



# 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.

**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 Australia (the airspace manager).**



# Roles and Responsibilities of Aircraft Noise Management

Aircraft noise is an unavoidable impact of aircraft operations. Roles and responsibilities regarding aircraft-noise management vary across a range of organisations, as shown in the table below.

ORGANISATION	RESPONSIBILITY
Airlines	Airlines purchase particular types of aircraft which are suitable for the routes they wish to fly, or are currently flying, into and out of Adelaide Airport.
International Civil Aviation Organization (ICAO)	ICAO is responsible for setting noise standards for manufacturers of new aircraft.
Civil Aviation Safety Authority (CASA)	CASA is responsible for regulation and ensuring safe operation of civil aviation in Australia. CASA is responsible for approving the use of new aircraft types in Australia.
Airservices Australia	Airservices manages the airspace around Australia to maintain control over the movement of aircraft into, and out of, airports in Australia. Airservices also designs and manages the flight paths and manages aircraft-noise complaints and enquiries through its Noise Complaints and Information Service (NCIS).
Aircraft Noise Ombudsman (ANO)	The Aircraft Noise Ombudsman oversees the handling of aircraft-noise enquiries and complaints by Airservices and the Commonwealth Department of Defence.
Department of Infrastructure, Transport, Regional Development and Communications (DITRDC)	The Commonwealth Department of Infrastructure, Transport, Regional Development and Communications (DITRDC) develops and enforces the policy and regulatory framework for airports and the aviation industry and administers the Airports Act 1996. DITRDC also administers the Adelaide Airport curfew, including dispensations and regulatory matters for certain aircraft to operate during the curfew period.
Adelaide Airport Limited (AAL)	AAL is responsible for providing and maintaining aviation infrastructure at a high standard for aircraft movements and passenger moments at the airport. AAL does not control aircraft noise. AAL actively manages ground-based noise at the airport.
Adelaide Airport Consultative Committee & Adelaide Airport Technical Working Group	<p>The Adelaide Airport Consultative Committee is the primary community forum used to discuss airport related issues impacting the community including aircraft noise.</p> <p>The Adelaide Airport Technical Working Group sub-committee discusses aircraft-noise management and improvement opportunities.</p>

# Describing Aircraft Noise

Aircraft noise is generated both by the aircraft's engines and by air passing over its airframe. Different models and sizes of aircraft produce different types and loudness of noise. These characteristics depend on the type of engine (propeller or jet), aerodynamic noise (affected by how modern the aerodynamic design is) and how the aircraft is flying (its speed and weight characteristics; how it takes off and lands).

Aircraft noise is different to other forms of noise in that it occurs sporadically and from an elevated source. Other forms of noise such as background urban transport noise occur more frequently, with morning and evening peaks and at ground level.

Although aircraft noise is sporadic, it can occur at regular or frequent intervals, depending on airline schedules. The noise from aircraft increases closer to airports when aircraft descend prior to landing. At low levels, aircraft noise can be very loud but only for a short period of time.

Aircraft noise is measured and analysed in terms of frequency of occurrence, peak noise levels during an overflight, loudness levels, and duration of the noise event. These characteristics are integrated over longer periods of time to describe the aircraft noise exposure at locations

# Communicating Aircraft Noise Information

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).

AAL continues to engage with local communities surrounding the airport through a range of committees and forums, such as the Adelaide Airport Consultative Committee. This Committee comprises local community representatives and key Government and regulatory stakeholders and is a forum where issues relating to the operations of the airport, and potential effects on the local community can be raised. Issues such as the management of the curfew, master planning and aircraft flight path improvements are regularly discussed, including presentations from airlines and Airservices Australia.

