

## **Australian Mayoral Aviation Council**

Response to  
the Department of Infrastructure, Transport, Regional  
Development and Local Government's

*"Safeguards for Airports and the Communities around them"*  
Discussion Paper – June 2009

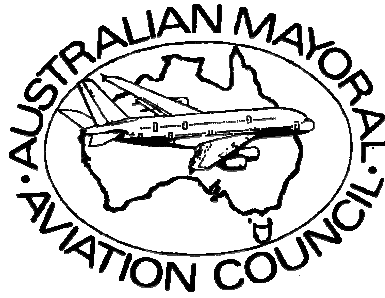
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## **Australian Mayoral Aviation Council**

### **Response to the Discussion Paper “Safeguards for Airports and the Communities around them”**

Implicit in the title of this discussion paper is that there is a conflict between the interests of airports and the communities which surround them. The most important element in resolving these issues is to strike a proper balance between the parties.

The airport operator companies (the landlords), the airlines, the concessions holders, the business operators and the travelling public and the residential communities around the airports all have different priorities and needs. There needs to be a “honest broker” who can objectively and impartially assess and resolve some of these conflicts and AMAC’s position is that role should be filled by the appointment of an Aviation Ombudsman.

There are many serious noise problems affecting the communities surrounding the airports in Australia which are not covered in any way by ANEFs.

It would be wrong for this discussion paper to limit the consideration to ANEFs.

Many properties surrounding airport were constructed before the airports and/or before the volume and type of aircraft became such as to cause unacceptable levels of noise.

Many more properties were constructed before the advent of ANEFs.

The problems faced by the owners of these properties are not addressed in the discussion paper.

The comments below are made in response to the questions raised within the discussion paper.

**1. Does the ANEF system provide an effective basis for planning in noise-affected areas?**

There are many better metrics for measuring the affects of noise from aircraft such as Leq, TA and various others which can be replicated, are single event measures and are more easily understood by the average person. There is a very compelling reason to investigate these alternative methods and no get caught up in ANEFs which can be very readily manipulated.

A recent ANEF approved as part of a Master Plan which shows aircraft movements increasing by 156% over the life of the Master Plan will result in a reduction of the contours of the ANEF. There appears to be some contradiction between the two concepts which suggest that the ANEF is not definitive or that it is wrong.

Another ANEF for another airport shows that the expected growth at that airport will greatly extend the ANEF contours over a much larger area of adjoining land such as to make that land unsuitable for residential development. There have been concerns expressed by non-airport sources about the accuracy of the data used to prepare the ANEF.

The ANEF system is a compromise between a number of conflicting objectives and as a result it is not entirely satisfactory for any of the affected parties.

However, it is considerably better than no system at all which is often the situation in America

Until a better system is devised the ANEF system is supported as a base for planning in noise affected areas.

The crucial flaw in the ANEF system is the lack of an objective assessment of the base data used in the preparation of the ANEF. At the present time it is the responsibility of the airport operator to prepare the ANEF and the final approval of the ANEF is given by Airservices Australia. Airservices Australia only issues a certificate of "technical accuracy" without establishing that the base data is correct and/or is appropriate for that airport.

If the airport includes in its draft ANEF information which is unrealistic or incorrect there is no machinery where that data is reviewed or assessed and the resultant ANEF is not accepted or supported by the affected parties.

The ANEF provides a guide to potential noise impacts resulting from airport operations. The ANEF allows the planning authorities to zone different development types to address potential noise impacts.

As an example, the NSW Government has released as part of the draft East Subregional Strategy residential density yield targets of 20,000 additional dwellings by 2031 for the eastern region of NSW. The City of Botany Bay target is 6,500 additional dwelling by 2031. This increase will focus on clustering new dwellings around centres. The draft Strategy also identifies employment targets for Botany Bay of 16,700 new jobs by 2031. This will require new business and industry development opportunities to be created.

The majority of the City of Botany Bay is classified as noise-affected by the ANEF system. The increasing pressures for housing and employment growth will require Council to consider growth, particularly housing growth to occur within the areas affected by higher ANEF contours in order to meet the State government targets.

