Monday, 13 May 2024

Dear Committee Chair,

**RE: Brisbane Airport Corporation response to the inquiry on the impact and mitigation of aircraft noise**

Thank-you for the opportunity for Brisbane Airport Corporation (BAC) to provide a supplementary submission to the Committee. BAC is also grateful for the opportunity to participate in the Hearing, not only to provide critical evidence and insights, but to also consider the perspectives of other witnesses. We note that the Hearing and submissions to the Committee have brought with it a wide range of positions on aircraft noise. The purpose of this supplementary submission is twofold: to provide further detail and guidance to the Committee on BAC's evidence, and to address criticisms and assessments of BAC provided by other witnesses and submissions.

BAC's objective in taking this approach is to reinforce the importance of ensuring balance in the development of aviation policy. We agree with the government's position that for aviation to continue to grow, the aviation industry and government must actively foster a social licence for airport and aviation activity.[1] We also agree that this is a subject of ongoing conversation and engagement with both government and the community. However, BAC, as a custodian responsible for managing the airport, must balance a range of priorities against the needs of a wide stakeholder base, including passengers, airlines, freight operators, exporters, tourism operators and the community. We believe that approaches to aircraft noise should do the same.

Aviation is an exceptionally complex ecosystem with many intersecting roles, responsibilities and challenges. While the current regulatory framework has been in place for over 30 years, the operating environment for aviation has evolved markedly, particularly in fast growing regions like South East Queensland. Any proposal to improve noise outcomes needs to consider an integrated, systems-based approach to noise, one that provides incremental, long-term, sustainable benefits to the community, while supporting the critical benefits provided by a competitive, efficient and sustainable aviation sector.

Certain proposals raised at the Hearing – including, but not limited to, caps and curfews – are not an effective policy option for Brisbane Airport's specific circumstances when set against the intent of long-held aviation policy objectives. We believe that there are better options that can be developed and implemented to address noise, with some of these options able to be implemented in a relatively short period of time.

The further development of solutions will require the engagement and participation of industry, the community, government and technical experts. BAC stands ready to work with all parties concerned to ensure that Brisbane's growth is supported sustainably, and with reference to continuing developments in the sector.

[1] Australian Government, 2023, Aviation Greenpaper (Towards 2050), p.97.

Our submission is provided in 3 parts:

**Part A:** background to aviation, history of BNE and the nature of aircraft noise

**Part B:** the importance of 24/7 operations, the impacts of Caps and Curfews, and BAC Community Engagement on the 2nd Runway

**Part C:** options to address aircraft noise.

# PART A

## The Importance of Aviation to Australia

Australia presents unique challenges in terms of connectivity. Characterised by a large land mass, relatively low population and dispersed population centres, options for high-speed connectivity are limited. This means aviation provides the only means of timely, reliable and accessible connectivity between our major – and equally important – regional population centres. As outlined in the map below, four major airports connect Australia's most populous cities – Sydney, Melbourne, Brisbane and Perth. Brisbane, as the major gateway to Queensland, further facilitates over 25 connections to our regional activity centres, including Cairns, Rockhampton, Gladstone, Mackay and Townsville. These are connections that cannot be readily substituted by other transport modes.

Map: Airport coverage in Australia, 2023
Source: Australian Airports Association, 2023
Larger bubbles indicate more domestic passenger traffic in the area.

Australia's transport environment can be contrasted with Europe, where relatively short distances between major cities, high urban populations and tight population densities allow easier substitution between transport modes. These include high-speed rail and road transport options. For example, a trip from major French population centres of Paris to Lyon (a distance of 400km) is approximately 1hr 5mins by air, and 1hr 54mins by high-speed rail. SNCF, the French rail operator, schedules up to 72 services per day travelling between the two cities. By contrast, a trip from Brisbane to Bundaberg (a similar distance to Paris/Lyon) is approximately 1hr by air and 4hr 45min by Queensland Rail's fastest locomotives (Tilt Train) and limited to a single service per day. Similar examples can be extrapolated across the European continent, including Germany, Italy and Spain, as mapped below.


Map: Commercial high speed rail development in Europe to 2022
Source: International Union of Railways, High Speed Rail Atlas 2023[2]

When placed in this context, the importance of aviation to Australian travellers and industry cannot be overstated. This includes the provision of open, flexible, and accessible gateway airport operations, such as BNE. Long-term government policy on airports (and their importance to connectivity) reflects this sentiment:

> The Government recognises that airports are vitally important to the communities and regions which they serve. In circumstances where airport usage is increasing rapidly, passenger and freight users need airports which are operating efficiently, are responsive to user requirements and which deliver the services necessary to meet the requirements of the Australian tourism, export and service industries which depend on air transport to compete in world markets."[3]

Regulatory and contractual frameworks placed by Government on Airport Leasing Companies (ALCs) include strict requirements to develop Australian airports to a standard required of similar international airports. Adequate investment in aeronautical facilities is monitored closely by the Australian Competition and Consumer

[2] https://uic.org/IMG/pdf/atlas_uic_2023.pdf
[3] Sharp, John, 1996, Second Reading Speech, Airports Bill, 23 May 1996

Commission under Part 7 and Part 8 of the *Airports Act 1996* (Cth) through both financial and Quality of Service Monitoring. Airports, therefore, are obligated to expand operations in line with the growth of the communities and industries they serve. Inadequate runway capacity – as experienced at BNE before the New Parallel Runway (NPR) – has a range of operational and quality of service impacts for airport users, including delays, missed flights, and terminal congestion. BNE experienced considerable community and political pressure over congestion via the **#BNELateAgain** campaign as outlined in our Preliminary Submission. Further correspondence and media coverage of congestion at BNE is provided at **Appendix A.** The material provided reflects the importance placed on the efficiency of BNE given its role as a key enabler of connectivity and economic growth in Queensland. Artificial constraints on BNE would work directly against increasing its capacity and in turn reduce its ability to connect Brisbane and Queensland. This setting would effectively work against long-term government objectives for the sector.

## The history of BNE

The current Brisbane Airport site was acquired by the Australian Government in the 1970s and opened as a new Airport in 1988, replacing the Eagle Farm aerodrome that had been supporting Brisbane since 1925. The Eagle Farm aerodrome site is incorporated in the current BNE airfield.

The vision and planning for Brisbane Airport from the time the site was acquired in the 1970s was for an ultimate configuration of parallel runways, separated by 2000 metres. This would enable the necessary passenger terminals and other support passenger infrastructure such as car parks, freight terminals and public transport zones to be efficiently located between the parallel runways.

In 1991, the Federal Airports Corporation (FAC), a Federal Government entity, prepared an updated Master Plan, adopting the same airfield layout including the provision for the future development of an 01L/19R western parallel runway, now known as the New Parallel Runway (NPR). A diagram for the position of the NPR, and its relationship to the existing runway is provided at **Appendix B.**

Initial planning and development of BNE sought to cater for 11.3 million passengers a year by 2010, with 182,000 flight movements.

**TABLE 4.1 - AIRPORT FACILITY REQUIREMENTS**

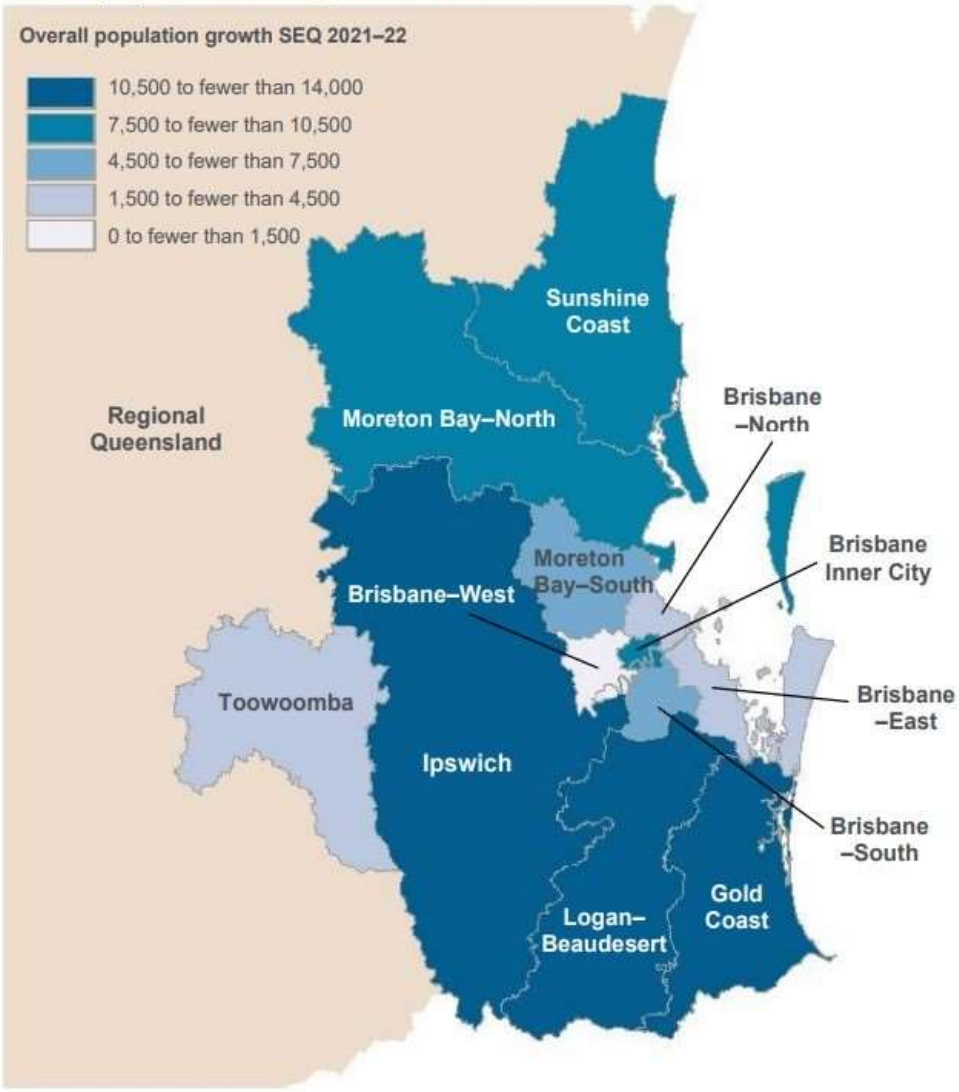
| | Existing (1990) | Planning Horizon (20 years) | Ultimate Development (50 years) |
|---|---|---|---|
| Runways | 2 | 2 | 3 |
| Bays/Gates | 25* | 64 | 100 + 25 stand off |
| Freight parking | 4 | (ϕ) | (ϕ) |
| Airline maintenance Hangars/parking | 8 | (ϕ) | (ϕ) |

However, historical passenger movements at BNE reflect a rapidly growing population, not only in Brisbane, but the wider South East Queensland region. For example, in 1988-89, BNE serviced approximately 4.8m passengers across its domestic and international operations. A decade later (1998-99), this number had almost doubled to 9.8m passengers. In 2018-19, volumes more than doubled again to nearly 24m passengers.. This

reflects Brisbane and South East Queensland's population boom, with Brisbane's population growing 1,611,027 (or over 168%) from 1971 to 2021.[4] By contrast, Sydney and Melbourne grew 74% and 91% respectively.[5]

More than 70% of Queenslanders lived in SEQ at 30 June 2022, with SEQ growing at almost triple the average annual rate (1.9%) of the rest of Queensland (0.7%) over the past 10 years.[6] In addition, Queensland's highest areas of growth are all within Brisbane Airport's catchment, as outlined in the map below.

**Size of population change in SEQ SA4s**




Source: Queensland Government Statisticians Office

BNE has therefore had to respond to a rapidly growing population, dispersed over a wider catchment area, at a rate unforeseen by the original master plan of 1991.

[4] Australian Bureau of Statistics, 2022, '50 Years of Capital City Population Change', <https://www.abs.gov.au/articles/50-years-capital-city-population-change>, accessed 22 April 2024.
[5] *Ibid*.
[6] Queensland Government Statistician's Office, 2023, *Population growth highlights and trends, Queensland Regions, 2023 edition*, p.3.

# The operation of modern airports and the impacts of noise

## Background information on aircraft noise and its measurement

Aircraft noise, like other noise sources in urban environments, is perceived by people differently. The subjective nature of noise perception makes it difficult to measure impacts on diverse populations to a high degree of certainty.

Although there are many sources of noise from aircraft (for example the engine, airframe, landing flaps and landing gear) it is usually the engine that causes the most noise. Jet aircraft noise is caused by high velocity exhaust gases mixing with ambient air, combustion of fuel and compressor fans. Propeller aircraft and helicopters can also create noise from their rotating propellers cutting through the air.

Generally, noise from departing aircraft is greater than from that of an arriving aircraft. This is due to the higher weight of the plane and the need to get airborne within specific parameters (thus requiring higher engine thrust settings). On departure, the noise level experienced on the ground from a particular aircraft is influenced by:

- the aircraft type and size, the way the aircraft is flown by the pilot and the aircraft settings
- the rate at which the aircraft climbs; and
- meteorological conditions and topography.

The human ear can handle an enormous range of sound levels. To measure this, the decibel scale (dB) is used, which encapsulates the energy of sound with reference to the threshold of hearing using a logarithmic scale. This relates sound intensity to the smallest audible sound of 0dB, so a sound 10 times more powerful is 10dB, whilst a sound 100 times more powerful than the threshold of hearing is 20dB.

Noise measurement also needs to take account of the varying responses of the human ear to different frequencies of sound (with most sensitivity occurring at the 2-4 kHz range). Therefore, the decibel unit used to express human response to loudness or annoyance includes a weighting that varies with both intensity and frequency. The most common measure of this is the A-weighted sound level known as dBA.

Knowing the scale of noise is only one element of capturing its impact; it is also important to consider how to measure the impact of an individual event. There are a range of decibel metrics by which aircraft noise is often described:

**Lmax** (Maximum level) which is a measure of the loudest part of an event

**Leq** (Equivalent level) which describes the cumulative noise exposure from aircraft noise events over a period of time. Research globally has found that annoyance due to aircraft noise is correlated with this cumulative metric

**SEL** is the sound exposure level of an aircraft event, measured in dBA of a one second burst of steady noise that contains the same total A-weighted sound energy as the whole event. SEL is often used to characterise the likelihood of sleep disturbance relating to aircraft noise as research has found that single event metrics are a better predictor of sleep disturbance than long-term average noise metrics such as Leq16h; and

**Lden** (Day evening night level) is a variant of Leq which includes a 10dB weighting for noise events at night and a 5dB weighting for events during evening periods, reflecting the potential for increased sensitivity to noisy events during those time periods.

Each of these metrics have different applications and the values are not equivalent. There is a significant difference, for example, between a 70dB Lmax event, which refers to a single event, and a 70dB Lden measure which refers to an average of 70dB over an extended period of time.

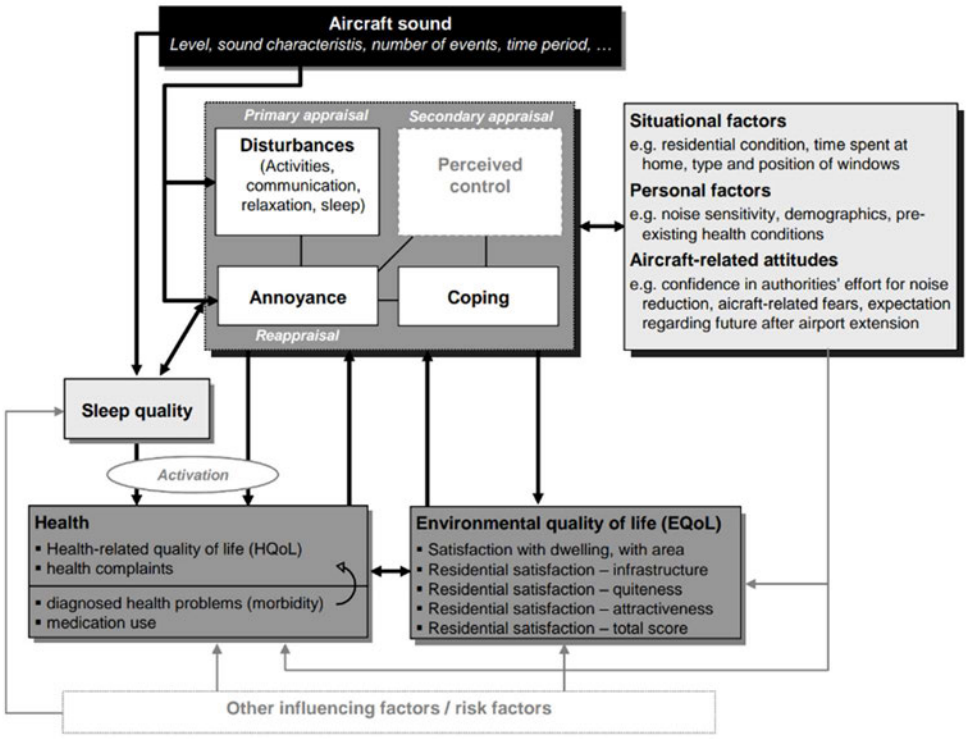
The distinction of measurements is critical given claims made during the Inquiry process of misleading data on noise levels and impacts to health and wellbeing. The majority of research studies or literature reviews make recommendations based on averaged metrics such as Lden or Leq. These measures are

considered to provide the best indication of long-term exposure to noise, rather than individual isolated noisy aircraft, measured in dB.