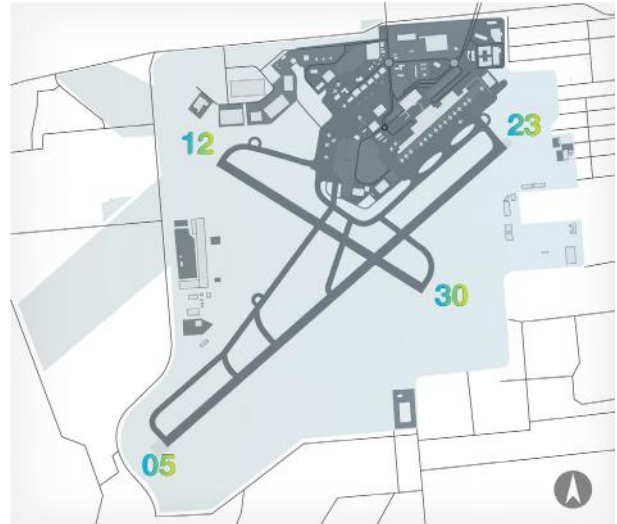
# Flight Paths

Flight paths are like highways in the sky where aircraft fly the majority of the time as they arrive and depart an airport.

Airservices Australia is the Commonwealth Government organisation responsible for the design of (and changes to) flightpaths and the management of air traffic arriving and departing Adelaide Airport. Flight path design is a complex process based on Australian and International design standards. AAL actively works with Airservices Australia in ensuring optimised airspace and the consideration of safety, efficiency and environment.

# Noise Abatement Procedures

Noise abatement procedures are implemented at all major airports, including Adelaide Airport, to reduce the impact of aircraft noise on the community. The use of noise abatement procedures, which include preferred runway use and preferred flight paths, are applied by Airservices air traffic control, subject to weather conditions and aircraft requirements. As aircraft take-off and land into the wind for safety and performance reasons, Adelaide's seasonal wind patterns primarily influence the use of runways. Runway 23 is used more in summer, where aircraft depart over the coast and arrive from the CBD direction. Runway 05 is used more in winter, where aircraft depart towards the CBD and arrive from over the coast.



# Adelaide Airport Curfew

Adelaide Airport currently operates under a legislated curfew subject to the Adelaide Airport Curfew Act 2000 and the Adelaide Airport Curfew Regulations 2000, to limit noise exposure from aircraft at night during the curfew hours of 11:00pm - 6:00am.

The Curfew is administered independent of Adelaide Airport, by the Commonwealth Department of Infrastructure, Transport, Regional Development and Communications. The Department is the only organisation that can make a determination of a curfew violation. Airservices Australia monitors which aircraft operate during curfew periods and provides reports to the Department.

The Adelaide Airport curfew is not a blanket restriction on aircraft operations at night as some aircraft are permitted to operate during the curfew. As outlined in the Act and Regulations, take-offs and landings at the airport are restricted to specific types of aircraft and operations. These include:

- Low-noise heavy freight aircraft. These aircraft carry medical supplies, perishable produce and other items which require urgent delivery times. A maximum of 15 take-offs and 25 landings are permitted each week
- Medical emergency flights, such as Royal Flying Doctor Service flights
- Medevac helicopters

- Cobham Aviation BAe146 aircraft undergoing scheduled maintenance (subject to approved dispensation from the Department).
- Approved aircraft listed in under Regulation 7 of the Regulations. These are listed as specified types of jet aircraft; of a maximum take-off weight of 34,000 kilograms or less; and comply with the Air Navigation (Aircraft Noise) Regulations 1998.

The Secretary of the Department has the power to approve an aircraft to operate during the curfew period (a dispensation). A dispensation is granted by the Department only where the aircraft operator meets the exceptional circumstances criteria set out by the Department. For more information on the Curfew refer to the Department's [Curfew Factsheet](#).

## Quieter Aircraft Technology

Technological advancements in aircraft technology have reduced aircraft fuel consumption, air pollution, and noise emissions significantly over the last 30 years and this is expected to continue in the future. 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. AAL is planning for infrastructure that supports newer generation quieter aircraft.

