



## EXECUTIVE SUMMARY

# Executive summary

## **1.1. Introduction**

Airbiz, was appointed by the Maroochy Shire Council to undertake a Master Planning study on behalf of Sunshine Coast Airport.

The study reviewed the previous Master Plan written in 1998 and covers the development of the Sunshine Coast Airport from 2005 to 2020

The Master Plan is a strategic document intended as a guide for future development decisions. Its purpose is to reserve land for future airport activities based on the predicted growth of the business as perceived at the time of writing. The Master Plan does not detail individual facilities nor does it purport to identify rigid time lines for the implementation of the Plan. Rather it sets a framework from which further detailed analysis can be based.

## **1.2. Consultation**

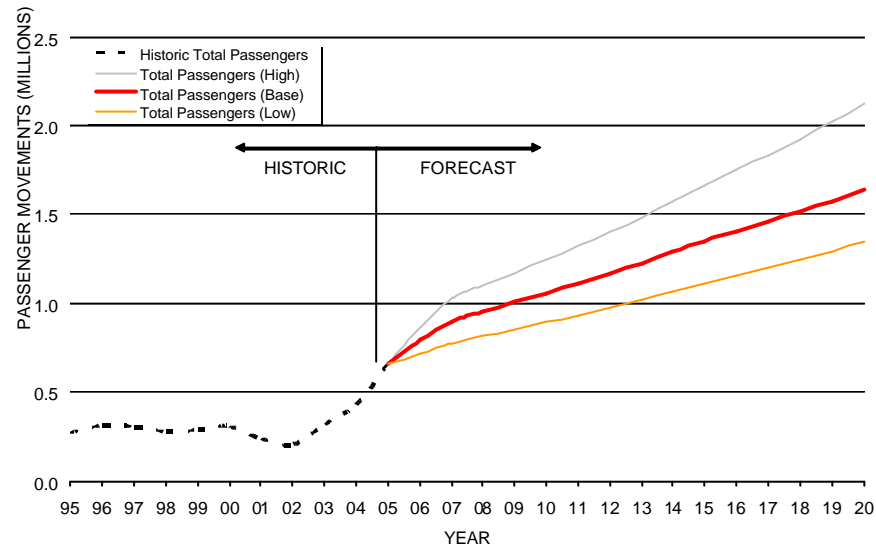
A comprehensive program of consultation was undertaken at the commencement of the study and at appropriate stages throughout the study period, with a wide range of stakeholders including the Maroochy Shire Council.

### 1.3. Aviation Forecasts

#### 1.3.1. Passenger Movements

With the introduction of regular direct services to/from Sydney, Melbourne and Adelaide by the new low cost carriers (Virgin Blue and Jetstar) in 2002 and 2004 respectively, traffic has grown rapidly to the current level of some 750,000 annual passenger movements.

Historic and forecast annual passenger movements are shown below

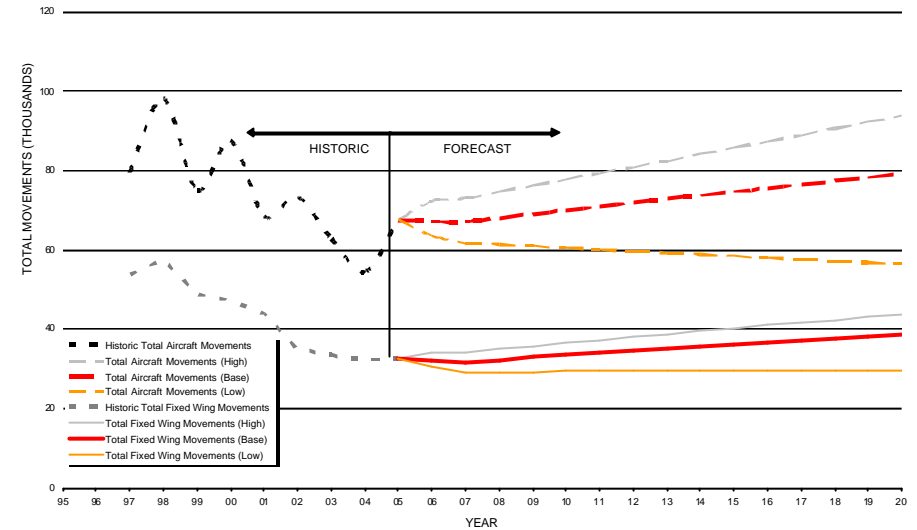


Historic and Forecast Annual Passenger Movements

From the above graph it is noted that the base case forecast predicts some 1.7 million passenger movements by 2020, with high and low forecasts of some 2.1 and 1.3 million respectively.