## The link between aircraft noise and community health

BAC notes claims that aircraft noise "contributes to a substantial increase in the risk of heart attacks and many other adverse effects." BAC is not aware of a contemporary Australian model that describes the relationship between aircraft noise exposure, annoyance and further mental and physical outcomes. Further, no study to date has linked the association between non-acoustical, attitudinal factors (e.g. attitudes towards the noise source, and towards authorities regulating noise) and the degree of noise annoyance.[7] These factors are important given research findings on how the perceived management (or mismanagement) of noise can act as second external stimulus of stress reaction to the noise itself.[8]

Consideration should also be given to how the noise exposure-annoyance-health association can apply to those with pre-existing illnesses, or those who are more sensitive to noise.[9] Indeed, those with reduced behavioural or physical resources to cope with noise exposure could react with stronger annoyance to the noise, and therefore be affected to a greater extent by its prevalence.[10] An additional factor to consider within an exposure-annoyance-health investigation is the interaction between aircraft noise and other noise sources, such as road traffic, rail, power equipment and utilities, with the view to developing a 'base line' of a resident's satisfaction of existing noise levels within an area. Situational factors, such as the design and condition of a home, time spent at home, and mitigations put in place (e.g. noise attenuation materials) also needs to be considered. A diagrammatic model of how these factors can be identified and sequenced is provided in the diagram below:




Source: Dirk Schrenkenburg, 2010.

[7] Schrenkenburg, D, et al., 2010, 'Aircraft Noise and Quality of Life around Frankfurt Airport, *International Journal of Environment Research and Public Health*. Vol 7, p. 3383.
[8] Hauptvogel, H, et al., 2020, 'Being a fair neighbour – towards a psychometric inventory to assess fairness related perception of airports by residents – development and validation of the Aircraft Noise Related Inventory', *International Journal of Environmental Research and Public Health*, Vol 20, p 6113.
[9] *Ibid.*
[10] *Ibid.*

The application of an aircraft noise investigative model based on the above requires a recursive process to capture results over a period (i.e. a longitudinal approach) and test variables to understand how noise affects a range of residents. This longitudinal approach would provide more robust insights in terms of understanding the relationship of noise to diverse population groups. A similar recommendation was put forward by the federal Environmental Health Standing Committee in 2018, which noted it was plausible aircraft, road and traffic noise had differential effects on health, but evidence was not conclusive and further investigation would be required.[11]

## The link between aircraft noise and house prices

The potential for negative impacts of aircraft noise on house prices has been raised by parties both at the Inquiry, and via other external forums. Since 2014, BAC has commissioned the Queensland University of Technology (QUT) to undertake a long-term study to explore the potential impact of aircraft noise on Brisbane residential property prices. The aim of the overall study has been to identify the impact of aircraft noise on residential property values in Brisbane. It includes an analysis of median house price based on geographic location for houses and inner-city units for the period since the NPR has commenced operations. Fifty-three suburbs are analysed within the report, including those within the NPR and legacy runway flight paths.

The results of this longitudinal study has shown that over the past 36 years, there has been a stronger correlation for average annual capital returns based on geographic location, strength of transport and social infrastructure and the socio-economic status of the suburb – in contrast to whether a suburb is exposed to flightpaths or aircraft noise.[12] The study also found that the suburbs identified recorded a higher capital return performance to middle rings and outer ring Brisbane suburbs, despite varying exposures to aircraft noise.[13]

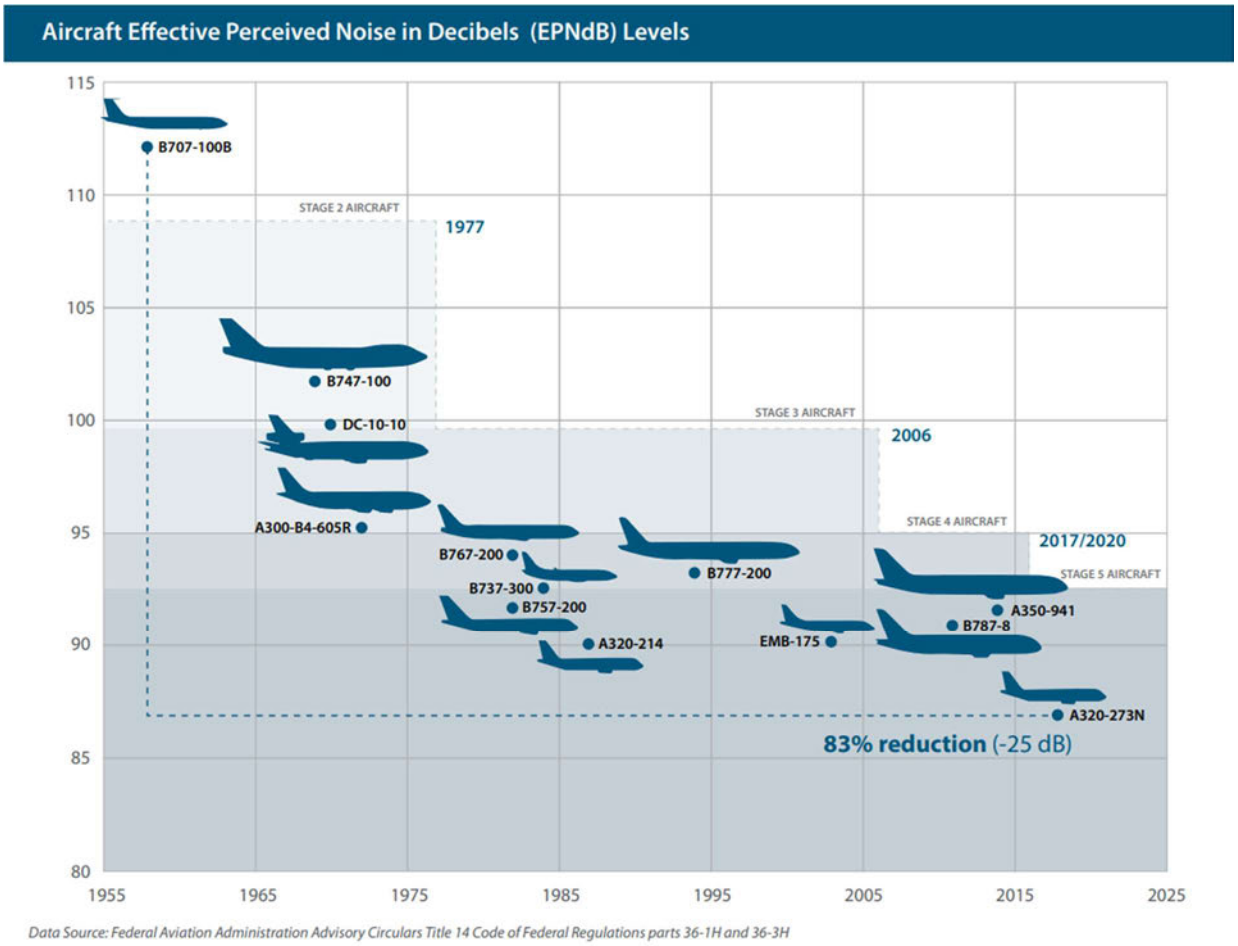
BAC notes the comments made at the Hearing of 15 April and via submissions, criticising the design of the study and the veracity of its findings. A separate written submission has been provided by Dr Andrea Blake to address these criticisms and confirm the study's findings.

## Improvements in aircraft design and efficiency

Improvements in both engine and airframe technologies have resulted in modern civil aircraft being more efficient and quieter. The International Civil Aviation Organisation (ICAO) defines noise limits through a certification process and categorises aircraft according to agreed standards. These standards are referred to as Stages (and an associated reference chapter), with the noisier aircraft as Stage 2 (Chapter 2) and the quieter more modern aircraft as Stage 5 (Chapter 14).

The graphic below shows the relativity of some of the more common aircraft types.

[11] enHealth, 2018, *The health effects of environmental noise,* p.61.
[12] Eves, C, and A Blake, 'The Impact of Aircraft Noise on Brisbane Residential Property Sectors: 1998-2023: Sub Sector Analysis, 2024, QUT Business School.
[13] *Ibid.*

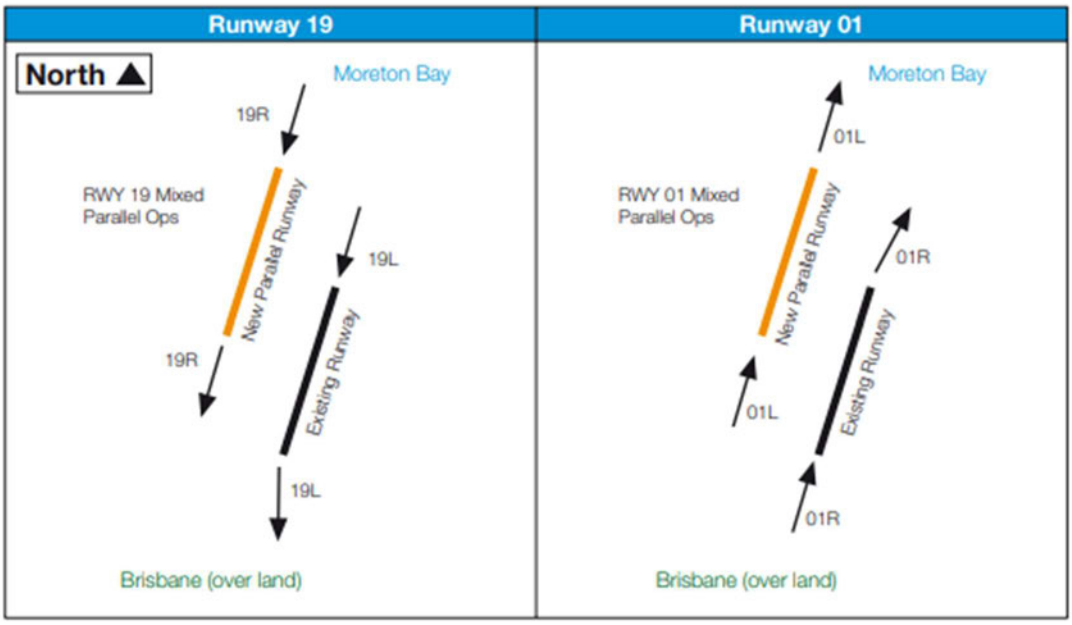



Brisbane Airport is seeing a move towards these quieter, more efficient aircraft. For example, new services from BNE to San Francisco, Los Angeles, and Dallas Fort Worth via US Carriers all use Boeing 787-9 Dreamliners, powered by General Electric GenX engines, which boast approximately 30% lower noise levels than previous generation engines. Similarly, Emirates A380 service to Dubai utilises a mix of Engine Alliance GP7200 or Rolls Royce Trent 900 engines, each operating under Stage 4 noise emissions standards. Domestic airlines too, are moving towards quieter, more efficient aircraft, with Qantas introducing Airbus A220s between Brisbane and Melbourne (operating with a 50% noise footprint reduction) and Virgin increasing its intended 737-Max fleet to 39 aircraft, with a 75% reduction in noise compared to previous 737 variants.

## Runway Operations

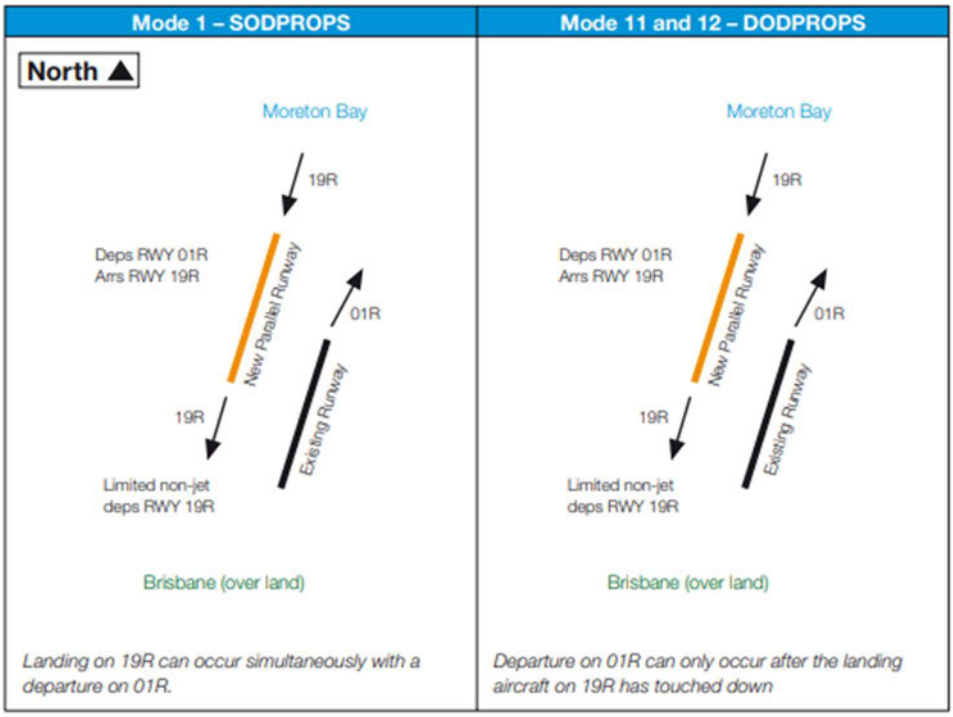
Runway operating modes refer to the way in which air traffic control allow aircraft to take off and land. At a parallel runway airport the key terms are:

**Mixed Parallel operations**: Both runways are being used for aircraft operations.




**SODPROPS:** Simultaneous Opposite Direction Parallel Runway Operations. The runways are operated in opposite directions, meaning aircraft can land and take-off from a particular direction (over the water at BNE)

**DODPROPS:** Dependent Opposite Direction Parallel Runway Operations. The runways are operated in opposite directions, but only one aircraft is moving at one time.



There are other modes used at Brisbane Airport but the majority of the time Brisbane Airport operates in a mixed parallel mode, where aircraft take off and land from both runways. Aircraft are allocated a runway based on their flight direction using a methodology known as 'compass operations'. Aircraft departing or arriving to the south or east use the Legacy Runway, whilst aircraft departing or arriving to the north and west are allocated the New Parallel Runway. This methodology significantly reduces the number of flight paths that intersect, enhancing the safety and efficiency of the airspace.

SODPROPS and DODPROPS are the preferred operating modes to reduce the impact of aircraft noise over neighbouring communities. These operations are restricted by CASA defined weather restrictions and the capacity of the runway system to cope with the scheduled demand. Because the available airspace is restricted to over-the-bay airspace, there is a reduced capacity for aircraft to operate, and the number of aircraft that can be safely managed reduces. This means that these operations are only suitable when the scheduled demand is at low levels.

The 2007 EIS forecast of SODPROPS/DODPROPS usage indicated that these modes would only be used during low traffic periods, with a gradual decline in their usage as the total movements at BAC increased over time.[14] The information presented in the 2007 EIS is consistent with information published at the various stages of the NPR development process and the information provided to the public during the consultation phase. None of the data supports claims that BAC indicated that the majority of aircraft would operate over Moreton Bay. This is supported by the ANO investigation in 2021 which did not find any contemporary documentation disseminated by the information campaign that contained inaccurate information.[15]

Despite these limitations, SODPROPS is BAC's preferred operating mode during periods of low traffic and suitable weather conditions. The Noise Action Plan for Brisbane is continuing to improve the potential use of SODPROPS and extend the operating hours where possible.

## Complaints relating to aircraft noise

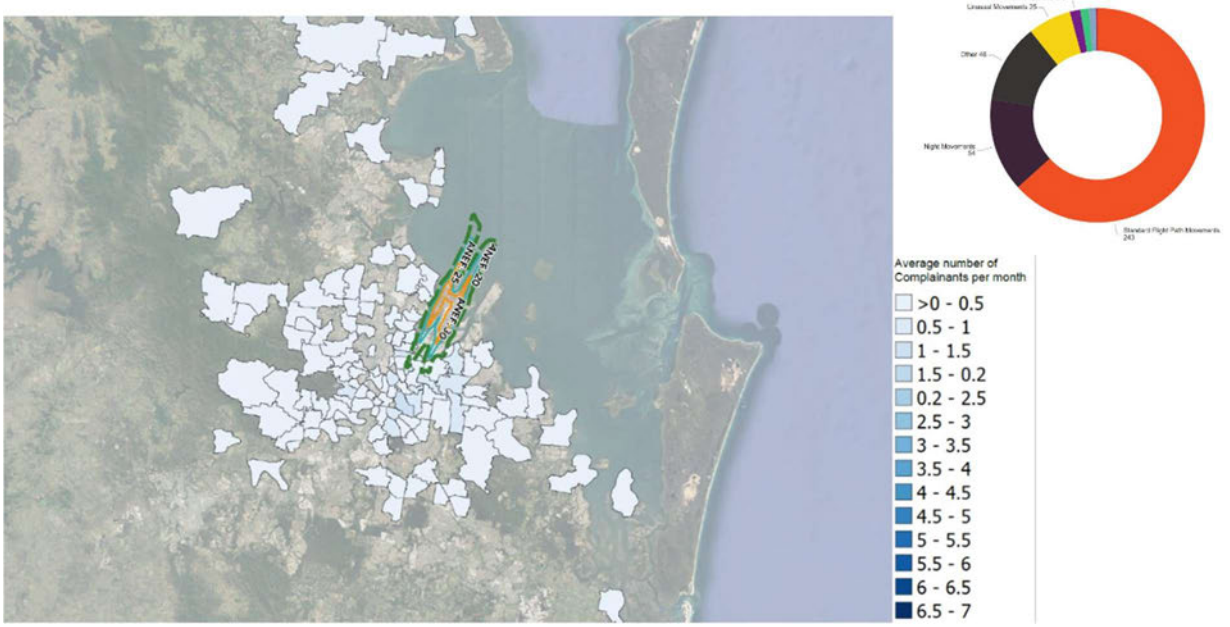
In 2023 BAC received 5,903 aircraft noise related complaints from 249 complainants. Note that approximately 5,000 complaints were from 2 residents (4,054 submissions and 1,000 submissions respectively).