## 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. This 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. Ground-based noise and curfew enquiries can be made directly with Adelaide Airport directly via email ([airport@aal.com.au](mailto:airport@aal.com.au)) or by phoning the Airport Management Centre during office hours on (08) 8308 9211.

## Previous Insulation Scheme

In 2000 the Commonwealth Government initiated a noise insulation program for buildings in areas of high aircraft noise exposure. Insulation works on some houses and public buildings continued until 2012 when the scheme was concluded.

Certain residential properties and public buildings (schools, places of worship, day care centres and hospitals) were eligible for assistance under the program.

This scheme was undertaken independent of AAL and inquiries on the scheme can be directed to the Commonwealth Department of Infrastructure, Transport, Regional Development and Communications.

## Learn more about aircraft noise in Adelaide

Airservices Australia hosts a free online system called [WebTrak](#) where the public can access information about where and how aircraft fly within 55km of Adelaide Airport. WebTrak provides users with information about arriving and departing aircraft (from three months to just 40 minutes prior to your inquiry) along with noise data from Airservices' monitoring stations.

Online aircraft tracking web pages and apps like Flightradar 24 may also assist with noise enquiries.

For detailed information on air traffic, aircraft movements and flight paths at Adelaide Airport, visit the Airservices Australia Adelaide page: <http://aircraftnoiseinfo.emsbk.com/adelaide/home/>

## How can I lodge a complaint about aircraft noise?

Airservices Australia is the responsible entity for managing flight paths and airspace and is also the body that addresses complaints and enquiries about aircraft noise and operations through its dedicated Noise Complaints and Information Service (NCIS). A complaint or enquiry to Airservices can be made via:

- Online: <https://www.airservicesaustralia.com/aircraftnoise/about-making-a-complaint/how-to-make-a-complaint>
- Phone: 1800 802 584 (free call)
- Mail: Noise Complaints and Information Service, PO Box 211, Mascot NSW 1460
- Directly via WebTrak: <http://www.airservicesaustralia.com/aircraftnoise/webtrak/>

## Independent Complaints Review Process

The Aircraft Noise Ombudsman (ANO) conducts independent administrative reviews of Airservices Australia's management of aircraft noise related activities including the handling of complaints or enquiries made to Airservices Australia about aircraft noise and community consultation processes related to aircraft noise. For more information, or if you feel your noise complaint was not managed effectively by Airservices Australia, you can contact the ANO via: [www.ano.gov.au/complaints/](http://www.ano.gov.au/complaints/)

# Adelaide Airport Master Plan 2019

The Adelaide Airport Master Plan 2019 outlines the vision for the development of Adelaide Airport to support the continued growth of air travel and the State economy. The Master Plan 2019 was approved by the Federal Minister for Infrastructure, Transport and Regional Development on 2 March 2020.

The Master Plan 2019 was developed through extensive stakeholder and community consultation and covers all aspects of airport planning and operations – from forecast aeronautical growth and associated development through to ground transport, airport safeguarding, land uses, environment strategies, aircraft noise and commercial development.

View the approved 2019 Adelaide Airport Master Plan here: [www.adelaideairport.com.au/corporate/community/adelaide-airport-master-plan/](http://www.adelaideairport.com.au/corporate/community/adelaide-airport-master-plan/)

## Australian Noise Exposure Forecast

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.

The Australian Noise Exposure Forecasts (ANEF) system is the aircraft noise exposure forecasting system currently adopted in Australia for land use planning.

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 copy of the ANEF is available in Chapter 13 of the Master Plan.

## Number-Above Contours

Number-Above contours are used to inform the community of current and future noise exposure. Number-Above contours illustrate the average number of events per day that exceed a certain noise level.

For example, N70 noise contours would represent the average number of daily noise events above 70 decibels (dB) caused by over-flying aircraft. 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. N70 maps for the area around Adelaide Airport are provided in Chapter 13 of the Master Plan.

