



# Managing Aircraft Noise

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Adelaide Airport is the aviation gateway to Adelaide and South Australia.

Aircraft noise is an unavoidable product of aviation connections to any city. Adelaide Airport Limited (AAL) is acutely aware that the economic and employment benefits of the airport, need to be balanced with the impacts of aircraft noise to surrounding areas.

AAL works with all levels of Government, airlines, and community to ensure measures are in place to manage aircraft noise.

There are a broad range of programs in place to manage aircraft noise around the airport. These include:

- Working with stakeholders to observe the existing curfew arrangements
- Consulting and engaging with the local community
- Working closely with the Commonwealth, State and Local Governments
- Consulting with the airlines that use the airport
- Investing in airport infrastructure to support new-generation quieter aircraft

The aircraft industry has been designing and building quieter aircraft that now operate in Australia. This reduces aircraft noise exposure for residents under flight paths. Many passenger aircraft, both domestic and international, are using required navigation procedures combined with continuous descent procedures, which allow the design of flight paths that minimise aircraft noise exposure for residential areas.

**To inform the community of current and future noise exposure, Number-Above contours are prepared to identify the frequency of aircraft noise events above a specified decibel threshold.**

# Understanding Aircraft Noise

AAL recognises the need for the airport to assist in managing aircraft noise for the surrounding communities by working closely with the airlines (the generators of the noise) and Airservices (the airspace manager).

The most effective means for reducing the impact of aircraft noise is through the effective long-term planning of land use for areas adjacent to the airport site. Other means include a combination of land use with alternative runway allocations and/or adopted flight path procedures; restrictions of aircraft movements by aircraft type; and the implementation of aircraft operational procedures aimed at achieving desired noise-abatement objectives. The current trend in renewing airline fleets also has the advantage that newer aircraft types are generally quieter than existing or older aircraft.

## Current Curfew Arrangements

Adelaide Airport currently operates under a legislated curfew (*Adelaide Airport Curfew Act 2000*) to limit noise exposure from aircraft at night. During curfew hours (11:00pm to 6:00am), take-offs and landings at the airport are restricted to specific types of aircraft and operations. For departing flights to meet the curfew they must be given taxi clearance by Airservices Air Traffic Control after 6:00am and before 11:00pm.

# Investing in Airport infrastructure to reduce ground-based noise

AAL regularly consults with airlines to encourage use of the ground power and pre-conditioned and compressed air facilities provided at Terminal 1, which reduces noise associated with the use of auxiliary power units and early engine start-ups. Additionally, AAL has implemented an Engine Ground Running Policy and guidelines for the ground running of aircraft engines. AAL is also planning for infrastructure that supports new generation quieter aircraft such as the Boeing B787 Dreamliner, B737 MAX, B777X and Airbus neo aircraft types.

## Consultation with local communities

AAL continues to engage with local communities surrounding the airport through a range of committees and forums.

Issues such as the management of the curfew and reporting of dispensations and levels of night time flights are regularly reviewed. Master planning, including the formulation of ANEFs and aircraft flight path improvements, are regularly discussed, including presentations from airlines and Airservices Australia.

Information about aircraft noise and curfew arrangements are published on the Adelaide Airport website.

Airservices Australia has developed an online WebTrak system, available at [www.airservicesaustralia.com](http://www.airservicesaustralia.com), which provides information about individual flights and allows users to submit noise inquiries and complaints.



# Australian Noise Exposure Forecast

The Australian Noise Exposure Forecasts (ANEF) system is the aircraft noise exposure forecasting system currently adopted in Australia for land use planning. The Airports Act requires a Master Plan to provide a new ANEF that is technical endorsed by Airservices Australia.

The ANEF system provides a scientific measure of aircraft noise exposure from aircraft operations around an airport and in conjunction with Australian Standard 2021-2015 Acoustics – Aircraft noise intrusion – Building siting and construction guides land use planning surrounding the airport.

The following factors are considered in calculating the ANEF:

- The intensity, duration tonal content and spectrum of audible frequencies of the noise of aircraft take-offs, landings and reverse-thrust after landing
- The forecast frequency of aircraft types and movements on the various flight paths (the ANEF modelling has not anticipated any major changes to the flights paths into and out of Adelaide Airport)
- The average daily distribution of aircraft take-offs and landing movements in both daytime (7.00am to 7.00pm) and night time (7.00pm to 7.00am) hours
- The topography of the area surrounding the airport

A new ANEF that considers the ultimate capacity of the current runways system has been prepared for the Master Plan 2019 and following engagement with State and Local governments was endorsed for technical accuracy by Airservices in July 2019.

# Noise Above Contours

N70 contours are included in the Master Plan to show the average number of daily noise events above 70 decibels (dB) caused by over-flying aircraft. For example, an outdoor noise level of 70 dB is approximately 60 dB indoors, with windows open to a normal extent, which is the approximate noise level that could interfere with normal conversation or with listening to television.