Airservices complaints data has been mapped over the suburbs in the graphics below and shows the suburbs with significant changes in complaint submissions. The most notable differences in complaint numbers are from the suburbs affected by flight paths created for the NPR, including those outlying suburbs that may also be affected by additional airspace (Archerfield and Amberley).

[14] BAC, *New Parallel Runway Draft EIS/MDP*, 2007, pD3 s3.3.1.
[15] Aircraft Noise Ombudsman, 2021, 'Investigation into complaints about the flight paths associated with the Brisbane Airport new parallel runway', 2021, p.23.

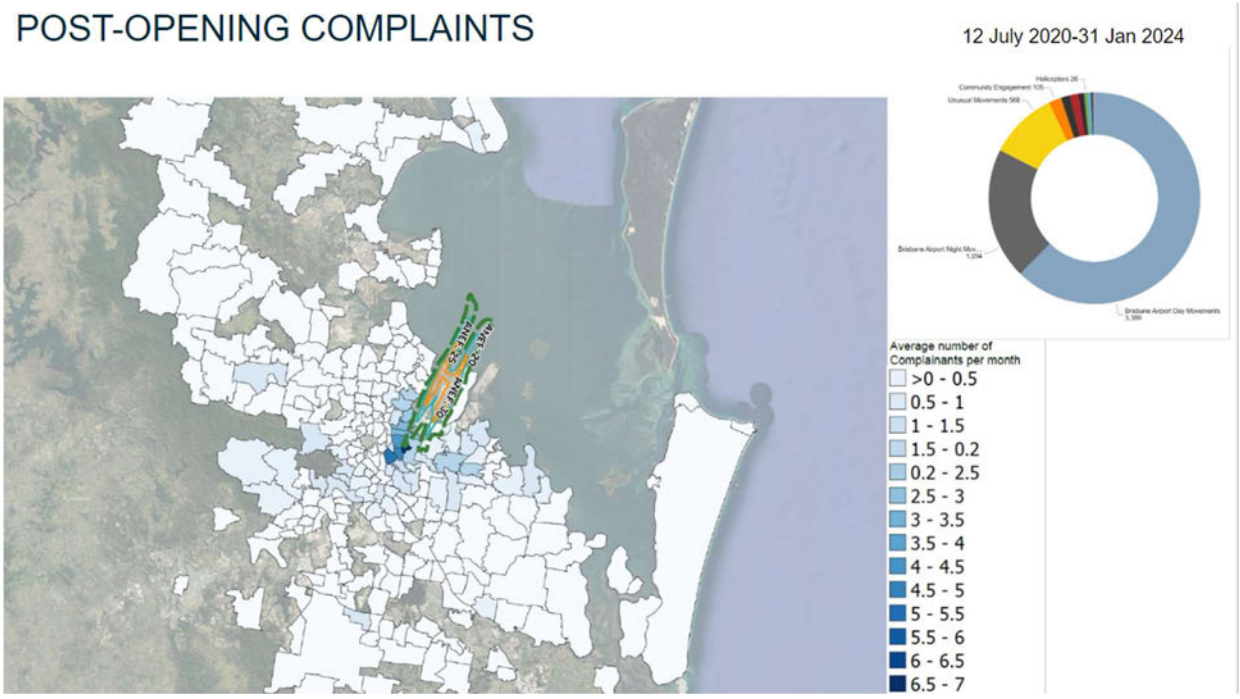
## PRE-OPENING COMPLAINTS

1 Feb 2019-9 July 2020




## POST-OPENING COMPLAINTS

12 July 2020-31 Jan 2024



## SIGNIFICANT CHANGES


**1 Jan 23 – 31 Mar 24**
**Top 20 Complainants**

| | |
|---|---|
| Balmoral | 109 |
| Nundah | 73 |
| Tingalpa | 66 |
| Morningside | 62 |
| Wynnum | 48 |
| Indooroopilly | 43 |
| New Farm | 42 |
| Bulimba | 40 |
| Wakerley | 39 |
| The Gap | 37 |
| Wynnum West | 35 |
| Hamilton | 34 |
| Wellington Point | 34 |
| Cannon Hill | 33 |
| Northgate | 33 |
| Taringa | 32 |
| Clayfield | 31 |
| Chapel Hill | 29 |
| Hawthorne | 29 |
| Carindale | 28 |

Aircraft noise complaints therefore do not reflect compounding issues with aircraft noise across BNE's legacy catchment area. Rather, complaints correlate to suburbs that have not experienced aircraft noise in the past.

### The role of BAC in addressing aircraft noise

As stated in BAC's Preliminary Submission to the Inquiry, there is understandable community confusion regarding the roles and responsibilities of the various organisations that make up the aviation industry. This has led to community frustration at what is seen as a lack of accountability for addressing noise issues.

Responsibility for airspace design, management, navigation and air traffic control primarily sits with Air Services Australia (AsA)**,** a government owned service delivery agency established under the *Air Services Act 1995* (Cth). AsA's legislated functions include the provision of air traffic management and air navigation support to airlines and pilots, including the development and management of flight paths. AsA also manages the national Noise Complaints and Information Service (NCIS) - the Australian aviation industry's main interface with the community on aircraft noise and related issues. AsA is a statutory entity legislated as the sole provider of the above-mentioned services. AsA is funded to provide these services primarily through regulated fees charged to airlines. BAC does not have a direct commercial or contractual relationship with AsA (save for some legacy property leases) and cannot request or compel AsA to conduct its activities in any particular manner.

The primary responsibility of BAC under the Australian aviation framework is building, maintaining and operating airport infrastructure and managing growth in line with lease obligations and the *Airports Act 1997* (Cth). From a noise perspective, BAC must produce Airport Master Plans in 5-year cycles, based on current and future passenger volumes. The Master Plan must include Australian Noise Exposure Forecast (ANEF) contour mapping, modelling noise levels across BNE's airspace. This ANEF contour mapping must be reviewed and endorsed by AsA (for technical accuracy), taking into account runway usage, flight track data, forecast numbers of aircraft movements, operating times, and aircraft types, amongst other factors. The primary purpose of ANEF modelling is to provide planning guidance for off-airport development.

Within this framework, BAC has no direct role in developing flight paths or managing aircraft movements, although does engage with AsA in the design of flight paths and airspace operations suitable to the physical airport infrastructure.

From a noise perspective, AsA remains the key entity to plan, develop and implement strategies to address aircraft noise. Noise mitigation can be addressed at numerous points of AsA's statutory functions, and in particular, flight path design, air traffic management and air navigation. While numerous reviews have been undertaken on AsA's approach to noise management, the implementation of the recommendations from these reviews remains a challenge. For example, as stated at the Hearing of 15 April, 49 Recommendations from AsA's Noise Action Plan (itself based on the Brisbane Airport Flight Path Changes Post Implementation Review) remain to be implemented. We believe that to truly drive outcomes for both industry and the community, AsA needs to be appropriately resourced, and its staff empowered to innovate and engage with industry. BAC remains committed to working constructively with AsA to reduce noise impacts on the community, while balancing the aviation needs of a growing city.

# PART B

## The importance of 24/7 operations

As a burgeoning world city with a rapidly growing multi-cultural population, a diversifying economy, and a renewed focus towards high value exports, Brisbane needs an airport that can facilitate connections internationally, domestically and throughout Queensland. Given the nature of aviation, 24/7 operations are critical to facilitate international tourism, time sensitive freight and domestic connections to key activity centres both intra and interstate. Investment in aviation infrastructure, given its scale and cost, is by nature defined by long time frames, with major developments such as runways and terminals planned across 50-year time horizons. It is for this reason that passenger and aircraft movements are central to the airport planning process, also serving as a proxy to highlight the challenges in balancing investment for future demand with growth.

### BNE Growth Forecasts

BAC is aware of comments made during the Inquiry, and via submissions, that it has sought to overstate passenger forecasts to justify investment in the NPR, and in turn, generate more profits at the expense of community amenity.

FKG Aero, an industry leader in aviation analytics, has developed BAC's passenger forecasts based on an exhaustive methodology comprising a diverse range of inputs. The methodology for passenger forecasts considers supply and demand factors, current market conditions, the pace of the post-COVID recovery, long-term underlying demand trends and the impact of competition from other Queensland airports. The domestic passenger forecast also reflects the dynamics of business, leisure and regional market segments, while the international passenger forecast reflects the nature of different geographical market segments. Long-term trends are estimated using multi-variate analysis of historic data coupled with forecasts of natural population growth, migration, spending power per capita, real ticket prices, construction activity and connectivity growth. Forecasts are then adjusted to allow for recent market developments such as the use of video-conferencing as a substitute for business travel.

Demand to move passengers through BNE is expected to grow considerably across the period to 2045-46 as a result of the considerable population and economic growth. The announcement of the 2032 Olympic and Paralympic Games to be held in SEQ is anticipated to significantly add to and accelerate this growth. This will be partly offset by two key global trends – usage of virtual meetings following COVID-19 and Government initiatives to reach net zero carbon emissions by 2050.

Latest and updated BAC forecasts prepared by FKG Aero reflecting the above trends indicate that by 2045-46, some 17.5 million passengers will pass through the international terminal and 35.6 million passengers will pass through the domestic terminal with a total 53.1 million passengers transiting through BNE.

More specifically between 2025-26* and the end of the 2026 Master Plan (2045-46):

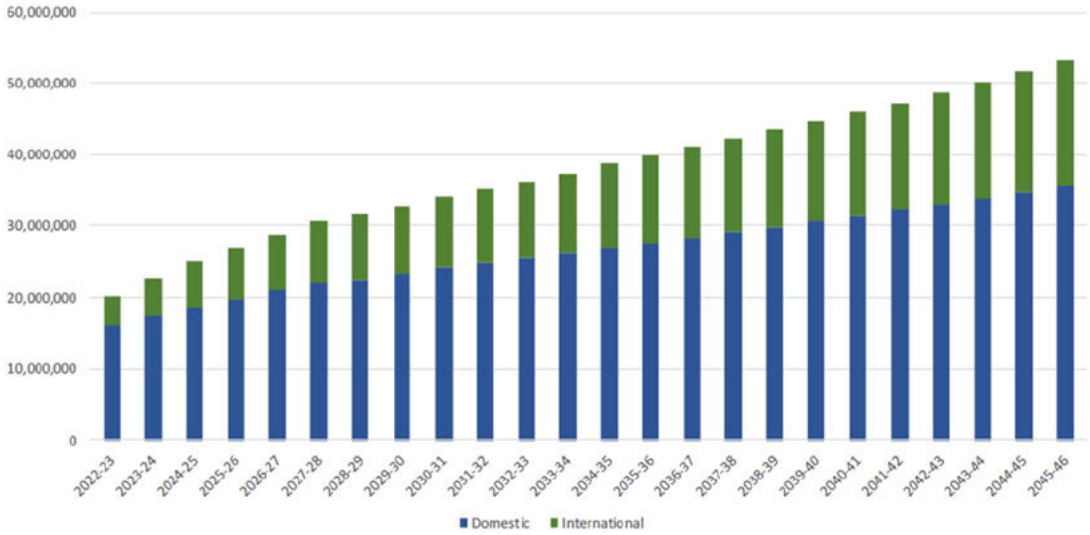
- Annual BNE domestic passengers will grow by 80.2 % or 15,834,042 passengers at an average annual growth rate of 2.8%;
- Annual BNE international passengers will grow by 139.4 % or 10,173,267 passengers at an average annual growth rate of 4.2%;
- Annual BNE total passengers will grow by 96.2 % or 26,007,309 passengers at an average annual growth rate of 3.3%.

**Forecasted Passengers (persons)**

| | 2025-26* | 2031-32 | 2045-46 |
|---|---|---|---|
| Domestic Passengers | 19,745,892 | 24,751,344 | 35,579,934 |
| International Passengers | 7,299,946 | 10,427,315 | 17,473,213 |
| **Total Passengers** | **27,045,839** | **35,178,659** | **53,053,148** |

**2025-26 has been used as the reference year to remove impacts of COVID-19 on passenger numbers.*

Figure 15: Forecasted Domestic and International Passengers




Between 2025-26* and the end of the 2026 Master Plan (2045-46):

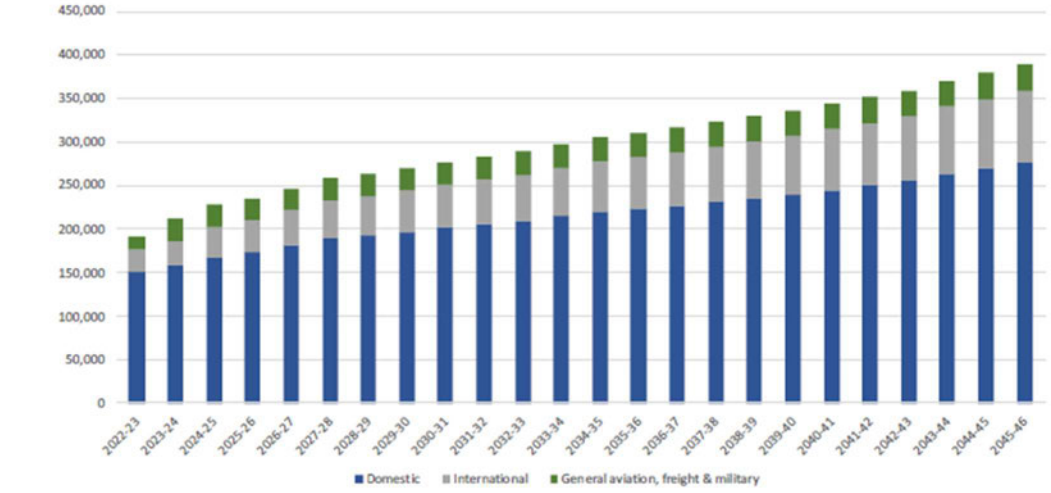
- Annual BNE domestic flights will grow by 59.1 % or 102,350 flights at an average annual growth rate of 2.2%;
- Annual BNE international flights will grow by 123.5 % or 45,683 flights at an average annual growth rate of 3.9%;
- Annual BNE general aviation flights will grow by 20.6 % or 5,164 flights at an average annual growth rate of 0.9%;
- Annual BNE total flights will grow by 65.1 % or 153,197 flights at an average annual growth rate of 2.4%.

**Forecasted Flights (number)**

| | 2025-26* | 2031-32 | 2045-46 |
|---|---|---|---|
| Domestic | 173,235 | 205,642 | 275,586 |
| International | 36,991 | 51,184 | 82,674 |
| General Aviation | 25,054 | 26,503 | 30,218 |
| **Total** | **235,281** | **283,330** | **388,478** |

**2025-26 has been used as the reference year to remove impacts of COVID-19 on passenger numbers.*

Figure 16: Forecasted Domestic, International, General Aviation, Freight and Military Flights

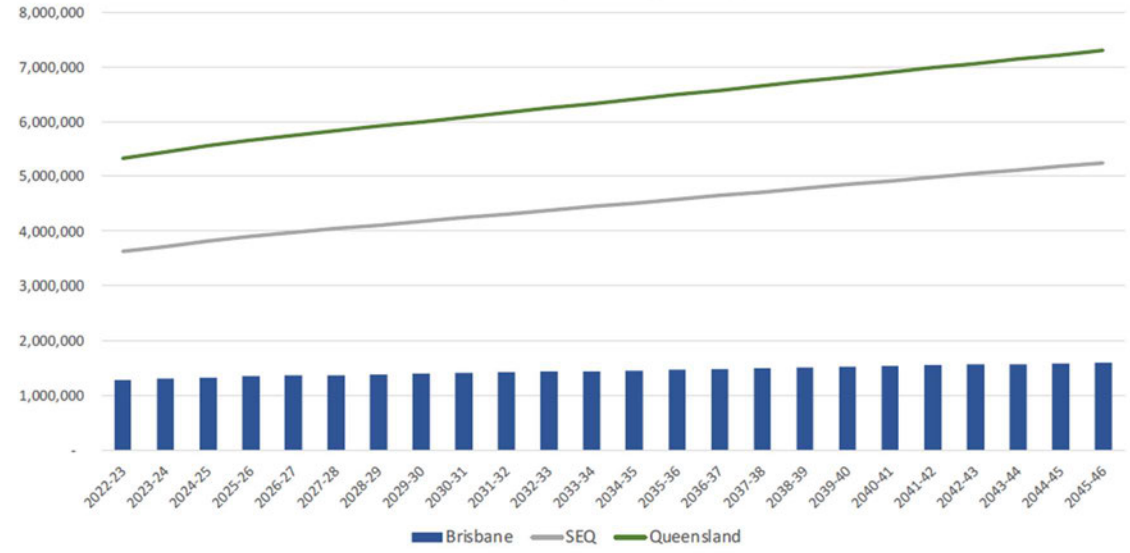



## Forecasted Population Growth

Brisbane's, SEQ's and Queensland's population growth, driven by economic opportunities, lower cost of living relative to Sydney and Melbourne, and an enviable lifestyle is expected to grow by significant levels. Between 2022-23 and the end of the 2046 Master Plan:

- Brisbane's population will grow by 22.8% or 318,296 persons at an average annual growth rate of 0.9%;
- SEQ's population will grow by 41.2% or 1,623,055 persons at an average annual growth rate of 1.6 %; and
- Queensland's population will grow by 34.2% or 1,970,883 persons at an average annual growth rate of 1.3%.

