8 February 2010

INQUIRY INTO THE EFFECTIVENESS OF AIRSERVICES AUSTRALIA'S MANAGEMENT OF AIRCRAFT NOISE

Committee Secretary
Senate Standing Committee on Rural and Regional Affairs and Transport
PO Box 6100
Parliament House
Canberra ACT 2600
Australia

SUBMISSION - 'OUTLINE OF A BETTER SOLUTION FOR SYDNEY REGION AIRPORT NEEDS'

Relating this submission to the terms of reference of the Senate Inquiry

This submission takes a broader perspective on aircraft noise than a focus on factors solely within Airservices Australia's management. While Airservices Australia management through its policies on day-to-day operations and introduction of new technology are one of the key influencers of the level of aircraft noise, there are other major influencers on aircraft noise.

I believe that aircraft noise is a product of the decisions of airlines, airports, Federal Ministers responsible for aviation, and local developers and planners as well as Airservices Australia. [1]

To restrict attention to Airservices Australia management risks producing sub-optimal aircraft noise outcomes. To take one example, higher airport landing charges for noisier aircraft as introduced at Narita Airport in Tokyo has proven an effective method of reducing aircraft noise.

I also believe that progress on improving airport noise needs to be one dimension of a broader range of decisions that also emphasise increasing the capacity at Australia's airports and protecting access for regional airline services to the major airports.

To restrict attention to aircraft noise, ignoring the imperative for more efficient use of airport capacity and regional airline access needs risks producing unbalanced and unachievable aircraft noise outcomes. Obviously, there will be trade-offs and compromises between aircraft noise and increased airport capacity, as there will be between increased airport capacity and regional airline access.

However, new technologies and more creative policy approaches from the Federal Government provide an opportunity for a better outcome for the economy/employment due to increased aviation capacity, as well as reduced aircraft noise for local residents and more sustainable airline access for regional communities.

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[1] The following submission asks who is responsible for outcomes from Sydney Airport (see page 4). To quote from the submission, "what we see is a lot of separate agencies, regulators, and private entities making individual decisions to maximise their interest but with no one responsible for the system as a whole, or for looking out for how the various separate interventions interact to produce unintended results."

Sydney Airport produces the most vexed issues in Australia around aircraft noise, a shortage of airport capacity and regional airline access to a major airport.

This submission to the Senate Standing Committee on Rural and Regional Affairs and Transport provides an outline of a new policy approach to managing Sydney Airport that promises better outcomes for employment, noise affected locals and regional airline access. While modifying AirServices Australia's management of Sydney Airport is a key aspect of the outlined solution this submission calls for reform of many other areas of Government policy, as well as the strategies of Sydney Airport and the airlines.

Origins of this submission

This submission was bred from frustration with the third best outcomes from current policies. While produced under my company name, it was not paid for or influenced by any client.

My personal history is that I have worked in tourism and transport policy for the last 18 years, with extended stints in: the Commonwealth Department of Tourism as Director Investment; most recently in Tourism Australia as Tourism and Aviation Economist; and prior to this in TTF as General Manager Policy. In the mid 1980s I worked for a time in the then Commonwealth Department of Aviation on analysing aviation policy and forecasting regional aviation demand at Sydney Airport as an input to planning for aviation needs in the Sydney region.

More important than the fine print of my recommendations for a better outcome for Sydney Airport is acceptance of the underlying logic that by going back to a blank sheet of paper new technologies and creative policies offer a much better outcome. This enhanced outcome would feature increased capacity from Sydney Airport, better and more sustainable regional aviation access to Sydney and ongoing and predictable reductions in aircraft noise affecting local residents.

Objectives of this submission

This submission's proposed solution to better management of Sydney Airport illustrates the need for a more holistic review if sustainable progress is to be made on airport noise in the medium term.

It is obvious from a policy perspective, if not always from the more difficult political perspective, that an updated approach to managing Sydney Airport is overdue. The current regulatory system as last modified in 1997 is producing unintended consequences and a focus away from the core objectives.

The Long Term Operating Plan (LTOP) of 1997 has passed its "use by date" due to traffic growth making noise sharing inoperative for long periods each day. LTOP, the restriction to 80 movements per hour and the ring fence around regional NSW services are no longer the most effective way to reduce noise for nearby residents or deliver regional airline services.

Getting a win-win result for all stakeholders with revised regulation of Sydney Airport is required to avoid escalating economic costs and unnecessarily high levels of noise for local residents in the short to medium term.

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The outcomes of the enclosed submission's proposed regulatory approach are:

- ✓ Delivery of certainty of progressively less noise for neighbours of the airport;

- ✓ More affordable and sustainable NSW regional airline services to Sydney;

- ✓ More aircraft movements at Sydney with larger average aircraft size; and

- ✓ No net cost to the Australian Government in the medium term.

A better solution requires an end to the failed policies of the regional ring fence for regional airline slots at Sydney Airport and the restriction to 80 movements per hour in favour of an updated regulatory regime that explicitly targets the delivery of noise reductions for local residents and provides fresh incentives to promote regional airline access to Sydney Airport.

I appreciate that development of a better regulatory approach is not all that is required to fix Sydney Airport. Over many years entrenched positions have been refined, distrust of opponents has flourished, as has anxiety about taking on the underlying issues. For this reason the approach to implementing a better solution needs to be patient, building step by step, with each step built on the successful implementation of previous steps. For these reasons the final section of the enclosed submission suggests a measured implementation path that gives time for learning what options exist and what compromises make sense across the key stakeholders.

I trust that this submission is useful in your difficult deliberations over reviewing the impact of Airservices Australia's management on aircraft noise and in recognising Airservices Australia's role in one of Australia's most difficult Commonwealth Government policy challenges.

Yours sincerely,

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OUTLINE OF A BETTER SOLUTION FOR SYDNEY REGION AIRPORT NEEDS

Issues

In brief, the current regulation of Sydney Airport is outdated and is proving ineffective in delivering its three core goals of:
- ➢ Maximising the economic benefits of the airport;
- ➢ Protecting the interests of noise affected local communities, and
- ➢ Ensuring access to NSW regional communities to Sydney Airport.

The existing Kingsford Smith Airport offers a major common sense advantage over alternative sites in terms of noise impacts. Around half KSA's aircraft landings and takeoffs are over water. Other coastal alternatives are unavailable while inland alternatives promise many more people impacted by aircraft noise if the airport is to be accessible to the travelling public.

