

AIRCRAFT NOISE



OVERVIEW

- Understanding noise
- Measuring noise
- Illustrating noise

CURRENT AS AT
JUNE 2019

Typical sound levels



Emergency Siren
140+ dB(A)



Construction Site
90 dB(A)



Modern twin-engine jet (at take-off at 152m distance)
81 dB(A)



Roadways
80 dB(A)



Passenger car (60km/h at 7m distance)
70 dB(A)



Cafes
50-70 dB(A)



Libraries
30-40 dB(A)

Every person's reaction to noise is different and subjective. To better describe aircraft noise levels, the Australian Government, in consultation with industry and the community, developed a system called the N70.

The N70

An N70 diagram shows contour lines over a map of Brisbane. The contour lines show the area which a stated number of flights (eg 5, 10 or 50 flights) generating noise of 70 decibels or more occur in a specified period of time.

Brisbane Airport Corporation (BAC) has undertaken extensive aircraft noise modelling for a range of existing and future scenarios, including when Brisbane's new runway is operational. These are available to view as N70s online at bne.com.au/flightpaths

An example of an N70 diagram and the information it contains is overleaf.

Why 70 decibels?

- A noise level of 70 decibels outside a building would generally result in an internal noise level of approximately 60 decibels, if windows are open.
- This noise level is considered sufficient to disturb conversation, in that a speaker would generally be forced to raise their voice to be understood, or some words may be missed in speech from a TV or radio.

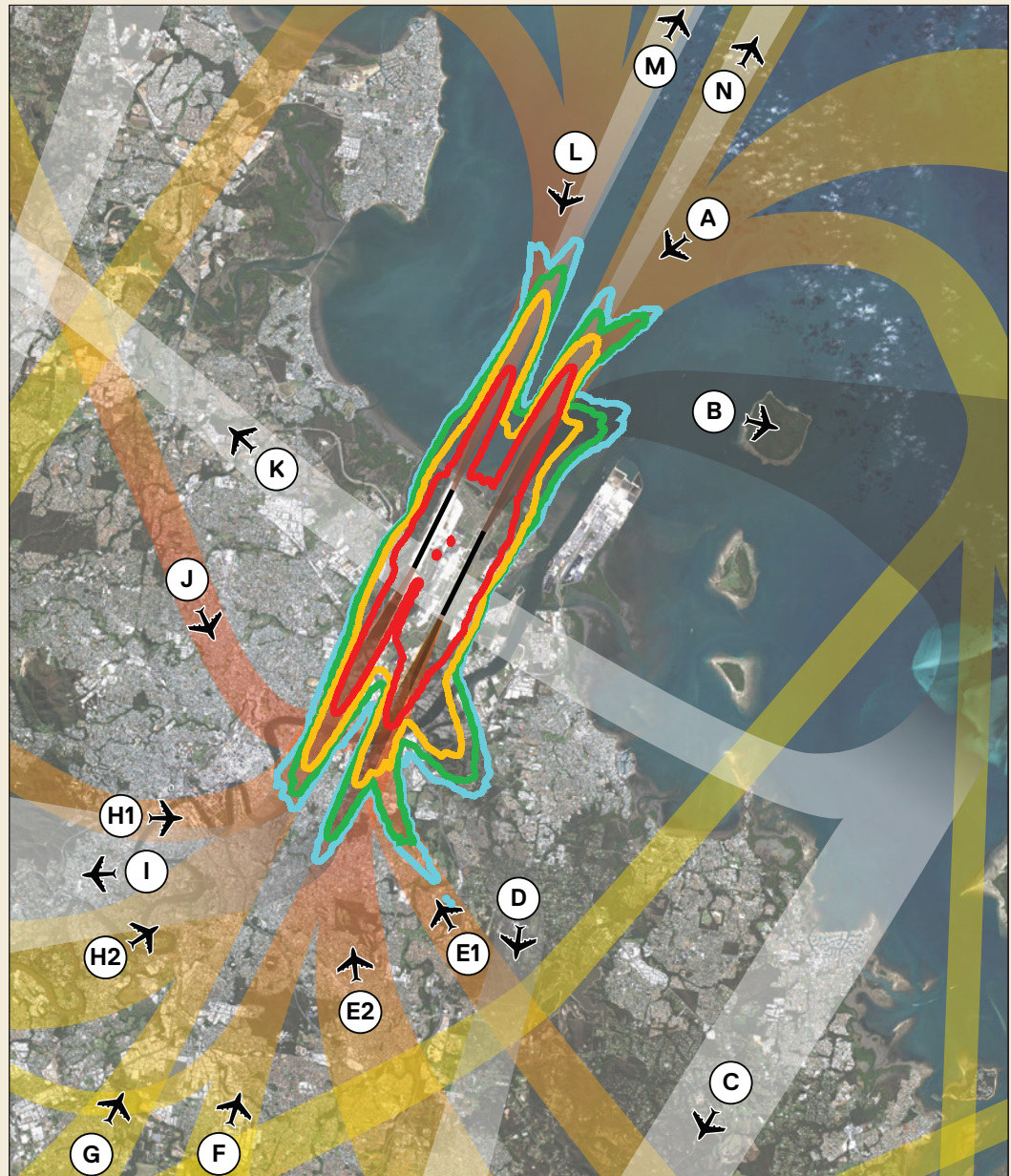
- If the windows were closed you would expect the noise inside to decrease by a further 10 decibels to 50 decibels.
- If you are outside, you would experience a noise level of 70 decibels.
- The diagram (at left) gives an indication of the types of decibel levels experienced from a range of typical everyday situations.

