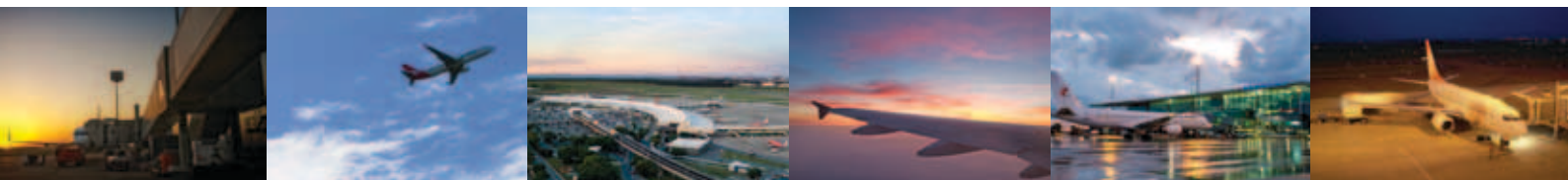


A SUMMARY

above and beyond

WORKING TOGETHER TO MANAGE AIRCRAFT NOISE



Brisbane Airport Corporation (BAC) is committed to ensuring that Brisbane Airport continues to meet the needs of passengers, airlines, industry and the wider Queensland community. The responsibility for managing the airport and aviation operations lies with a number of government departments and agencies working alongside BAC and airlines. A joint responsibility is the management of noise and the impacts of aviation on the community.

To highlight the issues and management strategies around noise management, as well as initiatives and efforts undertaken locally and globally to reduce the effects of aircraft noise, BAC and its partners have created the booklet "Above and Beyond". This document provides a summary of the booklet, which is available in its entirety at www.bne.com.au.



About Brisbane Airport

Brisbane Airport was established on its current site in 1988 following extensive investigations coordinated by the Australian Government. It set out to find a new airport location that would accommodate growth in air travel and provide a significant buffer between the airport and the surrounding community.

The result is an airport site that benefits from the largest noise buffer zone of any capital city airport in Australia. In addition, there are a number of other noise abatement procedures in place to minimise the potential for noise disturbance, including:

- From 10.00pm to 6.00am, the majority of aircraft arrive and depart over Moreton Bay, when there is no rain and winds are below 10 knots
- After take off over Moreton Bay, aircraft must reach an altitude of at least 5,000ft before they are clear to make a turn that would take them over land
- In the event that weather conditions preclude take off over Moreton Bay, aircraft are required to proceed to the furthest end of the runway, thus allowing the aircraft to take off from the runway earlier, gaining height advantages before they move out of Brisbane Airport land.

How Brisbane Airport operates

The operation of Brisbane Airport is dependent on a number of government and commercial organisations working collectively and cooperatively to provide a safe, efficient facility for all airport users. Partners include:

- BAC as the airport operator
- Airline operators and their maintenance and service providers
- Airservices Australia for air traffic management services
- Border protection and security agencies
- The commercial sector for retail and other commercial services for passengers and airport workers.

Working together to manage noise

When it comes to managing noise impacts, this responsibility is shared by a number of organisations and bodies including:

- The International Civil Aviation Organization (ICAO)
- Airservices Australia
- Aircraft Noise Ombudsman
- Federal Department of Infrastructure and Transport
- Civil Aviation Safety Authority
- Airlines
- Brisbane Airport Corporation (ground-running).

Connecting QLD 24/7

Benefits of a 24/7 operation at Brisbane Airport include:

- The capacity to fly overseas direct from Brisbane and make international connections in Asia
- Capacity to act as a hub for the overnight transport of fresh produce, such as flowers, seafood and other perishable items to overseas destinations
- Domestic business travel, in particular, during daylight saving in other Australian states
- The ability to bring regional aircraft into Brisbane at a time in the morning between 5.00am and 6.00am that allows passengers convenient transfer to morning flights to Sydney and Melbourne
- Tourism support.

Understanding noise

How aircraft noise is generated

In-flight

- Noise levels vary from aircraft to aircraft, but generally come about from the major engine components and the drag or resistance of airflow around the aircraft body and wings

On the ground

- Ground-based aircraft operations (activities such as maintenance or engine testing)

Weather

- Weather conditions also influence aircraft noise.

