environmental Monitoring and Evaluation. Moorabbin Airport EMS includes an environmental monitoring and assessment program for the Airport environment. In consultation with the AEO, monitoring includes environmental, storm water, surface water, underground storage tank integrity, fuel depots, and development sites. Sampling is undertaken when a suspected pollution event occurs. All monitoring and assessments are conducted by qualified professionals, in accordance with Australian Standards appropriate for the environmental management of the Airport as advised by consultants engaged by Moorabbin Airport or National Association of Testing Authorities Australia
- Non-Conformance and Corrective Action. Moorabbin Airport EMS includes a process for investigating non-conformances and managing corrective and preventive actions. Outcomes of a non-conformance investigation may result in consultation

with the AEO or other authorities, amendment of an existing procedure, development of a new procedure, and/or additional training and instructions

- Records and Environment Registers. Moorabbin Airport EMS includes a process to demonstrate overall environmental performance and compliance. All records are identified, stored, protected, retained and disposed in appropriately. Moorabbin Airport's Environmental Site Register (ESR) is required by the *Airports (Environmental Protection) Regulations 1997* (Cth) and provides a record of the Airport's environmental condition. Moorabbin Airport's ESR is largely electronic and supplements the day-to-day environmental management records. The ESR comprises:
 - 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
 - Legal and other Requirements Register – for a summary of statutory and other requirements for Moorabbin Airport's operations. This register is reviewed and updated by a qualified external consultant.
- EMS Audit. Moorabbin Airport EMS includes a process for audits of EMS elements at least once every AES period. An external audit of the Moorabbin Airport EMS in 2011, which conforms with AS/NZS ISO 14001:2016 Environmental Management Systems Requirements with guidance for use, recommended improvements that are in progress
- Management Review. EMS requires the senior management team to annually review the EMS for ongoing suitability, adequacy and effectiveness. The reviews include results of audits, progress in meeting Moorabbin Airport

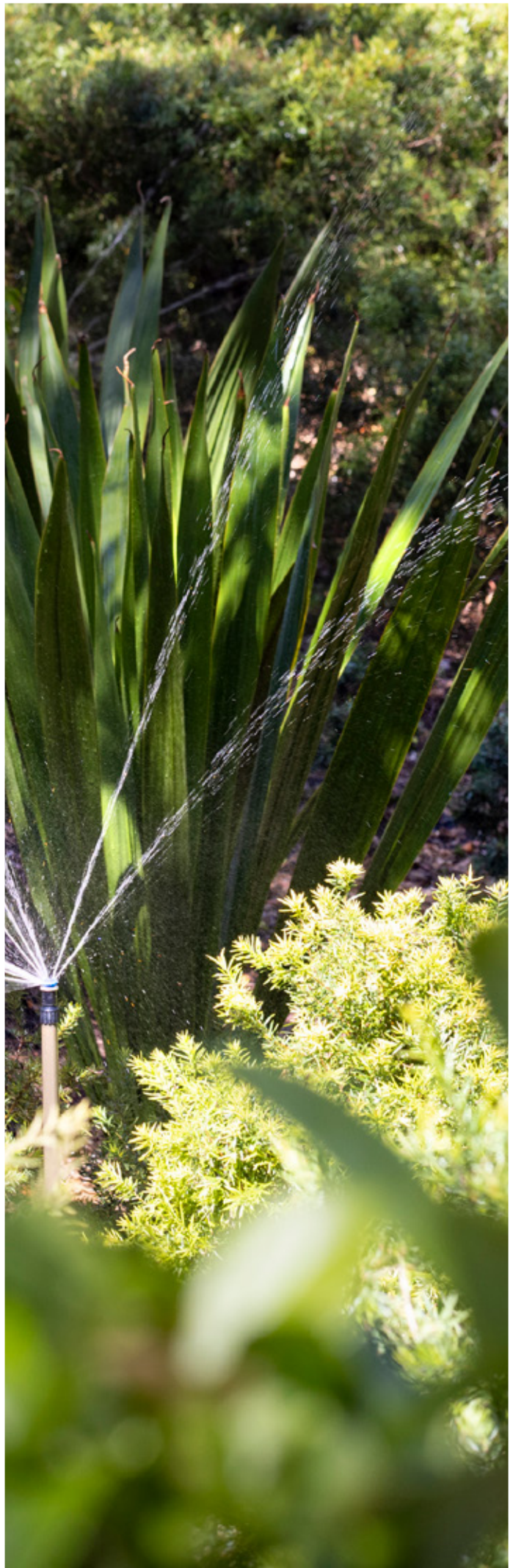
environmental objectives and any changed circumstances, and deciding if any revision of the EMS is warranted.

Annual Environmental Reporting

Moorabbin Airport is required to submit an Annual Environment Report (AER) to the AEO and Department of Infrastructure. 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 Moorabbin Airport's performance in achieving the policies and targets of the AES
- details of Moorabbin Airport's progressive management of enduring pollution problems at the Airport
- reports on any pollution incidents or other contraventions that have occurred
- monitoring and reporting of National Pollutant Inventory (NPI) reports from Moorabbin Airport customers.

Moorabbin Airport 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 11.



11.7.5 – Environmental Site Reviews

Environmental site reviews are undertaken to:

- identify environmental risks prior to, during, and on completion of development
- identify and monitor risks associated with operator activities and facilities at the Airport.

We have identified three Tiers of operators at the Airport:

- Tier 1 – operator activities and facilities having medium and high environmental risks
- Tier 2 – lowrisk
- Tier 3 – negligible risk

Under the environment review system, Airport customers conduct self-audits and submit them to Moorabbin Airport for review:

- Tier 1 – including Moorabbin Airport conducting self-audits annually
- Tier 2 – operators conduct self-audits every three years
- Tier 3 – operator activities are inspected by Moorabbin Airport as required.

11.7.6 – Development Control

To help manage compliance with the Master Plan and AES, all building proposals are reviewed by Moorabbin Airport management and the AEO prior to development. Environmental site reviews are carried out if required.

We require a Construction Environment Management Plan (CEMP) by contractors for any development projects on the Airport, to be completed during construction. The CEMP Guidelines have been prepared to assist construction contractors to identify and manage environmental risks associated with construction work at Moorabbin Airport.

CEMPs are prepared to manage potential environmental risks of buildings, car parks and other major developments. They also flora and fauna, dust, storm water, runoff, waste, contaminated soil and noise.

Ongoing management is incorporated into property-specific monitoring programs or Environmental Management Plans.

All new customers are required to develop Operational Environmental Management Plans (OEMP) to show how their day-to-day activities comply with regulations. Moorabbin Airport customers are required to undertake activities in an environmentally responsible manner, in compliance with regulations and legislations.

Moorabbin pioneers the practise of safe, compliant and effective environmental management, including continuing to green the Airport site and through responsible management of environmental issues.

11.7.7 – Achievements 2015 to 2020

2015	Previous AES was approved.
Ongoing	Moorabbin Airport continued to provide advice to customers during site inspections and follow up environmental audit inspections.
Ongoing	Environmental Self Audit Reviews were ongoing throughout the AES period. Follow up environmental audits and inspections were carried out by Moorabbin Airport.
Ongoing	Training and consultation amongst Airport staff, customers and operators was undertaken to increase awareness of environmental issues.
Ongoing	Moorabbin Airport continued to review and update CEMPs to manage and monitor potential risks to the environment associated with the development of sites at the Airport.
2015-2020	The Airport Emergency Procedures have been reviewed as part of an annual Moorabbin Airport Emergency exercise to practice emergency preparedness.
Ongoing	Moorabbin Airport continued to work with CASA, Government and local operators to increase safety awareness at Moorabbin Airport.
Ongoing	Moorabbin Airport has retained Airport Environmental Consultants, to assist with environmental matters on an ongoing basis.
Ongoing	A Contaminated Sites Register, Environmentally Significant Facilities Register, Document Register and a Customer Audit Register have been updated as has been necessary to improve accessibility of this information. Moorabbin Airport has continued to routinely check that documents are updated as new information becomes available.
Ongoing	Moorabbin Airport continued to report, as required, on the CACG meetings when environmental issues were raised.
Ongoing	Moorabbin Airport continued to carry out monthly AEO meetings and provide the Department of Infrastructure with the Annual Environment Report.
Ongoing	Moorabbin Airport included environmental information in the Airport communications.
2016	Moorabbin Airport partnered with Fareshare, a Melbourne-based Food Rescue organisation to host a one-acre charity garden to grow fresh vegetables that are used to provide meals each year to Victoria's hungry.



11.7.8 – Environmental Action Plans 2021 to 2029

Date / Responsibility	Management Action
Moorabbin Airport (2021 – 2029)	Environmental Management Framework – Continually improve systems appropriate to Moorabbin Airport's scale of operations, including review of the Environment Policy, EMS Manual and the Environmental Operating Procedures to ensure they remain current.
Moorabbin Airport (Ongoing)	<p>Communication and Consultation</p> <ul style="list-style-type: none"> - continue quarterly CACG meetings - continue AEO monthly and issue-specific meetings - submit Annual Environment Reports to Department of Infrastructure that will include an annual EMP for the following strategy year - report to customers, Moorabbin Airport maintenance team and contractors following site visits and environmental audits - Moorabbin Airport continually updates the website to provide environmental information relevant to operators at the Airport.
Moorabbin Airport (Ongoing)	Environmental Registers – Regularly maintain the Environmental Registers for inclusion in the Airport Environment Reports.
Moorabbin Airport (2021 – 2029)	<p>Environmental Training and Awareness</p> <p>Moorabbin Airport continues to raise environmental awareness among staff and contractors to ensure compliance with environmental objectives through:</p> <ul style="list-style-type: none"> - training – provide ongoing education, training and advice to staff, customers and Airport users on EMS improvement practices; - environmental site reviews - face to face meetings - web based advice.
Moorabbin Airport (Ongoing)	Development Control – continue to ensure all operators and projects that have the potential to cause environmental harm produce and follow an OEMP and CEMP.
Moorabbin Airport (Ongoing)	Development Control – continue Annual Environmental Site Reviews to assess compliance of customers, contractors and Moorabbin Airport facilities.
Moorabbin Airport /AEO (by 30 June each year)	Environmental Site Reviews – environmental Site Reviews will be conducted on an annual basis by a representative of Moorabbin Airport and the AEO.
Moorabbin Airport (Annually)	EMS audit – Moorabbin Airport 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 (where such audits are to be consistent with AS/NZS ISO 14001:2016 (to the extent required and updated from time to time))

11.8

AIR QUALITY

11.8.1 – Objectives and Overview

Air quality objectives for the Airport are to:

- minimise air emissions from ground-based activities (including ozone depleting substances)
- comply with the *Airports Act, Environment Protection Act 2017* (Vic) (EP Act), the Environment Reference Standard (to the extent applicable) and other requirements for emissions.

The Airport is an urban site, and is surrounded by major roads including Dingley Bypass and the new Mordialloc Freeway. Air emissions at the Airport occur from urban uses and ground-based operations and activities.

Emissions from Airport activities are one to two orders of magnitude lower than those of neighbouring off-site sources like roads.

Air emissions in the Airport boundary are regulated by the Airports Act and Regulations. Air quality emissions outside the boundary is set in the Environment Reference Standard and the Publication 1961: Guideline for assessing and minimising air pollution.

An AES is not required to address aircraft noise or emissions during flight, take off, landing or taxiing.

Sources of air pollution at the Airport include construction activities, vehicle emissions, fuel storage and refuelling, ozone depleting substances and spray painting.

11.8.2 – Current Management Practices

Moorabbin Airport maintains air quality initiatives including:

- reviewing air monitoring results prior to removing asbestos per the Asbestos Management Plan (2018)
- providing advice to customers through the Environmental Site Review Program on:
 - installing, maintaining and using air pollution control equipment when undertaking activities like spray painting and degreasing
 - storage and handling of chemicals to minimise the potential for escape and/or process emissions
 - safe and responsible disposal of chemicals and storage containers
- encouraging customers to assess and minimise chemicals used
- advising fuel supply companies on the Airport of their NPI reporting requirements
- monitoring Moorabbin Airport and Airport customer facilities for ozone depleting substances identified during site visits, and if required, assisting to phase out its storage and/or use.

Moorabbin aims to achieve carbon neutrality by 2025. Pleasingly 25% of all aviation activity at the airport has already achieved carbon neutrality.

11.8.3 – Achievements 2015 to 2020

Date	Initiative and Status
Ongoing	Maintenance and regular cleaning of fleet vehicles to ensure emissions were minimised.
Ongoing	Minimisation of dust generation and soil going off-site onto roads.
Ongoing	Carbon dioxide emissions and fuel consumption principles were considered prior to the purchase of new vehicles.

11.8.4 – Environmental Action Plans 2021 to 2029

Date / Responsibility	Initiative and Status
Moorabbin Airport (Annually)	Training and Awareness – Provide ongoing education, training and advice to staff, customers and Airport users on air quality improvement practices.
Moorabbin Airport / AEO/ Airport customer (As required)	Development Control – Ensure air quality issues, particularly dust suppression plans are included in CEMPs and OEMPs.
Moorabbin Airport (As required)	Monitoring – Monitoring will seek to confirm compliance with regulatory requirements (as required) and ensure regular servicing of vehicles and equipment.
Moorabbin Airport (2021 – 2029)	Environmental Site Reviews – Review facilities and operations on the Airport to assess compliance with relevant legislation and opportunities for improvement in air emissions at the Airport.

11.9

NOISE

11.9.1 – Objectives and Overview

Airport noise management objectives include:

- minimising potential noise nuisance associated with aircraft ground operations
- complying with requirements of the Airports Act and Regulations.

The Regulations do not apply to noise generated by aircraft in flight, taking off or taxiing at the Airport. The Airport is responsible for working with aircraft operators to manage noise from ground running of aircraft, aircraft engine testing and construction.

Local aircraft noise is mostly due to flight training activities and the metropolitan location of the Airport.

Noise generated from aircraft or maneuvering at Moorabbin Airport is controlled by the *Commonwealth through the Air Navigation (Aircraft Noise) Regulations 2018* (Cth). As Moorabbin Airport is not a Commonwealth Statutory Authority, it doesn't have a role in regulating aircraft noise, however has taken active measures to manage aircraft noise effects on areas beyond the Airport's boundaries (see Chapter 7).

The potential for noise to impact neighbouring areas is considered low due to the distance to surrounding residential areas and the nature of commercial and aviation activities at the Airport.

Over the last six years, Moorabbin Airport has worked with community and aviation stakeholders to refine the Fly Friendly program which identifies practical measures to decrease noise like limited training hours and flights over residential areas and promoting good pilot behaviour.

All aircraft maintenance and engine testing activities are done in aircraft hangars or remote parts of the airfield to minimise noise generated from ground running activities and away from residential areas. The engine test cell at the south of the airfield, which was previously used for engine testing, was removed in 2018. That removal has significantly reduced the potential for excessive noise emissions, and has been received positively by community groups.

We will continue to monitor noise impacts, identify best practice approaches to manage community concerns and provide resources about aviation noise impacts.

Construction at the Airport requires noise management control Contractors should provide a CEMP which includes noise management strategies and procedures, which are inspected regularly to see they meet the CEMP's requirements.

11.9.2 – Current Management Practices

Ground-based noise management and mitigation measures implemented at Moorabbin Airport include:

- consulting with government, communities, Airport users, regulators, the AEO and Airservices to provide solutions to mitigate noise impacts
- undertaking regular inspections of major construction sites by Moorabbin Airport management, external consultants and the AEO where necessary, so CEMP requirements are being met
- implementing the Fly Friendly program
- monitoring and reporting ground-based noise complaints.

11.9.3 – Achievements 2015 to 2020

Date	Initiative and Status
Ongoing	Moorabbin Airport has complied with legislative requirements with relating to the generation of noise.
Ongoing	Relevant aviation customers were continually advised to adhere to Moorabbin Airport's ground running procedures that minimise potentially excessive noise emissions.
Ongoing	Moorabbin Airport has continued to engage stakeholders and refined the Fly Friendly program to support flying activities that are considerate of local residents.
2019	After closing access to the Airport site from the south along Bundora Parade to address community concern about traffic flow and noise, an alternate route via Duigan Drive was opened up located further from residential properties on Bundora Parade.

11.9.4 – Environmental Actions 2021 to 2029

Date / Responsibility	Initiative and Status
Moorabbin Airport / Customers (ongoing)	Communication and Consultation – consulting with government, local Council, local communities, Airport users, regulators, the AEO and Airservices to provide solutions to mitigate noise impacts.
Moorabbin Airport / AEO / Airport customer (ongoing)	Development Control – ensure potential noise emissions, including mechanical equipment and noise during construction have been considered in CEMPs and OEMPs.
Moorabbin Airport (2021 – 2029)	Training and Awareness – provide ongoing education, training and advice to staff, customers and Airport users on noise improvement practices.
Moorabbin Airport (ongoing)	Training and Awareness – encourage relevant Airport users to comply with the requirements of Ground Running Procedures and the Fly Friendly program.
Moorabbin Airport (ongoing)	Monitoring – Whilst ground based noise monitoring has largely not been conducted at the Airport in the past (as it was not deemed to be required), Moorabbin Airport will periodically consider the need for monitoring and undertake as required.
Moorabbin Airport (ongoing)	Training and Awareness - provide ongoing education, training and advice to staff, customers and Airport users and encourage new and existing customers to minimise noise.

11.10

STORMWATER QUALITY AND WASTEWATER MANAGEMENT

11.10.1 – Objectives and Overview

Stormwater objectives include:

- minimise potential impacts of Airport operations on storm water
- comply with requirements of the *Airports (Environmental Protection) Regulations 1997* (Cth) or relevant State environmental obligations
- encourage WSUD principles to future developments
- implement an Emergency Preparedness Incident Response Program in the event of a spill
- ensure all liquid waste is disposed of in compliance with relevant legislation
- ensure disposal of liquid waste to the sewer system is appropriately licensed..

The flow of storm water at the Airport is primarily directed through two Melbourne Water channels along the Airport's southern boundary. The channels collect surface run-off from major roads, golf course, market gardens, residential areas, and commercial and industrial areas of the Airport. The quality of storm water is subject to activity occurring upstream. The storm water channels discharge into Mordialloc Creek and Port Philip Bay, four kilometres downstream of the Airport.

To reduce the potential for storm water contamination, we undertake a comprehensive monitoring program, including storm water sampling on a biannual basis. Investigations have indicated that the quality of storm water leaving the Airport is comparable the water entering the Airport, and continues to be largely consistent with the water quality found in urban environments. In 2020, two kilometres of drain on the northern and part on the eastern airside fence boundary was cleared, rubbish removed, and a geo fab liner was placed in sections to improve maintenance and weed control.

As part of the ongoing redevelopment of the Airport, WSUD features are incorporated into construction management and infrastructure design, aimed at protecting waterways and/ or implementing rainwater harvesting. Moorabbin Airport WSUD principles address key sustainability values of water consumption, water recycling, waste minimisation and environment protection.

The Airport is connected to Melbourne's reticulated sewer system that is managed by South East Water. Moorabbin Airport has trade waste agreements in place that allow for the discharge of industrial/commercial wastewater to the sewer system. Activities that generate wastewater include aircraft and vehicle washing, industrial processes and food outlets, which are required to have trade waste agreements. The agreements ensure a minimum level of water quality is maintained and on-site wastewater treatment systems like triple interceptor traps are installed, managed and maintained accordingly.

Potential sources of storm water and wastewater pollution at the Airport include:

- flow of storm water
- runoff from major roads, golf course, market gardens, residential 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
- historical chemicals used by third parties during in aviation firefighting and rescue activities
- runoff including soils, infrastructure materials from construction activities
- corrosion of plumbing infrastructure, degradation of roadways
- fertilisers
- leaks from inappropriate storage of chemicals, oil and fuel.

11.10.2 – Current Management Practices

Moorabbin Airport has surface water and wastewater processes in place to manage storm water quality, including:

- monitoring storm water on a bi-annual basis
- inspection of construction sites by Moorabbin Airport management, external consultants and the AEO where necessary, to see CEMP and OEMP requirements are being met
- monitoring wastewater disposal so it is directed to the sewer system through trade waste agreements or is disposed in accordance with Victorian Environment Protection Agency (Victorian EPA) requirements
- investigating, correcting and reporting surface water and wastewater incidents.

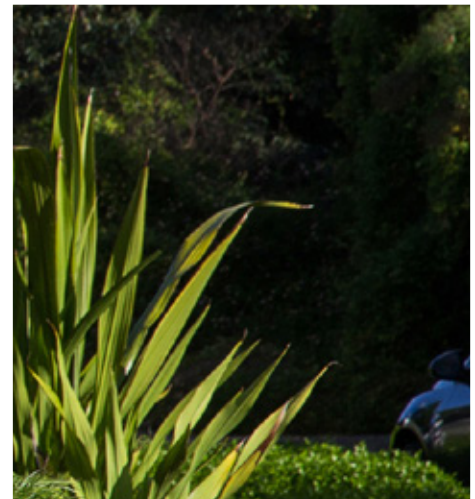
11.10.3 – Achievements 2015 to 2020

Date	Initiative and Status
2015 to 2020	Moorabbin Airport continued to undertake the bi-annual storm water monitoring pro-gramme, assessing the quality of water entering and leaving the site. Stormwater points have been revised in the last five years to ensure most effective points are sampled.
2015 to 2020	Notified operators of fuel depots of their obligations to monitor groundwater quality adjacent to their facilities as per the Victorian EPA UPSS management requirements.
2015 to 2020	Dedicated wash bay facilities and use of the triple interceptors are frequently used on the Airport.
2015 to 2020	Moorabbin Airport and relevant consultants developed a Stormwater Sampling Procedure for Airport storm water sampling.
2015 to 2020	Moorabbin Airport has worked with contractors on construction sites to ensure that activities on-site do not lead to the runoff of soil, sediment and chemicals into the storm water network.
2015 to 2020	Moorabbin Airport has fitted new developments with rainwater tanks to harvest rainwater which is then recycled for use in landscaping.
Moorabbin Airport / Airport Customers 2019 – 2020	Reviewed all trade waste agreements with South East Water, including customers, at the Airport.
2020	Cleared 2km of drain and placed “geo fab” to increase water flow and reduce maintenance.