Section 117(2) of the NSW Environmental Planning and Assessment Act 1979 is the relevant legislation which applies the ANEF provisions to all land surrounding an airport.

Unfortunately, that legislation is excluded under the Airports Act 1996 from applying to land at the airport.

Similarly, the legislation in other States is also excluded from applying to airport land.

Planning regulations have therefore relied upon the ANEF system to regulate development in close proximity to airports. This regulation has placed increasing pressures on land use planning and presented conflicts between planning for noise-affected areas and achieving development potential.

It is acknowledged that the ANEF system presents a number of limitations as set out in the discussion paper, particularly that the 'one size fits all' approach of the ANEF system does not provide a complete picture of aircraft noise impacts and does not provide sufficient flexibility to the planning system.

Opportunities do exist to increase residential densities with high ANEF contours as a result of internal acoustic engineering. Noise mitigation should be an issue addressed within airport sites rather than be the sole responsibility of surrounding areas to address through development restrictions.

There are substantial costs involved in protecting properties affected by ANEFs, particularly, at non greenfield sites and the costs of protecting those should be borne by the airports.

**2. How effective is the ANEF system as a land use-planning standard for Greenfield developments around airports?**

The ANEF system places significant restrictions on the redevelopment opportunities for Brownfield and infill sites particularly where the ANEF system prohibits residential development. The ANEF system therefore provides a 'one size fit all' approach that does not address the land use complexities facing existing major airports including:

- ❑ the central location of the airport to the city centre;
- ❑ the existing density of development surrounding the airport;
- ❑ the pressures for increased development densities within close proximity to a major transport node;
- ❑ the abundance of sensitive land uses in close proximity; and
- ❑ the increasing pressures on the expansion of airport operations at Australia's major airports.

In respect of Greenfield airport sites or airports which still have considerable tracts of undeveloped land there is a risk that the ANEF system will be used to sterilise land outside the airport boundaries to protect the perceived potential of the airport without proper compensation for the restrictions on the land use.

**3. Are acceptable levels of aircraft noise for particular developments identified in AS 2021 consistent with current community expectations?**

There appears to be a general acceptance of the existing levels under AS 2021 as far as they go but it is emphasised that there are many residences which are outside the scope of AS2021.

An examination of the complaints received by the Airservices Australia Noise Complaint service would indicate that there are many more complaints which originate outside the more sensitive contour areas of ANEF than inside and many of those complaints originate well outside the lowest ANEF contour.

The areas near airports which have been intolerable have been demolished, treated with insulation and the uses have been modified to such an extent that the noise from aircraft is now tolerable.

The review of AS 2021 could be focused upon more accurately determining the boundaries of the contours. This would enable there to be a more equitable definition of the problem and would remove anomalies where properties on one side of the road may have been within able to access noise reduction subsidies while properties on the other side of the road may have been ineligible.

The objective should be to refine the Standard.

**4. How can the current planning arrangement to address developments in noise affected areas around airports and under flight paths be improved to take account of community expectations, while also providing for the reasonable growth of aviation activity at airports?**

With respect to land use planning, the current planning arrangements do not adequately address the complexities of development in noise-affected areas around airports or under flight paths. The introduction of a multi-layered approach may present improved land use planning opportunities by allowing a merit-based approach to noise-affected development. The merit-based approach allows the introduction of site-specific responses to noise impacts.

Regardless of the changes made to planning arrangements the Commonwealth cannot expect community expectations to result in unanimous support of aviation growth at constrained and long established airports. Airports should seek to internalise their development restrictions and take increased responsibility for noise pollution associated with airport activities rather than imposing restrictions on surrounding land uses to address airport related impacts. The airports should focus on setting internal noise generation limits and identify growth opportunities, which do not increase impacts on areas surrounding the airport.

There are some airports where there is no more potential for expansion or growth. Technical developments may make some expansion possible in the future but with existing technology there cannot be any more expansion on some airports and the difficulty is to recognise that limit and develop new and/or secondary airports.

ANEFs only attempt address problems stemming from airport and aircraft noise but there are other significant nuisances which should be considered as part of this review. For example, traffic, transport, lighting, particulate pollution and the unfair economic advantage enjoyed by non-aeronautical commercial developments which are not required to comply with state planning legislation to name but a few.