Two influential airline industry reports have argued that the most economically efficient and least environmentally damaging approach to addressing Sydney's airport needs is to make the maximum use of the existing Kingsford Smith Airport, while developing airport capacity elsewhere in the Sydney region. This was the core conclusion of the Board of Airline Representatives of Australia July 2009 input to the review of Sydney airport needs and the July 2008 input of Qantas on this issue as an aspect of their broader input to the development of the Aviation Green Paper. Indeed both reports argued that improving the operation of the existing Sydney Airport is necessary in the short as well as medium and long term. [2] [3]

However, these reports left the question open of how to change regulation of the existing airport to improve utilisation of its valuable facilities while protecting if not improving the outcomes for the other key stakeholders; local noise affected communities and NSW regional communities air access needs to Sydney. **This is the objective of this submission.**

In recommending an alternative regulatory system for Sydney Airport there are two requirements. The first is devising a better regulatory system backed by Government policies that give wins to all stakeholders. Arguably the more difficult is the second requirement for building support from all stakeholders for regulatory and policy change and unfreezing decades long entrenched positions. To address this second requirement the Government needs to increase awareness of the failures of the

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[2] Board of Airline Representatives of Australia, July 2009, 'Position Paper on the site for a Second Sydney Airport' – "*The Sydney basin requires a significant increase in airport infrastructure within a comparatively short period of time. It is required so that Sydney can remain a gateway and hub international air travel and in order to avoid limitation and diversion of air travel demand.*" (page 1) - "*Given the overwhelming passenger preference for KSA (Kingsford Smith Airport), it must be allowed to expand to its maximum capacity and operate at its optimum efficiency.*" (page 2) – "*Due to the market and operational advantages arising from its physical location, KSA should remain the primary airport for the Sydney basin. KSA should be allowed to operate up to its optimum capacity*". (page 3)

[3] Qantas Airways, July 2008, 'Towards a National Aviation Policy Statement' – "*The guiding principle for Sydney should be to optimize the level of investment at the existing airport. Sydney is Australia's gateway airport and relies heavily on transfers of international passengers and freight, it would not be in the national interest to attempt to decant the Sydney services earlier than required.*" (Page 52)

current regulatory system and the opportunities for reform, but it also needs to build trust in systems such as noise monitoring/reporting that will be important in gaining support for reform.

10 problems with current Sydney Airport outcomes

There are 10 core problems with the current regulation of Sydney Airport from the perspective of airlines/the economy, noise affected communities and regional NSW airline users. In addition, there is an underlying problem in the institutional design that splits responsibilities for Sydney Airport outcomes across a host of agencies and private companies, each acting in their own interests.

1. Sydney Airport is now, effectively, full in the morning peak period for international airline services, even as international airline services provide the highest economic value. This reflects the limited aircraft parking available at the airport in the morning peak, as well as restrictions on the use of the 5am to 6am arrival times. Sydney Airport needs to build more aircraft parking space, but faces reduced incentives for doing so given the impact of other regulatory impediments. As aircraft movements are forecast to recover with an improved economy there will be a growing shortage of runway slots for non-regional aircraft. The recent entry of Tiger Airways into Sydney Airport services promises increased competition for the limited available non-regional runway slots for the higher value international airline services.

2. If Sydney is not available, then international airlines will be less attracted to fly to Australia and inbound tourism as well as trade and investment opportunities will be lost to Australia. Sydney continues to be the major, and is commonly the first, Australian airport serviced by international airlines to Australia. Sydney's profile as a global city will be undermined, as will Australia's employment, tourism export earnings and trade and investment opportunities.

3. The 1997 LTOP scheme for sharing noise cannot be used for long periods each day so noise is being concentrated to the suburbs just north of the airport. As traffic levels get close to the 80 per hour cap this forces use of a restricted range of LTOP parallel runway modes of operation that concentrate noise. If regulations on modes of operation were updated, new technology now offers greater opportunities for more effective noise sharing with parallel runway operations.

4. The restriction to 80 movements per hour and LTOP has discouraged investment in new technology including radar systems and landing systems that promise noise reductions as well as additional runway capacity. Trials indicate noise due to aircraft landing can be reduced by more than half with the introduction of Continuous Descent Approaches. In Sydney's case, the use of the parallel runways would still favour most aircraft taking off to the north and arriving from the south (winds permitting). This is because takeoffs, while noisier than arrivals, provide more opportunities for noise sharing by allowing multiple tracks as compared to arrivals where tracks have to be consistently applied for safety reasons.

5. The restriction to 80 movements an hour, reduces the ability of Sydney Airport to catch up on weather disruptions to traffic. Weather disruptions to runway capacity are common at Sydney Airport, particularly in summer and early spring months. The restriction to 80 movements an hour makes the curfew a greater imposition on the operations of the airport, airlines and their customers than it needs to be.

6. <u>Due to traffic levels in the 22:00 hour (10pm to 11pm) there is already limited availability for new slots for international airlines late in the evening</u>. Unfortunately this is the hour for departures that provides the most favoured morning arrival times in Asia (6-8am). To ensure departure before the 23:00 hour curfew in all wind conditions and to allow for delayed push off from the gate the slot co-ordinator is now limiting international departure times to before 21:45 which reduces the appeal of flying from Sydney to Asia.[4] Given the vital economic importance of enhancing economic links with Asia, this implication of the current regulation of Sydney Airport needs urgent attention. Regulation of the airport should be revised to ensure that slots are freed up for high economic value international airline departures in the 22:00 hour.

7. <u>The current protections for regional services at Sydney Airport have not worked, as regional airlines have faced a declining market into Sydney and services have been reduced despite high average fares</u>. Regional services are also at risk of much greater reductions as the current regional airline fleet ages (especially the Regional Express and Aero Pelican aircraft). In recent years, only the Qantas subsidiary Eastern Australian Airlines of the three surviving regional airlines has introduced new aircraft (Dash 8-400s with 72 seats). This aircraft has been important as it offers far more competitive operating costs per seat with interstate airline jet services than do 36 seat Rex or 18 seat Aero Pelican aircraft.

   In recent years, regional airline services to Sydney have been lost from: Mudgee, Cooma, West Wyalong, Casino, Kempsey, Maitland, Glen Innes, Cootamundra, Young, Singleton and Gunnedah. Similarly, regional airlines have been lost including: Yanda Airlines, Country Connections, Tamair, Impulse and AirLink. This is not to argue that regional airlines problems only relate to Sydney Airport regulation – rather that their favoured position at Sydney Airport has not protected them from other threats.

   Most important to the consumer, the cost of airfares to NSW regional centres is now commonly higher than much longer capital city services due to use of less cost effective aircraft.

8. <u>The ring fencing of regional airline services has significantly reduced the total aircraft movement capacity for Sydney Airport</u>, as regional aircraft require larger separation times (in minutes) from large aircraft to avoid greater impacts of wake turbulence on smaller aircraft. As regional aircraft are slower than jets they also take longer to reach and fly beyond areas of wake turbulence. Restrictions on use of slots reserved, but not used, for regional airlines has constrained the growing sectors of the aviation market to Sydney, reducing the economic benefits of the airport to Australia.

9. <u>If other elements of Sydney Airport policy are reformed successfully there are opportunities after perhaps three years experience to review aircraft movements in the curfew to deliver a better noise outcome for residents living near the airport and a better economic outcome for Australia</u>. Inevitably, the political sensitivity of the curfew means that this review needs to move at a slower pace than other elements of reform of Sydney Airport policy and that any new policies deliver a clear win for noise affected local residents.

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[4] Understandably operating rules give priority to aircraft landings over aircraft departures. If there have been problems earlier in the evening these compound into the 22:00 hour making it difficult to guarantee late departures. When winds are from the north, as they commonly are in the evening, forcing departures to the north the jet curfew is a greater constraint, as it requires earlier departure from the gate than is required for departures to the South.