Figure 13: Brisbane, SEQ and Queensland Forecasted Population (persons)




*Source: Queensland Government Statisticians Office 2023.*

### Night Operations (2200 – 0600)

Ten percent of Brisbane Airport's total aircraft movements are between the night hours of 2200 and 0600, with an average of 48 movements (24 take-offs/24 landings) per night in 2023.

In 2023, operations averaged 61% over the bay during these hours. Some airlines perform a higher average than this based on pilot and airline discretion for taking a greater tailwind component.

BNE's night movements consist of a mixture of freight and passenger services that provide key international connections. Nevertheless, it is important to note that international passenger services provide essential international freight to Queensland via capacity in the cargo area of aircraft. In addition, charter flights between 0500-0600 are predominantly to support Queensland's Fly in Fly Out (FIFO) workforce.

Where possible the scheduling of passenger flights is avoided at night, and those that have been scheduled or will be scheduled in the future can be considered essential to the economic and social prosperity of our region.

With the growing needs of the region, there will be an increased need for connections of both passenger and freight services at night. The forecasted growth of these flights over the next decade follows a similar profile to current nighttime movements (i.e. the majority 22:00-23:00 and then 05:00-06:00). The growth of these time periods support the key functions of national and regional freight operations, international connectivity with major hub airports, and capital city flights to enable return travel within a business day.

At a practical level, BNE's growth supports Queenslanders in the following manner:

- Connecting individuals, families and communities to the rest of Australia and the world, enabling wider opportunities for social engagement;
- Facilitating access by those in rural and remote areas to essential and emergency services;
- Enabling businesses, across Queensland and particularly in the tourism industry, to connect their goods and services to their customers; and
- Sourcing from Queensland businesses as part of BNE's extensive supply chain.

Without BNE 24/7 operations, the economic and social opportunities enjoyed by Queenslanders will not be sustained, particularly as our region grows. Further assessment of BNE's contribution is provided below.

## The economic and social contribution of BNE

### Economic

BNE plays a key role as an economic enabler for Queensland, facilitating the movement of people, goods and services to both regional and international markets. This in turn drives long-term growth for Queensland by generating jobs, investment and economic opportunity and contributes significantly to the wellbeing and prosperity of residents.

At a precinct level, the significance of BNE is evidenced in the activities underpinning the operation of 599 businesses at the airport. These businesses directly contribute to the Brisbane and SEQ region through economic activity and job creation; and indirectly through the supply chain and the expenditure of employee wages to create economic activity and jobs.

Three in every four of BNE's businesses are a small business and operate across an extensive range of activities including airlines, food and retail outlets, car rentals, petrol stations, childcare facilities, freight and logistics operators, maintenance firms and transport operators. Collectively, these businesses provide a direct $2.9 billion contribution towards Queensland's economy. Indirectly, BNE businesses provide an additional $1.6 billion through substantial supply chains and employee expenditure, thus creating significant flow on benefits. By 2045-46 (the end of the 2025 Master Plan period) these estimates are expected to rise to $7.5 billion and $4.2 billion respectively.

With respect to employment, BNE's 599 businesses employ 19,610 persons (representing the largest employment clustering in Queensland outside of central business districts) and indirectly through its supply chain and employee expenditure another 14,339 Queensland jobs. By 2045-46, BNE's direct workforce is anticipated to increase to 51,520 and will increase to 37,694 indirect Queensland jobs created.

**Total Economic Contribution ($ millions)**

| | 2022-23 | 2025-26 | 2031-32 | 2045-46 |
|---|---|---|---|---|
| Direct QLD | 2,853.6 | 3,824.0 | 4,973.9 | 7,501.2 |
| Indirect QLD | 1,614.1 | 2,163.1 | 2,813.6 | 4,243.2 |
| Indirect Rest of AUS | 421.9 | 565.3 | 735.2 | 1,108.8 |
| Enabled - QLD | 10,831.6 | 14,515.0 | 18,879.7 | 28,472.6 |
| **Total** | **15,721.1** | **21,067.4** | **27,402.4** | **41,325.7** |

**Total Employment Contribution (persons)**

| | 2022-23 | 2025-26 | 2031-32 | 2045-46 |
|---|---|---|---|---|
| Direct QLD | 19,610 | 26,264 | 34,162 | 51,520 |
| Indirect QLD | 14,339 | 19,216 | 24,994 | 37,694 |
| Indirect Rest of AUS | 3,745 | 5,020 | 6,529 | 9,847 |
| Enabled Employment QLD | 123,874 | 165,998 | 215,915 | 325,623 |
| **Total** | **161,568** | **216,498** | **281,600** | **424,683** |

Furthermore, the 600 businesses at BNE enable trade, tourism, international education, and resources activity that contributes significantly to Brisbane's, SEQ's and Queensland's economic growth and employment. This enabled economic activity occurs through:

- **Domestic and International Tourism:** BNE plays a pivotal role in facilitating domestic and international tourism in Queensland that in turn promotes other opportunities (including conventions and sporting events). BNE acts as a gateway to Queensland, particularly for international visitors and acts as a hub airport for flights within Queensland, particularly its regions. In the latest 12 months, BNE helped enable 11 million domestic visitors and 4.1 million international visitors to Queensland facilitating our State's key tourism industry which injects more than $30b billion into the Queensland economy and creating 206,200 jobs.
- **Regional Queensland Connectivity:** connectivity is one of main drivers of regional Queensland employers being able to attract the right skills and employees. For example, BNE's 7,226 FIFO charters have supported new resource developments across the State. BNE has played its part in helping enable $94.6 billion worth of resource sector economic activity that has created more than 450,800 jobs. Major resource industry participants reliant on BNE to facilitate connections include BHP, Anglo American and Glencore, amongst others.

**Brisbane Airport FIFO Flights (number)**

| | Passengers | Flights |
|---|---|---|
| Charter flights from Domestic Terminal | 252,718 | 5,567 |
| RPT or other flights from Domestic Terminal to non-RPT ports | 16,791 | 370 |
| Charter flights from General Aviation Terminal | 20,043 | 1,205 |
| Charter flights from other terminals | 3,846 | 84 |
| **Total** | **293,398** | **7,226** |

- **International Education:** International Education is one of Queensland's largest service exports and it relies on BNE to bring 122,601 international students to the state.[16] Key learning institutions such as University of Queensland, QUT, Griffith, University of Southern Queensland, Central Queensland University and James Cook University all benefit from BNE's operations. International students studying in Queensland are estimated to be contributing $2.39 billion toward the Queensland economy and creating 13,796 jobs.
- **Supporting access for Queensland businesses:** BNE facilitates access to larger markets for Queensland businesses. Key Queensland sectors utilise BNE airport freight and logistics networks as well as flights to import and export goods, parts, produce, services and skills. BNE has become a crucial multi-modal transport hub for Queensland exporters. In 2018-19 (the year before the impact of COVID-19) BNE was facilitating 76,431 tonnes of exports worth $2.9 billion. This represents 10 percent of exports via Australian airports and approximately 3.4% of Queensland's total exports.

As a consequence of BNE's role in enabling trade, tourism, international education, resources and business sectors, the airport was assessed in 2022-23 to directly enable $10.8 billion in economic activity through the movement of persons, goods and services enabling 123,874 jobs. By 2045-46 this enabled economic contribution will have more than doubled to $28.5 billion creating 325,623 jobs.

## Social

### Connecting Individuals

BNE fulfils the crucial societal function of connecting Queensland's individuals, families and communities. This is particularly relevant for Queensland where there are considerable distances between communities and over 50% of residents living outside of greater Brisbane.

In 2022-23, BNE facilitated the travel of over 5.0 million passengers to and from regional Queensland. Many regional Queensland communities do not currently have any substitute for the services provided by BNE. Moranbah, Gladstone, Emerald, Bundaberg, Miles and Biloela rely solely on BNE for air access to their community. On average, there are 1,131 weekly flights to and from regional Queensland or 159 flights a day. In addition, in 2022-23 BNE facilitated the travel of 11 million passengers interstate. This equates to an average of 1,675 weekly flights or 239 flights daily.

Further, BNE has a major role in dispersing visitors across the State. Just over 31 % of all BNE's domestic passenger movements are on intrastate flights between Brisbane and regional Queensland. With respect to intrastate domestic flights, the main five destinations are Cairns, Townsville, Mackay, Rockhampton and Moranbah.

[16] FY19 numbers, before the COVID-19 pandemic.

**Connecting essential and emergency services**

BNE has a long history in offsetting the geographical disadvantages of living in remote and rural parts of Queensland by delivering essential and emergency services. For example, BNE has helped to bring medical services to the most remote areas in Queensland through more than 4,296 LifeFlight and Royal Flying Doctor Service (RFDS) missions assisting Queenslanders in need. The share of intrastate flights between Brisbane and Queensland's regional centres for essential connectivity, and particularly health services, demonstrates the crucial importance of BNE as a regional hub.

# Impact of Caps and Curfews

When balancing policy and regulatory responses to aircraft noise, consideration needs to be given to the externalities of specific options, and whether on balance, the preferred option provides a net benefit to the community in light of these externalities.

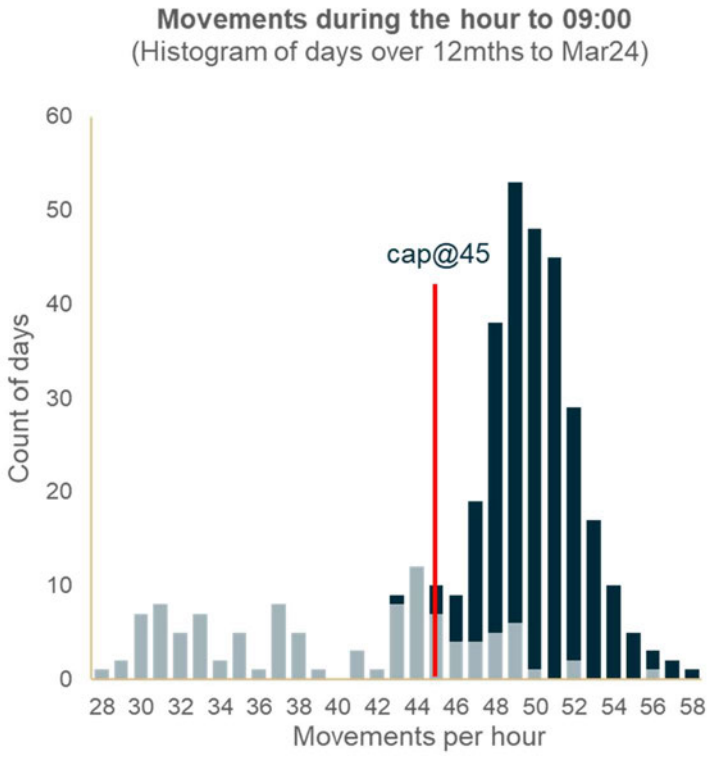
Caps and curfews are a blunt instrument to address aircraft noise, notwithstanding their perceived attractiveness as a quick and conclusive approach to address the issue. In fact, as outlined at the Hearing, and via its Preliminary Submission, caps and curfews would present significant impediments to the BNE and its ability to support connections throughout the region. These impediments would result in a range of economic, operational and passenger impacts, with more acute consequences for the regions.

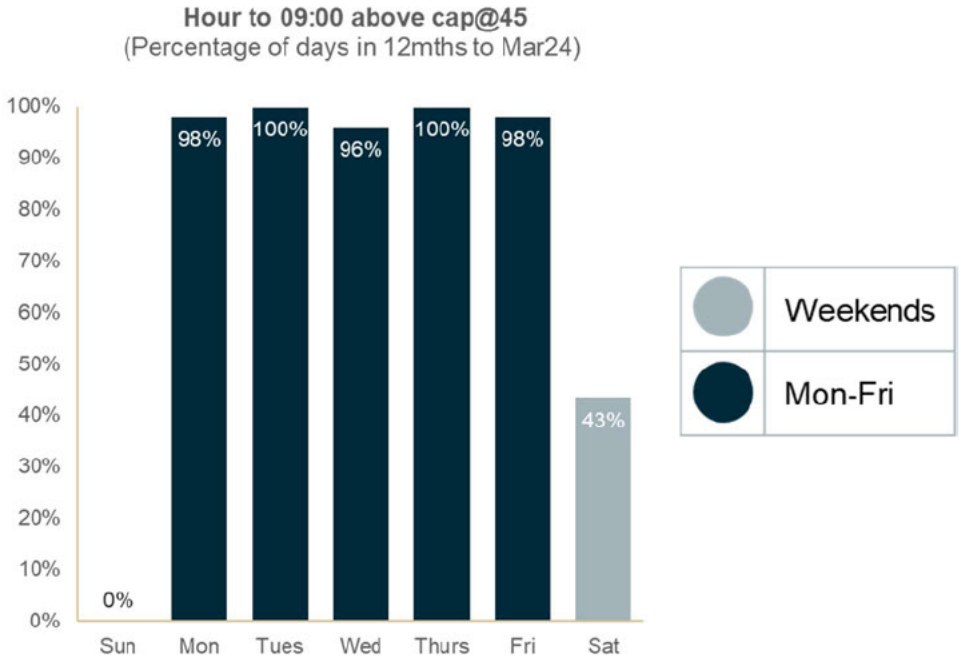
Modelling by respected economist Nick Behrens of Queensland Economic Advocacy Solutions (QEAS) analysed the impacts caps and curfews would have on Queensland communities reliant on Brisbane Airport for tourism, essential deliveries and the exports of goods. BAC notes comments on the methodology, approach and quality of analysis taken by QEAS in undertaking its modelling. A full explanation of the methodology, approach, assumptions, and results is provided in a separate submission by QEAS to the Inquiry.

### Scheduling and Operational Impacts

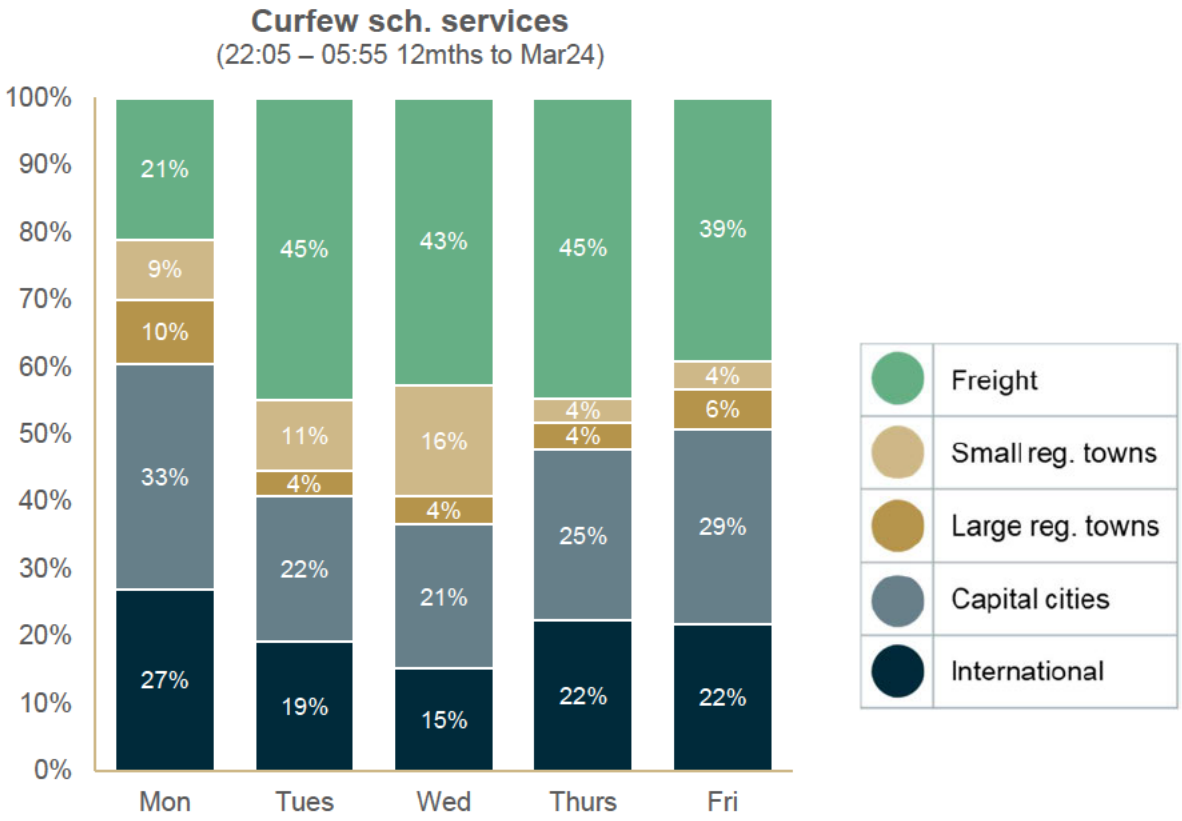
The graphs below outline the impacts of a 45 movements per hour cap as well as a curfew from 10pm to 6am. The introduction of a curfew would see flights scheduled between 10pm to 6am cancelled, whilst others would be transferred into the late evening and early morning peak periods (thus generating further noise within these windows). This would create increased concentration of aircraft movements in these peak periods and therefore more concentrated traffic during this time.