#### 1.3.2. Aircraft Movements

Historic and forecast total fixed wing (RPT plus GA) aircraft and helicopter movements are shown below.



Historic and Forecast Annual Aircraft Movements

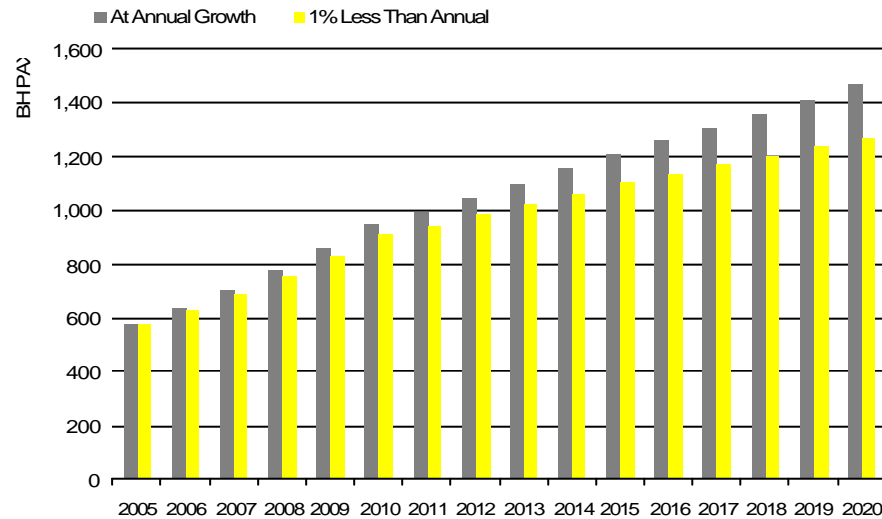
From the above graph it is noted that fixed wing aircraft movements (RPT and GA) represent approximately 50 percent of total aircraft movements:

- Base case forecasts predict some 79,000 annual aircraft movements (39,000 fixed wing and 40,000 helicopter movements) by 2020, with high and low forecasts of some 94,000 (44,000 and 50,000) and 57,000 (30,000 and 27,000) annual aircraft movements respectively
- RPT annual aircraft movement forecasts at 2020 are:
 

— High	17,300
— Base Case	13,900
— Low	11,600.

### 1.3.3. Busy Hour Passengers

Busy hour passenger forecasts were prepared to allow sizing of the future passenger terminal. The forecasts were based on a growth rate equal to the baseline annual passenger movement forecasts, as well as assuming a growth rate 1% per annum less than the baseline annual passenger movements growth rate. The forecasts are shown below.



BUSY HOUR PASSENGER FORECASTS

From the above, busy hour passenger arrivals and departures would reach some 1,270 by 2020. However, in practice, before embarking on major terminal expansion to accommodate the forecast busy hour passengers, Sunshine Coast Airport should negotiate with the airlines to encourage them to introduce new services outside the peak period, in order to minimise terminal and apron expansion facilities which would be underutilised much of the time.

### 1.3.4. Peak Stand Demand

Peak stand demand forecasts for RPT jet aircraft, are provided below.

Year	Active Stand Demand	Buffer <sup>(1)</sup>	Total Stands
2005(Current)	2	1	3
2010	4	1	5
2015	5	1	6
2020	6	1	7

