

A blue-tinted photograph of an airport tarmac. In the foreground, there are white diagonal stripes on the asphalt. In the middle ground, a large commercial airplane is parked on the right, and a ground support vehicle with 'bp' branding is on the left. The background shows a clear sky.

# SECTION 09

## MASTER PLAN

# 09

## Master Plan

A Master Plan represents an orderly plan for development for the airport site and its facilities over the defined horizon. In this case, as is typical for airports, the time period used for the planning horizon is 20 years. The full Master Plan development therefore identifies development that is expected to be required over the 20 year period to 2043. Passenger and freight traffic development may not, of course, develop exactly as forecast, regulations may change, or geopolitics may result in changes to use of the airport facilities that can impact how the airport develops. Consequently, the Airport Master Plan will need to be updated periodically to ensure that land reserved on the airport site is aligned with Aviation trends and the development of the BMAR. The Airport Master Plan has been presented in Exhibit 23.

Current passenger traffic at BMRA is predominantly served with FIFO flights as the region is becoming a popular location for the families of FIFO workers. The RPT operations include a 4 times a week service between BMRA and Melbourne. The FIFO flights represent the majority of passenger departing and arrival BMRA, however FIFO arrival passengers have little to no checked baggage, don't avail themselves of rental cars and transit through the arrivals processes quickly. The RPT arrival represents the peak demand for arrival terminal spaces with the collection of checked baggage and use of car hire services or transport options. Peak departure demand is during the peak FIFO departure period occurring early in the mornings. The air traffic forecasts prepared for the Master Plan identified two patterns to growth in air passenger traffic. The first pattern is the introduction of new services on the peak day with a forecast introduction of a service to Sydney and Brisbane as well as Singapore and Bali. Services are also forecast to grow through additional services being added on other days throughout the week.

As a result, the airport is forecast to reach a peak period demand between 2028 and 2033 and then forecast to remain constant throughout the forecast period as the additional growth occurs outside the peak period and peak day.

“A Master Plan represents an orderly plan for development for the airport site and its facilities over the defined horizon”

For future facility demands, this means that while overall annual passenger traffic is forecast to increase, the number of passengers passing through the terminal building in the peak period of the day will not increase significantly. Therefore, the passenger processing facilities need to be planned to accommodate at an acceptable level of service, defined at the passenger demand levels represented by the 2033 forecast. This peak demand is for 3 morning FIFO departures and an arrival peak of 2 RPT arrivals and 3 FIFO arrivals using A320/B737 sized aircraft. The FIFO arrivals would deplane and walk straight through the terminal so the space demands caused by the large number of FIFO arrivals is minimised. The international flights by virtue of their restrictions and markets at the destinations, would operate outside the peak periods. As such, the facility demands for international passenger processing can be assisted with the use of swing gates and operable walls, to reduce the overall building footprint.

Where development has been identified in Section 8 of this document, the Council have reviewed the options available and identified which approach to development they prefer to follow to accommodate future operations or to safeguard for potential future changes or opportunities. The primary facility issues addressed earlier in the document, and for which development

## Passenger Terminal

The need for a new passenger terminal has been evident for some time with the 2016 Master Plan identifying the requirement for a new terminal building. The requirement the new terminal has since grown in importance with the introduction of the RPT services and the success of these services is likely to result in additional services to Sydney and Brisbane. To facilitate the existing and forecast growth the new terminal is required and development should begin as soon as possible. The passenger terminal should be sized to ensure the 2028/2033 peak period arrivals and departures demand can be accommodated. The terminal should then be able to operate through the forecast period without the need for further expansion.

