

# ***SUBMISSION TO SENATE COMMITTEE ON AIRPORTS AMENDMENT BILL 2006 ETC***

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As Private Individual

As Secretary Sydney Airport Community Forum Inc [consistent with forum -decided principles ].

The writer is also Proxy of Mayor of Ashfield to Government SACF , but is not preparing this report in that official capacity) <sup>#1</sup>

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### ***A REPRESENTATION OF ANEF LEVELS AS NUMBER OF 70 dB(A) -max EVENTS***

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<sup>1</sup> Due to late provision of notification to the writer no formal Council Authorisation has been possible.

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Private Individual <sup>#2</sup>

Secretary , Sydney Airport Community Forum Inc [consistent with forum -decided principles ].

***Preamble:***

This submission primarily focusses on the aircraft noise-related implications of the proposed amendments to the Airports Act and the issue whether the amended Act will fulfil the stated objectives in relation to the more effective dissemination of meaningful aircraft noise information as claimed in the Explanatory Memorandum to the Bill, following the concerns raised in the Senate Committee Inquiry into the aircraft noise disclosure issues surrounding the preparation of the Brisbane Airport Master-Plan (June 2000).

It further discusses the prolixity and contradictions among legislation and regulations purportedly impacting on the aviation environment affecting residential communities around airports, and points out that parliament urgently needs to address an integrated approach to the regulation and control of aircraft noise. There is a major problem among airports, government agencies and the public attempting to identify just which of these is responsible for aircraft noise impacts, and what standards should be applied. The supposedly all-embracing National Environment Protection Measures (Implementation) Act (1998), whose intention was to unify State and Federal approaches to environmental regulation and controls or subjects such as air pollution and noise exempts overflying aircraft . This leaves a major gap in the coverage of aircraft noise and pollution regulation across Australia.

This submission suggests several legislative changes by which the above situation could be improved .

It further raises (in outline only) the potential problems (not consistent with the furtherance of public consultation) which are foreshadowed will result from the shortening of the exposure periods for future Draft Master- & Major-Development Plans at Australia's airports.

The Submission is therefore divided into four (4) Parts.

Part 1 Aircraft Noise Concerns:

Part 2 Suggested Legislative Targets For Improving The Aviation Environment In Australia:

Part 3 Planning Exposure Period Concern:

Part 4 Implications for Transfer of Airservices Regulatory Powers to CASA in the Airspace Bill.

***Part 1 Aircraft Noise Concerns:***

***Introduction:***

The Parliament is to be complimented for attempting , through the proposed amendments to the Airports Act 1996, to further evolve the specification of information likely to be of assistance to communities and residents of aircraft-noise affected regions of Australian towns and cities in close proximity to airports .

The following thoughts stem primarily from experience gleaned by the writer in Sydney through the ongoing implementation of the "Long Term Operating Plan for Sydney (Kingsford Smith ) Airport " [ie the "LTOP" or "Fair Share Noise Plan"].

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<sup>2</sup> The writer is also Proxy of Mayor of Ashfield to Government SACF , but is not preparing this report in that official capacity.

The final dot-point in the introduction to the Explanatory Memorandum lists the following as the last key area in which the Bill is intended to amend the Act regarding aircraft noise near airports :

***" clarifying and refining processes associated with the current noise management arrangements applying at leased federal airports."***

It is therefore curious that the word "noise" occurs in only four (4) items of the Bill (ie 7, 26, 30, & 39).

Dealing with each of these occurrences in turn:

***Item 7:*** [S. 5 -Definitions] This Introduces a definition into the Act S. 5, for the "*Australian Noise Exposure Forecast*" (ie ANEF) . It is agreed that there is a need for such a definition . The term "Significant ANEF" is already referred to later in the definitions in the existing Act , but not identified with any exposure forecast . It is curious , however, that the wording inserted will , if unamended , leave the material definition of ANEF subject to "endorsement" by the Minister of the day .

Senators are invited to consider why they should not give it the meaning which derives from its well-established scientific definition in Australian Standard AS 2021 -2000 "Acoustics - Aircraft noise intrusion -Building siting and construction" at Appendix A?

