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## **Submission to the Department of Infrastructure, Transport, Regional Development and Local Government on the Development of a National Aviation Policy Statement**

### **Introduction**

Curfew 4 Canberra Inc (C4C) is a community-based umbrella group representing seven ACT communities or suburbs and one NSW community: Gungahlin, Watson, Hackett, Ainslie, Campbell, Pialligo, Narrabundah and Jerrabomberra. C4C has been leading a community campaign for a night time curfew at Canberra Airport in response to the recent proposals by the Canberra International Airport Pty Limited (CIAPL) to massively expand operations at the Canberra Airport, including the establishment of national and international freight hub and 24 hour aircraft operations.

C4C appreciates the opportunity to provide a submission on the development of a National Aviation Policy Statement (NAPS). C4C notes that one of the key challenges to be addressed by the NAPS is determining which Australian airports need to remain curfew free. As noted in the supporting issues paper, “Towards a National Aviation Policy Statement”, aircraft noise is a highly sensitive issue for communities around airports, and the expansion proposals by CIAPL have generated significant community concern and opposition in Canberra and Queanbeyan. Concerns with the proposed airport expansions have resulted in 3, 225 residents of Canberra and Queanbeyan signing a petition, to be tabled in the House of Representatives, urging the Federal Government to introduce an 11.00 pm to 6.00 am at Canberra Airport.

This submission primarily focuses on a particular part of the issues paper - Section 4.2 Aircraft Noise. Using the Canberra Airport as an example, it highlights the existing inadequacies in protecting surrounding communities from the noise impacts of expanded airport operations and the need for curfews to maintain the health and quality of life of nearby residents. In the process the submission also refers to a number of other challenges identified in the issues paper, such as the need for improved community consultation, sharing information on aircraft noise and appropriateness of current airport regulatory regimes.

### **Background to proposed Canberra Airport expansion**

CIAPL purchased the Canberra Airport lease in 1998 from the Federal Government. Canberra Airport has provision for 24-hour operations that primarily derives from its past life as a RAAF operational base. The CIAPL is required under the *Airports Act 1996* to have in place a public Master Plan that details the actual and planned operations of the airport, including management of the impacts of these operations. Since its acquisition of the Canberra Airport lease, the CIAPL has had Master Plans approved by the Federal

Government in 1999 and 2005. The CIAPL issued in November 2007 a Preliminary Draft Master Plan (PDMP) for public consultation that is required prior to updating the existing master plan. The PDMP outlined proposals by CIAPL to substantially expand aircraft operations at Canberra Airport. The most significant changes in the PDMP included:

- projected increases in passenger numbers from 2.7 million in 2006/07 to between 6.2 and 7.9 million by 2027/28;
- projected increases in aircraft movements from 81,732 (2005/06) to between 136,209 and 180,551 in 2027/28, and by 2050, to an ultimate capacity of around 282,120 annual fixed wing aircraft movements, which is similar to Sydney's current movements. This includes over 120,000 total fixed wing (around 90,000 jet) night movements ie. a plane movement between 7pm and 7am about every two minutes or so, with around 23,846 night freight flights (65 flights per night) and 96,647 night-time passenger flights (265 flights per night);
- the establishment of a regional, national and international 24 hour freight hub centre;
- capacity to significantly contribute to the aviation needs of the Sydney basin – in effect becoming the second airport for Sydney; and
- the eventual establishment of a parallel third runway.

The PDMP has attracted significant community comment and objection to these and other expansion proposals for Canberra Airport. The public comment period on the PDMP closed in February 2008. The CIAPL has advised that it is revising the PDMP to take account of public comments. However, it has not confirmed when this process will be completed or when it will forward the revised PDMP to the Minister for Infrastructure, Transport, Regional Development and Local Government.

If allowed to proceed, the changes proposed in the PDMP will completely change the scale and mode of operations at Canberra Airport. Canberra Airport currently operates around 120 flights per day. The largest aircraft currently using the airport on a regular basis are B737 and A320 class aircraft. Prior to the privatization of the airport, there wasn't a civil aviation requirement for air services between 11 pm and 6 am, or for the airport to serve as an international alternate.

