

DRAFT NATIONAL AIRPORTS SAFEGUARDING FRAMEWORK - REVIEW OF AIRPORT NOISE GUIDELINES

Najah Ishac, Director EMGA Mitchell McLennan Pty Ltd
nishac@emgamm.com

The draft framework calls for 'new' noise metrics and associated criteria to supplement the long established ANEF system documented in Australian Standard AS2021. One of the main reasons cited for the suggested changes was that the majority of noise complaints come from residents living outside the 20 ANEF contour. It is widely acknowledged that complaints are a very poor indicator of annoyance. In fact the latest available Sydney Airport Operational Statistics (for November 2011) demonstrate this (as found on Airservices Australia's website). In particular the Noise Complaint Section (p 15 onwards) and the tabulated Complaint History vs Number of Complainants (p 19) highlights that a high number of complaints from a given area does not necessarily mean there are a high number of complainants. For example, the November data shows 1660 complaints from 1 complainant in Kellyville, NSW, which is well outside normal aircraft noise impact zones of any description. Similarly, there were 1239 complaints from 2 complainants in Eastlakes in November 2011. This pattern of complaints is evident during other months of data collected and published by Airservices Australia in 2011. To that end, the draft guideline report does not acknowledge how many resident complaints would come from outside of the proposed more stringent criteria.

If residents outside the 20 ANEF contour have been given an expectation that they will not be affected by aircraft noise, the problem is how noise information is presented and communicated, not the technical means of assessing it. This is where the proposed number above metric (eg N70) can help. Such metrics have been used by practitioners for decades in Australia and are very useful in providing a more comprehensible way of understanding noise impacts and exposure. However, it cannot alone be the sole measure of impacts, just like the current ANEF system is not the sole criteria for aircraft noise. The AS2021 that provides the ANEF criteria requires that in addition to ANEFs, maximum (L_{max}) noise level events are to be assessed in determining effects on land uses. The L_{max} noise level is the basis for the 'number above' metrics (eg N70) and like the N70, the AS2021 also relies on maximum noise levels from aircraft for impact assessment, but importantly not for planning purposes.

The most relevant aspect in the document that is contentious is paragraph 15 of the Guideline:

There should be no new designations or zoning changes that would provide for noise sensitive developments within a 25 ANEF

where that land was previously rural or for non urban purposes. Zoning for noise-sensitive development should be avoided where ultimate capacity or long range 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); or*
- *100 events or more daily events [sic] of greater than 60 dB(A).*

The first sentence in the quote above is consistent with the current AS2021 recommendations and there has been wide acceptance of this to date. However, the criteria presented in the second part of the quotation above are not founded on credible scientific studies or information. The first issue is how one reasonably quantifies ultimate capacity or long range operations of an airport. Secondly, the presented criteria appear to be combining traditional planning metrics for new homes near existing airports (ANEF) with more recent 'annoyance' based metrics for new aircraft noise on existing homes on an ad hoc basis. No new data are presented, with reliance placed on a relatively small sample taken some 30 years ago in a study by the National Acoustics Laboratories (NAL). If the new metrics are adopted, then a significant amount of land around airports which is currently available for rezoning for noise sensitive purposes will become sterilised for that purpose.

Whilst the number of movements exceeding 70dB(A) during a 24-hour period and the number of movements exceeding 60dB(A) over the night time period is useful information to allow residents within the community to understand what their reaction to the noise might be, there is no technical justification for setting the number of movements at these levels as criteria to assist in preparing planning guidelines and legislation. These metrics have so far only been used as information to assist the community in understanding the airport noise environment.

These metrics cannot be justified by analysing complaints, since complaints do not correlate well with noise annoyance. The use of criteria around the new metrics for planning purposes is not supported, but the use of information on maximum noise levels under flight paths to assist the community in its understanding of likely noise impacts is useful. For planning purposes, the ANEF system should be retained along with the current AS2021 approach to maximum noise level assessments. Presenting maximum noise level events using N70 and N60 contours should become a formal requirement for information purposes (as it has been used to date) only.