The idea that limited jet freight movements (using BAE 146 aircraft) and propeller aircraft should be allowed to operate overnight when quieter passenger jet aircraft movements cannot is a peculiarly archaic regulation. IATA highlights that today's jet aircraft are 50% quieter than they were a decade ago and expects that jet aircraft in 2020 will be 50% quieter again. The origin of the jet curfew arose in days when jet aircraft were far noisier than they are today. This regulation fails to reflect the respective economic value of passenger over freight aircraft movements and that most freight now travels on passenger aircraft. The days when bank cheques had to be sent from Sydney overnight are long gone. The jet curfew was implemented in a period when there was much less appetite by passengers for arriving or departing at night than there is now, as passengers often arrive in Australia on long haul flights with their body clocks far from attuned to it being overnight. The costs of the Sydney curfew have increased over time in part because of curfews at other airports, much longer haul services and the need for international airlines to maximise aircraft utilisation.

10.   Management of the noise/capacity system at Sydney Airport is influenced by decisions by both Airservices Australia and Sydney Airport. <u>Both of these bodies have been less accountable and innovative in the last 12 years due to the impact of the post 1997 freezing of regulation of the airport with the LTOP</u>.   A core challenge for any new regulation of Sydney Airport is to exploit enhancements in both Airservices Australia and Sydney Airport management of the airport in partnership with airlines to deliver a better outcome for all stakeholders. For example, Sydney Airport charging should encourage quieter aircraft and Airservices Australia charging should encourage aircraft with modern satellite based radar systems (GNSS and GLS) with lower landing charges than aircraft with the older ILS system as this allows landings and takeoffs which reduce noise and allows more effective noise sharing. [5]

<u>Who is responsible for outcomes at Sydney Airport?</u>

Consideration of the split responsibilities between Sydney Airport and Airservices Australia raises the more general problem at Sydney Airport of institutional design and the problems this causes in gaining a focused and co-ordinated response to problems.

What we see is a lot of separate agencies, regulators, and private entities making individual decisions to maximise their interest but with no one responsible for the system as a whole, or for looking out for how the various separate interventions interact to produce unintended results. Comparisons with the health sector are obvious.

After a couple of decades of privatisation, corporatisation and reliance on arms length regulators it is the case that the Minister's powers are more limited than many in the public assume. Ultimately the Minister has money to spend and some residual regulatory powers. There is an argument that the Minister and Government are caught in a system that makes co-ordinated reform far more difficult to achieve than is widely understood.

In devising a better solution for Sydney Airport it is important to recognise the divided responsibilities and limits on direct Ministerial control. At the end of this submission, the discussion of the implementation challenge suggests that the Minister's most effective intervention is likely to be in a

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[5] Currently airlines are being charged by ASA for both forms of radar support, even though the older system is far inferior and not used.

leadership role communicating the nature of the problem and creating the conditions (including incentives) to persuade other players who influence Sydney Airport outcomes to act in different ways.

A better solution for all stakeholders

A better solution for all stakeholders requires beginning with a fresh piece of paper. The focus should be on delivering the outcomes of economic efficiency, reduced noise and affordable NSW regional airline customer access to Sydney rather than focusing on indirect if easier to implement policies focussed on intermediate targets. In other words, the seriousness of the problems with Sydney Airport regulation, demand that regulations be designed to directly target noise, regional services and economic efficiency and not distant proxies for these objectives such as the number of aircraft movements per hour and how many of these movements are by regional airlines.

> A better solution requires an end to the failed policies of the regional ring fence for regional airline slots at Sydney Airport and the restriction to 80 movements per hour in favour of an updated regulatory regime that explicitly targets delivery of noise reductions for local residents and fresh incentives to promote regional airline access to Sydney Airport.

This better solution features:

➢ Reducing (objectively measured and reported) noise budgets, providing certainty for local residents that noise will be reduced each year, along with increased accountability from Sydney Airport and Airservices Australia for delivering noise reductions each year;

➢ Noise reductions to be promoted using airport pricing policies to exclude the noisiest aircraft and encourage noisier aircraft to use the airport at less sensitive hours of the day (see Section 5 of the appendix that discusses this approach at Narita Airport in Tokyo and Section 6 which discusses improvements in noise performance of modern aircraft);

➢ New radar and operational solutions to deliver less noisy aircraft landings (continuous descent approaches, see section 2 of the appendix) and increase noise sharing to provide increased opportunities for respite periods for residents close to the northern end of the airport;

➢ Australian Government subsidies for NSW regional airline carriage of passengers on one stop services to Sydney through regional hub airports of Newcastle, Dubbo and Canberra with the last leg of the journey to Sydney on much larger aircraft;

➢ Australian Government subsidies for NSW regional airline carriage of passengers into Richmond Airport for the first five years; [6]

➢ NSW and Australian Government investment in upgrading land transport links for Richmond Airport and Australian Government investment in upgrading facilities at Richmond Airport –

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[6] Richmond Airport was the preferred site for progressive development of a second Sydney Airport by the Board of Airline Representatives of Australia in their July 2009 Position Paper on the site for a Second Sydney Airport. In particular, BARA argued that a site outside the Sydney basin risked becoming a 'white elephant' due to passengers preferring to use KSA and the problems of achieving high-speed road and rail access to a more distant site.

allowing deferral into the long term for any need for a much more expensive green-field Second Sydney Airport;

➤ Changes to the regulation of Sydney Airport allowing greater peak period aircraft movements with more passengers per aircraft and support for Richmond Airport should encourage Macquarie Airports to bring forward investments to upgrade Sydney Airport. Investment is overdue in large aircraft parking spaces and has unfortunately been recently deferred. A higher peak period at Sydney Airport suggests a greater need for investment in international passenger processing facilities, taxiways and other infrastructure (terminal gates etc) to allow more of the aircraft movements at Sydney Airport to be handled in peak periods of the day. More peak period movements will allow more effective respite from aircraft noise for local residents at other times of the day;

➤ So long as the policies above reduce aircraft noise for local residents, after perhaps three years the curfew policy could be reformed to deliver reduced aircraft noise for local residents over-night as well as reduced lost economic opportunities.

Local noise affected residents as winners from an updated regulatory system

a) One year prior to implementation of any revised regulation of Sydney Airport, an enhanced noise monitoring and reporting system should be implemented. An independent Sydney Airport Noise Ombudsman who reports to the community and Parliament, should administer this system. This is preferable to having noise reporting as a responsibility of Airservices Australia, the Airport or the Department of Infrastructure and Transport. Data at ground level from noise from aircraft using Sydney Airport should be collected for a large number of sites around Sydney and reported on the Internet. This is an important preliminary step in building community confidence that noise monitoring is fair and accurate. It also assists local planning around the airport accurately reflect noise impacts.

b) After a year of data, noise budgets should be set for Sydney Airport and publicly monitored/reported through the existing noise monitoring infrastructure. Each year noise across monitored points should be reduced on average by an efficiency dividend of perhaps 2% per annum. This is a modification of a European Union approach to measuring noise (see section 4. in the Appendix).

c) In order to achieve noise budget improvements Sydney Airport should use airport pricing decisions to progressively remove the noisiest aircraft, by reallocating the same total level of aeronautical charges (see section 5. in the Appendix that discusses this approach at Tokyo, Narita Airport).

d) New radar systems and operational procedures should be introduced and encouraged by Airservices Australia pricing to mandate Continuous Descent Approaches to Sydney Airport (see sections 2. and 3. in the Appendix) and to allow a wider range of parallel 'modes' of operation. These changes will reduce the noise impact of parallel runway operation of the airport on near neighbours. Parallel runway operations, rather than use of the East West runway, is required by current traffic levels in a growing number of hours each day.

