

NATIONAL AIRPORTS SAFEGUARDING FRAMEWORK

MEASURES FOR MANAGING IMPACTS OF AIRCRAFT NOISE

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Purpose of guideline

1. This document provides guidance to Commonwealth, State, Territory and Local Government decision makers to manage the impacts of noise around airports including assessing the suitability of developments.

The document has been developed through the National Airports Safeguarding Advisory Group (NASAG). Why it is important

2. The *Principles for a National Airports Safeguarding Framework* acknowledge the importance of airports to national, state, territory and local economics, transport networks and social capital.
3. Over the long term inappropriate development around airports can result in unnecessary constraints on airport operations and negative impacts on community amenity. These impacts need to be managed in a balanced and transparent way.
4. The established Australian Noise Exposure Forecast (ANEF) System and the Australian Standard AS 2021-2015 *Acoustics – Aircraft Noise Intrusion – Building Siting and Construction* (AS2021) have been recognised by a number of jurisdictions in their land use planning regimes. However, AS2021 recognises that the 20 ANEF and 25 ANEF zones do not capture all high noise affected areas around an airport, and the ANEF contours are not necessarily an indicator of the full spread of noise impacts, particularly for residents newly exposed to aircraft noise.
5. Governments recognise the merits of utilising a range of noise measures and tools in conjunction with the ANEF system to better inform strategic planning and to provide more comprehensive and understandable information on aircraft noise for communities. A brief

overview of other aircraft noise measures and tools for the purposes of public communication is provided in the [Attachment](#).

6. Standards Australia has also developed a handbook (*Acoustics – Guidance on producing information on aircraft noise*) to provide assistance on the preparation of information to describe aircraft noise to the public. Making such information available to the public can assist the individual in making their own decision on what is an acceptable level of aircraft noise in their circumstances.

Roles and responsibilities

7. State/Territory and Local Governments are primarily responsible for land use planning.
8. The Australian Government is responsible for planning control at federally leased airports administered under the *Airports Act 1996* (the Airports Act) and Defence airports under the *Defence Act 1903*. Planning on other airports is undertaken by State, Territory Governments and Local Governments or private operators.
9. Airport lease holders under the Airports Act have the responsibility of publishing as part of the five-yearly Master Plans, endorsed Aircraft Noise Exposure Forecast (ANEF) information. These ANEFs may be standard (up to 20 years) long range (20 year +) or ultimate capacity. The preference for land use planning purposes is to use ultimate capacity or long range forecasts.
10. The Department of Defence prepares ANEFs and related noise information for Defence operated airports and contributes to the ANEF development for joint user airports.

How it should be used

11. Some States/Territories already have planning guidelines or policies in place and this document provides guidance for any reviews of those documents. For those without policies in place, these Guidelines (in addition to the associated Safeguarding Framework) will provide guidance for new policies.
12. In preparing new local or regional Strategic Plans, existing airports should be clearly identified and noise modelling reports made available by the airport owners/operators. The modelling reports will allow the guidelines on noise sensitive developments to be applied in the vicinity of the relevant airports.
13. There is a need to treat future development and existing development differently. Where there is no *major* existing or approved development, there is scope to plan ahead to take account of potential noise disturbance and in particular to minimise the zoning of noise-exposed land for residential development. There may be less scope to avoid noise issues in situations of urban consolidation and infill or redevelopment of brownfield areas, but consideration should be given to the appropriate nature of that development and the balance of public interest. It is recognised that most State and Territory Governments have targets or policies that need to be met to achieve housing and employment area supply.

14. It is recognised that the pattern of flying at military airfield might not readily lend itself to the same suite of frequency based noise measurements. This is because military jets exhibit a pattern of lower frequency but higher individual noise events that may require different measures, such as N80s. These airfields might continue to rely more heavily on the ANEF.
15. This document gives guidance to planning officials when considering the following scenarios:
 - i. rezoning of greenfield areas for noise sensitive uses¹ (i.e. areas that are predominantly rural or non-urban, including specifically identified urban boundary areas around airport sites);
 - ii. rezoning of brown-field areas for noise sensitive uses (i.e. areas that are predominantly urban where changes of land use from industrial, commercial or low-density residential are being considered); and
 - iii. assessment of new developments applications for noise sensitive uses within existing residential areas.