Flights would not necessarily transfer to other times of the day and airlines may take aircraft assets elsewhere to maximise asset utilisation. BNE currently operates around 60 movements per hour during peak times. Weekday schedules are routinely above 45 movements per hour from 8:00am to 09:00am (including passenger, charter and freight services). A cap and curfew arrangement would mean that BNE would exhaust its peak movement allocations at least 98% of the time based on current passenger and traffic volumes.

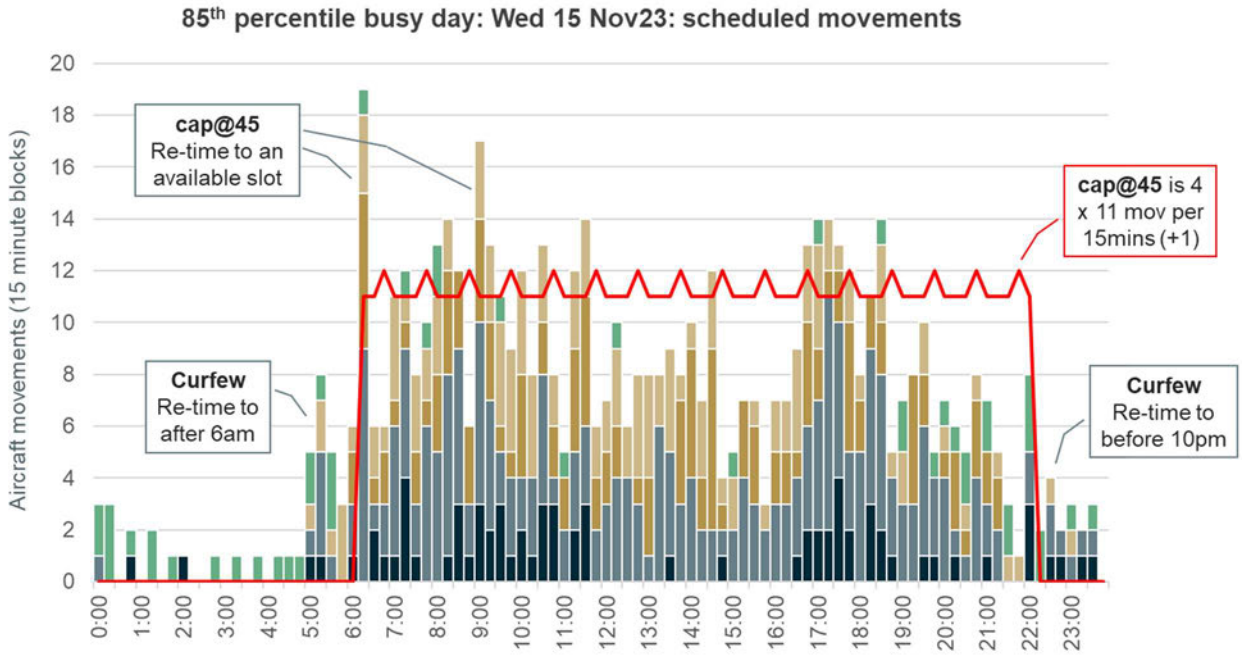




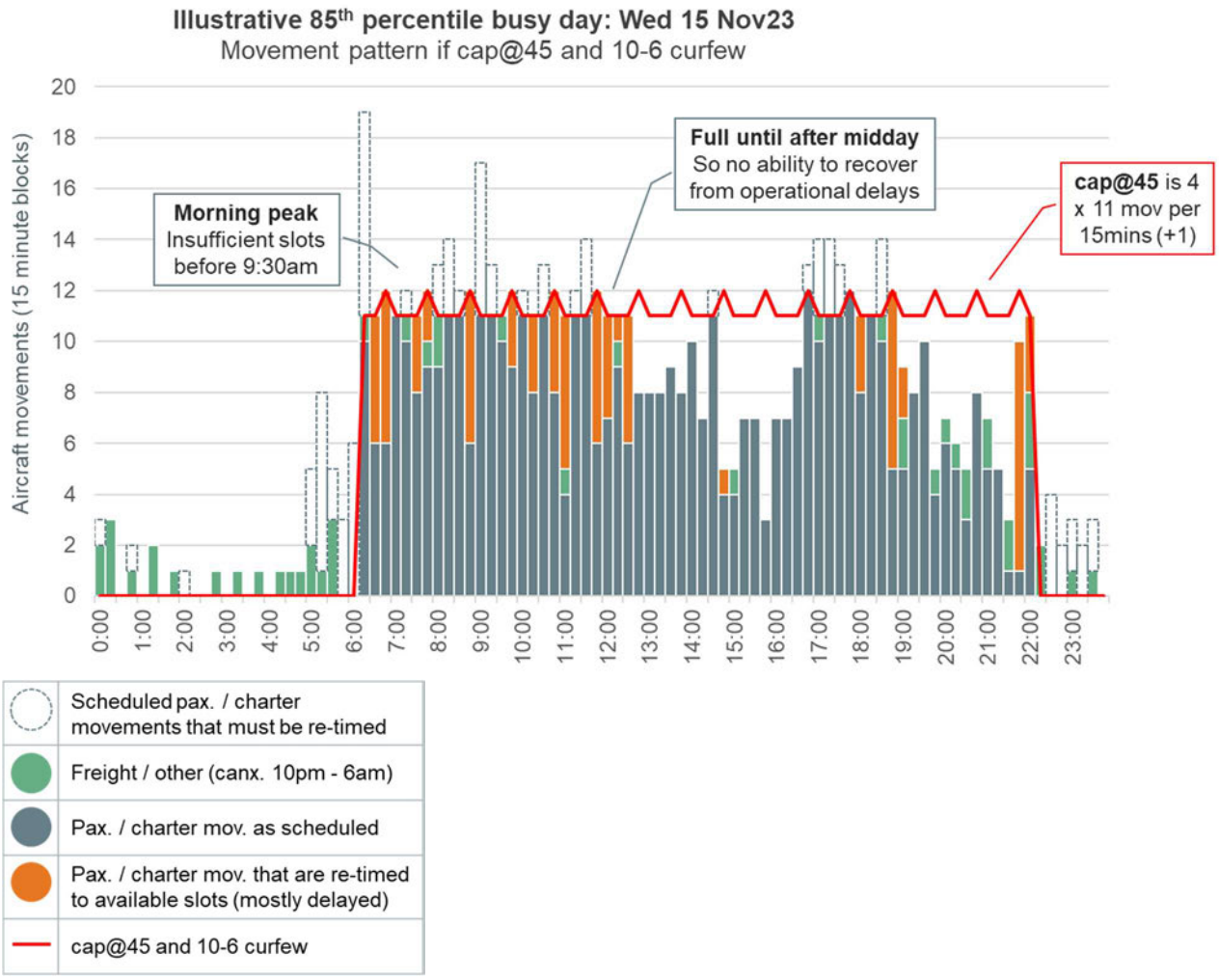

**All types of services will be affected by a 10pm to 6am curfew.**



**A 45 movements per hour cap and 10pm-6am curfew requires some scheduled services to be moved or cancelled.**



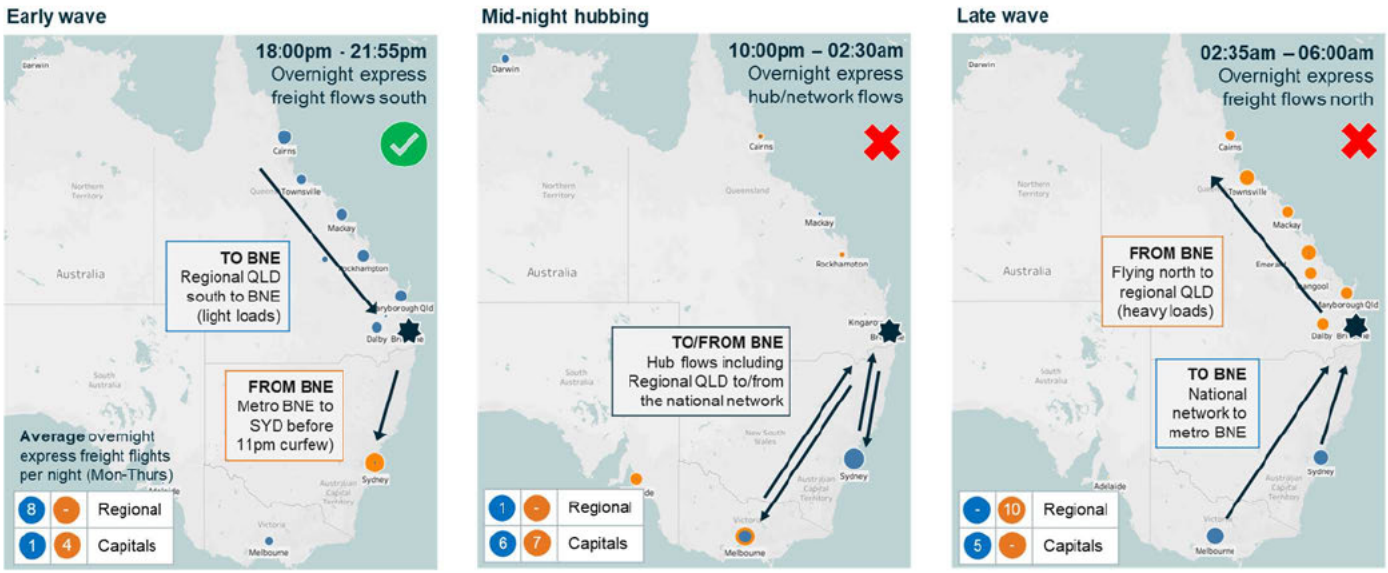

**Illustrative outcome if schedule passenger and charter services must slide to an available slot**



## Freight impacts

Overnight flights allow for reduced freight costs, more efficient delivery of perishable goods and permits early morning deliveries. This has assisted BNE in becoming one of the country's prime air freight hubs, providing essential goods and medical supplies to Queensland's dispersed population.

Overnight express freight routes would be impacted by a curfew as freighter arrivals and departures must be timed to avoid busy hours at Brisbane Airport and on the roads. A curfew of 10pm to 6am would cut key connections between regional Queensland and the national overnight express network. As a result, next day delivery of parts and other time sensitive items would not be able to be guaranteed.




*Source: FKGAero, May 2024*

**Case Study: Hellman Worldwide Logistics**

Hellmann Worldwide Logistics is an international delivery and logistics provider, and a key operator within the global airfreight market, operating across 173 countries including 5 locations in Australia. Since 2005 Hellmann has based its Queensland operations at Brisbane Airport, largely due to the unique connection and operational capacity that Brisbane Airport's 24/7 cap-free status provides. Hellmann operates in partnership with private and commercial airlines for the purpose of international and domestic deliveries – including but not limited to medical supplies, pharmaceuticals, perishable goods, urgent mining equipment, and construction equipment. The impact of a cap and/or curfew to Brisbane Airport would result in significant challenges to the on-time delivery of essential goods and products through Hellmann's operations, including airfreight operating within the 10pm-6am proposed curfew window. In FY2022-23 Hellmann facilitated the delivery of 6,000 tonnes of freight through BNE, of which originated from or was delivered to regional Queensland. Nighttime operations are of significant importance for the efficient delivery of goods to regional ports that aren't serviceable by alternative freight delivery methods. A cap and/or curfew could see the delivery of essential goods, including pharmaceutical goods, to regional ports delayed. Nighttime operations also benefit businesses in regional areas that require deliveries outside of trading hours for the following business day.

The loss of Brisbane Airport's 24/7 cap-free status would not only impact the delivery of goods to regional ports but would have significant impact on staff operating at Brisbane Airport. Due to the 24/7 status at BNE staff can operate around the clock providing more employment opportunities to Brisbane residents. A change to the operations and 24/7 status could see an impact to the wider Australian logistics network as deliveries may require routing delays resulting in further delays to final destination. Changes to the 24/7 cap-free status would also impact international trade and freight deliveries, resulting in limited overnight in-time deliveries.

## Regional impacts

Brisbane Airport's curfew free operations remain central to its role as a major regional dispersal airport. Early morning flights for fly-in fly-out workers, medical professionals and business travellers to regional Queensland are highly important, given the varied and often 24-hour operations of the mining and gas industries.

For example, over the last decade, the resources industry has worked collaboratively with BAC and regional air service providers to establish regular links to resource locations. These links provide access to FIFO workers and key auxiliary services from Brisbane. A major mining company utilising charter service flights out of and into BNE conducts 62 flights a week, totalling 3628 passengers (equating to 3244 flights and 188,656 passengers annually). A 10pm to 6am curfew would reduce the capacity to serve its operations, reducing seat capacity by nearly 20,000 passengers (due to early morning flights being unable to depart during curfew times). Further, where charter services are pushed to peak travel times, it is likely that airlines would prioritise larger planes, resulting in a higher loss of flights (1,612 annually). The impacts on mining operations due to a compromised flow of workers would be significant, both increasing the costs of labour supply, and the ability of companies to operate their projects efficiently.[17]

### Case Study: Royal Flying Doctor Service

The Royal Flying Doctor Service of Australia (RFDS) is integral to facilitating health care to regional and remote Queensland. Established in 1928 by the Reverend John Flynn, the RFDS has grown to become the largest and most comprehensive aeromedical organisation of its kind in the world. It delivers 24-hour emergency aeromedical and primary health care services to all those who live, work, and travel throughout Australia.

The RFDS lands at Brisbane BNE Airport on average 10 times a day, 24/7, 365 days a year.

In 2022/23, there were 3,241 RFDS aircraft landed at Brisbane Airport, underlining the strategic importance of its aviation presence close to many of the leading tertiary hospitals in Brisbane.
An estimated 4296 patients transport via Brisbane Airport for emergency and non-emergency health services in 2022-2023.


| From Airport to BNE Airport | Number of flights |
|---|---|
| Hervey Bay (lic) | 625 |
| Rockhampton (lic) | 600 |
| Bundaberg (lic) | 459 |
| Gladstone (lic) | 299 |
| Toowoomba (lic) | 166 |
| Kingaroy (lic) | 150 |
| Emerald | 92 |
| Brisbane West Wellcamp | 83 |
| Roma (lic) | 77 |
| Mackay (lic) | 64 |
| Maryborough (lic) | 61 |
| Townsville (raaf/Lic) | 46 |
| Brisbane | 39 |
| Dalby | 39 |
| Sunshine Coast | 39 |
| Longreach (lic) | 38 |

*Originating airport of RFDS flights to BNE Airport FY22/23 and top 15 locations*

In Queensland, the RFDS currently operates from nine regional bases at Brisbane, Bundaberg, Cairns, Charleville, Longreach, Mount Isa, Rockhampton, Roma and Townsville. Brisbane forms a critical link in RFDS' strategic network of aeromedical services as well as a broad range of health care programs.
These include general practice, Aboriginal and Torres Strait Islander health, child and family health, social and emotional wellbeing, mental health, women's health, oral health and health promotion activities.

24/7 operations at BNE are critical for the RFDS network, and its ability to deliver high quality care to regional and remote Queensland. The use of caps and curfews bears a real risk of RFDS regional services having to compete for slots during peak times. This will have direct implications for regional and remote residents accessing regular health services in Brisbane, and introduce scheduling and operational complexities across the RFDS network.

[17] Source withheld at its request.

Most regional Queensland airports rely on the availability of services to and from BNE for domestic air travel. For six regional airports, 100 % of their passenger movements are to and from BNE (Moranbah, Gladstone, Emerald, Bundaberg, Miles and Biloela). For these communities, all passenger movements (100 %) occur on point-to-point services between Brisbane and these cities. BNE is also a key connecting airport for the larger regional centres such as Rockhampton and Mackay, accounting for the bulk of passenger movements.

In 2022-23 BNE facilitated the travel of over 5.0 million passengers to and from regional Queensland. On average each week there are 1,131 flights to and from regional Queensland or 159 flights a day. In summary, the share of intrastate flights between Brisbane and Queensland's regional centres demonstrates the crucial importance of BNE as an intrastate hub. BNE's operations play an essential role in the social, economic and cultural sustainability of Queensland and its regional centres.

