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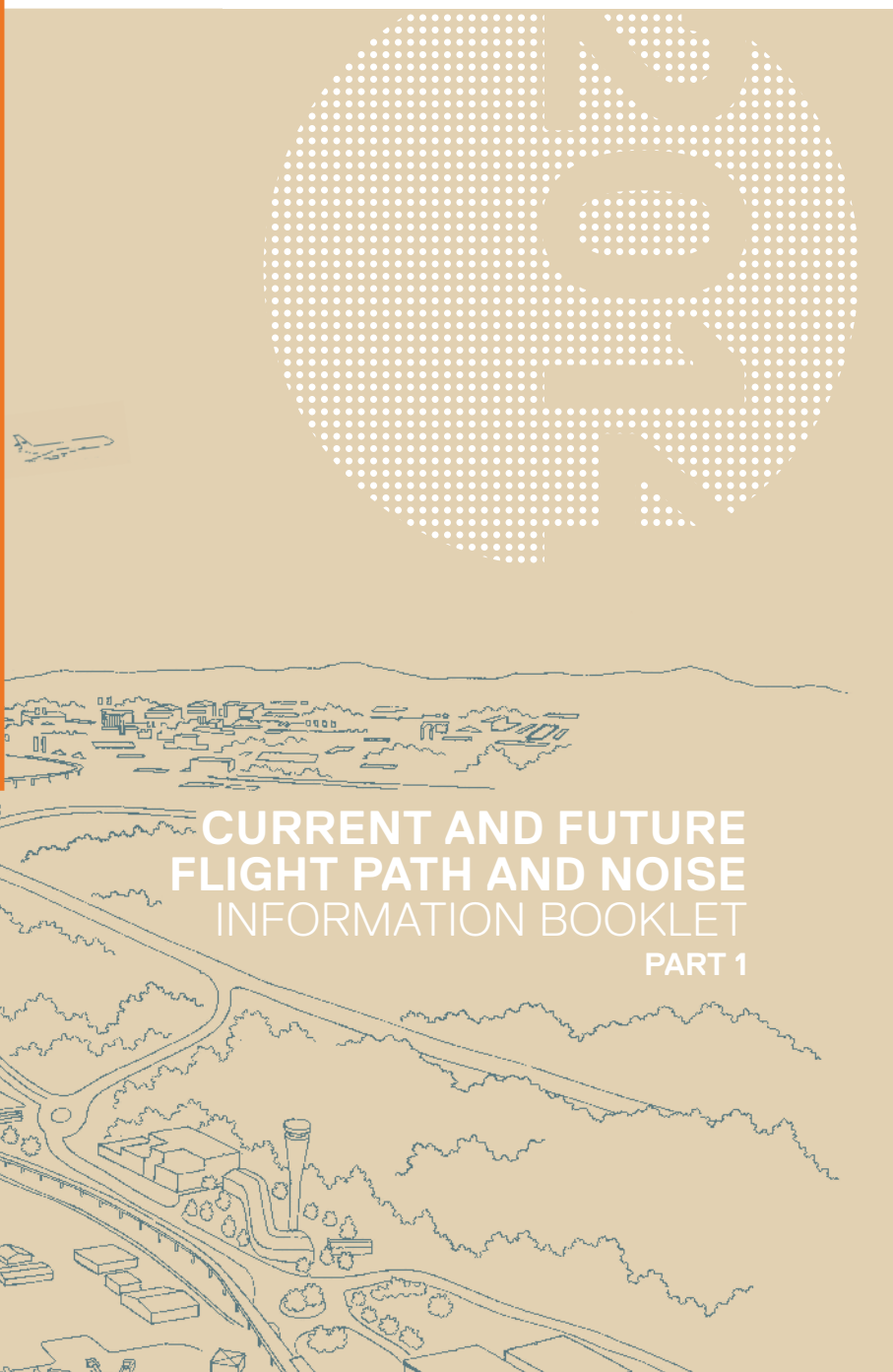
This document contains a number of flight path and noise information charts. By selecting the 'layers' icon\* in the Acrobat Reader toolbar you are able to overlay a map of Brisbane suburbs onto each of the charts.

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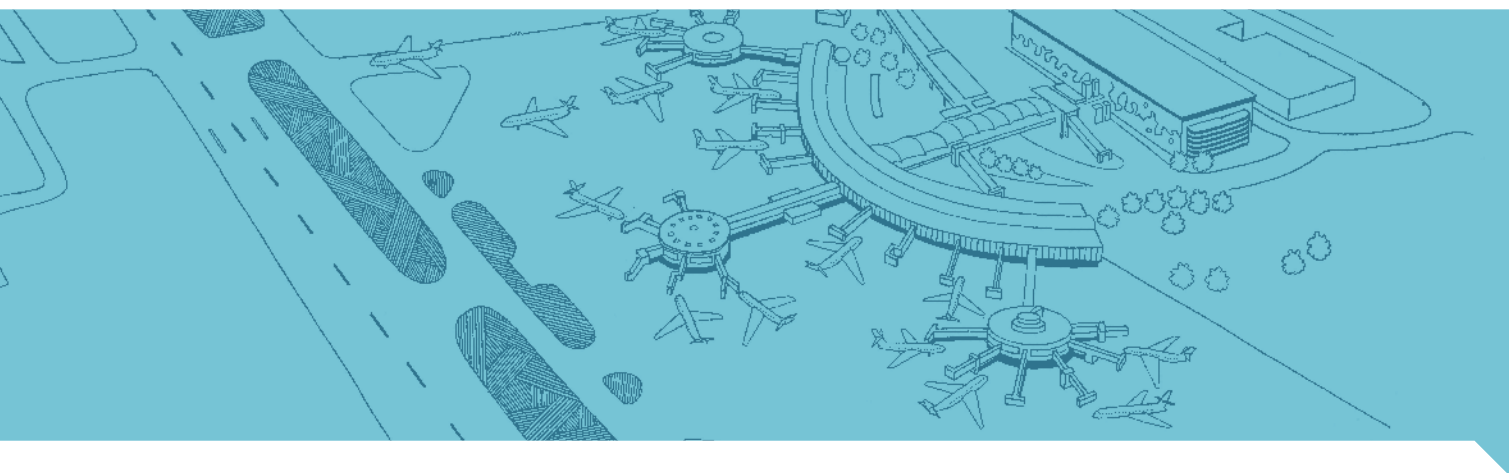
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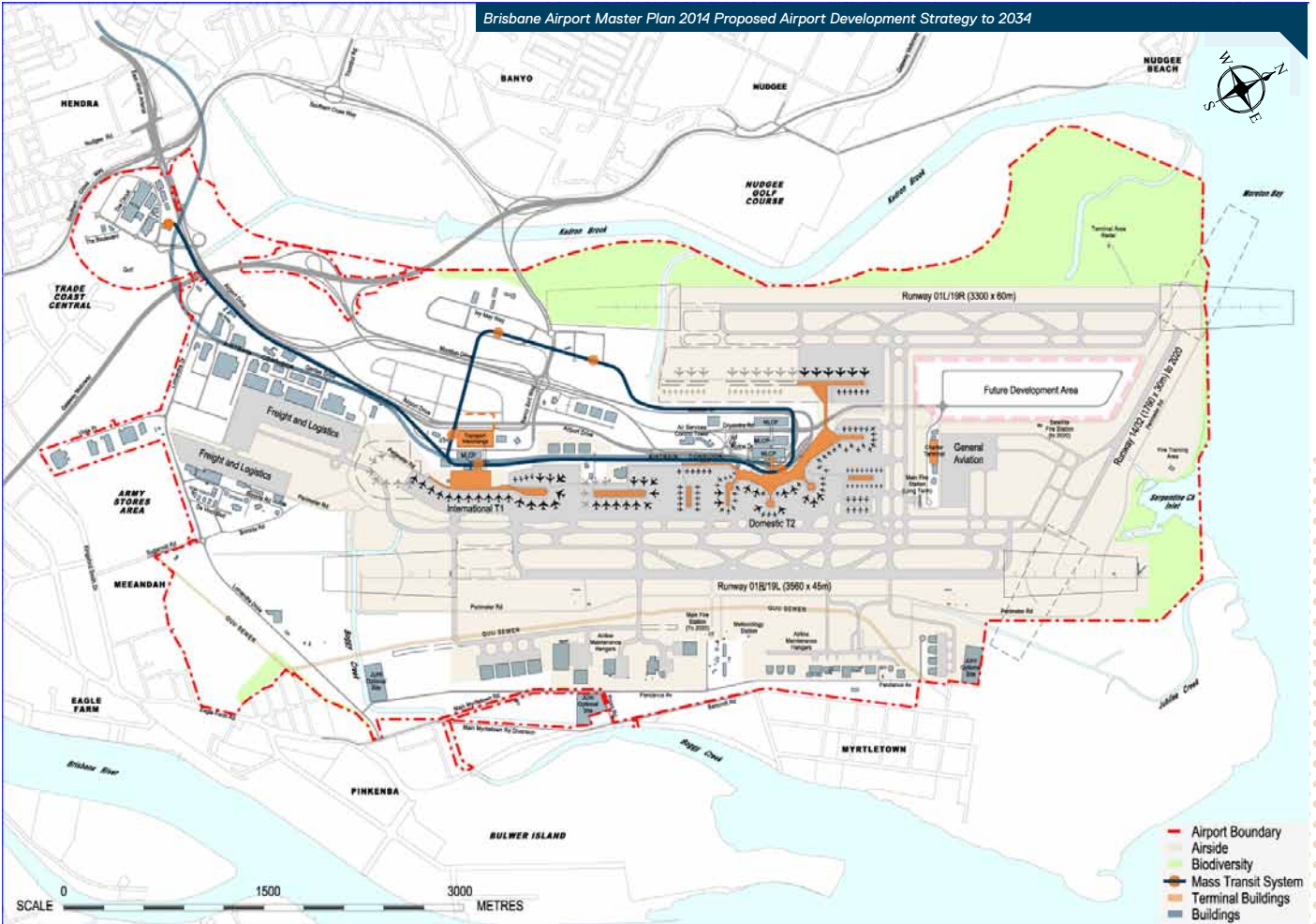


# CURRENT AND FUTURE FLIGHT PATH AND NOISE INFORMATION BOOKLET PART 1



Prepared by Brisbane Airport Corporation as part of the Brisbane Airport 2014 Master Plan. This is an update to the first "Flight Path and Noise Information Booklet" issued in 2006 to coincide with the public comment phase for the New Parallel Runway Environmental Impact Statement and Major Development Plan.





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## CURRENT AND FUTURE FLIGHT PATH AND NOISE INFORMATION BOOKLET



## ABOUT THIS BOOKLET

### WHY THIS BOOKLET HAS BEEN PREPARED

This Current and Future Flight Path and Noise Information Booklet has been prepared for the community and interested stakeholders by Brisbane Airport Corporation (BAC) to complement the Brisbane Airport 2014 Master Plan and to provide a stand-alone reference document on Brisbane Airport operations. The Master Plan contains information about the current and future development and operation of the airport to 2034, as well as information about aircraft noise, primarily for land use planning purposes.

Chapter 8 of the 2014 Master Plan, Environment, provides information and diagrams about the Australian Noise Exposure Forecast (ANEF). While the ANEF is a requirement of the *Airports Act 1996* (Airports Act), it is essentially a land use planning tool of most relevance to local and state governments when making planning decisions for today and future decades.

This is because an ANEF is an aggregate calculation of noise modelling, combining current and future aviation operations.

Brisbane Airport's ANEF is an aggregation of noise modelling around current operations and future forecasts of operations and flight paths with the New Parallel Runway (NPR) in operation, to 2060. The NPR is currently under construction and is expected to be operational by around 2020.

Because of its aggregate nature, an ANEF provides little assistance to those seeking to understand specific noise impacts and variations on a day-to-day basis.

Based on discussions with community members spanning many years, BAC understands the information most sought relates to:

- » Flight paths
- » Noise levels likely to be experienced as a result of aircraft using those flight paths
- » Frequency of overflights
- » The affect the opening of the NPR will have on flights paths, noise and the overall operation of the Brisbane Airport runway system.

These topics, and more, are covered in this booklet.

### THE PURPOSE OF THE BOOKLET

The purpose of this booklet is to provide the community with useful information on aircraft operations at Brisbane Airport between now and 2034, including the likely noise impacts of those operations. For completeness, information is also presented on ultimate capacity operations, nominally calculated at 2060.

It is designed primarily to illustrate, through a series of drawings known as N70s, current and future flight paths and related aircraft noise effects in a format that allows the reader to



**BAC has released the Brisbane Airport 2014 Master Plan and complementary documents including a Summary of the Master Plan and this Current and Future Flight Path and Noise Information booklet.**

understand when and how often aircraft might fly in the vicinity of their home, combined with the likely volume of noise that could be experienced as a result of those flights.

In addition, it is designed to provide information on how the airport runway system operates today and how it will operate when the NPR is operational.

It provides readers with a greater level of understanding about why aircraft take off and land in certain directions, or operating modes, Airservices Australia's (Airservices) role in managing aircraft traffic, and the factors that will influence runway choice when the NPR is in use.

Responding to guidelines issued by the National Airports Safeguarding Advisory Group (NASAG), BAC has included in this booklet charts and tables, which provide other ways to view and understand flight paths and associated noise impacts.

## ULTIMATE CAPACITY

BAC considers that it is an appropriate planning practice to consider very long-term or ultimate capacity scenarios for elements of major airport infrastructure beyond the 2034 planning horizon of the 2014 Master Plan.

The assessment of ultimate capacity scenarios is based on current standards for aviation infrastructure, airspace management and current aircraft fleet technologies.

The 2014 Master Plan presents the implications of considering the ultimate capacity for terminal areas, ground transport, runway system and aircraft noise metrics contained in this booklet to ensure stakeholders are fully informed.

Future assessments of the ultimate operating capacity of Brisbane Airport could change as a result the introduction of new and more efficient aircraft, changes to growth forecasts or changes to airspace management.

## ABOUT THE BRISBANE AIRPORT 2014 MASTER PLAN

In the past 10 years BAC has invested more than \$1 billion in Brisbane Airport and in the next 10 years a further \$2.5 billion will be spent. Of that, \$1.3 billion will be invested in the NPR, which is currently under construction and expected to be operational by around 2020.

BAC's investment in Brisbane Airport is guided by a Master Plan. A Master Plan is a statutory document prepared every five years, which is subject to formal public comment followed by Australian Government assessment.

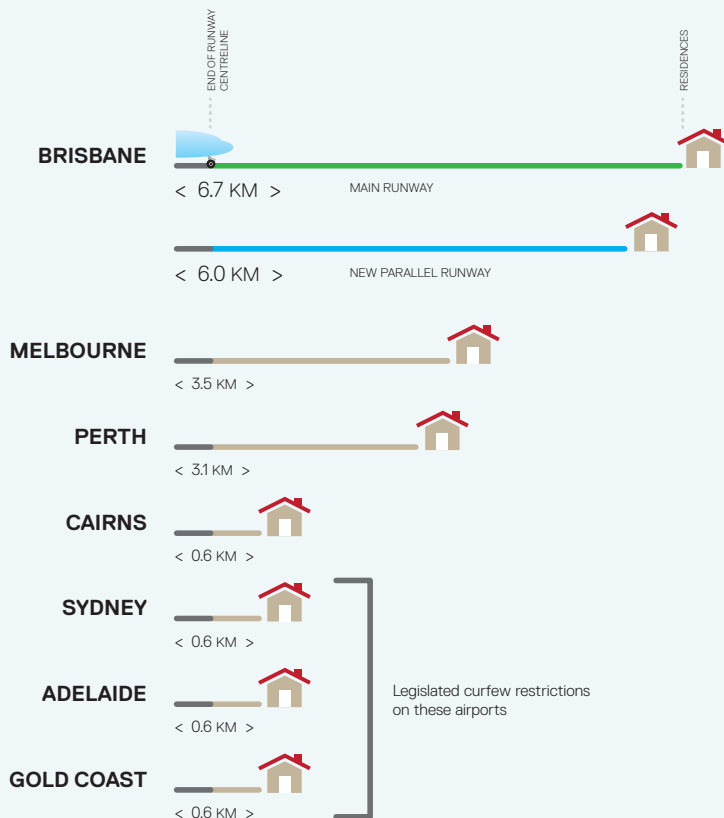
While it is prepared to meet the requirements of the Airports Act, the Master Plan also gives BAC a platform to define its ongoing commitment to integrated planning to meet future demand, sustainability and high standards of stakeholder and community engagement.

The Brisbane Airport 2014 Master Plan, which looks at on-airport development for the next 20 years, will drive ongoing investment in, and contribution to, the Australian and Queensland economies. It will ensure airport planning achieves a balance between economic development, sound environmental management and sustainability.

The Master Plan can be viewed at [www.bne.com.au](http://www.bne.com.au) by following the 'Upgrading Your Airport' home page link.

## BUFFER ZONE

Brisbane Airport has the largest noise buffer zone of any capital city airport in Australia. Drawing a straight line from the end of the main runway, the nearest residence is around 6.7 km away. Using the same straight line approach, the distance from the end of the NPR to the nearest residence is around 6 km.





# THE OPERATION OF BRISBANE AIRPORT'S CURRENT RUNWAY SYSTEM

## Introduction

The safe and efficient movement of aircraft in and out of Brisbane Airport are fundamental objectives of airport and airspace operations. The operating modes for the airport runway system play an integral part in achieving these objectives. A number of factors influence the choice of runway for arriving and departing aircraft, with the principal factors being wind direction and speed. As a general rule aircraft must land and take-off into the wind. Other weather factors also play a role in determining runway choice, as well as the amount of air traffic in the vicinity of the airport.

In this section we explain how Brisbane Airport's runway system operates (referred to as modes of operation) today, and when the NPR is operational.

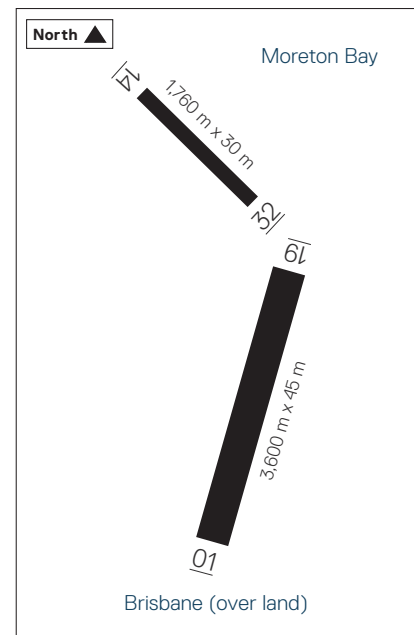
## THE OPERATION OF BRISBANE AIRPORT'S CURRENT RUNWAY SYSTEM

Brisbane Airport's current runway system consists of two runways as shown in Figure 1.

The main runway (RWY 01/19) is 3,600 m long and 45 m wide. Aircraft can arrive over Moreton Bay from the north and depart to the south – described as using RWY 19. Or, they can operate in the opposite direction, arriving from the south and departing over Moreton Bay to the north – described as using RWY 01.

The cross runway (RWY 14/32) is 1,760 m long and 30 m wide and can accommodate all turboprop and domestic narrowbody jet aircraft with limitations. (Certain aircraft types (A320s and 737s) are load restricted when operating on this runway, due to its shorter length.)

FIGURE 1  
Brisbane Airport's Current Runway System



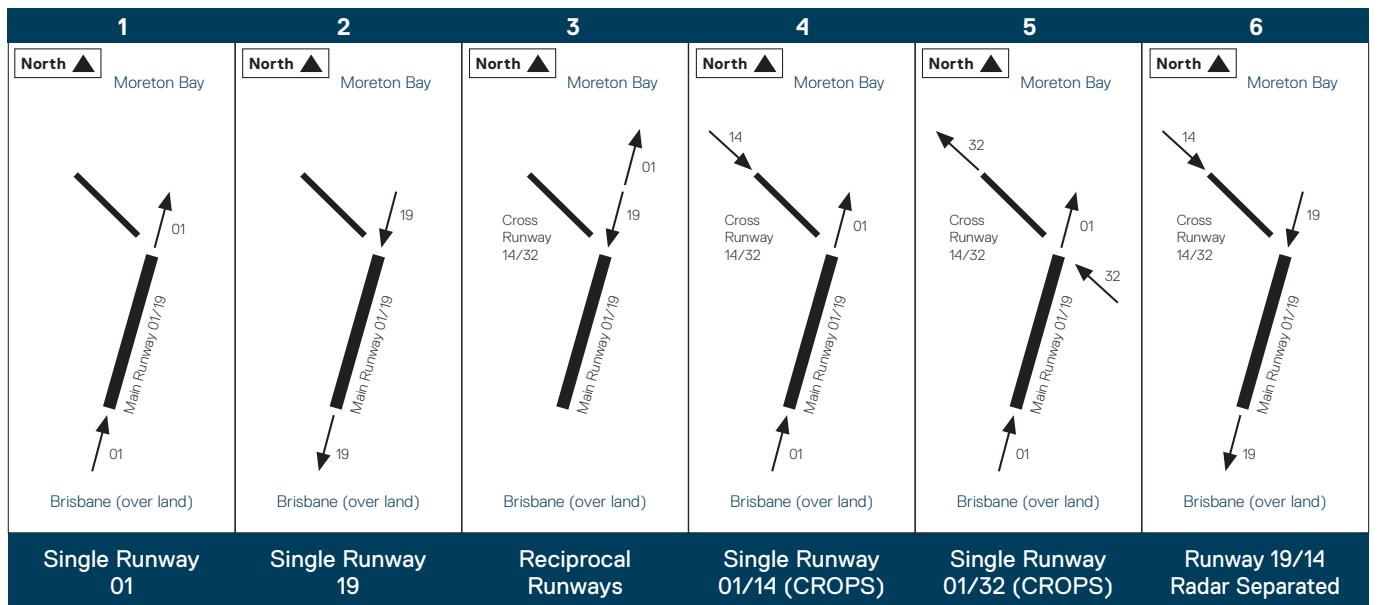
Airservices provides air traffic control and air navigation services at Brisbane Airport and determines how the runways are to operate at any given time, based on factors such as weather conditions, preferred operating modes and Noise Abatement Procedures (NAPs), and the volume of air traffic in the area.

The runways can operate in the following modes as described in Table 1 and illustrated in Figure 2.

**TABLE 1: DESCRIPTION OF THE OPERATING MODES FOR THE CURRENT RUNWAY SYSTEM**

No.	Mode	Arrivals	Departures
1	Single Runway 01	Arriving from the south over land – RWY 01	Departing to the north over the bay – RWY 01
2	Single Runway 19	Arriving from the north over the bay – RWY 19	Departing to the south over land – RWY 19
3	Reciprocal Runways	Arriving from the north over the bay – RWY 19	Departing to the north over the bay – RWY 01
4	Single Runway 01/14 – Converging Runway Operations (CROPS)	Arriving from the south over land – RWY 01, and Arriving from the north west over the bay – RWY 14	Departing to the north over the bay – RWY 01
5	Single Runway 01/32 (CROPS)	Arriving from the south over land – RWY 01, and Arriving from the south east over the bay – RWY 32	Departing to the north over the bay – RWY 01, and Departing to the north west over the bay – RWY 32
6	Runway 19/14 Radar Separated	Arriving from the south over land – RWY 19, and Arriving from the north west over the bay – RWY 14	Departing to the south over land – RWY 19

**FIGURE 2: Illustrations of the Operating Modes for the Current Runway System**



## The Operation of Brisbane Airport's Current Runway System (continued)

### About the Modes of Operation

Operation in the RWY 01 direction is generally preferred when weather conditions permit. This enables combined operations on Runway 14/32, which can increase the number of aircraft that can arrive and depart the airport – responding to the increasing demand Brisbane Airport is experiencing and helping to minimise schedule delays.

The Reciprocal Mode facilitates all operations over Moreton Bay, minimising noise impacts. However, in addition to wind direction and speed criteria, the requirements for separation between aircraft on final approach and initial departure tracks on the same runway means it can only be used during periods of very low demand, usually at night.

RWY 14 arrivals, in conjunction with RWY 01 arrivals and departures is

referred to as Converging Runway Operations (CROPS). This mode of operation is available in daylight hours and arrivals on RWY 14 are independent of arrivals on RWY 01. When available, this mode permits the aircraft arrival rate to be increased by around three to five aircraft per hour.

Similarly RWY 32 can be used for arrivals in conjunction with RWY 01 when conditions permit.

Weather and air traffic permitting, RWY 32 can also be used for departing turboprop aircraft, operating independently of arrivals and departures on RWY01. This mode is generally used during periods when there are more departures than arrivals and can reduce delays.

Another mode is where RWY14 is used for arrivals in conjunction with arrivals on RWY19. Arrivals in this mode must be radar separated for each runway and can only be used in times of low demand.

### RUNWAY DEMAND MANAGEMENT SCHEME

A Runway Demand Management Scheme (RDMS) was introduced at Brisbane Airport in 2012 to manage delays as aircraft traffic demand builds ahead of the opening of the NPR and the resulting step change in Brisbane Airport capacity.

The RDMS involves a number of operational initiatives designed to maximise the available runway capacity, improve recovery after schedule or weather disruptions and to more efficiently accommodate unscheduled operations that can occur, i.e. medical emergency flights by Royal Flying Doctor Service and others.

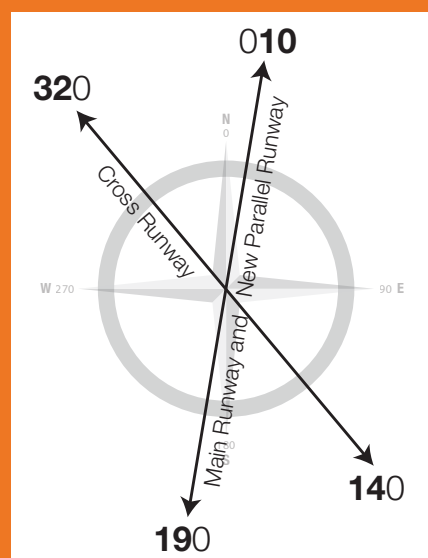
### ABOUT THE RUNWAY NUMBERING SYSTEM

So that air traffic controllers can direct pilots to the appropriate runway for take-off or landing, runways are always described using two numbers. Each number represents the orientation of the runway on a compass.

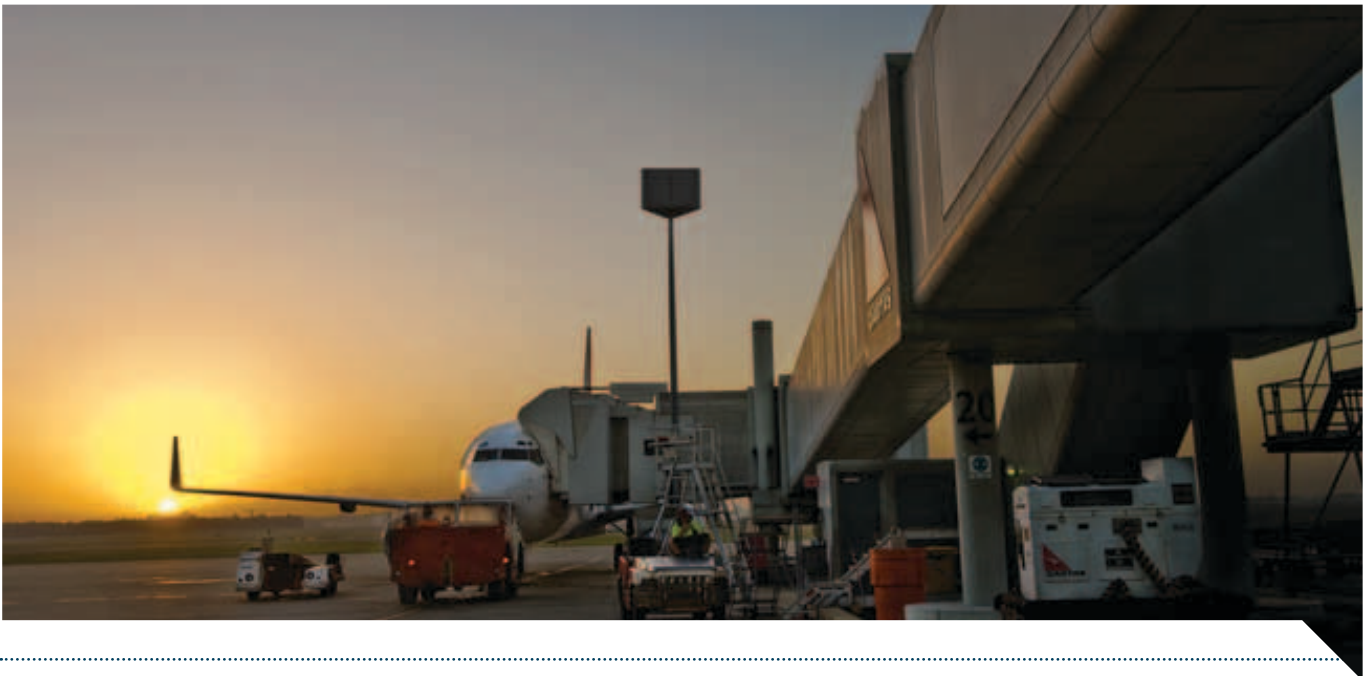
Based on compass orientation, Brisbane Airport's main runway is described as 01/19 (010 degrees magnetic / 190 degrees magnetic) and the cross runway is described as 14/32 (140 degrees magnetic / 320 degrees magnetic).