It is projected in the PDMP that by 2050 more than 700 aircraft will arrive and depart Canberra Airport every day. Currently there are four freight flights (propeller aircraft, not jets) arriving and departing each night and no passenger jets arriving or departing between 11 pm and 6 am. The proposed escalation of operations will result in increasing numbers of landings and take-offs of long haul B747 freighters and large international passenger jets, with potentially around 24 jumbo jet flights every night, 7 days a week, every day of the year. Nightly flights could include numerous Boeing 747 and 777 jumbos, Airbus 330s, Boeing 737-800s, Airbus 320s and Boeing 757 freighters.

### **Characteristics of areas impacted by Canberra Airport noise**

The current role of Canberra Airport is as a regional airport servicing a population of about 500,000 people. The tablelands topography and climatic conditions around

Canberra present particular challenges for aircraft operations and control of aircraft noise from the current airport location. The surrounding hills limit the availability of safe flight paths, particularly for fully laden passenger and freight aircraft, while the cool, dry atmosphere and frequent temperature inversions experienced in Canberra can exacerbate aircraft noise through the reflection of take-off and landing noise between the inversion layer and the runway and other surfaces.

Canberra Airport has an essentially inner city location, situated about 8 kilometres from Canberra city centre and central Queanbeyan. Canberra's predominantly residential and light to medium commercial developments and absence of heavy industry has established it as one of the quietest capital cities in Australia. This feature has been a significant factor in the quality of life for residents and as an advertised attraction for visitors and future residents. Background noise is normally low, around 30 decibels (dB) during the day and less than 30dB from late evening to early morning.

A number of suburbs border Canberra Airport or are in close proximity to flight paths and are already currently subject to some aircraft noise disturbance. These include Hackett, Watson, Ainslie, Campbell, Pialligo, Narrabundah, Kingston foreshores, Jerrabomberra and a number of new and developing suburbs in the Gungahlin area. Recent independent noise level measurements indicate existing B737 operations expose some North Canberra residents to noise levels in excess of 65 dB. The proposed introduction of 24 hour operations of larger aircraft such as B767s and B747s would be expected to be much noisier than B737s and their noise impacts spread over a broader area than the abovementioned suburbs.

Noise Abatement Areas have been established to prevent low altitude overflights of, and minimize noise impacts on, most residential areas near the Canberra Airport. The location of the Noise Abatement Areas restrict most commercial jet landing and take-off flight paths to a fairly narrow north-south area, referred to by the CIAPL as a "High Noise Corridor", between the eastern outskirts of Canberra suburbs and Queanbeyan. CIAPL contends that by restricting commercial jet operations to the "High Noise Corridor", '*significant adverse aircraft noise*' or noise levels 65dB or higher, are confined to the "High Noise Corridor" and that 99.5% of Canberra and Queanbeyan residents are therefore protected from adverse noise impacts.

However, this approach appears to have limited practical effect on confining noise impacts and ensuring protection from aircraft noise intrusions. As indicated above, noise levels in excess of 65dB have been measured within the Noise Abatement Areas of North Canberra for current B737 jet flights. Additionally, a number of areas with significant residential development, such as North Watson, Gungahlin suburbs of Harrison, Amaroo, Franklin and Forde plus parts of Jerrabomberra and Queanbeyan, are not currently included within the Canberra and Queanbeyan Noise Abatement Areas. The Noise Abatement Areas are also a voluntary measure so there is no provision for enforcement action to be taken against the airline or pilot by Airservices Australia for any breaches of associated noise abatement procedures. Furthermore, the noise abatement procedures do not apply to light aircraft, helicopter and Government VIP jet movements and these noise levels from these aircraft have been recorded in excess of 65dB.

