Aircraft noise

As Australia's busiest 24-hour gateway and a vital contributor to the economy, it is essential that Melbourne Airport's operations are safeguarded. An important element of this is managing the impact of aircraft noise on communities surrounding the airport.

A range of legislation and planning controls seek to protect Melbourne Airport's ongoing operations. These ensure that economic and social benefits are balanced with the effects of aircraft noise in the community.

The Melbourne Airport site at Tullamarine was originally selected in part because it was a long way from major urban areas. Over time, development has crept closer to the airport, and flight traffic has increased substantially. State land use policies and controls are applied to restrict how land surrounding the airport can be used to try and avoid the introduction of residents into areas of current and future noise.

Aircraft noise is an unavoidable by-product of flights. While modern aircraft are quieter, the volume of flights is increasing to meet demand, so noise remains an issue that requires careful attention.

Measuring aircraft noise

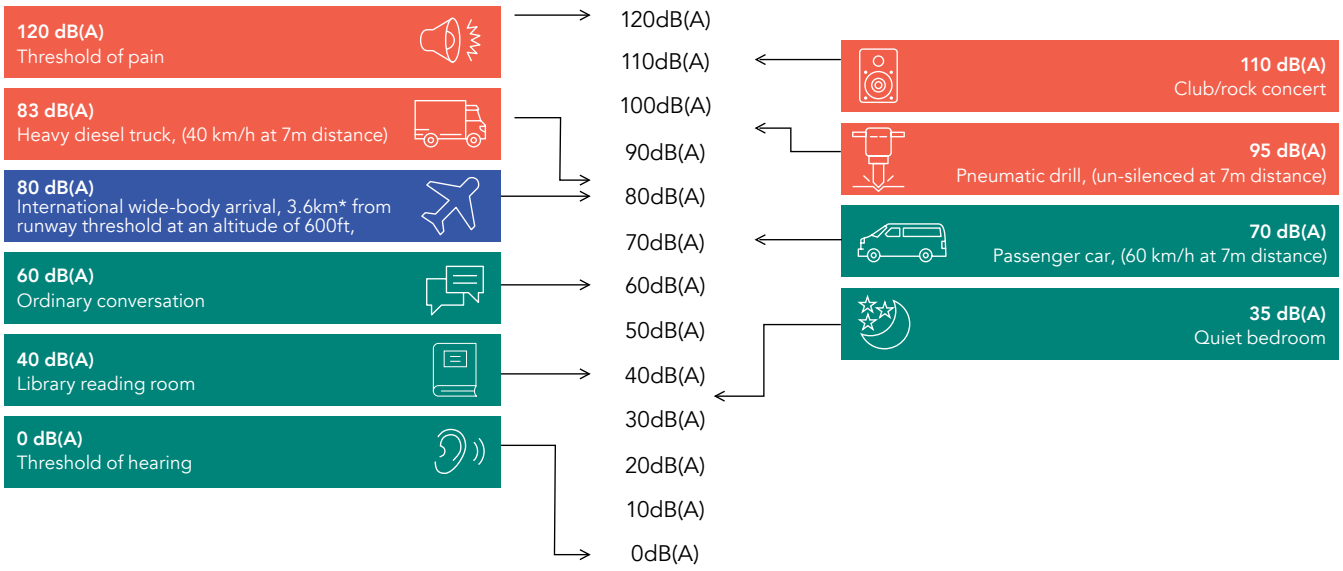
Sound is usually measured in decibels (dB). Aircraft noise is measured in decibels adjusted, which is A-weighted decibels or dB(A). This means decibels have been adjusted to reflect our ear's response to different frequencies of sound.

Noise scale

The scale below explains noise in the context of common experiences. It describes the noise modelled 3,600 metres south of Melbourne Airport's third runway, at the intersection of the Calder Freeway and Green Gully Rd, for:

- narrow-body[1] jet arrivals and departures (typically serving domestic routes)
- wide-body[2] jet arrivals and departures (typically serving international routes)

Noise Scale dB(A) with examples of noise



Source: APAM and NASF Guideline A: Attachment 1

**3.6km is approximately the distance from Runway 34R threshold to the Calder Freeway. Aircraft noise values are based on modelling used in Melbourne Airport's Third Runway Major Development Plan.*

1 'Narrow-body' refers to aircraft that have one passenger aisle. Examples include Boeing 737 and Airbus A320 fleets.

