

Attachment One - Evidence Base Regarding Noise

The National Aviation Policy White Paper, December 2009, states that

“The impact of noise should not be under-estimated”, and goes on to say “Community pressure for operational constraints at airports is coming increasingly from residents living outside the conventional high noise exposure zones near airports.” (p.206), and:

“History and experience has shown that aircraft noise does not stop at a contour, and aircraft noise complaints are coming increasingly from areas well outside the 20 ANEF value. Best practice land use planning around airports and flight paths should ideally take into consideration the range of noise information relevant to the local community including the location of flight paths, types of aircraft activity, numbers and timing of aircraft movements, the intensity of noise events from those movements and the comparison to ambient noise levels. The ANEF and the current building standard AS2021 should not be applied by planners in isolation or without merit-based judgement” (p.211)

The Australian Airports Safeguarding Framework, agreed to by all states and territories in 2012, makes the following statements:

“AS2021-2015 recognises that the 20 ANEF and 25 ANEF zones do not capture all high noise affected areas around an airport, and ANEF contours are not necessarily an indicator of the full spread of noise impacts, particularly for residents newly exposed to aircraft noise.

Governments recognise the merits of utilising a range of noise measures and tools in conjunction with the ANEF system to better inform strategic planning...” (p.1)

The supplementary attachment states also:

“experience shows the majority of noise complaints that are received come from residents living outside the 20 ANEF contour”, and, “it is likely no single standard will be appropriate for all airports”, and, “the ANEF gives only limited recognition of night-time noise” (p.1)

The attachment also notes that the ANEF methodology resulted from a survey of only 3,575 residents in 1982 and that ANEF 20 anticipates 11% of people will be seriously affected and 45% moderately affected by aircraft noise. The study suggested that more accurate results would accrue if N70 values were combined but noted that computing power at the time made this very difficult and expensive

The Guideline then sets out a number of N contour targets for greenfield areas. It is noted that the EIS utilises N60 and N70 contours for the airport, amongst other values, and these demonstrate the likelihood that greater restrictions may be appropriate relating to night time movements at least in the general vicinity of the future airport city.

In fact there is a significant body of evidence from around the globe that supports the view that it is risky to place noise sensitive development adjacent to the ANEC or

ANEF 20 contour relating to the new airport. The following points are relevant to the consideration of noise in relation to land use planning:

The EIS, prepared to inform the Stage 1 Airport Plan, and the Peer Review of that document, prepared by WSROC, describe a high level of uncertainty. The various noise contours produced, including the ANEC, are all based on predicted flight paths referred to as a “*hypothetical future airport usage pattern*”. The EIS states that:

“The flight paths and procedures used for this noise assessment are indicative, which introduces uncertainty in regards to predicting the extent of aircraft overflight noise impacts” (p.11 of Section 31 Noise), and:

“New flight paths can only be implemented following further analysis, including detailed consideration of potential noise abatement opportunities and extensive community consultation, and final approval by CASA”. (p. 28 of Section 10 Noise (aircraft))

The EIS makes it abundantly clear that the contours are not to be relied on for Land Use Planning purposes. Under the heading “Land use planning implications”, The EIS states:

“It is important to note that the ANEC contours for the proposed Stage 1 development are not intended to guide future land use planning and are provided primarily for comparative purposes and to provide information about predicted noise exposure. It is intended that any changes to the current land use planning instruments would be based on longer term forecasts of noise exposure and the final airspace design” (p.40 of Section 10) and:

“It is expected that future land use planning around the proposed airport would be based on formal long term ANEF contours endorsed by Airservices Australia prior to the commencement of airport operations”. (p. 73 of Section 10)

Similarly, the noise section relating to subsequent stages states:

“Land use and planning around the proposed airport would be influenced by the development of an official ANEF chart as part of the future airspace design process. It is envisaged that planning controls based on a long term development scenario would be implemented prior to the introduction of dual runway options in order to promote appropriate development in the vicinity of the proposed airport.” (p. 67 of Section 31)

Various peer reviewers of the EIS speculate that the eventual ANEF 20 contour could be significantly broader than the current ANEC 20 contour.

The EIS, the National Airports Safeguarding Framework (referenced in the LUIIP Stage 1) and the National Aviation Policy White Paper all state that a broad range of noise metrics should be employed when determining acceptable locations for noise sensitive development. The EIS itself calls up a number of measures, including ANEC, N70 and N60, LAmx, and ground noise from engine run up and taxiing. The EIS models three different time periods: stage 1 (10m passengers, 2030), 2050 and 2063. It is very important to note that many of these contours exceed the limits of the ANEC

contours for each period. Notably the N60 contours intrude well into the proposed Aerotropolis Core. This is to be expected because ANEC and ANEF describe cumulative aircraft noise for an annual average day. This can be very different from actual experience on any particular occasion. Best practice noise management demands that all of these impacts must be considered and that cumulative impacts must be aggregated to get an accurate picture. Consideration of the N60 contour is particularly relevant to the preservation of the curfew-free status. Your attention is drawn to the figures in the two noise sections of the approved EIS: figures 10-12, 15, 16 and 24 in Volume 2a, Chapter 10 and figures 31-5, 14, 21, 31, 34 and 35 in Volume 3, Chapter 31.

It is noteworthy that the Australian Industrial policy on nighttime noise states that noise above 40dBA is unacceptable. This level clearly contradicts the usual standard of 60dBA. There are numerous references to the fact that residents in quiet rural suburbs, newly exposed to noise are likely to be particularly sensitive.

For the reasons explained above, LCC believes a precautionary approach should be adopted to locating noise sensitive development in close proximity to the new airport. We believe that there will be a much more certain body of evidence, on which to base planning decisions, shortly after the airport has opened: there will be:

- approved flight paths and ANEF contours, following community consultation;
- evidence from noise monitoring stations to establish ambient noise levels and aircraft noise from the operational aircraft; and
- a record of noise complaints received.

This evidence will enable more informed decision making. LCC believes that this approach will not inhibit the growth of the airport or the Aerotropolis as there is more than enough land available in close proximity to the airport to absorb the residential demand in the meantime. Provided appropriate transport connections are provided, these surrounding areas and existing regional centres can house executives and airport workers. In the meantime, land uses that are not noise sensitive can establish in the Aerotropolis Core.

Council believes that failure to consider these measures against determined flight paths will put the curfew-free status of the airport at risk and potentially lead to adverse impacts on the health and well-being of future residents in the area. A recent article, referring to Perth airport, highlighted the importance of retaining a curfew-free airport when it stated that imposition of a curfew would result in a loss of 17,000 potential jobs over 25 years and an economic loss to the state of \$46 billion dollars.