11.10.4 – Environmental Actions 2021 to 2029

Date / Responsibility	Initiative and Status
Moorabbin Airport (Biannually)/ AEO	Monitoring and Reporting – undertake bi-annual storm water monitoring
Moorabbin Airport (ongoing)	Environmental Site Reviews – undertake regular visual inspections of the storm water systems including the wash bay and Airport customer facilities. Inspect and encourage customers to manage chemical stores appropriately to reduce the impact of chemical spills. Ensure there are adequate controls in place to minimise the potential for storm water or waste water pollution.
Moorabbin Airport (ongoing)	Training and Awareness – encourage use of wash-down bay for aircraft and vehicle washing and use of the triple interceptors.
Moorabbin Airport / Airport customers	Operational Control – review trade waste agreements with South East Water, as required by all new customers operating at the Airport.
Moorabbin Airport (2021 – 2025)	Development Control – develop WSUD Guidelines for the Airport to manage run off and/or harvesting of rainwater for other on-site uses.
Moorabbin Airport (2021 – 2025)	Development Control – continue to fit new developments at the Airport with rainwater tanks for use in landscaping.
Moorabbin Airport (2021 – 2024)	Training and Awareness – provide ongoing education, training and advice to staff, customers and Airport users on storm water quality and wastewater management improvement practices.



Moorabbin Airport supports 30 community initiatives each year, targeting programs related to aviation, youth, aviation history and the local community.

11.11

SOIL AND GROUNDWATER

11.11.1 – Objectives and Overview

Soil and groundwater objectives include:

- prevent contamination of soil and groundwater occurring from Airport activities
- manage areas of contaminated soil and groundwater in accordance with regulatory requirements
- comply with requirements of the *Airports (Environmental Protection) Regulations 1997* (Cth) and other legislation and policies about groundwater and soil quality.

Moorabbin Airport and its customers are required to monitor groundwater and undertake soil testing when contamination has, or is considered likely, to have occurred. We have also done testing adjacent to the Airport site. The locations of bores to monitor groundwater quality are recorded on the Contaminated Site Register. Groundwater and soil quality at the Airport reflect the historic land use and quality of work practices.

Under regulation 6.09 of the *Airports (Environmental Protection) Regulations 1997* (Cth), the AEO may direct Moorabbin Airport (or one of its customers) to examine the condition of soil and/or groundwater.

To support its objectives, Moorabbin Airport maintains records and expects customers to keep up-to-date records of chemicals stored on site through the customers' audits. Controls are required when managing underground storage tanks (USTs) adjacent to the Airport.

Potential sources of soil and groundwater pollution at the Airport include:

- historical landfilling activities
- leakage from USTs, that are owned and/or controlled by Moorabbin Airport, fuel companies or other Airport customers (principally aviation maintenance organisations)
- chemical, fuel and oil spills

- inappropriate storage and use of chemicals, oils and fuels
- historical chemicals used in aviation firefighting and rescue activities
- extant pollution – groundwater contamination plume, pesticides and herbicides that may have had an impact in earlier years
- construction and related works.

11.11.2 – Current Management Practices

Soil and groundwater quality measures implemented at Moorabbin Airport include:

- if a spill, leak or illegal dumping of waste is observed at the Airport, the following is required:
 - reporting of all soil or groundwater quality pollution incidents to Moorabbin Airport 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
 - remedial actions and reporting conducted as required
- assessing soil contamination status prior to land development and if required undertake any remediation works
- undertaking regular inspection of construction sites by Moorabbin Airport management, external consultants and the AEO where necessary to ensure CEMP requirements for soil and groundwater management are being met
- monitoring customers with USTs and chemical stores to ensure they are compliant with legislative requirements.

11.11.3 – Achievements 2015 to 2020

Date	Initiative and Status
2015 to 2020	Moorabbin Airport continued to provide advice on chemical storage and handling (both at Airport customer and Moorabbin Airport facilities).
2015 to 2020	Site contamination assessments were carried out by Moorabbin Airport in conjunction with the AEO during the reporting period.
2015 to 2020	Installation of groundwater monitoring wells at all facilities with underground fuel storage tanks in accordance with the Victorian EPA, Publication 888.4 Guidelines on the design, installation and management requirements for underground petroleum storage systems (UPSSs), August 2015.
2015 to 2020	Installation of groundwater monitoring wells at various development sites.
2015 to 2020	Decommissioning of 1 UST across the Airport site.
2015 to 2020	Establishment of 32 groundwater monitoring bores across the Airport.
2015 to 2020	Taking more than 549 samples of soil across the Airport.
	Appropriate re-use and management of excess soils arising from development sites across the Airport.

11.11.4 – Environmental Actions 2021 to 2029

Date / Responsibility	Initiative and Status
Moorabbin Airport / AEO (ongoing)	Development Control – ensure environmental site assessments have been conducted prior to construction works, where relevant.
Moorabbin Airport / Airport customer (when required)	Development Control – ensure soil and groundwater contamination prevention principles are incorporated into CEMPs and OEMPs.
Moorabbin Airport (when required)	Development Control – manage installations of new USTs by ensuring compliance with Victorian EPA Publication 888.4.
Moorabbin Airport (2021 to 2029)	Development Control – limit installations of new USTs where possible.
Moorabbin Airport (2021 to 2024)	Training and Awareness – provide ongoing education, training and advice to staff, customers and Airport users on soil and groundwater improvement practices.
Moorabbin Airport (2021 to 2029)	Operational Control – site contamination assessments will be carried out in conjunction with the AEO during the period 2021 to 2029.
Moorabbin Airport / Airport customer (ongoing)	Training and Awareness – continue to advise customers (particularly fuel storage facilities) with USTs, that they continue to monitor USTs in accordance with relevant State and Commonwealth legislative requirements.
Moorabbin Airport / Airport customer (ongoing)	Emergency Preparedness – ensure Moorabbin Airport 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.
Moorabbin Airport (ongoing)	Monitoring and Reporting – continue monitoring groundwater conditions across the Airport on a periodic basis to assess changes in groundwater quality and seek advice where required to address groundwater impacts.

11.12

HAZARDOUS MATERIALS

11.12.1 – Objectives and Overview

Hazardous materials objectives include to:

- ensure that storage, transport and handling of hazardous materials is appropriate
- assist staff, customers, contractors and Airport users to comply with legislative requirements.

Storage and handling of dangerous goods and hazardous substances is not covered by Commonwealth legislation for Airports. 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* (Vic), the *Dangerous Goods (Storage and Handling) Regulations 2022* (Vic), the *Occupational Health and Safety Act 2004* (Vic) and *Occupational Health and Safety Regulations 2017* (Vic).

Appropriate management of hazardous materials can minimise and/or prevent air, water and soil pollution.. Hazardous substances stored at the Airport include fuel, degreasing agents, solvents, paints, herbicides, insecticides and miscellaneous materials. As some of the buildings were constructed prior to the 1990s, there is the possibility of asbestos and lead paint being used.

11.12.3 – Current Management Practices

Moorabbin Airport maintains hazardous material management processes and procedures so that hazardous materials are managed. These include:

- undertaking regular inspection of major construction sites by Moorabbin Airport management, external consultants and the AEO where necessary so CEMP requirements for environmental management are being met
- inspection of chemical registers and Material Safety Data Sheets
- assessing incident and emergency response preparedness procedures for facilities that have bulk storage and/or other chemicals
- inspecting Moorabbin Airport buildings for potential asbestos in accordance with legislative requirements

11.12.3 – Achievements 2015 to 2020

Date	Initiative and Status
Ongoing	Moorabbin Airport has conducted site inspections across the Airport and monitored the use of hazardous materials and their use or storage through EMS Audits.
Ongoing	Storage and handling of dangerous and hazardous goods was carried out as per State guidelines.

11.12.4 – Environmental Actions 2021 to 2029

Date / Responsibility	Initiative and Status
Moorabbin Airport (Annually)	Environmental Site Reviews – monitor hazardous materials, including MSDS and hazardous waste disposal information through the Environmental Site Review Program.
Moorabbin Airport / Airport customer (when required)	Operational Control – ensure sufficient bunding beneath any containers (as per Victorian EPA, Publication 16948: Liquid Storage and Handling Guidelines, June 2018).
Moorabbin Airport / Airport customer (ongoing)	Training and Awareness – provide ongoing education, training and advice to staff, customers and Airport users on spill response and chemical handling. Complete checks of the National Pollutant Inventory for Airport Operations and provide guidance about newly listed substances.
Moorabbin Airport (2021 – 2029)	Training and Awareness – provide ongoing education, training and advice to staff, customers and Airport users on hazardous materials improvement practices.



11.13

WASTE MANAGEMENT

11.13.1 – Objectives and Overview

Waste management objectives include:

- minimise the production of waste by promoting increased recycling and waste recovery
- assist staff, customers, contractors and Airport users to comply with legislative requirements.

Waste collection, treatment and disposal are subject to State legislation under the EP Act and the *Environment Protection Regulations 2021* (Vic). *The Environment Protection Regulations 2021* (Vic) provide the Victorian Government's guidance on prevention, re-use and recycling of industrial wastes and actions required to dispose of industrial wastes safely.

The main sources of waste at the Airport include office (putrescible and non –putrescible), workshop, and non-putrescible waste from retail operations. We continue to assist customers improve waste management through the regular reviews in conjunction with the AEO.

11.13.2 – Current Management Practices

We maintain waste management processes and procedures, which include:

- undertaking regular inspections of construction sites by management, external consultants and the AEO where necessary to monitor CEMP requirements for waste management are being met
- waste oil and most waste solvents generated at the Airport continue to be recycled off-site through EPA approved facilities
- recycling of 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 premise
- monitoring Moorabbin Airport maintenance facilities and work practices, so storage and handling of waste is adequately controlled to prevent pollution.



11.11.3 – Achievements 2015 to 2020

Date	Initiative and Status
Ongoing	<p>Moorabbin Airport continued to provide advice on the following:</p> <ul style="list-style-type: none"> - assessing alternate options to minimise the amount of waste generated - assessing the potential to re-use and/or recycle as much as practicable - the storage and handling of wastes - assessing waste management options (and documentation requirements) in terms of off-site disposal requirements.
Ongoing	Airport customer audits are done to ensure general and hazardous wastes are disposed of correctly.
Ongoing	Airport customer audits are done to ensure waste water emissions to sewer network have a Trade Waste agreement in place.

11.13.4 – Environmental Actions 2021 to 2029

Date / Responsibility	Initiative and Status
Moorabbin Airport / Airport customer (as required)	Operational Control – ensure asbestos waste is removed and handled as per the Asbestos Management Plan (2010) and relevant legislation.
Moorabbin Airport / AEO (as required)	Development Control – ensure waste minimisation principles including storage and management of waste on site is included in CEMPs and OEMPs.
Moorabbin Airport / Airport customer (2021 to 2029)	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 program.
Moorabbin Airport (2021 to 2029)	Training and Awareness – provide ongoing education, training and advice to staff, customers and Airport users on waste management improvement practices.
Moorabbin Airport (2021 to 2029)	<p>Operational Control – consider options for the roll out of recycling bins in all Moorabbin Airport and customer operated buildings.</p> <p>Provide education on the types of wastes that can be recycled and supply appropriate receptacles for the storage and disposal of these waste types, including appropriate bins at areas of the Airport used for retail.</p> <p>Consider the benefits of composting food and green waste streams for use in the Fareshare Community Garden and Airport grounds.</p>

11.14

ENERGY MANAGEMENT AND RESOURCE EFFICIENCY

11.14.1 – Objectives and Overview

Energy Management and Resource Efficiency objectives include:

- promote energy and resource efficiency to Airport users
- minimise use of resources across the Airport
- assist staff, customers, contractors and Airport users comply with legislative requirements.

Moorabbin Airport understands the importance of actively increasing energy and resource efficiency alongside Airport expansion plans. We will continue to develop initiatives to assess and manage impact associated with operations and construction works. Further details regarding Moorabbin Airport's approach to sustainability is in Chapter 3 – Sustainability, Corporate Responsibility and Community.

11.14.2 – Current Management Practices

Moorabbin Airport maintains ongoing practices to manage energy and resource efficiency, including:

- promoting efficient use of energy and resources by distributing information provided by the Victorian EPA, water authorities and other agencies
- undertaking an annual energy usage and greenhouse gas emissions assessment.





11.14.3 – Achievements 2015 to 2020

Date	Initiative and Status
Ongoing	Details of energy and fuel usage, as well as CO ² emissions from the facility continued to be provided in AERs.
Ongoing	Moorabbin Airport continued to assess its usage of power, fuel and water using processes under the National Greenhouse and Energy Reporting Act 2007 (Cth) and Melbourne Water's open data water maps.
Ongoing	Solar panels are operating on buildings at the Airport, generating 1,700 kW as of December 2022. Moorabbin Airport has investigated how solar panels can be implemented without adversely affecting aviation operations and safety and with CASA approval.
Ongoing	Energy usage largely remained consistent for each year between 2015 and 2020, despite the number of customers and workforce increasing with the growth of the Airport.

11.14.4 – Environmental Actions 2021 to 2029

Date / Responsibility	Initiative and Status
Moorabbin Airport (2021 to 2029)	Operational Control – regularly maintain fleet vehicles to minimise their use of fuels and select the most energy efficient vehicles adequate for the task required. Consider the potential use of biofuels for on Airport maintenance equipment and vehicles.
Moorabbin Airport (2021 to 2029)	Operational Control – complete feasibility assessment to upgrade lighting across all Airport and customer buildings to LED to reduce power usage and keep up with technological advances.
Moorabbin Airport (2021 to 2029)	Operational Control – support the installation of further solar PV on rooftops. The Moorabbin Airport Green Plan has a target of 2,800 kW of CASA approved Solar PV to be installed on rooftops at the Airport by 2029.
Moorabbin Airport (2021 to 2029)	Transport – investigate the feasibility to incorporate public transport (bus) routes to the Airport as well as bike paths along key corridors.
Moorabbin Airport / 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.x
Moorabbin Airport (2021 to 2029)	Training and Awareness – provide ongoing education, training and advice to staff, customers and Airport users on energy management and resource efficiency improvement practices.
Moorabbin Airport (2021 to 2029)	Monitoring and Reporting – monitor annual energy usage and associated greenhouse gas emissions, to improve efficiency and reduce greenhouse emissions.
Moorabbin Airport / Developer (as required)	Development Control – encourage inclusion of recycled materials, energy conservation and water capture within building design. Consider use of captured water for use in plumbing and watering systems.
Moorabbin Airport / Developer	Operational Control – encourage WSUD landscaping techniques to minimise water requirements for gardens.



11.15

FLORA, FAUNA AND LANDSCAPE

11.15.1 – Objectives and Overview

Flora, fauna and landscape objectives include to:

- maintain and improve the overall Airport landscape
- implement a Green Plan (see Chapter 3 – Sustainability, Corporate Responsibility and Community)
- minimise impacts of Airport activities on the environment.

The Airport comprises of 294 hectares of man-made, engineered and open land for aviation and non-aviation uses.

There are 2,000 trees on the airport site and over 100,000 ground cover and shrubs. Regular audits and maintenance are conducted on the trees. Every tree removed is replaced with non-bird attracting and restricted height trees. A Vegetation Management Plan has been created and includes data on current and projected tree and plant coverage at the Airport.

Three site flora and fauna assessments have been conducted at the Airport since 2008 to support 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. No plant species or vegetation communities listed under the *Victorian Flora and Fauna Guarantee Act 1988* (Vic) (FFG Act) and the *Flora and Fauna Guarantee Amendment Act 2019* (Vic), or the EPBC Act were identified.

The species of fauna recorded in the assessment comprised 33 bird species and five mammal species, 11 of which were exotic. The fauna habitats recorded were highly modified, degraded or anthropogenic. No species listed under the EPBC Act or the FFG Act has previously been recorded or is 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 Moorabbin Airport will amend its environmental assessment processes so the organisation's legal obligations to protect new listings are met.

Moorabbin Airport will try to oversee that operators try to implement the goals and objectives set out in this section.

The flora, fauna and landscape at the Airport can potentially be affected by:

- development
- weed and pest invasion
- storm water and drainage run off and water quality
- climate change
- fire including bushfire and wildfire
- changes to surrounding land use
- lack of information on how to manage flora and fauna values.

11.15.2 – Current Management Practices

Moorabbin Airport maintains flora, fauna and landscape management processes by:

- undertaking regular inspections of major construction sites by the Airport, external consultants and the AEO where necessary to ensure CEMP requirements for flora, fauna and landscape management are being met
- implementing the Moorabbin Airport Preferred Plant Register that details species selections considered suitable for planting at the Airport due to their non-bird attracting features, to help prevent bird strikes on aircraft.

11.15.3 – Achievements
2015 to 2020

Date	Initiative and Status
2018 to 2019	Moorabbin Airport delivered the Airport-wide Site Presentation Program. This encompassed the removal of poor quality/Airport inappropriate trees and replacement with younger trees and shrubs, where appropriate.
2015 to 2020	Moorabbin Airport 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.



11.15.4 – Environmental Actions 2021 to 2029

Date / Responsibility	Initiative and Status
Moorabbin Airport / Developer (as required)	Development Control – Moorabbin Airport will ensure ecological surveys including vegetation mapping and species surveys are considered or undertaken, where appropriate, in areas of new development.
Moorabbin Airport (as required)	Development Control – consultation with the AEO and ABC, when necessary, to assess application for new building works to ensure landscaping information is provided and implemented.
Moorabbin Airport (2021 to 2029)	Environment Register – continue to implement the Moorabbin Airport Preferred Plant Register, which is used to provide strategic guidance on landscape issues. Continue to enhance the local natural environment with appropriate trees, shrubs and ground cover and undertake ongoing weed management activities (as required).
Moorabbin Airport (2021 to 2029)	Operational Control – compile an integrated Airport Landscape Plan that draws together the available information from development sites across the Airport and provides detailed guidance for the management and activities across the Airport.
Moorabbin Airport (as required)	Monitoring and Reporting – where amendments to EPBC Act lists are made, Moorabbin Airport will amend its environmental assessment processes to ensure that the organisation's legal obligations to protect new listings are met.
Moorabbin Airport (ongoing)	Training and Awareness – provide ongoing education, training and advice to staff, customers and Airport users and encourage conservation of flora, fauna and the landscape around Moorabbin Airport..



11.16

ABORIGINAL AND EUROPEAN HERITAGE MANAGEMENT

11.16.1 – Objectives and Overview

Aboriginal and European heritage management objectives include to ensure that any confirmed Aboriginal or European heritage sites are managed and protected as required by legislation.

An archaeological survey of the Airport was carried out in 1998 and reassessed in 2008 by Biosis Research. The aim of the studies was to identify any areas that may have had Aboriginal or heritage significance, and provide recommendations on the potential future management of any area identified. Both report findings concluded that as there is no evidence of Aboriginal or historic cultural heritage at the Airport.

Areas for proposed future development may be subject to archaeological assessments, as considered appropriate in consultation with the AEO.

11.16.2 – Current Management Practices

Although no areas of Aboriginal or historic cultural heritage significance have been found at the Airport, Moorabbin Airport 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.



11.16.3 – Achievements 2015 to 2020

Date	Initiative and Status
Ongoing	<p>Moorabbin Airport has 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. Moorabbin Airport provides the Museum with three sites totalling one hectare for a peppercorn rent and is looking to expand the Museum over the next eight years.</p> <p>The Museum is already the largest volunteer run aviation museum in Australia with 473 dedicated members and has grown by 19 airplanes between 2014 and late 2020. It attracts over 40,000 visitations each year and hosts numerous community events and functions, often raising money for charitable causes.</p>

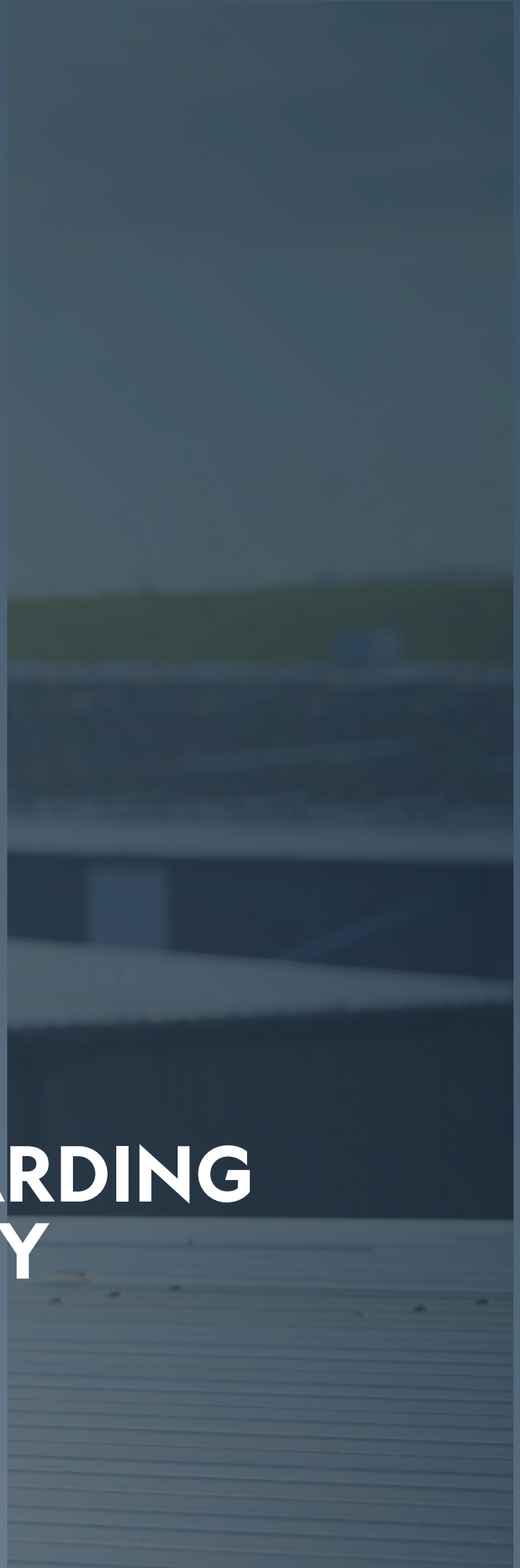
11.16.4 – Environmental Actions 2021 to 2029

Date / Responsibility	Initiative and Status
Moorabbin Airport (as required)	Monitoring and Reporting – ensure that archaeological surveys are considered or undertaken where required as part of major development proposals.
Moorabbin Airport (as required)	Monitoring and Reporting – if any archaeological sites, artefacts or objects are discovered at any time during development, qualified personnel shall be contacted to further assess the significance of the findings, as per section 5.02B of the Airports Regulations.
Moorabbin Airport (ongoing)	Training and Awareness – provide ongoing education, training and advice to staff, customers and Airport users and encourage new and existing customers to identify any Aboriginal and European heritage.




12

AIRPORT SAFEGUARDING STRATEGY







We are committed to safety at all levels. We don't just follow rules and regulations, we lead by example and set new benchmarks for safety, health and wellbeing.

Safety is ingrained in every facet of our business. We want to create a safety culture in and around the airport and set a benchmark for how safety processes can be kept well in hand for current operations and future activities.

As Melbourne's leading training airport, safety has been our highest priority over the past 73 years. A new ANEF, endorsed by Airservices, has been adopted for the Airport.

As the Airport adapts to accommodate the changing needs of the aviation community and the complex ecosystems it serves, our goal is not only to meet but exceed acceptable safety performance targets and embrace new performance-based measures.