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Continuous Descent Approaches will allow more regular use of the parallel runways with landings and takeoffs to the South when winds permit, that would significantly reduce the level of noise for residents to the north of the runways. Nevertheless, in order to provide respite for residents living close to the north side of the airport the most common mode of operation (winds allowing) should remain parallel operation with landings and takeoffs to the North, but with a much wider range of modes of operation to spread the noise of takeoffs more evenly.

Airlines like Qantas have been investing in Reduced Noise Procedures (see Section 3 in the appendix), which require upgraded satellite based radar systems and pilot training but Airservices Australia pricing actively discourages this investment by requiring those airlines who do make these investments to also pay for the old system (ILS) that they no longer use.

A policy priority should be that Airservices Australia pricing encourage a rapid migration of aircraft using Sydney Airport to Reduced Noise Procedure systems. This may also require Government subsidies for smaller operators to allow them to make the necessary investments. In the medium term Sydney Airport should only use the more modern radar systems, so non-compliant aircraft are excluded. [7]

e) One important potential win for neighbouring communities along with travelling passengers would be if the NSW State or Australian Government took over the Sydney Airport Rail Link from its private owners (Airport Link) and instituted more frequent services to the airport and more affordable ticket prices. This would reduce road noise for neighbouring communities and also improve the benefit/cost of living close to the airport. Increased frequencies would also reduce the disadvantages of the separation of the international and domestic terminals at the airport (ideally a dedicated rail shuttle could be run between the international and domestic terminal, though this may involve additional track work). Currently the cost of the rail ticket from the airport to the city is equivalent to trips of around 80 kilometres on other routes on the Cityrail network.

Upgrading the rail service to Sydney Airport is an overdue development, as the land transport links to the airport are coming under increasing congestion pressure and the existing rail link is underutilised due to its pricing. Ideally, the rail carriages on services to Sydney Airport should like those to other airports around the world, have extensive baggage holding areas.

f) If the other elements of policy reform at Sydney Airport succeed in delivering better noise outcomes for neighbouring communities, after perhaps three years experience it may be time to look at reforming the curfew. A better regulatory system for the curfew period would limit overnight freight and passenger aircraft (including propeller aircraft) movements to the very quietest of aircraft and require nearly all takeoffs (wind permitting) and landings over Botany Bay, with total aircraft movements restricted to below current levels. This proposed change is not intended to affect curfew restrictions on the vast majority of noisier aircraft movements scheduled for before 11pm. With monitored and mandated reductions in aircraft noise overnight this would be a clear win for noise affected local residents, though it is recognised that its implementation requires more trust building than other elements of reforming Sydney

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[7] The new technology A380s, A330s, and 737-800s in the Qantas fleet are no longer reliant on ILS. Qantas has also committed to retrofit the new satellite based radar technology to 767s, 747s and Jetstar A320s, leaving only the older 737-400s that are due for replacement subject to old ILS technology.

Airport operations. Noise budgets for aircraft movements overnight with changes to the curfew could be subject to larger reductions over time (say 8% per annum for two years and then 4% per annum in following years).

NSW regional airline customers as winners from an updated regulatory system

a) It is recognised that airlinks to Sydney from regional NSW are vitally important to members of these communities. Qantas has noted that 30% of its regional NSW airline passengers are joining interstate or international flights at Sydney Airport, so there is a continuing need for regional services to the primary Sydney Airport, should a second airport be built. Indeed, regional airline passengers are at risk from the development of a second Sydney Airport that their services would be the first to be moved out of Kingsford Smith, leaving many passengers with a commute between the Sydney Airports in order to catch their next flight.

b) It is obvious that the current regional ring fence policy is not working to provide NSW regional populations with affordable and sustainable access to Sydney Airport. Regional routes and frequencies are disappearing due to commercial pressures and inadequate returns for regional airlines, even as airfares on regional routes are often much higher than fares on much longer capital city services. A particular challenge for regional airlines is replacing old aircraft, as aircraft become too old and are sold it is common that services are reduced.

Comparisons of the cheapest available one way airfares from key centres to Sydney for travel in late August 2009, as shown in the following table, highlight the high costs of travel from regional NSW communities to Sydney compared to much longer routes from the capital cities.

On a cents per kilometre basis it is common that NSW regional passengers are paying three to four times more per kilometre travelled than are capital city customers. While some of this difference is due to longer routes normally having lower costs per kilometre, this does not explain the extent of the large differences that remain. Inevitably, larger aircraft offer cheaper operating costs. The extremely high fares on the short Newcastle to Sydney route as offered on the smallest of the regular passenger service aircraft to Sydney (18 seat) highlight that this service is likely to have a more business/government oriented passenger mix, with other types of passengers commonly diverted to other modes of travel.

Comparison of airfares to Sydney for regional NSW and capital cities on 27 August 2009

Route to Sydney	Air Distance	One way airfare	Cents per kilometre
Newcastle	142	$112 Aero Pelican	79 cents
Grafton	496	$146 Rex	29 cents
Gold Coast	678	$61 Virgin Blue	9 cents
Brisbane	751	$59 Virgin Blue	8 cents
Broken Hill	932	$271 Rex	29 cents
Dubbo	310	$116 Rex	37 cents
Adelaide	1,167	$88 Tiger	7 cents
Wagga Wagga	366	$117 QantasLink	32 cents
Griffith	473	$134 Rex	28 cents
Canberra	236	$67 Virgin Blue	28 cents
Melbourne	706	$49 Tiger	7 cents

Sources: Webjet and Aero Pelican Airline web sites for flights on 27 August with baggage.

c) The new Sydney Airport Master Plan highlights growing problems in catering to regional NSW terminal needs at Sydney Airport. This is an aspect of a more general problem with the capacity of the domestic terminals at Sydney Airport in peak periods. Qantas has highlighted that the Sydney Airport Draft Master Plan 2009 shows no turbo prop terminal gates in close proximity to the domestic terminal precinct. This will result in bussing and increased check-in times for regional passengers, along with increased total travel times. [8]

d) While there will continue to be a wide range of non-stop services from regional NSW to Sydney, the Government should encourage the use of regional hubbing (one stop services to Sydney) to aggregate some of this traffic on to larger regional aircraft. Regional airline passengers should be subsidised by the Australian Government for flights to Sydney so long as their flights hub into the three key regional hub airports of Newcastle, Canberra and Dubbo and service between these cities and Sydney is on aircraft with more than 50 seats. This would facilitate regional airlines offering increased frequencies and services to a wider range of smaller NSW towns (e.g. Bourke, Walgett, Broken Hill, Wagga Wagga, Tamworth, Armidale and Cooma). A subsidy of perhaps $50 per passenger per one-way journey will be a tiny fraction of the cost to the Commonwealth Government of a new Sydney Airport and would more directly foster regional airline services than would a new and distant Sydney airport. This level of subsidy is considered necessary to overcome the time required for a one stop rather than direct service.