When it is completed, the NPR will run parallel to the current main runway and so it will also carry the numbers 01/19. To distinguish between the two, the NPR will be described as 01L (left)/19R (right) and the current main runway 01R (right)/19L (left).

The cross runway 14/32 will close when the NPR opens (refer page 126 of the Master Plan 'RWY 14/32 – Future Closure Strategy').







# THE OPERATION OF BRISBANE AIRPORT'S FUTURE RUNWAY SYSTEM

Flight paths into and out of Brisbane, as well as the management of airspace around the airport, will change when the NPR opens. Consequently, aircraft noise exposure around Brisbane will also change. (Refer to the Flight Path and Noise Charts in this document for information on aircraft movements and noise impacts.)

The NPR provides the opportunity to use a number of new operating modes that will provide benefits to the community by increasing the number of aircraft movements that can occur over Moreton Bay, particularly at night.

The design of the airspace around Brisbane, including flight paths and modes of operation for the NPR system, were fully investigated and documented at the time the Environmental Impact Statement and Major Development Plan (EIS/MDP) was prepared for the NPR in 2006. Today, as part of the work for the Brisbane Airport 2014 Master Plan, this information has been reviewed in consultation with Airservices, resulting in some minor changes.

## FUTURE RUNWAY CONFIGURATION

The NPR will be 3,300 m long and 60 m wide and located two km west of the existing RWY 01/19. There is a provision to extend the runway length to 3,600 m should that be necessary. Brisbane Airport's cross RWY 14/32, mentioned earlier in this section, will close when the NPR opens.

The runway designations for the NPR are shown in Figures 3 and 4. In summary:

- » RWY 19L/19R: arrivals from the north over Moreton Bay and departures to the south over land
- » RWY 01L/01R: arrivals from the south over land and departures to the north over Moreton Bay.

FIGURE 3: NPR RUNWAY DESIGNATIONS

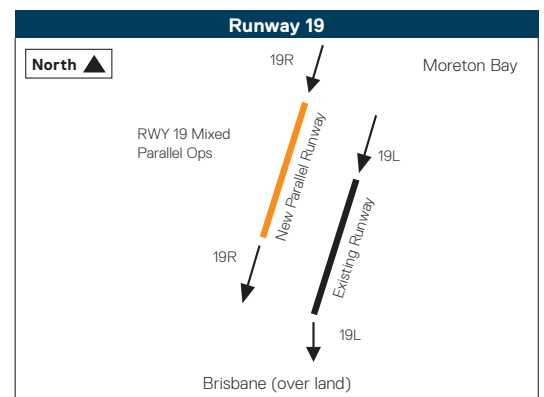
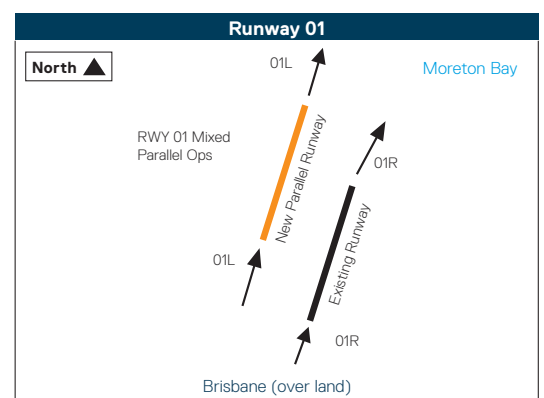


FIGURE 4: NPR RUNWAY DESIGNATIONS



## MODES OF OPERATION FOR THE NPR

There are several possible modes of operation for the NPR, with mode selection being influenced by:

- » Existing air routes to and from the airport
- » Optimisation of runway capacity
- » Current preferred runway rules and NAPs in operation at the airport
- » Options under varying wind conditions
- » Simplicity of airspace design and flight paths to maximise safety and efficiency
- » Amalgamation of existing procedures with new procedural requirements for parallel operations
- » Options to minimise overflights of residential areas.

## About the Modes of Operation

The six main modes of operation proposed for the NPR are:

### MODE 1: SIMULTANEOUS OPPOSITE DIRECTION PARALLEL RUNWAY OPERATIONS (SODPROPS)

This is a low to medium capacity mode with operations over Moreton Bay and allowing some non-jet departures from RWY 19R (6am to 10pm).

***This is BAC's preferred operating mode for noise mitigation when traffic volume and weather conditions permit.***

The mode can only be used when there is no more than a five knot downwind and a dry runway, or no downwind and a wet runway. It will be most often be used at night (11pm to 5am Summer/11pm to 6am Winter) when demand is reduced.

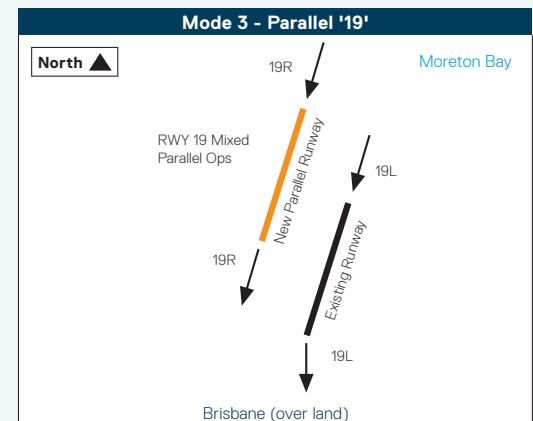
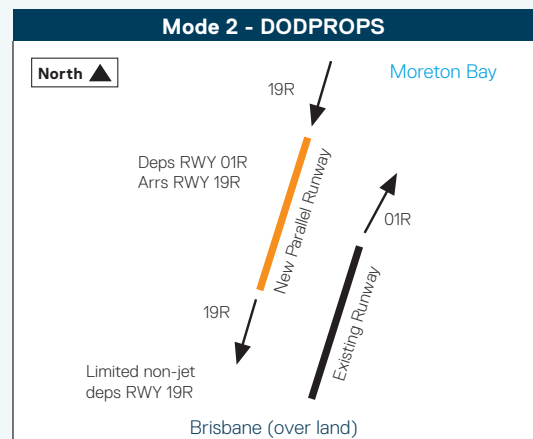
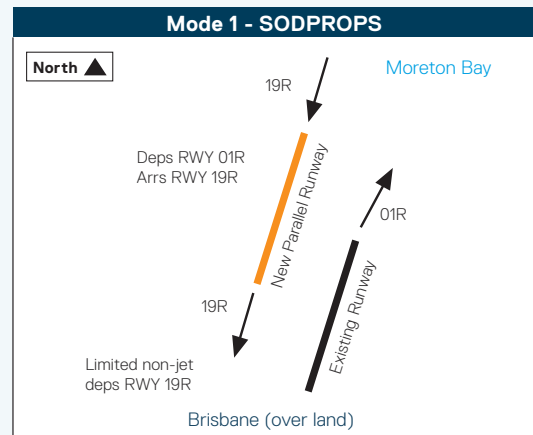
### MODE 2: DEPENDENT OPPOSITE DIRECTION PARALLEL RUNWAY OPERATIONS (DODPROPS)

This is a low capacity night time mode (11pm to 5am Summer/11pm to 6am Winter) with all jets departing or landing over Moreton Bay, but with non-jet departures permitted from RWY 19R.

The mode can only be used at night with up to a 10 knot downwind and dry runway. Aircraft are not permitted to take-off from RWY 01R until an aircraft landing on 19R is safely on the ground.

### MODE 3: MIXED PARALLEL OPERATIONS ON RWYS 19L AND 19R

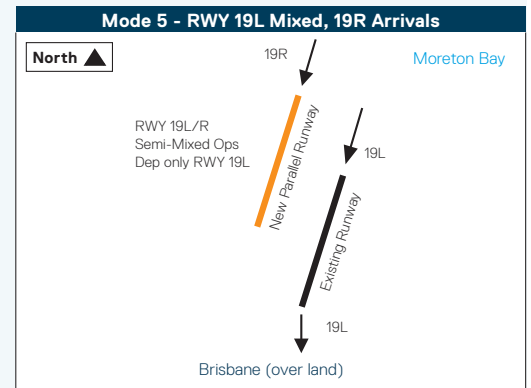
This is the most efficient mode for air traffic management for normal airport operations when weather conditions promote a southerly air traffic flow. Because arrival tracks are generally more concentrated than departure tracks, for noise abatement purposes arrivals over Moreton Bay are preferred if weather permits.



## MODES OF OPERATION FOR THE NPR

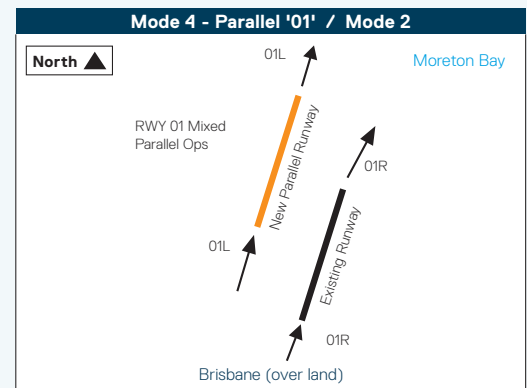
### MODE 5: RWY 19R ARRIVALS AND 19L MIXED MODE OPERATIONS

Mode 5 is a variation on Mode 3. It can be used in dry conditions with up to five knots downwind, and in wet weather with no downwind. This mode is an option that may be considered during non-peak and shoulder periods with high arrival rates. This mode offers operational efficiency through reduced taxiing times from aprons.



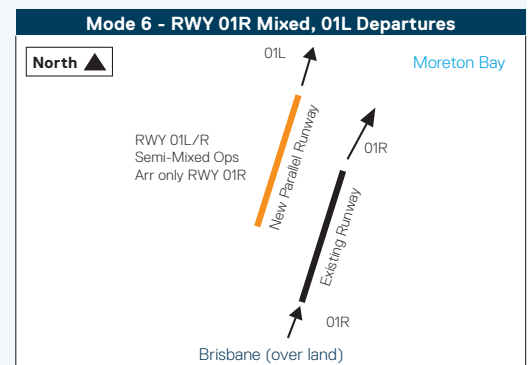
### MODE 4: MIXED PARALLEL OPERATIONS ON RWYS 01L AND 01R

Mode 4 is the primary mode of operation for arrivals and departures on RWY 01L and 01R. It is the most efficient mode for air traffic management for normal airport operations when weather conditions promote a northerly air traffic flow.



### MODE 6: RWY 01L DEPARTURES AND 01R MIXED MODE OPERATIONS

Mode 6 is a variation on Mode 4. It can be used in dry conditions with up to five knots downwind, and in wet weather with no downwind. This mode is an option that may be considered during non-peak and shoulder periods with high departure rates. This mode offers operational efficiency through reduced taxiing times from aprons.



## THE PARALLEL RUNWAY OPERATING PLAN

BAC has prepared an operating plan to be implemented when the NPR is open. It outlines the preferred modes of operation recommended for weekdays and weekends to optimise noise abatement where possible and is shown in Table 2.

During the day the decision to change modes will be 'passive'. This means that a mode change will only be implemented if the current mode becomes unavailable, or will clearly become unavailable in a short time, generally driven by weather changes.

For instance, if Mode 3 is being used and the wind changes allowing Mode 1 SODPROPS to be available, then if Mode 3 is still suitable no change is required to be made.

In the evening and early mornings on weekends mode changes will be made on an 'active' basis. For instance, if Mode 3 or 4 is being used and conditions change that mean Mode 1 SODPROPS becomes available, then a change to Mode 1 is required as soon as possible.

At night, a change to Mode 1 SODPROPS or Mode 2 DODPROPS must be implemented on an 'active' basis if weather conditions permit.

There may be times at night when the downwind component is greater than five knots but less than 10 knots and the airport could operate in Mode 2 DODPROPS except traffic departures are above the nominal capacity for the mode.

In this event and in order to maintain over Moreton Bay operations, Mode 2 can be varied to allow some smaller quieter non-jet aircraft to depart over the land on RWY19R.

An artist's impression of the New Parallel Runway currently under construction at Brisbane Airport



## NEW FLIGHT PATH APPROVAL PROCESS

Before any proposed flight path procedure and/or modes of operation can be finalised and implemented for the NPR system, an additional Safety Case and Environmental Assessment will be completed by the airspace and navigation service provider, Airservices. This will occur prior to the opening of the NPR and must be approved by the Office of Airspace Regulation (OAR) within Civil Aviation Safety Authority (CASA).

**TABLE 2: PARALLEL RUNWAY OPERATING PLAN**

**WEEKDAY OPERATIONS – MONDAY TO FRIDAY<sup>1</sup>**

Time	Number of Available Modes	Preferred Sequence of Application
Day Mode (6am to 8pm)	3	Mode 1: SODPROPS (downwind up to 5kts) – ‘passive’ Mode 3: RWY 19 Mixed Parallel Mode 4: RWY 01 Mixed Parallel
Evening Mode (8pm to 10pm)	3	Mode 1: SODPROPS (downwind up to 5kts) – ‘active’ Mode 3: RWY 19 Mixed Parallel Mode 4: RWY 01 Mixed Parallel
Night Mode (10pm to 6am)	6	Mode 1: SODPROPS (downwind up to 5kts) – ‘active’ Mode 2: DODPROPS (downwind up to 10kts) – ‘active’ Mode 5: RWY 19 Semi-mixed Parallel – departures RWY 19L only Mode 6: RWY 01 Semi-mixed Parallel – arrivals RWY 01R only Mode 3: RWY 19 Mixed Parallels Mode 4: RWY 01 Mixed Parallels

**WEEKEND OPERATIONS – SATURDAY AND SUNDAY<sup>1</sup>**

Time	Number of Available Modes	Preferred Sequence of Application
Day Mode (8am to 8pm)	3	Mode 1: SODPROPS (downwind up to 5kts) – ‘passive’ Mode 3: RWY 19 Mixed Parallel Mode 4: RWY 01 Mixed Parallel
Evening Mode (8pm to 10pm)	3	Mode 1: SODPROPS (downwind up to 5kts) – ‘active’ Mode 3: RWY 19 Mixed Parallel Mode 4: RWY 01 Mixed Parallels
Night Mode (10pm to 6am)	6	Mode 1: SODPROPS (downwind up to 5kts) – ‘active’ Mode 2: DODPROPS (downwind up to 10kts) – ‘active’ Mode 5: RWY 19 Semi-mixed Parallel – departures RWY 19L only Mode 6: RWY 01 Semi-mixed Parallel – arrivals RWY 01R only Mode 3: RWY 19 Mixed Parallels Mode 4: RWY 01 Mixed Parallels
Early Morning (6am – 8am)	3	Mode 1: SODPROPS (downwind up to 5kts) – ‘active’ Mode 3: RWY 19 Mixed Parallel Mode 4: RWY 01 Mixed Parallel

<sup>1</sup> Mode allocation is both weather and demand dependent and Modes 1 and 2 will be actively allocated within agreed demand rates and down wind criteria.



# ABOUT CURRENT AND FUTURE FLIGHT PATHS

## DEFINING FLIGHT PATHS

Flight paths are highways in the sky. They define three-dimensional routes that aircraft use to arrive at or depart from an airport.

They are developed in accordance with standards established by organisations including the International Civil Aviation Organization (ICAO), CASA and its OAR and are carefully formulated to ensure the safe and efficient operation of aircraft.

Flight paths are the means through which air traffic is controlled and are based on Standard Arrival Routes, known as STARs, and Standard Instrument Departure Routes, known as SIDs. Together, STARs and SIDs form the basis for the flight paths that are used by pilots and airlines operating in controlled airspace.

These flight paths are used by pilots to negotiate entry into and out of Brisbane airspace, under the direction of Airservices Air Traffic Controllers.

By using a number of navigational tools that are established for each flight path, pilots can fly safely and confidently into and out of Brisbane in adverse weather conditions, even if they have never flown to Brisbane before.

Flight paths are integral to the noise modelling process and are used in the development of the ANEF and the noise charts shown in this booklet.

Therefore, the arrival and departure flight paths for Brisbane Airport at 2020 before the NPR opens and for the nominal ultimate capacity year of 2060 with the NPR in operation, are shown on pages 13 – 16.

Flight paths at Brisbane Airport will change after the opening of the NPR in 2020.

However, no further changes to the runway system are envisaged after that and so the flight paths shown for 2060 will be the same as those used in 2020 when the NPR opens.

Information about how flight paths are approved for use is contained on pages 83 and 84 of this booklet.

Because flight paths differ for arrivals and departures and for various aircraft types, the flight paths shown over the following pages include:

- » Arrival Flight Paths 2020 before NPR opens (Jets, Turboprops and Helicopters)
- » Departure Flight Paths 2020 before NPR opens (Jets, Turboprops and Helicopters)

- » Arrival Flight Paths 2060 with NPR open (Jets, Turboprops and Helicopters)
- » Departure Flight Paths 2060 with NPR open (Jets, Turboprops and Helicopters)

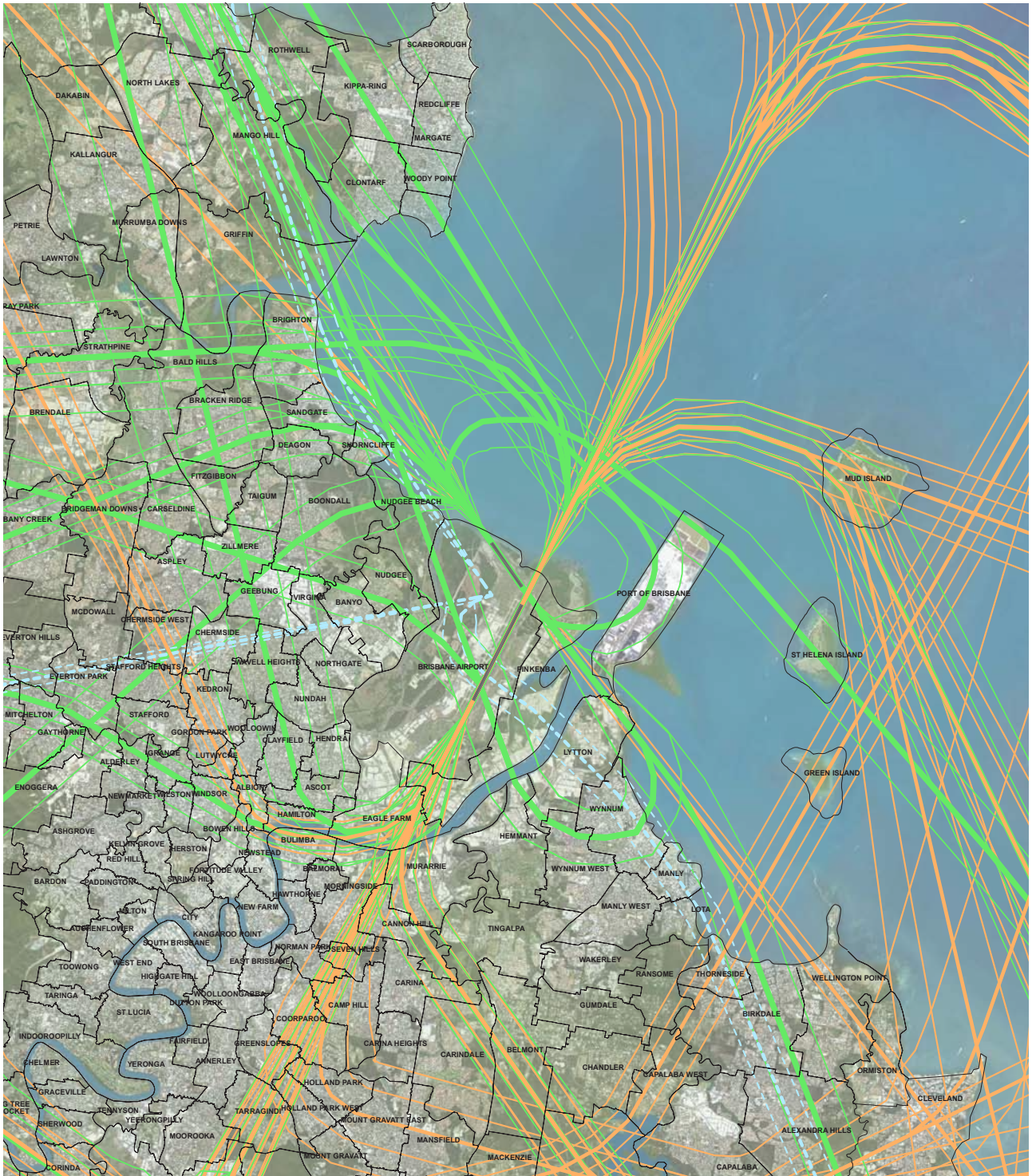
## ABOUT FLIGHT PATHS

Flight paths can be depicted as single lines on a map, however, it is not always possible for aircraft to follow precisely along the line depicted.

In practice, flight paths can vary up to several kilometres or more. This occurs for a range of reasons such as weather conditions, requirements for aircraft separation or variations in aircraft performance.

The flight paths shown are based on a nominal spread around a centreline path. The modelling used in developing the noise metrics assumes the majority of aircraft will be along the centreline path with a decreasing proportion of aircraft flying on the outer edge of the path.

**ARRIVAL CENTRE LINE TRACKS 2020 BEFORE NPR OPENS (JETS, TURBOPROPS AND HELICOPTERS)**

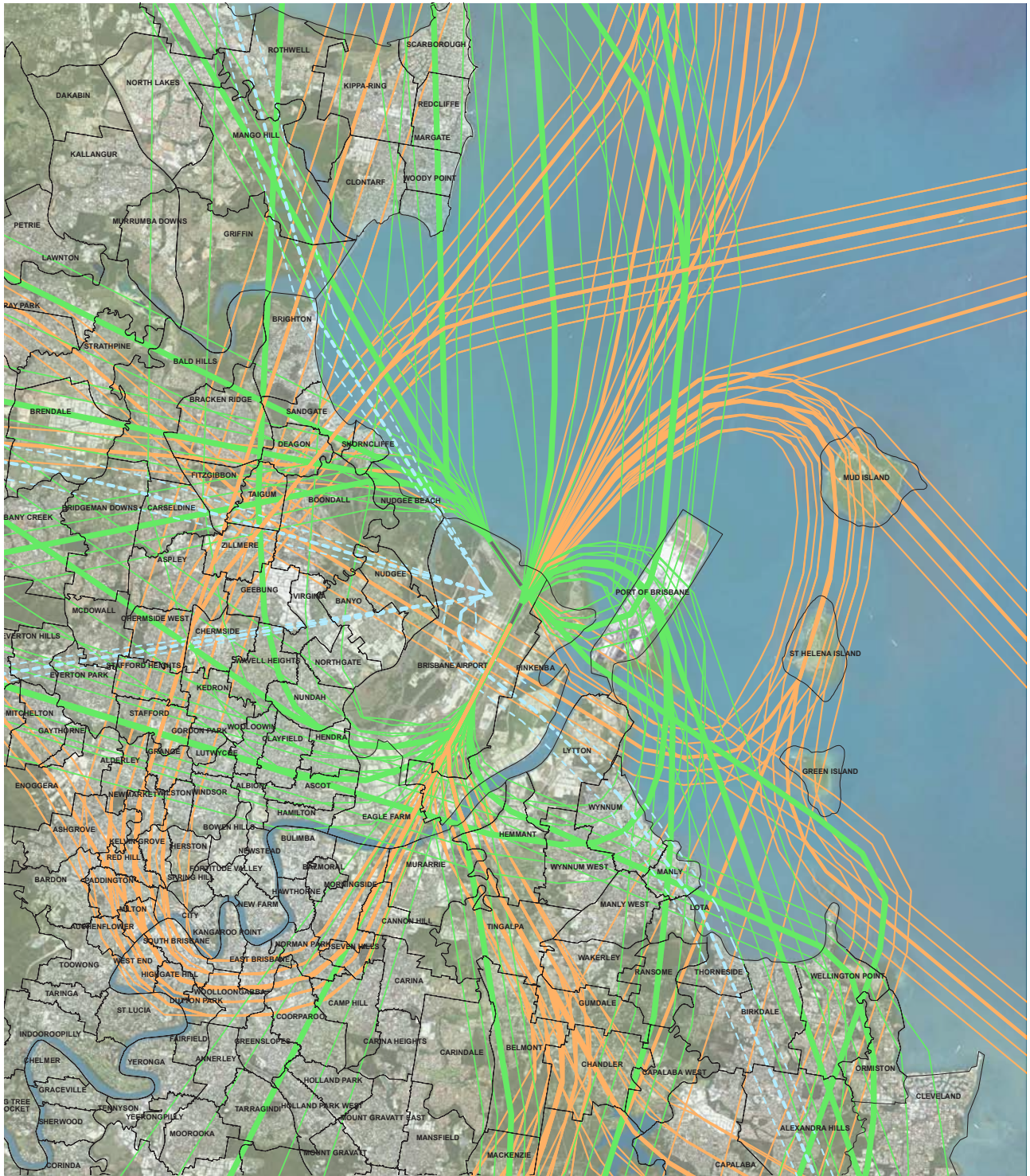


**LEGEND**

- Jet Tracks
- Non-jet Tracks
- Helicopter Tracks

**PLACE THE CLEAR OVERLAY PROVIDED AT THE FRONT OF THIS BOOK OVER THIS CHART TO SEE THE RELATIONSHIP BETWEEN THE FLIGHT PATHS AND BRISBANE SUBURBS.**