12.1

INTRODUCTION

MAC is committed to maintaining its upstanding safe aviation practices and actively seeks to minimise safety concerns and possible incidences by implementing national frameworks including for airspace protection, regulatory compliance and public safety areas.

12.1.1 – Overview

Safety at the Airport is regulated by laws, planning controls and Commonwealth aviation authorities. We commission studies and expert reports to assist with assessing safety and risk at the Airport. The legislation, planning controls, studies and strategies that inform Moorabbin Airport's strategy approach include:

- legislation and associated regulations, including the Airports Act, the *Civil Aviation Act 1988* (Cth), the *Planning and Environment Act 1987* (Vic) and local planning schemes
- national policies including the NASF
- State Government policies including the PPF and Plan Melbourne – the State Government's strategic plan for metropolitan Melbourne
- planning controls embedded in the VPPs and local planning schemes
- aircraft noise management measures such as the ANEF, Australian Standard AS2021-2015: Acoustics – Aircraft Noise Intrusion – Building Siting and Construction (AS2021-2015), the Airport Environs Overlay in the Kingston Planning Scheme and noise monitoring systems
- airspace protection measures, including the *Airports (Protection of Airspace) Regulations 1996* (Cth) and the *Civil Aviation (Building Control) Regulations 1988* (Cth)
- measures to deal with hazards to aircraft operations such as bird-strikes, 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, implementing sustainability initiatives and connecting communities
- education and communication measures to inform and consult with interested parties about the Airport and issues associated with it, including the CACG.

These measures form a safeguarding framework to support Moorabbin Airport's aviation operations, and balance the needs of nearby communities. Two important components of this framework are the aircraft noise and airspace protection measures.

Safeguarding the Airport is a shared responsibility between all levels of government, the Airport, operators and the community. Moorabbin Airport supports the National Airports Safeguarding Advisory Group (NASAG) objectives to continue to improve airport safeguarding measures around Australia. This is discussed further in Section 12.7.

Objectives of the Airport Safeguarding Strategy are to:

- enable the Airport to offer aviation services effectively and competitively at local, national and international levels
- ensure that any new land use or development supports safe and long-term aviation operations, and avoids or minimises incompatible land uses
- strengthen Moorabbin Airport's role within Victoria's economic and transport infrastructure and protect its ongoing aviation operations
- attract and retain customers at the Airport that contribute to a diversified business base, including small and large flight training operators
- manage and, where possible, minimise the impact of Airport and aircraft
- operations on surrounding areas and communities

- ensure that strategic planning for metropolitan Melbourne and City of Kingston recognises, supports and protects the Airport, and that land use decisions result in improved social outcomes
- continue to balance the safeguarding role of lower density use areas and restrict incompatible land uses in the immediate vicinity of critical areas of the Airport whilst not restricting activity off-Airport that has been assessed and complies with safeguarding objectives.

12.1.2 – Key elements of Airport Safeguarding at Moorabbin Airport

In approaching Airport safeguarding, Moorabbin Airport has considered the following:

- Moorabbin Airport has supported flight training operations since opening in 1949
- runway alignments, runway lengths, aircraft types, controlled airspace and circuit design have remained relatively constant since the commencement of operations
- since the Master Plan 2015, Moorabbin Airport has ranked as the most, or second most busy, airport in Australia. During that time the Airport supported the highest number of aircraft movements of any Australian flight training metropolitan airport
- aviation at the Airport is and always has been a safe activity and industry. Safe outcomes are achieved through compliance, implementation of a safety management system, provision of purpose-built airfield infrastructure for flight training, controlled airspace, qualified and experienced aviation operators, building activity processes that include impact assessments and decision-making processes that respond to risks and evidence-based factors

- since 2012 all aviation and non-aviation developments have been assessed against, and comply with, NASF Guidelines. Every other development on the Airport has been assessed against relevant standards including building heights and location. Planning processes include precinct and whole of Airport safeguarding analysis and actions. The Victorian planning system, which references the NASF Guidelines, enhances airport safeguarding
- safety and NASF Guidelines based assessments are carried out by industry expert consultants and experienced airport personnel. We collaboratively engage with industry regulators, decision makers and operators. Safeguarding workflows at the Airport have delivered increased certainty of safe outcomes to our stakeholders on and off the Airport
- protection of airspace surrounding the Airport from intrusion is a necessary part of Airport safeguarding and is critical for the immediate and long-term operation of the Airport. This airspace protection is implemented through the regulatory framework which includes Obstacle Limitation Surfaces (OLS) and Procedures for Air Navigation Services (PANS-OPS)
- in addition to OLS and PANS-OPS, since 2017 Moorabbin Airport has been an industry leader in assessing and implementing Public Safety Area (PSA) methodologies. The Airport's planning processes adopt world's best practice and establish a PSA risk-based framework. Working with experts and government advisors has allowed for a collated data set and risk issues for Australian metropolitan and flight training airports. This has been endorsed by the Department of Infrastructure, CASA and Airservices. All Airport developments are appropriate for risk levels identified considering future uses, aircraft activity, location and forecast numbers of airport visitations in an area
- community amenity and transparent sharing of understandable aircraft noise related information is a key objective of the NASF. The primary noise tool is the ANEF which plots estimated noise exposure and is endorsed by Airservices for accuracy



- the Moorabbin Airport ANEF reflects 88% of flight training circuit movements being conducted from our eastern-most twin set runways, 86% of all aircraft movements originate from the north-south runways with an ultimate practical capacity of 375,000 movements
- aircraft noise impacts are greatest when aircraft are flying directly overhead at lower altitudes and during the departure stage of flight when engines are operating at higher power settings. In contrast, when aircraft are at higher altitudes or performing ground-based phases of circuit training on central segments of runways, aircraft noise has fewer amenity impacts
- precinct planning has always positioned aviation activity in the centre of the 294-hectare Airport site. The airfield is surrounded by built form and vegetation that partly shields ground based and low altitude aircraft noise from the surrounding community. Residential areas on the west are 0.5 kilometres from the main runway and adjoin a non-aviation precinct of warehouses, offices and landscaping. Closer to the airfield, a continuous row of aviation hangars has been constructed parallel to the north-south runways, to improve local amenity
- where possible, aircraft activity and flight paths respond to impacts on surrounding communities, and aircraft noise mitigation measures are implemented including a local Fly Friendly program
- we acknowledge that all these mitigation measures do not eliminate aircraft noise in higher activity areas, including the eastern side of the Airport and beneath flight paths to and from the Airport
- the Kingston Planning Scheme implements an airport safeguarding planning control – the Airport Environs Overlay. This overlay relates to aircraft noise and limits potential noise-sensitive uses and supports other developments, considering aircraft noise conditions.

12.1.3 – 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 that are impacted adversely by aircraft noise as determined by the NASF Guidelines
- safety outcomes by ensuring aviation safety requirements are recognised in land use planning decisions and through the NASF Guidelines being adopted by jurisdictions on safety related issues.

The NASF comprises:

- 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 Lighting in the Vicinity of Airports
- Guideline F: Managing the Risk of Intrusions into the Protected Airspace of Airports
- Guideline G: Protecting Aviation Facilities – Communications, Navigation and Surveillance
- Guideline H: Protecting Strategically Important Helicopter Landing Sites
- Guideline I: Managing the Risk in Public Safety Areas at the Ends of Runways.

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, initially comprising Guidelines A to F. In November 2018, three new NASF Guidelines were added, Guidelines G to I.

Each State and Territory jurisdiction is responsible for implementing the NASF and aligning their planning processes with the NASF principles and Guidelines where appropriate.

12.1.4 – Overview of Existing Framework

The existing airport safeguarding regulatory framework comprises:

- Land Use Management Framework – for assessing and controlling on-airport use and development, see Section 6.4, Chapter 6 - Land Use Plan
- Aircraft noise – the ANEF / AS2021 / Airport Environs Overlay system, forecasting degrees of exposure to aircraft noise for areas surrounding an airport and providing guidance for land use planning. Measures taken to manage aircraft noise are in Section 12.3
- Regulation of prescribed airspace – relevant to the airspace above either an OLS or PANS-OPS surface. The safeguarding framework for prescribed airspace is discussed in 12.8
- Planning Policies and Controls – at State, metropolitan and local levels, strategic and land use planning policies and controls recognise the need to strengthen airport safeguarding. These are in Section 12.12.

Whilst the NASF Guidelines provide valuable guidance for airport safeguarding, they do not have regulatory or statutory standing. See Section 12.13.



12.2 FLIGHT PATHS

12.2.1 – Introduction

Moorabbin Airport operates under airspace rules that apply to the whole of Australia. Class D airspace rules apply when the Moorabbin 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 CASA and allows for high-intensity operations of light aircraft and enhanced operational safety.

Most aircraft movements at Moorabbin are in the training circuits on the eastern side of the Airport. Aircraft which are flying to or from other destinations do so via established reporting points, and whilst in the immediate vicinity of the Airport, aircraft follow standard traffic patterns depending on the relevant runway and reporting point.

This procedure helps with safe separation between aircraft and defines the flight paths.

Flight paths are managed by Airservices in consultation with industry. Moorabbin Airport does not approve or design the flight paths and has no authority to amend airspace or aircraft operations.

12.2.2 – Moorabbin Airspace

The Control Zone for Moorabbin Airport extends for three nautical miles (5.5 kilometres) 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 Control Zone includes areas of Mentone, Mordialloc, Chelsea, Parkdale, Dingley, Springvale, Heatherton, Oakleigh, Highett and Bentleigh. Within this area, aircraft are controlled directly by the Airservices operated ATC tower (when operational) and are normally in the act of approach,

departure, take-off, landing or circuit training. The highest concentration of aircraft operations is within the Control Zone.

12.2.3 – Runway Usage

At Moorabbin Airport, Runways 17L/35R and 17R/35L are the preferred runways because of safety and operational efficiency. These runway directions are used approximately 86% of the time.

Light aircraft, which carry out most movements at the Airport, have a limit on the maximum crosswind component they can safely accept – normally 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 approximately 14% of the time, however because of seasonal wind patterns, there may be periods of several days when operations use these runways continuously.



Figure 12.1 – Runways 17L, 17R, 35L and 35R – Arrival, Departures and Training Flight Paths

Runway 04/22 is used for landing operations during rare occasions (less than 50 times a year or 0.02% of total movements annually) when crosswinds preclude operations on other runways. It is not available for circuit training.

12.2.4 – Arrival and Departure Flight Paths

Flight paths into and out of the Airport are established so 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 12.1. Flight paths for Runways 13L/31R and 13R/31L are shown on Figure 12.2.

i. Visual Flight Paths

Aircraft approaching Moorabbin Airport are required to make an initial call to the Moorabbin ATC tower (or, outside of ATC tower operating hours, pilots broadcast

their intention via radio call) at four visual reporting points, being:

- Brighton Marina
- Police Academy in Mount Waverley
- The Old General Motors Holden Factory in Dandenong
- 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 are directed into the Moorabbin Airport traffic pattern.

Aircraft track by visual reference to the ground and should maintain track within one nautical mile (1.9 kilometres) either side of their nominal flight path. Most of the flight paths are common for all runways, except closer to the Airport where aircraft maneuver to align with the active runway

ii. Instrument Flight Paths

Aircraft approaching the Airport under Instrument Flight Rules can conduct an instrument approach using either the Moorabbin NDB on the central west area of the Airport site, or by a global positioning system (GPS) fitted to an aircraft and operated by a qualified pilot.

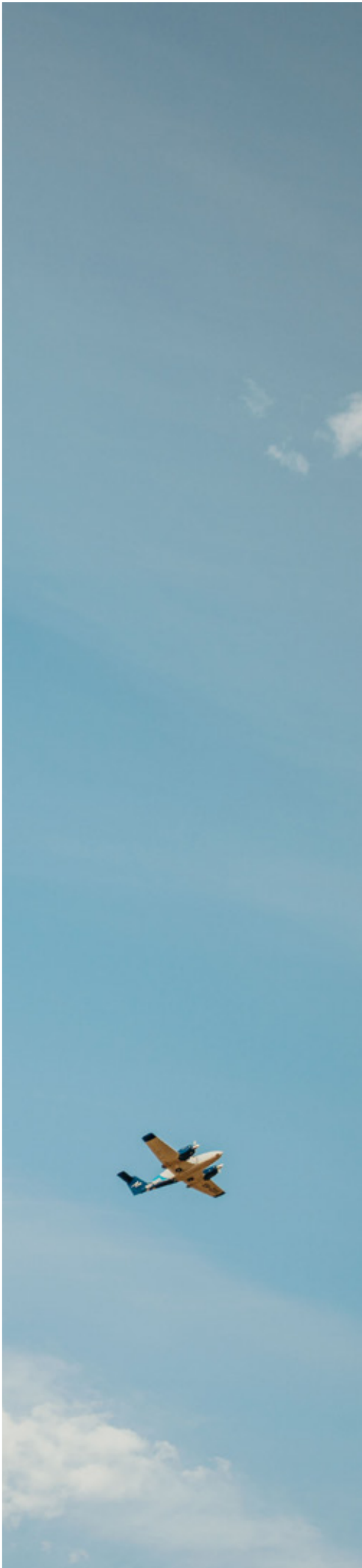
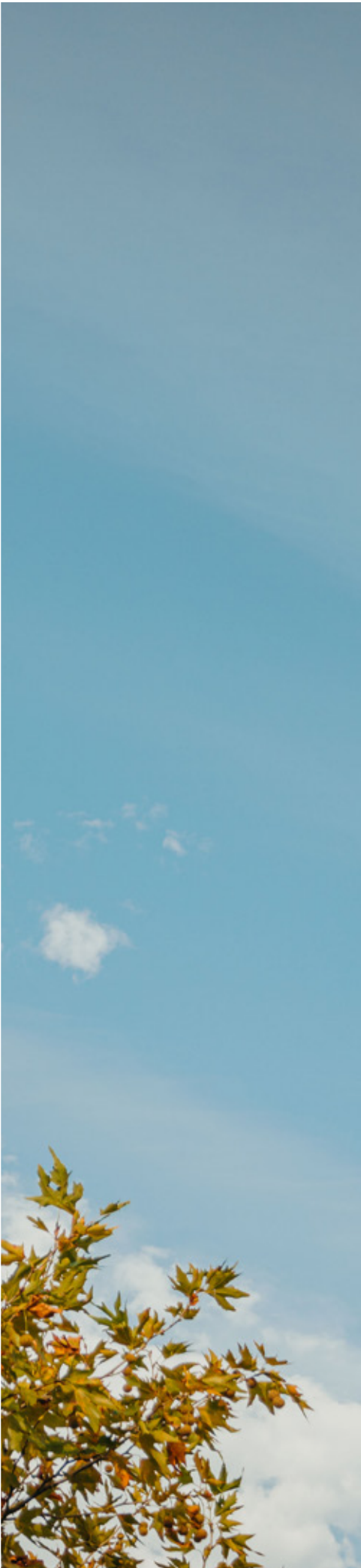
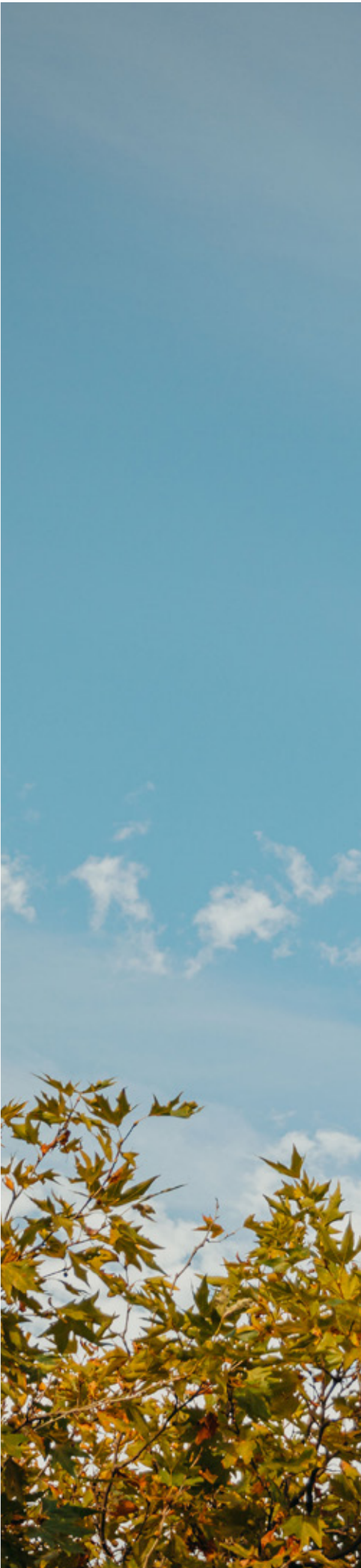
The NDB approach path takes aircraft from a point in Port Phillip Bay (Bay west) on a direct track to the Moorabbin Airport NDB, flying over Black Rock, Beaumaris and Mentone before joining the circuit for the active runway.

A GPS approach from the north tracks directly to land on Runway 17L, and 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 practiced in good weather as they form an important part of pilot training.



Figure 12.2 – Runways 13L, 13R, 31L and 31R – Arrival, Departure and Training Flight Paths



12.2.5 – Circuit Training

Aircraft undertaking circuit training fly the same standard pattern at the Airport as other Australian training airports. This pattern is common worldwide and supports safe training exercises to conduct repeated practice take-offs, approaches and landings in an efficient manner. This must be done safely.

A typical circuit for 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 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-degrees behind the pilot. Here a third left or right 90-degree turn is conducted 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 course flown at any point because of executing the procedure will vary depending on a range of factors. These include aircraft type and climb performance, wind and other meteorological conditions, the pilot's capability and the amount of traffic in the circuit. As a result, there is often a wide variation in the path flown by aircraft from circuit to circuit. See Figure 12.3, which shows 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 ATC tower hours is discretionary and subject to guidance provided by the local ATC. Under circuit booking procedures in place at the Airport since 2017, an average of up to seven aircraft operate in the eastern circuit with one in the western circuit. When the ATC tower is not operational, a maximum of five aircraft are allowed. A typical circuit takes eight to 10 minutes to complete. Each circuit generates two movements –

a take-off and a landing – and in appropriate weather conditions, daily movements range from 600 to 1,000.

Most circuit training is conducted to the east of the Airport. Most arriving and departing traffic occurs to the west and so needs to be sequenced into the western circuit. This makes the circuit suitable only for experienced pilots who are able to make the adjustments to work in with arriving and departing traffic. Airservices has advised that to manage aircraft in the western circuit safely, the number of routes on the western circuit cannot be increased due to the majority of arrival and departure traffic required to use this circuit. The capacity for aircraft in the western circuit, therefore, is reduced.

A Circuit Training Report commissioned by Moorabbin Airport in 2011 made a series of recommendations including implementing a CBS, which are now in effect. The CBS is an online airspace slot system and has supported safer operations and improved data and movement forecasting.

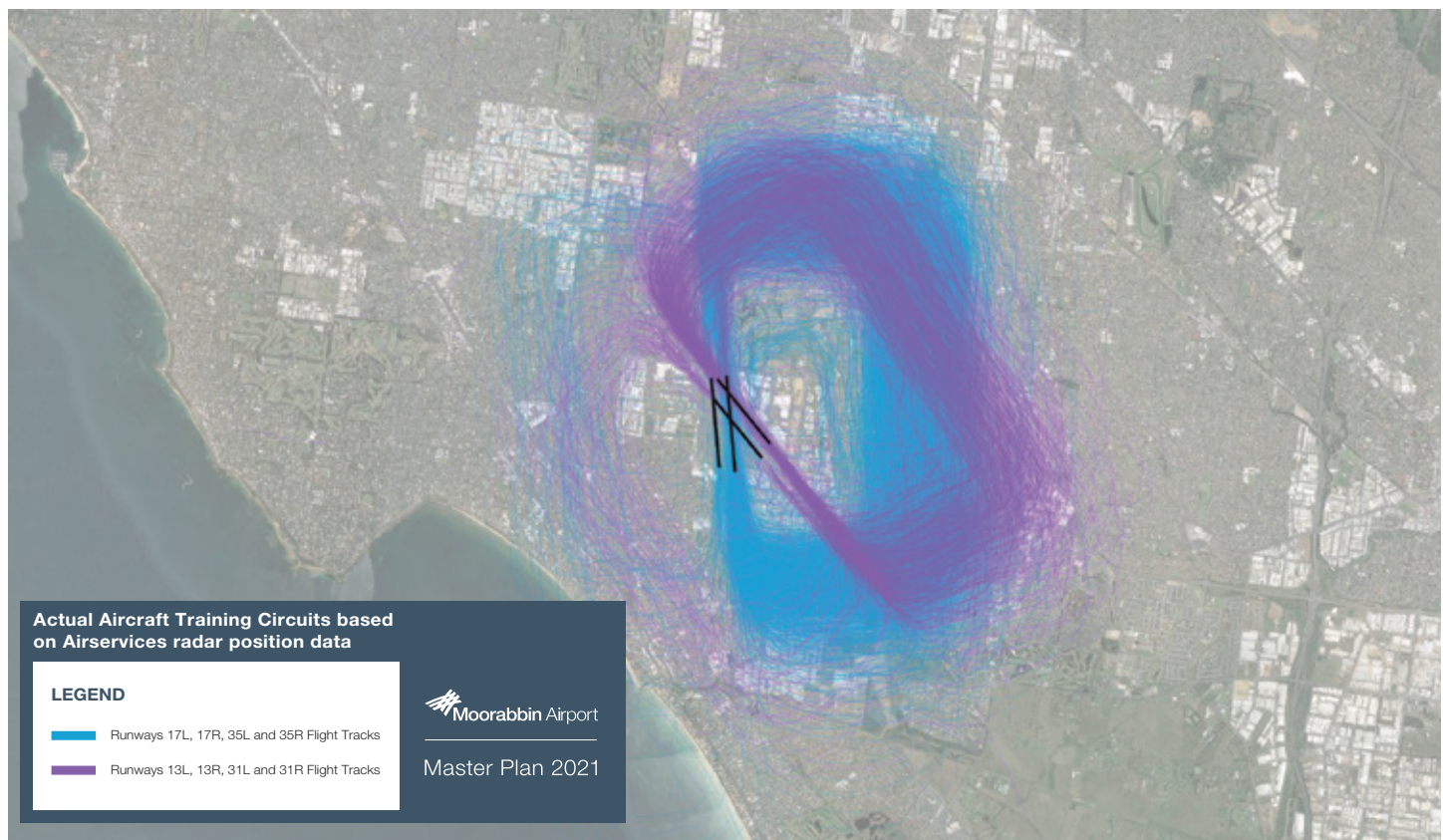


Figure 12.3 – Actual Aircraft Training Circuits based on Airservices radar position data

Safety remains Moorabbin Airport's prime focus; we are an industry leader in public safety and airport planning, and have implemented a general aviation risk-based approach to operations.



