

## Submission to the Senate Rural and Regional Affairs and Transport (RRAT) committee inquiry into aircraft noise - April 2024



### About RAAA

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The Regional Aviation Association of Australia (RAAA) is a not-for-profit organisation formed in 1980 (formerly known as the Regional Airlines Association of Australia) to protect, represent and promote the combined interests of its regional aviation organisations across Australia. RAAA members operate in all States and Territories and include airlines, airports, engineering and flight training companies, finance and insurance companies and government entities. RAAA's members operate successful and growing businesses providing employment and economic sustainability within regional and remote areas of Australia.

The RAAA has approximately 125 organisational members who directly employ over 10,000 people, mainly in regional areas. On an annual basis, the RAAA's Air Operator Certificate (AOC) members jointly turnover more than \$1.5 billion, carry well more than 2 million passengers and move over 23 million kilograms of freight. Our regional airport members also provide and manage critical infrastructure across Australian.

As detailed in our Constitution, the aim of the Association is to support our members by working with Government, the regulatory authority, and the community, to promote the maintenance of a safe and viable regional aviation industry.

### Introduction

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The use of aircraft across a range of community needs and businesses is deeply embedded in Australian society and our way of life. A person's reaction to aircraft noise can be unique and highly emotive. How an individual reacts to aircraft noise will vary depending on their own circumstances. Key determining factors and considerations with aircraft noise centre around the type of aircraft, the frequency of flight, the time of day and the prevailing weather conditions at the location.

The sound of a rescue helicopter flying overhead is a welcome relief to a lost bushwalker. The sound of a Royal Flying Doctor Service aircraft arriving to undertake vital regional health visits is reassuring. The sound of a small business jet flying a critical response surgical team to undertake a lifesaving medical retrieval or organ transplant is well understood. The sound of a freight aircraft delivering fresh produce or urgently needed automotive parts from across the country is very much expected and appreciated by the community. The sound of a regional jet taking off to safely transport fly in-fly out mine workers to their workplace has become routine. The sound of a large passenger jet taking off transporting Members of Parliament to visit their constituents or families on well-earned holidays or family visits is commonplace. All of these are unquestionably vital to the Australian community, our wellbeing, and our lifestyle. However, they all generate aircraft noise in our community.

The need to undertake these activities are well understood and accepted by the community. However, despite all of the accepted benefits of the aviation industry, for some people, hearing any aircraft noise at all is not acceptable under any circumstances.

## Some facts and figures

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Aviation is critically important to Australia's economy and quality of life.

- Prior to COVID-19, the aviation sector directly contributed around \$20 billion to the Australian economy and employed around 90,000 people. The sector indirectly enables the tourism, business, recreation, mining, manufacturing, and higher education sectors. [1]
- A report commissioned by the Australia Airports Association (AAA) in 2022 showed that airports and their associated activities contributed \$105 billion to the Australian economy or 5% of GDP. [2]
- Approximately 600 Australian companies participate in aerospace manufacturing. These include maintenance repair and overhaul (MRO) services for airlines and manufacturers. The aircraft manufacturing and repair sector was worth \$861 million to Australia's GDP in 2020-21. [3]
- The aviation sector is also integral to many freight supply chains. In 2019 Australia benefited from over 1 million tonnes of combined imports and exports of high value airfreight. [4]
- Australia's tourism sector relies heavily on aviation which accounts for around \$68 billion or six per cent of GDP. Total international passenger traffic continues to grow post COVID-19 and to the year ending January 2023 domestic passenger movements alone were 52.14 million. [5]

[1] Aviation Green Paper – Towards 2050. Commonwealth of Australia, September 2023

[2] Taking Flight: The economic and social contribution of Australia's airport. Australian Airports Association, November 2023

[3] Taking Flight: The economic and social contribution of Australia's airport. Australian Airports Association, November 2023

[4] Bureau of Infrastructure, Transport and Regional Economics, Freight Performance Dashboard website

[5] Bureau of Infrastructure, Transport and Regional Economics, website

## Australia meets its international obligations

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In Australia the Air Navigation (Aircraft Noise) Regulations 2018 (Cth) require all aircraft operating in Australian airspace to comply with noise standards and recommended practices introduced under the Convention on Civil Aviation. These standards are set out in the International Civil Aviation Organization (ICAO) document, Annex 16, Environmental Protection - Volume I.