**DEPARTURE CENTRE LINE TRACKS 2020 BEFORE NPR OPENS (JETS, TURBOPROPS AND HELICOPTERS)**

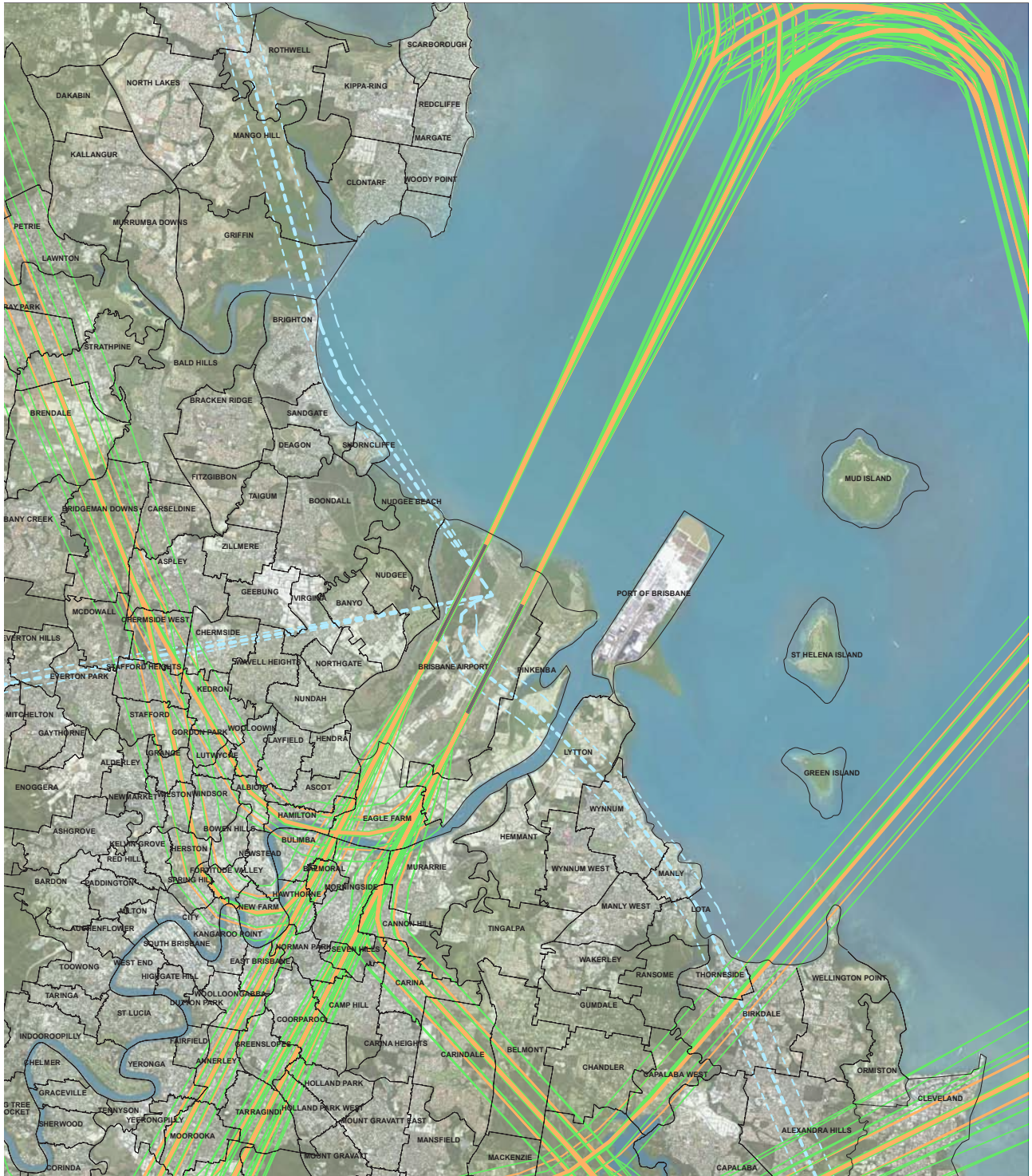


- LEGEND**
- █ Jet Tracks
  - █ Non-jet Tracks
  - █ Helicopter Tracks

**PLACE THE CLEAR OVERLAY PROVIDED AT THE FRONT OF THIS BOOK OVER THIS CHART TO SEE THE RELATIONSHIP BETWEEN THE FLIGHT PATHS AND BRISBANE SUBURBS.**



**ARRIVAL CENTRE LINE TRACKS 2060 WITH NPR OPEN (JETS, TURBOPROPS AND HELICOPTERS)**

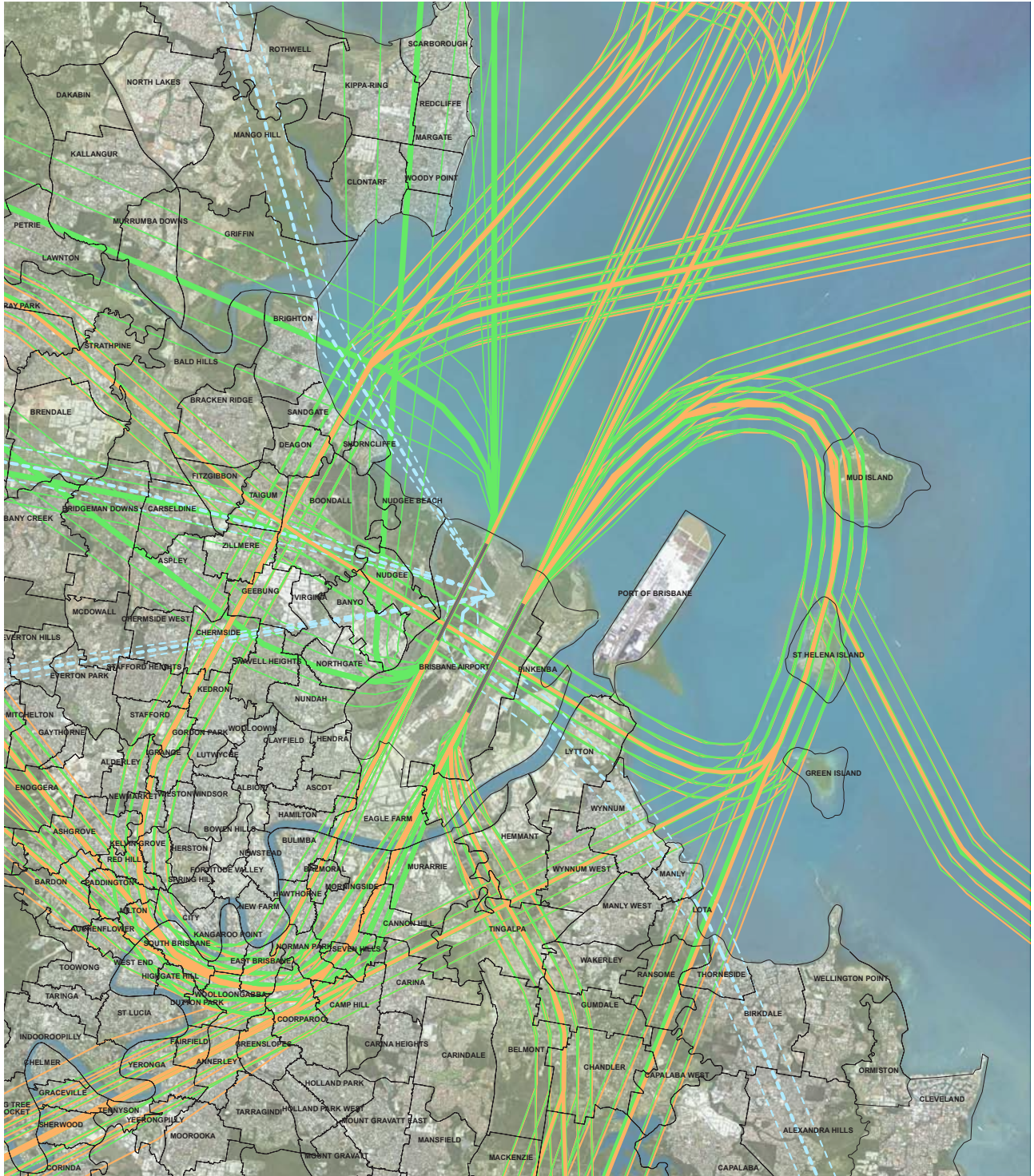


**LEGEND**

- Jet Tracks
- Non-jet Tracks
- Helicopter Tracks

**PLACE THE CLEAR OVERLAY PROVIDED AT THE FRONT OF THIS BOOK OVER THIS CHART TO SEE THE RELATIONSHIP BETWEEN THE FLIGHT PATHS AND BRISBANE SUBURBS.**

**DEPARTURE CENTRE LINE TRACKS 2060 WITH NPR OPEN (JETS, TURBOPROPS AND HELICOPTERS)**



**LEGEND**

- █ Jet Tracks
- █ Non-jet Tracks
- █ Helicopter Tracks

**PLACE THE CLEAR OVERLAY PROVIDED AT THE FRONT OF THIS BOOK OVER THIS CHART TO SEE THE RELATIONSHIP BETWEEN THE FLIGHT PATHS AND BRISBANE SUBURBS.**

# BUILDING THE FLIGHT PATH AND NOISE CHARTS SHOWN IN THIS BOOKLET

In the next section of this booklet BAC has provided a number of Flight Path and Noise Charts for the years:

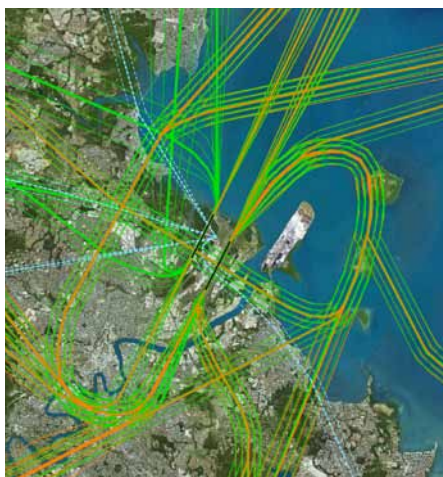
- » 2020 (just prior to NPR opening)
- » 2020 (on opening of the NPR)
- » 2034 (which is the 20-year planning horizon for the Brisbane Airport 2014 Master Plan)
- » 2060 (the nominal date when Brisbane Airport will approach ultimate runway capacity).

In addition to showing flight paths, the Flight Path and Noise Charts include useful information about how the flight paths will be used by aircraft, as well as the likely noise effects, shown through the use of contour lines overlaid on each map.

While all information is overlaid on a map of Brisbane, the perforated clear page showing the boundaries of Brisbane suburbs can be removed from the front of this booklet and held over each Flight Path and Noise Chart so you can clearly see where your suburb is located in relation to the flight paths.

In this section we explain how flight paths are developed, the primary flight tracks used and how this information has been used to develop the flight paths shown in this booklet.

## EXAMPLE 1: CENTRE LINE FLIGHT TRACKS



We also provide a guide to understanding the information on and the range of the Flight Path and Noise Charts.

## ABOUT PRIMARY FLIGHT TRACKS

While primary flight tracks can be depicted as single lines on a map (refer Example 1 below), they allow for variance, because it is not always possible for aircraft to follow a particular flight path precisely along the same line.

In practice, individual flight tracks can vary from the primary flight track by up to several kilometres or more (refer Example 2 below). This occurs for a range of reasons such as weather conditions, requirements for aircraft separation, variations in aircraft performance, or through the use of approved visual approaches, typically used when weather conditions are good and traffic allows.

## ABOUT THE SWATHE-STYLE FLIGHT PATHS IN THIS BOOKLET

Therefore, to better illustrate the potential area within which aircraft may fly into and out of Brisbane, information on the primary flight tracks is usually combined with the information on flight

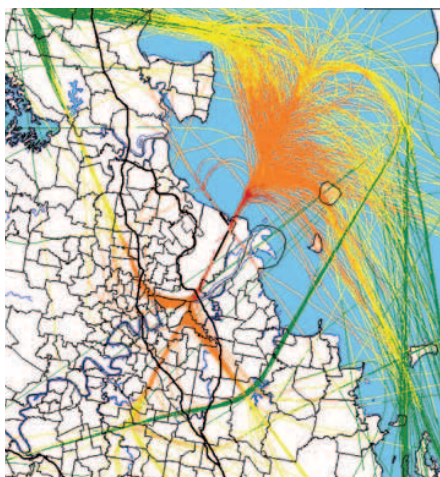
tracks flown, to create the swathe-style of flight paths shown in this booklet (refer Example 3 below).

It should be noted that in many cases aircraft will fly close to the centre line of these swathes and this centre-line approach will dominate in coming years as technologies such as Required Navigation Performance (RNP) are adopted across the industry.

The images below illustrate how the flight paths have been developed for this booklet, incorporating:

- » Primary flight paths for the primary jet aircraft arrivals and departures into Brisbane
- » The actual spread of jet aircraft arrival and departure flight paths sourced from Airservices
- » The integration of primary flight paths and actual flight paths to form the swathe-style flight path drawings shown in this booklet.

## EXAMPLE 2: ACTUAL FLIGHT TRACKS FLOWN



Source: Airservices Australia

## EXAMPLE 3: SWATHE-STYLE FLIGHT PATH IMAGES USED IN THIS BOOK



# UNDERSTANDING THE FLIGHT PATH AND NOISE CHARTS

During the development of the Flight Path and Noise Charts concept, BAC sought input from a cross-section of the community about the type of information they would like to know about flight paths and noise impacts and how they would like that information to be shown. The charts shown in this booklet are the product of this consultation.

There are three primary elements to each Flight Path and Noise Chart. Here we have highlighted the primary elements using a sample Flight Path and Noise Chart.

## 1

**Flight paths – appearing as coloured swathes overlaid on a map of Brisbane**

The flight paths in this booklet, each denoted by a capital letter, show three important pieces of information:

- » Whether aircraft are using the flight path for arrival or departure, illustrated by the direction of the aircraft icon and the colour scheme of the path
- » The approximate height of aircraft as they arrive or depart Brisbane shown through a colour gradient that can be interpreted by using a height legend on the chart
- » The potential width of the flight path.

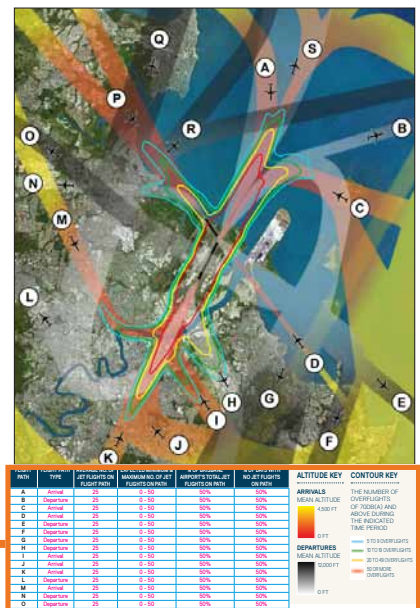


## 2

**Data tables – appearing at the bottom of each Flight Path and Noise Chart**

At the bottom of each Flight Path and Noise Chart you will find specific details about how the flight paths will be used by aircraft, including:

- » The average number of times per day that an aircraft is likely to use the flight path
- » The expected minimum and maximum number of flights that are likely to use the flight path
- » The percentage of all jet aircraft flights that this path is likely to carry during the period of time being reported on
- » The number of days within the period of time being reported on when the flight path is likely to experience no flights.



# 3

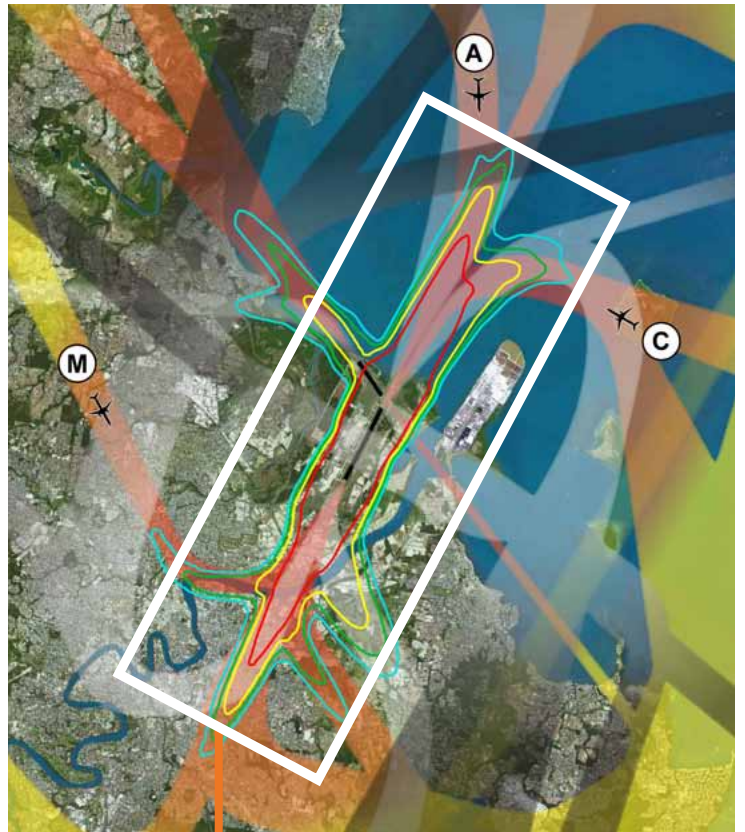
## N70 noise contours – appearing as contour lines overlaid on the flight paths

A system of describing and predicting aircraft noise has been developed by the Australian Government in consultation with industry and the community. This work focused on finding ways to provide information in a form that could be more easily understood by the community and which provided a comprehensive description of the nature of aircraft noise exposure at any point. The N70 contour or diagram was a product of this work and is now also being adopted overseas to better communicate information about aircraft noise.

An N70 diagram, illustrated as contour lines over a map of Brisbane, shows the area within which a stated number of flights generating noise of 70 decibels or more occur in a specified period of time.

An aircraft noise event of 70 decibels or above is one that may disturb conversation, television viewing or using the telephone inside a house with open windows.

They describe the number of noise events (N) exceeding an outdoor maximum noise level of 70 dBA. The 70 dBA outdoor level was chosen because it corresponds to the Australian standard for the onset of indoor speech interference of 60 dBA (10 dB attenuation by the building fabric with open windows is allowed for).



### The N70 contour lines will show you:

- » Where overflights generating noise of 70 decibels or more are likely to occur
- » The predicted number of such overflights that are likely to occur
- » The time period (day, evening or night) when these overflights are likely to occur.

The colour of the contour line relates directly to the number of flights generating noise of 70 decibels or more that are likely to occur within its boundaries. As you get closer to Brisbane Airport, more events of 70 decibels or greater are experienced.

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# EXAMPLE FLIGHT PATH AND NOISE CHART

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An example Flight Path and Noise Chart is interpreted on the opposite page.

1

## Flight paths

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By looking at the direction the aircraft icon is heading, and the colour of the flight path in relation to the legend on the chart, you can see whether the flight path is used for arriving or departing aircraft. On this Flight Path and Noise Chart you can see that flight path A is used by aircraft arriving into Brisbane Airport, while flight path B is used by aircraft departing Brisbane Airport.

By following the change in the gradient of the colour on the flight path and by using the height legend, you can see the approximate height of aircraft on each flight path as they arrive at or depart from Brisbane Airport.

You can also see the area within the flight path that aircraft may fly by looking at the width of the path.

2

## Data Tables

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By following the data table at the bottom of the chart you can read across to see more information about what will happen on each of the flight paths. The 'typical busy day' this Flight Path and Noise Chart represents is a winter, weekday (Monday to Friday) day (6am to 6pm). This detail of season, day and time is noted at the top of each Flight Path and Noise Chart.

Using flight path A as an example, the data table sample shows you:

- » An average of 63 aircraft used this arrival flight path
- » The expected range in the number of aircraft using this flight path is 0 – 158
- » 15% of all aircraft using flight paths into and out of Brisbane used this flight path
- » This flight path is expected not to be used 13% of the time, also referred to as respite.

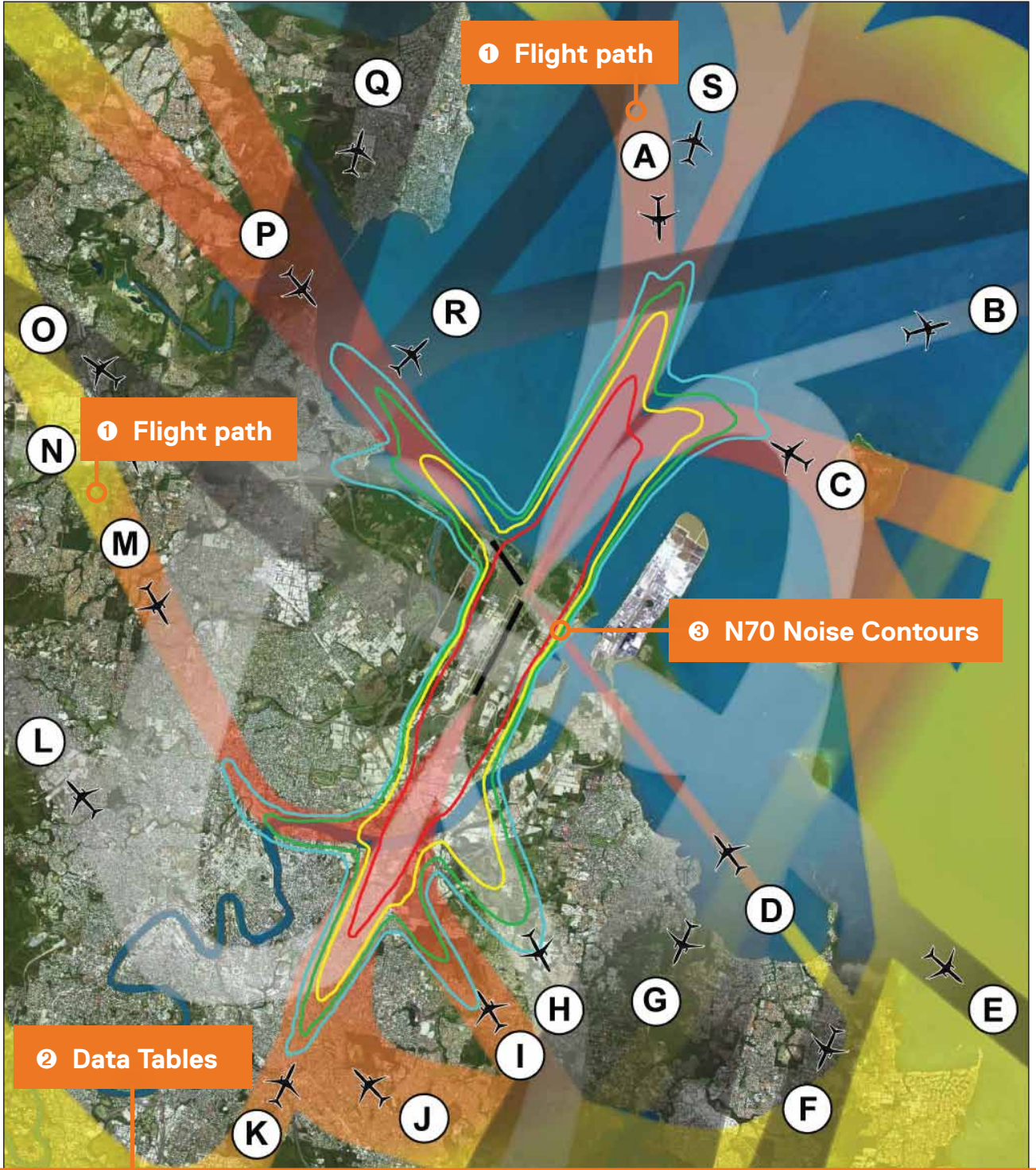
3

## N70 Noise Contours and Contour Key

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The coloured contour lines show the geographic extent of noise of 70 decibels or more that is generated by aircraft, while the contour key (shown bottom right corner) shows the number of overflights of 70 decibels or more that are likely to occur within the contour line boundaries. By analysing the sample opposite you can see that:

- » Between 5 and 9 overflights of 70 decibels or more occur in the area between the outer blue contour line and the green contour line
- » Between 10 and 19 overflights occur in the area between the green contour line and the yellow contour line
- » Between 20 and 49 overflights occur in the area between the yellow contour line and the red contour line
- » 50 or more overflights occur within the area bounded by the red contour line.



FLIGHT PATH	FLIGHT PATH TYPE	AVERAGE NO. OF JET FLIGHTS ON FLIGHT PATH	EXPECTED MINIMUM & MAXIMUM NO. OF JET FLIGHTS ON PATH	% OF BRISBANE AIRPORT'S TOTAL JET FLIGHTS ON PATH	% OF DAYS WITH NO JET FLIGHTS ON PATH
A	Arrival	63	0 - 158	15%	13%
B	Departure	2	0 - 4	<1%	10%
C	Arrival	15	0 - 35	4%	13%
D	Arrival	3	0 - 7	<1%	21%
E	Departure	3	0 - 8	<1%	13%
F	Departure	<1	0 - 1	<1%	27%
G	Departure	61	0 - 105	15%	3%
H	Departure	49	0 - 113	12%	13%
I	Arrival	21	0 - 37	5%	3%
J	Arrival	<1	0 - 1	<1%	62%
K	Arrival	57	0 - 101	14%	3%
L	Departure	36	0 - 90	9%	13%
M	Arrival	24	0 - 54	6%	4%
N	Departure	13	0 - 27	3%	20%
O	Departure	8	0 - 16	2%	3%
P	Arrival	15	0 - 68	4%	40%
Q	Departure	3	0 - 9	<1%	17%
R	Departure	5	0 - 11	1%	24%
S	Departure	42	0 - 91	10%	3%

ALTITUDE KEY		CONTOUR KEY
<b>ARRIVALS</b>		THE NUMBER OF OVERFLIGHTS OF 70DB(A) AND ABOVE DURING THE INDICATED TIME PERIOD
MEAN ALTITUDE		
4,500 FT		5 TO 9 OVERFLIGHTS
0 FT		10 TO 19 OVERFLIGHTS
<b>DEPARTURES</b>		20 TO 49 OVERFLIGHTS
MEAN ALTITUDE		50 OR MORE OVERFLIGHTS
12,000 FT		
0 FT		

# ABOUT THE RANGE OF FLIGHT PATH AND NOISE CHARTS

Flight paths and associated noise impacts vary according to the season, the day of the week and the time of day. Therefore this booklet provides Flight Path and Noise Charts for 'typical busy days' for the following scenarios.

<b>Summer (October – March)</b>	<b>Weekday</b> (Monday to Friday)	Day (5am to 6pm)
		Evening (6pm to 11pm)
		Night (11pm to 5am)
	<b>Weekend</b> (Saturday to Sunday)	Day (6am to 6pm)
		Evening (6pm to 11pm)
		Night (11pm to 6am)
<b>Winter (April – September)</b>	<b>Weekday</b> (Monday to Friday)	Day (6am to 6pm)
		Evening (6pm to 11pm)
		Night (11pm to 6am)
	<b>Weekend</b> (Saturday to Sunday)	Day (6am to 6pm)
		Evening (6pm to 11pm)
		Night (11pm to 6am)

You will notice in the chart that 'night', during weekdays in summer, runs from 11pm to 5am, whereas in the same scenario for winter, 'night' is measured between 11pm and 6am. The difference reflects the influence of summer daylight saving in southern states. This leads to more flights leaving Brisbane from 5am in summer, primarily for business customers.

In all there are 48 different Flight Path and Noise Charts in this booklet.