This policy approach is framed recognising that NSW regional communities want frequent services to Sydney but there is insufficient traffic to warrant the use of larger aircraft for non-stop services. If after five years one in four of the current estimated 650,000 per annum regional NSW non-jet airline passengers to Sydney from other than Canberra, Newcastle, Dubbo flew to Sydney on a one stop service through these centres this would involve 160,000 passengers per annum. This measure would cost the Australian Government around $16 million per annum in subsidies but reduce total regional NSW frequencies to Sydney by around 60 frequencies per week or 3,000 per annum.   Replacement of the current 35 flights a week by 18 seat aircraft from Newcastle to Sydney by aircraft on average three times this size would reduce frequencies to Sydney by a further 23 frequencies per week or just over 1,000 per annum. Over time this policy would encourage an increased network of NSW regional services into Sydney Airport (with more one stop services) as well as more affordable airfares than is possible currently. It is expected that the 18 seat Aeropelican Airlines aircraft could be readily transferred to link other regional centres with Newcastle, Canberra and Dubbo, as could some of the Regional Express aircraft.

e) The Australian Government should also support airline investment in regional aircraft to facilitate new regional airline services through the new regional hub airports to Sydney by increasing depreciation allowances (or providing direct grants towards the purchase cost) for regional aircraft used for these services.   Aircraft such as the Dash 8-400 with 72 seats provides a far more cost competitive basis for regional services into Sydney than do much older Aero Pelican 18 seat or Regional Express 36 seat aircraft. This policy will over time promote increased regional airline services to Newcastle, Canberra and Dubbo and provide a greater base for at least Newcastle and Canberra to win limited international services (presumably from New

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[8] Qantas Response to the Sydney Airport Draft Master Plan 2009, December 2008, page 5.

Zealand in the first instance). In considering the depreciation of regional aircraft, it is important for the Government to move beyond tax policy purity to recognise that, in the special circumstances of Sydney Airport as Australia's most valuable transport infrastructure asset, highly targeted tax concessions can deliver a larger micro-economic benefit to the Australian economy and for the Australian taxpayer. Alternatively, direct grants may be an easier way to achieve the development of regional hubs. The demand for additional regional hub traffic from Canberra to Sydney and hub traffic plus origin traffic from Newcastle and Dubbo could be satisfied with as few as three aircraft. Direct grants of perhaps $5m each toward the cost of purchase of three aircraft (a Dash Q-400 has a purchase price of around US$30m) could provide the additional incentive necessary for regional airlines to begin regional hubbing services to Sydney with appropriately larger aircraft.

f) In line with the recommendation of BARA, Richmond Airport should be developed as a second Sydney Airport, beginning with regional and freight services. Regional NSW airline passenger services to Richmond should be subsidised in the first five years, on the same basis as the continuing subsidy for NSW regional hubbed passengers to Sydney. Development of Richmond Airport will require investment by the NSW and Australian Government in supporting land transport infrastructure and by the Australian Government in Richmond Airport for apron space and other facilities. It is expected that Richmond Airport will become a competitor airport to Sydney for low cost carrier services if highly competitive landing costs are provided, as per secondary airports such as Avalon and Gold Coast. Owing to the sale agreement for Sydney Airport, Sydney Airport has a first right of refusal on purchasing any airport like Richmond that is within 100 kilometres of Sydney Airport. As it is the national interest for Richmond Airport to provide effective competition to Sydney Airport it may need to remain in public ownership, but should provide a net revenue return to the Australian Government. A more detailed discussion of regional airline services is provided in Section 1. of the Appendix.

Sydney Airport as a winner from an updated regulatory system

a) The encouragement for larger aircraft and potential for more aircraft movements under the proposed revised policies offers Sydney Airport much enhanced revenue potential from aeronautical and non-aeronautical sources such as retail and car parking. A rapid adoption of satellite based radar systems will allow reduced separation times between aircraft as they can be more accurately separated from wake turbulence. This will allow more aircraft movements into Sydney in peak periods (and provide more effective noise respite for local residents). Changes in regional airline services are expected to reduce total aircraft movements at Sydney while also increasing the theoretical maximum number of aircraft movements in peak periods due to reduced separation times.

b) Sydney Airport has been discouraged from new investments by the existing regulations of the 80 movements per hour cap and the regional ring fence. The proposal for noise based charging is not intended to offer Sydney Airport increased revenue, rather a different mix of revenue by aircraft type.

c) A range of new investments should ideally be negotiated for Sydney Airport with the airport owners, possibly as an aspect of approval of a revised Master Plan associated with the new policies. Sydney Airport should urgently invest in new aircraft parking spaces for larger aircraft to increase the currently binding capacity constraint for international aircraft arrivals in the peak morning period to 10am. Similarly additional investment is warranted in taxi ways, baggage handling and terminal space (including the common use domestic terminal) to handle higher peak period traffic flows. Related to this investment by the Airport there should be increased investment with the Government border processing agencies in upgraded international passenger processing facilities. Sydney Airport will have improved incentives to increase investment in taxiways and other facilities that allow more efficient utilisation of the airport, to take advantage of the removal of the 80 movements per hour cap and regional ring fence.

d) An important but indirect benefit for Sydney Airport of the proposed regulatory system is that the mandating of new satellite based radar systems will free up considerable land on the airport site. The older ILS system required large clearances around its facilities, whereas the new satellite systems take up far less airport land and are already in place.

Australian Governments as winners from an updated regulatory system

a) The Australian Government would deliver core micro-economic reform in a difficult area that has defeated previous Governments. A block to economic growth for Sydney and Australia would be removed. The Government would also benefit from recognition of continued reductions in noise impacts on local residents and more affordable and sustainable access for regional NSW to airline services to Sydney.

b) By explicitly targeting reductions in noise for local residents, this policy proposal should defuse the political lobbying from various sides around less direct policy measures such as LTOP, the movement cap, the curfew and the need for a new airport outside the Sydney basin.

c) The proposal would be broadly cost neutral for the Australian Government. Extra revenue would flow from the operation of Richmond Airport and additional GST from increased foreign tourism, which should cover the infrastructure costs at Richmond Airport and subsidies to NSW regional airline passengers. Most importantly, this proposal saves billions of dollars required for a remote Second Sydney Airport that would risk being a white elephant due to higher access costs from most of Sydney and the implausibility of the NSW Government delivering rapid land transport links from a remote airport site to central Sydney.

d) The NSW Government would benefit from enhanced international and domestic airline service growth opportunities at Sydney Airport as well as enhanced regional airline services to Sydney. Without these policy changes, Sydney and NSW are set to receive further reductions in their share of Australian international and interstate airline passenger traffic. The key additional cost for the NSW Government is for land transport upgrades to Richmond Airport. The additional cost is expected to be a fraction of costs required for land transport upgrades to a more distant second Sydney Airport. Increased regional airline services to Newcastle and Dubbo will provide growth opportunities for these regional economies and facilitate decentralisation of some Government services from Sydney.