Australia is a long-standing member of the International Civil Aviation Organization (ICAO) who developed the Balanced Approach to Noise Management to guide aircraft noise management. Since 2001, member states like Australia have been required to adopt this approach. The Balanced Approach addresses aircraft noise management through four elements:

- reduction of noise at source, for example quieter aircraft and noise standards
- land-use planning and management, for example zoning, easements and building standards
- noise abatement operational procedures, for example preferred flight paths and runways
- operating restrictions on aircraft, for example caps, curfews, and quotas, which are regarded as last resorts and only to be used after the other three options above have been exhausted.

Australia has been meeting, and continues to meet, its international obligations to the management of aircraft noise.

## New aircraft are quieter

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How an aircraft generates noise varies from aircraft type to aircraft type. Most people hear 'noise'. Predominantly the noise from an aircraft comes from the engines, albeit a jet engine or a propellered engine. Additionally, the levels of noise can vary depending on the phase of flight. On take off the engines are running at high power to help the aircraft generate lift to fly. In the cruise or landing phase of flight engine power settings will vary. The total noise level is also affected by the design of the aircraft and its control surfaces. These generate aerodynamic drag (noise) that also add to the total noise profile.

It is now well known and accepted that newer aircraft types flying in Australia and around the world are quieter, with both their engine noise outputs and aerodynamic noise profiles significantly less than older fleet.

As an example, older and now retired aircraft like the Boeing 727 and Boeing 747-200 generated noise levels over 100 decibels on departure. Compare this to the current aircraft types like the Airbus A320 and Boeing 737-800 which are widely used in Australia and only generate 75-85 decibels at 1000-2000 feet on departure. [6] Further to this, the very latest models of aircraft entering service into Australia like the Boeing 787, Airbus A350, and Boeing 737 MAX aircraft are quieter. To put this into context, a large crowd cheering at a football game in a stadium can be 100 decibels and the sound of an emergency services vehicle siren is 130 decibels. [7] Interestingly these other loud sources of noise are understood and accepted by the community.

It is important to recognise that modern aircraft are getting quieter. Australia has a modern fleet of passenger aircraft that are quieter than older legacy aircraft. An individual can hear the difference and reduction in noise level for these newer aircraft.

[6] <https://www.nats.aero/environment/noise-and-emissions/measuring-noise/lmax/>

[7] <https://www.bne.com.au/corporate/community-and-environment/flight-paths-aircraft-noise/learn-about-aircraft-noise>

## Flight path design ... airports are close to communities

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By their very existence airports are close to the communities they serve. Most capital city airports in Australia were originally built away from residential areas. However, over time with the growth of our cities and towns some airports are now surrounded by urban living.

Melbourne airport is an example of this. It originally opened in 1970 as a green field development on the outskirts of Melbourne. The site was chosen as it was well away from the residential suburbs. Today with urban sprawl its very much a part of the local residential community and yet, whilst the airport was there first, some residents are not happy with the aircraft noise at this location.

Generally speaking, many larger airports have been located and designed in such a manner that their impacts on the surrounding communities are mitigated as far as possible. The reality is however that it is impossible to design flight paths to completely avoid residential areas. Fortunately, many larger city airports are located on the coast and depending on prevailing wind conditions flights can be directed over water for arrivals and departures.

Flight path design is a detailed and complicated process however with multiple factors coming into consideration. Flight path design needs to incorporate the physical location of the runway including the surrounding landscape and potential obstacles to safe flight; the annual weather patterns at the location; the type, size, and operating performance of the aircraft using the airport; as well as the frequency and volume of aircraft traffic expected for arrivals and departures. In addition to all of these criteria, modern flight path design also considers the impact of aircraft on the community.