Measuring noise at Brisbane Airport

To capture accurate information on aircraft noise levels around Brisbane Airport and to ensure the airport is operating in accordance with government protocols, Noise Monitoring Terminals are located at Cannon Hill, Tingalpa, Nudgee Beach, Kedron and Bulimba. Data is collected by Airservices and is used to generate reports publicly available at www.airservicesaustralia.com

Mapping noise at Brisbane Airport

One of the most useful ways of describing noise at Brisbane Airport to the community is through the N70 diagram.

Illustrated as contour lines over a map of Brisbane, the N70 shows the area within which a stated number of flights generating noise of 70dB(A) or more occur in a specified period of time.



Many N70 diagrams for Brisbane Airport exist and take into account weekday, seasons and future air traffic forecasts. Variations can be found at www.bne.com.au/experience-centre

Managing noise at Brisbane Airport

In addition to the noise management tools, regulations and procedures that are in place at Brisbane Airport and which are monitored and reported on independently of BAC, there are a number of other initiatives that are focused on minimising noise impacts on the community.

Continuous Descent Approach (CDA)

BAC is working with industry partners to implement the use of flight procedures that minimise noise over residential areas. One example of this is CDA, which enables an aircraft to land in one smooth descent with engines at minimum power settings to reduce noise.

Smart Tracking

Smart Tracking - or Required Navigation Performance (RNP) - uses the aircraft's onboard flight management and computer systems that are linked to satellite navigation to approach and depart an airport along a programmed, specific flight path - reducing noise exposure to communities.

The New Parallel Runway (NPR)

The NPR is a noise management tool in its own right. It will allow, subject to weather and traffic conditions, a range of new operational modes that maximise the number of flights over Moreton Bay. It is expected to be operational by around 2020.

Improvements in aircraft technology

Globally, industry and manufacturers have been focused on improving aircraft noise for the past 30 years. This focus continues, and manufacturers, NASA, Australia's government agencies and industry groups continue to invest heavily in research and development.

Air traffic control

Airservices Australia is responsible for the management of aircraft into and out of Brisbane Airport. It follows a number of principles and procedures to minimise the impact of aircraft noise during operations. For more information on procedures visit www.airservicesaustralia.com.

Communicating about noise

Connecting with our community

BAC has a number of community and technical groups that focus on operational and noise impacts including:

- The Brisbane Airport Community Aviation Consultation Group (BACACG)
- The quarterly Brisbane Airport and Area Round Table (BAART)
- The Brisbane Airport Technical Noise Working Group (TNWG)
- The Brisbane Airport Experience Centre located at Airport Village.

Other tools that provide information about aircraft noise include:

Transparent Noise Information Package (TNIP)

TNIP was an Australian Government initiative developed to allow all members of the community to access information about the location and frequency of flights in specific locations.

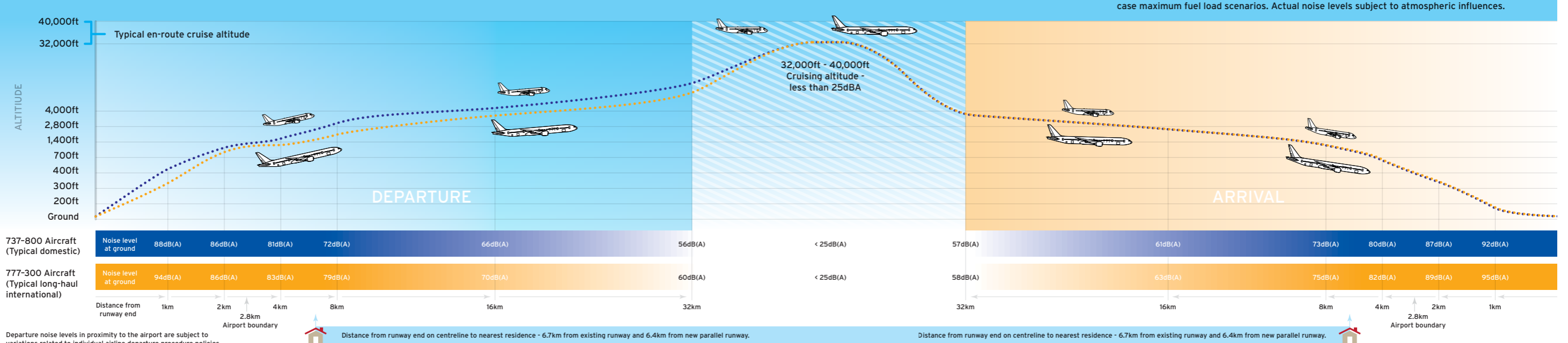
WebTrak

Airservices Australia WebTrak is an online portal that allows users to view where and how high aircraft fly over major Australian cities including Brisbane. For further information visit www.airservicesaustralia.com/aircraftnoise/webtrak/