**Domestic Fight Movements by Queensland Cities and Towns 2022-23**

| Name | Passengers | Flights |
|---|---|---|
| Cairns | 1,211,624 | 8,249 |
| Townsville | 869,494 | 7,130 |
| Mackay | 749,475 | 6,491 |
| Rockhampton | 476,982 | 6,364 |
| Proserpine | 293,212 | 2,296 |
| **Moranbah*** | 248,276 | 6,009 |
| **Gladstone*** | 206,992 | 4,016 |
| **Emerald*** | 191,578 | 3,906 |
| Hamilton Island | 172,594 | 1,526 |
| Mount Isa | 146,459 | 1,640 |
| **Bundaberg*** | 111,868 | 2,391 |
| Hervey Bay | 75,757 | 1,650 |
| Roma | 61,915 | 2,812 |
| Norfolk Island | 38,028 | 658 |
| Longreach | 23,437 | 426 |
| **Miles*** | 11,648 | 425 |
| Blackall | 8,751 | 159 |
| Barcaldine | 8,033 | 156 |
| Charleville | 7,679 | 420 |
| Toowoomba | 6,683 | 397 |
| Weipa | 5,987 | 91 |
| **Biloela*** | 4,587 | 383 |
| Birdsville | 322 | 9 |
| Thargomindah | 154 | 14 |
| Windorah | 154 | 7 |
| St George | 75 | 5 |

**Denotes 100 % reliance on BNE for air connectivity*

Cairns, Townsville, Mackay and Rockhampton would be the most affected economically, given both the importance of the agriculture, resources and tourism industries to these cities, and their underlying population densities.

The reduction in regional Queensland employment is forecast at:

- 3,525 regional jobs by 2025-26;
- 6,905 jobs by 2031-32; and
- 16,414 regional jobs by 2041-42.

**Annual Economic Losses by Major Queensland Cities and Towns ($ millions – 2023 dollars)**

| | 2025-26 | 2031-32 | 2041-42 |
|---|---|---|---|
| Cairns | 81.4 | 159.20 | 376.5 |
| Townsville | 58.4 | 114.2 | 270.2 |
| Mackay | 50.4 | 98.5 | 232.9 |
| Rockhampton | 32.1 | 62.7 | 148.2 |
| Proserpine | 19.7 | 38.5 | 91.1 |
| Moranbah | 16.7 | 32.6 | 77.1 |
| Gladstone | 13.9 | 27.2 | 64.3 |
| Emerald | 12.9 | 25.2 | 59.5 |
| Hamilton Island | 11.6 | 22.7 | 53.6 |
| Mount Isa | 9.8 | 19.2 | 45.5 |
| Bundaberg | 7.5 | 14.7 | 34.8 |

**Employment Losses by Major Queensland Cities and Towns (persons)**

| | 2025-26 | 2031-32 | 2041-42 |
|---|---|---|---|
| Cairns | 857 | 1,678 | 3,989 |
| Townsville | 615 | 1,204 | 2,863 |
| Mackay | 530 | 1,038 | 2,468 |
| Rockhampton | 337 | 661 | 1,570 |
| Proserpine | 207 | 406 | 965 |
| Moranbah | 176 | 344 | 817 |
| Gladstone | 146 | 287 | 682 |
| Emerald | 135 | 265 | 631 |
| Hamilton Island | 122 | 239 | 568 |
| Mount Isa | 104 | 203 | 482 |
| Bundaberg | 79 | 155 | 368 |

### Regional ring-fencing considerations

A regional ring fence, as used at Sydney Airport, is a mechanism that reserves a proportion of slots at an airport for flights classed as regional (as defined under legislation). The premise of the mechanism is to avoid the externalities presented by caps and curfews, namely, having regional flights deprioritised or cancelled in favour of higher volume metropolitan or international flights.

Under the current Sydney Airport arrangements, a set percentage of peak hour slots are designated as only available for regional flights, together with regulated pricing for airport charges. These slots cannot be moved between peak and non-peak hours and cannot be traded for non-regional slots at other times of the day.

In theory, this ensures that regional carriers and passengers are assured access to Sydney Airport at key times. However, reviews of the scheme have highlighted difficulties in fully utilising slots at specific times (i.e. a high proportion of slots going unused), or in other cases, lack of slots due to airlines seeking higher volume arrivals/destinations in high demand regional locations. These factors lead to significant challenges in the operation of the airport and can result in airlines operating flights at times that are mis-aligned with passenger demand.

## Impacts on passengers and flights

### Removed services and cancelled flights

BNE operates in a global aviation network and has minimal flexibility in international flight times. BNE's 24-hour operations are critical to enabling certain flights to connect with key network hubs, such as Dubai and Singapore. BNE must compete with other airports (both nationally and internationally) to allow for the most attractive times for major carriers to connect to key hubs. Having airlines schedule their aircraft to align with key hubs means that flights are commercially viable, ensuring sustained services over the long term. Sustained services in turn, provide the aviation access necessary to benefit Brisbane and Queensland. If a curfew were imposed, services to key international growth destinations including Hong Kong, Singapore, Dubai and Kuala Lumpur would be jeopardised. This would risk losing 328,000 passenger movements each year, including more than 160,000 international visitors and domestic holidaymakers. A lack of international services in turn, will have direct implications to our tourism, freight and export sectors.

### Inconvenient domestic flight times

The imposition of a curfew and 45 flights per hour cap would lead to re-scheduling of flights. This would lead to flights being rescheduled with sub-optimal travelling times. Domestic flights are dependent on business demand, particularly in summer. Early morning flights are vital for inter-state business travel, particularly to southern states. During other states' daylights savings period, flights from Brisbane to Melbourne, Sydney and Canberra are required to leave prior to 6am to land in-time for the business day. The introduction of a curfew would prevent this, likely seeing these flights cancelled and significantly impeding inter-state commerce.

### Flight delays

There are already significant operational constraints at BNE in the 6am morning peak, whereby 10,000 plane movements per year occur to key domestic and international destinations. A curfew and flight cap would exacerbate these challenges as flights captured under an operating curfew would seek to move into the first available slot. Further challenges occur where flight delays, whether due to weather conditions or operational issues, cause flights to arrive or depart outside of an allocated slot. In these cases, flights are regularly cancelled, causing significant inconvenience to passengers and costs to airlines. It is for this reason that SYD – with strict cap and curfew arrangements – has the highest rates of cancellations around the country, a fact that has caused increased scrutiny of industry performance in the media (**see Appendix C**). Re-scheduling flights to just outside curfew hours would also lead to congestion and delays for arriving international passengers at immigration, baggage collection and border protection.

### Accommodating diverted aircraft

As the only large curfew-free international airport on the Australian east coast, Brisbane serves an important role in accommodating diverted aircraft. Aircraft delayed due to weather that cannot meet the Sydney, Newcastle or Gold Coast curfews often divert to Brisbane as an alternate destination. A curfew would prevent Brisbane Airport from accommodating diverted flights overnight. This would result in many flights unable to meet Australian curfews to be cancelled or postponed overnight as airlines would be unwilling to take the risk of having no landing site. Cancelling and overnighting flights represents a major inconvenience for passengers and a significant cost to airlines.

# BAC's history of engagement and action on the 2nd Runway

BAC is aware of claims it did not engage adequately with the community when planning and constructing the NPR, or where it sought to engage, it did not do so in an open and transparent manner.

BAC received clear guidelines from the Department of the Environment and Heritage, and the Department of Transport and Regional Services, on the requirements of the Environment Impact Statement (EIS), which included extensive requirements around assessing and communicating noise impacts. BAC complied with these guidelines and met all recommendations in relation to the evaluation of noise impacts on communities.

BAC published consistent information on the operation of the NPR from the time of the 1998 Master Plan to the opening of the NPR in 2020. This information clearly outlined the noise impacts on communities and was based on the best noise modelling available at the time. Airservices Australia developed the final flight path design and compared it to the original EIS proposal. The design of the NPR was assessed as consistent with the EIS, noting some minor changes to the noise contours (including the reduction of contours in some areas).

The community engagement program undertaken by BAC during the planning, design and construction of the NPR was the most extensive in its history and was designed to reach as many community members as possible, with information provided through a range of mediums. An outline of engagement undertaken by BAC upon the announcement of the NPR to its opening is provided below:

**Community Engagement Activities**

**Draft EIS/MDP engagement activities (public comment period: 3 October 2006 – 6 Feb 2007)**

| | |
|---|---|
| Community Information sessions | 3 sessions (80 people attended):<br>• Pacific Golf Club Carindale (Brisbane south);<br>• Virginia Palms Hotel Boondall (Brisbane north);<br>• Bardon Conference Centre (Brisbane west) |
| Community Group presentations | 138 presentations |
| Regional roadshow | 13 locations including Longreach, Cairns, Dalby |
| Information Kits | 3,913 kits distributed |
| Free call Information Line | 282 calls received |
| Community Information Centre on airport | 161 visitors |
| Draft EIS/MDP distributed | • To Federal, State and Local Council members in Queensland;<br>• Local Government centres across SE Qld;<br>• Qld State Library<br>• Local libraries in BCC, Logan City, Ipswich City, Redland Shire, Caboolture Shire, Beaudesert Shire and Pine Rivers Shire |
| Draft EIS/MDP on BAC's NPR Project website | 22,709 webpage visits |
| Digital, print, TV campaign | 56 print; 68 radio and 11 television media stories during the public comment period.<br><br>110 ads placed in The Australian, Courier Mail and Quest Community Newspapers |

**Pre-NPR engagement activities (2009 – 2020)**

| | | | |
|---|---|---|---|
| Community Information Exchanges/ Information sessions/Community Forums | 2009 – 2015 | 18 events | Approx 852 attendees |
| Public Information displays/ Festivals | 2009 – 2018 | 36 events | Approx ,836 attendees |
| Discovery Centre | Opened 15 July 2010 – July 2016 | N/A | Approx.00 attendees |
| Mobile information centres | November 2018 – July 2020 | 77 events across 103 days | Approx 16,221 visitors |
| BAC Online community Forum | 2009 – 2011 | 257 enquiries posted | N/A |
| Bus tours | 2008 – 2020 | 573 bus tours | Approx 15,615 tour guests |
| Community presentations | 2008 – 2020 | 138 presentations | N/A |
| 1800 phone line | 2007 – 2020 | 1,106 phone calls | N/A |
| Email submissions | 2008 – 2020 | 879 emails | N/A |
| Community briefing (at home) | 2009 | 1 briefing | 10 attendees |
| Industry briefings | 2016 – 2020 | 47 briefings | Approx 1,200 attendees |
| Runway Seminars | 2018 | 9 Seminars | Approx 170 attendees |
| Site tours | 2014 – 2020 | 97 tours | N/A |
| On airport events (e.g. open house) | 2014, 2017, 2019 | 3 Open Houses | Approx 376 attendees |
| Brisbane Airport Community Aviation Consultation Group | 2009 – 2020 | 42 meetings | N/A |
| Technical noise Working Group | 2009 – 2014 | 10 | N/A |
| Brisbane Airport Advisory Group | 2017 – 2018 | 2 | N/A |

**Communication Materials**

| | | | |
|---|---|---|---|
| Fight Path and Aircraft Noise Information Booklet | 2014 – 2020 | Hard copies | Online: 2018 – 2020 (only stats available)<br>7,656 downloads |
| Project Emails | 2007 – 2015 | 24 emails sent | Sent to approx.. 1,000 per email send |
| Take off Email Newsletter | 2018 – 2020 | 15 | Combined send to 106,052 subscribers<br>Average send 7,070 subscribers |
| Airport News BNR Special Edition | 2018 – 2020 | 4 | Combined send 1,284,465 subscribers Average send 321,116 subscribers |
| Airport News with BNR inclusion | 2017 – 2020 | 26 | Combined send 11,979,128 subscribers Average send 460,736 subscribers |
| Take Off printed Newsletter | 2017 – 2020 | 7 editions | 3,500 total distribution |
| Virtual Reality experience | 2019 – 2020 | Delivered as part of information centre | N/A |

| | | | |
|---|---|---|---|
| QUT Research report: Impact of Aircraft noise on Property Prices | 2014 – 2020 | 6 editions | 2,164 total downloads plus print |
| Noise improvement technical report and summary | 2019 – 2020 | N/A | 28 downloads of summary, 16 downloads of full report, plus print distribution |
| Queensland Urban Utilities Letterbox drop | 2019 | 1 | 1 million QUU customers |
| BNE Magazine | 2012 – 2020 | 44 editions | 1,410,000 copies distributed |

**Paid media**

| | | | |
|---|---|---|---|
| Quest advertisement | | | |
| Quest advertorial City News, Northside Chronicle City North News | 2009 – 2012 | 78 advertorials | Distribution of more than 150,000 per fortnight |
| BMag Advertorial | July 2011 – June 2016 | 130 advertorials | Distribution of 450,000 per fortnight |
| The Australian "the Deal" Advertisement | 2019 | 1 full page advertisement | The Deal readership 49,000, The Australian readership 538,000 |
| Queensland Infrastructure report Advertisement | 2019 | 1 | 538,000 readership |
| Urban List Paid Feature | 2020 | 1 article<br>Social channels<br>1 newsletter link | Newsletter distribution 86,000 readers |
| Village News | 2018 – 2020 | 8 full page advertisements | 50,000 across each edition<br><br>400,000 total distribution |
| Letterbox drop | 2009 – 2020 | 27 | Total distribution 614,195 households |
| Real estate.com.au digital advertising | 2019 | N/A | 10,543,790 total impressions |
| Real estate.com.au paid editorial | 2019 – 2020 | 3 articles | 67,521 page views |
| Billboards | 2018 – 2020 | 175 | 10,454,000 impressions |
| Radio Advertisements | 2018 – 2020 | 1066 | 2018: 1.788M people<br>March 2019 – March 2020: 534 live reads |
| Cinema Advertisement | 2020 | 30 sec video shown pre movie at 19 cinemas | 34,366 impressions |
| Search Advertising | 2019 – 2020 | 14,097 clicks | 49,120 impressions |
| Article advertising on publishing sites | 2019 -2020 | 106,967 clicks | 33,918,689 impressions |
| News Corporation Future Campaigns | 2019 | 28 pages in print and 13 digital articles | 8,0197,008 impressions |

The Aircraft Noise Ombudsman (ANO) found BAC had delivered a 'well resourced and extensive campaign' to inform the public of potential impacts from the NPR. Further, despite numerous claims from complainants of mis-information on the noise impacts, the ANO found no supporting evidence of this in NPR documentation or supporting public material.[18]

[18] At 15, p.22.

Post NPR opening, BAC has continued to commit to high levels of engagement with the community. For example, BAC contributed to Airservices Post Implementation Review (PIR), including the attendance at various community forums and workshops. BAC is also a key stakeholder in the Noise Action Plan (a development from the PIR) and meets weekly with AsA's Program Office to discuss the implementation of key PIR recommendations. BAC has also supported the establishment of the Brisbane Airport Community Airspace Advisory Board as a key forum to engage the community and consult on noise issues.