Indeed, Section 71 (8) of the existing Act , which is subject to a minor amendment in Item 34, states:

***" 71(8) In developing plans referred to in s. 71 (2)(e) and (3)(e), an airport-lessee company must have regard to Australian Standard AS2021--1994 ("Acoustics--Aircraft noise intrusion--Building siting and construction") "***

For completeness the reference to AS2021 should now read 2021-2000 , as the last amended version of this standard was produced in the year 2000.

Leaving the definition as quoted in S. 5 only compounds the obscurity of what is required of an Airport corporation wishing to comply with the stated intentions of the Act in preparing Master- and Major Development -Plans according to S. 71 (2) & (3), respectively .

Sceptics may construe an intention at some time to depart from the established definition in favour of more loosely defined parameters or metrics not mentioned in the Act . If so, then that intention should be clearly stated as the "***Brisbane Inquiry Report***" <sup>#3</sup> (paras. 4.45-4.48 ) mentions a system of Department-defined alternative possible "parameters" proposed for use in relation to changes of noise affectation in existing urban and suburban areas <sup>#4</sup> . Indeed, this raises the question as to why dwellings in newly-affected well-established existing suburbs should be subjected to different noise and /or insulation standards from those used in "Land Use Planning" applied to new airports in "greenfield" areas.

***Items 26 & 30*** [SS. 71(2) (d) - (da) ; & 71(3) (d) -(da)]: It is agreed that reference to proposed flight paths is appropriate here. However, this raises the problem highlighted by Brisbane Airport Corporation at para. 4.37 of the "***Brisbane Inquiry Report***" .

Flight paths in two dimensions do not provide enough information from which an informed person may arrive at the extent of applicable aircraft noise exposure resulting from a proposed runway or other

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<sup>3</sup> Report of the Senate Inquiry into the Development of the Brisbane Airport Master Plan, June 2000.

<sup>4</sup> See Department paper "Expanding Ways to Describe and Assess Aircraft Noise", DOTARS 2000.

development. There is a need for three dimensional trajectory information taking account of whatever rules and regulations are in force pertaining to flight corridors, track-spreading and /or "Noise Abatement Departure Protocols" , as may be promulgated in the Airservices Publications "DAP-East & West" and the AIP <sup>#5</sup>.

Indeed Brisbane Airport Corporation was correct in stating that (without consulting with air-traffic and airspace planners) they had no flight tracks for their new runway. Making an airport responsible for communicating this important environmentally relevant noise and trajectory information to the public , when it has no control over how aircraft are being flown , appears legislatively schizophrenic .

Although common sense suggests that an airport company *must be aware* of the environmental consequences of its Master- & Major- (even minor) Development plans, in practice it is the *Airservices Act* (Cth. 1995, S. 8(1) (d) & 9(2) ) which makes Airservices responsible for the environmental consequences of aircraft operations ! - See further comments in *"Who Is Responsible For The Aviation Environment And What Standards Should Be Applied "*, below .

Also there may be some temptation for an airport , which has a vested interest in gaining planning approval, to perhaps downplay the perception of aircraft noise impacts in the draft planning stages. The most significant precedent for this, of course , is the notorious case of Sydney's "Third Runway", and its aftermath in the well-known Senate Select Committee Inquiry , "Falling on Deaf Ears". Also, given that even an *Airport Environment Strategy* required by Part 6 of the *Airports Act* is not permitted to canvas the effects of noise from aircraft overflying areas outside an airport's perimeter, **it is submitted there is a major gap in the allocation of responsibility for the consequences of aircraft noise.**

Given the well-established *"polluter-pays"* principle, one might legitimately ask who should bear responsibility for the damage caused to the human environment (air-pollution, health & psychological issues, building damage caused by vibration, etc) ? Should it be an Airport Corporation or the Air-traffic Controller entity, who both make money by maximising air-traffic throughput , the airspace planner (in future perhaps CASA under the accompanying Airspace Bill 1996) , or the airlines, who merely (mostly ) follow air traffic control instructions, or should they all share responsibility , and if so in what proportion? **Senators are therefore urged to consider whether it is really parliament's intention for such infrastructure and regulatory "behemoths" to be forever protected from their liabilities under the law of nuisance for noise and pollution outside airports?**