2 'Wide-body' refers to aircraft that have two passenger aisles. Examples include Boeing 787 and Airbus A380 fleets.

Number-above contours (N-contours)

Number-above contours (N-contours) are measurements in dB(A) that indicate the number of potential noise events above a certain level in a specified time period. For example, N70 noise contours would represent the number of noise events of 70 dB(A) or above produced by aircraft flying overhead.

N-contours are produced for day and evening (6am-11pm), night (11pm-6am) and 24 hours.

The most commonly used N-contour is N70. During the day, a noise level of 70 dB(A) outside a building will be approximately 60 dB(A) inside with the windows open. This is enough to disturb conversation because someone speaking would generally have to raise their voice to be heard.

For night-time, it is appropriate to consider lower noise levels. N60 values are most often used and would typically result in an indoor maximum noise level of 50 dB(A) with windows open and 40 dB(A) with windows closed. The 50 dB(A) maximum noise level is considered close to the point at which someone sleeping may wake up.

The N-contour represents an average day and not a typical day. On a typical day, there may be more or less noise events than the N-contours suggest. This is because the traffic at Melbourne Airport varies significantly from weekdays to weekends, the runway being used at a particular time and the weather.

Some common measurements include the following:

N60=5	Five or more flights are 60 dB(A) or above per day in an outside environment.
N60=20-50	20-50 flights overhead per day that may be 60 dB(A) or above outside.
N70=50-100	50-100 flights overhead per day that may be 70 dB(A) or above outside.

Australian Noise Exposure Forecast

The Australian Noise Exposure Forecast (ANEF) is the aircraft noise exposure forecasting system used in Australia for land-use planning. The ANEF system provides a scientific measure of aircraft noise exposure from aircraft operations around an airport. It is used in conjunction with *Australian Standard 2021-2015 Acoustics – Aircraft noise intrusion – Building Siting and Construction guide* for land use planning surrounding the airport.

An ANEF is a chart that is endorsed by Airservices Australia for technical accuracy. An airport can only have one endorsed ANEF at any one time.

Learn more about this at Airservices Australia's website:
https://www.airservicesaustralia.com/industry-info/anefs-and-aneis/

Noise Sharing Plan

As part of the conditions of approval for the third runway, Melbourne Airport will be developing a noise-sharing plan. The noise-sharing plan will outline how the airport will share and lessen noise. It will explain the operating modes that will be used to manage the impact of aircraft noise on communities surrounding the airport, including providing those communities with periods of relief from noise by using cross-runway operations using the east-west runway. Further details will be released when available.

Noise amelioration plan

Melbourne Airport is facilitating a Noise Amelioration Plan for residential dwellings and public buildings (childcare, healthcare, education and aged care) in areas most impacted by noise from the airport.

The plan's scope will come from noise forecasts that include the flight paths and aircraft traffic growth to come with the new third runway.

The plan will be developed in consultation with local councils, communities, the Victorian Department of Transport and Planning and the Melbourne Airport Community Aviation and Consultation Group.

We have only just begun developing and defining the Noise Amelioration Plan. While timelines are yet to be finalised, at this stage we expect to begin consultation to develop the plan in mid-2025 and have a draft plan finalised mid-2026, to submit to the Minister for approval by September 2026.

Once we receive the Minister's approval, people in affected dwellings and facilities will be contacted about the process to conduct amelioration works.

Community consultation

Community consultation will be important to the process of refining and finalising the airport's operating model. This process will start in 2025 and is expected to run through until 2026. Visit our website for updates.

Aircraft noise enquiry or complaint

Airservices Australia is Australia's air navigation service provider, responsible for managing Australia's airspace and flight paths, providing noise information, and managing complaints.

If you have an enquiry or complaint relating to aircraft noise and/or flight paths, please contact Airservices Australia:

- Online: https://www.airservicesaustralia.com/community/environment/aircraft-noise/about-making-a-complaint/
- Call: 1800 802 584 (free call, Monday - Friday 10:00am to 4:00pm (AEST) excl. public holidays)
- Post: Noise Complaints and Information Service, PO Box 211, Mascot, NSW 1460