**5. For developments around the major capital city and freight airports, should State governments have to refer residential development within a defined buffer zone to the Commonwealth Transport Minister or Secretary for approval?**

Referral of residential developments within a defined buffer zone should only occur if a benefit for future development can be clearly demonstrated. If referral for approval to the Commonwealth Transport Minister or Secretary results in the increase of prohibitions and/or the increase in onerous restrictions to development then the referral process is not appropriate.

The buffer zone should be used to identify residential sites where specific noise attenuation measures need to be employed to provide an appropriate level of amenity to future residents that cannot be easily legislated.

**6. Should the current protection of airspace regulatory provisions be strengthened and broadened to cover all CASA- Certified and Registered airports?**

The communication and effective implementation of regulatory requirements is best achieved when regulations can be clearly understood and practically applied. The CASA Standards identify the need for consistency with international criteria and logically should be applied to all CASA Certified and Registered airports. Prior to the broadening of the CASA Standards the current regulatory provisions should be amended to clearly outline:

- the OLS requirements;
- the PANS-OPS chart requirements; and
- any specific standards that should be applied to individual airports.

Current regulatory provisions do not clearly articulate the significant cumulative impact that may occur developments. The regulations should be revised to allow for their effective application by:

- development proponents in the preparation of development applications,
- the community in understanding airspace regulation; and
- government agencies in the assessment of development proposals.

The introduction of a nationwide mapping system should also be considered. The introduction of a mapping system will allow State, Territory and local government agencies to clearly identify parcels of land affected by OLS and PANS-OPS limitations and communicate the information effectively to the public.

**7. How might State, territory and local government planning rules help protect airports from encroachment by unsafe intrusions into airspace?**

The amendment of current regulations to provide greater clarity of OLS and PANS-OPS requirements would allow for greater application of the CASA Standards within State, Territory and local government procedures. State legislation could be amended to include something like the following provisions regarding development and the OLS:

***13B Development and Obstacle Limitation Surfaces (OLS)***

- (1) *Councils may grant consent to development that would penetrate the nominated airspace in relation to an Airport only if:*
- (a) *it has referred the development application to Airport Operator Company, and*
  - (b) *any necessary approvals required under the Civil Aviation (Buildings Control) Regulations 1988 and the Airports (Protection of Airspace) Regulations 1996 (both of the Commonwealth) in relation to the development have been obtained.*

**8. Should there be a consistent industry standard for mechanical turbulence and wind shear? If so should the standard be proscriptive or allow for a case by case assessment?**

The airport's Safety Management System should identify standard criteria for buildings with respect to mechanical turbulence and wind shear. If a proposed development exceeds the standard criteria a case-by-case assessment may be more appropriate in order to determine the potential impacts to airport operations. Setting standards will provide a focused approach to case-by-case assessments.

Standards also reduce the potential development costs associated with preparing expert modelling and risk assessments. An assessment report should only be imposed on an applicant where sufficient information regarding the potential impact of wind shear and mechanical turbulences is not already known. In order to reduce the need for costly reporting the airports should undertake a wind shear and mechanical turbulence assessment of current conditions surrounding airports using the Dutch method identified in the discussion paper. The preparation of a base level assessment will highlight areas of concern around the aerodrome and help airport's Safety Management Systems to clearly articulate standard criteria for assessment.

Case by case assessments are more appropriate for developments that exceed the standard criteria where unique provisions for development and building design may need to be considered to reduce impacts on airport operations.

Furthermore if the referral of development proposals is required to the Department or Airservices Australia legislative mechanisms should be introduced for referral procedures. For example the NSW planning system specifies referrals procedures and timeframes to ensure that development proposals are determined in an effective and efficient manner. Similar procedures should be introduced to the relevant Acts to ensure that lengthy delays for referrals are not incurred.

**9. Should expert modelling reports on turbulence and wind shear be mandatory for developments in close proximity to runways and who should bear the cost?**

As stated above the airports should establish baseline data for wind shear and turbulence conditions in and around airports. This baseline data can be used to set a benchmark for future development proposals.