12.2.6 – Moorabbin Training Area

Most aircraft operating from the 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 maneuvers however a pilot may also perform maneuvers in any suitably equipped aircraft in open airspace such as over the sea.

12.2.7 – Helicopter Flight Paths

Helicopters operating at the Airport conduct arrival and departure operations as well as training circuits.

In addition, emergency services helicopter aircraft frequently operate at a low level in the general vicinity of the Airport. These operations can be intense however this is not an activity related to the Airport.

Increased traffic is forecast during the summer months as more tourism, charter and fire management flights are conducted.

Helicopter arrival, departure and training flight paths are shown in Figure 12.4.

i. Helicopter Arrival/Departure Flight Paths

Helicopters arriving and departing the Airport will operate to the north or south of the Airport in-line with the runway directions.

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 mainly transit to and from Melbourne using the coastal transit route, which is established 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 the Airport. 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 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.

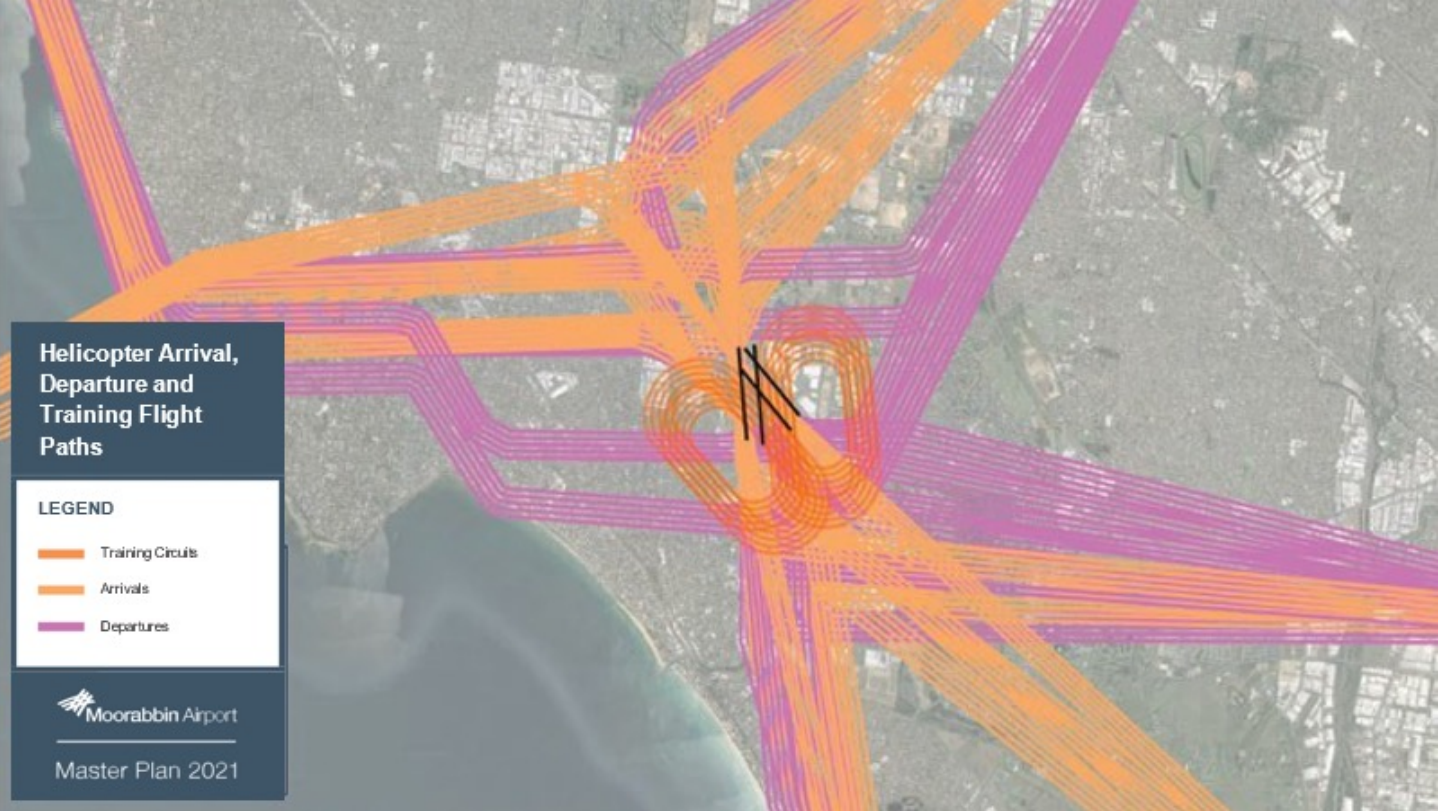


Figure 12.4 – Helicopter Arrival, Departure and Training Flight Paths

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12.3

MANAGING AIRCRAFT NOISE

Since Master Plan 2015, Moorabbin Airport has continued to work with stakeholders on aircraft noise. As a result, and by actively working with Airport operators, Moorabbin Airport has been successful in managing aircraft noise for the community.

The Commonwealth Government recognise the merits of using a range of noise measures and tools in conjunction with the ANEF system for better strategic planning and to provide more comprehensive information on aircraft noise for communities. For instance, the NASF provides guidelines which off-Airport developments are assessed on to confirm that the development is appropriate.

Moorabbin Airport, under the Airports Act, has the responsibility of publishing endorsed ANEF information as part of the Master Plan 2021.

12.3.1 – Noise Abatement Measures

Moorabbin Airport does not control aircraft in flight and this Master Plan 2021 cannot directly address operational issues or procedures relating to aircraft noise. However, there are existing noise abatement measures that constitute a local Fly Friendly program which aims to mitigate some areas of concern that have been raised. Under the Fly Friendly program:

- Moorabbin Airport expects aircraft pilots operating to and from the Airport to undertake operations in a manner which is considerate of residents as the safe operation of an aircraft must be always maintained
- practical measures are identified 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 program is voluntarily entered into by the Airport's aviation customers and Airport users to minimise the impact of aircraft operations on the community.

As part of the abatement measures, Moorabbin Airport issues educational and advisory communications pertaining to noise abatement to flight training organisations and other operators based at the Airport. Noise abatement procedures are published in the Aeronautical Information Package – En-Route Supplement Australia. These measures are periodically reviewed and are an important part of the discussions of the CACG relating to noise issues. The CACG's membership includes representatives of local government bodies, airlines and Airport users.

Moorabbin Airport also participates in regular meetings with the City of Kingston, Airservices 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 the Airport operates on a CBS and is only allowed on weekdays between 8am and 9pm during winter, or 10pm during summer, 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 Woodlands 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
- pilots are at all times encouraged to be sensitive to the needs of residents to minimise throttle setting changes, and to fly smoothly and avoid abrupt changes in power whilst in the circuit area of the Airport.

These aircraft noise management measures were developed by acknowledging relevant factors, including AS2021-2015:

- The Fly Friendly measures are preferred

and there are other factors which determine where aircraft operate.

- Airspace management is provided by Airservices. Airservices operates a Noise Enquiry Service at the following link: <https://www.airservicesaustralia.com/community/environment/aircraft-noise/about-making-a-complaint/>

12.3.2 – Australian Noise Exposure Forecast

i. ANEF System

Noise contours are required as part of the Master Plan 2021. Section 5 of the Airports Act defines the "Australian Noise Exposure Forecast" for an airport to mean an ANEF endorsed in the manner approved by the Commonwealth Minister – currently the manner approved by the Commonwealth Minister for Infrastructure, Transport, Regional Development and Local Government on 18 April 2017.

An ANEF is a forecasting methodology used throughout Australia to produce a contour plan representing various degrees of exposure to aircraft noise for the areas surrounding an airport. The contours produced are from calculations based on forecast aircraft movements and noise levels generated by each movement. Under the ANEF system, movements in the period 7pm to 7am are given additional importance 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 AS2021 – 2015, which Moorabbin Airport recognises in land use planning regimes.

NASF Guideline A recognises that the ANEF 20 and 25 contours do not capture all high noise affected areas around an airport and the ANEF contours are not an indicator of the full spread of noise impacts, particularly for residents newly exposed to aircraft noise.

While accepting that the ANEF system is an established land use planning tool used by State planning authorities, Moorabbin Airport is of the view that the ANEF should

be used in conjunction with other noise metrics and when appropriate noise monitoring devices. Such an approach will help ensure that any limitations of the ANEF are mitigated and the most appropriate development decisions are made regarding noise exposure for residents. In this context, the limitations of the ANEF system include that:

- 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 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, intensity of noise events from those movements and the comparison to ambient noise levels
- 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
- ANEF contours do not consider levels of aircraft noise 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

- ANEF contours for an airport are focused on the landing and take-off trajectories of aircraft yet they do not indicate the noise along flight paths in and around the airport.

Moorabbin Airport believes that “Number above” (N) contours should be adopted. These contours are considered by the Department of Infrastructure, Airservices and many airports to provide a more meaningful summary of aircraft flight movements. These N contours are further discussed in Section 12.3.3. Moorabbin Airport supports measures that better inform planning decisions on and off-Airport including the commissioning of expert reports for aircraft noise, use of noise monitoring devices in appropriate locations and appropriate building design and construction responses. Moorabbin Airport notes that there is an insufficient amount of circuit training after 10pm to be able to accurately undertake an N contour analysis of night-time aircraft movements at the Airport.

ii. Development of the new ANEF – the Aviation Environmental Design Tool

A new ANEF for the Airport has been developed for this Master Plan 2021 as required under the Airports Act, using the Aviation Environmental Design Tool (AEDT) software version 3b, the required modelling

format by Airservices from 31 December 2019.

AEDT is software that has been developed and continues to be refined by the United States Federal Aviation Administration, Office of Environment and Energy that is designed to model aviation related operations in space and time to compute noise.

iii. Endorsement for Technical Accuracy

Airservices has responsibility for endorsing airport ANEFs for technical accuracy and it is the decision of Airservices as to when an ANEF is ready for endorsement. In deciding whether to endorse an ANEF for technical accuracy Airservices must be satisfied with the inputs and assumptions that have been made in producing the ANEF such as:

- an appropriate selection of aircraft types for the airport have been used as input data
- runway usage and flight track data used as an input to the model are operationally suitable for the airport
- forecast numbers of aircraft movements, operating times and the aircraft types carrying out operations are not greater than the physical ultimate capacity of the existing or proposed runways using the accepted and published methodologies



- the contours have been modelled correctly
- Moorabbin Airport has demonstrated it has paid due regard to all issues raised by State and local government authorities in relation to the ANEF
- any other matters Airservices considers relevant to decide whether to endorse the ANEF.

This process helps modelling to be undertaken is appropriate and reflects the forecasts of aircraft movements which Moorabbin Airport expects will occur in the future.

iv. Moorabbin Airport Ultimate Practical Capacity ANEF

The Moorabbin Airport Ultimate Practical Capacity ANEF forecasts total aircraft movements of 375,000 per year of which 332,500 are fixed-wing aircraft movements and 42,500 are helicopter movements. The Ultimate Practical Capacity ANEF was developed in close consultation with Moorabbin ATC tower and airport operators and is the best available current assessment of the practical capacity of the Airport. The ultimate practical capacity is based on airspace limitations, ground infrastructure, the Fly Friendly program and the Moorabbin Airport CBS.

The ANEF noise contours replace the previous Long Range (2050) ANEF noise contours that were endorsed in 2015

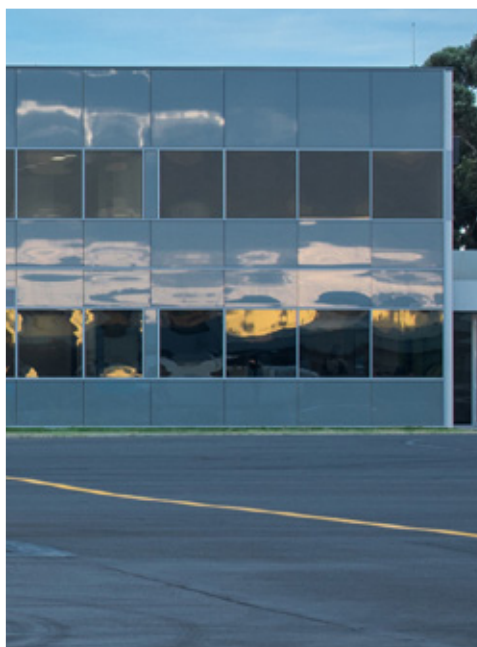
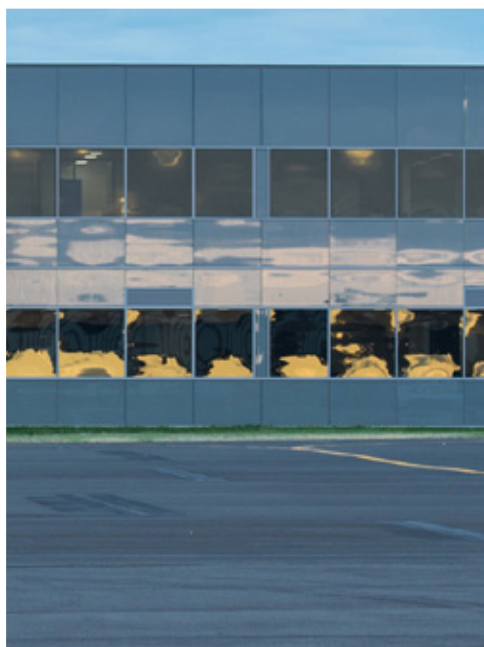
and incorporated in Master Plan 2015. Modelling used to produce the Ultimate Practical Capacity ANEF, reflects the likely long-term operations at the Airport, and considers the following:

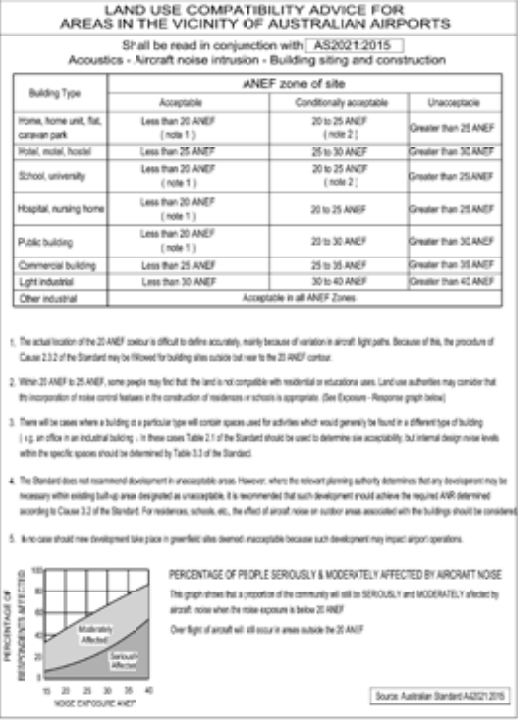
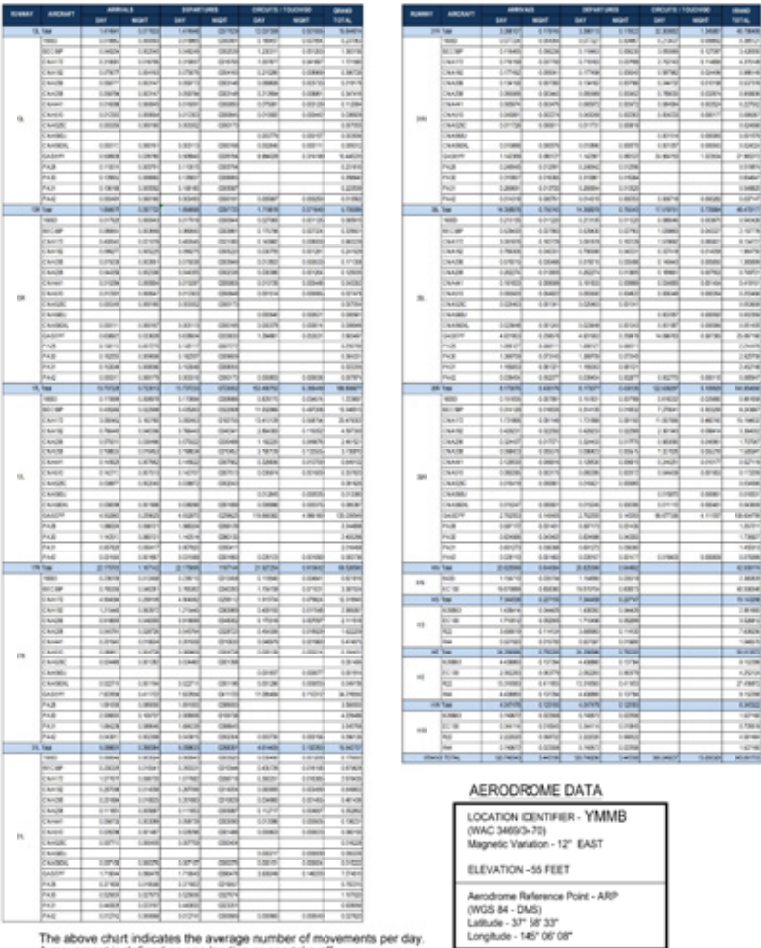
- identification of safe and efficient operational environment including capacity
- Moorabbin Airport's strategic flight training focus
- revised operating assumptions and availability of additional operational data arising from the CBS
- Moorabbin Airport's top five operators – that generate 75% of aviation activity – have executed long-term leases
- significant changes to fleet mix including an increase in light sports aircraft
- reduction of fixed-wing aircraft movement forecasts and changes to runway allocation, based on Moorabbin ATC operational capacity to manage circuit operations on Runways 13R/31L and 17R/35L
- operator feedback from major flying training users regarding sustainable levels of aerodrome circuit traffic, including that the Airport was approaching its safe operating capacity
- Moorabbin Airport's commitment to the Fly Friendly program and respect for

the surrounding community

- relocation of the Southern HLS to a Southern Aiming Point position
- relocation of the Northern HLS to a Northern Aiming Point position
- updated forecasts of rotary wing activity, based on:
 - recent consolidation of rotary-wing operators and upgrade of rotary fleet on Airport
 - no new rotary operators having commenced at the Airport in the past 15 years
 - updated data clarifying actual operations by each organisation
 - fixed-wing flying training opportunities
 - consideration of the long-term compatibility between rotary and fixed-wing activity
- application of the newly required modelling software AEDT.

The Moorabbin Airport Ultimate Practical Capacity ANEF, produced for the purpose of this Master Plan 2021 and endorsed by Airservices on Tuesday 6 April 2021 and was re-endorsed by Airservices on 28 September 2021 and subsequently on 2 February 2023, is shown in Figure 12.5.





GENERAL NOTE:

1. WHERE FIGURES HAVE BEEN ROUNDED DISCREPANCIES MAY OCCUR BETWEEN TOTALS AND THE SUMS OF COMPONENT ITEMS.

2. AFTER EXAMINATION IT WAS DETERMINED THAT THE TERRAIN SURROUNDING MOORABBIN AIRPORT COULD HAVE AN INFLUENCE OVER THE SIZE AND SHAPE OF THE NOISE CONTOURS AND THEREFORE THE INCLUSION OF LOCAL TOPOGRAPHY IN THE MODEL WAS WARRANTED.

Figure 12.5 – Moorabbin Airport 2021 Endorsed ANEF

v. ANEF Contours

A comparison of the ANEF contours from Master Plan 2015, and the new ANEF endorsed and re-endorsed by Airservices is shown in Figure 12.6.

There are changes to the ANEF contour as compared to the previous ANEF contours within the Master Plan 2015, with the differences being:

- east-west extent of the ANEF 20 and 25 contours has reduced
- north-south extent of the ANEF 20 and 25 contours has increased slightly
- south western shapes of the ANEF 30, 35 and 40 have changed due to repositioning the Southern Aiming Point from the west side of the airport to the west side of Runway 35L.

The change in the ANEF contours from 2015 to 2020 is due to:

- aircraft movement numbers can be forecast with greater certainty following

the implementation of a CBS at the Airport in 2017 (as discussed above). The Ultimate Practical Capacity of this 2020 ANEF is 375,000 forecasted aircraft movements

- prior master plan capacity limits above 375,000 movements have now been assessed as incompatible with the Airport airspace as it is currently managed including subsequent to the introduction of Class D airspace and the CBS
- the Master Plan 2015 upper long range forecast of 500,000 movements has been aligned in this Master Plan to current safety and operational assumptions. Prior master plans adopted a conservative forecast of long range capacity. These forecasts have been revised as additional information about safety and airspace has been determined

- Moorabbin ATC's advice to manage aircraft in the western circuit safely (containing up to one aircraft and is used infrequently), the number of circuits on the western circuit cannot be increased due to the dominance of arrival and departure traffic using the eastern circuit
- increases in absolute numbers of arrival/departure operations over time to reach ultimate capacity, the number of training circuits that can be safely conducted on the western circuit might decrease slightly from the currently forecast 375,000 movements
- Moorabbin ATC also advises that capacity for aircraft in the western circuit (Runway 13R/31L and 17R/35L) is on average one aircraft operating, and capacity in the eastern circuit (Runway 13L/31R and 17L/35R) is seven aircraft operating



Figure 12.6 – Moorabbin Airport 2015 and 2020 ANEF Comparison

- percentage of arrival and departure traffic at the Airport is influenced largely by the movement of aircraft to and from the designated training area. The ratio of arrivals and departures to
- circuit movements is a feature of the training syllabus and is expected to remain constant compared with current operations (16% of total movements)
- relocation of the Southern HLS to a Southern Aiming Point on the western side of the end of Runway 35L.

12.3.3 – Number-Above Contours

The 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 approach provides further information to support planning decisions and community amenity in addition to the ANEF system discussed in Section 12.3.2.

Moorabbin Airport is supportive of disclosure of aircraft noise in accordance with NASAG principles and set out in NASF Guideline A – Measures for Managing the Impact of Aircraft Noise. Moorabbin Airport supports the NASF recommendations and has prepared N contours as part of this Master Plan 2021.

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 100 N-60 contour connects all the points on the ground where 100 events with a noise level of 60 dB(A) or louder would occur on an average day.

N contour maps are shown in Figure 12.7, Figure 12.8 and Figure 12.9. 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 can still be expected to receive frequent exposure to audible aircraft operations.