I. Rezoning of greenfield areas to permit noise sensitive uses

16. This section applies where the introduction of new noise-sensitive uses is under consideration in areas that are predominantly rural or non-urban, including specifically identified urban boundary areas. This section does not apply to existing urban areas which have been developed.
17. It is important that consideration be given to the application of the following approach to land use planning:
 - i. no new designations or zoning changes that would provide for noise sensitive developments within a 20 ANEF where that land was previously rural or for non urban purposes (in keeping with AS2021).
 - ii. Zoning for noise-sensitive development be avoided where ultimate capacity or long range noise modelling for the airport indicates either:
 - 20 or more daily events greater than 70 dB(A);
 - 50 or more daily events of greater than 65 dB(A); or
 - 100 events or more daily events of greater than 60 dB(A).
 - iii. Zoning for noise-sensitive development should take into account likely night time movements and their impact on residents' sleeping patterns. For example, where there are more than 6 events predicted between the hours of 11pm to 6am which create a 60 dB(A) or greater noise impact, measures for aircraft noise amelioration and restriction on noise sensitive development may be appropriate.
18. The above approach could be used as additional guidance by strategic planners and weighed along with other relevant strategic considerations.

¹ Noise sensitive uses are residential, education establishments, offices, hospitals, aged care, churches, religious activities, theatres, cinemas, recording studios, court houses, libraries and galleries as specified as a 'noise sensitive developments' in AS2021 (see table 2.1 and 3.3)

II. Rezoning of brownfield areas to permit noise sensitive uses

19. This section applies to urban land that is currently primarily designated for non-noise sensitive uses and is being considered for rezoning, for example, for residential infill or increasing residential densities, such as within a mixed use precinct near a transport corridor.
20. In some instances, areas identified for urban consolidation can also be subject to aircraft noise impacts. In these circumstances, there is a need to balance the need to provide housing, economic growth and strategic planning outcomes against the operational needs of the airports. This approach may identify some adversely impacted parties and it can also identify where benefits outweigh the overall disadvantages.
21. Whilst it would not be appropriate to allow for development that would impact on the operational safety of an airport, there may be circumstances where increasing settlement in existing areas exposed to a significant degree of aircraft noise, would be acceptable given other benefits the site has to offer.
22. Consideration should be given to measures to manage the implications. This could include conditions that require development to be undertaken in a manner that physically reduces noise impacts (e.g. through appropriate construction techniques) and requirements for disclosure processes that ensure future residents are made aware of these impacts prior to purchase.
23. In some circumstances, redevelopment of areas already exposed to aircraft noise can result in a better outcome through better design and construction responses.
24. In locations considered 'marginal' in terms of exposure to aircraft noise, a case-by-case assessment of development proposals could be used.
25. Other relevant aircraft noise information tools (see paragraphs 17 and 29) are available to assist in informing these rezoning considerations.

III. Assessment of new developments applications for noise sensitive uses within existing residential areas

26. This section applies to urban land that is already designated for noise sensitive uses, primarily residential areas where development pre-dates the significant growth of airport traffic experienced following the introduction of jet aircraft in the late 1950s.
27. Whilst it would not be appropriate to allow for development that would impact on the operational safety of an airport, increasing densities or new developments in existing areas exposed to aircraft noise may be acceptable where the site provides other desirable outcomes such as providing housing near transport or meeting urban consolidation targets. In some circumstances, redevelopment of sites already exposed to aircraft noise can result in a better outcome through better design and construction responses.
28. Such development should be undertaken in a manner that physically reduces noise impacts (e.g. through appropriate construction techniques and adherence to AS2021) but also through a disclosure process that ensures future residents are aware of these impacts prior to purchase.

29. Commonwealth, State, Territory, Local Governments and airport operators should support effective disclosure of aircraft noise to prospective residents. This should be considered as broadly as possible but required where ultimate capacity noise modelling for the airport indicates either:

- the area is within the 20 ANEF;
- 20 or more daily events greater than 70 dB(A);
- 50 or more daily events of greater than 65 dB(A);
- 100 events or more daily events of greater than 60 dB(A); or
- 6 or more events of greater than 60 dB(A) between the hours of 11pm and 6 am.

Measures for Airports without an ANEF

30. An ANEF may not be available at all general aviation airports or airports with low frequencies of scheduled flights. Whether or not an ANEF is prepared for these airports, land use planning should take account of flight paths, the nature of activity on airports and/or 'number above' contours if available.

31. A zone of influence around airports could be taken into account, depending on the amount of traffic at the airport. The following zones are approximations and should be used as guidelines only:

- Within 15 km of an international airport, major domestic airport, or major military aerodrome.
- Within 10 km of a domestic airport with regular scheduled public transport services.
- Within 5 km of any other type of aerodrome for which an ANEF chart is unavailable.

32. The approach in paragraph 17 could also be considered as appropriate for use at these airports.