The limited protection afforded by the proposed airport developments is disproportionate to the scale of potentially adverse impacts on the Canberra and Queanbeyan communities from increased aircraft noise. Considering just the suburbs in the immediate vicinity of the current jet aircraft flight paths (Hackett, Watson, Ainslie, Campbell, Pialligo, Narrabundah, Kingston, Jerrabomberra, Harrison, Gungahlin and Amaroo) the 2006 Census figures indicate that around 43,000 residents (including around 10% of the ACT population) and around 17,780 households could potentially be affected by excess aircraft noise generated by the proposed 24 hour aircraft operations. The relevant property values associated with these residences, based on current median property values, is over \$8 billion (including almost \$7 billion in the ACT). Many of these residences involve young families in the outer suburban mortgage belt areas that are more vulnerable to any negative pressures on property values and night time noise disturbance.

### **Noise impacts of proposed expanded aircraft operations at Canberra Airport**

Despite the close proximity of residents to the airport and the proposed massive expansion in aircraft operations, there is limited evidence available of actual aircraft noise impacts on the surrounding community. The 2007 Rehbein AOS report, produced in conjunction with the PDMP, has provided an updated practical ultimate capacity Australian Noise Exposure Forecast (ANEF) for the Canberra Airport. The ANEF modeled the noise effects of the projected 282,120 fixed wing aircraft movements anticipated at Canberra airport by 2050.

This analysis indicated that the projected 20 ANEF contour for ultimate capacity on future aircraft operations over next 50 years closely approximated the existing “High Noise Corridor”. However, as suggested in the 2000 Department of Transport and Regional Services report “Expanding Ways to Describe and Assess Aircraft Noise”, the ANEF system is a fairly crude measure of determining noise impacts on individuals and more suited for establishing broad acceptability standards, such as the land use acceptability advice in Australian Standard 2021 (AS2021). The ANEF system also has a bias to maximum noise levels and as a theoretical model provides limited “ground-truthing” of how actual aircraft noise over a range of levels affects individual and discrete communities.

The CIAPL has also produced two single event noise contour maps in the PDMP to model the extent of noise impacts of B767 and B737 aircraft landings and departures at Canberra Airport. The CIAPL also tabled in the PDMP an N65 contour map showing the extent of the number of noise events that exceed 65dB. The basis and extent data used to inform these contour maps is unclear, particularly for the B767 flights which have been very restricted to date at Canberra Airport. These maps indicate the extent of noise 65dB or above (the level where aircraft noise is considered to be intrusive) is confined largely within the supposed “High Noise Corridor” and outside the Noise Abatement Areas and are used by the CIAPL to justify its position that 99.5% of residents are protected from significant noise impacts.

However, this analysis is inadequate and flawed for the following reasons:

- it is based on current aircraft operations and appears to have no correlation to the noise impacts that can be inflicted on surrounding areas in the future from the proposed more frequent flights by much larger aircraft such as B747 and B757 jumbo jets and A330 and A340 Airbuses;
- it appears to make no allowance for other extenuating factors - such as nightly or early morning temperature inversion effects; the low background noise levels in surrounding communities that would particularly amplify the impact and intrusiveness of comparatively high level aircraft noise; the sensitivity of experiencing high level noise at certain times such as late evening/early morning (the “Expanding Ways to Describe and Assess Aircraft Noise” report for instance notes the use of a lower 60dB noise threshold for analyzing aircraft noise impacts is appropriate for hours 10.00 pm to 7.00 am because these are sleeping hours and an external single event noise level of 60 dB equates to the sleep disturbance level of 50 dB specified in AS2021);
- no extrapolation of the maps and testing of the noise data to determine the relative noise levels over suburbs in close proximity to the airport. As previously noted, independent noise level tests in North Canberra on current B737-400 flights have already recorded aircraft noise in excess of 65dB, contradicting the extent of the 65dB contour on the single event maps;
- no agreed benchmark of what is “significant adverse noise”. The issue of what constitutes significant aircraft noise has been contested worldwide and is still inconclusive. It is too simplistic to use 65dB as the appropriate threshold level of intrusive aircraft noise in Canberra, given the abovementioned factors of limited data on the proposed high frequency large aircraft operations, the untested impacts of large scale night time operations in Canberra, the particular climatic and background noise conditions, etc. More consideration needs to be given to these and other relevant factors before more appropriate threshold levels can be determined that more accurately reflect the impact of the proposed major changes changed in Canberra Airport’s operations.