Noise and Flight Path Monitoring Systems (NFPMS)

Airservices Australia NFPMS collects noise and flight data 24 hours a day, seven days a week. Airservices Australia produces quarterly reports which can be viewed at www.airservicesaustralia.com/publications/reports-and-statistics/noise-reports/

INDICATIVE NOISE LEVELS FOR TYPICAL FLIGHT OPERATIONS



Bodies responsible for managing and responding to queries or concerns about aircraft noise:

Brisbane Airport Corporation

Complaints about ground running noise can be directed to BAC on (07) 3406 3000.

Airservices Australia

Airservices manages complaints and enquiries about aircraft noise. You can lodge a complaint or make an enquiry:

- Directly via WebTrak
- Using the online form - www.airservicesaustralia.com/aircraftnoise/about-making-a-complaint/how-to-make-a-complaint/
- By telephoning 1800 802 584 (freecall) or 1300 302 240 (local call - Sydney)
- By fax (02) 9556 6641
- By emailing ncis@airservicesaustralia.com
- By mail, Noise Complaints and Information Service, PO Box 211, Mascot NSW 1460.

WebTrak screenshot



WebTrak

Complaints can also be logged via the WebTrak system at www.airservicesaustralia.com/aircraftnoise/webtrak/

Aircraft Noise Ombudsman

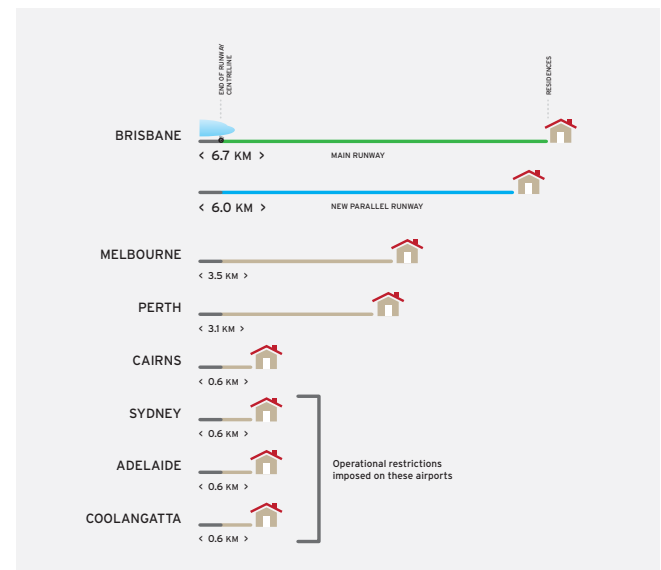
The ANO is independent of Airservices and has been established to conduct independent reviews of Airservices and how it manages activities, such as complaints/enquiries, community consultation processes, and the presentation and distribution of aircraft noise-related information.

Complaints should be first lodged through Airservices Noise Complaints and Information Service, referred to opposite. If they are unable to offer a satisfactory solution, complaints can be lodged electronically with the ANO, or can be mailed to the ANO at:

Aircraft Noise Ombudsman
GPO Box 1985
Canberra City ACT 2601

The service is free and available to anyone.

Brisbane Airport noise buffer zone



What is a decibel?

Noise is measured on a logarithmic scale with the decibel (dB) as the unit of measure. Measurements of noise usually have a correction factor applied to reflect the sensitivity of the human ear. This factor is referred to as "A-weighting" and environmental noise is usually measured in dB(A) units. The noise level of normal daytime urban-based activities typically varies between 40dB(A) and 85dB(A). On this scale, a change in noise level of 10dB(A) is perceived to be a doubling or halving in loudness. For example, most humans perceive a noise event of 85dB(A) to be about twice as loud as an event of 75dB(A).

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