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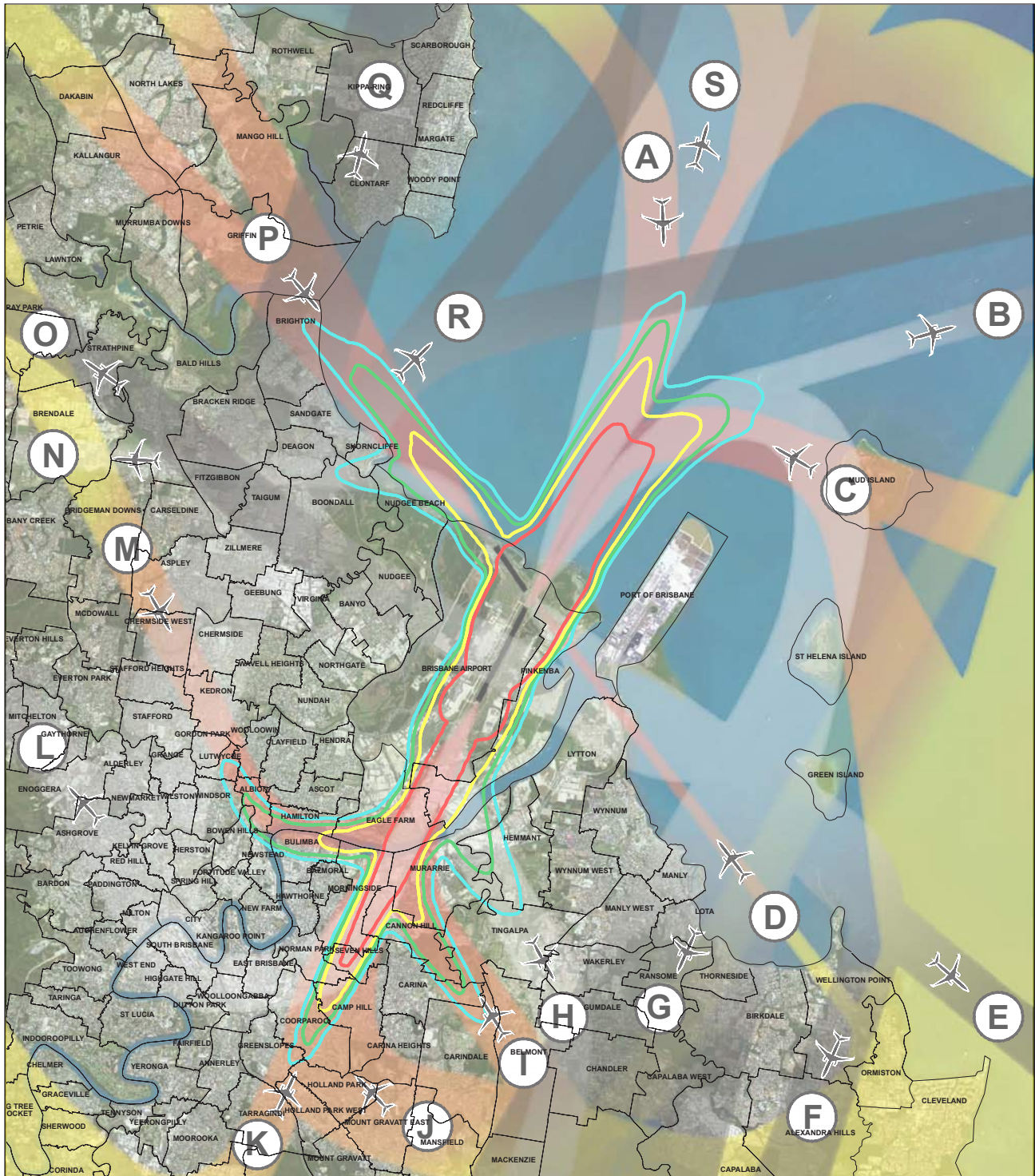
## FLIGHT PATH AND NOISE CHARTS

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Illustrating flight paths currently in use and those planned for the NPR and likely noise effects:

» 2020 – Before the opening of the NPR	24 – 35
» 2020 – Just after the opening of the NPR	36 – 47
» 2034 – With the NPR	48 – 59
» 2060 – With the NPR	60 – 71

2020 SUMMER WEEKDAY DAY WITHOUT THE NPR – MONDAY TO FRIDAY 5AM – 6PM

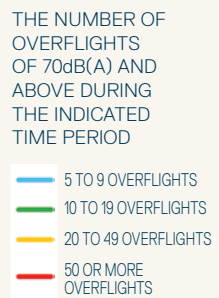


FLIGHT PATH	FLIGHT PATH TYPE	AVERAGE NO. OF JET FLIGHTS ON FLIGHT PATH	EXPECTED MINIMUM & MAXIMUM NO. OF JET FLIGHTS ON PATH	% OF BRISBANE AIRPORT'S TOTAL JET FLIGHTS ON PATH	% OF DAYS WITH NO JET FLIGHTS ON PATH
A	Arrival	28	0 - 165	6%	43%
B	Departure	3	0 - 4	<1%	4%
C	Arrival	6	0 - 37	1%	45%
D	Arrival	3	0 - 6	<1%	23%
E	Departure	10	0 - 12	2%	1%
F	Departure	<1	0 - 1	<1%	51%
G	Departure	89	0 - 108	20%	1%
H	Departure	21	0 - 120	5%	43%
I	Arrival	32	0 - 39	7%	1%
J	Arrival	2	0 - 3	<1%	24%
K	Arrival	81	0 - 107	18%	1%
L	Departure	15	0 - 90	3%	43%
M	Arrival	34	0 - 59	8%	1%
N	Departure	13	0 - 22	3%	18%
O	Departure	11	0 - 15	3%	1%
P	Arrival	26	0 - 68	6%	15%
Q	Departure	1	0 - 8	<1%	62%
R	Departure	1	0 - 11	<1%	62%
S	Departure	63	0 - 90	14%	1%

ALTITUDE KEY

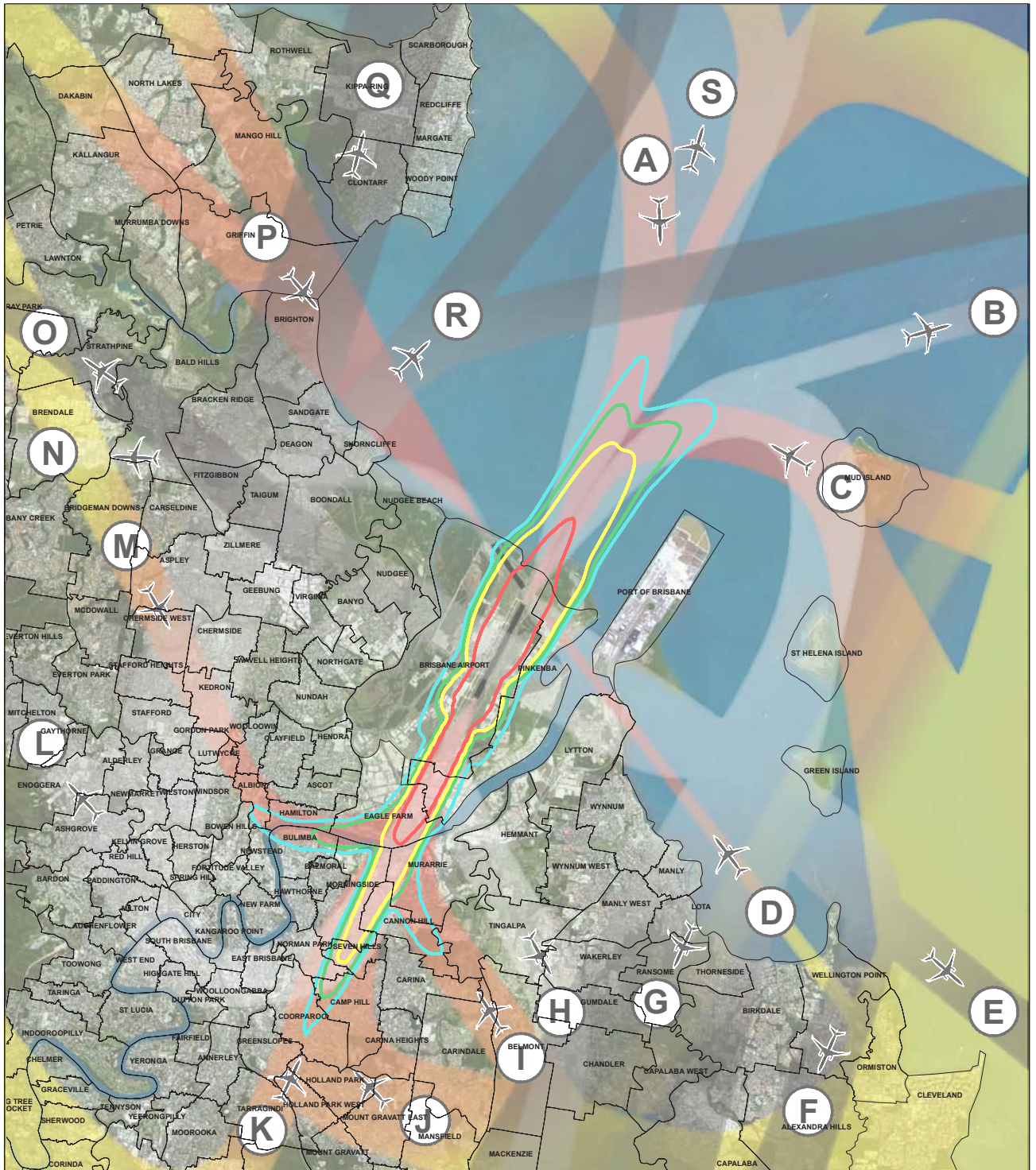


CONTOUR KEY



THESE FLIGHT PATHS REPRESENT WHERE THE MAJORITY OF AIRCRAFT WILL FLY, HOWEVER ALL AREAS COULD BE SUBJECTED TO SOME AIRCRAFT OVERFLIGHT.

2020 SUMMER WEEKDAY EVENING WITHOUT THE NPR – MONDAY TO FRIDAY 6PM – 11PM



FLIGHT PATH	FLIGHT PATH TYPE	AVERAGE NO. OF JET FLIGHTS ON FLIGHT PATH	EXPECTED MINIMUM & MAXIMUM NO. OF JET FLIGHTS ON PATH	% OF BRISBANE AIRPORT'S TOTAL JET FLIGHTS ON PATH	% OF DAYS WITH NO JET FLIGHTS ON PATH
A	Arrival	7	0 - 69	5%	78%
B	Departure	<1	0 - 1	<1%	11%
C	Arrival	1	0 - 12	<1%	78%
D	Arrival	1	0 - 2	<1%	26%
E	Departure	4	0 - 4	3%	5%
F	Departure	<1	0 - 0	<1%	100%
G	Departure	29	0 - 32	21%	4%
H	Departure	4	0 - 36	3%	78%
I	Arrival	12	0 - 13	9%	4%
J	Arrival	<1	0 - 0	<1%	100%
K	Arrival	38	0 - 44	27%	4%
L	Departure	2	0 - 22	1%	81%
M	Arrival	19	0 - 24	14%	5%
N	Departure	1	0 - 2	<1%	40%
O	Departure	4	0 - 5	3%	5%
P	Arrival	2	0 - 7	1%	57%
Q	Departure	<1	0 - 0	<1%	100%
R	Departure	<1	0 - 2	<1%	81%
S	Departure	16	0 - 19	11%	4%

ALTITUDE KEY

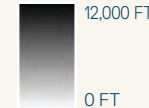
ARRIVALS

MEAN ALTITUDE



DEPARTURES

MEAN ALTITUDE



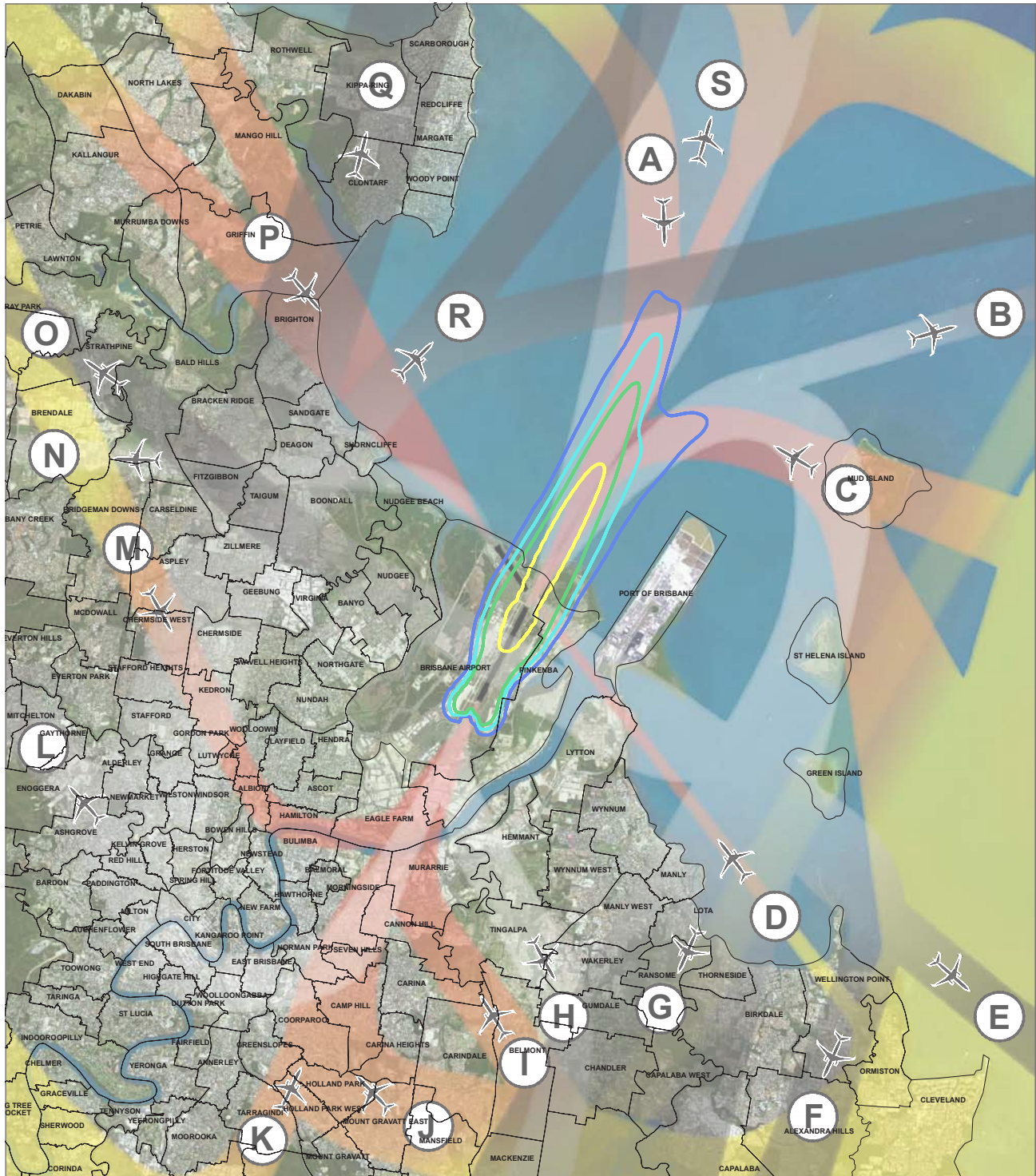
CONTOUR KEY

THE NUMBER OF OVERFLIGHTS OF 70dB(A) AND ABOVE DURING THE INDICATED TIME PERIOD

- 5 TO 9 OVERFLIGHTS
- 10 TO 19 OVERFLIGHTS
- 20 TO 49 OVERFLIGHTS
- 50 OR MORE OVERFLIGHTS

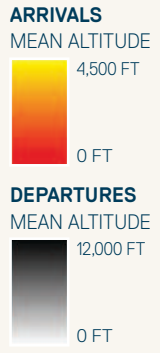
THESE FLIGHT PATHS REPRESENT WHERE THE MAJORITY OF AIRCRAFT WILL FLY, HOWEVER ALL AREAS COULD BE SUBJECTED TO SOME AIRCRAFT OVERFLIGHT.

2020 SUMMER WEEKDAY NIGHT WITHOUT THE NPR – MONDAY TO FRIDAY 11PM – 5AM

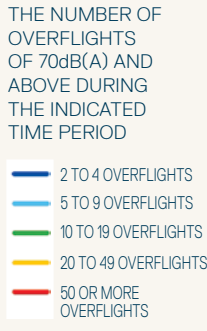


FLIGHT PATH	FLIGHT PATH TYPE	AVERAGE NO. OF JET FLIGHTS ON FLIGHT PATH	EXPECTED MINIMUM & MAXIMUM NO. OF JET FLIGHTS ON PATH	% OF BRISBANE AIRPORT'S TOTAL JET FLIGHTS ON PATH	% OF DAYS WITH NO JET FLIGHTS ON PATH
A	Arrival	10	0 - 11	37%	1%
B	Departure	<1	0 - 1	<1%	1%
C	Arrival	1	0 - 2	4%	3%
D	Arrival	<1	0 - 1	<1%	87%
E	Departure	<1	0 - 0	<1%	100%
F	Departure	<1	0 - 0	<1%	100%
G	Departure	2	0 - 2	7%	0%
H	Departure	<1	0 - 2	<1%	98%
I	Arrival	<1	0 - 1	<1%	89%
J	Arrival	<1	0 - 0	<1%	100%
K	Arrival	1	0 - 7	4%	79%
L	Departure	<1	0 - 10	<1%	97%
M	Arrival	<1	0 - 5	<1%	79%
N	Departure	<1	0 - 0	<1%	100%
O	Departure	3	0 - 4	11%	0%
P	Arrival	<1	0 - 1	<1%	99%
Q	Departure	<1	0 - 3	<1%	98%
R	Departure	<1	0 - 1	<1%	99%
S	Departure	10	0 - 11	37%	0%

ALTITUDE KEY

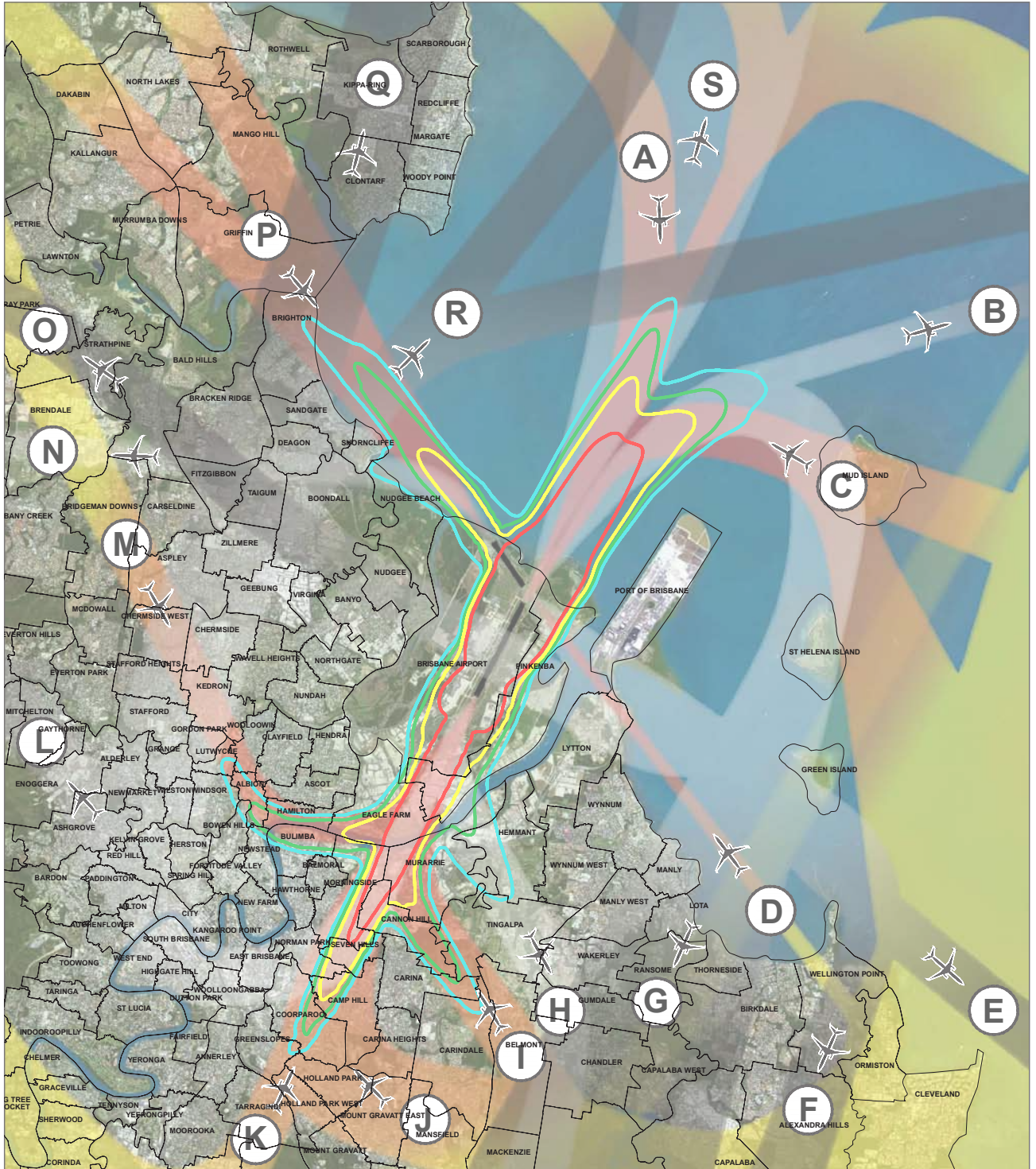


CONTOUR KEY



THESE FLIGHT PATHS REPRESENT WHERE THE MAJORITY OF AIRCRAFT WILL FLY, HOWEVER ALL AREAS COULD BE SUBJECTED TO SOME AIRCRAFT OVERFLIGHT.

2020 SUMMER WEEKEND DAY WITHOUT THE NPR – SATURDAY AND SUNDAY 6AM – 6PM



FLIGHT PATH	FLIGHT TYPE	AVERAGE NO. OF JET FLIGHTS ON FLIGHT PATH	EXPECTED MINIMUM & MAXIMUM NO. OF JET FLIGHTS ON PATH	% OF BRISBANE AIRPORT'S TOTAL JET FLIGHTS ON PATH	% OF DAYS WITH NO JET FLIGHTS ON PATH
A	Arrival	16	0 - 110	5%	45%
B	Departure	4	0 - 5	1%	5%
C	Arrival	5	0 - 30	1%	45%
D	Arrival	2	0 - 4	<1%	21%
E	Departure	10	0 - 12	3%	1%
F	Departure	<1	0 - 2	<1%	48%
G	Departure	71	0 - 85	20%	1%
H	Departure	15	0 - 97	4%	45%
I	Arrival	28	0 - 34	8%	1%
J	Arrival	2	0 - 3	<1%	32%
K	Arrival	67	0 - 84	19%	1%
L	Departure	9	0 - 67	3%	45%
M	Arrival	28	0 - 45	8%	1%
N	Departure	9	0 - 15	3%	19%
O	Departure	12	0 - 14	3%	1%
P	Arrival	20	0 - 46	6%	22%
Q	Departure	1	0 - 9	<1%	61%
R	Departure	1	0 - 11	<1%	62%
S	Departure	51	0 - 69	15%	1%

**ALTITUDE KEY**

**ARRIVALS**  
MEAN ALTITUDE  
4,500 FT  
0 FT

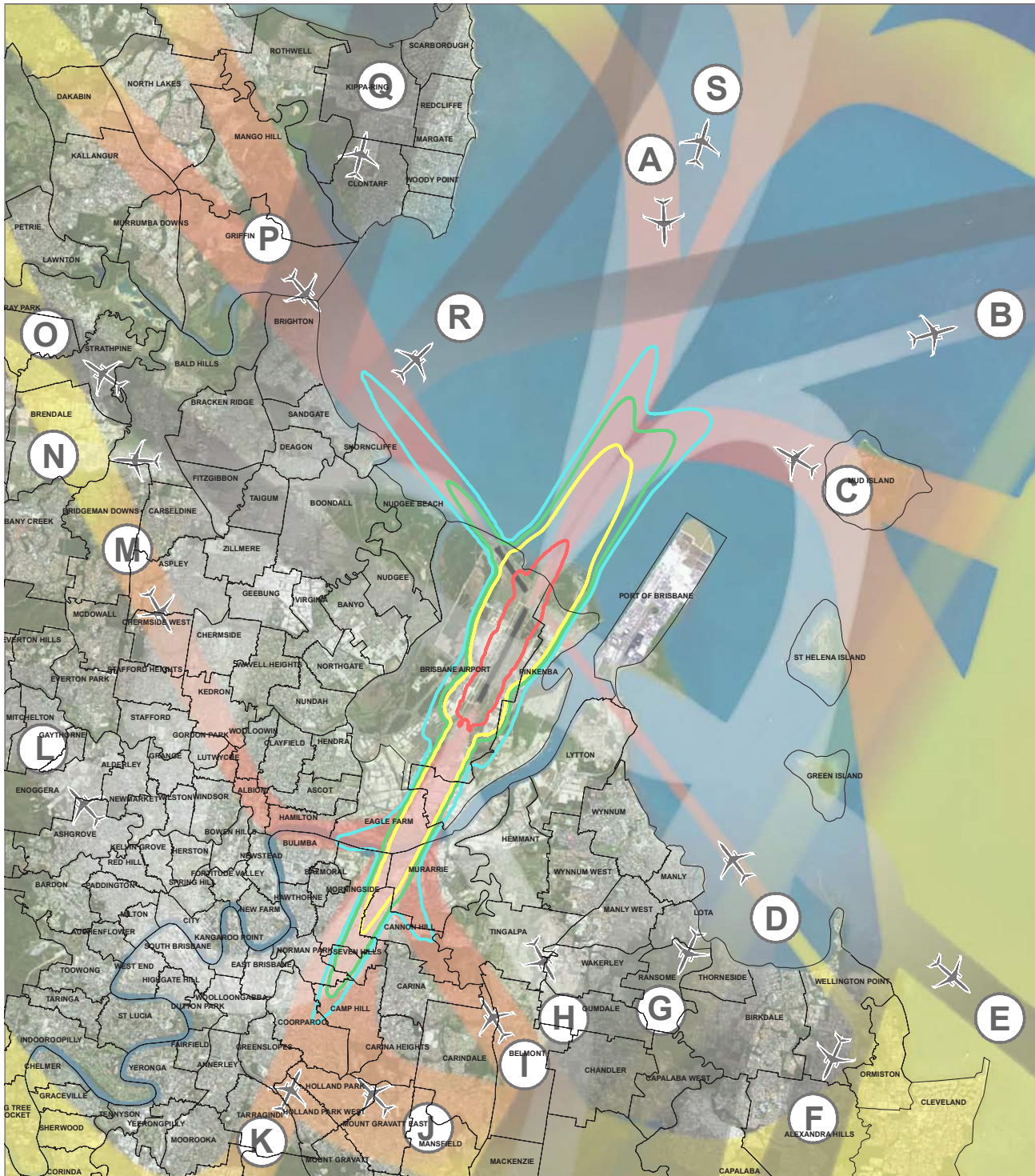
**DEPARTURES**  
MEAN ALTITUDE  
12,000 FT  
0 FT

**CONTOUR KEY**  
THE NUMBER OF OVERFLIGHTS OF 70dB(A) AND ABOVE DURING THE INDICATED TIME PERIOD

- 5 TO 9 OVERFLIGHTS
- 10 TO 19 OVERFLIGHTS
- 20 TO 49 OVERFLIGHTS
- 50 OR MORE OVERFLIGHTS

THESE FLIGHT PATHS REPRESENT WHERE THE MAJORITY OF AIRCRAFT WILL FLY, HOWEVER ALL AREAS COULD BE SUBJECTED TO SOME AIRCRAFT OVERFLIGHT.