By CIAPL’s own admission in the PDMP, the proposed expanded airport operations will increase in-flight aircraft noise as Canberra Airport operations move to more frequent flights with larger aircraft. It is therefore obvious that aircraft noise impacts will be substantially greater over larger areas than currently experienced. The above uncertainties also highlight the need for much more detailed analysis of noise impacts before any approval is given to the proposed changes in the PDMP. There are evident flaws in the existing noise assessment process that need to be addressed not only in the current Canberra airport PDMP process but also more broadly under the NAPS, possibly in the development of more consistent and rigorous national standards appropriate to the expanding airport and aircraft industry.

## **Justification for night curfew on Canberra Airport**

CIAPL is proposing to completely change the character of Canberra's aircraft operations. It plans to replace a regional inner city airport with moderate scale day and evening air traffic, an airport surrounded by established residential areas with historically low noise levels, with a 24 hour passenger transit and freight hub centre, with the ultimate aircraft movements equivalent to those currently at Sydney airport but without the relief of a night curfew afforded to Sydney residents. In effect, it intends to create a second Sydney airport on Canberra's doorstep using existing and expanded airport infrastructure, with plane movements every two minutes, with around 24 jumbo jet flights every night over sensitive sleeping hours, even though Canberra airport's inner city location, quiet background noise and topography make it particularly unsuited for this purpose.

The noise footprint from Canberra Airport will inevitably expand further into surrounding suburbs with the envisaged massive increase in large long haul aircraft operations. Apart from the increased loudness of individual flights, the proposed large number of flight movements over a continuous 24 hour period, particularly over the sensitive sleeping hours, provides no respite from aircraft noise intrusion and will reduce the quality of life of many residents.

In practical terms, the development of a national and international freight hub at Canberra Airport appears to be more a crude short term solution to noise sharing – dumping the excess aircraft noise from Sydney airport on to the under-utilised capacity of Canberra Airport – rather than a genuine long term strategic approach to Australia's aviation requirements.

There is limited evidence to indicate that the major increase in noise events will be effectively managed to limit the impact on Canberra and Queanbeyan residents. As noted above, the single noise event analysis of the extent and impact of existing aircraft operations on surrounding suburbs is inconclusive and inadequate and not even available for the proposed much larger aircraft such as B747 and B757 jumbo jets. An independent noise monitoring program is urgently required to provide a more comprehensive and structured approach to verifying the actual current and future noise impacts on surrounding communities. The draft ANEF provides the only evidence of confining the proposed aircraft noise but is based on a range of theoretical assumptions that may have no correlation to actual aircraft movement or climatic conditions at the airport. The underlying data and assumptions used for such a key planning and noise management tool also need to be tested by independent review before the findings are accepted by Government.

The establishment of more rigorous national standards for noise impact assessment is an issue that needs to be addressed under the NAPS process.

Existing and proposed mitigation measures at Canberra Airport to avoid aircraft noise disturbance appear inadequate to deal with the reality of major increases in aircraft size, frequency and resultant noise. The range of measures currently in place, such as the

Noise Abatement Areas and associated height restriction procedures, along with minor variations to flight paths, runway departure and arrival times and flight altitude restrictions, are suitable only to the current scale of aircraft operations.

The increasing use of Required Navigation Performance (RNP) curved approaches and 15 degree offset approach/departure using GPS, as proposed in the PDMP, has limited application as a noise mitigation measure in the short term as currently only the 737-800 Qantas aircraft are technically able to use RNP approach and only two of these aircraft arrive in Canberra each day. Based on data collected since April 2006 by Air Services Australia, only 30% of these flights use RNP when making an approach to Canberra Airport. The new Virgin Embraer fleet to use Canberra Airport is not RNP capable. RNP technology is not available in older planes such as freighters that are likely to have significant night noise impacts and cannot be retrofitted. There is no mandatory requirement at this stage to use the RNP or the offset approaches factored into the draft ANEF.