**Community Reputation Index**

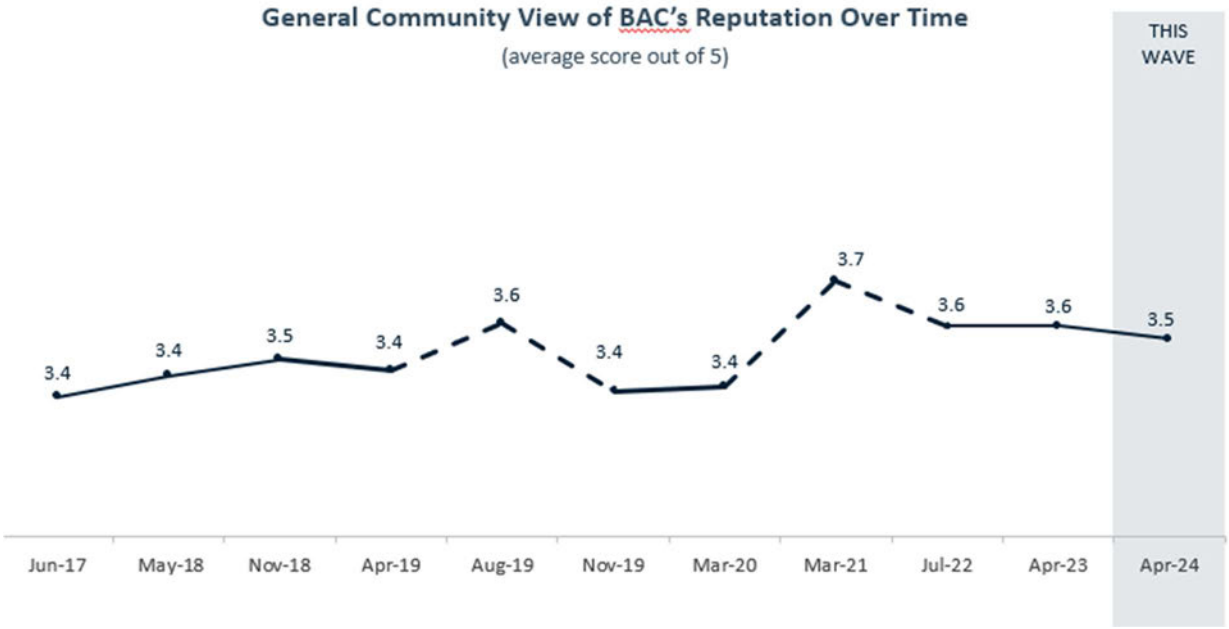
As outlined in our Preliminary Submission, BAC places a high value on its social contract with the community. To measure its perception with the community, BAC engages Enhance Research to undertake an annual survey with community members and calculate a Community Reputation Index (scored out of 5). The Index is calculated via weekly surveys of residents in key suburbs surrounding BNE, grouped according to Federal electorates including:

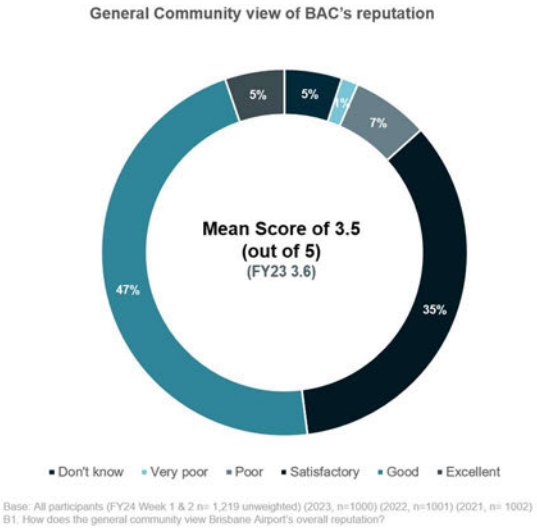
- Brisbane
- Griffith
- Lilley
- Moreton
- Ryan
- Bonner
- Bowman
- Dickson; and
- Petrie

Since 2017, BAC has maintained a high community score, consistently rated between 3.4 and 3.7 out of 5. The most recent report for FY23 (surveying 1809 residents) has provided a mean score of 3.5, with a majority of respondents rating BNE as 'good' or 'excellent'. This score reflects consistency in community perception since the opening of the NPR in 2020. Residents also reflected a very high level of agreement on the following statements:

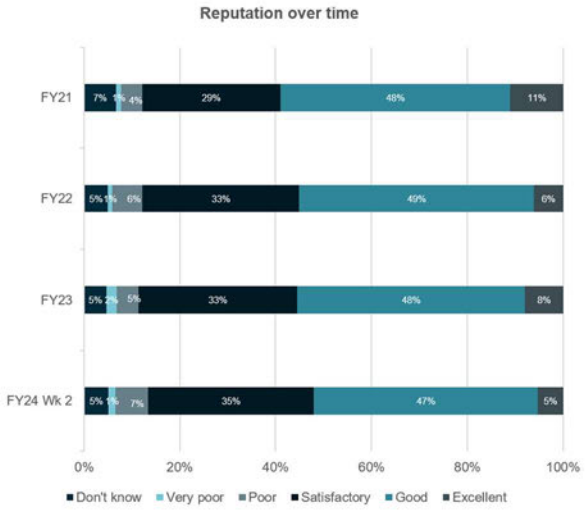
- 'BNE benefits tourism' (93% agreement)
- 'BNE is essential for freight and cargo' (89% agreement) and
- 'BNE is a good thing for Queensland' (90% agreement).

Regarding perceptions on aircraft noise, 70% Greater Brisbane residents surveyed reported experiencing planes flying across their suburbs. For those experiencing planes flying over their suburbs, there was a high level of agreement that they 'rarely notice the planes flying over' (48%) or 'enjoy watching the planes' (47%). Amongst those who experience planes flying over their suburb, 27% of residents stated that they are impacted by aircraft noise, however only 8% feel strongly that they are negatively impacted. Residents surveyed also stated support for BNE's future growth, with 71% of respondents 'happy to see flight numbers and passenger numbers at BNE grow over the coming years.'




Base: All participants (FY24 Week 1 & 2 n= 1,219 unweighted) (2023, n=1000) (2022, n=1001) (2021, n= 1002)
B1. How does the general community view Brisbane Airport's overall reputation?



# PART C

## Potential options to improve noise outcomes

When considering policy and regulatory solutions to address aircraft noise, it is imperative to consider the underlying complexity of the aviation ecosystem, and to provide solutions that are in sync with the characteristics of each airport and the regions they serve. One size fits all solutions, or blunt approaches to addressing noise, are more likely to have detrimental effects to the sector, and compromise its ability to meet future growth. Further, poorly calibrated solutions – such as caps and curfews – will do little to address the underlying causes and effects of noise. Effective, enduring solutions to addressing noise requires significant collaboration between aircraft manufacturers, airlines, air traffic control organisations, regulators, governments and airports. This will be an ongoing program of work requiring a constructive and open relationship between industry and the community.

### ICAO Balanced Approach

ICAO is the United Nations specialised agency that serves as a forum for cooperation in all fields of civil aviation among its 191 Member States. Australia is a founding member of ICAO and sits on its Governing Council. In 2001, the ICAO Assembly endorsed the concept of a 'Balanced Approach' to aircraft noise management. In 2007, the Assembly reaffirmed the 'Balanced Approach' principle and called upon States to recognise ICAO's role in dealing with the challenges of aircraft noise.

The 'Balanced Approach' concept involves identifying the noise problem at an airport and then analysing the various measures available to reduce noise, in the most cost-effective manner, through exploration of four principal elements, namely:

**1. Reduction at source (quieter aircraft):** much of ICAO's effort to address aircraft noise over the past 40 years has been aimed at reducing noise at source. Aircarft and helicopters built today are required to meet the noise certification standards adopted by the Council of ICAO. Examples of options that could be explored in Australia are:

- Legislative changes to limit nighttime operations to aircraft that do not meet ICAO Chapter 14 requirements (a federal government decision);
- Airline fleet renewal programmes to replace older aircraft with more noise efficient aircraft (an industry decision); and
- The introduction of noise incentives into aeronautical agreements with airlines to encourage fleet replacement programs (an industry decision)

**2. Land-use planning and management:** land-use planning and management is an effective means to ensure that the activities nearby airports are compatible with aviation. Its main goal is to minimise the population affected by aircraft noise by introducing land-use zoning around airports. Compatible land use planning and management is also a vital instrument in ensuring that the noise reduction gains achieved by latest generation aircraft are not negated by inappropriately locating noise sensitive land uses around airports. Examples of options that could be explored in Australia are:

- A consistent national framework that balances community needs with the reduction of aviation emissions (a federal government decision);
- Revisions to the ANEF metric and standards to provide better protection for public buildings and private dwellings (a federal government decision);
- Engagement with State authorities at flight path design stage to minimise noise impacts on residential areas (a state government decision); and
- Revised State planning requirements to align with a revised ANEF metric (a state government decision)

**3. Noise abatement operational procedures:** noise abatement procedures include, for example, preferential runways and routes, particular procedures for take-off, approach and landing, or curfews. The appropriateness of any of these potential measures depends on the physical layout of the airport and its surroundings, but in all cases the procedure must give priority to safety considerations. Examples of options that could be explored in Australia are:

- Legislated joint responsibility model between Airservices and airports to manage flight path design and noise complaints (a federal government decision)
- Changes to flight paths to reduce the noise impact on neighbouring communities (an industry decision)
- Increase capability of air navigation service providers to operate with greater flexibility (an industry decision)
- Develop voluntary and incentivised airline operational improvements such as steeper climbs, modification of flap and landing gear settings. These are often called 'Fly Neighbourly' Programmes and utilised worldwide (an airport and industry decision); and
- Noise Respite Procedures create runway configurations and timings to provide communities with known and consistent times for respite from consistent aircraft noise (a good international example is the Heathrow Airport Fly Quiet programme -an airport and ANSP decision).

**4. Operating restrictions**: noise concerns have led some States (mostly developed countries) to consider banning the operation of certain noisy aircraft at noise-sensitive airports. Examples of options that could be explored in Australia are:

- Introduction of overnight noise quotas and reporting (an industry decision); and
- Annual forecasting and noise modelling with open transparent reporting systems (an industry decision). These have proved to be most successful where data from both airports and ANSPs is combined into a single source of information e.g. Schiphol.

Each of these suggested initiatives would contribute to better noise outcomes for all stakeholders in the aviation system as well as people in the community. BAC sees it as critical to work with governmental, local communities aircraft operators, regulators and air navigation providers to develop these concepts into practical solutions that minimise noise impacts on communities.

## Other considerations

### Current approach to noise complaints

BAC has engaged closely with AsA on addressing community complaints around aircraft noise. In our experience, we believe that the current Noise Complaint Information Service (NCIS) is too generic and does not provide the necessary information to prioritise and address complaints. The generic nature of the NCIS also means that the system can be oversubscribed by multiple complaints from a single individual. This means that each complaint must be separately addressed whilst simultaneously inflating complaint data.

In our view, the NCIS should allow for a more sophisticated approach to complaints management, helping regulators to identify the nature of specific complaints and prioritise actionable data. Clear timeframes for action and response are similarly important, as are processes around engaging with complainants on the status of investigations. Feedback received from community members to BAC is that current timeframes are not being met, communication is not consistent, and responses are taking too long.

A solution to this issue includes the use of updated tools for primary complaint management. For example, New Zealand already uses a primarily complaint platform that has the following attributes:

- Allows complainants to provide specific feedback on aircraft (using a radar system)
- Provides better capacity for establishing specific, actionable data rather than general complaints

- A centralised source of truth for data that identifies specific aircraft and locates a residence as a complaint location (rather than entire suburbs); and
- Requires complainants to enter in specific information, including identification and address details.

Consideration should also be given to a flexible approach based on individual airport needs to create joint noise offices between the ANSP and airports to provide a localised central response to complaints. This could provide more timely and local responses improving the information sharing outcomes for communities.

In addition to the above process of noise complaint management, further consideration needs to be given to the placement of the Aircraft Noise Ombudsman. The current structure for the Ombudsman – one located and funded within AsA – does not provide the community confidence that noise complaints will be handled in an accountable and objective manner. Like most administrative review mechanisms, independence can be ensured by locating the review function outside the decision making and implementation body.

**Assessing and communicating noise impacts**

Community members, advocacy groups and the ANO consider the existing use of Australian Noise Exposure Forecast (ANEF) contours to portray the impacts of aircraft noise to be inadequate.

There are two key drivers for preparing information relating to aircraft noise:

- Supply of information about aircraft overflight and associate noise
- Land use planning decisions around airports as part of airport safeguarding.

Currently, there is not one set of contours which adequately respond to both drivers. This necessitates preparing and supplying two sets of noise contours, which, often leads to confusion and the perception within communities that airports are trying to hide information.

It is critical to the broader program of airport safeguarding that aircraft noise is considered in planning and development decisions in the vicinity of airports. For many decades, the ANEF has been used as the planning tool to consider aircraft noise by state governments and territories. However, with increasing residential intensification in major cities, and in the case of Brisbane, current and planned intensification in the vicinity of final approach paths, there is a clear need for state governments and territories to fully implement NASF Guideline A which identifies the need to use a range of metrics to supplement ANEF contours in land use planning decisions off airport.

Preparing ANEF contours involves several assumptions about future aircraft demand, fleet mix and origin/destination. These can each be supplied by airports, however, there are also several assumptions regarding air traffic management including flight path selection and operation, noise abatement procedures and track spread which emanate from AsA. AsA is then required to technically endorse assumptions relating to this data prior to any public comment period. Technically endorsing ANEFs prior to a public comment period limits any change to an ANEF through community feedback. It may be more appropriate for ANEFs to be technically endorsed during Ministerial approval period to allow the community to comment of a draft ANEF.

Full adoption of NASF Guideline A by state and territories for application in off airport land use planning assessments will bring into focus the need for robust and consistent preparation of alternative metrics by Australian airports. In doing so, a nationally consistent approach is needed which establishes the alternate metrics to be produced, the sources of operational data and reasonable timeframes for obtaining that data. A consistent approach is needed, particularly for states such as Queensland where multiple domestic and international airports exist.

A range of alternative metrics could be considered, including the Australian Noise Exposure Concept (ANEC); the Number above ‘N’ measure, and the maximum noise level single event noise measure (Lamax).

**The Importance of community engagement**

BAC supports the need for clear and consistent community engagement standards across the sector when planning and implementing flight path designs. While AsA should be commended for developing a Community Engagement Standard, there should also be a robust framework for presenting decisions made by AsA, rather than an open-ended process of selecting options. The process should then refine and/or review decisions based on public feedback. This approach avoids an endless cycle of engagement with little buy in from key stakeholders, and keeps communities informed and engaged on flight path changes in a clear and transparent manner.

Government(s) can better communicate with potential purchasers of properties regarding aircraft noise. As an immediate step, the government should mandate aircraft noise and flight path data to be presented with the purchase of properties with a defined noise metric zone. An example of this application in Australia is the Tralee trial in New South Wales, whereby developers were obliged to have property purchasers sign an acknowledgement of Canberra Airport's location and impact prior to purchase. This trial was supported by the former Aircraft Noise Ombudsman as a proactive and practical approach to better balancing residential development with airport operations. A wider, more robust noise contour insulation standard should also be considered for new builds, particularly in high density residential developments.

I trust the above information is of assistance to the Committee. BAC remains committed to addressing community concerns around aircraft noise and will continue to engage with government and industry on best practice policy and regulatory approaches to address its impacts. We remain open to further engagement with the Committee and to answer any further questions that may arise.

Yours sincerely

Gert-Jan de Graaff
**Chief Executive Officer**
**Brisbane Airport Corporation**

# APPENDIX A

Hon **Barnaby Joyce** MP
Deputy Leader of The Nationals | Minister for Agriculture
FEDERAL MEMBER FOR NEW ENGLAND

22 July 2014

RECEIVED
29 JUL 2014
IN CEO'S OFFICE

Ms Julieanne Alroe
CEO and Managing Director
Brisbane Airport Corporation
PO Box 61
HAMILTON CENTRAL QLD 4007

Dear Ms Alroe Julieanne,

I have recently conducted a meeting with Ms Julie Stewart, Manager, Tamworth Regional Airport, Tamworth Regional Council, and Council's Director, Business and Events, Mr John Sommerlad, regarding a proposal by Skytrans to commence passenger operations between Tamworth and Brisbane following the cessation of Brindabella's services.

Ms Stewart and Mr Sommerlad have raised concerns regarding difficulties being experienced obtaining morning and evening slots at Brisbane Airport to suit business travellers as well as problems accessing bay allocations and check-in counters at the domestic terminal.

Enclosed are some briefing notes provided by Ms Stewart and Mr Sommerlad in which they have provided background information on the Tamworth-Brisbane route and an overview of the slots, bay allocation and check-in counter issues.

I would be grateful if urgent consideration could be given to these matters in light of the concerns and points which have been raised by Ms Stewart and Mr Sommerlad and for any assistance you may be able to provide to enable the commencement of this much needed service.

I fully support Tamworth Regional Council's endeavours to establish a regular passenger air service that caters for the needs of business and other travellers between Tamworth and Brisbane and would be grateful for your advice at your earliest convenience.

Should any additional information be required, please do not hesitate to contact me.

Yours sincerely

Barnaby Joyce MP
Federal Member for New England
Deputy Leader of The Nationals
Minister for Agriculture

bj.lt.tam

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Shop 5, 259 Peel Street (PO Box 963), Tamworth NSW 2340
ph 02 6761 3080 toll free 1300 301 839 fax 02 6761 3380

TOQ-02515

18 JAN 2013

Ms Rachel Crowley
Head of Corporate Relations
Brisbane Airport Corporation Pty Ltd
PO Box 61
HAMILTON CENTRAL QLD 4007

Dear Ms ~~Crowley~~ Rachel,

Thank you for your letter dated 30 November 2012, which provided an update in relation to the delays currently being experienced at Brisbane Airport.

The need for a second runway at Brisbane Airport is a measure of the strong growth potential of Brisbane Airport and, more broadly, the Queensland economy as a whole. I look forward to completion of the New Parallel Runway Project and the economic benefits it will bring.

However, it is clear that there is a level of concern in the community about the delays currently being experienced during the construction phase. In this regard, I have received correspondence from members of the public in relation to these issues.

I appreciate your advice in relation to introduction of a 'slot' system and the AirServices Australia proposal to bring the Metron system to Brisbane Airport. I trust that these and other measures will achieve success in alleviating the delays being experienced.

Thank you for the offer of a briefing in relation to these matters. I look forward to our discussion.

Yours sincerely

Treasurer and Minister for Trade

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**Facsimile** +61 7 3211 0122
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**WARREN TRUSS MP**
Federal Member for Wide Bay

PO Box 283
Maryborough Qld 4650
**1300 301 968 (toll free)**
Phone: 07 4121 2936
Fax: 07 4122 3968

Wt/cw

21 December 2012

Received
2 JAN 2013

Ms Rachel Crowley
Head of Corporate Relations
Brisbane Airport Corporations Pty Limited
PO Box 61
Hamilton Central Qld 4007

Dear Ms Crowley

Thank you for your letter regarding current delays at Brisbane Airport.

As you rightly point out, current delays at Brisbane Airport are causing great frustration for passengers and ruining many travel schedules.

I am pleased that Brisbane Airport Corporations is seeking to take appropriate measures to provide short and long term solutions to this problem. In particular, I look forward to the reopening of the cross runway which should provide substantial relief, especially for passengers arriving and departing Brisbane to regional centres. The current delays and the increase in passenger movements have highlighted the urgent need to bring the new parallel runway on line as soon as possible.

May I thank you for taking the time to inform me of current developments in relation to this project and I hope that the current issues delaying the project can be resolved as quickly as possible.