2020 SUMMER WEEKEND EVENING WITHOUT THE NPR – SATURDAY AND SUNDAY 6PM – 11PM

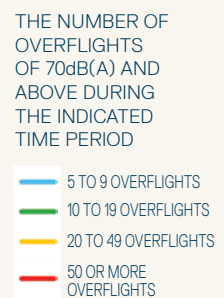


FLIGHT PATH	FLIGHT PATH TYPE	AVERAGE NO. OF JET FLIGHTS ON FLIGHT PATH	EXPECTED MINIMUM & MAXIMUM NO. OF JET FLIGHTS ON PATH	% OF BRISBANE AIRPORT'S TOTAL JET FLIGHTS ON PATH	% OF DAYS WITH NO JET FLIGHTS ON PATH
A	Arrival	8	0 - 47	7%	14%
B	Departure	<1	0 - 1	<1%	6%
C	Arrival	1	0 - 11	<1%	14%
D	Arrival	1	0 - 2	<1%	27%
E	Departure	3	0 - 3	3%	6%
F	Departure	<1	0 - 1	<1%	91%
G	Departure	26	0 - 29	23%	1%
H	Departure	3	0 - 32	3%	81%
I	Arrival	10	0 - 12	9%	5%
J	Arrival	<1	0 - 0	<1%	100%
K	Arrival	26	0 - 36	23%	5%
L	Departure	2	0 - 16	2%	81%
M	Arrival	8	0 - 16	7%	6%
N	Departure	1	0 - 2	<1%	36%
O	Departure	2	0 - 3	2%	8%
P	Arrival	9	0 - 21	8%	25%
Q	Departure	<1	0 - 0	<1%	100%
R	Departure	<1	0 - 4	<1%	83%
S	Departure	14	0 - 17	12%	5%

ALTITUDE KEY

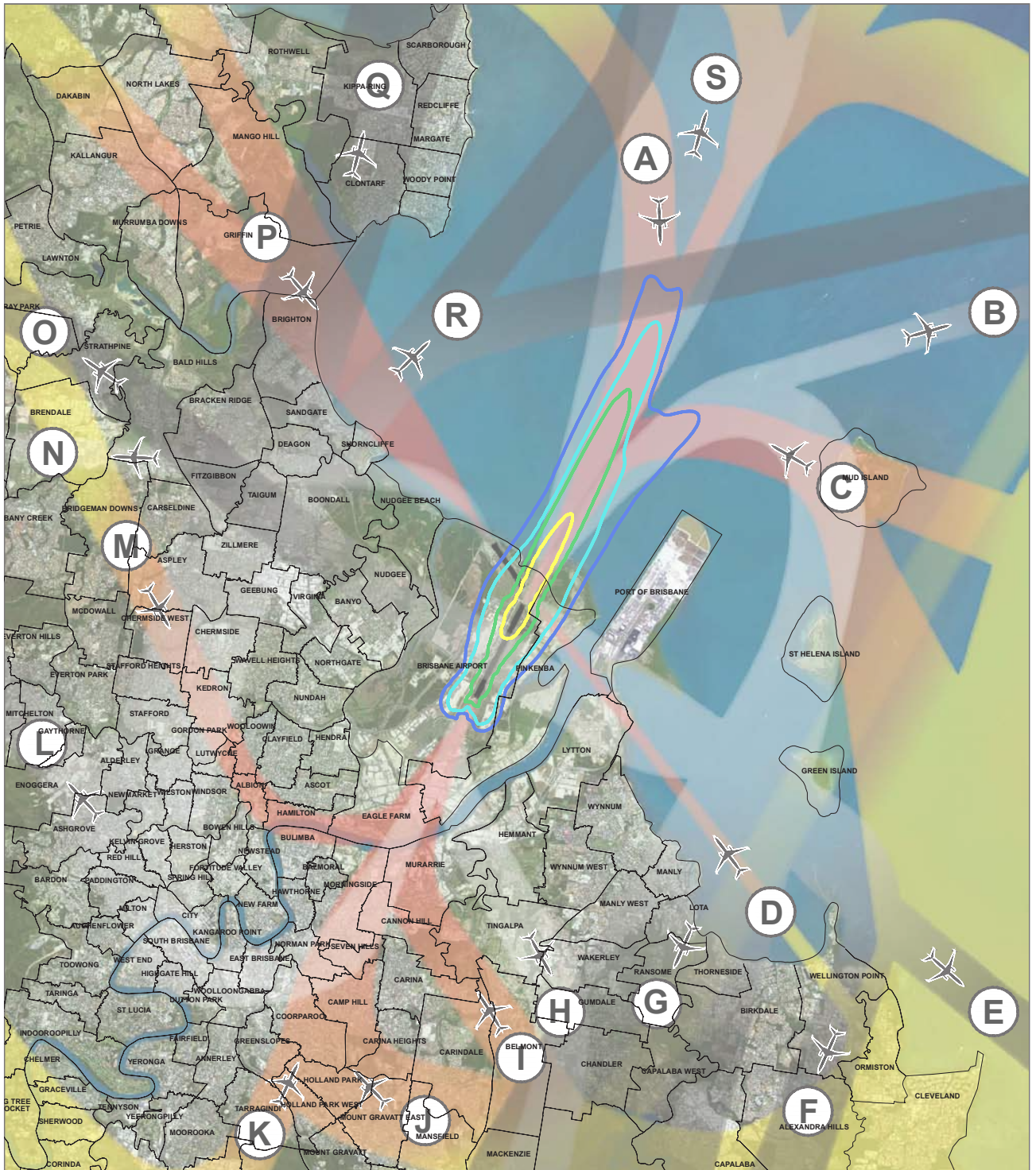


CONTOUR KEY



THESE FLIGHT PATHS REPRESENT WHERE THE MAJORITY OF AIRCRAFT WILL FLY, HOWEVER ALL AREAS COULD BE SUBJECTED TO SOME AIRCRAFT OVERFLIGHT.

2020 SUMMER WEEKEND NIGHT WITHOUT THE NPR – SATURDAY AND SUNDAY 11PM – 6AM



FLIGHT PATH	FLIGHT PATH TYPE	AVERAGE NO. OF JET FLIGHTS ON FLIGHT PATH	EXPECTED MINIMUM & MAXIMUM NO. OF JET FLIGHTS ON PATH	% OF BRISBANE AIRPORT'S TOTAL JET FLIGHTS ON PATH	% OF DAYS WITH NO JET FLIGHTS ON PATH
A	Arrival	13	0 - 14	57%	0%
B	Departure	<1	0 - 0	<1%	100%
C	Arrival	<1	0 - 0	<1%	100%
D	Arrival	<1	0 - 1	<1%	87%
E	Departure	<1	0 - 0	<1%	100%
F	Departure	<1	0 - 0	<1%	100%
G	Departure	3	0 - 3	13%	1%
H	Departure	<1	0 - 3	<1%	99%
I	Arrival	<1	0 - 0	<1%	100%
J	Arrival	<1	0 - 1	<1%	98%
K	Arrival	1	0 - 8	4%	79%
L	Departure	<1	0 - 4	<1%	98%
M	Arrival	<1	0 - 6	<1%	79%
N	Departure	<1	0 - 0	<1%	100%
O	Departure	3	0 - 4	13%	0%
P	Arrival	<1	0 - 1	<1%	99%
Q	Departure	<1	0 - 2	<1%	98%
R	Departure	<1	0 - 0	<1%	100%
S	Departure	3	0 - 3	13%	0%

**ALTITUDE KEY**

**ARRIVALS**  
MEAN ALTITUDE  
4,500 FT  
0 FT

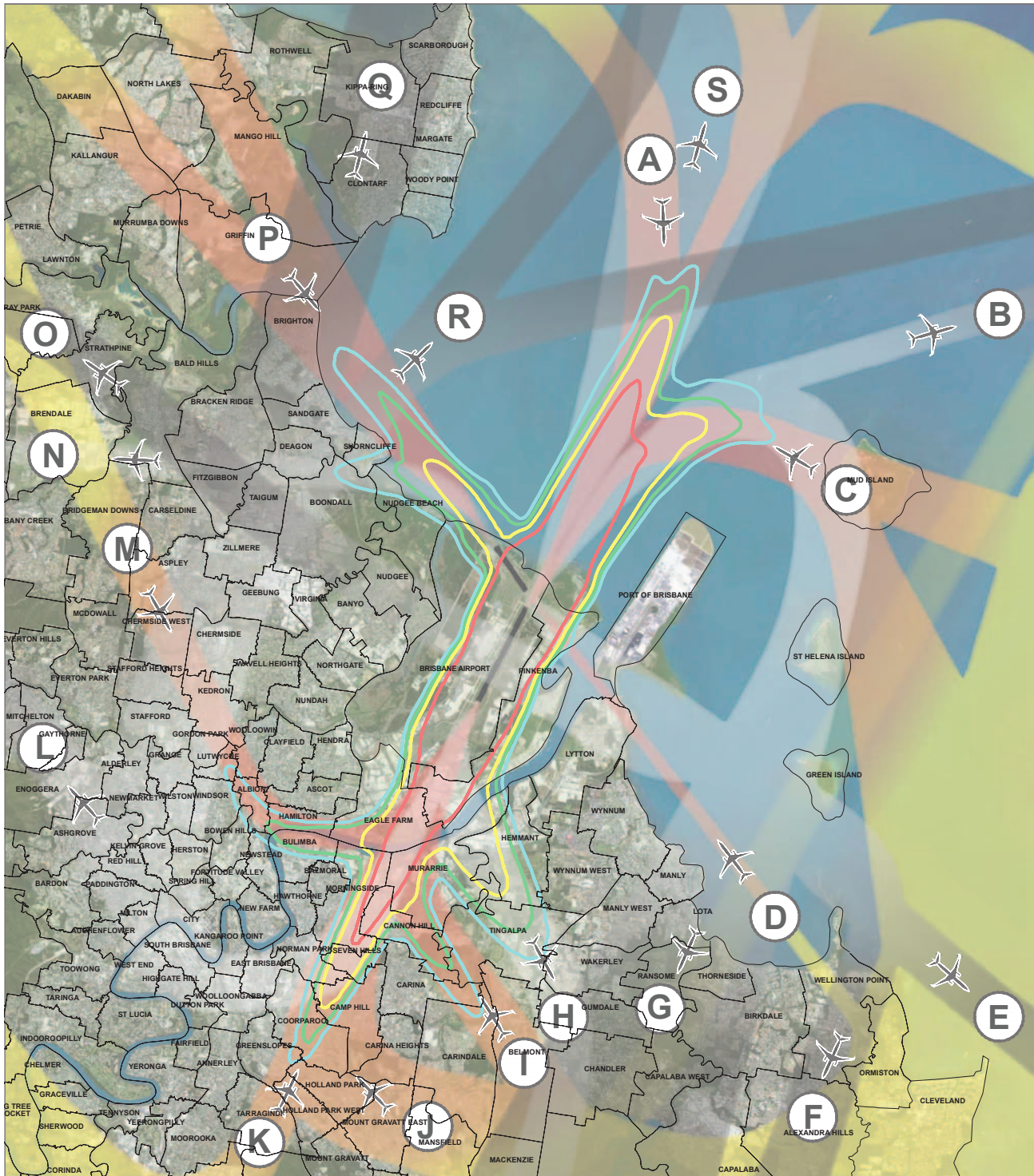
**DEPARTURES**  
MEAN ALTITUDE  
12,000 FT  
0 FT

**CONTOUR KEY**  
THE NUMBER OF OVERFLIGHTS OF 70dB(A) AND ABOVE DURING THE INDICATED TIME PERIOD

- 2 TO 4 OVERFLIGHTS
- 5 TO 9 OVERFLIGHTS
- 10 TO 19 OVERFLIGHTS
- 20 TO 49 OVERFLIGHTS
- 50 OR MORE OVERFLIGHTS

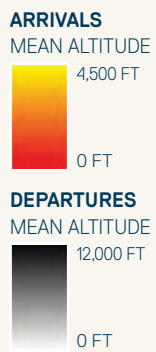
THESE FLIGHT PATHS REPRESENT WHERE THE MAJORITY OF AIRCRAFT WILL FLY, HOWEVER ALL AREAS COULD BE SUBJECTED TO SOME AIRCRAFT OVERFLIGHT.

2020 WINTER WEEKDAY DAY WITHOUT THE NPR – MONDAY TO FRIDAY 6AM – 6PM

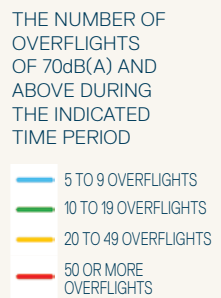


FLIGHT PATH	FLIGHT PATH TYPE	AVERAGE NO. OF JET FLIGHTS ON FLIGHT PATH	EXPECTED MINIMUM & MAXIMUM NO. OF JET FLIGHTS ON PATH	% OF BRISBANE AIRPORT'S TOTAL JET FLIGHTS ON PATH	% OF DAYS WITH NO JET FLIGHTS ON PATH
A	Arrival	63	0 - 158	15%	13%
B	Departure	2	0 - 4	<1%	10%
C	Arrival	15	0 - 35	4%	13%
D	Arrival	3	0 - 7	<1%	21%
E	Departure	3	0 - 8	<1%	13%
F	Departure	<1	0 - 1	<1%	27%
G	Departure	61	0 - 105	15%	3%
H	Departure	49	0 - 113	12%	13%
I	Arrival	21	0 - 37	5%	3%
J	Arrival	<1	0 - 1	<1%	62%
K	Arrival	57	0 - 101	14%	3%
L	Departure	36	0 - 90	9%	13%
M	Arrival	24	0 - 54	6%	4%
N	Departure	13	0 - 27	3%	20%
O	Departure	8	0 - 16	2%	3%
P	Arrival	15	0 - 68	4%	40%
Q	Departure	3	0 - 9	<1%	17%
R	Departure	5	0 - 11	1%	24%
S	Departure	42	0 - 91	10%	3%

ALTITUDE KEY



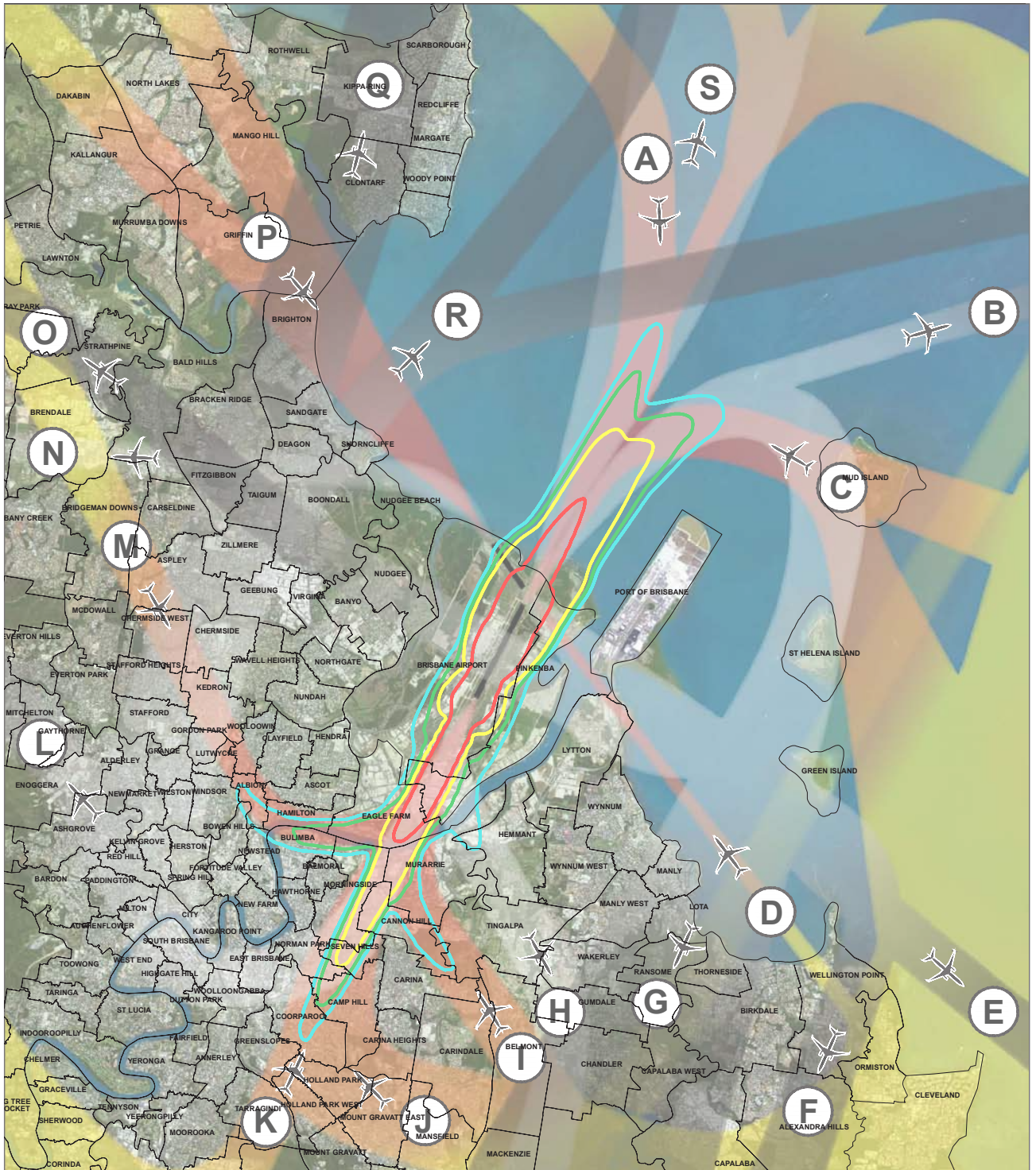
CONTOUR KEY



THESE FLIGHT PATHS REPRESENT WHERE THE MAJORITY OF AIRCRAFT WILL FLY, HOWEVER ALL AREAS COULD BE SUBJECTED TO SOME AIRCRAFT OVERFLIGHT.

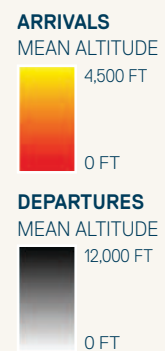


2020 WINTER WEEKDAY EVENING WITHOUT THE NPR – MONDAY TO FRIDAY 6PM – 11PM

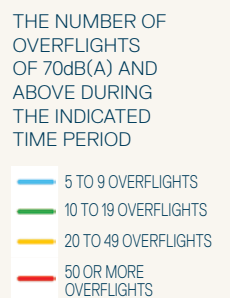


FLIGHT PATH	FLIGHT PATH TYPE	AVERAGE NO. OF JET FLIGHTS ON FLIGHT PATH	EXPECTED MINIMUM & MAXIMUM NO. OF JET FLIGHTS ON PATH	% OF BRISBANE AIRPORT'S TOTAL JET FLIGHTS ON PATH	% OF DAYS WITH NO JET FLIGHTS ON PATH
A	Arrival	14	0 - 72	10%	64%
B	Departure	<1	0 - 1	<1%	24%
C	Arrival	3	0 - 14	2%	64%
D	Arrival	1	0 - 2	<1%	18%
E	Departure	6	0 - 7	4%	9%
F	Departure	<1	0 - 0	<1%	100%
G	Departure	30	0 - 37	20%	8%
H	Departure	8	0 - 44	5%	64%
I	Arrival	12	0 - 15	8%	8%
J	Arrival	<1	0 - 0	<1%	100%
K	Arrival	36	0 - 45	24%	8%
L	Departure	3	0 - 15	2%	70%
M	Arrival	19	0 - 25	13%	8%
N	Departure	1	0 - 2	<1%	24%
O	Departure	3	0 - 4	2%	11%
P	Arrival	1	0 - 6	<1%	62%
Q	Departure	<1	0 - 1	<1%	72%
R	Departure	<1	0 - 1	<1%	76%
S	Departure	10	0 - 14	7%	8%

ALTITUDE KEY

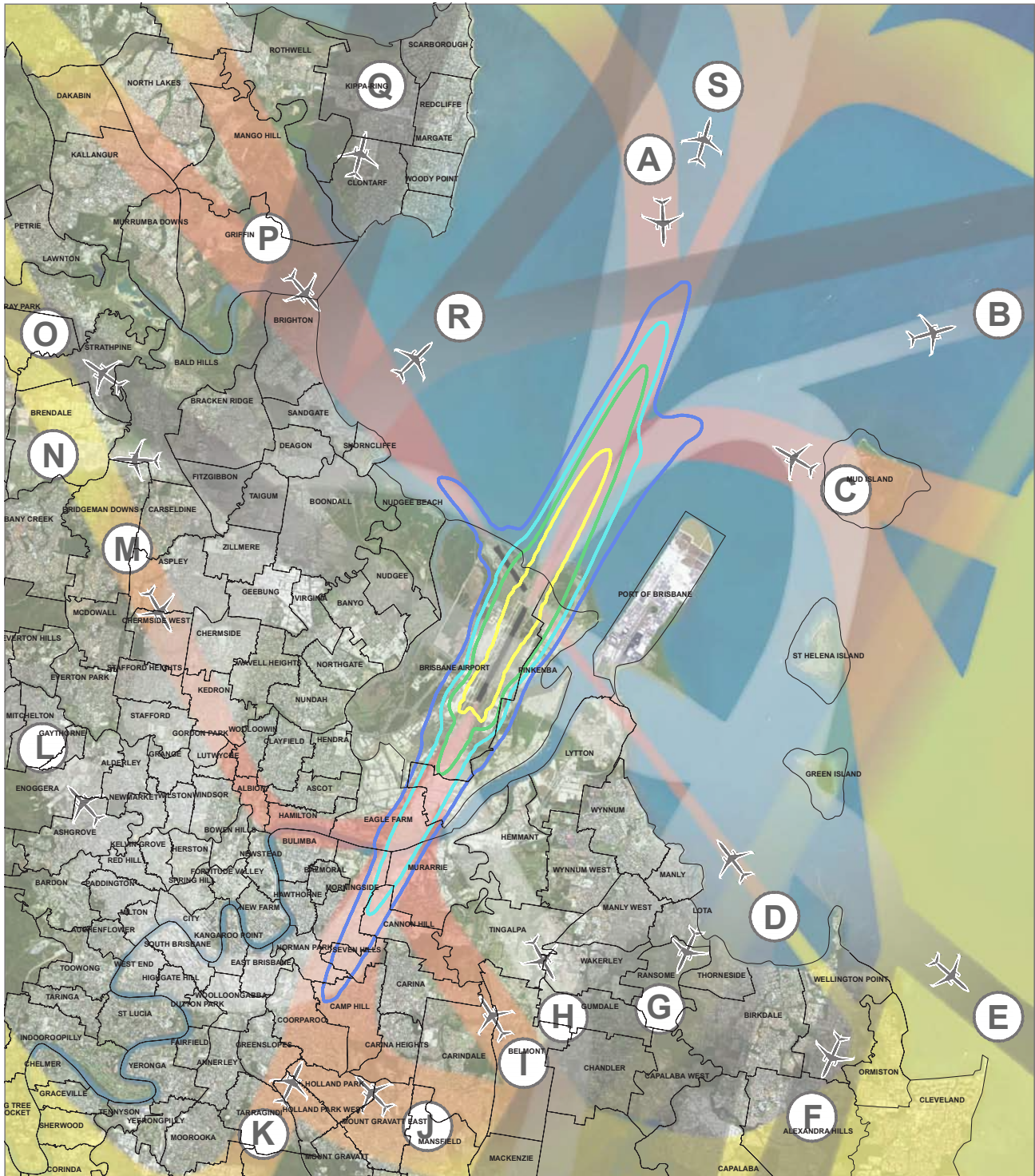


CONTOUR KEY



THESE FLIGHT PATHS REPRESENT WHERE THE MAJORITY OF AIRCRAFT WILL FLY, HOWEVER ALL AREAS COULD BE SUBJECTED TO SOME AIRCRAFT OVERFLIGHT.

2020 WINTER WEEKDAY NIGHT WITHOUT THE NPR – MONDAY TO FRIDAY 11PM – 6AM

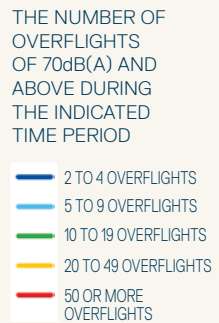


FLIGHT PATH	FLIGHT PATH TYPE	AVERAGE NO. OF JET FLIGHTS ON FLIGHT PATH	EXPECTED MINIMUM & MAXIMUM NO. OF JET FLIGHTS ON PATH	% OF BRISBANE AIRPORT'S TOTAL JET FLIGHTS ON PATH	% OF DAYS WITH NO JET FLIGHTS ON PATH
A	Arrival	13	0 - 20	32%	0%
B	Departure	<1	0 - 1	<1%	0%
C	Arrival	2	0 - 2	5%	1%
D	Arrival	<1	0 - 1	<1%	60%
E	Departure	<1	0 - 0	<1%	100%
F	Departure	<1	0 - 1	<1%	41%
G	Departure	4	0 - 4	10%	1%
H	Departure	<1	0 - 4	<1%	69%
I	Arrival	<1	0 - 2	<1%	97%
J	Arrival	<1	0 - 2	<1%	59%
K	Arrival	4	0 - 14	10%	20%
L	Departure	4	0 - 15	10%	31%
M	Arrival	1	0 - 5	2%	20%
N	Departure	1	0 - 2	2%	60%
O	Departure	2	0 - 5	5%	1%
P	Arrival	1	0 - 1	2%	40%
Q	Departure	<1	0 - 0	<1%	100%
R	Departure	<1	0 - 2	<1%	98%
S	Departure	9	0 - 13	22%	0%

ALTITUDE KEY

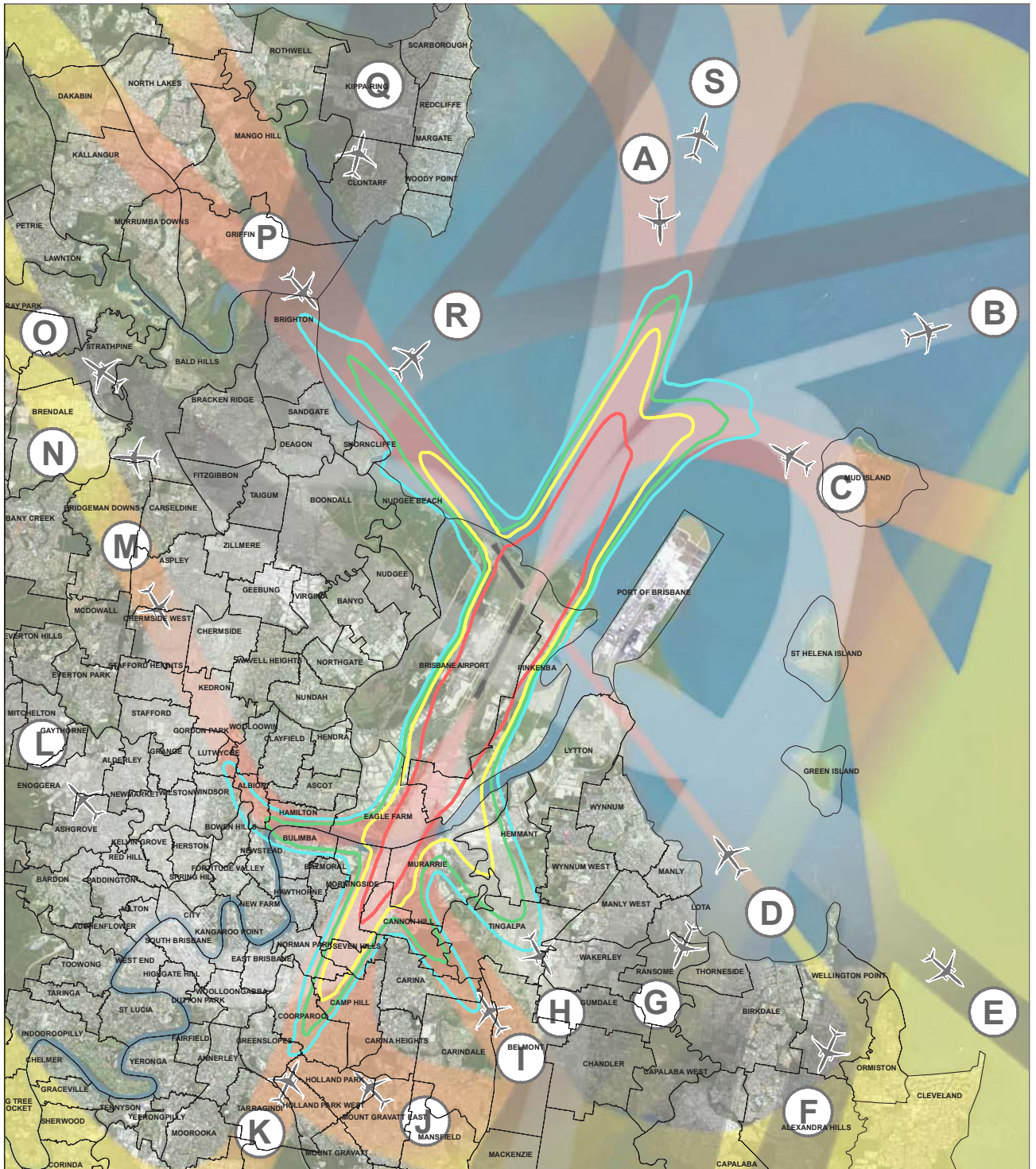


CONTOUR KEY



THESE FLIGHT PATHS REPRESENT WHERE THE MAJORITY OF AIRCRAFT WILL FLY, HOWEVER ALL AREAS COULD BE SUBJECTED TO SOME AIRCRAFT OVERFLIGHT.