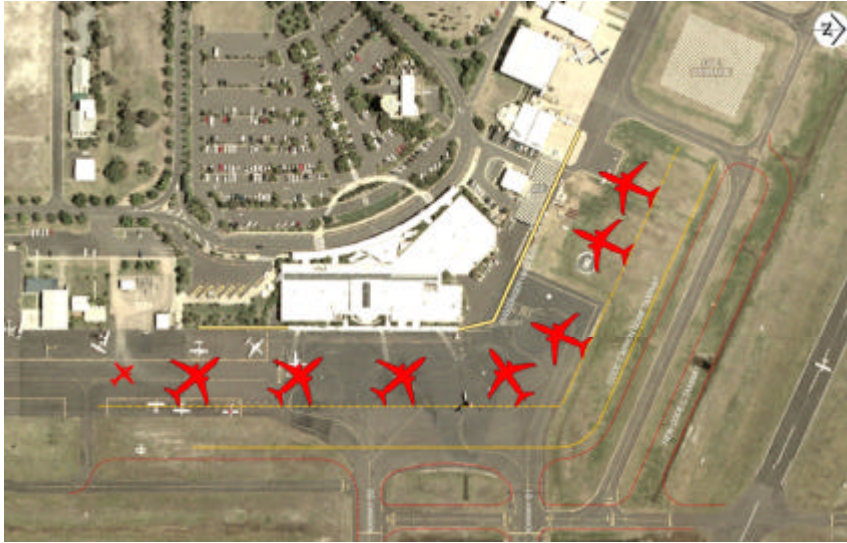
Note: (1) Makes provision for off-schedule and itinerant aircraft

### 1.4. RPT Apron

The current RPT apron can accommodate four aircraft. However, the layout is such that aircraft cannot access all bays independently, as inadequate apron edge taxiways are available. Also, the terminal front is located such that the tails of A320 and B737 aircraft parked on the apron facing the main runway (Runway 18/36) infringe the 1 in 7 transitional surface from the edge of the 150m wide runway strip.

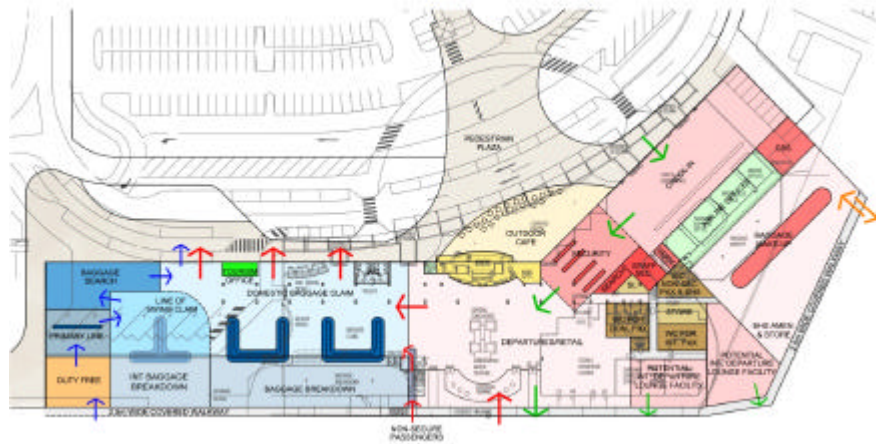
A parking layout that overcomes current deficiencies and provides for the forecast peak stand demand is shown below.





**1.5. Passenger Terminal**

A terminal concept to accommodate the projected 2020 busy hour passenger numbers, including accommodating international (trans-Tasman) traffic, is shown below.



**1.6. Parking**

The existing car park, with a total capacity of 401 paved spaces, currently fills to overflowing during peak periods, with overspill parking on grassed areas. Evidence suggests that pressure is placed on available car parking by:

- Passengers originating from Brisbane availing themselves of cheap air fares from Sunshine Coast Airport, coupled with free parking at the airport
- Free airport parking used by non air travellers.

Forecast parking demand, is provided below.

Year	Short Term	Long Term	Rental	Staff	Coaches / Shuttles
Current (2005)	180	120	100	50	8
2010	300	200	125	62	10
2015	400	270	150	75	12
2020	490	320	170	85	14

A concept for layout of the car park and terminal access road system to accommodate the 2020 demand, coupled by provision for terminal expansion and assuming that the control tower remains throughout the planning horizon, is shown below.



### 1.7. Surface Access

The Department of Main Roads is proposing a new link road from the Sunshine Coast Motorway to David Low Way, linking into the latter at its intersection with Runway Drive.

In addition, a new internal access road is proposed from David Low Way to the passenger terminal and other airport precincts.

The proposed future external and internal main road system is shown below.