## Commercial Aviation Development

The BMRA Development Project completed in 2018 has provided the City with airside leases for aviation commercial and business opportunities. Once the new passenger terminal is constructed, the land adjacent to the Central Apron will be available for development. A number of options for developing the land adjacent to the Central Apron and northern aprons were explored with Option 4 (Exhibit 14) selected as the preferred option for Commercial Development on the Central Apron and Option 3 was selected for the development of the North Apron. Using a combination of Option 3 and Option 4 allows the City to rapidly respond to interest provided the aircraft weight can be accommodated on Taxiway D2, in the near term. In the longer term, the City can lease Code C hangar lots along the Central Apron after the new Passenger terminal is constructed

## Air Freight Facilities

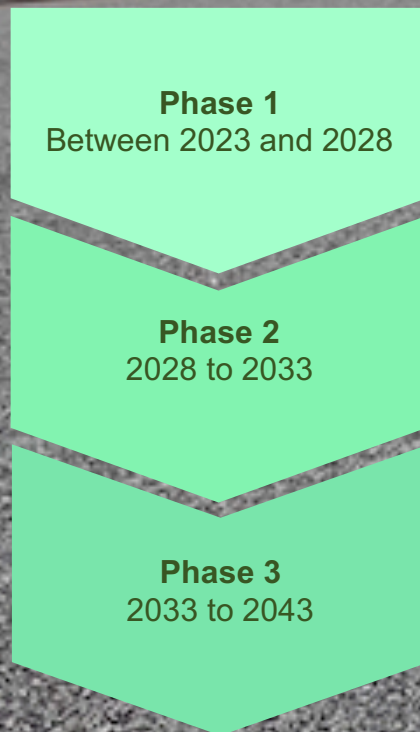
There is currently no demand for air freight. However, with the increase in RPT services, carriers will want to generate additional revenue from the excess capacity they carry on flights. This is particularly true when international services start operating and producers from the region can benefit from air freight, including seafood produced in the area that would find an enthusiastic market in Singapore where tourism demand is forecast to generate passengers to develop and sustain international flights. Carriers operating international services will be looking to fill all available aircraft belly space and therefore the introduction of international passenger flights will cause an increased demand for freight operations. To support freight operations, 2 options were considered for the development of a freight terminal. Option 2 was selected as this places the freight facilities close to the Passenger Terminal and the RPT aircraft stands on the South Apron.

## Aircraft and Pilot Support Precinct

There were 2 options for the development of an FBO facility. The first was to position the FBO on the Central Apron and the second, was to position the FBO on the North Apron. Option 1 was selected as an FBO would be able to make use of the old passenger terminal for their FBO services. The site also permits the organisation to develop hangars beside the FBO Terminal for hangarage or maintenance activities for their customers. In addition, the apron strength of the Central Apron is understood to be a PCN of 58 and therefore is capable of accommodating any sized itinerant aircraft or business jet that might wish to fly into BMRA.

## Phasing

The Airport Master Plan identifies the infrastructure needs for the future development of the BMRA. The Master Plan also identifies areas that should be safeguarded for development beyond the planning horizon or ensure that businesses can take advantage of opportunities as and when they manifest, benefiting the BMRA and all airport users. As such, the Master Plan has looked at the forecast traffic and what infrastructure is needed to accommodate the forecast demand. The Master Plan has looked at potential business opportunities and what would be needed for those opportunities to develop. Some can be developed quickly with interest already expressed by businesses and interested groups. However, some will develop over time and the City needs to monitor how conditions change and when those opportunities would be suitable to encourage. To assist the City in planning for the longer-term development of the airport and to monitor traffic development and how that will influence some of the opportunities identified, the forecast planning horizon used in this Master Plan has been divided into 3 phases:



# PHASE 1

The initial phase of development for the airport is forecast to see the introduction of new RPT routes and an increase in FIFO traffic. The Phase 1 development has been shown in Exhibit 24. The existing airport infrastructure is suitable for significant growth in air traffic with the primary exception being the Passenger Terminal capacity. A new Passenger Terminal was identified as being required in the 2016 Master Plan and has been confirmed as being needed in the Phase 1 development. Current passenger demand exceeds the capacity of the existing passenger terminal system and therefore the need for the new terminal is immediate. Initial planning, design, funding and construction of the new terminal will take between 2 and 4 years.