2020 WINTER WEEKEND DAY WITHOUT THE NPR – SATURDAY AND SUNDAY 6AM – 6PM



FLIGHT PATH	FLIGHT PATH TYPE	AVERAGE NO. OF JET FLIGHTS ON FLIGHT PATH	EXPECTED MINIMUM & MAXIMUM NO. OF JET FLIGHTS ON PATH	% OF BRISBANE AIRPORT'S TOTAL JET FLIGHTS ON PATH	% OF DAYS WITH NO JET FLIGHTS ON PATH
A	Arrival	38	0 - 117	11%	13%
B	Departure	2	0 - 5	<1%	10%
C	Arrival	12	0 - 31	4%	13%
D	Arrival	2	0 - 5	<1%	21%
E	Departure	6	0 - 11	2%	4%
F	Departure	<1	0 - 2	<1%	18%
G	Departure	50	0 - 83	15%	3%
H	Departure	39	0 - 94	11%	13%
I	Arrival	20	0 - 33	6%	3%
J	Arrival	1	0 - 2	<1%	62%
K	Arrival	48	0 - 81	14%	3%
L	Departure	23	0 - 64	7%	13%
M	Arrival	21	0 - 43	6%	3%
N	Departure	7	0 - 15	2%	21%
O	Departure	6	0 - 11	2%	5%
P	Arrival	20	0 - 44	6%	14%
Q	Departure	3	0 - 7	<1%	17%
R	Departure	6	0 - 13	2%	17%
S	Departure	36	0 - 69	11%	3%

**ALTITUDE KEY**

**ARRIVALS**  
MEAN ALTITUDE  
4,500 FT  
0 FT

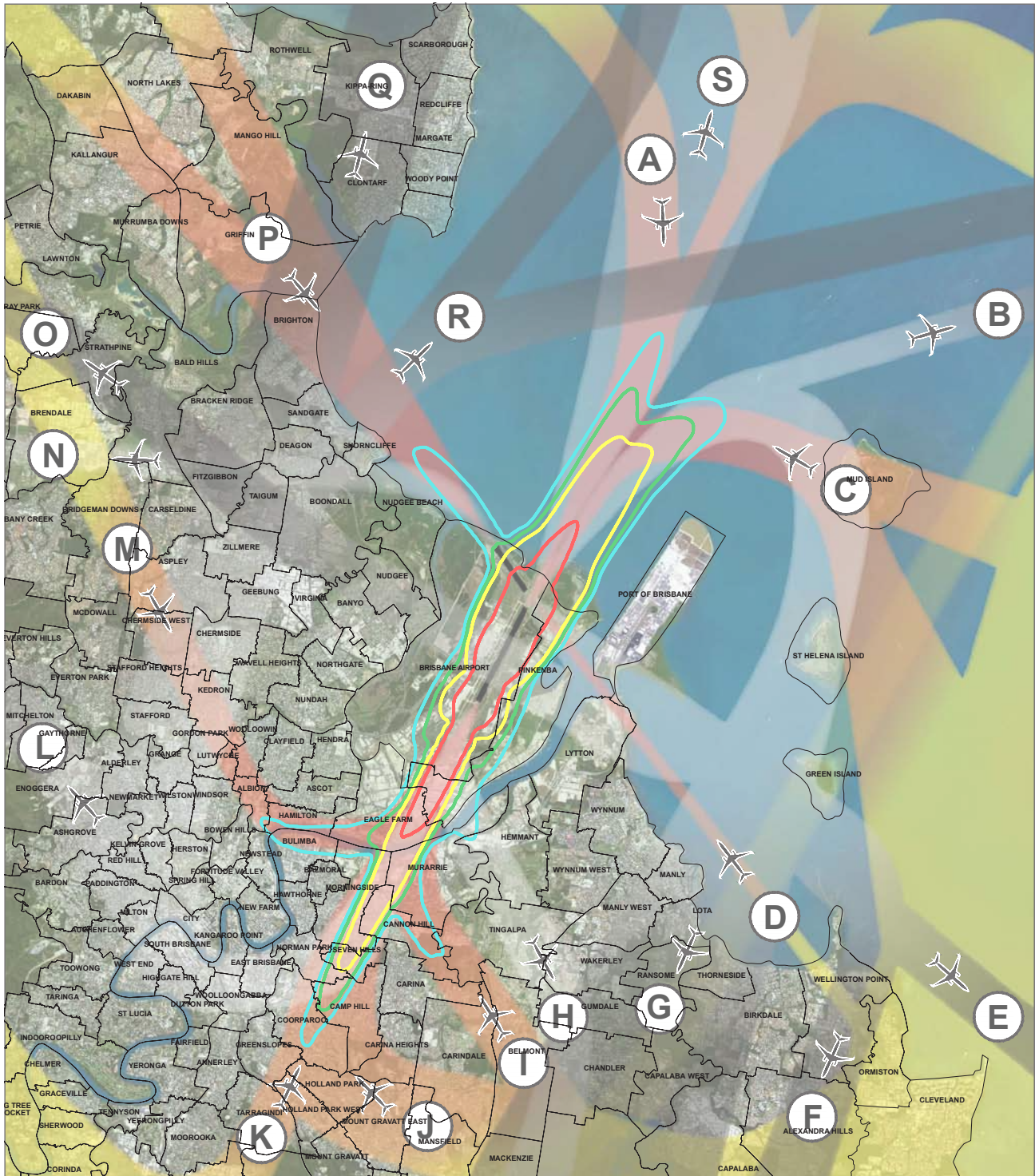
**DEPARTURES**  
MEAN ALTITUDE  
12,000 FT  
0 FT

**CONTOUR KEY**  
THE NUMBER OF OVERFLIGHTS OF 70dB(A) AND ABOVE DURING THE INDICATED TIME PERIOD

- 5 TO 9 OVERFLIGHTS
- 10 TO 19 OVERFLIGHTS
- 20 TO 49 OVERFLIGHTS
- 50 OR MORE OVERFLIGHTS

THESE FLIGHT PATHS REPRESENT WHERE THE MAJORITY OF AIRCRAFT WILL FLY, HOWEVER ALL AREAS COULD BE SUBJECTED TO SOME AIRCRAFT OVERFLIGHT.

2020 WINTER WEEKEND EVENING WITHOUT THE NPR – SATURDAY AND SUNDAY 6PM – 11PM

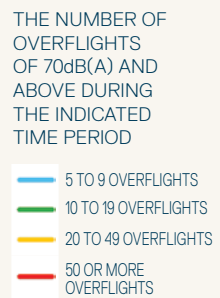


FLIGHT PATH	FLIGHT PATH TYPE	AVERAGE NO. OF JET FLIGHTS ON FLIGHT PATH	EXPECTED MINIMUM & MAXIMUM NO. OF JET FLIGHTS ON PATH	% OF BRISBANE AIRPORT'S TOTAL JET FLIGHTS ON PATH	% OF DAYS WITH NO JET FLIGHTS ON PATH
A	Arrival	9	0 - 62	7%	64%
B	Departure	<1	0 - 1	<1%	16%
C	Arrival	2	0 - 11	1%	64%
D	Arrival	2	0 - 3	1%	17%
E	Departure	4	0 - 5	3%	11%
F	Departure	<1	0 - 1	<1%	70%
G	Departure	29	0 - 36	22%	8%
H	Departure	7	0 - 41	5%	64%
I	Arrival	10	0 - 12	7%	8%
J	Arrival	<1	0 - 0	<1%	100%
K	Arrival	33	0 - 42	25%	8%
L	Departure	3	0 - 17	2%	64%
M	Arrival	12	0 - 17	9%	9%
N	Departure	3	0 - 4	2%	20%
O	Departure	3	0 - 5	2%	16%
P	Arrival	5	0 - 18	4%	56%
Q	Departure	<1	0 - 1	<1%	80%
R	Departure	1	0 - 3	<1%	73%
S	Departure	11	0 - 17	8%	9%

ALTITUDE KEY

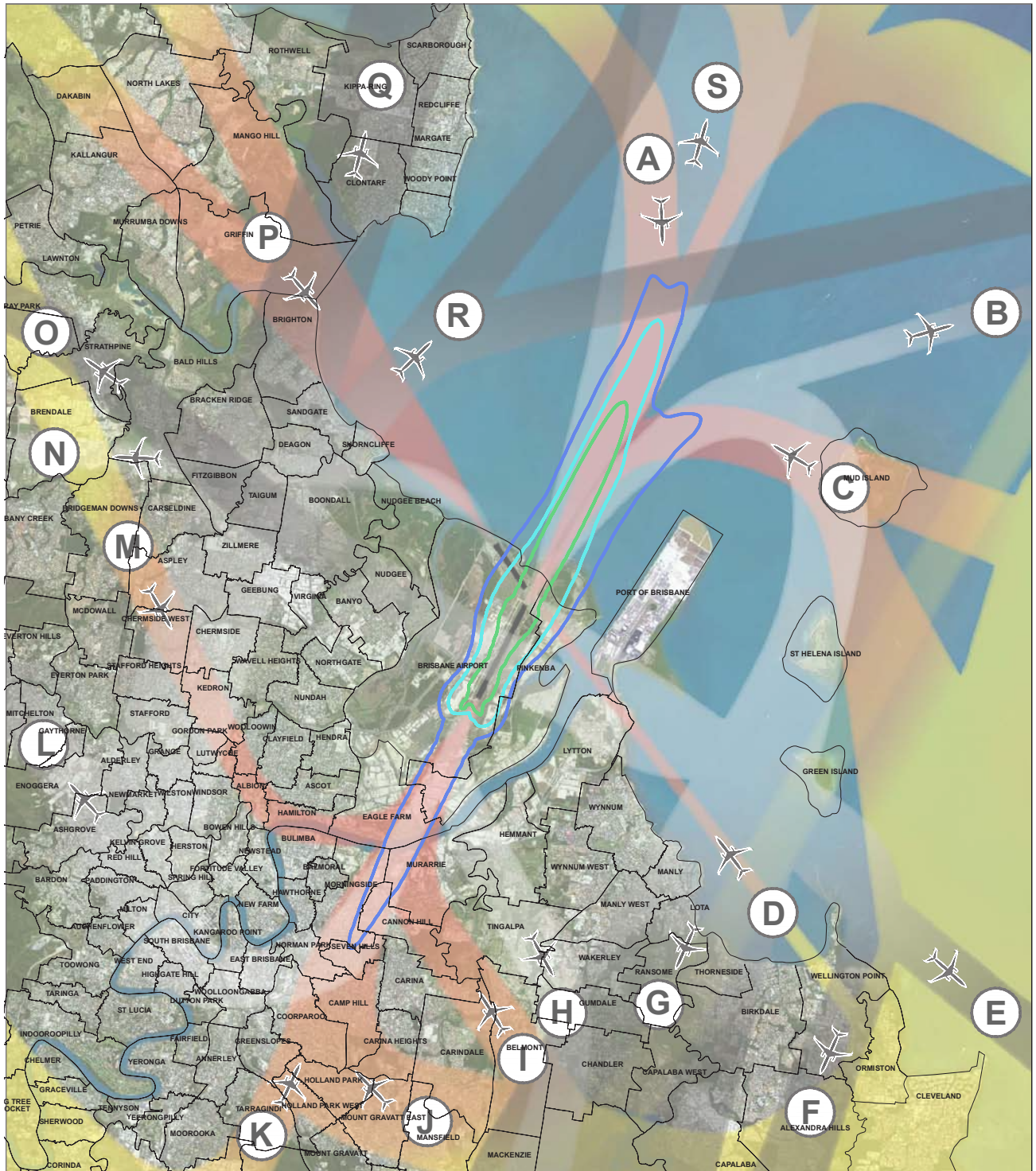


CONTOUR KEY



THESE FLIGHT PATHS REPRESENT WHERE THE MAJORITY OF AIRCRAFT WILL FLY, HOWEVER ALL AREAS COULD BE SUBJECTED TO SOME AIRCRAFT OVERFLIGHT.

2020 WINTER WEEKEND NIGHT WITHOUT THE NPR – SATURDAY AND SUNDAY 11PM – 6AM



FLIGHT PATH	FLIGHT PATH TYPE	AVERAGE NO. OF JET FLIGHTS ON FLIGHT PATH	EXPECTED MINIMUM & MAXIMUM NO. OF JET FLIGHTS ON PATH	% OF BRISBANE AIRPORT'S TOTAL JET FLIGHTS ON PATH	% OF DAYS WITH NO JET FLIGHTS ON PATH
A	Arrival	11	0 - 14	48%	0%
B	Departure	<1	0 - 0	<1%	100%
C	Arrival	<1	0 - 1	<1%	70%
D	Arrival	<1	0 - 0	<1%	100%
E	Departure	<1	0 - 0	<1%	100%
F	Departure	<1	0 - 0	<1%	100%
G	Departure	1	0 - 1	4%	1%
H	Departure	<1	0 - 1	<1%	99%
I	Arrival	1	0 - 1	4%	30%
J	Arrival	<1	0 - 2	<1%	99%
K	Arrival	2	0 - 7	9%	29%
L	Departure	1	0 - 4	4%	70%
M	Arrival	1	0 - 5	4%	29%
N	Departure	<1	0 - 0	<1%	100%
O	Departure	3	0 - 4	13%	0%
P	Arrival	<1	0 - 0	<1%	100%
Q	Departure	<1	0 - 3	<1%	69%
R	Departure	<1	0 - 0	<1%	100%
S	Departure	3	0 - 4	13%	0%

**ALTITUDE KEY**

**ARRIVALS**  
MEAN ALTITUDE  
4,500 FT  
0 FT

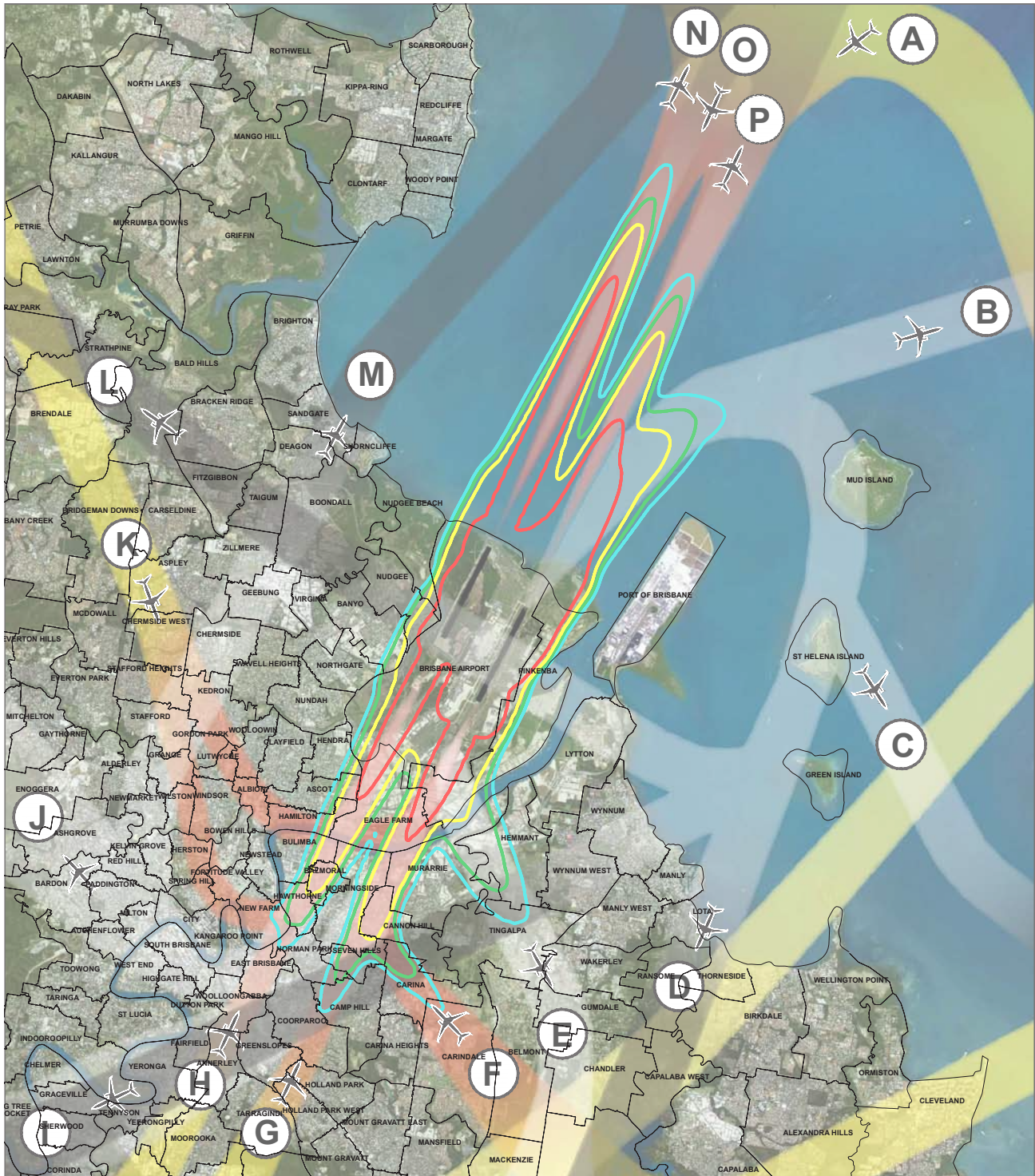
**DEPARTURES**  
MEAN ALTITUDE  
12,000 FT  
0 FT

**CONTOUR KEY**  
THE NUMBER OF OVERFLIGHTS OF 70dB(A) AND ABOVE DURING THE INDICATED TIME PERIOD

- 2 TO 4 OVERFLIGHTS
- 5 TO 9 OVERFLIGHTS
- 10 TO 19 OVERFLIGHTS
- 20 TO 49 OVERFLIGHTS
- 50 OR MORE OVERFLIGHTS

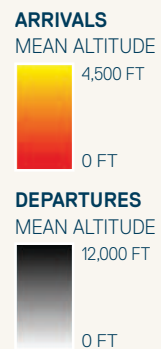
THESE FLIGHT PATHS REPRESENT WHERE THE MAJORITY OF AIRCRAFT WILL FLY, HOWEVER ALL AREAS COULD BE SUBJECTED TO SOME AIRCRAFT OVERFLIGHT.

2020 SUMMER WEEKDAY DAY WITH THE NPR – MONDAY TO FRIDAY 5AM – 6PM

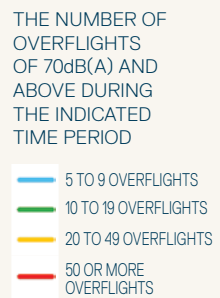


FLIGHT PATH	FLIGHT PATH TYPE	AVERAGE NO. OF JET FLIGHTS ON FLIGHT PATH	EXPECTED MINIMUM & MAXIMUM NO. OF JET FLIGHTS ON PATH	% OF BRISBANE AIRPORT'S TOTAL JET FLIGHTS ON PATH	% OF DAYS WITH NO JET FLIGHTS ON PATH
A	Arrival	38	0 - 112	9%	10%
B	Departure	1	0 - 3	<1%	34%
C	Departure	4	0 - 6	<1%	2%
D	Departure	81	0 - 115	18%	1%
E	Departure	27	0 - 91	6%	10%
F	Arrival	25	0 - 62	6%	28%
G	Arrival	20	0 - 52	5%	28%
H	Arrival	21	0 - 50	5%	28%
I	Departure	9	1 - 25	2%	0%
J	Departure	6	0 - 18	1%	10%
K	Arrival	21	0 - 50	5%	28%
L	Departure	2	0 - 4	<1%	1%
M	Departure	25	0 - 95	6%	10%
N	Departure	44	0 - 106	10%	28%
O	Arrival	86	0 - 167	20%	5%
P	Departure	30	0 - 70	7%	1%

ALTITUDE KEY

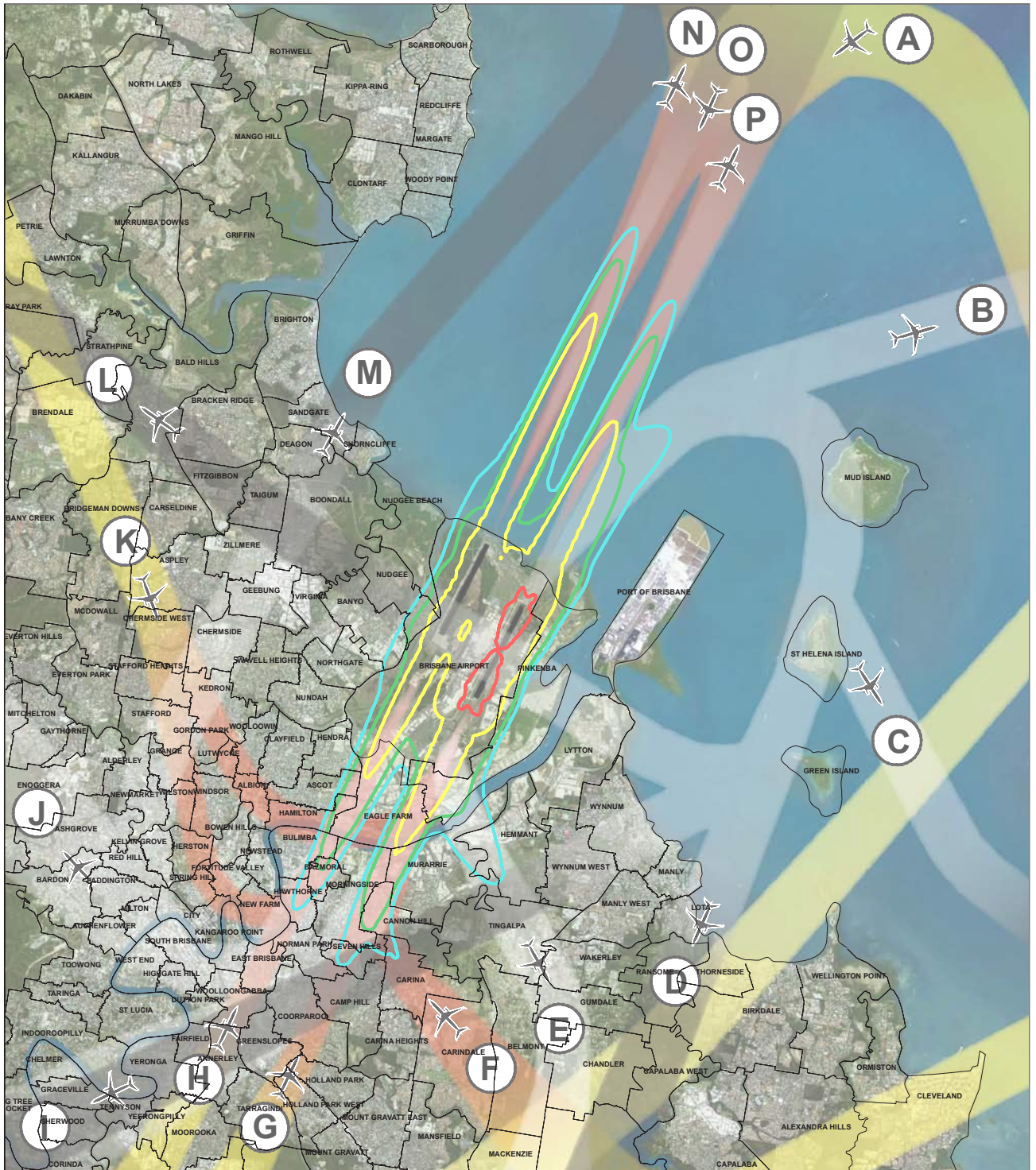


CONTOUR KEY



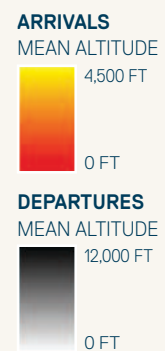
THESE FLIGHT PATHS REPRESENT WHERE THE MAJORITY OF AIRCRAFT WILL FLY, HOWEVER ALL AREAS COULD BE SUBJECTED TO SOME AIRCRAFT OVERFLIGHT.

2020 SUMMER WEEKDAY EVENING WITH THE NPR – MONDAY TO FRIDAY 6PM – 11PM

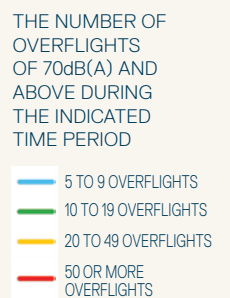


FLIGHT PATH	FLIGHT PATH TYPE	AVERAGE NO. OF JET FLIGHTS ON FLIGHT PATH	EXPECTED MINIMUM & MAXIMUM NO. OF JET FLIGHTS ON PATH	% OF BRISBANE AIRPORT'S TOTAL JET FLIGHTS ON PATH	% OF DAYS WITH NO JET FLIGHTS ON PATH
A	Arrival	19	0 - 42	14%	37%
B	Departure	<1	0 - 1	<1%	43%
C	Departure	<1	0 - 2	<1%	50%
D	Departure	17	0 - 35	12%	10%
E	Departure	13	0 - 26	9%	37%
F	Arrival	10	0 - 24	7%	49%
G	Arrival	8	0 - 21	6%	49%
H	Arrival	8	0 - 19	5%	49%
I	Departure	5	1 - 9	3%	0%
J	Departure	2	0 - 7	2%	39%
K	Arrival	8	0 - 19	6%	49%
L	Departure	<1	0 - 2	<1%	15%
M	Departure	10	0 - 20	7%	37%
N	Departure	10	0 - 23	7%	49%
O	Arrival	28	0 - 49	20%	30%
P	Departure	2	0 - 4	1%	11%

ALTITUDE KEY

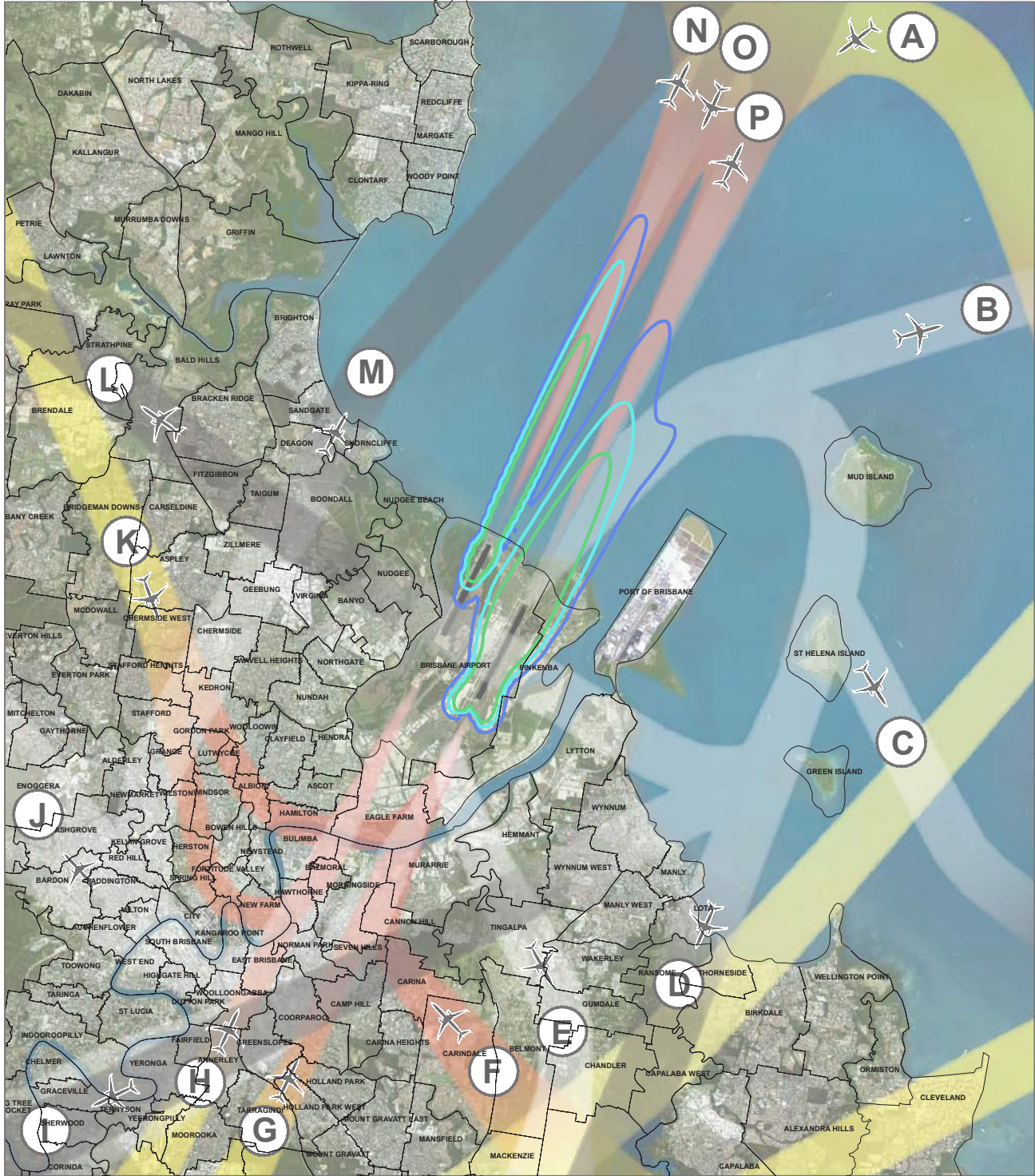


CONTOUR KEY



THESE FLIGHT PATHS REPRESENT WHERE THE MAJORITY OF AIRCRAFT WILL FLY, HOWEVER ALL AREAS COULD BE SUBJECTED TO SOME AIRCRAFT OVERFLIGHT.