Noise mitigation measures overall appear to have been arbitrarily left in the hands of airport operators. The requirements for more effective, uniform and precautionary noise mitigation measures, consistent with the scale of aircraft operations and the surrounding airport developments and environment, is another issue that needs to be addressed in the NAPS process.

The expected massive increases in aircraft noise, and the limited analysis and mitigation action to address these noise impacts, presents Canberra and Queanbeyan with a potentially major public health risk. There are noted effects on health caused by aircraft noise, particularly at night. The Age newspaper in February 2008 published an article outlining a recent European Commission-funded 4 year study that found that exposure to night-time aircraft noise is a major health issue. The study examined the effects of night time noise on blood pressure levels during sleep of 5000 people living near London's Heathrow Airport and 3 other major European airports. It found that an increase in night time aircraft noise of 10 decibels increased the risk of high blood pressure by 14 per cent in both men and women. The "Expanding Ways to Describe and Assess Aircraft Noise" report also noted the concerns with sleep disturbance and associated health effects from aircraft noise and the need to give special consideration to sensitive times such as evenings and early mornings. An ABC-online article by Dr Norman Swan in August 2005 noted that a three country study on the effects of aircraft and traffic noise on young children indicated that the intensity and interrupting nature of aircraft noise significantly affected reading comprehension and some aspects of memory. The World Health Organisation will shortly finalise guidelines for restricting aircraft night noise exposure.

Many Canberra and Queanbeyan residents now face the prospect of real reductions in quality of life, sleep disturbance and potential health problems from incessant high level jet noise with limited assurance or confidence that adequate mitigation measures will be introduced to minimize these disruptions. Indeed there are limited regulatory requirements to ensure these measures are developed and implemented before major expansions to aircraft operations are in place. In the face of such high risks and limited

capacity for effective controls, a proactive and precautionary management approach is justified. A night time curfew between 11.00 pm and 6.00 am is the only effective means of addressing the identified risks and impacts to the broader community posed by the proposed expansion in Canberra Airport's operations. This would reduce future conflict and need for subsequent remedial action on aircraft noise whilst allowing expansion of aircraft activity outside those hours to continue at Canberra Airport.

### **Limited evidence of economic benefits of Canberra Airport expansion**

Much has been made of the economic value and importance to the ACT and Queanbeyan regions of the proposed expansion of Canberra Airport and aircraft operations. The CIAPL states in the PDMP that "A curfew would create major impediments on the operation of Canberra Airport and would lead to significant future economic detriment to the ACT and region."

However, there is limited sound evidence on whether these economic benefits will be realized and how the expanded airport operations will be pivotal to the future ACT economy. The PDMP provides no details of a cost benefit or triple bottom line analysis of the projected expansions in Canberra Airport's operations. There are no details of how revenue generated from the freight hub, such as new employment opportunities, would directly benefit the ACT regional economy or its community. While there are predictions of substantial increases in passenger and freight traffic, there is no analysis or detail of the opportunity cost of these expansions in terms of road construction and freight costs, land developments, noise impact mitigation, etc.

The increased air traffic predictions must be questionable given the failure to achieve the air traffic increases forecasted in earlier versions of the Canberra Airport Master Plans. Total annual aircraft movements at Canberra Airport have actually fallen significantly from 131,798 movements in 1999 to 80,788 in 2007, with average movements over the last four years relatively stable around 80,000 per year despite strong domestic economic growth and a growing aviation market.

The CIAPL purchased the lease for the Canberra Airport from the Howard Government for \$66.5 million and has claimed in the PDMP to have invested over \$500 million in the airport's development, to the benefit of the local economy. Residents in the suburbs most closely affected by the proposed expanded airport operations have also invested significantly in the ACT and Queanbeyan economy and community. As previously mentioned, 2006 Census figures and median household price data for the ACT and Queanbeyan indicate that over \$8 billion has been invested in residential properties alone. As long as the threat of greatly expanded and unrestricted aircraft operations hangs in the balance, these assets have the real potential to devalue over time, irregardless of whether the forecast aircraft operations eventuate.