The introduction of standard criteria can also isolate the need for modelling reports to proposed developments that exceed a standard or accepted industry criteria. By setting standards for developments, applicants and/or developers can design compliant buildings that achieve an intended function and produce an acceptable economic return on investment.

Placing a mandatory requirement for all developments in close proximity to runways to prepare modelling reports could place a financial burden on development resulting in the sterilisation of some development sites. The sterilisation of sites may seem extreme but when modelling report costs are added to existing reporting requirements including contamination reports, geotechnical reports, architectural design verification statements, flooding reports, etc the cost of development can be financially prohibitive. Flexibility in standards will allow for development to occur within acceptable limits.

The applicant/ developer should bear the cost of producing modelling reports. The burden of setting standards for the preparation of modelling reports should be borne by the approval authority being the Department of Infrastructure, Transport, Regional Development and Local Government. The Department needs to set modelling criteria and minimum standards for reporting to ensure consistency in the quality of modelling produced.

**10. Given variable regional circumstances for birds and flying foxes would a recommended standard zone (e.g. 15km radius) be appropriate?**

Implementing a standard zone is not feasible or realistic for many local government areas. Planning controls for areas surrounding airports cannot be relied upon to address bird strike. There are recognised and vital Wetlands for example within close proximity to many Airports. Most of these Wetlands are heritage items with considerable conservation value as wildlife habitats.

Airport operations should not seek to limit existing natural environments or the future growth of those environs within surrounding areas. The airport should address this issue within airport sites and airport operations. Airports should consider the following to address the potential impacts of bird strike:

- undertake modelling of bird migratory patterns in and around airport sites to identify seasons when bird migration present the most significant impact to airspace;
- technological advancements in aircraft design;
- the application of sonar to deter flying foxes from entering airspace; and
- focus aircraft engine design to reduce the damage caused to engine function and integrity as a result of bird strike incidents.

**11. What other planning issues might arise in safeguarding against bird strike?**

Placing restrictive controls on development can have an adverse impact on the balance between the built environment and the natural environment. For example, the NSW legislation including the *Environmental Planning and Assessment Act 1979* the *Native Vegetation Act 2003* the *Threatened Species Conservation Act 1995* require the consideration of the likely impacts of development on both the natural and built environments. Planning issues, which may arise, involve a contradiction in environmental values between Federal, State, Territory and local government policy.

**12. What guidance do state, territory and local governments require on the siting of wind farms and the potential impacts on aviation?**

Wind farms pose much the same problems on local communities as do airports – noise, danger to bird and wildlife, restricted airspace and inhibitions on the development of the surrounding properties.

This organisation has no direct experience of the problems associated with wind farms and leaves this question to others with appropriate experience.

- 13. Should developers of wind farms be required to provide CASA with a report on the potential impacts on aviation and aviation infrastructure of the turbines?**

See the response to the above question.

- 14. Should development of technical facilities near airports (say within 5km) require automatic referral to CASA for assessment of impact on radar and navigation systems?**

Referral procedures should be considered for technical facilities under the appropriate State Environmental legislation. The impact on airport navigation and radar systems are a significant issue that should be subject to assessment procedures by the appropriate technical authority, be that CASA, Airservices and/or Defence.

These technical bodies should be required to deliver their responses in thirty days failing which they shall be deemed to give their consent.

- 15. What additional guidance do State, Territory and local governments require on the siting of technical sites and the potential impacts on radar and navigation systems?**

All such developments must comply with the technical requirements of the abovementioned authorities but they must also comply with the requirements of the relevant State planning legislation.

- 16. Are CASA's current requirements sufficient, and what additional guidance might state, territory and local governments require regarding lighting and pilot distraction?**

CASA is the best placed authority to advise State, Territory and local government authorities about potential lighting impacts and the cumulative nature of lighting impacts as a result of major projects. CASA can also articulate alternative lighting options for developments and infrastructure schemes where an adverse impact to airport safety is demonstrated. The State planning legislation could require local authorities to take account of the recommendations of CASA on this issue.

**17. Should an approach based on the identification of public safety zones be introduced to help ensure that new developments around the ends of runways do not lead to undue levels of risk?**

If it is considered essential that airports should have public safety zones of the kind described in State Planning Policy 1/02 issued by the Queensland Government of 1km in length and ranging from 350 metres to 250 metres then such a safety zone should be provided upon land owned by the airport.