Proposed approach to implementing a new system for regulating Sydney Airport

In such a complicated area of Government policy and sensitive politics it is sensible to move slowly and carefully in implementing any reform agenda. This will help a common understanding of problems, build confidence that solutions will deliver promised benefits and avoid the unintended consequences that have bedevilled the current regulatory system. [9]

Year 1 - Getting the building blocks of a common understanding of problems and opportunities at Sydney Airport in place:

a. Implement a new and independent ground based noise monitoring system with regular reporting to the public and Parliament;

b. Implement a review of the opportunities from new technology and pricing reform by Sydney Airport and Airservices Australia to deliver wins for stakeholders at Sydney Airport. This will include review of the net benefits of facilitating a rapid shift to Reduced Noise Procedure Systems for aircraft using Sydney Airport;

c. Review how noise budgets (day time and during the curfew) can be set and what rate of reduction over time in measured noise offers a sensible trade-off of benefits to noise affected local residents and the NSW/Australian economy. In setting night-time noise budget reductions assume the current curfew rules remain for at least the first three years, after which more aggressive noise reductions might be feasible with updated curfew rules;

d. Review options to make the rail service to Sydney Airport more affordable and increase service levels (including additional baggage facilities on carriages);

e. Review the requirements for infrastructure upgrades at Richmond Airport and land transport links to Richmond Airport in line with its proposed secondary airport role;

f. In recognition of the vital economic importance of enhancing links with Asia, change runway slot allocations to provide more of the 22:00 to 23:00 hour slots to international airline departures – give international airline departures in this hour a higher priority for take-offs compared to the departures of other aircraft;

g. Given that it will take regional airlines time to respond, move quickly to introduce a trial subsidy to regional airline passengers flying through Newcastle, Canberra and Dubbo and on to Sydney on larger aircraft. Similarly, move quickly to increase depreciation rates on the purchase of larger regional aircraft that will service the hubbing role to Sydney.

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[9] This section reflects the philosophy of Ronald A. Heifetz from the Kennedy School of Government at Harvard University. 'Leadership without easy answers' (Harvard University Press, page 276) closes with the following comment….
"Leadership, seen in this light requires a learning strategy. A leader has to engage people in facing the challenge, adjusting their values, changing perspectives, and developing new habits of behaviour."

Year 2 – Trial new systems:

a. Introduce a one-year trial of noise budget reductions for day time use of the airport. Introduce a four year trial of small noise budget reductions for night time use of the airport. Report noise levels against these budgets;

b. Introduce policies to facilitate the spread of Noise Reduction Procedure Systems by aircraft using Sydney Aircraft and announce a date for phase out of the ILS system at Sydney Airport;

c. Modify Airservices' routings including use of continuous descent approaches to achieve these noise reductions and spread noise more evenly;

d. Introduce noise based aeronautical charging at Sydney Airport;

e. Introduce an enhanced and more affordable rail service to Sydney Airport;

f. Begin works at Richmond Airport and for land transport associated with a secondary airport role for Richmond Airport.

g. Review with Sydney Airport and airlines the investment needs at the airport required to handle increased peak period passenger traffic flows (including for taxiways, aircraft parking, terminals, baggage handling and International Passenger facilitation by Government agencies).

Year 3 – Implement phase 1 of the new regulations:

a. Abolish the 80 movement an hour cap, in favour of legislating noise reductions for local residents;

b. Open Richmond Airport for limited regional and interstate low cost carrier services;

c. Implement regional passenger subsidies for travel to and from Richmond Airport for a five year period;

d. Implement low airport charges at Richmond Airport to attract low cost carrier services.

Year 5 – Implement phase 2 of the new regulations:

a. Modify the jet curfew to focus all aircraft movements on only the quietest passenger and freight jet aircraft – in line with introduction of more significant reductions in legislated noise budgets for overnight aircraft noise;

b. Hold a public review of the implementation of the new policies.

Conclusion

This submission recognises the need for wide ranging policy changes to managing Sydney Airport.

A more effective blueprint is needed for the future of Sydney Airport. This submission suggests directions for future Sydney Airport policy and management that offer significant advantages over current outcomes for the Australian economy, noise affected local communities and regional NSW air access to Sydney.

How reform of Sydney Airport policies is implemented is critical to achieving better outcomes from Sydney Airport. This submission argues for a slow implementation timetable built around detailed analysis of the current problems in outcomes from Sydney Airport flowing from the existing regulations and extensive review of opportunities for better outcomes.

This slow implementation agenda also recognises the limits on the Australian Government's direct influence over a range of Government agencies and private sector participants. The Minister's most effective intervention is likely to be in a leadership role communicating the nature of the problems and opportunities and creating the conditions (including incentives) to persuade other players who influence Sydney Airport outcomes to act in different ways.

With patient and determined implementation, better outcomes from Sydney Airport management policies are readily available from introducing new technologies and revising policies to focus on delivering core outcomes for key stakeholders.

Karl Flowers
Managing Director

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Appendix

Contents:

1.   Regional NSW airline services to Sydney Airport

The table on the following page outlines current NSW regional airline services (including from Canberra to Sydney). The proposal in this submission does not anticipate large changes in the total number of seats from regional NSW cities and towns direct to Sydney. It would be expected that the small 18 seat aircraft used by Aero Pelican for 48 services a week direct to Sydney from Newcastle (35) and Narrabri (13) would be replaced by a larger and faster aircraft type flying from Newcastle, with the Aero Pelican aircraft relocated to service points to the North and North West of Newcastle to feed the Newcastle service into Sydney or services to the west of Dubbo or south and west of Canberra.   Total seats from Newcastle to Sydney would be expected to increase noticeably under the proposed policy. The removal of the smallest and slowest Aero Pelican aircraft from Sydney Airport would be expected to provide a noticeable improvement in the operational efficiency of Sydney Airport.

It is expected that other regional NSW towns and cities will continue to have a direct service to Sydney. For towns more remote from Sydney it is expected that over time in addition to a direct service option to Sydney they may also have the option of a cheaper (including the subsidy) service through Newcastle, Canberra or Dubbo. As well as the one stop service being subsidised at a proposed $60 per round trip the volume of traffic through Newcastle, Canberra and Dubbo, use of more cost efficient larger aircraft and more competition from these centres to Sydney would be expected to reduce total airfares to Sydney from regional communities. Towns such as Parkes, Orange and Bathurst would continue to only receive a direct service to Sydney, as backtracking to Canberra or Dubbo would not be attractive.

Late last year Regional Express Airlines discontinued airline services from Mudgee to Sydney and Mildura to Sydney. Regional Express also confirmed that the winter season service to Cooma would be discontinued, and cut services to Griffith. In late 2007 Regional Express cut the Sydney-West Wyalong service. Regional Express also cut services from a range of western NSW towns to Dubbo (Bourke, Cobar, Coonamble, Lightning Ridge and Walgett) that used a combination of 5 and 9 seat piston aircraft. The subsidy of indirect services to Sydney would hopefully lead to a restoration of these smaller aircraft services.