In the circumstances it is disingenuous for the CIAPL to conclude that imposing a night time curfew would be a major impediment in the development of Canberra Airport and the ACT economy. The Canberra Airport is an important part of the region's

infrastructure and general economy, but it is highly doubtful that it can appropriately serve the needs of a national/international freight hub without creating more costs than benefits for the local community. The establishment of such a major freight centre is a matter of national policy and more consideration to the economic, social and environmental costs of such a facility needs to be taken on a strategic national basis than is afforded in the CIAPL's current proposals.

The unsubstantiated nature of the proposed aircraft operations would appear to provide limited surety for investors and create an ongoing environment of uncertainty and threat for the community. In these circumstances a regulated night time curfew would provide greater certainty for economic development, stability for community assets and reduce future conflict between stakeholders.

### **Inadequacy of existing consultation processes**

There are significant drawbacks in the existing consultative processes concerning the future operations of airports, including determining the need for curfews. Airport lease operators appear to have been given significant latitude under the *Airports Act 1996* to control the release of information in the development and amendment of airport master plans. The consultation process for the Canberra Airport Master Plan is entirely run by the CIAPL, including control of analysis, reporting and resultant recommendations on its own operations.

As an example, the PDMP was withdrawn from public access on the CIAPL website at the completion of the formal public consultation period in February 2008. CIAPL has not advised when an updated version, taking account of public submissions, will be made available or even when the revised PDMP will be provided to the Federal Minister for Infrastructure, Transport, Regional Development and Local Government for consideration. It is inappropriate that such a process remains open-ended and key information is withheld from the community at a time when broad participation in the development of a NAPS is being encouraged at the Federal Government level.

The lack of independent analysis and review draws into question the objectivity and independence of the eventual decisions made in the master plan process that can have far reaching impacts on the community, such as the currently proposed major expansions in aircraft operations. A more transparent process needs to be legislated.

The ongoing role of community organizations on aircraft noise consultative groups needs to be formalized and given due authority and the terms of reference and operation of these consultative groups needs to be independently controlled. Community representatives directly impacted by aircraft noise have previously had difficulty in securing representation on Canberra Airport consultative forums and addressing community aircraft noise concerns due to the control of these forums by the CIAPL. In relation to airports under Federal jurisdiction, such consultative forums need to be chaired and convened and by an independent person appointed by the Minister Infrastructure, Transport, Regional Development and Local Government.

The sharing of information in a more user-friendly format needs to be improved so that issues such as the impact of aircraft noise on surrounding suburbs and the need for any restrictions on aircraft movements such as curfews can be readily understood by all key stakeholders. For instance, the contentions around the validity of single noise event contours and ANEF outcomes could be addressed to some extent by requiring Airservices Australia to collect aircraft noise data using a grid of ground stations to test and confirm theoretical modeling of single event contours. It should also provide an independent overview of how the ANEF is derived and how it will be used in airport planning and development decisions. This information should be made available to community groups and other stakeholders to ensure a more robust consultative process on how to respond to aircraft noise.

### **Inadequacy of existing legislative mechanisms**

As one of several major airports that occur on Commonwealth land, the CIAPL is not subject to the strategic or regulatory planning frameworks of the ACT or NSW. While the CIAPL states in the PDMP that it works in close consultation with the ACT Government and aims to integrate the respective activities, there are evident problems in planning for noise mitigation where such loopholes exist. The *Airports Act 1996* and the airport master plans required under the Act are the primary regulatory tools governing operations at airports such as Canberra Airport. The master plans specify the requirement for an ANEF but have limited requirements to ensure airport operators accurately identify the full extent of aircraft noise incursions and implement measures to mitigate these incursions.

This submission has already highlighted the inadequacies in consultative arrangements under the Act and the need for more detailed information to verify ANEF and single noise event forecasts and for more effective noise mitigation measures, including a legislated night curfew. Consideration should be given in the NAPS to amending the *Airports Act 1996* to require a more thorough noise impact assessment, in consultation with relevant State and Territory bodies and community groups, and implementation of appropriate noise mitigation measures before approval of major expansions of aircraft operations such as proposed for Canberra Airport.

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27 June 2008