2020 SUMMER WEEKDAY NIGHT WITH THE NPR – MONDAY TO FRIDAY 11PM – 5AM



FLIGHT PATH	FLIGHT PATH TYPE	AVERAGE NO. OF JET FLIGHTS ON FLIGHT PATH	EXPECTED MINIMUM & MAXIMUM NO. OF JET FLIGHTS ON PATH	% OF BRISBANE AIRPORT'S TOTAL JET FLIGHTS ON PATH	% OF DAYS WITH NO JET FLIGHTS ON PATH
A	Arrival	<1	0 - 7	<1%	97%
B	Departure	<1	0 - 1	1%	4%
C	Departure	<1	0 - 0	<1%	100%
D	Departure	2	0 - 2	7%	0%
E	Departure	<1	0 - 1	<1%	98%
F	Arrival	<1	0 - 4	1%	80%
G	Arrival	<1	0 - 6	2%	79%
H	Arrival	<1	0 - 0	<1%	100%
I	Departure	1	0 - 3	4%	1%
J	Departure	<1	0 - 7	<1%	97%
K	Arrival	<1	0 - 3	<1%	79%
L	Departure	1	0 - 2	4%	1%
M	Departure	<1	0 - 7	<1%	97%
N	Departure	1	0 - 14	4%	79%
O	Arrival	11	0 - 12	39%	1%
P	Departure	10	0 - 11	36%	1%

**ALTITUDE KEY**

**ARRIVALS**  
MEAN ALTITUDE

4,500 FT  
0 FT

**DEPARTURES**  
MEAN ALTITUDE

12,000 FT  
0 FT

**CONTOUR KEY**

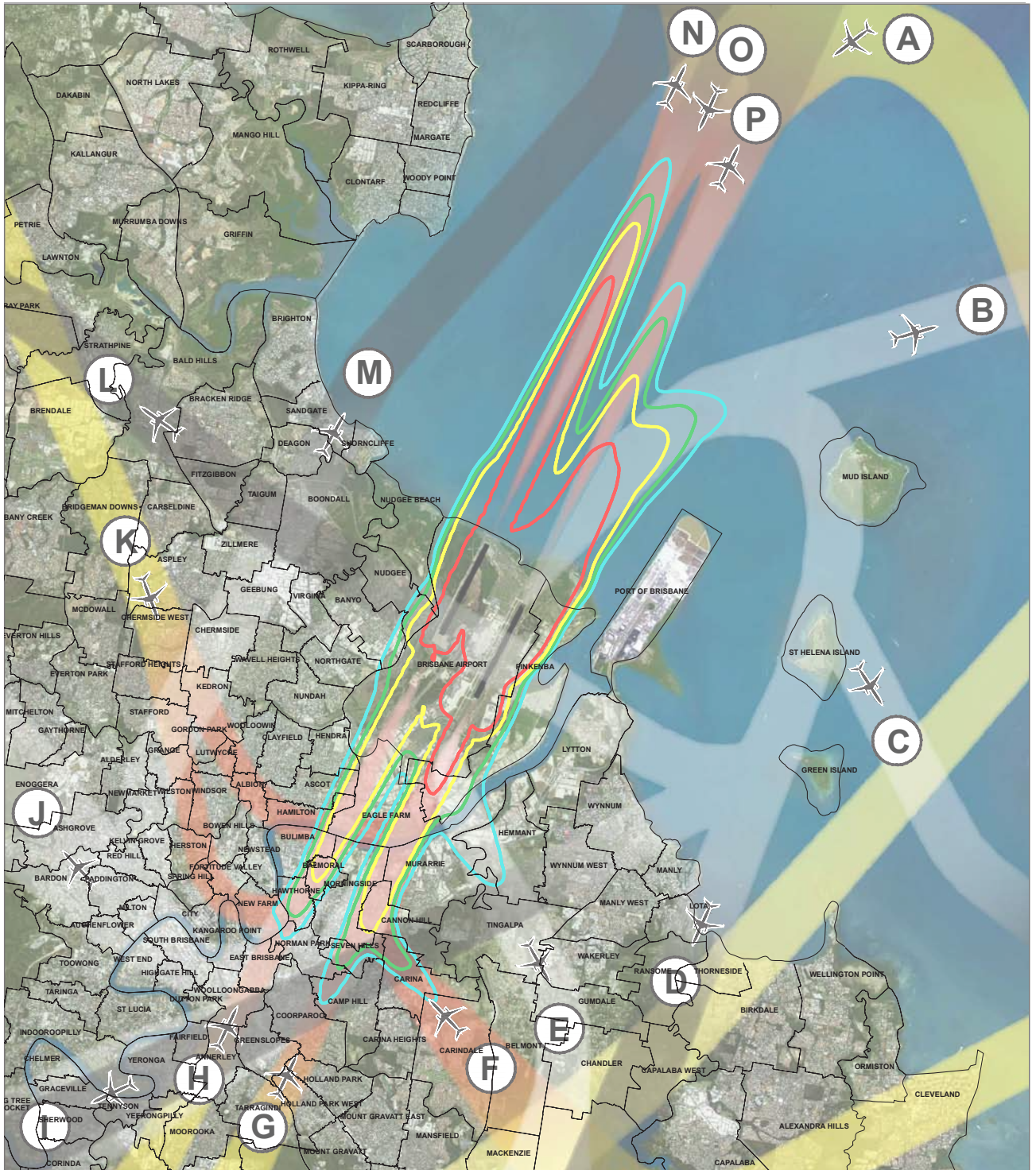
THE NUMBER OF OVERFLIGHTS OF 70dB(A) AND ABOVE DURING THE INDICATED TIME PERIOD

- 2 TO 4 OVERFLIGHTS
- 5 TO 9 OVERFLIGHTS
- 10 TO 19 OVERFLIGHTS
- 20 TO 49 OVERFLIGHTS
- 50 OR MORE OVERFLIGHTS

THESE FLIGHT PATHS REPRESENT WHERE THE MAJORITY OF AIRCRAFT WILL FLY, HOWEVER ALL AREAS COULD BE SUBJECTED TO SOME AIRCRAFT OVERFLIGHT.



2020 SUMMER WEEKEND DAY WITH THE NPR – SATURDAY AND SUNDAY 6AM – 6PM



FLIGHT PATH	FLIGHT PATH TYPE	AVERAGE NO. OF JET FLIGHTS ON FLIGHT PATH	EXPECTED MINIMUM & MAXIMUM NO. OF JET FLIGHTS ON PATH	% OF BRISBANE AIRPORT'S TOTAL JET FLIGHTS ON PATH	% OF DAYS WITH NO JET FLIGHTS ON PATH
A	Arrival	17	0 - 91	5%	36%
B	Departure	1	0 - 4	<1%	36%
C	Departure	5	0 - 6	1%	1%
D	Departure	75	0 - 92	21%	1%
E	Departure	12	0 - 72	3%	36%
F	Arrival	22	0 - 51	6%	28%
G	Arrival	18	0 - 40	5%	28%
H	Arrival	17	0 - 40	5%	28%
I	Departure	6	0 - 20	2%	7%
J	Departure	3	0 - 16	<1%	36%
K	Arrival	17	0 - 38	5%	28%
L	Departure	2	0 - 5	<1%	9%
M	Departure	11	0 - 77	3%	36%
N	Departure	39	0 - 87	11%	28%
O	Arrival	77	0 - 158	22%	6%
P	Departure	29	0 - 70	8%	7%

ALTITUDE KEY

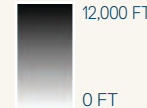
ARRIVALS

MEAN ALTITUDE



DEPARTURES

MEAN ALTITUDE



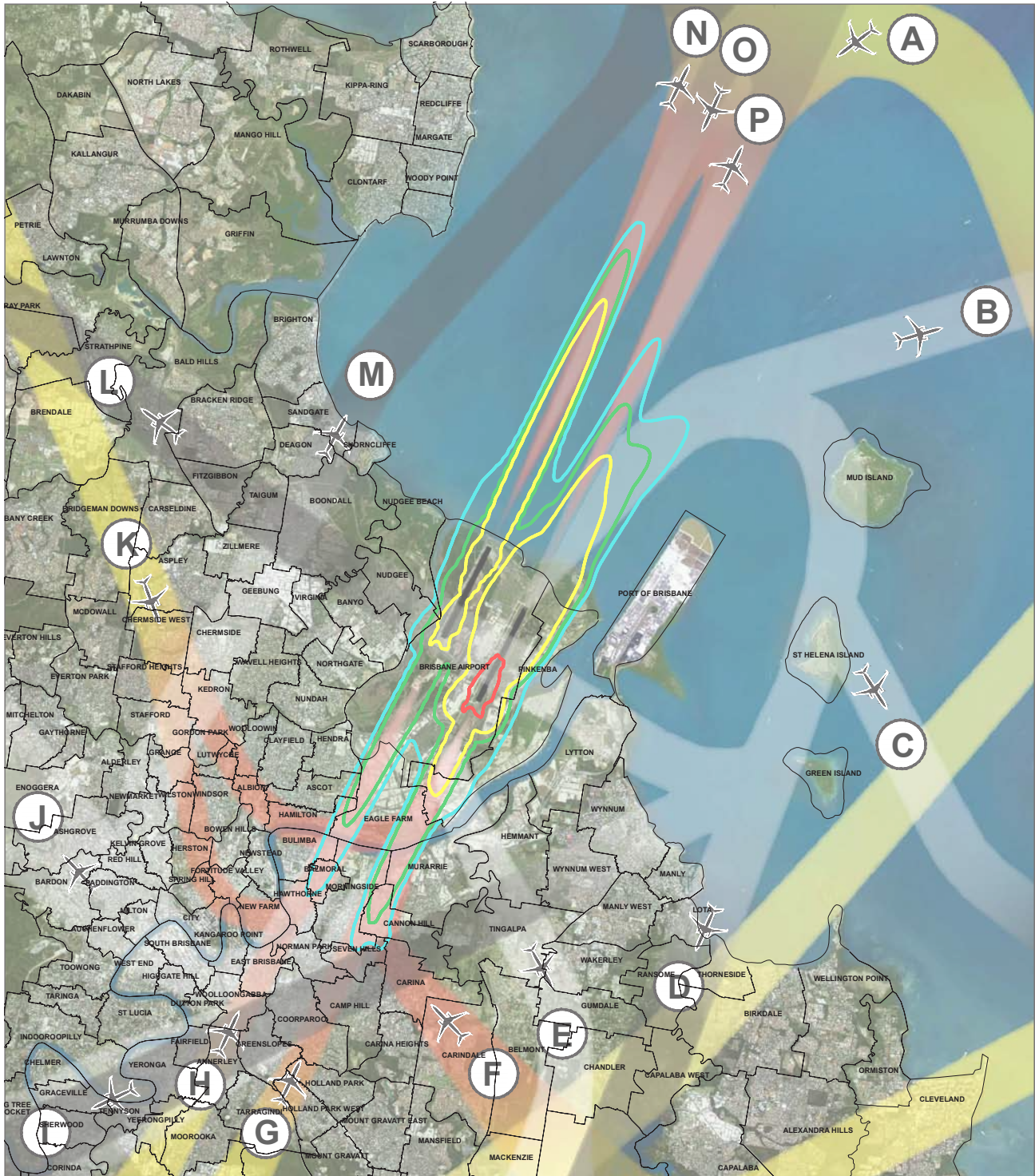
CONTOUR KEY

THE NUMBER OF OVERFLIGHTS OF 70dB(A) AND ABOVE DURING THE INDICATED TIME PERIOD

- 5 TO 9 OVERFLIGHTS
- 10 TO 19 OVERFLIGHTS
- 20 TO 49 OVERFLIGHTS
- 50 OR MORE OVERFLIGHTS

THESE FLIGHT PATHS REPRESENT WHERE THE MAJORITY OF AIRCRAFT WILL FLY, HOWEVER ALL AREAS COULD BE SUBJECTED TO SOME AIRCRAFT OVERFLIGHT.

2020 SUMMER WEEKEND EVENING WITH THE NPR – SATURDAY AND SUNDAY 6PM – 11PM

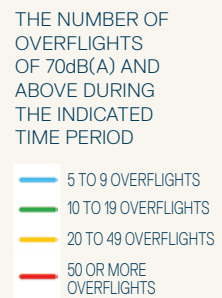


FLIGHT PATH	FLIGHT PATH TYPE	AVERAGE NO. OF JET FLIGHTS ON FLIGHT PATH	EXPECTED MINIMUM & MAXIMUM NO. OF JET FLIGHTS ON PATH	% OF BRISBANE AIRPORT'S TOTAL JET FLIGHTS ON PATH	% OF DAYS WITH NO JET FLIGHTS ON PATH
A	Arrival	9	0 - 35	7%	45%
B	Departure	<1	0 - 2	<1%	40%
C	Departure	<1	0 - 2	<1%	10%
D	Departure	23	0 - 31	20%	1%
E	Departure	6	0 - 22	5%	45%
F	Arrival	8	0 - 20	7%	49%
G	Arrival	6	0 - 17	6%	49%
H	Arrival	5	0 - 13	5%	49%
I	Departure	2	0 - 9	2%	34%
J	Departure	<1	0 - 4	<1%	84%
K	Arrival	5	0 - 14	5%	49%
L	Departure	<1	0 - 2	<1%	44%
M	Departure	4	0 - 18	3%	45%
N	Departure	8	0 - 20	7%	49%
O	Arrival	29	0 - 51	25%	14%
P	Departure	6	0 - 13	5%	40%

ALTITUDE KEY

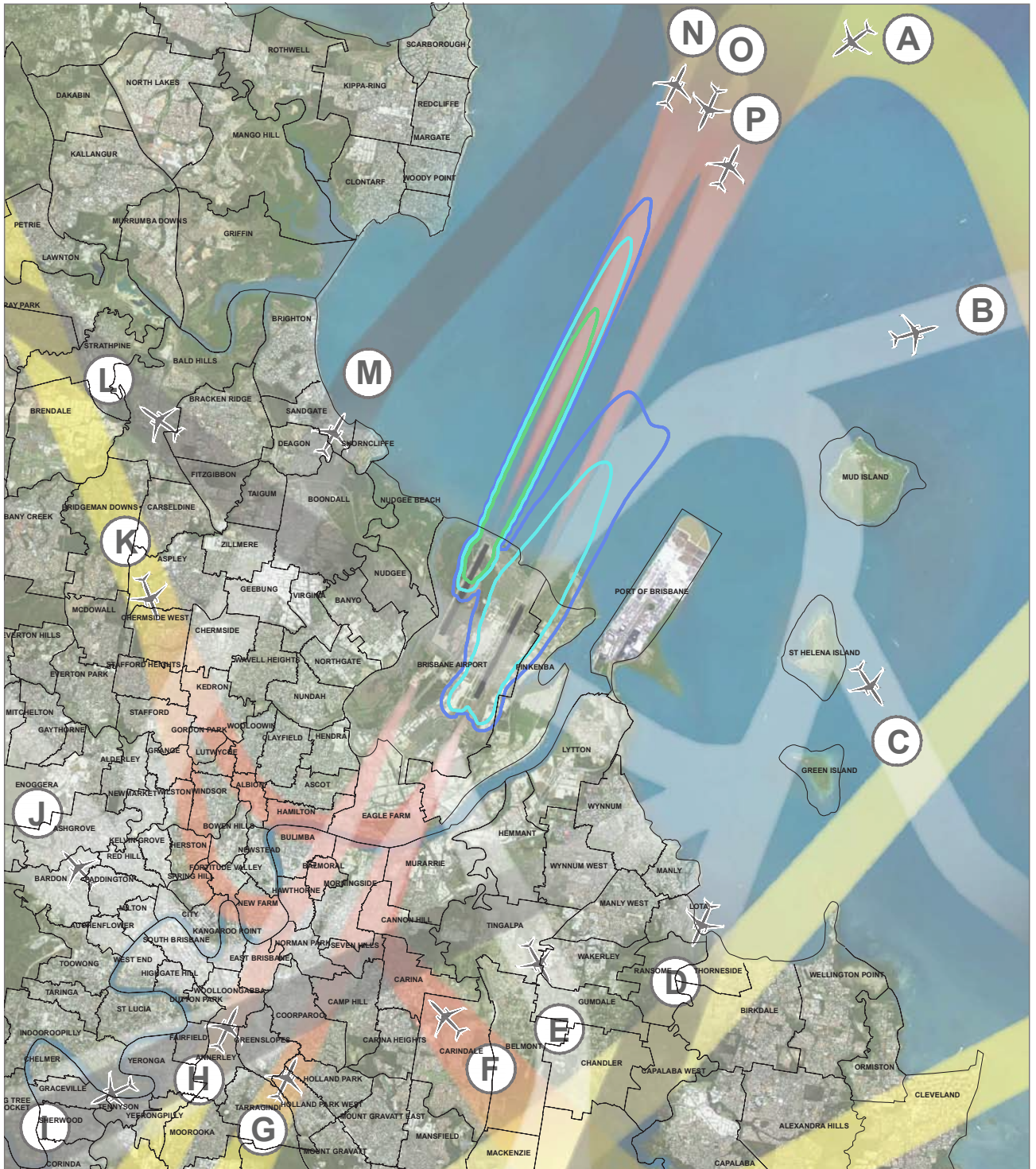


CONTOUR KEY



THESE FLIGHT PATHS REPRESENT WHERE THE MAJORITY OF AIRCRAFT WILL FLY, HOWEVER ALL AREAS COULD BE SUBJECTED TO SOME AIRCRAFT OVERFLIGHT.

2020 SUMMER WEEKEND NIGHT WITH THE NPR – SATURDAY AND SUNDAY 11PM – 6AM

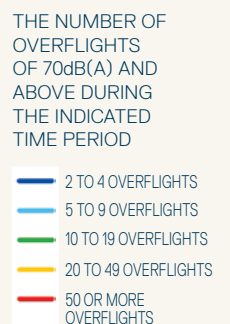


FLIGHT PATH	FLIGHT PATH TYPE	AVERAGE NO. OF JET FLIGHTS ON FLIGHT PATH	EXPECTED MINIMUM & MAXIMUM NO. OF JET FLIGHTS ON PATH	% OF BRISBANE AIRPORT'S TOTAL JET FLIGHTS ON PATH	% OF DAYS WITH NO JET FLIGHTS ON PATH
A	Arrival	<1	0 - 6	<1%	97%
B	Departure	<1	0 - 0	<1%	100%
C	Departure	<1	0 - 0	<1%	100%
D	Departure	3	0 - 3	13%	1%
E	Departure	<1	0 - 3	<1%	99%
F	Arrival	<1	0 - 4	<1%	80%
G	Arrival	<1	0 - 8	2%	79%
H	Arrival	<1	0 - 0	<1%	100%
I	Departure	1	0 - 2	5%	2%
J	Departure	<1	0 - 4	<1%	98%
K	Arrival	<1	0 - 4	1%	79%
L	Departure	1	0 - 2	5%	2%
M	Departure	<1	0 - 2	<1%	98%
N	Departure	<1	0 - 6	3%	80%
O	Arrival	13	0 - 14	56%	0%
P	Departure	3	0 - 4	13%	2%

ALTITUDE KEY

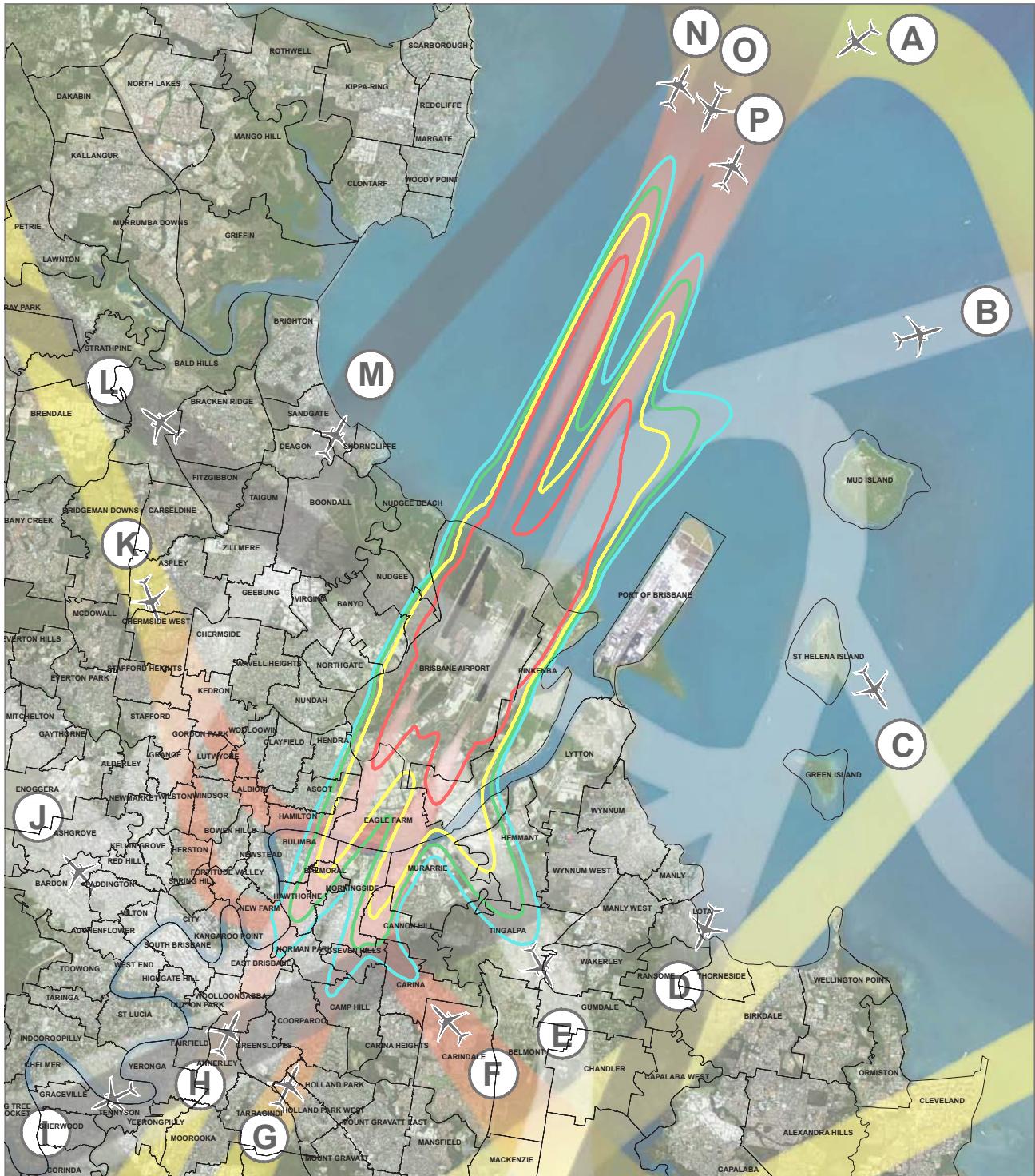


CONTOUR KEY



THESE FLIGHT PATHS REPRESENT WHERE THE MAJORITY OF AIRCRAFT WILL FLY, HOWEVER ALL AREAS COULD BE SUBJECTED TO SOME AIRCRAFT OVERFLIGHT.

2020 WINTER WEEKDAY DAY WITH THE NPR – MONDAY TO FRIDAY 6AM – 6PM

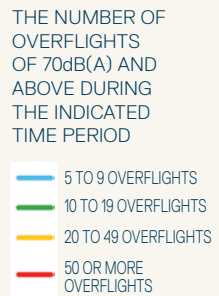


FLIGHT PATH	FLIGHT PATH TYPE	AVERAGE NO. OF JET FLIGHTS ON FLIGHT PATH	EXPECTED MINIMUM & MAXIMUM NO. OF JET FLIGHTS ON PATH	% OF BRISBANE AIRPORT'S TOTAL JET FLIGHTS ON PATH	% OF DAYS WITH NO JET FLIGHTS ON PATH
A	Arrival	44	0 - 105	10%	13%
B	Departure	1	0 - 4	<1%	21%
C	Departure	2	0 - 4	<1%	14%
D	Departure	63	0 - 110	15%	3%
E	Departure	38	0 - 87	9%	13%
F	Arrival	12	0 - 58	3%	49%
G	Arrival	10	0 - 47	2%	49%
H	Arrival	10	0 - 48	2%	49%
I	Departure	12	1 - 24	3%	0%
J	Departure	7	0 - 18	2%	13%
K	Arrival	10	0 - 47	2%	49%
L	Departure	2	0 - 6	<1%	3%
M	Departure	40	0 - 95	9%	13%
N	Departure	22	0 - 107	5%	49%
O	Arrival	113	0 - 198	27%	1%
P	Departure	36	0 - 94	9%	3%

ALTITUDE KEY

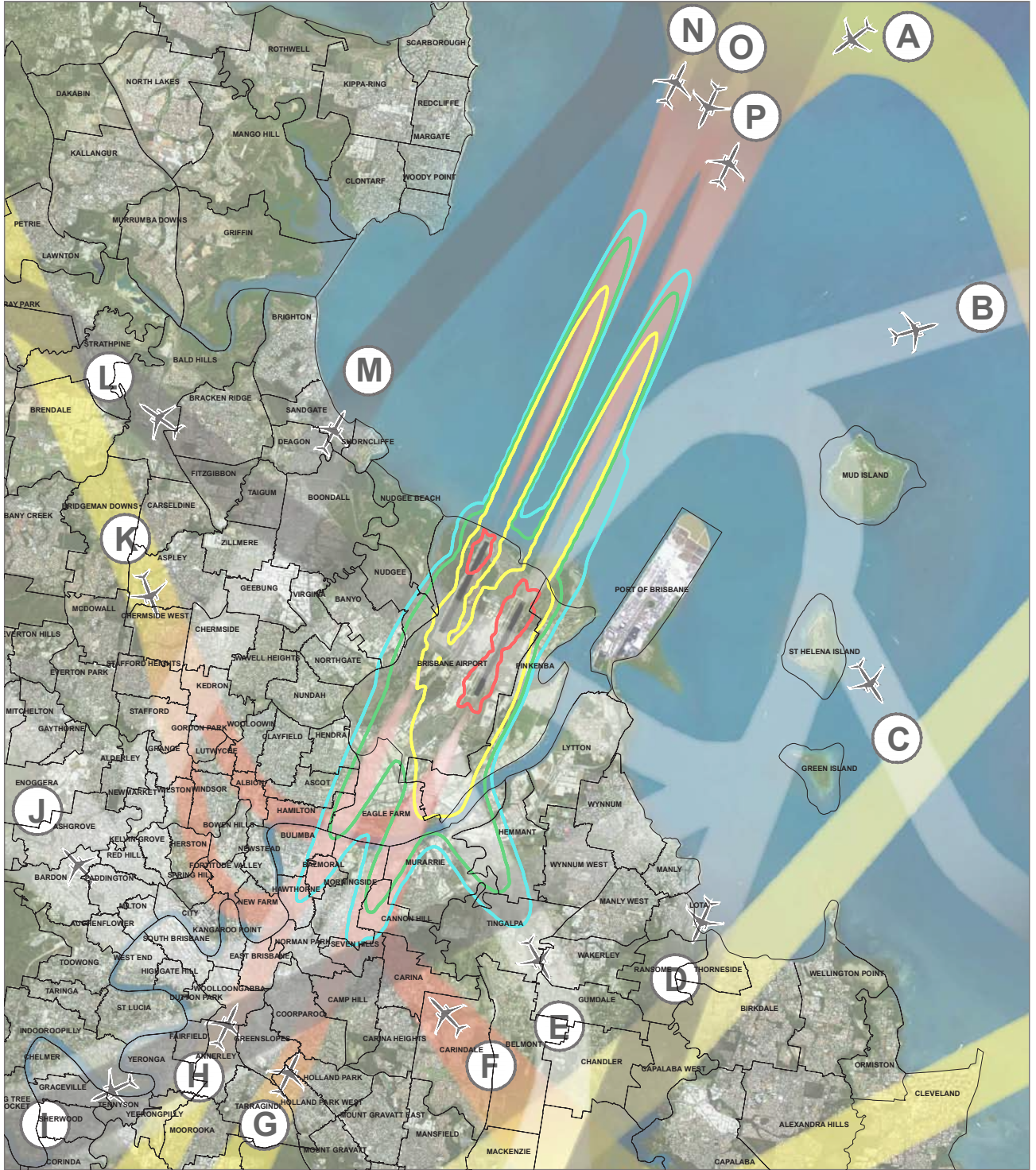


CONTOUR KEY



THESE FLIGHT PATHS REPRESENT WHERE THE MAJORITY OF AIRCRAFT WILL FLY, HOWEVER ALL AREAS COULD BE SUBJECTED TO SOME AIRCRAFT OVERFLIGHT.