The City is receiving interest for aviation lease lots. It is important for the City to respond quickly to these requests for sites. Commercial activity at the airport generates revenue through leases and aviation fees and creates employment with associated economic multipliers that result in the region. The apron accessed from Taxiway D1 is to become the GA and Recreational Aviation home with 27 small hangars. This area is ready for development and the Aero Club are an interested party in developing this area. The apron accessed from Taxiway D2, is ready for development and the City can respond to requests immediately.

There has also been some interest in larger hangars to give aircraft maintenance organisations the ability to develop facilities and expand their businesses. Developing the lease lots as per Option 3 would permit the City to respond quickly to interest. Any interest expressed after passenger operations move to the Southern Apron, can be accommodated on the Central Apron as per Option 4.

The car rental industry was quick to identify the opportunity presented with the introduction of the Jetstar service to Melbourne. With increased services to Melbourne during Phase 2 and the forecast introduction of a Sydney service in 2024/5, the demand is going to continue to grow. Car rental organisations are looking to grow their services at the airport and during Phase 1, space would be made available for vehicle storage area, valet and cleaning services.

## PHASE 2

From 2028 to 2033, the concentration of development is to encourage commercial aviation activity as shown in Exhibit 25. The new Passenger Terminal is to be developed during Phase 1, resulting in the Central Apron no longer utilised for RPT and FIFO aircraft. Similarly, the old passenger terminal buildings will not be required for this purpose. During Phase 2, the old passenger terminal can be repurposed into the FBO and larger hangar lots made available can be leased along the face of the Central Apron.

The level of aircraft activity and number of aircraft on the Southern apron stands in the peak period is forecast to reach 4 aircraft. As the aircraft in the peak period are Code C aircraft and are able to turnaround in 30 to 45 minutes, the actual demand during the peak period is for 5 arrivals with one departure occurring during the same hour. Therefore, any technical issue or delay to the flight schedule will quickly result in 5 to 6 aircraft on stand at once. The Southern Apron can accommodate 4 aircraft at any one time and therefore accommodate the peak demand provided there are no delays. During Phase 2, it is recommended that the City expand the Southern Apron to include 5 Code C stands and if international air service providers indicate the introduction of widebody aircraft, the City should expand the apron to include 6 stands in Phase 2 rather than Phase 3.

During Phase 2, the forecasts identify the commencement of international services. The City should prepare for the development of freight facilities that will help to encourage an international carrier to start the BMRA to Singapore sector and provide an export opportunity for airfreight the region.

The introduction of international services triggers a need for airline support services. During Phase 2, the development of services including aircraft cleaning and catering would be required. Initially, it is expected that this may be provided by Perth based firms providing the services but as the international schedule develops over the week, the opportunities for businesses to provide these services with locally based staff and facilities develops

## PHASE 3

The period from 2033 to 2043, Phase 3, is for a concentrated effort to encourage the development of the existing route network including RPT and FIFO operators. Increase in air traffic activity during Phase 3 is expected to occur outside the peak period with additional frequencies for both RPT and FIFO flights occurring on additional days. The infrastructure developed in Phase 1 and 2 should be able to support the air traffic growth. Exhibit 26 illustrates the airport development in Phase 3. As the level of activity increases, the BMRA can continue to develop the commercial activities in the Airport and Airline Support Precinct. Initial activity in the Retail, Commercial and Accommodation Precinct can start being developed.

The Southern Apron would have been expanded to 5 aircraft stands in Phase 2 and it is recommended the apron be expanded further to a capacity of 6 stands in Phase 3. The 6th stand at the southern end of the apron would be able to accommodate a Code E aircraft. The stand should be equipped with a refuelling hydrant system to allow rapid refuelling of the Code E aircraft. To accommodate the hydrant refuelling the refuelling storage facility would be moved to the reserved location near the Southern Apron