In the case of "Significant ANEF" exceedances [S. 5] , for which until July 2006 the Federal Government bore some cost of noise insulation for affected dwellings, but for which noise levy collection at Sydney Airport has since ceased , who in future is to bear the cost of insulation? Also why was there no requirement for Sydney's Airport Master Plan (2003) , as accepted by the Minister, to state how many additional dwellings and/or Schools would be affected by the year 2023 at the (Airports Act-deemed) "significant" ANEF levels, or for that matter how many buildings would enter the 25-30 ANEF range for which the Australian Standard specifies that home and school construction is "unacceptable" without noise insulation? **Senators are therefore urged to consider making such requirements the subject of regulation.**

***Item 39*** [New Subsection 78(2A)]. This makes provision for Ministerial scrutiny of "Revised Draft Master Plans" consequential to changes of ANEF with which the writer concurs.

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<sup>5</sup>

AIP = "Australian Instructions to Pilots"; DAP = "Departure & Arrival Procedures"

***Who Is Responsible For The Aviation Environment And What Standards Should Apply?***

As mentioned above , the Airservices Act (Cth. 1995, S. 8(1) (d) & 9(2) ) at present make *Airservices Australia* responsible for the environmental consequences of aircraft operations outside airports.

However, there is no regulation under the *Airservices Act* or the *Airports Act* stipulating what maximum noise levels should be permitted from aircraft flying over dwellings , schools or hospitals. In many countries, and at several airports, heavy fines are levied against airlines, airline pilots etc who cause exceedances of given noise levels above sensitive areas. Other countries and airports <sup>#6</sup> have applied "Noise Critical Altitudes" below which aircraft must not fly over a nation's cities (See review of measures in Chapt. 8 & Appendix "L" of the SACF Inc Sydney LTOP Review <sup>#7</sup> , May 2004).

Moreover, the currently applicable Airports (Environment Protection) Regulations under the *Airports Act* actually exonerate any leased airport from responsibility for aircraft noise and pollution beyond the airport boundary. Thus Regulation 1.03 states:

"These regulations do not apply to:

(a) *pollution generated by an aircraft; or*

(b) *noise generated by an aircraft in flight or when landing, taking off or taxiing at an airport."*

The footnote to the above , in relation to engine and noise emissions by aircraft on the ground, calls up the *Air Navigation (Aircraft Engine Emissions) Regulations* and the *Air Navigation (Aircraft Noise) Regulations*. However, there is no relevant regulation under the *Air Navigation Act* relating to noise and emissions from aircraft while in flight. The Air Navigation regulations referred to are those required for initial certification of the aircraft. These apply only to ground running , or restricted overflying very near airports.

**Therefore Senators should be aware that it therefore does not follow that if an aircraft complies with the *Air Navigation Act* certification rules, that aircraft cannot be flown by an operator at such a low altitude as to produce extremely offensive noise over residential areas.** Also present CASA regulations are only concerned with the Minimum Safe Altitude [MSALT] at which aircraft may be flown, not with noise levels on the ground. Hence the transfer of Airservices regulatory responsibility to CASA [*Airspace Bill 2006*] will not by itself improve this situation.

Moreover the *Airports (Environment Protection) Regulation* 1.04 further excludes the operation of State laws at airport sites to the extent that the Airports Act and Regulations make laws about the same matter . Although this exclusion does not affect the operation of State laws on pollution from motor vehicles; occupational health and safety; or emissions of substances that deplete stratospheric ozone; and the use of pesticides: Reg. 1.04(2), pollution and noise consequences from overflying aircraft are excluded.

**Hence the exclusion from liability under State Laws for breaches of traditional noise regulations and the air pollution consequences for overflying aircraft is extremely comprehensive.**

Thus the duty of airport corporations under Section 71 (2) & (3) of the Bill (As amended) is merely to "notify" the public of the projected ANEF contours and expected track positions for aircraft overflights. Even quantifying the extent of affectation (in terms of numbers of dwellings, and which ones) to be

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<sup>6</sup> Including at some in Australia, but not at Sydney, Kingsford Smith

<sup>7</sup> "The Way Forward for Aircraft Noise Sharing at Sydney (Kingsford Smith ) Airport" ISBN 0-9751843-4-3 (pbk); ISBN 0-9751843-5-0 (pdf); Convening Ed. Lingard P.S. et al, May 2004.