Figure 12.7 – N-60 Contour Map



Figure 12.8 – N-65 Contour Map

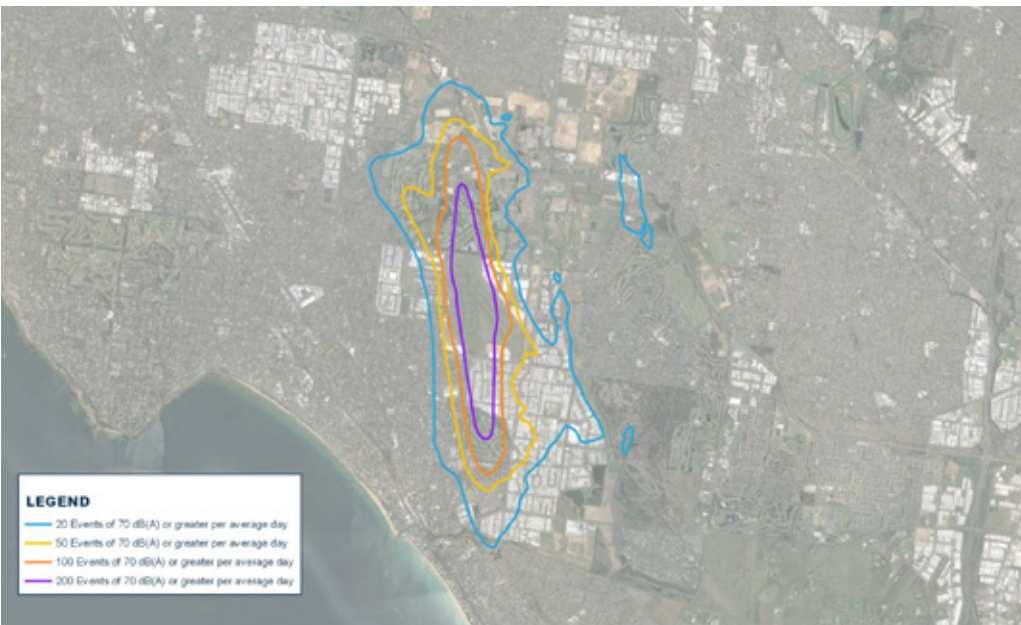


Figure 12.9 – N-70 Contour Map

12.4

MANAGING BUILDING GENERATED WINDSHEAR

Moorabbin Airport as the Airport Lessee Company uses NASF Guideline B in the planning and development processes to ensure aviation operations remain safe. 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.

Buildings that could pose a safety risk are those located within the assessment trigger area as illustrated on Figure 12.10, for each runway end, that is:

- 1,200 metres or closer perpendicular from the runway centreline (or extended runway centreline)
- 900 metres or closer in front of the runway threshold (towards the landside of the airport)
- 500 metres or closer from the runway threshold along the runway.

For proposed buildings within the assessment trigger area, a review of the height in relation to the 1:35 surface extending perpendicular from the runway centreline (or extended runway centreline within the assessment trigger area) is considered. Buildings that are below the 1:35 surface, in accordance with NASF Guideline B, are considered to clearly not pose a risk. This conservative assessment

is based on global research and has been adopted in Australia through NASF Guideline B.

Where proposed buildings penetrate the 1:35 surface, further assessment is required. Moorabbin Airport seeks modelling and assessment by wind engineers against the allowable windshear and turbulence criteria set out in NASF Guideline B.

Moorabbin Airport and aviation consultants review the wind engineering assessment against historical wind data in consultation with CASA and Airservices to manage safety compliance.

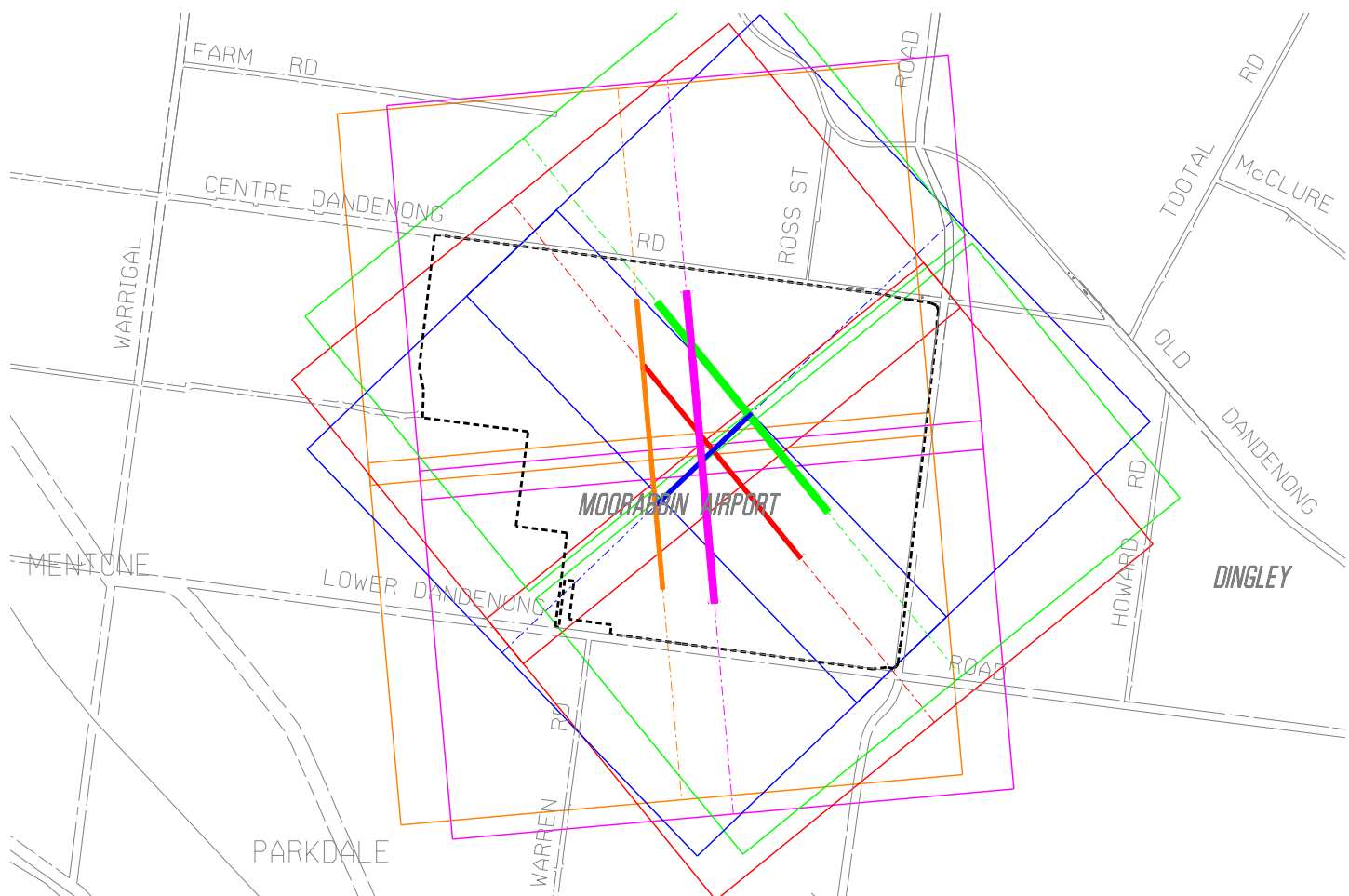


Figure 12.10 – Windshear Assessment Envelopes

12.5

MANAGING THE RISK OF WILDLIFE STRIKES

NASF Guideline C provides advice to help protect against wildlife hazards originating off-Airport. Many airports are surrounded by areas attractive to wildlife, particularly birds, however appropriate land use planning decisions and the way in which existing land is managed near airports can significantly reduce the risk of wildlife hazards.

Guidance is provided on the land uses that present a risk of attracting wildlife and triggers based on three kilometres, eight kilometres and 13 kilometres of the airports as illustrated in Figure 12.11.

For proposed developments on Airport, issues such as surrounding landscaping and/or management of food waste are considered in the early stages of a proposal and are considered in the final design.

Moorabbin Airport is surrounded by a mix of residential, industrial and recreation uses. Most of the uses surrounding the Airport present a wildlife attraction risk of 'very low' to 'moderate' in accordance with NASF Guideline C Attachment 1. Moorabbin continues to maintain its ongoing communication with local councils to mitigate and monitor the risk of wildlife attraction where appropriate.

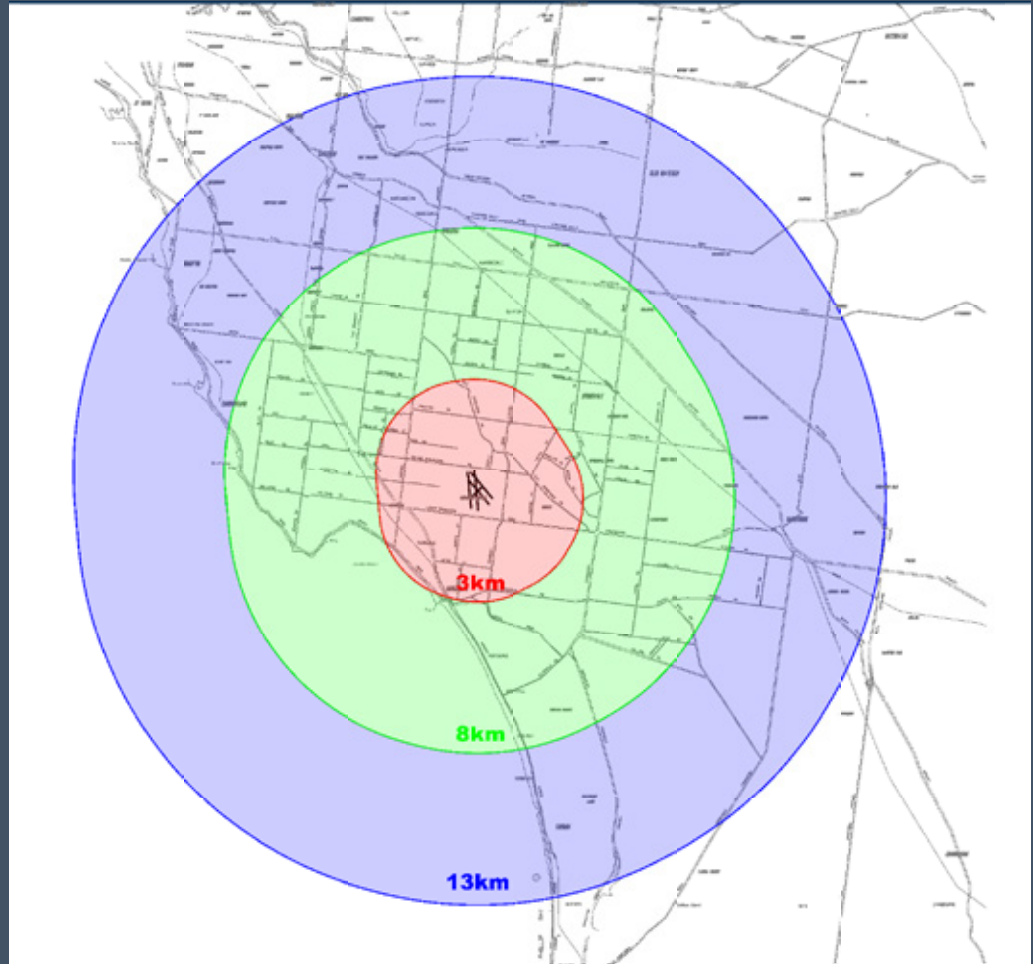


Figure 12.11 – Wildlife Buffer Zones



12.6

MANAGING THE RISK OF WIND TURBINE FARMS

Wind turbines can constitute a risk to low-flying aviation operations such as agricultural pilots. Additionally, wind monitoring towers can be erected in anticipation of, or in association with, wind farms and can also be hazardous to aviation – particularly given their low visibility. These structures can affect the performance of CNS equipment operated by Airservices and the Department of Defence.

NASF Guideline D provides advice on the location and safety management of these and other similar structures. Wind turbine farms are not a significant operational issue for Moorabbin Airport. The Airport is located within the metropolitan urban area whereas wind farms are usually developed in rural and regional areas.

Within the Victorian Planning Provisions there are off-airport planning controls relating to wind turbine farms (clause

52.32), and these require consideration of any nearby airports. The prescribed airspace controls discussed in Section 12.8 would apply.

12.7

MANAGING THE RISK OF LIGHTING DISTRACTIONS

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 important that lighting near an airport is not configured so that pilots could be distracted or mistake this lighting as being ground lighting from the airport.

Moorabbin Airport development processes

require NASF Guideline E to be considered when planning on Airport development. The MOS 139 section 9.144 (Lights – requirements for zones) sets out the restrictions and degree of interference ground lights can cause as a pilot approaches and provides advice to lighting suppliers on the general requirements. The primary area is divided into four light control zones: A, B, C and D. These zones reflect the degree of interference ground lights can cause pilots as they approach and are illustrated on Figure 12.12.

Proposed developments on Airport are assessed against the light control zones and Moorabbin Airport ensures proponents are aware of their responsibilities to ensure lights meet the requirements of the zone.

While there are no specific off-Airport planning controls for lighting near the Airport, CASA has the authority under regulation 94 (Dangerous lights) of the *Civil Aviation Regulations 1988* (Cth) to authorise a notice to the owner of the place where the lights are, to extinguish or modify lights if it is likely to endanger the safety of aircraft.



Figure 12.12 – Maximum Lighting Intensity Zones

12.8

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 OLS and PANS-OPS surfaces.

The powers for airspace to be prescribed are granted under the *Airports Act and the Airports (Protection of Airspace Regulations) 1996* (Cth) and are further detailed in the NASF Guideline F – Managing the Risk of Intrusions into the Protected Airspace of Airports.

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 (including such non-physical things such as glare and air turbulence) are called controlled activities and cannot be carried out without the prior approval of the relevant airport operator and the Department of Infrastructure. The airport operator and/or the Department of Infrastructure must assess applications to carry out controlled activities and may impose conditions on approval.

Moorabbin Airport has determined that future requirements for airspace are adequately protected by the Airport's operational airspace.

Protection of airspace allows for continued growth in pilot training and this allows for future planning of the Airport to meet aviation, commercial and legislative requirements. It also provides greater certainty for planning decisions.

The Airport's prescribed airspace surfaces are shown in Figure 12.13 and Figure 12.14.

Note – the distances covered by the PANS-OPS can impose restrictions even in areas outside the OLS.

12.8.1 – Obstacle Limitation Surfaces

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 visual flight rules (when the pilot is flying by sight). The OLS consists of virtual reference surfaces in the airspace which determine when an object may become an obstacle to aircraft maneuvering near 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, obstacles or other aircraft.

In some circumstances the OLS may be infringed if the infringements 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.

The OLS applicable to Moorabbin Airport is illustrated in Figure 12.13.

12.8.2 – PANS-OPS Surfaces

The PANS-OPS surface is usually higher than the OLS and provides protection for instrument flying or instrument flying rules (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 so 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, obstacles or 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 (Cth) states that a short-term controlled activity may be approved by the Secretary of the Department of Infrastructure where the relevant airport operator supports the approval.

The PANS-OPS surfaces for the Airport provide airspace protection for the following instrument flight procedures published by Airservices:

- 5 GNSS arrival procedures (being the global navigation satellite system, GPS)
- an approach procedure to a circling minima using the Moorabbin Airport NDB
- a Runway 17L and 35R GPS RNAV (GNSS) approach procedure.

It is envisaged that the current instrument approach procedures will be retained in the future. Since there are no planned infrastructure changes, the current procedures will remain in their current form subject to routine maintenance by Airservices (as the custodian of the procedures).

The PANS-OPS surfaces applicable to the Airport are illustrated in Figure 12.14.

12.8.3 – Changes to OLS or PANS-OPS Surfaces

The OLS and PANS-OPS shown in Figures 12.13 and 12.14 reflect the prescribed airspace necessary to accommodate development in accordance with this Master Plan 2021.

These will be subject to technical review by Airservices prior to declaring under the regulations on approval of this Master Plan 2021.

12.8.4 – Other Controls on Obstacles and Hazards

In addition to the *Airports (Protection of Airspace) Regulations 1996* (Cth), the *Civil Aviation (Building Control) Regulations 1988* (Cth) and the CASR are relevant to controlling obstacles and hazards affecting airports.

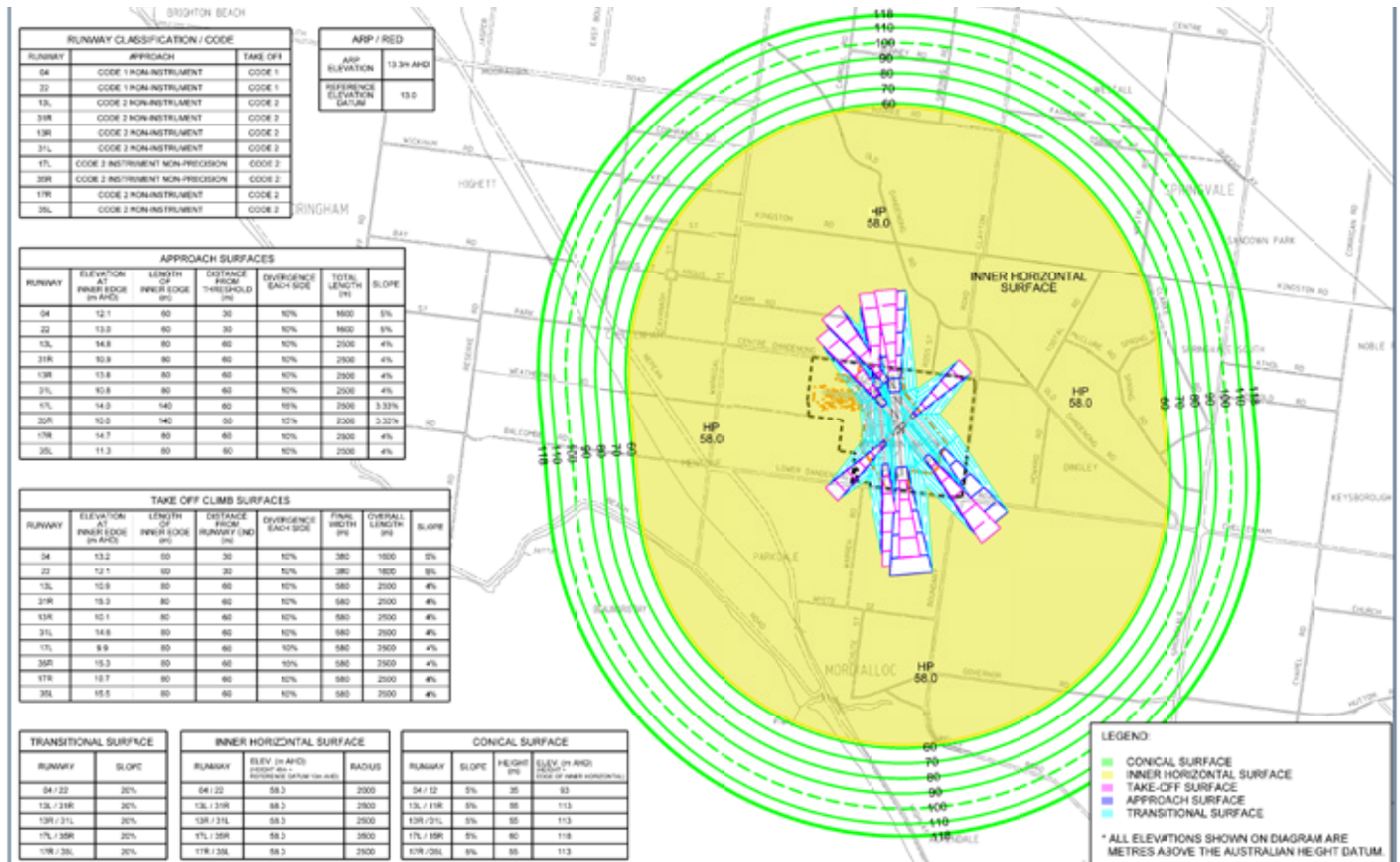


Figure 12.13 – OLS

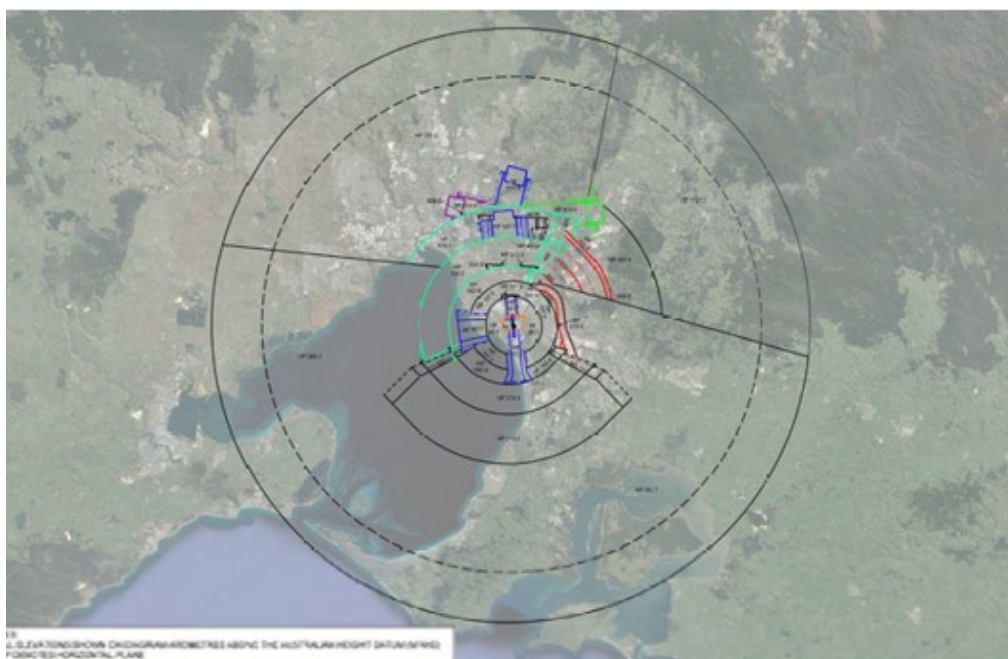


Figure 12.14 – PANS-OPS

Under the CASR, a person who proposes to construct a building or structure of 110 metres or more above ground level must inform CASA.

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 Department of Infrastructure. Approval for a controlled activity is separate to any local authority building approval.

12.9

PROTECTING AVIATION FACILITIES

CNS facilities are crucial to the safety of aviation. CNS infrastructure and facilities enable:

- pilots to navigate while enroute between airports
- pilots to utilise navigation aids to conduct instrument approach procedures
- dialogue between pilots and ATC
- ATC to monitor and confirm aircraft location.

While such facilities are associated with airports, some are off-site and at significant distances from airports. Inappropriate development near these aviation facilities can compromise their effectiveness.

NASF Guideline G is intended to assist land use planners in their consideration of these aviation facilities when assessing development proposals, rezoning requests and developing strategic land use plans. It will also guide their interactions with Airservices and the Commonwealth Department of Defence on when to consult on development proposals and in gaining up to date geographical locations for these facilities.

Airservices operates a NDB navigation aid at the Airport. The NDB provides lateral guidance to aircraft operating in marginal weather conditions. Protection surfaces are published for navigation aids to prevent interference with the performance and integrity of the aid's signal.