May I extend my best wishes to you for a successful year ahead.

Yours sincerely

**WARREN TRUSS**
**Federal Member for Wide Bay**
**Leader of The Nationals**

*Working for Wide Bay*

319 Kent Street Maryborough Email: W.Truss.MP@aph.gov.au Website: www.warrentruss.com

The Courier Mail, 09 March 2013, p11.

# DELAYS CAN BE TOUGH WITH CHILDREN

**KATE MCKENNA**

JUST three months shy of his third birthday, Hugo Boorman is one jet-setting toddler.

But, of all the trips the tot has flown, including to Los Angeles and London, those that leave and arrive at Brisbane's domestic airport are proving to be the trickiest, according to his mother and Channel 7 reporter Chloe Baker.

"Flying domestically is actually the hardest (with a child) because of that unknown," she said.

"You just don't know how long you will be delayed (at Brisbane Airport)."

Take their hold-up leaving Brisbane Airport last Monday. A water leak in the galley of their Sydney-bound plane pushed back the departure by 10 to 15 minutes, which Ms Baker assured was "fine", but then air traffic congestion delayed it a further 40 minutes before take-off.

"We were in a line on the tarmac and my son was looking out the window and saying, 'so many planes mummy'," she said.

The delays prompted her to tweet using the #bnelateagain hashtag: she wrote she was "dreading" the return trip.

**FLYING CHALLENGE:** Chloe Baker and her son Hugo

## RUNWAY OF WOE

**Late arrivals at Brisbane Airport this week (evening flights)**

| Monday | | Tuesday | | Wednesday | | Thursday | |
|---|---|---|---|---|---|---|---|
| 44+ mins | **19%** | 44+ mins | **21.5%** | 44+ mins | **2%** | 44+ mins | **7%** |
| 30-44 mins | **14.5%** | 30-44 mins | **40.5%** | 30-44 mins | **9.5%** | 30-44 mins | **10.5%** |
| 15-29 mins | **27%** | 15-29 mins | **30%** | 15-29 mins | **33%** | 15-29 mins | **28.5%** |
| On time | **39.5%** | On time | **8%** | On time | **55.5%** | On time | **54%** |

The Age, 01 May 2013, p.34.

**Aviation** Surging demand stressing infrastructure

# Regulator urges airport upgrades

**Matt O'Sullivan**

The competition watchdog has called for Australia's biggest airports to boost their investment in terminals and other facilities to cope with surging demand.

In its annual report on the state of the airports, the Australian Competition and Consumer Commission found that service at the five largest airports – Sydney, Melbourne, Brisbane, Perth and Adelaide – had deteriorated in 2011-12 on the prior financial year. It named Sydney Airport as the worst offender given the "pattern of price and earnings increases, lower service standards and low investment levels compared with other airports".

ACCC chairman Rod Sims said continued growth in passenger numbers at most airports was placing pressure on their existing infrastructure, and contributing to lower service standards. "More investment is required to avoid excessive congestion," he said.

The Bureau of Infrastructure, Transport and Regional Economics has forecast total passenger numbers at the five airports will more than double to almost 217 million passengers a year by 2031.

The ACCC said the increased demands placed on the airports was greatest at Sydney, Brisbane and Perth. "If unaddressed, congestion issues will have direct impacts on users of the airports, as well as indirect impacts on the economy," it said in its latest report.

"Despite investment in aeronautical assets over the past 11 years, there is evidence of emerging system-wide congestion at Australia's monitored airports."

But the Australian Airports Association rejected the regulator's suggestion the airports were falling behind in building new infrastructure. The peak body said each of the country's five biggest airports was working on or had plans for significant new investments, including new terminals and runways.

"With $9 billion invested in aeronautical infrastructure since privatisation, and another $9 billion planned for the next decade, it is clear that our major airports are making massive investments," the association's chief executive, Caroline Wilkie, said.

Brisbane Airport again received the highest ranking for quality of service from the ACCC, followed by Adelaide Airport, which recorded falls in passenger numbers, average revenues and margins in 2011-12.

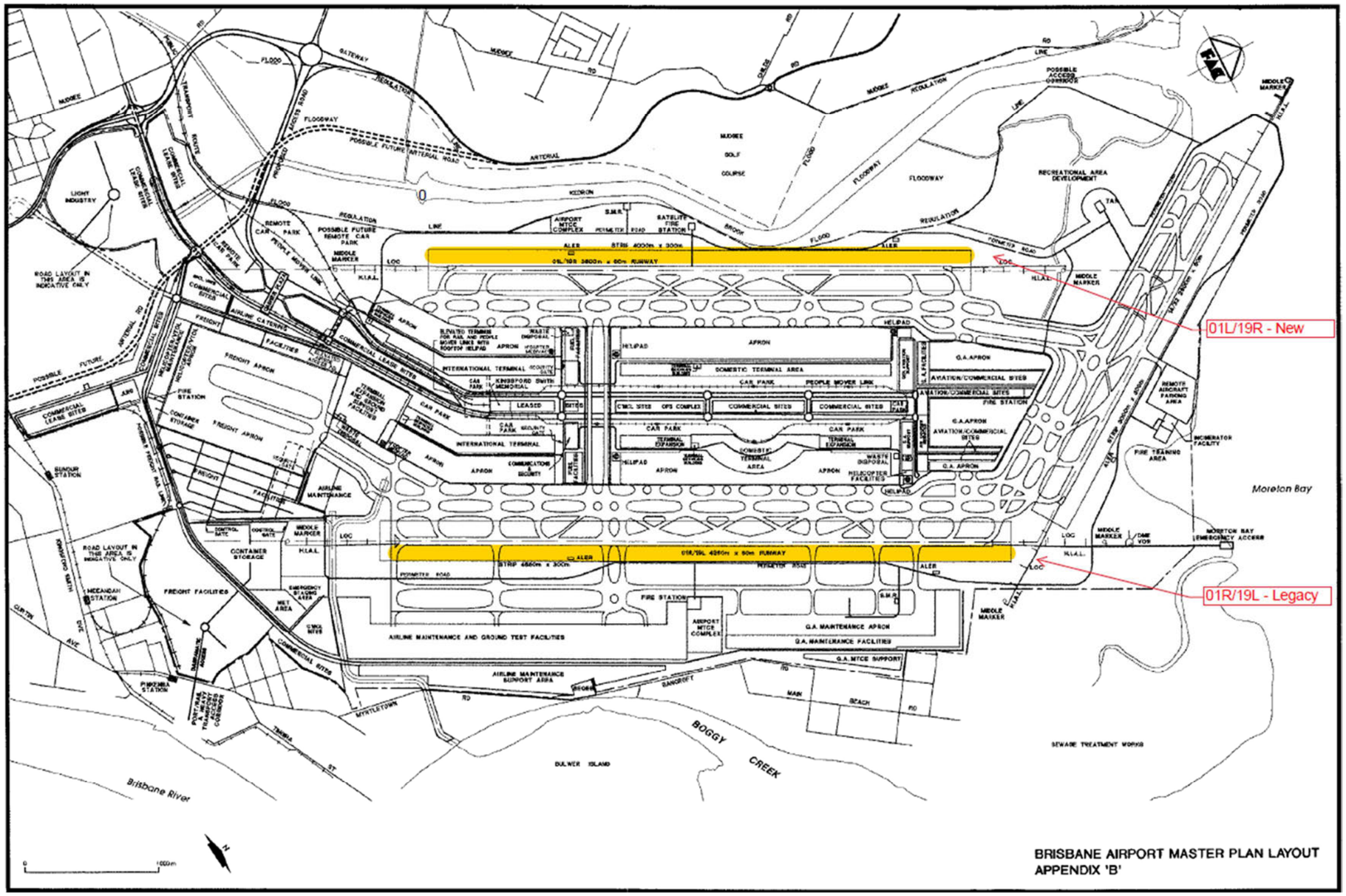
Melbourne Airport was in third place for overall service.

Darwin International Airport has announced that work on the $42.5 million expansion of its terminal will begin on May 2. Qantas will more than double the size of its lounge at the airport by the middle of next year, while Virgin Australia will open its first lounge there.

**The competition watchdog has found a decline in service at the major airports.** Photo: Getty Images

# Appendix B

1991 Master Plan – Federal Airports Corporation



BRISBANE AIRPORT CORPORATION

## Appendix C

'Which Airlines Cancel the Most?', *The Australian Financial Review*, April 27, 2023, p.44.

# Which airlines cancel the most?

**Aviation** New data sheds light on the extent to which the ability of flights to take off on time has been disrupted, writes Lucas Baird.

Almost one in 10 trips from Melbourne-Sydney or Sydney-Melbourne were cancelled last month. PHOTO: ROB HOMER

Almost one in 10 flights – 414 in total – between Melbourne and Sydney were cancelled last month, leaving passengers in the lurch as the aviation industry struggles to get back to pre-pandemic levels of reliability.

Jetstar was the least dependable of the domestic airlines, according to new data from the Bureau of Infrastructure and Transport Research Economics, with the highest cancellation rate of 7.1 per cent. On the busiest route, between Melbourne and Sydney, Jetstar cancelled a whopping 15.7 per cent of its flights.

But by sheer volume of flights cancelled, Qantas was the worst offender, scrapping about 600 domestic flights in total, with 148 flights of those alone on the Sydney-Melbourne route.

Of all the airlines, Jetstar had the highest proportion of flights– more than two-thirds – delayed. Virgin Australia came in second, with just 69.7 per cent of its flights departing on time compared with 73.5 per cent at Regional Express and 75.7 per cent at Qantas. March was the seventh month in a row that Virgin Australia had been unable to match the punctuality of its largest rival.

Overall cancellations, as a percentage of each airline's total flights, were lowest at Rex, with 2.3 per cent of flights binned. Virgin Australia cancelled 2.7 per cent of flights and Qantas 3.4 per cent.

Bad weather may force operational constraints on airports, such as running flights on a single runway, which will prompt airlines to delay or cancel trips. But more recently, a shortage of air traffic controllers has also disrupted the ability of airports and airlines to ensure flights take off and land on time.

The Australian Competition and Consumer Commission has also observed that "aircraft manufacturer delays, supply chain dislocations and labour availability and training" are also factoring into cancellations and delays. The Bureau of Infrastructure, Transport and Regional Economics said the aviation industry was still underperforming compared with the pre-pandemic period.

"[March's] on-time arrivals figure (71 per cent) was significantly lower than the long-term average performance for all routes (81.5 per cent), and the on-time departures figure (71.4 per cent) was also significantly lower than the long-term average (82.7 per cent)," it said.

Almost one in 10 trips from Melbourne-Sydney or Sydney-Melbourne were cancelled in March, higher than any other route. From Melbourne-Sydney, Qantas cancelled 81 flights in the month, Jetstar 65, Rex 10 and Virgin 58.

Canberra to Sydney had the next highest flight cancellation rate of 7.7 per cent, and airlines cancelled 7.2 per cent of all flights travelling the other way from Sydney to Canberra.

According to the data, Sydney Airport had 450 flights cancelled over the month – the most of any airport around the country. Melbourne airport also had a high rate of cancellation, with 345 flights scrapped.

It was a similar story for delays, with only 69.5 per cent of flights departing Sydney Airport on time. This was less than Melbourne (70 per cent), Brisbane (72.9 per cent), Perth (69.8 per cent), and Adelaide (70.3 per cent).

Sydney Airport also reported the worst on-time performance of all the major airports back in February. Its chief executive, Geoff Culbert, blamed the regulation of aircraft slots and movements – the gateway's age-old

nemesis – which limit the number of flights in and out each hour.

Due to specific regulations in Sydney, the airport can accommodate only 80 aircraft movements per hour within strict curfew limits. This means it's a juggling act – if there are 80 flights scheduled and some are delayed for whatever reason, air traffic controllers must try to fit them in to whichever hour slot is available – and some flights are eventually cancelled. No other major Australian airport has similar movement restrictions and most do not operate with a curfew.

Worse still, last month Culbert accused the major domestic airlines Qantas and Virgin Australia of "overbooking" slots – for example, he says, Qantas Group filed for 106 per cent of its 2019 capacity and Virgin filed for 95 per cent of pre-COVID slots – and then cancelling flights en-masse, preventing other carriers from gaining access to the nation's busiest airport.

While rules dictate that airlines must utilise at least 80 per cent of the slots allocated to them or face losing the unused slots, the cancellation rates at Sydney are still well below this threshold.

Airlines must apply to independent bodies to secure aircraft slots on a yearly or seasonal basis, but once a slot is granted, an airline can hold it in perpetuity. The Australian Competition and Consumer Commission has observed that "new and expanding airlines can find it very difficult to obtain slots at peak periods, which in turn acts as a barrier to entry and expansion, limiting competition".

Qantas and Virgin, however, deny that they are hoarding slots in Sydney and say evidence behind that claim is contested. However, a 2021 review by former productivity commissioner Peter Harris said rumours of airlines gaming the system were "credible", although it did not make a definitive finding.

As well as access constraints to the airport, the cap also stops Sydney Airport from building in any operational buffer to cope with delays and cancellations. The airport can schedule and operate only up to 80 flights per hour, so, even if slots are freed up due to cancellations, it cannot back-fill the gap with later flights.

It means Sydney Airport is often operating below its full capacity. It is hoping the government will rethink the restrictions in response to a landmark report into the slot management process at Sydney due later this year.

The problem for consumers and airports, according to former Qantas chief economist Tony Webber, is that there is little to no punishment for airlines if they cannot operate flights to schedule. Although the rules compel airlines to keep cancellations at less than 20 per cent for a given airport slot or face losing it, there is little chance of this happening domestically as cancellation rates are still relatively low.

"The main risk is that you may upset passengers and that could impact future revenues. But if all the airlines are doing it at the same time, that offsets the impact," says Webber.

For consumers, the same basic consumer right applies to flights as it does to other products. If a flight is cancelled, the ACCC says an airline must provide a replacement within a reasonable time or provide a refund.

If a passenger has to book a flight with another airline because the first could not find a new flight within a reasonable time, they may be entitled to reimbursement.

But Webber says that on high-frequency routes such as Sydney to Melbourne, it is unlikely that an airline will be unable to find a replacement within a reasonable period.

"Passengers will be on the flight 20 to 30 minutes after the one they were first scheduled to be on," he says. "Frequencies are so high on the golden triangle [Sydney-Melbourne-Brisbane flights] that there is no refund risk."

Webber says there is even an incentive for Qantas and Virgin to cancel half-full flights in advance and rebook those passengers on more full flights to limit operating costs and improve per-seat yields.

Canberra Airport boss Stephen Byron says the current level of cancellations is "extraordinary", but says consumers have little recourse in the current environment if flights are cancelled or delayed due to the Qantas/Virgin duopoly.

"Rex and Bonza provide a valuable alternative for consumers, but they are not an effective competitive force to the Qantas/Virgin duopoly," Byron says.

Qantas and Virgin are the only airlines currently flying Sydney-Melbourne, although Jetstar and Rex offer services from Melbourne and Brisbane.

"The biggest indicator of the lack of competition between the two airlines who control 95 per cent of the market are the sky-high airfares, record profits and the extraordinary cancellations," says Byron.

Qantas says more cancellations occur on the Sydney-Melbourne route because customers can be moved to different flights without disruption, thanks to the frequency of services on its routes.

"In Qantas' case, customers are generally moved to another flight 15 to 30 minutes from their original flight," a spokesman says.

It has strongly rejected suggestions of slots hoarding from Sydney Airport in the past, writing in a submission to a review of slot management at the airport in late 2020 that "Qantas is utilising its slots in accordance with the rule and strongly denies suggestions of impropriety".

"Where cancellations occur, they are primarily due to factors outside of the airline's control. These include weather events such as fog, storms and wind, and operational cancellations, such as unscheduled engineering events," the airline wrote at the time.

A Virgin Australia spokeswoman rejects accusations of slot hoarding and says it complies with the government-mandated framework at Sydney Airport. Virgin says it "continues to work hard to improve operational reliability".

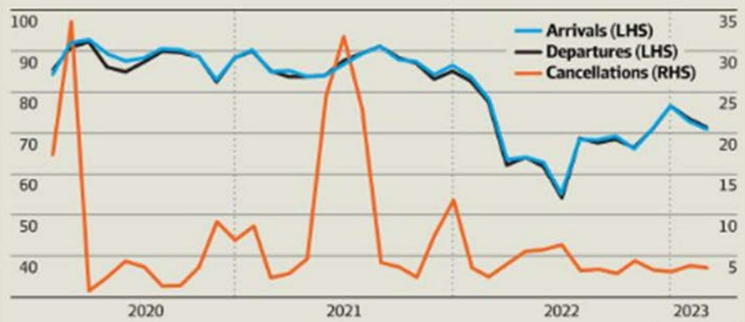
Despite the issues, the ACCC said the industry was improving its reliability.

"With the airlines increasing capacity and most airlines reporting improvements in their performance over the last few months, the industry appears to be getting closer to its pre-pandemic operational capability," it said in a report.

Qantas has committed to hiring thousands of workers over the next decade, and Virgin has also hired hundreds in recent months. These efforts are expected to yield an improvement in services as flying begins to tick above pre-COVID-19 levels later this year. AFR

## Traffic control

Australian domestic airline on time performance, monthly (%)

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