exposed to "significant" ANEFs (ie > 30 dB(A)) is not required as the *Airports Act* and regulations stand at present. The Airport must merely produce the expected ANEF Charts forecast for the relevant period of the lease. In the case of the recent Sydney Airport Master Plan, for example two independent reports<sup>#8</sup> have shown that between 5000 and 7000 dwellings will become affected at the so-called significant 30 ANEF level by 2023, and up to 40,000 dwellings at between ANEF 25 and 29, **but Senators should be aware that these facts were not required to be raised in the Final Master Plan .**

**Furthermore the requirements for production of an Airport Environment Strategy exempt an airport from considering the impact of aircraft pollution and noise outside the airport boundaries.**

Regulation 3.08 of the *AIRPORTS (ENVIRONMENT PROTECTION) REGULATIONS* (entitled "Identification of sources of environmental impact "at airports"" states:

"An airport-lessee company, in specifying in an environment strategy the sources of environmental impact that, under paragraph 116 (2) (c) or (3) (c) of the Act, it associates with airport operations, or civil aviation operations at the airport, as the case requires, must address:

(a) the quality of air at the airport site, and in so much of the regional airshed as is reasonably likely to be affected by airport activities; "

However, it appears that, excepting for regulation (3.08(a) , which is concerned with effects on the quality of air in the regional airshed, *the references to environmental impacts in Reg. 3.08, like those in s. 116(2)(c) to which it refers are with respect to impacts "at the airport"*.

A further incongruity in the environment protection system relating to aircraft nuisance is that Parts 2 & 3 [SS. 11 & 16] of the *National Environment Protection Measures [Implementation] Act (1998)* , which was designed to unify the approach of all States to Environmental impacts of all kinds , exempts the regime from [S. 5] "national interest" matters or

(b) a prescribed matter relating to:  
..... (ii) *the management of aviation airspace or airports, including aircraft emissions, aircraft noise and on-ground airport management, but not including matters specified in subregulation 1.04(2) of the Airports (Environment Protection) Regulations; or*

(c) *any other matter agreed between the Commonwealth, the States and the Territories."*  
[Note subregulation 1.04(2) of the Airports (Environment Protection) regulations only applies to provisions about motor vehicle pollution; occupational health and safety matters; emissions of substances that deplete stratospheric ozone; or the use of pesticides.]<sup>#9</sup>

It is therefore schizophrenic for the Explanatory Memorandum to assert that the Airports Amendment Bill 2006 aims at *"clarifying and refining processes associated with the current noise management arrangements applying at leased federal airports."*

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<sup>8</sup> NSW Govt Submission to the Sydney Airport Preliminary Draft Master Plan 03/04, Table 10 p. 37; SACF Inc Submission On Sydney Airport Corporation Ltd's "Preliminary Draft Master Plan" July 2003, pp 17-19, Table 4.

<sup>9</sup> *ENVIRONMENTAL PROTECTION FROM OVERFLYING AIRCRAFT* Prepared for Sydney Airport Community Forum Inc [SACF Inc] 12 June 1999, by P.S. Lingard (attached) .

**It is submitted that there is much more legislative work to be done for the environmental protection of Australians from , in particular , the noise impacts from overflying aircraft in schools and residential areas near airports. Some relevant suggested Legislative tasks are :**

***Part 2 Suggested Legislative Targets For Improving The Aviation Environment In Australia:***

1. Setting achievable and meaningful statutory noise impact protections provided under the Airservices Regulations (or its successor ) which should aim to approach the protections available to residential areas under current State Land Use Laws and National Environment Protection Measures (NEPMs) , if any, governing the restriction of impacts from industrial noise ;
2. If other scientific and/or statistical parameters and/or metrics are to be employed in future for the representation of aircraft noise impacts on affected communities, then they should be unambiguously able to demonstrate the effect of the impact in terms which persons familiar with state-based day-to-day noise regulation can understand (eg. noise levels marked on power tools).

One such DOTARs proposed system <sup>#10</sup> employs contours showing the number per day of events above a given noise level, ie. the N[dB(A)] (eg. N70, N80 etc) , but is arguably prone to misinterpretation because within , say a 70 dBA contour, a whole range of sound levels up to well in excess of 100 dB(A) may be experienced. Thus if such a system were to be employed, a full spectrum of contours should be provided [See discussion in Chapt. 8 of Ref. 3] .