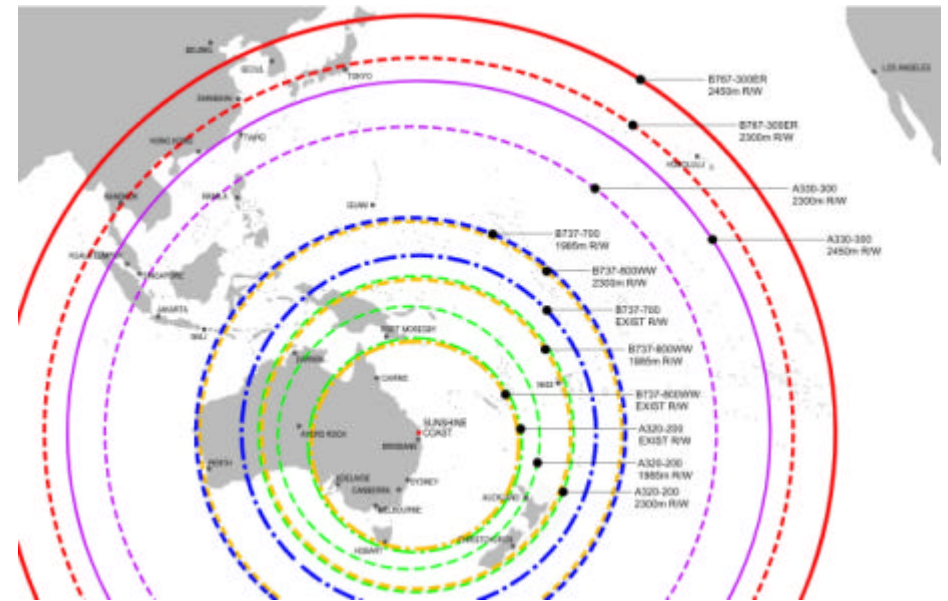
## 1.8. Runway Requirements

The existing main Runway 18/36, at 1,797m long x 30m wide, restricts the aircraft size and range of operations that can be accommodated to narrow body aircraft types (e.g. B737-700/800 and A320) on services to eastern Australian destinations and possibly trans-Tasman at reduced payload.

Three options to extend the existing Runway 18/36 and to provide the mandatory runway end safety areas (RESAs) were investigated, in addition to a long term protection for a future new runway that would permit introduction of larger wide body aircraft on domestic and/or international services. The three options to extend the existing runway were:

- Option 1 Lengthen within the existing airport boundary  
This option provides a take-off distance of 1,985m in each runway direction.
- Option 2 Extend the airport northern boundary  
This option provides an “unbalanced” runway system, with a Runway 18 take-off distance of 2,200m and a Runway 36 take-off distance of 1,985m. This would be operationally unacceptable to the airlines and so was discounted.
- Option 3 Extend both the airport northern and southern boundaries.  
This option provides a take-off distance of 2,300m in each runway direction.
- Future Runway 13/31  
Provides a take-off distance of 2,450m in each direction, with a runway width of 45m.

Indicative ranges of operations by typical aircraft from the various runway length options are illustrated in the following diagram..



The Master Plan recommended that the future Runway 13/31 be protected for longer term development of the airport. However, in the interim, Option 1 be adopted, with construction being undertaken when a business case has been established.

The layout of the recommended Option 1 runway extension is provided below.



### 1.9. Aviation Support Facilities

A range of aviation support facilities, many with specific siting requirements, need to be accommodated. The range of such facilities and proposed siting of each are illustrated below.



### 1.10. 2020 Master Plan

The 2020 Master Plan, incorporating facilities required to accommodate the forecast traffic at the 15 year planning horizon of this study, based on retention of the existing runway system with Runway 18/36 extended to 1,985m, is shown on the following drawing.

In addition to the 2020 Master Plan, the long term vision for the airport includes protection for the future Runway 13/31, as illustrated below.





### 1.11. Aircraft Noise

The Master Plan study investigated aircraft noise scenarios based on runway development Option 1 and the future Runway 13/31.

Following review of the proposed runway strategy and ANECs prepared in this study, Sunshine Coast Airport identified that the Master Plan should allow for extension of the existing main runway within the airport boundary (Runway Option 1) and protect for long-term development of a new Runway 13/31 to accommodate services to international destinations.