Moorabbin Airport's development approval process includes consideration of NASF Guideline G when considering on Airport development proposals. There are currently no specific off-Airport planning controls relating to NASF Guideline G. Moorabbin Airport supports outcomes for proposed developments in the NDB vicinity to be reviewed against NASF Guideline G by experts so that informed planning decisions can be made and CNS infrastructure continues to deliver safe operations.

12.10

PROTECTING HELICOPTER LANDING SITES

NASF Guideline H provides guidance on the ongoing operations of strategically important HLSs and the protection of flight paths and areas for new strategically important HLSs.

For the purposes of NASF Guideline H, a strategically important HLS is an area not on an aerodrome. Therefore, this NASF Guideline does not apply to Moorabbin Airport.

Moorabbin Airport's helicopter flight paths are discussed in Section 12.2.7.

12.11

MANAGING RISK IN PUBLIC SAFETY AREAS

NASF Guideline I provides guidance on approaches for a PSA planning framework in Australian jurisdictions. This Guideline is intended to ensure there is no increase in risk from new development and assist land use planners to better consider public safety when assessing development proposals, rezoning requests and developing strategic land use plans.

A PSA is a designated area of land at the end of an airport runway within which development may be restricted to control the number of people on the ground at risk of injury or death in the event of an aircraft accident on take-off or landing. PSA models aim to limit land uses that increase the number of people living, working or congregating within the PSA.

The dimensions of a PSA are typically determined by reference to the levels of statistical chance of an accident occurring at a particular location. The number of aircraft movements and the distance of the location from the critical take-off and landing points can be used to model the total statistical likelihood of a fatal accident at the location over a one-year period.

There is currently no ICAO standard for PSAs nor is a single risk methodology recognised as the world's best practice and as such implementation of PSAs varies internationally and is not uniform.

NASF Guideline I suggests two methods suitable for a planning-led approach to the assessment of the PSA:

- UK NATS Methodology
- Queensland State Planning Policy.

Moorabbin Airport has developed a methodology for the establishment of PSAs based on a reasonable estimation of the risks posed to third parties from the Airport's core aviation activities. This methodology is based on the UK NATS Methodology and was reviewed and agreed to by the Department of Infrastructure in 2017.

Moorabbin Airport considers that existing and proposed developments located within areas where individual risk is one in 100,000 per year or greater should be subject to further consideration and assessment to determine the suitability of the proposed activity with respect to prevailing and forecast future levels of risk.

With reference to relevant policy adopted in other jurisdictions, it is not considered necessary to consider further risk to public safety for on Airport activities in areas with individual risk below one in 100,000 per year.

Guidance on the appropriate land use planning approach off-Airport is a matter for State and/or local planning policy.



Figure 12.15 – Public Safety Areas

12.12

PLANNING POLICIES AND CONTROLS

12.12.1 – 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 18.04-1S of PPF includes NASF as a policy document.

12.12.2 – State Planning Policy (PPF and 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 5.5, Chapter 5 – Planning Framework and Context of this Master Plan 2021. In summary:

- Plan Melbourne provides for the transport function of the Airport (including other metropolitan airports) to be protected from incompatible land uses
- the current PPF includes (in Clause 18.04 – 1S) strategies for protecting airports from incompatible land uses.

12.12.3 – Local Planning Policies and Controls

Within the Kingston Planning Scheme, the following provisions assist in safeguarding the Airport and help ensure that the use and development of land around the Airport is sensitive to the long-term operation of the Airport:

- Clause 18.02-7L-02 – Moorabbin Airport Environs Policy
- Clause 45.02 – Airport Environs Overlay, and Schedule 1 to that overlay which applies to areas adjoining the northern, southern and eastern boundaries of the Airport
- Clause 42.03 – Design and Development Overlay, and Schedules 4 and 5 to that overlay, which implement height controls on buildings and works in areas near the Airport.

These provisions are discussed in more

detail in section 5.7, Chapter 5 – Planning Framework and Context of this Master Plan 2021.

Moorabbin Airport will continue to work with the City of Kingston to determine the implications for these planning controls on the noise contours and prescribed airspace outlined in this Master Plan 2021.

12.13

IMPROVING AIRPORT SAFEGUARDING

Given Moorabbin Airport's social and economic importance to the local region and the State, land use planners and the planning system should adopt a precautionary approach to protecting this significant asset and surrounding communities.

For this reason, Moorabbin Airport believes that significant improvements can be made to safeguard the Airport and its aviation operations.

The Victorian Government has established the Melbourne Airport Environs Safeguarding Standing Advisory Committee (MAESSAC) to review the effectiveness of controls intended to safeguard Melbourne Airport and other airports in Victoria.

More specifically, MAESSAC was established by the Victorian Minister for Planning in December 2019 to:

- advise on improvements to the planning provisions safeguarding Melbourne Airport and its environs
- consider:
 - the PPF, zones, overlays and any other related planning provisions
 - relevant guidance material and any complementary safeguarding tools and processes.

Importantly, MAESSAC may provide advice on improvements to planning provisions, guidance material and any complementary safeguarding tools and processes that may help safeguard other airport environs in Victoria in addition to Melbourne Airport.

Further information relating to MAESSAC can be found at:

<https://www.planning.vic.gov.au/panels-and-committees/browse-panels-and-committees/projects/melbourne-airport-environs-safeguarding-standing-advisory-committee>.

In September 2020, Moorabbin Airport, together with other airport operators, made a written submission to MAESSAC. Public hearings were held in February 2021.

Safeguarding matters set out in Moorabbin Airport's submission to MAESSAC are:

- The NASF should be fully implemented into the Victorian planning system. NASF is currently referred to as a policy document under the PPF's Clause 18.02-7S – Airports and Airfields. The policy reference, while supportive, can be strengthened by requiring on the ground planning assessments including aviation impact assessments, both on and off-airports
- The Kingston Planning Scheme applies the Airport Environs Overlay and the AEO1 to parts of the municipality. The Kingston Planning Scheme adopts the endorsed ANEF 25 contour, as it stood on 22 December 1999. This Master Plan 2021 contains an ANEF that adopts an "Ultimate Practical Capacity" of 375,000 aircraft movements and will result in the ANEF 25 contour contracting over the Airport site. This is a 25% reduction in movements and is driven by aviation safety and airspace limitations. As a result, Moorabbin Airport will work with the City of Kingston to update the AEO1
- While Moorabbin Airport's prescribed airspace is protected by the *Airports Act and Airports (Protection of Airspace) Regulations 1996* (Cth), this is not widely known or understood by developers, the community, or other stakeholders. The 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. However, these controls do not cover all the Airport's prescribed airspace and are outdated due to changes to the Airport's prescribed airspace. Moorabbin Airport has recognised the Design and Development Overlays

in Master Plan 2015 and has worked with the City of Kingston regarding safe development heights surrounding the Airport. Better implementation of prescribed airspace requirements into the Victorian planning system would be beneficial for all stakeholders

- As discussed in Section 8.6, Chapter 8 – Non – Aviation Development Plan of this Master Plan 2021, we recommend the Airport is located within the UGB
- The Airport has been planned, including using safeguarding principles, around airport infrastructure and aviation functions being located in the middle of the Airport. The built form within industrial and retail zones provides a noise buffer to off-Airport uses. Future industrial warehouse developments in Precinct 4 of Master Plan 2015 will further shield residential areas to the east. Moorabbin Airport recommends that MAESSAC supports the Airport's layout because it delivers safeguarding objectives
- 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 N contours, to provide a more detailed and accurate reflection of the potential aircraft noise effects adjacent to the Airport. Moorabbin Airport recommends current N60 / N65 / N70 contours should be used as an additional consideration over and above the ANEF contours and the Airport Environs Overlay and AEO1, particularly when changes to zoning are proposed near the Airport or its flight corridors

- Airport safeguarding is complex and the assessment of planning proposals near the Airport requires specific information and technical knowledge. Moorabbin Airport recommends improved planning controls and a Planning Practice Note for airport safeguarding, as this would assist permit applicants to better prepare applications and Local Council planners to assess applications near the Airport
- Moorabbin Airport has implemented a comprehensive stakeholder

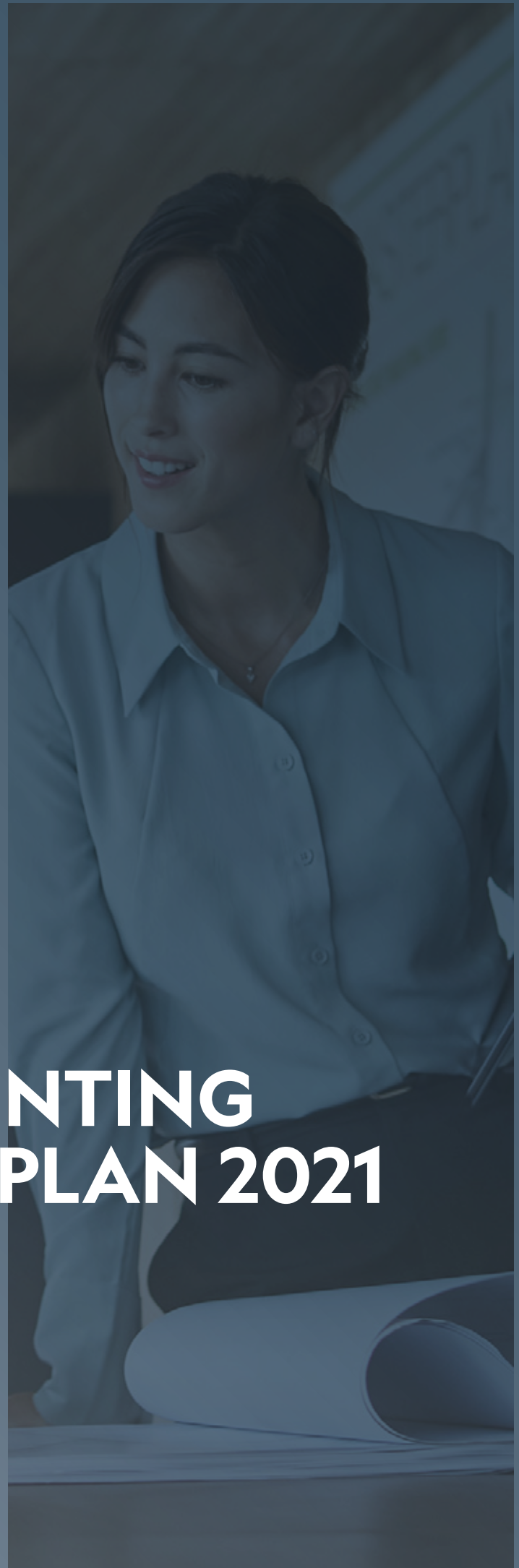
engagement strategy including airport safeguarding. Stakeholders include three levels of Government, regulators, customers, industry and the community. An issue remains to determine how airports can best provide information to the most noise sensitive people so they better understand how aircraft noise may impact them. 25,000 residents live under controlled airspace in an 11-kilometre diameter area of the Airport. Each year Moorabbin Airport receives 75 noise complaints and fewer than 10 safety enquiries (Airservices receives 90). Most residents were aware of the Airport, our website, aviation information and the flight training role of the Airport when they chose to live nearby and rarely if ever – communicate with Moorabbin Airport on safeguarding issues. This indicates the work Moorabbin Airport is currently undertaking is effective and any improvements delivered by the safeguarding framework will enhance outcomes for the community.

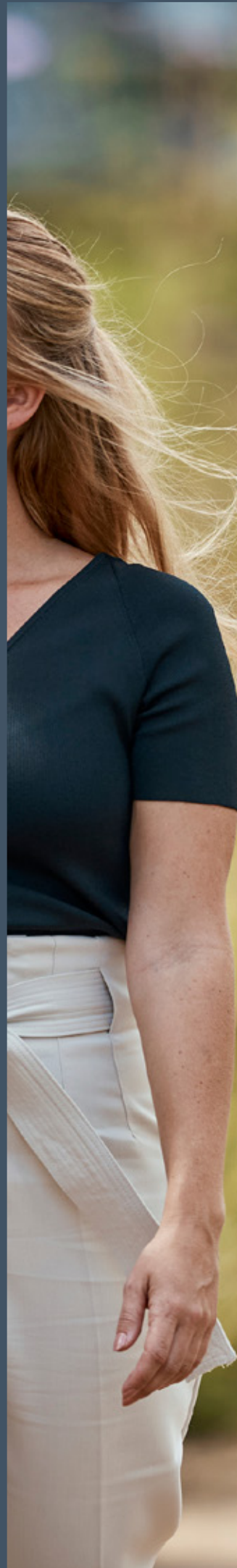




13

IMPLEMENTING MASTER PLAN 2021





This Master Plan 2021 has a term of eight years and will be implemented over the next 20 years.

In compiling the Master Plan, we have sought to collaborate with key stakeholders (including the Federal Government, City of Kingston, Moorabbin Airport Chamber of Commerce, Moorabbin Airport customers) to address key concerns raised during consultation when preparing this Master Plan 2021.

This Master Plan seeks to continue Moorabbin's recognition as a State significant asset by the Victorian Government, providing a key economic and employment function for both Melbourne and Victoria.



We work with communities, regulators, governments and customers; and through our collective experience, we provide guidance supporting our eco-system's operational and growth objectives.





13.1

INTRODUCTION

Implementation of activities, and associated capital expenditure, in this Master Plan 2021 will be demand driven. We will support this implementation with infrastructure and improvements, so that the Airport is developed in a whole of site manner.

When implementing this Master Plan 2021, we will respond to Commonwealth, State and Local laws and policies

13.2

CAPITAL WORKS PROGRAM

Capital works improvements across the Airport will align with the development priorities outlined in this Master Plan 2021 and will be funded by Moorabbin Airport. Moorabbin Airport will oversee the development of the Airport per Chapter 7 - Aviation Development Plan and Chapter 8 - Non-Aviation Development Plan.

13.3

DELIVERY APPROACH

Moorabbin Airport's management team and its external consultants will ensure that effective and appropriate project management, project delivery, safety and environmental management systems practices are adopted.

To successfully implement this Master Plan 2021, Moorabbin Airport will adopt relevant standards, policies and procedures to:

- help Moorabbin Airport deliver on its commitment of investment in the Airport
- track and communicate progress on proposed and current projects and programs
- enable Moorabbin Airport to build its capability to run successful projects
- support operator investment at the Airport

- continuously improve the way Moorabbin Airport runs projects

Moorabbin Airport aims to see that in delivering each project and program:

- a governance process is established so stakeholders delivering the project understand what is required, by whom and when
- clear and consistent information is provided for effective communication
- a transparent process is provided for those affected by the project
- expectations of all stakeholders are appropriately managed
- provides the best outcome for the Moorabbin Airport business
- stakeholder co-operation is increased and project objectives are aligned to Moorabbin Airport's strategic goals
- projects progress seamlessly through the funding and design approval stages
- Moorabbin Airport's ability to prioritise projects and to plan and evaluate workload is increased.

Several processes used by Moorabbin Airport when delivering projects are set out below.

13.3.1 – Development Process

The process for building activity and development approval for Moorabbin Airport is prescribed by the Airports Act and outlined in Chapter 6 – Land Use Plan of this Master Plan 2021.

13.3.2 – Safety Management Systems

Developments at the Airport are subject to an aviation risk assessment where appropriate, through the Moorabbin Airport Safety Management System.

Developments are assessed to ensure safe aviation operations are maintained and that any risk mitigation actions required are taken prior to the development commencing, as required.

13.3.3 – Environmental Management System

Details of Moorabbin Airport's Environmental Management System are in Chapter 11 – Environment Strategy of this Master Plan. This system provides a comprehensive, structured approach to managing environmental protection measures.

13.4

COMMUNITY AND STAKEHOLDER ENGAGEMENT

Moorabbin Airport facilitates ongoing communication through consultative processes with the local community, customers, Local, State and Commonwealth Government and other stakeholders. These will continue to operate during the term of the Master Plan 2021.

13.4.1 – Moorabbin Airport Community Aviation Consultation Group

Moorabbin Airport operates the CACG, which meets quarterly.

The CACG is a forum that Airport stakeholders, and representatives of surrounding communities, can understand each other's activities and concerns. Members of the CACG may raise issues that affect them, and these are discussed. Moorabbin Airport provides information regarding forthcoming plans for land use, aviation and non-aviation activities.

A topic of discussions at the CACG is aircraft noise, which is further discussed in Chapter 12 – Airport Safeguarding Strategy.

Issues discussed at the CACG will inform the implementation of this Master Plan 2021. Further details of the CACG are in Chapter 3 – Sustainability and Community Contribution.

13.4.2 – Additional Consultation

Moorabbin Airport undertakes extensive consultation with industry bodies, Local, State and Commonwealth Governments regarding matters affecting aviation safety, security, land use and planning. We will continue to do so to implement this Master Plan 2021. Consultation forums include:

- Moorabbin Airport Planning Consultation Group: regular consultation forum with different levels of Government that are engaged in planning around Moorabbin Airport, including City of Kingston planners, and representatives from the Victorian Government Department of Transport and Planning (which now includes VicRoads)
- Airport Emergency Planning Committee: statutory committee required under the certification of Moorabbin Airport by CASA. The committee comprises Airport customers, airlines, airspace authorities and emergency services, and reviews the operation of the AEP
- Municipal Emergency Management Planning Committee: committee convened by the City of Kingston that deals with all emergency planning matters relating to events in the area, with representation from Moorabbin Airport
- Airport Security Committee: committee convened pursuant to the *Aviation Transport Security Act 2004* (Cth), representing stakeholders in the security of the Airport including Airport customers and airlines, airspace authorities and representatives from Victoria Police
- Regulatory consultation with statutory officers: Moorabbin Airport has monthly meetings with the AEO and ad-hoc meetings with the ABC to discuss land use, planning and environmental issues arising at the Airport and the approval process for building activities and development

- Environment Strategy: Moorabbin Airport has detailed and ongoing consultation with Commonwealth, State and Local authorities, Airport customers and stakeholders, and the community regarding the Environment Strategy. See Chapter 11 – Environment Strategy
- Aviation Obstacle Protection: Moorabbin Airport holds delegated authority under the *Airports (Protection of Airspace) Regulations 1996* (Cth) for approval of temporary obstructions affecting prescribed airspace and is a referral authority under the Kingston Planning Scheme for all building proposals within the Aviation Obstacle Referral Height Area. In consultation with authorities, Moorabbin Airport sees that the airport flight paths are protected from the encroachment of inappropriate obstacles which may impact the safe operations
- Infrastructure development: Moorabbin Airport undertakes detailed and ongoing consultation with Local and State authorities for designing and approving new infrastructure and road upgrades. See Chapter 9 – Ground Transport Plan and Chapter 10 – Infrastructure Services
- Airport Customers: Moorabbin Airport undertakes detailed and ongoing consultation with Airport stakeholders. See Chapter 7 – Aviation Development Plan.

13.5

PERIODIC REVIEWS

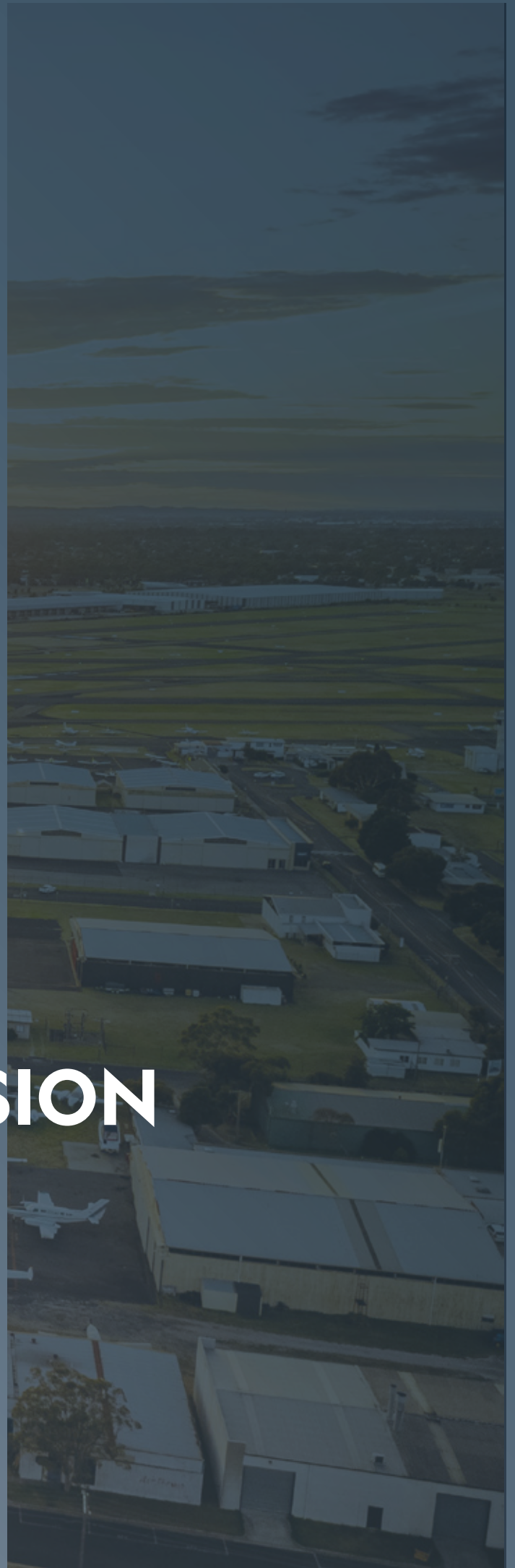
This Master Plan 2021 is effective for eight years, as prescribed in the Airports Act, which allows the Commonwealth Minister to direct an Airport Lessee Company to replace a master plan with a new master plan.

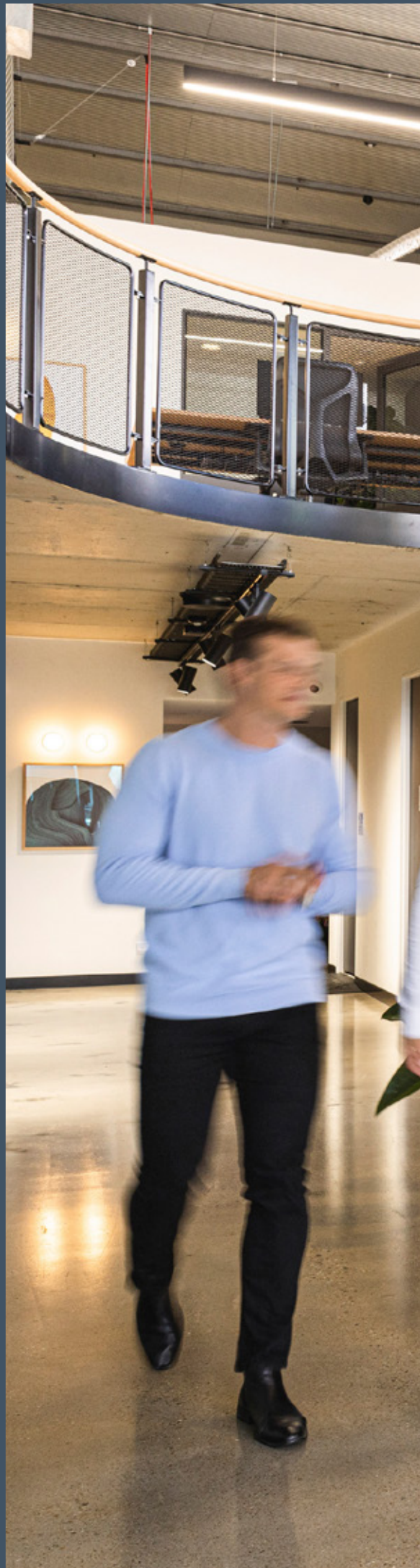
Moorabbin Airport undertakes regular internal reviews of aviation and non-aviation development and infrastructure requirements and assessments against the vision outlined in this Master Plan 2021. Other reviews are on noise contours and airspace surfaces to monitor the airport safeguarding strategies.