Currently there are only three regional airlines providing services to Sydney from regional NSW cities and towns, as shown in the following table:

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Table: Regional NSW and Canberra services to Sydney Airport as at July 2009

Origin Airport	Operator/Aircraft type/Seats	Return services per week
Newcastle	Aero Pelican – British Aerospace Jetstream 32 (18 seats)	35
Narrabri		13
Albury	Regional Express – Saab 340 (34 seats)	26
Ballina		18
Bathurst		16 (2 to Parkes)
Broken Hill		14 (5 to Dubbo)
Dubbo		36
Grafton		11 (17 to Taree)
Griffith		24 (9 to Narrandera)
Lismore		23
Merimbula		18 (15 to Moruya)
Narrandera		9 (13 to Griffith)
Orange		24
Taree		17
Wagga		30
Albury	QantasLink – Eastern Australian Airlines De Havilland (Bombardier) DHC-8-400 Dash (72 seats) and DHC 8-300 (50 seats)	23
Armidale		23
Canberra		101
Coffs Harbour		28
Dubbo		23
Lord Howe Island		7
Moree		11
Port Macquarie		24
Tamworth		25
Wagga Wagga		30
Total Non-Jet		**632** **531 not including Canberra**
Jet Services		
Canberra	Virgin Blue Embraer 170 (78 seats)	53
Ballina		10
Albury		14
Port Macquarie		14
Coffs Harbour	Virgin Blue Embraer 190 (104 seats) and some 737s	14
Canberra	Qantas 737-400 (144 seats)	43
Total Jet		148

Source: Air Transport Intelligence website, as at 15 July 2009.

2.   The potential of glide approaches

Smooth aircraft approach cuts noise pollution
From the *New Scientist*, 24 November 2003

NOISE-REDUCING APPROACH
Aircraft making a long, steady approach create less noise when close to the ground
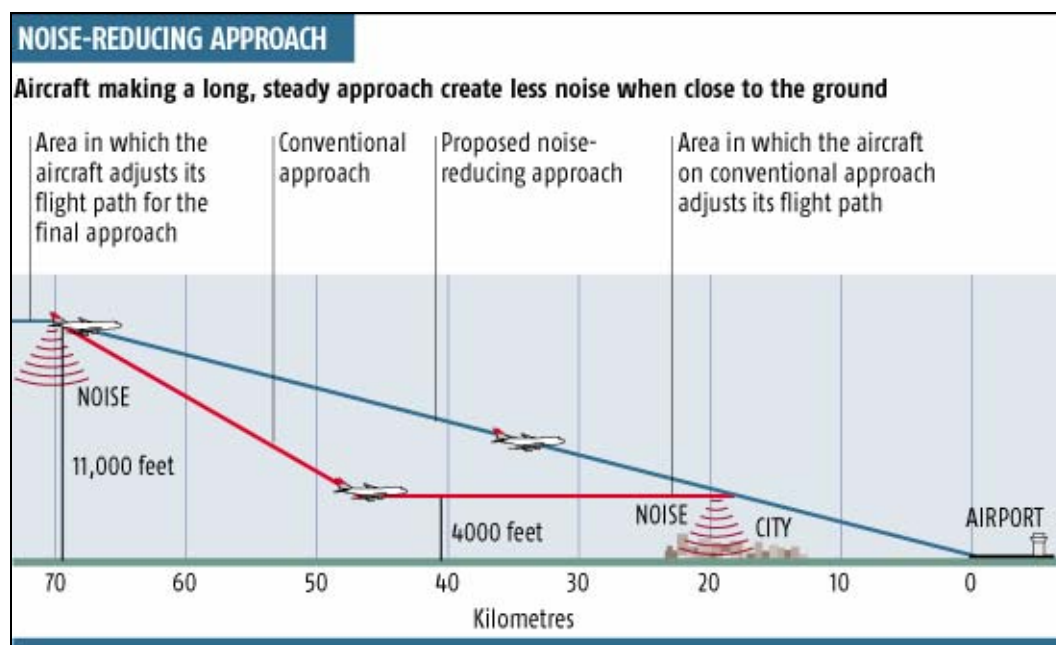
Noise nuisance from aircraft can be reduced significantly by changing the way the planes come in to land. Lining up with the runway as far as 70 kilometres away and making a steady descent can more than halve the acoustic energy that reaches the ground, an international research consortium has found.

Now pressure is on for the technique to be considered for the busiest international airport in the world, Heathrow, in London, UK.

The noise during descent comes from two sources: the engines, particularly when they have to deliver high power as the plane manoeuvres near to the ground, and aerodynamic noise from the flaps on the trailing edge of the wing, which also gets worse during manoeuvres.

So the way to reduce noise near the ground seems straightforward: carry out the manoeuvres needed to get on course for the runway farther away from airports and at high altitude, and then descend slowly with minimal corrections.

Continuous descent

A method of noise reduction along these lines, known as a continuous descent approach, is already in use at many airports. But now a consortium that includes Rolls Royce, the Massachusetts Institute of Technology, the University of Cambridge, British Airways and the UK Civil Aviation Authority wants to take the idea further.

In a continuous descent approach, an aircraft begins its final descent from a distance of about 17 kilometres and an altitude of 4000 feet. It then maintains a steady 3° angle of descent during its approach, says Richard Wright, spokesman for the UK's National Air Traffic Services.

But this technique involves significant manoeuvring at 4000 feet and below, which can be noisy for people living under that part of the flight path. "What we need is an approach procedure where there are no transients in thrust over noise-sensitive locations," says John-Paul Clarke, an aeronautical engineer at MIT.

Using a flight simulator modified to analyse noise, he and colleagues at Boeing and NASA developed a quieter continuous descent path into Louisville International Airport in Kentucky. Working with the cargo airline UPS, Clarke then asked the crews of two Boeing 767 jets to adopt the new approach routine.

Acoustic energy

Instead of beginning the descent 17 kilometres away, the crew began their descents some 70 kilometres away and from a height of 11,000 feet, while maintaining an angle of descent of 3° and keeping engine power changes to a minimum.

The teams measured the results with 14 microphones placed in neighbourhoods near the airport and found that compared with conventional 767 approaches, the noise dropped by between 3.9 and 6.5 decibels. That is a drop in acoustic energy of more than half, and is noticeable to the human ear.

What is more, the manoeuvre saved nearly 200 kilograms of fuel on each landing, Clarke says. The team has submitted its research to the *Journal of Aircraft*.

3.   Reduced Noise Procedures

The following is the abstract of "Systems analysis of noise abatement procedures enabled by advanced flight guidance technology", by J.P.B. Clarke from MIT at the AIAA. Aerospace Sciences Meeting No35, Reno, NV, 2000, vol. 37, no2, pp. 266-273 (18 ref.)