3. If the ANEF system itself is the source of the assumed public confusion then Senators may be interested in a proposal which converts the ANEF contour level to a parameter representing the number of **"equivalent sound energy aircraft noise events"** each of 70 dB(A) maximum A-weighted decibels, as suggested in the SACF Inc Sydney LTOP Review [Chapt. 8), Appendix "K", Ref. 3]<sup>#11</sup>.

**Therefore Senators may be interested in the example of such a representation reproduced in The Table in the Appendix (p. 9) of this submission .** If it is borne in mind that each 70 dB(A) event is more than sufficient to interrupt a civilised conversation , reference to the Table clearly shows the magnitude of the noise problem needed to meet the insulation threshold for the so-called "significant ANEF" [30 dB(A) ] level as presently defined in the Airports Act.

4. Addressing the shortfall of the ***National Environment Protection Measures (Implementation) Act***, which excludes noise from overflying aircraft in the system of State-Agreed national environment protection measures (NEPMs). Some examples of what to aim for can be found in various places overseas eg. the EU , Washington DC and Boston Logan (See Ref. 3, Vol. 2 Appendix "L") .
5. Include Airservices Australia (or any subsequent air -space planning body) in the Airport Master- and/or Major-Development Planning processes, by stipulation of law, with the express object of introducing an integrated and congruent set of community-acceptable environmental impact rules protecting residents and dwellings from the effects of overflying aircraft.

6. Prescribe Absolute Maximum permissible sound levels and minimum (noise critical) altitudes for

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<sup>10</sup> "Expanding Ways to Describe and Assess Aircraft Noise" , DOTARS, 2000.

<sup>11</sup> "The Way Forward for Aircraft Noise Sharing at Sydney (Kingsford Smith ) Airport" ISBN 0-9751843-4-3 (pbk); ISBN 0-9751843-5-0 (pdf); Convening Ed. Lingard P.S. et al.

aircraft overflying residential areas [except for emergencies] .

7. Include in any Federally mandated noise insulation program such as the apparently abandoned Sydney Airport Noise Insulation program [SANIP] , residences and schools in areas above the ANEF = 25 dB(A) level. **Senators should be aware that this level, not an ANEF of 30 dB(A) corresponds to the designation "unacceptable" in the categorisation of aircraft noise impacts in Australian Standard AS 2021-2000.**
8. Noise insulation is not always a satisfactory solution for dwellings in hot climates , as double glazing and air-conditioning and isolation from the outside living environment is consequently required. Therefore some regulatory stimulus should be given to encouraging Airservices Australia or the subsequent relevant authority, to promote the use of optimal Noise Abatement Departure Protocols for all jet takeoffs at Australian airports where takeoffs occur over residential areas of a town or city. There should also be consideration given to establishing a minimum National noise-critical altitude level for all Australian airports. For example at Brisbane, Canberra , Melbourne (Tullamarine ) and Cairns this is already around 5000 ft above ground level (AGL) , whereas at Sydney, departing jets across the city most frequently fly below as 3000 and often as low as 1500 feet AGL out to between 10 and 30 km from takeoff-roll.

### ***Part 3 Planning Exposure Period Concern:***

It is submitted that Senators must seriously consider eliminating the proposed reduction of exposure draft consultation periods across the board in the Draft Airports Act Amendment Bill. The argument that because consultation periods for Development Applications to local councils is 45 days, then it should be the same for an Airport is erroneous. This arguably assumes that the impact of an infrastructure development having the pollution consequences of a major petrochemical plant<sup>#12</sup> is similar to that of a typical urban development, and given the imbalance of resource allocation between both local affected Councils , community groups and a typical large (sometimes multinational) Airport Corporation , **the resulting situation will therefore be unjust, and therefore the consultation periods should remain at present levels.**

It is also suggested that Senators must reconsider the proposed doubling of the minimum cost threshold for Major -Developments at Australia's airports. Only Major Developments must be submitted to the Minister for approval. For Sydney (Kingsford -Smith) Airport (KSA) in particular , it is submitted that any increase in development potential will entrench , perhaps indefinitely, the use of KSA as the major airport serving Sydney. This will ensure that as population increases, there will be an intensification of use, increased aircraft movements, noise and safety concerns. There will be reduced incentive for creating a second major airport for Sydney if the consultation and cost-threshold provisions facilitated by the Bill are put into effect. This in turn spell effective environmental doom for large residential tracts of inner Sydney.