2020 WINTER WEEKDAY EVENING WITH THE NPR – MONDAY TO FRIDAY 6PM – 11PM



FLIGHT PATH	FLIGHT PATH TYPE	AVERAGE NO. OF JET FLIGHTS ON FLIGHT PATH	EXPECTED MINIMUM & MAXIMUM NO. OF JET FLIGHTS ON PATH	% OF BRISBANE AIRPORT'S TOTAL JET FLIGHTS ON PATH	% OF DAYS WITH NO JET FLIGHTS ON PATH
A	Arrival	34	0 - 46	23%	11%
B	Departure	<1	0 - 0	<1%	100%
C	Departure	<1	0 - 4	<1%	73%
D	Departure	8	0 - 41	6%	27%
E	Departure	24	0 - 31	17%	11%
F	Arrival	5	0 - 26	3%	73%
G	Arrival	4	0 - 22	3%	73%
H	Arrival	3	0 - 19	2%	73%
I	Departure	8	0 - 10	5%	11%
J	Departure	3	0 - 4	2%	11%
K	Arrival	3	0 - 19	2%	73%
L	Departure	<1	0 - 0	<1%	100%
M	Departure	13	0 - 17	9%	11%
N	Departure	3	0 - 17	2%	73%
O	Arrival	36	0 - 45	25%	8%
P	Departure	<1	0 - 1	<1%	39%

**ALTITUDE KEY**

**ARRIVALS**  
MEAN ALTITUDE  
4,500 FT  
0 FT

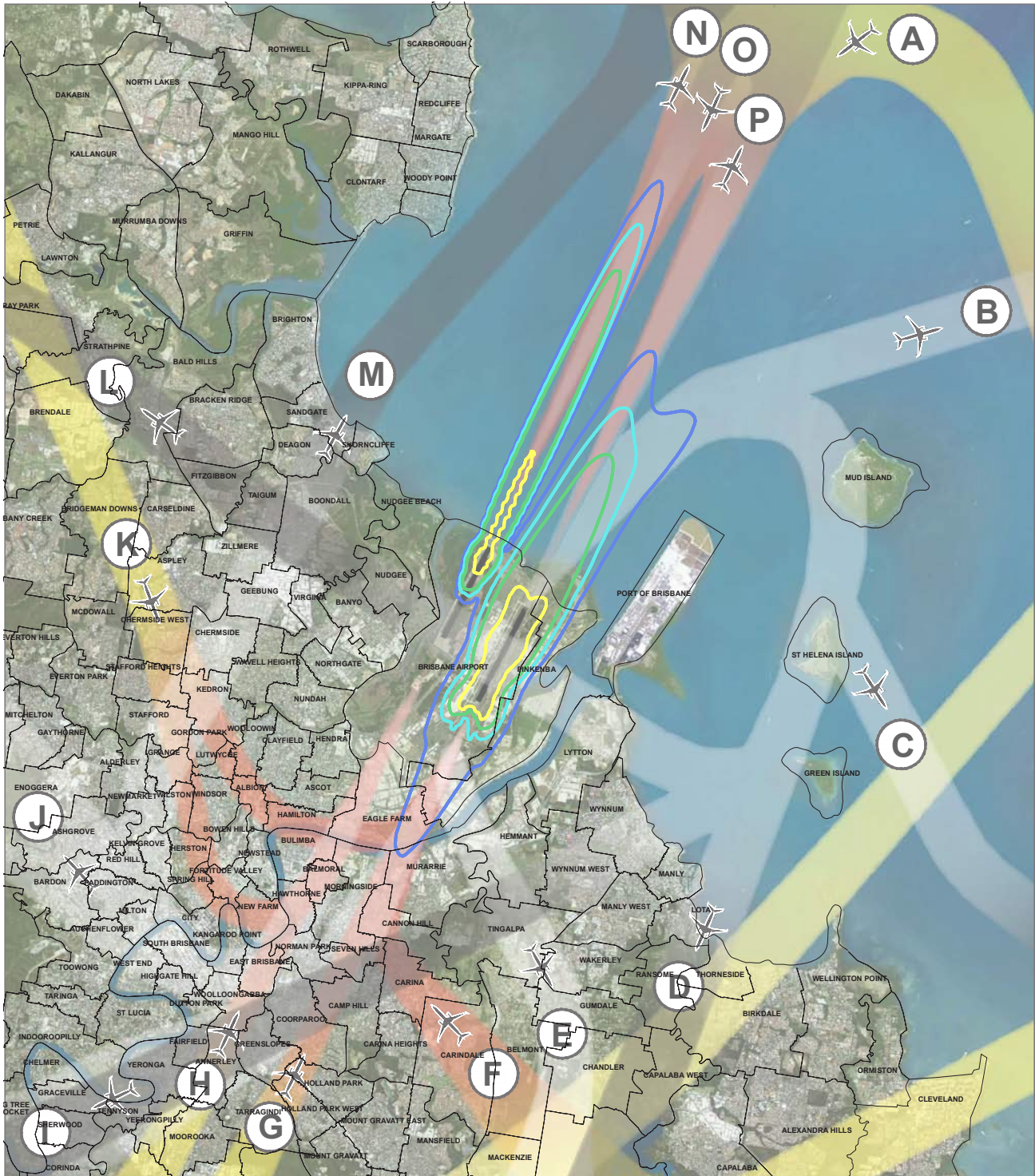
**DEPARTURES**  
MEAN ALTITUDE  
12,000 FT  
0 FT

**CONTOUR KEY**  
THE NUMBER OF OVERFLIGHTS OF 70dB(A) AND ABOVE DURING THE INDICATED TIME PERIOD

- 5 TO 9 OVERFLIGHTS
- 10 TO 19 OVERFLIGHTS
- 20 TO 49 OVERFLIGHTS
- 50 OR MORE OVERFLIGHTS

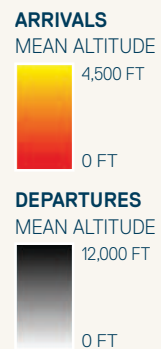
THESE FLIGHT PATHS REPRESENT WHERE THE MAJORITY OF AIRCRAFT WILL FLY, HOWEVER ALL AREAS COULD BE SUBJECTED TO SOME AIRCRAFT OVERFLIGHT.

2020 WINTER WEEKDAY NIGHT WITH THE NPR – MONDAY TO FRIDAY 11PM – 6AM

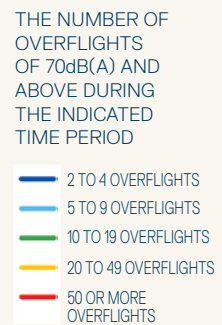


FLIGHT PATH	FLIGHT PATH TYPE	AVERAGE NO. OF JET FLIGHTS ON FLIGHT PATH	EXPECTED MINIMUM & MAXIMUM NO. OF JET FLIGHTS ON PATH	% OF BRISBANE AIRPORT'S TOTAL JET FLIGHTS ON PATH	% OF DAYS WITH NO JET FLIGHTS ON PATH
A	Arrival	<1	0 - 13	2%	40%
B	Departure	<1	0 - 1	2%	1%
C	Departure	<1	0 - 0	<1%	100%
D	Departure	4	0 - 5	10%	0%
E	Departure	<1	0 - 3	<1%	39%
F	Arrival	<1	0 - 8	<1%	93%
G	Arrival	<1	0 - 11	<1%	93%
H	Arrival	<1	0 - 0	<1%	100%
I	Departure	2	1 - 4	5%	0%
J	Departure	2	0 - 10	5%	40%
K	Arrival	<1	0 - 4	<1%	93%
L	Departure	2	0 - 3	4%	0%
M	Departure	1	0 - 7	3%	41%
N	Departure	<1	0 - 16	<1%	93%
O	Arrival	20	0 - 21	47%	0%
P	Departure	9	0 - 12	21%	0%

ALTITUDE KEY

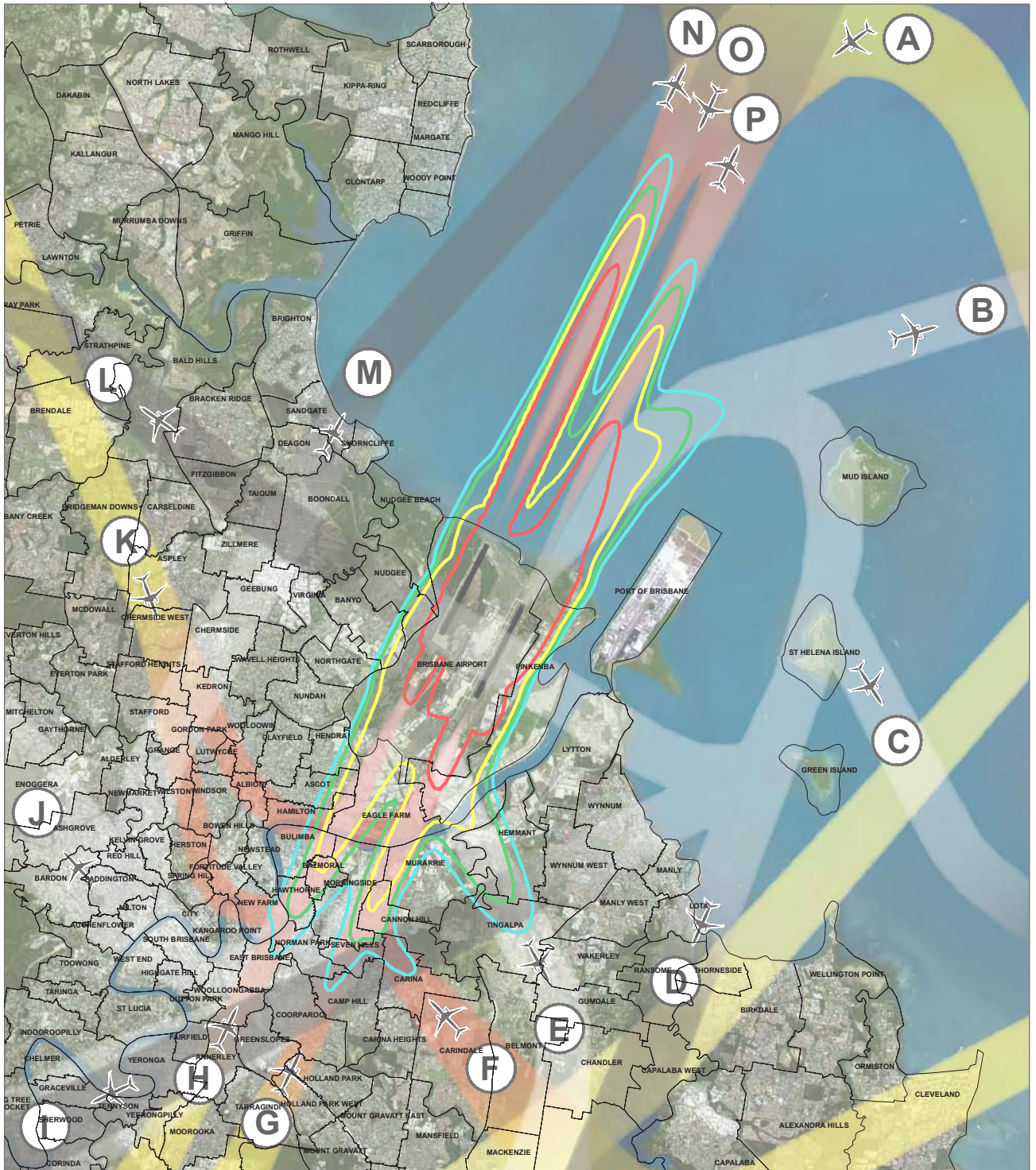


CONTOUR KEY



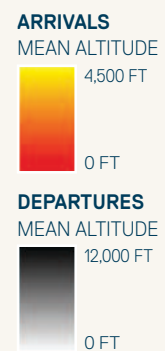
THESE FLIGHT PATHS REPRESENT WHERE THE MAJORITY OF AIRCRAFT WILL FLY, HOWEVER ALL AREAS COULD BE SUBJECTED TO SOME AIRCRAFT OVERFLIGHT.

2020 WINTER WEEKEND DAY WITH THE NPR – SATURDAY AND SUNDAY 6AM – 6PM

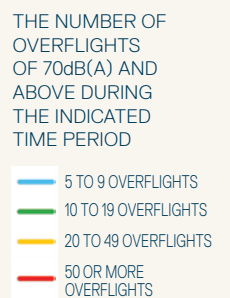


FLIGHT PATH	FLIGHT PATH TYPE	AVERAGE NO. OF JET FLIGHTS ON FLIGHT PATH	EXPECTED MINIMUM & MAXIMUM NO. OF JET FLIGHTS ON PATH	% OF BRISBANE AIRPORT'S TOTAL JET FLIGHTS ON PATH	% OF DAYS WITH NO JET FLIGHTS ON PATH
A	Arrival	34	0 - 89	10%	13%
B	Departure	1	0 - 4	<1%	23%
C	Departure	3	0 - 6	<1%	4%
D	Departure	52	0 - 89	15%	3%
E	Departure	28	0 - 70	8%	13%
F	Arrival	11	0 - 50	3%	49%
G	Arrival	9	0 - 39	3%	49%
H	Arrival	9	0 - 37	3%	49%
I	Departure	10	0 - 19	3%	1%
J	Departure	6	0 - 13	2%	14%
K	Arrival	8	0 - 37	2%	49%
L	Departure	2	0 - 5	<1%	7%
M	Departure	30	0 - 77	9%	13%
N	Departure	19	0 - 84	6%	49%
O	Arrival	91	0 - 162	27%	1%
P	Departure	28	0 - 72	8%	4%

ALTITUDE KEY

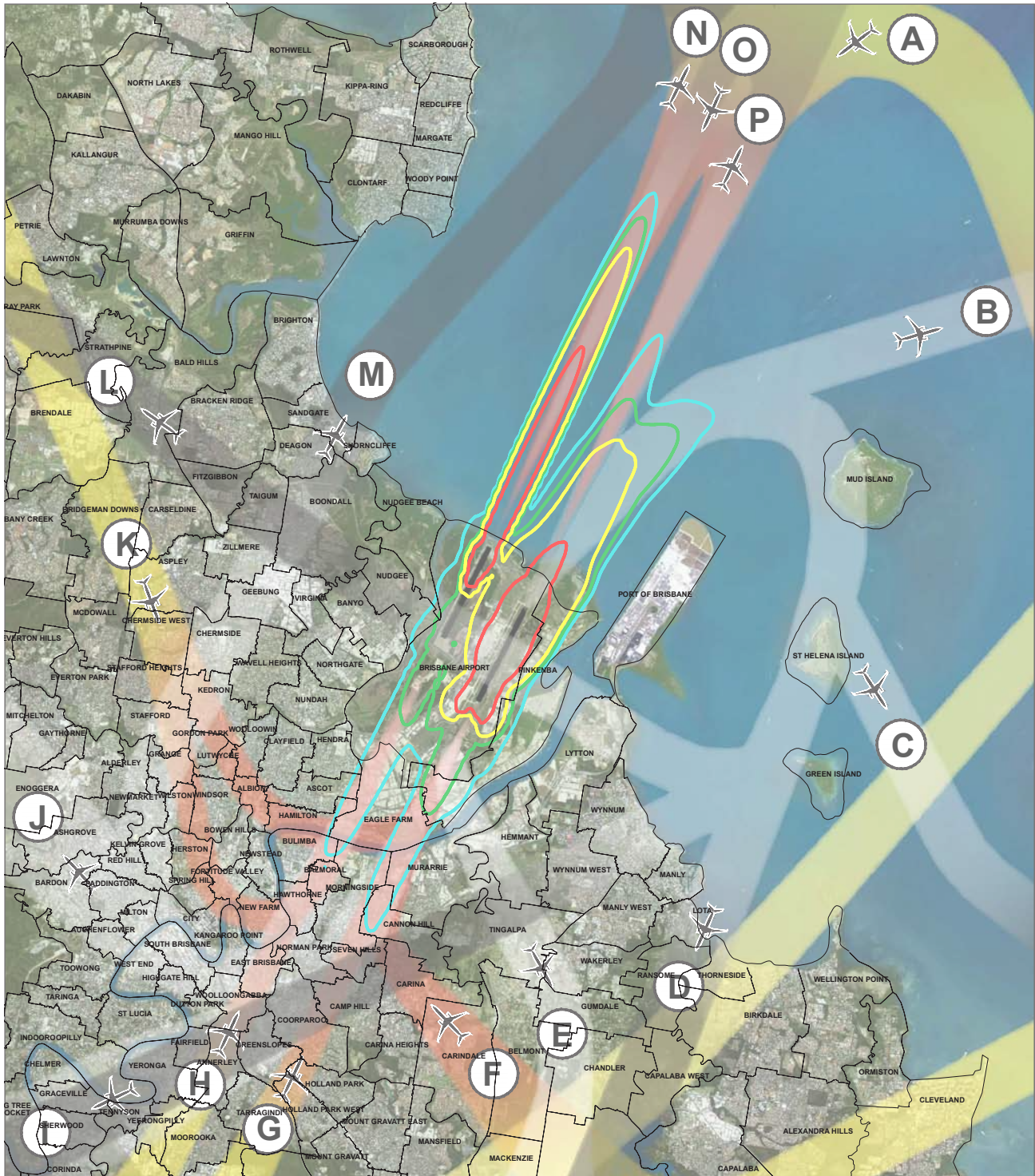


CONTOUR KEY



THESE FLIGHT PATHS REPRESENT WHERE THE MAJORITY OF AIRCRAFT WILL FLY, HOWEVER ALL AREAS COULD BE SUBJECTED TO SOME AIRCRAFT OVERFLIGHT.

2020 WINTER WEEKEND EVENING WITH THE NPR – SATURDAY AND SUNDAY 6PM – 11PM

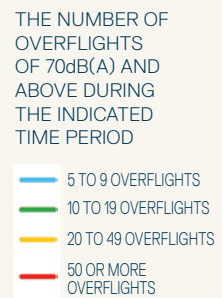


FLIGHT PATH	FLIGHT PATH TYPE	AVERAGE NO. OF JET FLIGHTS ON FLIGHT PATH	EXPECTED MINIMUM & MAXIMUM NO. OF JET FLIGHTS ON PATH	% OF BRISBANE AIRPORT'S TOTAL JET FLIGHTS ON PATH	% OF DAYS WITH NO JET FLIGHTS ON PATH
A	Arrival	6	0 - 41	5%	70%
B	Departure	<1	0 - 1	<1%	29%
C	Departure	2	0 - 3	2%	11%
D	Departure	32	0 - 39	24%	1%
E	Departure	5	0 - 29	4%	70%
F	Arrival	4	0 - 23	3%	73%
G	Arrival	3	0 - 20	2%	73%
H	Arrival	3	0 - 15	2%	73%
I	Departure	3	0 - 10	2%	12%
J	Departure	1	0 - 6	<1%	73%
K	Arrival	3	0 - 16	2%	73%
L	Departure	1	0 - 2	<1%	29%
M	Departure	3	0 - 18	2%	70%
N	Departure	4	0 - 21	3%	73%
O	Arrival	53	0 - 72	40%	3%
P	Departure	11	0 - 17	8%	4%

ALTITUDE KEY



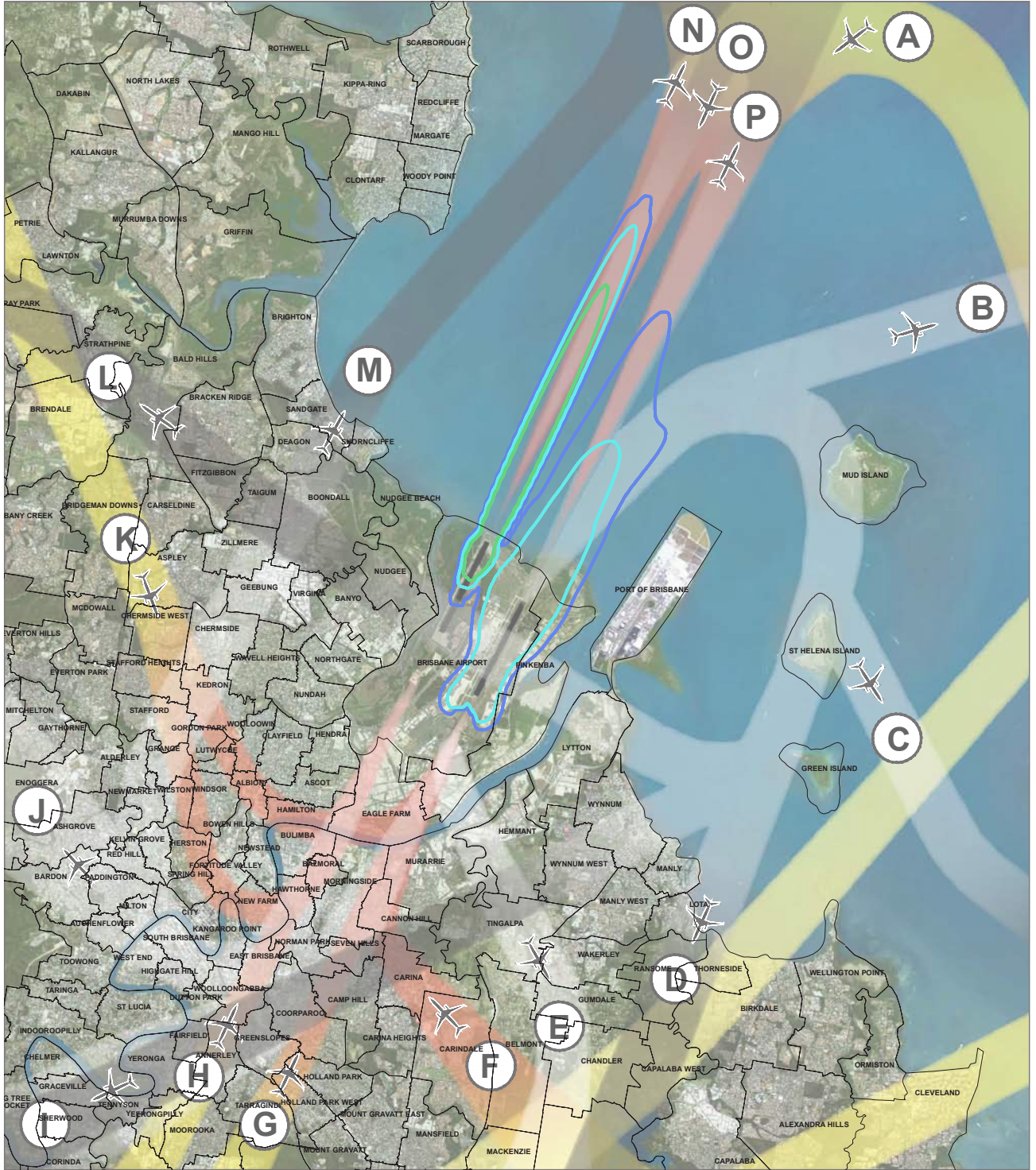
CONTOUR KEY



THESE FLIGHT PATHS REPRESENT WHERE THE MAJORITY OF AIRCRAFT WILL FLY, HOWEVER ALL AREAS COULD BE SUBJECTED TO SOME AIRCRAFT OVERFLIGHT.



2020 WINTER WEEKEND NIGHT WITH THE NPR – SATURDAY AND SUNDAY 11PM – 6AM



FLIGHT PATH	FLIGHT PATH TYPE	AVERAGE NO. OF JET FLIGHTS ON FLIGHT PATH	EXPECTED MINIMUM & MAXIMUM NO. OF JET FLIGHTS ON PATH	% OF BRISBANE AIRPORT'S TOTAL JET FLIGHTS ON PATH	% OF DAYS WITH NO JET FLIGHTS ON PATH
A	Arrival	<1	0 - 6	<1%	95%
B	Departure	<1	0 - 0	<1%	100%
C	Departure	<1	0 - 0	<1%	100%
D	Departure	<1	0 - 1	4%	1%
E	Departure	<1	0 - 1	<1%	99%
F	Arrival	<1	0 - 4	<1%	95%
G	Arrival	<1	0 - 8	<1%	95%
H	Arrival	<1	0 - 0	<1%	100%
I	Departure	1	0 - 2	6%	0%
J	Departure	<1	0 - 4	<1%	98%
K	Arrival	<1	0 - 4	<1%	95%
L	Departure	1	0 - 2	6%	0%
M	Departure	<1	0 - 3	<1%	96%
N	Departure	<1	0 - 7	<1%	95%
O	Arrival	14	0 - 14	62%	0%
P	Departure	4	0 - 5	19%	0%

**ALTITUDE KEY**

**ARRIVALS**  
MEAN ALTITUDE  
4,500 FT  
0 FT

**DEPARTURES**  
MEAN ALTITUDE  
12,000 FT  
0 FT

**CONTOUR KEY**  
THE NUMBER OF OVERFLIGHTS OF 70dB(A) AND ABOVE DURING THE INDICATED TIME PERIOD

- 2 TO 4 OVERFLIGHTS
- 5 TO 9 OVERFLIGHTS
- 10 TO 19 OVERFLIGHTS
- 20 TO 49 OVERFLIGHTS
- 50 OR MORE OVERFLIGHTS

THESE FLIGHT PATHS REPRESENT WHERE THE MAJORITY OF AIRCRAFT WILL FLY, HOWEVER ALL AREAS COULD BE SUBJECTED TO SOME AIRCRAFT OVERFLIGHT.