Today air traffic control and airlines use several operational techniques to help mitigate the effects of aircraft noise. These include Required Navigational Performance (RNP) which allows an aircraft's flight path to be precisely flown (0.3 nautical miles laterally) as well as Continuous Descent Approaches (CDA) which requires an aircraft power setting on decent to be at or near thrust idle. This in turn generates significantly less noise for the arrival. Additionally, there are several examples where the use of RNP has meant that the airlines fly additional track miles to facilitate aircraft noise sharing for the community. However, this also means that airlines are burning more fuel which is counter to the communities' and government expectations around the decarbonisation of aviation. Reducing use of fossil fuels is a key component of the governments Net Zero Road Map and push towards 'net zero' by 2050.

As a final measure, there is the use of airport curfews. Adelaide airport is only 600 metres from the nearest houses. Consequently, the airport is one of the only four curfewed airports in Australia - the others being Sydney, Gold Coast and Essendon. By contrast, Brisbane airport has the greatest separation distance of any major airport with the nearest homes being located 6 kilometres away. The use of flight curfews is not a viable way to mitigate aircraft noise issues in such circumstances. In fact, the RAAA does not support any further expansion of airport curfews in Australia.

Australia's airspace regulators, service providers, airlines and airports all contribute to safe and appropriate flight path design that is informed by community expectations. Ultimately, community expectations need to be carefully balanced with aviation safety as well as the other economic and social contributions.

## Airservices and aircraft noise

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Airservices Australia are Australia's air navigation services provider. They are responsible for the safe and efficient management of Australia's airspace and supply air traffic control and aviation rescue and firefighting services. These are delivered in accordance with the Air Services Act 1995. Additionally, they are required to undertake their activities in accordance with other regulations set out in the Civil Aviation Safety Regulations (CASR) which are administered by the Civil Aviation Safety Authority (CASA).

Airservices has publicly re-committed to minimising the impact of aircraft operations on the community through its 'Our Commitment to Aircraft Noise Management' document. [8] Airservices' commitment covers every facet of the management of aircraft noise, from flight path design and change processes through to community consultation. Airservices also has responsibility for aircraft noise monitoring at major airports across Australia, allowing people to make noise complaints and when required working with the Aircraft Noise Ombudsman (ANO) to investigate aircraft noise issues.

In their Commitment to Aircraft Noise Management, they articulate their focus areas for aircraft noise management. They are,

- Equitable and transparent community engagement
- Better outcomes through increased collaboration with government and industry
- Alignment to ICAO Balance Approach to noise management
- Innovation and Technology development within air navigation services industry
- Ongoing benchmarking and knowledge-sharing with other air navigation service providers and aviation organisations.

As an air navigation service provider, Airservices uses flight path design and noise abatement procedures as one way to minimise the impact of aircraft operations on the community.

Airservices also consults with the community and participates in Community Aviation Consultation Groups (CACG). These are independent forums where community members and organisations can raise opinions and issues at specific airports. These include planning and development matters as well as operational matters such as aircraft noise which may affect airport relations with their neighbours.

Like other government departments and agencies, aviation regulators and airports, Airservices has clearly defined processes for the management of aircraft noise.

The RAAA supports Airservices and their updated approach to aircraft noise management.

[8] Our Commitment to Aircraft Noise Management – Airservices Australia website [www.airservicesaustralia.com](http://www.airservicesaustralia.com)

## Conclusion

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- Aviation is critically important to Australia's economy and quality of life.
- The RAAA and its members are key contributors to the Australian aviation industry and the benefits it delivers.
- A person's reaction to aircraft noise can be unique and highly emotive. How an individual reacts to aircraft noise can vary depending on their own individual circumstances.
- Key determining factors and considerations with aircraft noise centre around the type of aircraft, the frequency of flight, the time of day and the prevailing weather conditions at the location.
- Australia has and continues to meet its international obligations to the management of aircraft noise.
- Australia has a modern fleet of passenger aircraft that are quieter than older legacy aircraft. Australia's airspace regulators, service providers, airlines and airports all contribute to safe and appropriate flight path design that is informed by community expectations.
- All government departments, agencies, aviation regulators, airlines, airports and Airservices Australia have clearly defined regulations and processes for the management of aircraft noise.
- Community expectations will always need to be carefully balanced with aviation safety as well as other economic and social contributions for the benefit of the Australian community.
- The RAAA supports current regulations, policies and procedures used to manage aircraft noise across Australia.