### ***Part 4 Implications for Transfer of Airservices Regulatory Powers to CASA in the Airspace Bill.***

The Transfer of Airservices Regulatory Powers to CASA in the Airspace Bill needs to be considered in light of the current Environmental Responsibilities of Airservices Australia under the *Airservices Act*, as mentioned above. CASA does not have any such responsibilities. Its major concerns are legitimately **"Aviation Safety"** and **"Aircraft integrity"**.

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"Flying Off Course", Environmental Impacts of America's Airports, Natural Resource Defense Council (NRDC) , NY., 1996. Chapt. 6.



**Therefore there must be an appropriate , but independent , corresponding authority and/or agency for the regulation and monitoring of the aviation noise and pollution environment as it impacts human beings . This authority needs to be financially independent of both the Airport Corporations and Airservices Australia .** It is suggested that the Commonwealth Department of the Environment or the National Environment Protection Council be considered for such a function.



[Signed]

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*The writer is also Proxy of Mayor of Ashfield to Government SACF , but is not preparing this report in that official capacity)*

***CITED REFERENCES:***

1. Report of the Senate Inquiry into the Development of the Brisbane Airport Master Plan, June 2000.
2. Department paper "Expanding Ways to Describe and Assess Aircraft Noise", DOTARS 2000.
- 3\*. "The Way Forward for Aircraft Noise Sharing at Sydney (Kingsford Smith) Airport" Lingard P.S. et al. ISBN 0-9751843-4-3 (pbk); ISBN 0-9751843-5-0 (pdf); Convening Ed. Lingard P.S. et al.
- 4\*. ENVIRONMENTAL PROTECTION FROM OVERFLYING AIRCRAFT 1999, by P.S. Lingard
5. "Flying Off Course", Environmental Impacts of America's Airports, Natural Resource Defense Council (NRDC) , New York, October 1996, Chapt. 6.
6. NSW Govt Submission to the Sydney Airport Preliminary Draft Master Plan 03/04, Table 10 p. 37
7. SACF Inc Submission On Sydney Airport Corporation Ltd's "Preliminary Draft Master Plan" July 2003, pp 17-19, Table 4. ISBN 0-9751843-2-6 (pbk) ISBN 0-9751843-3-4 (pdf)

Encl . Note: \* Means supplied attached as pdf .

PTO for APPENDIX TO SUBMISSION

## **APPENDIX TO SUBMISSION**

### **A REPRESENTATION OF ANEF LEVELS AS NUMBER OF 70 dB(A) -max EVENTS**

TABLE 8.1.4.2 , p. 114 from SACF Inc's *"The Way Forward for Aircraft Noise Sharing at Sydney (Kingsford Smith) Airport"* ISBN 0-9751843-4-3 (pbk); ISBN 0-9751843-5-0 (pdf); Convening Ed. Lingard P.S. et al.

The Table in the above referenced review shows that the "significant " ANEF equal to 30 dB(A) is achieved if a number somewhere between 1400 and 2000 aircraft per day fly over a given dwelling or school each producing a maximum noise impact of only 70 dB(A). This amounts to a figure between 80- to 120 equivalent noise events PER HOUR.

	MOVEMENTS PER DAY	ANEF dB(A)	N70 PER DAY
70 dB(A) EVENTS PER HR			
2	34	13.06	34
4	68	16.07	68
6	102	17.83	102
8	136	19.08	136
10	170	20.05	170
20	340	23.06	340
30	510	24.82	510
40	680	26.07	680
50	850	27.04	850
60	1,020	27.83	1,020
80	1,360	29.08	1,360
120	2,040	30.84	2,040

The region with the blue-coloured background in Column 3 shows the ANEF level within which Australian Standard AS 2021-2000 considers that the building site is either **"Acceptable"** (up to 20 ) or only **"Conditionally Acceptable"** (25-30) for a dwelling , motel/hotel, school , university or hospital. The figure with the orange background represents the movement cap for Sydney Airport.