What is a decibel?

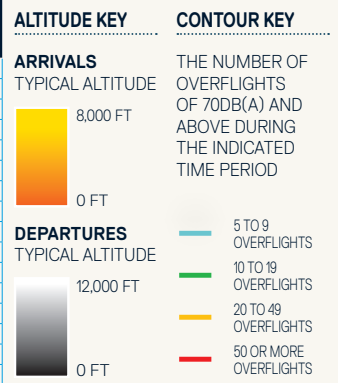
Noise is measured on a logarithmic scale with the decibel (dB) as the unit of measure. Measurements of noise usually have a correction factor applied to reflect the sensitivity of the human ear. This factor is referred to as "A-weighting" and environmental noise is usually measured in dB(A) units.

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).

2020 SUMMER WEEKDAY DAY ON OPENING OF BNR – MONDAY TO FRIDAY 6AM – 6PM



FLIGHT PATH	FLIGHT PATH TYPE	AVERAGE NO. OF JET FLIGHTS ON FLIGHT PATH	EXPECTED MINIMUM & MAXIMUM NO. OF JET FLIGHTS ON PATH	% OF BRISBANE AIRPORT'S TOTAL JET FLIGHTS ON PATH	% OF DAYS WITH NO JET FLIGHTS ON PATH
A	Arrival	57	0 - 111	16%	12%
B	Departure	8	0 - 18	2%	28%
C	Departure	48	0 - 101	13%	27%
D	Departure	63	0 - 119	17%	12%
E1	Arrival	26	0 - 58	7%	27%
E2	Arrival	4	0 - 9	<1%	27%
F	Arrival	20	0 - 39	5%	27%
G	Arrival	19	0 - 37	5%	27%
H1	Arrival	14	0 - 30	4%	27%
H2	Arrival	3	0 - 7	<1%	27%
I*	Departure	39	0 - 71	11%	12%
J	Arrival	<1	0 - 0	<1%	100%
K	Departure	5	0 - 9	1%	31%
L	Arrival	34	0 - 66	9%	12%
M	Departure	27	0 - 61	7%	27%
N	Departure	<1	0 - 1	<1%	98%



* majority of flights will depart from Brisbane's new runway.

Image for illustrative purposes only – not to be used for interpreting flight paths.

Important Notice: This information has been prepared by, or on behalf of, Brisbane Airport Corporation Pty Limited about Brisbane's new runway at Brisbane Airport. While care has been taken to ensure the information is accurate and up to date, it is provided for information purposes only.

There are many sources of information to learn more about aircraft noise at Brisbane Airport in addition to the N70s online:

- Read the Flight Path Monitoring System Reports for Brisbane at www.airservicesaustralia.com
- View aircraft movements and noise levels on Webtrak at www.airservicesaustralia.com/aircraftnoise/webtrak
- Utilise the Flight Path Tool at bne.com.au/flightpaths to understand flight path and noise impacts on a selected address in Brisbane.
- Download the "2020 Flight Paths and Aircraft Noise Information Booklet" at bne.com.au/flightpaths
- Read the Brisbane Airport Master Plan 2020, which looks at planning for the airport over the next two decades, at bne.com.au/masterplan

For information visit: bne.com.au/flightpaths