Advanced flight guidance technologies such as area navigation utilizing the global positioning system offer the potential to reduce the impact of aircraft noise on communities surrounding airports by enabling more flexible approach and departure procedures that reduce noise exposure to the most sensitive areas. A systems analysis is presented of noise abatement procedures enabled by these technologies. NOISIM, the primary systems analysis tool, combines a flight simulator, a noise model, and a geographic information system to create a unique rapid prototyping environment in which the user can simulate an aircraft's operation in existing and potential guidance and navigation environments, while simultaneously evaluating the aircraft's noise impact.

The analysis included generic and site specific studies of approach and departure procedures using 737-200 noise estimates. The results of the generic study of approach procedures indicate that a 3-deg decelerating approach provides significant noise reductions in comparison to the baseline instrument landing system (ILS) approach and is preferred by pilots to the more complex vertically segmented approach. In a study of approaches to runway 13L at Kennedy Airport, a 3-deg decelerating approach reduced the population impacted by noise greater than 60 dBA from over 250,000 in the ILS approach to less than 70,000.

The results of the generic study of departure procedures indicate that the benefits of noise abatement departures are site specific. In a study of departures from runway 4R at Logan Airport, a noise abatement departure that combined a targeted thrust cutback with a dual turn lateral trajectory reduced the population impacted by peak noise greater than 60 dBA by over 15%.

4.   Europe's approach to setting airport noise budgets

From *Eurocontrol* web site:

The level of noise and the metrics used to describe noise significance vary from European country to country and from airport to airport.

The European Community proposes "Lden" as the common unit for measuring transport noise. Equivalent continuous sound pressure (Leq) is a measure of the average sound pressure level during a period of time. Day-evening-night level (Lden) is based on Leq over a whole day.

The European Commission will require all major airports in the European Union to use the Lden/Lnight noise metrics for noise mapping and specifies the 65 Lden and 55 Lnight levels as being of interest for mapping noise affected areas. These broadly equate to noise levels and metrics generally regarded as marking the onset of significant disturbance around airports. Values similar to these are used for planning restrictions on residential development. This does not mean that lower noise levels are unimportant, but below these levels, scientific evidence is that the majority of people are not unacceptably disturbed.

At a local level, some European airports operate a noise quota system over and above the noise certification standard. In these cases, the number of movements of aircraft is regulated by a combination of a limit on the number of movements and a quota or "noise budget". The noise budget represents the total sum of noise over a specific period.

All commercial aircraft must meet the International Civil Aviation Organization's (ICAO's) noise certification standards. These apply to aircraft designs and types when they are first approved for operational use, and they have been progressively tightened since the initial Chapter 2 standard was adopted in 1971. This was for aircraft designed prior to 1977. Since 1977, any new aircraft designs have been required to meet stricter (Chapter 3) standards. On April 1st 2002 most aircraft not meeting Chapter 3 standards were phased out by international agreement. From 1 January 2006, a more stringent standard (Chapter 4) applied for new aircraft designs. This standard will be one third quieter than the existing Chapter 3 standard.

5. Promoting the introduction of quieter aircraft at Narita Airport

Airports Council International Case Study 8

What: Aircraft noise index for establishing landing charges
When: 2005
Why: Economic incentives for airlines to use quieter aircraft

In order to promote the use of low-noise aircraft, Narita International Airport introduced from October 2005 a new system of landing charges based on a noise index. Under the Narita Aircraft Noise Rating Index (NANRI), aircraft are categorised into six classes, A through F, according to the noise produced at the three landing, takeoff, and side-line measurement points, defined in the ICAO aircraft noise certification scheme. The previous landing charge regime at Narita was based solely on aircraft weight. The new system, introduced in conjunction with an overall reduction in fees, gives preferential treatment to aircraft with lower noise levels. For Class A aircraft (the class with the lowest level of noise) the landing charge was reduced by 31% and for Class F aircraft the reduction was only 12%.

Airlines using the best aircraft are rewarded for their actions. The use of this noise index is also designed to benefit communities on the sidelines of flight paths, as well as those directly under flight paths.

Over 100 noise-monitoring stations measure noise levels in the vicinity of Narita Airport. Measurement results tallied by class disclose a proportional relation between the actual noise level per aircraft and the noise classes of Narita Aircraft Noise Rating Index. This result confirmed the effectiveness of the NANRI in actual measurement of noise levels. The ratio of classes A, B and C (i.e. quieter aircraft classes) at Narita was 52.6% during the period October 2004-March 2005. That ratio exceeded 60% during the period April 2006-October 2006. The new landing charge system has thus achieved the desired objective.

The noise-index-based landing charge system is expected to continue to increase the number of low-noise aircraft. These aircraft are usually newer models and employ cutting-edge technologies that improve not only fuel efficiency, but also reduce pollutants affecting local air quality. In this way the expanded introduction of low-noise aircraft will not only reduce aircraft noise but also help reduce aviation's impact on climate change and local air pollution. Among the low-noise aircraft using Narita Airport are the Airbus 340 and Boeing 777 in class A and B of the noise index. It is hoped that technological developments will strengthen low-noise, low-emission characteristics for the production of new generation environmentally friendly aircraft.

The ACI Noise Index The Narita noise index was based on the ACI-developed aircraft noise index, available at: www.aci.aero/noise. Aircraft are categorised from quietest, category A, to noisiest, category F. An A330-300 is for example a category B aircraft, while a B767-300ER is a category B-D aircraft depending on the engine used. Similarly, a 747-300 is category F while a 777-300 is category B.

(Source: Airports Council International, Environmental Initiatives Around the World, July 2007, www.aci.aero)

6. "Aircraft Noise - Becoming Less Noisy"
(Source: IATA website)

Thanks to technology, today's aircraft are 50% quieter than 10 years ago.   Research initiatives target a further 50% reduction by 2020.

The number of people exposed to aircraft noise worldwide has gone down – by about 35% between 1998 and 2004.

Chapter 4 Standard - One-Third Quieter - On 1 January 2006, a more stringent noise certification standard (pdf, 72kb) - Chapter 4 - was introduced, for new aircraft designs. Chapter 4 aircraft are at least one third quieter than those currently certified to the Chapter 3 standard.

Implementing a Balanced Approach to Aircraft Noise Management - ICAO's Balanced Approach (pdf, 110kb) provides a transparent process for identifying a specific noise problem at an airport and then evaluating four types of measures to reduce noise, to see how the maximum environmental benefit can be achieved, most cost effectively.

IATA worked closely with ICAO's Committee on Aviation Environmental Protection (CAEP) to develop guidance material on the Balanced Approach, which ICAO has urged all regulators worldwide to implement.

IATA Policy on Night Time Operational Restrictions - Nighttime operational restrictions are increasing, especially in Europe. At some airports, night flights are completely banned. These restrictions can have a serious impact on the economy, next-day delivery services, home-based charters, freight services and intercontinental flights. They can also increase daytime congestion. IATA has developed a policy on night flights (pdf, 65.2kb). When appropriate, IATA assists its Member Airlines with lobbying efforts in response to proposed restrictions.

IATA Supports ICAO's Work. IATA and its Environment Committee (ENCOM) provide noise-related policy input to ICAO and CAEP, ensuring airline views are represented at meetings and in ICAO decisions.   See also IATA Environmental Review 2004, part 1, "Towards a quieter future".