Consequently, a composite ANEF was prepared to allow external land use planning to protect for both the extended Runway 18/36 as well as the future Runway 13/31.

The following figure illustrates the composite ANEF.

A separate A1 size print of this ANEF, endorsed by Airservices Australia, along with an electronic version to allow Sunshine Coast Airport / Maroochy Shire Council to overlay the ANEF contours on their planning scheme, was provided to Sunshine Coast Airport.



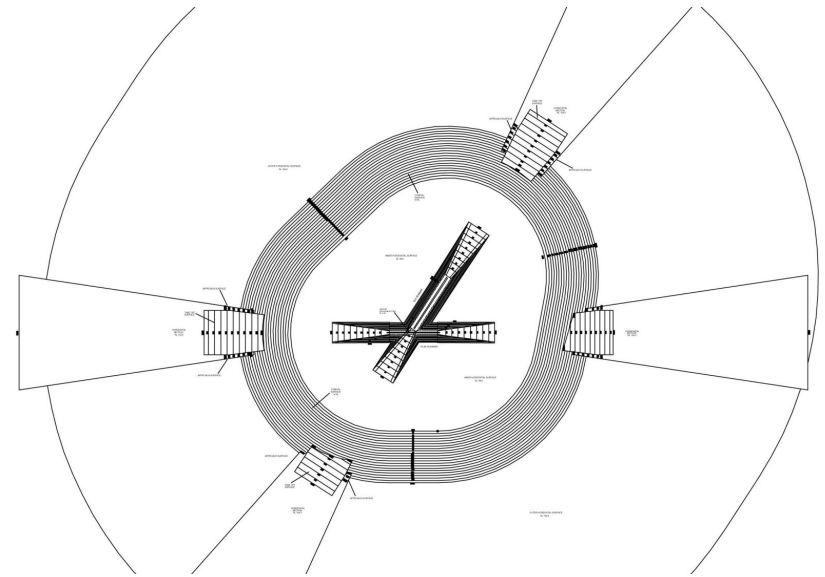
1.12.

**Obstacle Limitation Surfaces**

Following review of the proposed runway strategy, an obstacle limitation surfaces (OLS) drawing based on a composite of the extended Runway 18/36 and the Future Runway 13/31 was prepared to protect airspace associated with the airport in the long term. The OLS should be incorporated into the town planning scheme for areas surrounding the airport.

The following figure illustrates the OLS drawing.

A separate B1 size print of this OLS drawing, along with an electronic version to allow Sunshine Coast Airport / Maroochy Shire Council to overlay the contours on their planning scheme, was provided to Sunshine Coast Airport.



1.13.

### 1.14. Staged Development

Operational requirements, funding limitations and other considerations usually dictate that provision of expanded or new facilities is undertaken in a staged manner. Development of facilities is driven by traffic conditions or other triggers that can be defined as part of the planning process ahead of the time the facilities are likely to be required.

Thus, the desired airport developments will be achieved in a series of stages that are tailored to match traffic growth and required service levels, with the basic philosophy being to ensure that maximum use is made of existing infrastructure in subsequent development stages.

Three development stages of ongoing development of the existing airport were prepared as follows:

- Stage 1 (short term)                    0 – 5 years
- Stage 2 (medium term)                6 - 10 years
- Stage 3 (long term)                    11 – 15 years.

The above time periods are indicative and do not represent a commitment to undertake the developments.

A brief description of major work items within each development stage are as follows:

- Stage 1
  - Reconfigure RPT apron
  - Develop retail departure lounge in passenger terminal
  - Establish new airport access road
  - Expand landside road system
  - Expand car parking facilities
  - Provide serviced commercial sites
  - Serviced site for Singapore Flying College accommodation.
- Stage 2
  - Extend Runway 18/36 to 1,985m long
  - Expand RPT apron

- Construct partial parallel taxiway
- Expand passenger terminal
- Expand car parking facilities
- Expand GA aprons

- Stage 3

- Expand RPT apron
- Expand car parking facilities
- Expand GA aprons
- Extend parallel taxiway

A plan that illustrates the staging is provided below.