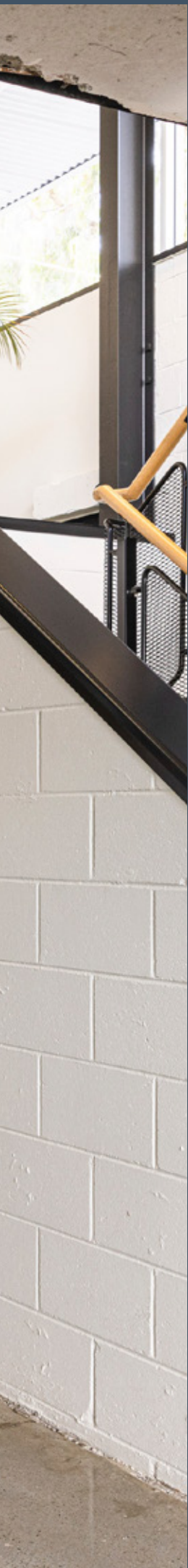


14

CONCLUSION







Moorabbin Airport's vision is to continue to develop an efficient and fully functioning Airport of Regional and State significance, which we have been committed to since privatisation in 1998.

The Airport holds a reputation for positive contribution to the surrounding area including City of Kingston and metropolitan Melbourne, which is evidenced by increasing flight student numbers, employment generation, investment and sustainable initiatives.

We support safe aviation operations that are responsive to the community, secure connections with regional areas, enhance environmental management and further connect the Airport with surrounding communities and regions.

We will continue to work hard to develop meaningful strategic relationships with all levels of Government to enhance the offerings for aviation customers and expand their networks.

This Master Plan 2021 will result in:

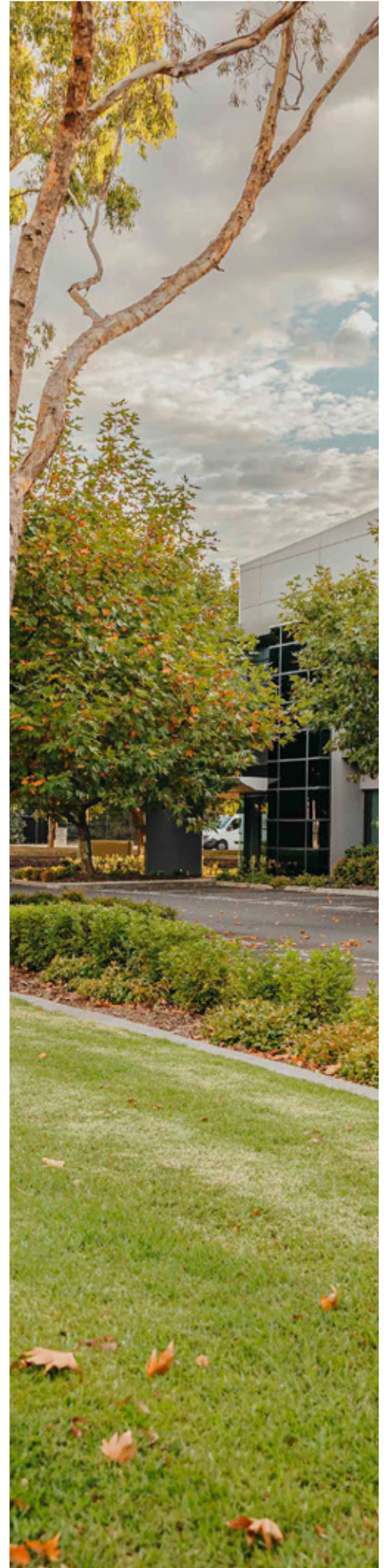
- 9,050 jobs
- \$285 million of investment in aviation and non-aviation activities
- \$1.2 billion per year in total economic benefit for the community
- new investment in aviation
- safe transport options
- safe operations
- infrastructure, services, facilities, and land for aviation customers to operate and grow
- greater aircraft parking
- an increase in aviation
- a surplus of aviation capacity
- a focus on working with our aviation customers to support their businesses.

We're committed to working with all stakeholders to deliver this Master Plan 2021.

Abbreviations	Meaning
AAT	Administrative Appeals Tribunal (Commonwealth)
ABC	Airport Building Controller
ACZ	The Activity Centre Zone forming part of the Victorian Planning Provisions
ADP	The Aviation Development Plan set out in Chapter 7 of Master Plan 2021
AEDT	Aviation Environmental Design Tool
AHD	Australian Height Datum
AEO	Airport Environment Officer
AEP	Airport Emergency Plan
AER	Annual Environment Report
AES	Airport Environment Strategy 2021-2029
Airport Lease	The long-term lease of the Airport from the Commonwealth to Moorabbin Airport
Airports Act (or the Act)	Airports Act 1996 (Commonwealth)
Airports Regulations (or the Regulations)	Regulations made under the Airports Act
Airservices	Airservices Australia
ANEF	Australian Noise Exposure Forecast
ARI	Average Recurrence Interval
AS2021-2015	Australian Standard AS2021-2000 – Acoustics – Aircraft Noise Intrusion – Building Siting and Construction
ATC	Air Traffic Control
CACG	Community Aviation Consultation Group
CASA	Civil Aviation Safety Authority
CASR	Civil Aviation Safety Regulations 1998 (Cth)
CASR Part 139	Part 139 of the Civil Aviation Safety Regulations 1998
CBS	Circuit Booking “Slot” System
CEMP	Construction Environment Management Plan
CNS	Communication, Navigation and Surveillance
COC	Certificate of Compliance or completed works notice
Commonwealth Minister	Commonwealth Minister for Infrastructure, Transport and Regional Development and Local Government
Council Plan	The City of Kingston’s Council Plan for 2017-2021, ‘Our Roadmap’
DDO4	Kingston Planning Scheme, Design and Development Overlay Schedule 4
DDO5	Kingston Planning Scheme, Design and Development Overlay Schedule 5
Department of Infrastructure	Department of Infrastructure, Transport, Regional Development, Communications and the Arts

Abbreviations	Meaning
DFO	Direct Factory Outlet
DPO1	Kingston Planning Scheme, Development Plan Overlay Schedule 1
EAP	Environmental Action Plan
EMS	Environmental Management System
EP Act	Environment Protection Act 2017 (Vic)
EPBC Act	Environment Protection and Biodiversity Conservation Act 1999 (Cth)
ESR	Environmental Site Register
FFG Act	Flora and Fauna Guarantee Act 1988 (Vic)
FTOs	Flight Training Operators
GPS	Global Positioning System
GWAZ	Green Wedge A Zone
GWZ	Green Wedge Zone
HLS	Helicopter Landing Site
ICAO	International Civil Aviation Organisation
LDA	Landing Distance Available
MA-ACZ	Moorabbin Airport Activity Centre Zone
MA-ACZ1	Moorabbin Airport Activity Centre Zone Schedule 1
MA-ACZ2	Moorabbin Airport Activity Centre Zone Schedule 2
MA-AEO	Moorabbin Airport Environs Overlay
MA-AEO1	Moorabbin Airport Environs Overlay Schedule 1
MA-C2Z	Moorabbin Airport Commercial 2 Zone
MA-DDO	Moorabbin Airport Design and Development Overlay
MA-SUZ	Moorabbin Airport Special Use Zone
MA-SUZ1	Moorabbin Airport Special Use Zone Schedule 1
MA-SUZ2	Moorabbin Airport Special Use Zone Schedule 2
MA	Moorabbin Airport
MAC	Moorabbin Airport Corporation
MAESSAC	Melbourne Airport Environs Safeguarding Standing Advisory Committee
MAPCG	Moorabbin Airport Planning Consultation Group
MDP	Major Development Plan
MICLUP	The Melbourne Industrial and Commercial Land Use Plan
MOS 139	CASA Manual of Standards Part 139 – Aerodromes
MRO	Maintenance, Repair and Overhaul

Abbreviations	Meaning
MPS	Municipal Planning Strategy
NASAG	National Airports Safeguarding Advisory Group
NASF	National Airports Safeguarding Framework
NBN	National Broadband Network
NDB	Non-Directional Beacon
NPI	National Pollutant Inventory
OEMP	Operational Environmental Management Plan
OLS	Obstacle Limitation Surface
PANS-OPS	Procedures for Air Navigation Services – Aircraft Operations
PBN	Principal Bike Network
PBS	Performance Based Standards
PFAS	Per-and poly-fluoroalkyl substances
PFN	Principal Freight Network
Plan Melbourne	Plan Melbourne 2017 - 2050
PPF	The Planning Policy Framework within the Victoria Planning Provisions
PSA	Public Safety Area
RPT	Regular Public Transport
SA2	Statistics Areas Level 2
South East Green Wedge Place	The land comprising the South East Green Wedge
TORA	Take-off Run Available
UGB	Urban Growth Boundary
Victorian EPA	Victorian Environment Protection Authority
VITM	Victorian Integrated Transport Model
VPPs	Victoria Planning Provisions
WSAA	Water Services Association of Australia
WSUD	Water-Sensitive Urban Design







APPENDIX 1

Moorabbin Airport Planning Controls - Master Plan 2021



1.0

ZONES

This section sets out the zones which apply to land at the Airport.

The following elements are included in all zones which apply to land at the Airport.

Section 1 – Approval not required

USE	CONDITION
Any use in Section 1 of the schedule to a zone	Must comply with any condition in Section 1 of the schedule to a zone.

Section 2 – Approval required

USE	CONDITION
Any use in Section 2 of the schedule to a zone	Must comply with any condition in Section 2 of the schedule to a zone.
Any other use not in Section 1 or 3 of the schedule to a zone	

Section 3 – Prohibited

USE	CONDITION
Any use in Section 3 of the schedule to a zone	

1.0.2 Use of land

Any requirement in the schedule to the zones must be met.

If the use of land is for “sensitive development” as defined in the Airports Act, then that use of land must not occur without the approval of the Commonwealth Minister as required under section 89A of the Airports 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; and
- a written statement providing an assessment of the proposal's consistency with the Moorabbin Airport Master Plan 2021.

Decision Guidelines

Before deciding on an application, Moorabbin Airport must consider, as appropriate:

General

- the consistency of the proposal with the Moorabbin Airport Master Plan 2021;
- the Airports Act 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; and
- 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 ANEF requirements;
- whether the proposal complies with the NASF guidelines; and
- whether the proposal is consistent with CASR Part 139.

1.0.3 – Leasing

As all Airport land is owned by the Commonwealth of Australia and leased to the Airport Lessee Company, land is subject to either a lease, sub-lease, licence or other occupancy agreement.

1.0.4 – 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, then the relevant requirements of sections 90 to 94 of the Airports Act apply.

If the proposal is a “sensitive development” as defined in the Airports Act, then the development must not be carried out without the approval of the Commonwealth Minister as required under section 89A of the Airports Act.

The maximum height of buildings or works must not exceed the relevant OLS standards.

Application requirements

An application to construct a building or construct or carry out works must be accompanied by, the following information (to the satisfaction of Moorabbin Airport), where appropriate and where required by Moorabbin Airport:

- 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 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 plans; and
- a written statement providing an assessment of the proposal's consistency with the Moorabbin Airport Master Plan 2021.

Decision guidelines

Before deciding on an application, Moorabbin Airport must consider, as appropriate:
General

- the consistency of the proposal with the Moorabbin Airport Master Plan 2021;
- the consistency of the proposal with the Airports Act 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; and
- 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 ANEF requirements;
- whether the proposal is consistent with the NASF; and
- whether the proposal is consistent with CASR Part 139.

1.0.5 – Advertising signs

Advertising sign requirements are at section 3.1 of these Appendix 1 - Moorabbin Airport Planning Controls – Master Plan 2021.

1.0.6 – Car Parking

Car parking requirements are at section 3.2 of these Appendix 1 - Moorabbin Airport Planning Controls – Master Plan 2021.

1.0.7 – Loading and Unloading Vehicles

Requirements for the loading and unloading of vehicles are at section 3.3 of these Appendix 1 - Moorabbin Airport Planning Controls – Master Plan 2021.

1.0.8 – Design Principles

Design Principles for New Development are at section 3.4 of these Appendix 1 - Moorabbin Airport Planning Controls – Master Plan 2021.

1.1

MOORABBIN AIRPORT SPECIAL USE ZONE

Shown on the Zoning Plan (Figure 6.2) as MA-SUZ with a number.

Purpose

To protect airside land and uses for aviation operations.

To preserve and enhance the general aviation capacity and functions of Moorabbin Airport.

To reinforce the role of Moorabbin Airport as a Place 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 – Moorabbin Airport Special Use Zone - Schedule 1

Shown on the Zoning Plan (Figure 6.2) as MA-SUZ1.

Airfield

Purpose

To protect airside land and uses for aviation operations.

To preserve and enhance the general aviation capacity and functions of Moorabbin Airport.

1.1.1-1 – Table of uses

Section 1 – Planning Approval not required.

Section 1 – Planning Approval not required

USE	CONDITION
Aircraft operations	
Airport	
Airport operations facilities	
Apron	
Helicopter Landing Surface	
Heliport	
Minor utility installation	
Road	
Runway	
Runway approach aid	
Taxiway	

Section 2 – Planning Approval required

USE	CONDITION
Air traffic control facility	
Aviation support facility	
Car Park	
Fuel facility	
Navigational aids including weather station	
Passenger terminal and associated facilities	
Transport terminal	
Utility installation (other than Minor utility installation)	

Section 3 – Prohibited

USE	CONDITION
Corrective institution	
Gambling premises	
Intensive animal husbandry	
Major sports and recreation facility	
Shop	

1.1.2 – Moorabbin Airport Special Use Zone - Schedule 2

Shown on the Zoning Plan (Figure 6.2) as MA-SUZ2.

Aviation Support Services

Purpose

To support the long-term aviation needs of the Airport's aviation operations and aviation support 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 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 of 17 June 2015.

11.2-1 – Table of uses

Section 1 – Planning Approval not required

USE	CONDITION
ATC associated facilities	
Aircraft operations	
Airport	
Airside road	
Apron	
Aviation maintenance facility	
Aviation support facility, including earthworks, repositories and water management basins	
Aviation support facility	
Businesses that protect, support or facilitate emerging and next generation aviation activities	
Hangars and aircraft parking	
Helicopter Landing Surface	
Minor utility installation	
Runway	
Runway approach aid	
Taxiway	
Terminal	

Section 2 – Planning Approval required

USE	CONDITION
Commercial Display Area	
Fuel Facility	
Passenger terminal and associated facilities	
Student Accommodation	
Utility installation (other than Minor utility installation)	
Any other use not in Section 1 or 3	

Section 3 – Prohibited

USE	CONDITION
Adult sex bookshop	
Corrective institution	
Gambling premises	
Intensive animal husbandry	
Major sports and recreation facility	
Retail Premises	
Any use which is a Sensitive Development (as defined in the Airports Act) unless a Major Development Plan is approved for that use in accordance with the Airports Act.	
Any use specified in Section 1 or Section 2 of MA-SUZ1, MA-ACZ, MA-ACZ2 or MA-C2Z, unless the use is specified in Section 1 or Section 2 of this MA-SUZ2 (which prevails)	

1.2

MOORABBIN AIRPORT
ACTIVITY CENTRE
ZONE

Shown on the Zoning Plan (Figure 6.2) as MA-ACZ with a number.

Purpose

To implement the Moorabbin Airport Master Plan 2021.

To encourage a mixture of uses and the intensive development of the activity centre:

- as a focus for business, shopping, working, leisure, transport and community facilities; and
- to support sustainable urban outcomes that maximise the use of infrastructure and public transport.

To create through good urban design an attractive, pleasant, walkable, safe and stimulating environment.

To facilitate use and development of land in accordance with the Development Framework for the activity centre.

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 – Operation

A schedule to this zone comprises the Development Framework for the activity centre.

A schedule to this zone must contain:

- a framework plan for the activity centre;
- a statement of the activity centre land use and development objectives to be achieved;

A schedule to this zone may contain:

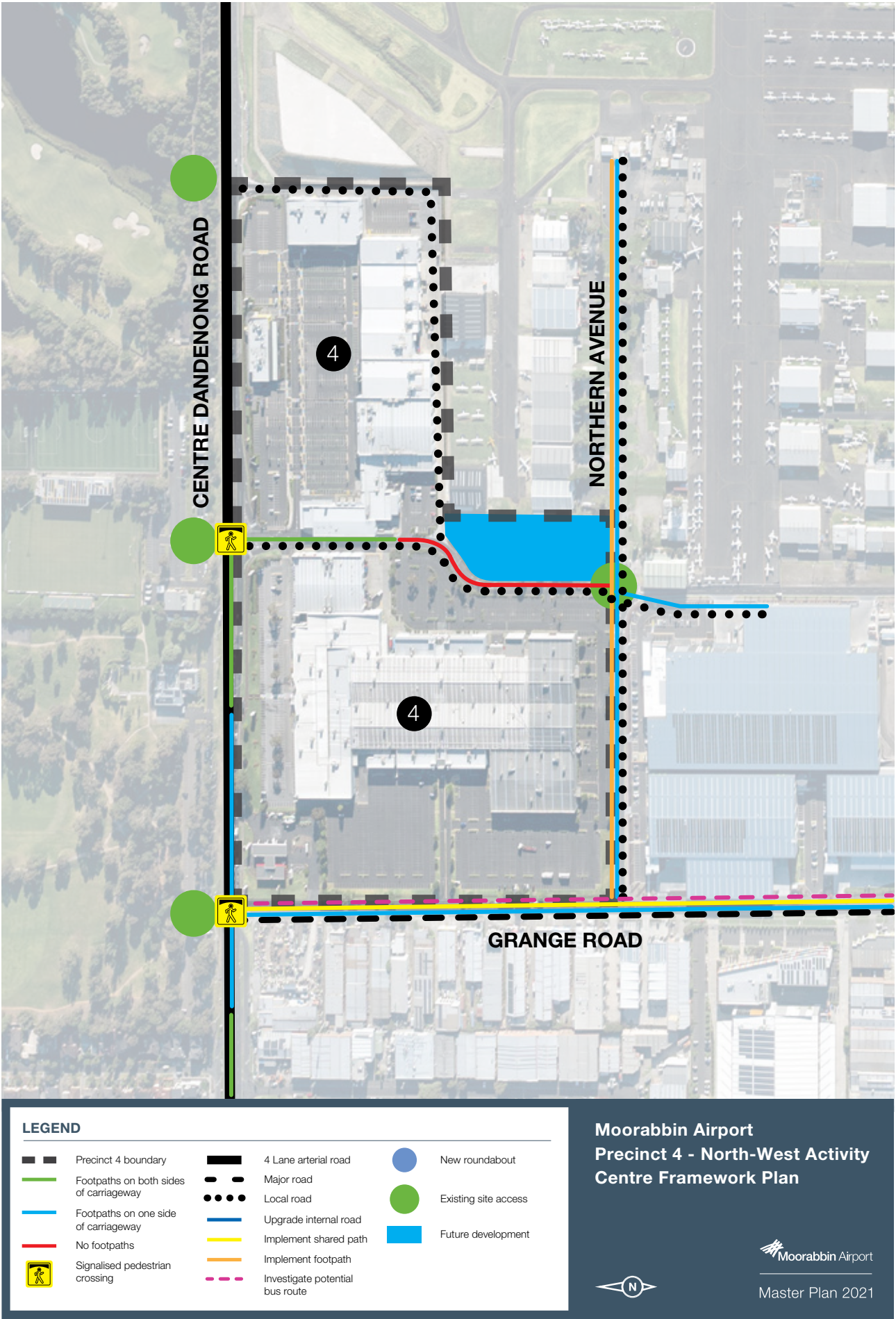
- centre-wide provisions; and
- precinct provisions.

1.2.1 – Moorabbin Airport
Activity Centre Zone -
Schedule 1

Shown on the Zoning Plan (Figure 6.2) as MA-ACZ1.

Moorabbin Airport North-West Activity Centre

1.2.1-1 – Moorabbin Airport
North-West Activity Centre
Framework Plan





1.2.1-2 – Land use and development objectives to be achieved

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 provide a mix of uses for local and weekly convenience shopping that serve the needs of the surrounding community as well as retail uses serving a larger regional catchment.

To promote entertainment, leisure and recreation uses.

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.

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 Airport businesses and support the existing and future employee base.

Encourage the provision of retail premises, including so as to support the future employment base of the Airport.

Encourage activities and services which support and enhance the local and regional economies and provide locally based retail, business and commercial employment opportunities.

Encourage pedestrian linkages to and use of the Principal Public Transport Network along Centre Dandenong Road abutting this precinct.

1.2.1-3 – Table of uses

Section 1 – Approval not required

USE	CONDITION
Accommodation (other than Corrective institution)	
Childcare centre	
Education centre	
Exhibition centre	
Home based business	
Informal outdoor recreation	
Motor racing track	
Minor utility installation	
Office	
Place of worship	
Railway	
Retail premises (other than Gambling premises and Shop)	
Road	
Shop (other than Adult sex bookshop)	
Telecommunications facility	
Tramway	

Section 2 – Approval required

USE	CONDITION
Facilities for aircraft operations, aviation maintenance or aviation support	Must be located within the area indicated for 'Future development' as set out in Appendix 1 - 1.2.1-1 Moorabbin Airport North-West Activity Centre Framework Plan.
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.
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)	
Transport terminal	
Utility installation (other than Minor utility installation)	
Warehouse	

Section 3 – prohibited

USE	CONDITION
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) unless a Major Development Plan is approved for that use in accordance with the Airports Act	



1.2.2 – Moorabbin Airport Activity Centre Zone - Schedule 2

Shown on the Zoning Plan (Figure 6.2) as MA-ACZ2.

Moorabbin Airport North-East Activity Centre

1.2.2-1 Moorabbin Airport North-East Activity Centre Framework Plan

1.2.2-2 Land use and development objectives to be achieved

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 provide a mix of uses for local and weekly convenience shopping that serve the needs of the surrounding community as well as retail uses serving a larger regional catchment.