Many airports already have this land available for some runways although it may not be formally declared a Public Safety Zone.

At many airports and on some runways it is possible to provide such safety zones on the airport. However, in many built up areas such safety zones are often not possible. The north-western end of the main runway at Adelaide is a prime example where houses are located within the defined area and the landing lights for the runway are constructed in the backyards of those homes. The airport purchased the right to erect the lights in that location for a few hundred pounds many years ago and both the residents and the airport are now stuck with that bargain.

There have been instances where airports have displaced the runway threshold without approval from the local council with the consequence that the Obstacle Limitation surface and other limitations have been extended into the surrounding community.

It would be appropriate to amend the legislation so that such changes and other changes which affect the surrounding community need council approval.

Runway End Safety Areas (RESAs) have recently been constructed at very considerable cost and it may be that some of the benefits sought from the installation of Public Safety Zones (PSZs) may be realised by the RESAs.

In any event the airports were required to build these RESAs to comply with the international safety standards imposed by the International Civil Aviation Safety Organisation.

It would seem that where RESAs are already provided and where runways already have the space for a Public Safety Zone there may be only a marginal advantage to be gained by mandating new Public Safety Zones for existing airports.

**18. For which airports might such public safety zones be identified – all airports or only major airports with regular airline traffic?**

All airports should be independently assessed for the desirability of providing Public Safety Zones. It would be desirable to have Public Safety Zones at all airports but there is a limit on how many can be economically justified and a compromise will have to be reached by the parties.

When the third runway was being proposed for Sydney Airport, the then Prime Minister, Bob Hawke, promised that there would be no takeoffs to the north from that runway. Not long after the runway opened that promise was discarded and aircraft began to takeoff to the north with consequent disastrous results for the community surrounding the airport. It should not be possible for aircraft to be re-directed under these or similar circumstances.

The departure flight tracks for all airports should be such that aircraft maintain runway heading until they are well clear of the surrounding communities. Similarly, arrival flight tracks should be restricted to runway heading so that the adverse affects of aircraft can be confined to very clearly defined paths and the properties affected can be acquired and demolished, properly treated against noise and/or pollution and other amelioration methods can be used. Ultimately, the adverse affects of an airport can be dealt with instead of the existing situation where the noise is spread far and wide and it is not practicable to treat all of the affected properties.

There is a high price to pay for a small number of properties but it does mean that very many properties which are now affected can be relieved of the noise nuisance they currently experience.

All aircraft should be restricted to defined flight paths and any deviation from such flight paths should be subject to a financial sanction.

Excuses such as “operation and/or met. conditions” should be subject to peer review and objective scrutiny.

The programme which operates at Manchester airport UK indicates that such discipline is practical and the airlines operating out of that airport take great pride in publicising there compliance with the flight paths.

**19. What methodology and criteria should be applied in defining the boundaries of a PSZ?**

The methodology and criteria should be based upon international best practice. The methodology should also take into consideration:

- the historical land uses surrounding individual airports;
- the State, Territory and local government policy for land use planning within areas surrounding airports;
- international examples of PSZs and their effectiveness in mitigating public safety issues;
- the inflexible nature of the ANEF system and the impact of identifying zones where surrounding land uses can be adversely restricted.

**20. What sort of additional controls might be imposed for new developments in identified PSZs?**

In order to achieve the full benefits of Public Safety Zones, it would seem that no development of any type should be permitted in those areas in case an aeroplane lands or crashes in that area.

**21. What sort of steps might be taken to ensure the identification of a PSZ does not unduly affect the value and enjoyment of existing properties within the zone?**

The Department should prepare a discussion paper focusing on PSZs and their role within the Australian planning system. The discussion paper should identify possible PSZs for all Australian airports and address potential impacts of the PSZs on the environmental, social and economic value of affected areas. The discussion paper should form part of a lengthy public consultation period in order for all issues to be fully examined.

The information provided within this discussion paper regarding PSZs is inadequate for public consultation purposes and does not provide sufficient information for decision-making.