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.

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.

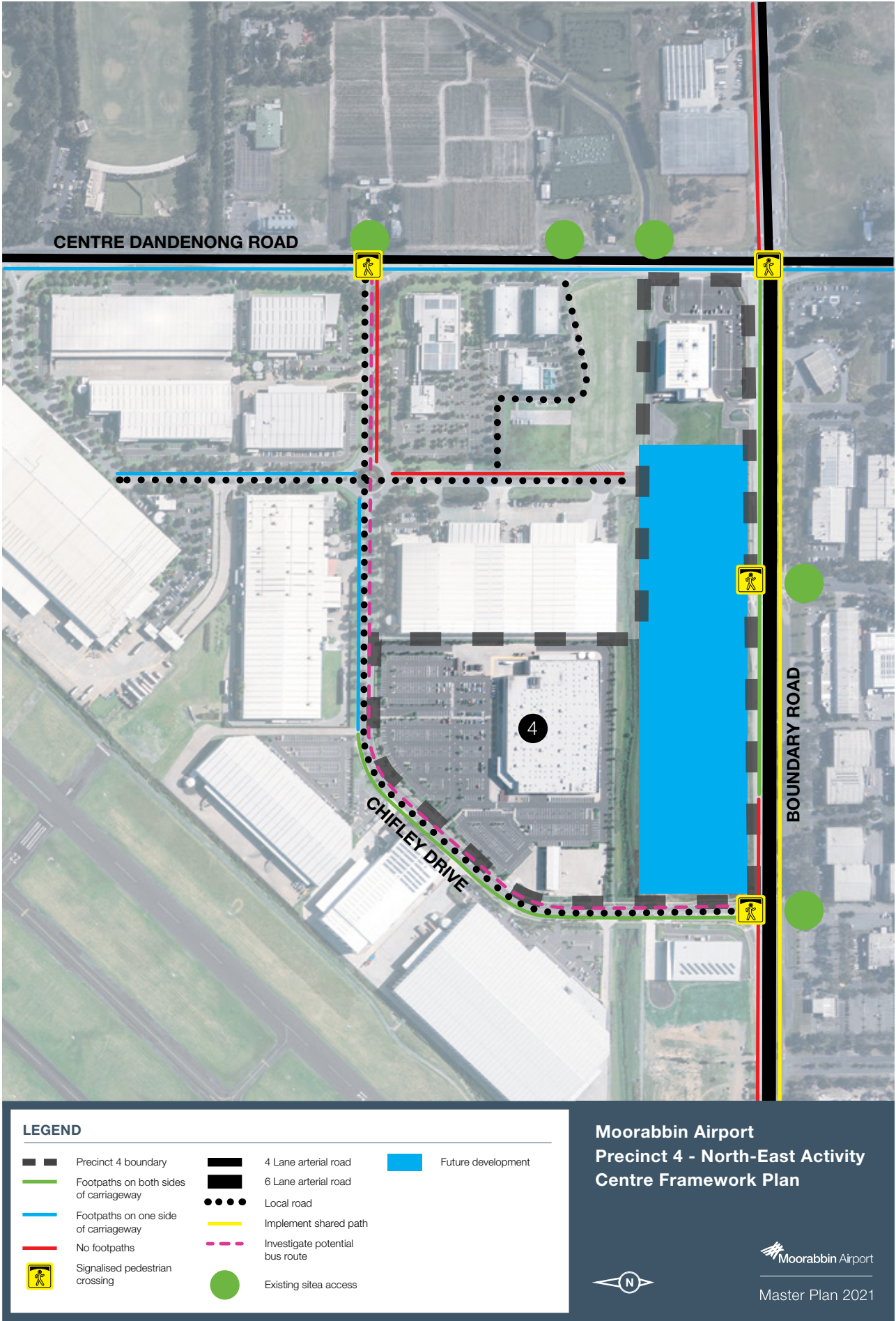
Encourage the provision of retail premises, including so as to support the future employment base of the Airport.

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.

Allow for medical and aged care facilities of appropriate kinds and in appropriate locations. Moorabbin Airport 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.



Section 1 – Approval not required

USE	CONDITION
Accommodation (other than Corrective institution)	
Childcare centre	
Education centre	
Exhibition centre	
Home based business	
Informal outdoor recreation	
Motor racing track	
Minor utility installation	
Office	
Place of worship	
Railway	
Retail premises (other than Gambling premises and Shop)	
Road	
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.
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)	
Transport terminal	
Utility installation (other than Minor utility installation)	
Warehouse	
Any other use not in Section 1 or 3	

Section 3 – prohibited

USE	CONDITION
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) unless a Major Development Plan is approved for that use in accordance with the Airports Act	



1.3

MOORABBIN AIRPORT COMMERCIAL 2 ZONE

Shown on the Zoning Plan (Figure 6.2) as MA-C2Z.

Purpose

To reinforce the role of Moorabbin Airport as of Place 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
Aviation engineering facility	
Aviation maintenance facility	
Aviation support facility	
Businesses that protect, support or facilitate emerging and next generation aviation activities	
Car park	
Flight Training Education Centre	
Cafe and canteen premises	
Industry (other than Materials recycling and Transfer station)	<p>Must not be a purpose listed in the table to Clause 3.5 with no threshold specified.</p> <p>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 of 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.</p> <p>Must be appropriately designed and located so as not to cause offence or unacceptable risk to the neighbourhood.</p>
Logistics	
Minor utility installation	
Office	
Postal agency	
Restricted retail premises	
Road	
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 1,800 square metres.
Spare parts warehousing	
Student accommodation (for flight training)	
Supermarket	The leasable floor area must not exceed 1,800 square metres.
Telecommunications facility	
Trade Supplies	
Warehouse	

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	
Fuel facility	
Hospital	Where required a Major Development Plan must be approved in accordance with the Airports Act.
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.
Transport terminal	
Utility installation (other than Minor utility installation)	
Any other use not in Section 1 or 3	

Section 3 – Prohibited

USE	CONDITION
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) unless a Major Development Plan is approved for that use in accordance with the Airports Act	

2.0 OVERLAYS

This section sets out the 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 6.9) 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 NASF Guidelines B, C, E, F, G and I.

Buildings and works

Planning Approval requirement

Planning approval is required to:

- construct a building or construct or carry out works; and
- construct a fence.

Planning approval will be granted only for buildings and works which will, to the satisfaction of Moorabbin Airport 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 near Airports;
- NASF Guideline E – Managing the Risk of Distractions to Pilots for Lighting near Airports;
- NASF Guideline F – Managing the Risk of Intrusions into the Protected Airspace of Airports;
- NASF Guideline G - Protecting Aviation Facilities – Communications, Navigation and Surveillance (CNS); and

- NASF Guideline I - Managing the Risk in Public Safety Areas at the Ends of Runways.

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 6.8) 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 Master Plan 2021 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 Appendix 1 - Moorabbin Airport Planning Controls –Master Plan 2021.

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 6.8) 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);
- childcare centre;
- drive in theatre;
- education centre (other than a Flight training education centre); and
- 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; and
- tavern.

Planning approval may not be granted for a use that is prohibited under the zone.

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; and
- 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

USE	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 not required

USE	CONDITION
Floodlit sign	Must comply with the requirements of the Air-ports Act and Regulations, the CASR and Guideline E of the NASF in relation to lighting around Airports.
Internally Illuminated sign	
Any other sign not in Section 1	

Section 3 – Prohibited

USE	CONDITION
Nil	

3.1.3 Application requirements

An application to display an advertising sign must be accompanied by the following information (to the satisfaction of Moorabbin Airport), where appropriate and where required by Moorabbin Airport:

- 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 and 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;
- levels of illumination including:
- lux levels;
- the dwell and change time for any non-static images; and
- the relationship to any significant or prominent views and vistas.

3.1.4 – Decision Guidelines

Before deciding on an application to display a sign, Moorabbin Airport must consider, as appropriate:

- the requirements of the Airports Act and Regulations in relation to lighting around Airports;
- NASF Guideline E – Managing the Risk of Distractions to Pilots for Lighting near 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; and
- 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 Moorabbin Airport, 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 Moorabbin Airport 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 five 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 three 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 eight 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 two 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 seven 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; and
- 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 (Cth).

3.1.6 – Existing Signs

A sign that was lawfully displayed on the approval date of the Moorabbin Airport Planning Controls - Master Plan 2021 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; and
- 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.

A car parking requirement in the table is calculated by multiplying the figure in Column A or Column B (whichever applies) by the measure (for example square metres, number of patrons or number of bedrooms) in Column C. Column A applies unless Column B applies. Column B applies if any part of the land is identified as being within the Principal Public Transport Network Area as shown on the Principal Public Transport Network Area Maps (State Government of Victoria, August 2018).

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 Moorabbin Airport.

Decision guidelines

Before a requirement for car spaces is reduced or waived, the applicant must satisfy Moorabbin Airport 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; and
- any other relevant consideration as determined by Moorabbin Airport.

3.2.2 – Design and construction

Car parking plan

Before any use commences or any new building is occupied, the car spaces, access lanes, drive-ways and associated works and landscaping shown on the plan must, to the satisfaction of Moorabbin Airport, 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; and
- 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, Moorabbin Airport 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 – 2004, Parking facilities, Part 1: Off-street car parking; or a variation agreed with Moorabbin Airport.
- 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; and
- 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 Moorabbin Airport; and
- car spaces and accessways should have the following minimum dimensions.

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.

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

Use	Rate Column A	Rate Column B	Car Parking Measure Column C
Amusement parlour	4	3.5	To each 100 sqm of net floor area
Art & craft centre	4	3.5	To each 100 sqm of net floor area
Bar	0.4	-	To each patron permitted
	-	3.5	Space to each 100 sqm of leasable floor area
Betting agency	4	3.5	To each 100 sqm of leasable floor area
Bowling green	6	6	To each rink plus 50 per cent of the relevant requirement of any ancillary use
Childcare centre	0.22	0.22	To each child
Cinema based entertainment facility	0.3	0.3	To each patron permitted
Convenience restaurant	0.3	-	To each patron permitted
Convenience shop if the leasable floor area exceeds 80 sq m	-	3.5	To each 100 sqm of leasable floor area
	10	-	To each premises
	-	3.5	To each 100 sqm of leasable floor area
Display home centre	5	-	To each dwelling for five or fewer contiguous dwellings, plus
	2	-	To each additional contiguous dwelling
	-	3.5	To each 100 sqm of leasable floor area
Dwelling	1	1	To each one or two bedroom dwelling, plus
	2	2	To each three or more bedroom dwelling (with studies or studios that are separate rooms counted as bedrooms) plus
	1	0	For visitations to every 5 dwellings for developments of 5 or more dwellings
Education centre other than listed in this table	0.4	0.3	To each student that is part of the maximum number of students on the site at any time
Food and drink premises other than listed in this table	4	3.5	To each 100 sqm of leasable floor area
Freezing and cool storage	1.5	1	To each 100 sqm of net floor area
Fuel depot	10	10	Per cent of site area
Funeral Parlour	0.3	0.3	To each patron permitted
Gambling premises other than listed in this table	0.4	-	To each patron permitted
	-	3.5	To each 100 sqm of leasable floor area
Golf course	4	4	To each hole plus 50 per cent of the relevant requirement of any ancillary uses

Use	Rate Column A	Rate Column B	Car Parking Measure Column C
Home based business	1	0	To each employee not a resident of the dwelling
Hotel	0.4	-	To each patron permitted
	-	3.5	To each 100 sqm of leasable floor area
Industry other than listed in this table	2.9	1	To each 50 sqm net floor area
Landscape gardening supplies	10	10	Per cent of site area
Mail centre	3.5	3	To each 100 sqm of net floor area
Manufacturing sales	4	3.5	To each 100 sqm of leasable floor area
Market	8	3.5	To each 100 sqm of site area
Materials recycling	10	10	Per cent of site area
Medical centre	3	10	To the first-person providing health services plus
	5	-	To every other person providing health services
	-	-	To each 100 sqm of leasable floor area
Milk depot	10	10	Per cent of site area
Motel	1	1	To each unit, and one to each manger dwelling, plus 50 per cent of the relevant requirement of any ancillary use
Motor repairs	3	3	To each 100 sqm of net floor area plus
	1	1	For each vehicle being serviced, repaired or fitted with accessories, including vehicles waiting to be serviced, repaired, fitted with accessories or collected by owners
Office other than listed in this table	3.5	3	To each 100 sqm of net floor area
Place of assembly other than listed in this table	0.3	0.3	To each patron permitted
Postal agency	4	3.5	To each 100 sqm of leasable floor area
Primary produce sales	4	3.5	To each 100 sqm of leasable floor area
Primary school	1	1	To each employee that is part of the maximum number of employees on the site at any time
Research and development centre	3.5	3	To each 100 sqm of net floor area
Residential aged care facility	0.3	0.3	To each lodging room

Residential village	1	1	To each one or two bedroom dwelling plus
	2	2	To each three or more bedroom dwelling (with studies or studios that are separate rooms counted as bedrooms) plus
	1	0	For visitations to every five dwellings for developments of five or more dwellings
Retirement village	1	1	To each one or two bedroom dwelling plus
	2	2	To each three or more bedroom dwelling (with studies or studios that are separate rooms counted as bedrooms) plus
	1	0	For visitations to every five dwellings for developments of five or more dwellings
Restaurant	0.4	-	To each patron permitted
	-	3.5	To each 100 sqm of leasable floor area
Restricted retail premises	3	2.5	To each 100 sqm of leasable floor area
Rooming house	1	1	To each four bedrooms
Saleyard	10	10	Per cent of site area
Secondary school	1.2	1.2	To each employee that is part of the maximum number of employees on the site at any time
Shop other than listed in this table	4	3.5	To each 100 sqm of leasable floor area
Squash court - other than in conjunction with a dwelling	3	3	To each court plus 50 per cent of the relevant requirement of any ancillary use
Store other than listed in this table	10	10	Per cent of site area
Supermarket	5	5	To each 100 sqm of leasable floor area
Swimming pool - other than in conjunction with a dwelling	5.6	5.6	To each 100 sqm of the site
Tennis court - other than in conjunction with a dwelling	4	4	To each court plus 50% of the requirement of any ancillary use
Trade supplies	10	10	Per cent of site area
Veterinary centre	5	-	To the first-person providing animal health services plus
	3	-	To every other person providing animal health services
	-	3.5	To each 100 sqm of leasable floor area
Warehouse other than listed in this table	2	2	To each premises plus
	1.5	1	To each 50 sqm of net floor area
Winery	0.4	-	To each patron permitted
	-	3.5	To each 100 sqm of leasable floor area

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 is provided on the land for loading and unloading vehicles as specified in the table below; and
- 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; or
- adequate provision is made for loading and unloading vehicles to the satisfaction of Moorabbin

Floor Area of Building	Minimum Loading Bay	Dimensions
2,600 sqm or less in single occupation	Area	27.4 sqm
	Length	7.6 sqm
	Width	3.6 sqm
	Height clearance	4.0 sqm
For every additional 1,800 sqm or part	Area	Additional 18 sqm

3.4

DESIGN PRINCIPLES FOR NEW DEVELOPMENT

In addition to other matters, all applications submitted to Moorabbin Airport 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 Place of State Significance and a centre of aviation and flight training, complies in all relevant respects with the NASF guidelines;
- reflects the role and operation of the Airport.
- enhances liveability, visual amenity and safety of the public realm, and
- 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 Moorabbin Airport'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.

Car parking 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 powder coat 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.

Car parking

Appropriate levels of car parking must be provided in conjunction with all new land uses to the satisfaction of Moorabbin Airport.

Loading Bays

Loading areas should be located to be easily accessed and 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 of 17 June 2015 is in a residential zone or the Commercial 1 Zone under the Kingston Planning Scheme, or land which as of 17 June 2015 is used for a hospital or an education centre.

Type of use or activity (purpose)	Threshold distance (metres)
Basic metal products	
Iron or steel production:	
- up to 1,000,000 tonnes per year	500
- exceeding 1,000,000 tonnes per year	1,000
Non-ferrous metal production:	
- up to 100 tonnes per year	100
- between 100 and 2,000 tonnes per year	300
- exceeding 2,000 tonnes per year	500
- aluminium by electrolysis	2,000
Chemical, petroleum and coal products	
Ammunition, explosives and fireworks production	1,000
Biocide production and storage	1,000
Briquette production	300
Chemical product manufacture other than listed within this group	300
Coke processing	500
Cosmetics and toiletries production	100
Fertiliser production	1,000
Gasworks	1,000
Industrial gases production	1,000
Organic and inorganic industrial chemicals production other than those listed within this group	2,000
Other petroleum or coal production	500
Paints and inks manufacture, blending and mixing exceeding 2,000 tonnes per year	500
Petroleum refinery	2,000
Pharmaceutical and veterinary chemical production	1,000
Polyester and synthetic resins production, exceeding 2,000 tonnes per year	1,000
Rubber production:	
- synthetic rubber, exceeding 2,000 tonnes per year	1,000
- using either organic solvents or carbon black	300
- using sulphur	1,000
Soap and detergent production	500

Type of use or activity (purpose)	Threshold distance (metres)
Fabricated metal products	
Abrasive blast cleaning	500
Boiler maker	100
Metal coating and finishing	500
Structural or sheet metal production	500
Food and beverages	
Alcoholic and non-alcoholic beverage production, exceeding 5,000 litres per day	500
Animal processing	1,000
Bakery (other than one ancillary to a shop):	
- exceeding 200 tonnes per year	100
- night-time operations, exceeding 200 tonnes per year	500
Flour mill, exceeding 200 tonnes per year	250
Food production other than those listed within this group:	
- exceeding 200 tonnes per year	250
- including frying, drying or roasting, exceeding 200 tonnes per year	500
Grain and stockfeed mill and handling facility:	
- with meat meals or tallow	500
- no meat meals or tallow	250
Maltworks, exceeding 200 tonnes per year	500
Manufacture of milk products, exceeding 200 tonnes per year	300
Milk depot	100
Pet food production	500
Production of vegetable oils and animal facts using solvents, exceeding 200 tonnes per year	500
Seafood processor, exceeding 200 tonnes per year	500
Smallgoods production:	
- exceeding 200 tonnes per year	100
- including smoking and drying, exceeding 200 tonnes per year	500
Miscellaneous manufacturing	
Printing and coating works with heated curing ovens	500
Rendering and casings works	1,000

Type of use or activity (purpose)	Threshold distance (metres)
Non-metallic mineral products	
Bitumen batching plant	1,000
Cement production in amounts:	
- up to 5,000 tonnes per year	300
- between 5,000 and 150,000 tonnes per year	500
- exceeding 150,000 tonnes per year	1,000
Cement, lime, clay bricks, tiles and pipe refractories, with a design production rate exceeding 10,000 tonnes per year	500
Concrete batching plant, with a production rate exceeding 5,000 tonnes per year	300
Glass and glass production including glass wool and fibreglass	500
Plaster or plaster articles production, exceeding 5,000 tonnes per year	200
Rock wool manufacture	500
Solar salt manufacture	1,000
Other premises	
Automotive body, paint and interior repair	100
Rural industry handling, processing or packing agriculture produce	300
Paper and paper products	
Paper or paper pulp production:	5,000
- involving combustion of sulphur or sulphur containing materials	
- from semi-processed materials	100
- from prepared cellulose and rags	200
- by other methods than above	None specified
Recreational, personal and other services	
Dry cleaning for commercial and institutional customers, or in bulk quantities	100
Laundry for commercial and institutional customers, or in bulk quantities	100

Type of use or activity (purpose)	Threshold distance (metres)
Textiles	
Carpet backing with latex	500
Dyeing or finishing of cotton, linen and woolen yarns and textiles	300
Leather and artificial leather goods production	300
Leather tanning and dressing:	
- up to 250 tonnes per year	300
- exceeding 250 tonnes per year	2,000
Rope, cordage and twine production	100
Treatment or production of natural and synthetic fibres and textiles	1,000
Treatment of production of textiles using carbon disulphide	500
Wool sourcing	200
Transport and storage	
Bus depot	200
Depot for refuse collection vehicles	100
Storage of bulk volatile organic compounds in quantities greater than 1,000 tonnes	1,000
Storage of petroleum products and crude oil in tanks exceeding 2,000 tonnes capacity:	
- with fixed roofs	300
- with floating roofs	100
Storage of wet-salted or unprocessed hides	250
Waste, recycling and resource recovery	
Chemical or oil recycling	1,000
Combustion, treatment or bio-reaction of waste to produce energy	None specified
Composting and other organic materials recycling	None specified
Hazardous waste storage or treatment	1,000
Landfill	None specified
Other resource recovery or recycling operations	None specified
Soil conditioning or blending	None specified
Transfer station	
- accepting organic wastes	500
- other	200
Used plastics treatment or processing	500
Waste tyre recycling and re-treading	1,000
Vehicle recycling or disposal	500

Type of use or activity (purpose)	Threshold distance (metres)
Water and wastewater	
Sewage treatment plant, exceeding a design or actual flow rate of 5,000 litres per day	None specified
Water treatment plant	None specified
Wood, wood products and furniture	
Charcoal production:	
- by the retort process	500
- other than by the retort process	1,000
Joinery	100
Sawmill, wood products and furniture	500
Wood preservation plant:	
- up to 10,000 cubic metres of timber per year	100
- exceeding 10,000 cubic metres of timber per year	300
Alcoholic and non-alcoholic beverage production, exceeding 5,000 litres per day	500
Animal processing	1,000
Bakery (other than one ancillary to a shop):	
- exceeding 200 tonnes per year	100
- night-time operations, exceeding 200 tonnes per year	500
Flour mill, exceeding 200 tonnes per year	250
Food production other than those listed within this group:	
- exceeding 200 tonnes per year	250
- including frying, drying or roasting, exceeding 200 tonnes per year	500
Grain and stockfeed mill and handling facility:	
- with meat meals or tallow	500
- no meat meals or tallow	250
Maltworks, exceeding 200 tonnes per year	500
Manufacture of milk products, exceeding 200 tonnes per year	300
Milk depot	100
Pet food production	500
Production of vegetable oils and animal facts using solvents, exceeding 200 tonnes per year	500
Seafood processor, exceeding 200 tonnes per year	500
Smallgoods production:	
- exceeding 200 tonnes per year	100
- including smoking and drying, exceeding 200 tonnes per year	500
Miscellaneous manufacturing	
Printing and coating works with heated curing ovens	500
Rendering and casings works	1,000

4.0

DEFINITIONS

The land use terms used in the Appendix 1 - Moorabbin Airport Planning Controls – Master Plan 2021 take their meaning from the VPPs where they are defined therein.

A land use term used in the Appendix 1 - Moorabbin Airport Planning Controls – Master Plan 2021, and not defined in the VPPs, 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; and - 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.
Helicopter Landing Surface	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.
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.

