



Assessment of Aircraft Noise Information
(Sydney) – Airservices Australia
March 2012

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I. Executive summary

The Aircraft Noise Ombudsman (ANO) recently released its *Review of Aircraft Noise Information, Presentation and Complaint Resolution (Perth)*¹, hereinafter referred to as the Perth Review. The Perth Review made a series of recommendations for Airservices Australia (Airservices), many of which have national relevance, and when implemented, will help improve the noise information for residents of Sydney. As for the Perth Review, this assessment of aircraft noise information for Sydney is likely to have national application.

This assessment has revealed a number of areas in which more comprehensive or responsive information could be made available to allay complaints and concerns about the management of aircraft noise. Some of the recommendations reflect changes already underway within Airservices in improving public information on aircraft noise. The recommendations contained within this assessment are therefore intended to feed into the reform process and assist in the development of more effective communications and greater accountability on aircraft noise issues.

Significantly, the ANO found that Airservices has established an extensive suite of documents relating to aircraft noise associated with the operations at Sydney Airport. Commendably, Airservices has established a diverse range of methods for the public to obtain information about Sydney operations, including WebTrak², email, telephone, postal mail and through the provision of web based information and reports.

Through analysis of complaint data, consideration of unsolicited public submissions to the ANO, and other information inputs, the ANO has identified opportunities to enhance Airservices' noise information provision. Primarily, this assessment has found that while there is significant information available, it is often difficult for residents to understand the information, data, maps and graphs and translate it into an understanding of the impact that aircraft noise will have on them personally. Additionally, this assessment has identified a number of topics where information is lacking, or not clearly presented.

Data collection, analysis and information provision could always benefit from improvement. As such, this assessment suggests nine recommendations to enhance the presentation of aircraft noise information (**Attachment 1**). The ANO will report publicly on Airservices' progress in implementing these recommendations.

Finally, this assessment has highlighted a number of issues relating to aircraft noise information that cross organisational and agency boundaries. The ANO will refer these issues to relevant organisations, with the aim of improving aircraft noise information nationally.

¹ Available on ANO website www.ano.gov.au

² WebTrak is a web based system that provides dynamic and almost real time information on aircraft operations around major airports.

II. Introduction

On 16 December 2009 the Australian Government released the Aviation White Paper '*Flight Path to the Future*', which proposed the establishment of an Aircraft Noise Ombudsman (ANO) to:

- oversee the handling of aircraft noise enquiries and complaints
- conduct independent assessments of noise complaints handling
- make recommendations for improvements where necessary.

The *Aircraft Noise Ombudsman Charter*³ was published in September 2010. One of the purposes as stated in the charter is to 'report on the effectiveness of the presentation ... of aircraft noise-related information'. Approximately a quarter of the complaints received by the ANO in the first year of operation (September 2010 to September 2011) related to Sydney Airport with the overwhelming theme being the provision, presentation and integrity of the information provided by Airservices in relation to aircraft noise. As such, the ANO has undertaken this assessment.

This assessment is based on Sydney complainants, their expectations relating to noise information and the common themes raised in noise complaints. The assessment has considered information currently available and undertaken a gap analysis to determine what improvements need to be considered, or what additional information would assist in explaining to the community aircraft noise issues, such as the concept of noise sharing. The structure of this assessment is therefore based on these steps.

In formulating the recommendations in this assessment, the ANO office has taken into account the issues identified by the above analysis and also considered the following factors:

- Airservices is currently implementing the recommendations of the ANO's previous two reviews. The implementation of the recommendations from these reviews will have a significant effect on noise information for Sydney.
- The number of agencies involved in Sydney airspace management is even greater than at other airports around Australia (involving the Sydney Airport Community Forum and the Long Term Operating Plan Monitoring Committee). This more complex dynamic means that the recommendations for Airservices will need to be considerate of the roles of these other bodies.
- Other agencies concerned with aircraft noise are undertaking significant initiatives at present. This is likely to make some of the recommendations less relevant with time. For example, the Australian Airports Association, in conjunction with Airservices, is currently working on a major project to enhance the aircraft noise information available on the web.

This is not an assessment of the Long Term Operating Plan (LTOP), neither its concept nor its targets. The ANO acknowledges the significant work previously undertaken by other agencies to consider these issues. While some complainants did express a desire that this assessment should encompass these broader issues, they were not within the scope of this review.

³ Available at <http://www.ano.gov.au/>

III. Assessment methodology

In conducting this assessment, the ANO has drawn upon the following sources of information:

- ANO complainant case files
- Discussions with staff and management in noise-related roles within Airservices
- Discussions with aviation stakeholders, including Airport owners and operators, airport community forums and industry noise management specialists
- Airservices' website
- Media reporting of aircraft noise issues, and published 'letters to the editor'
- Blogs and web discussion forums covering Sydney aircraft noise issues
- The records of the Sydney Airport Community Forum (SACF)

This assessment did not call for public submissions as there was already a large amount of material available that reflected the views of complainants and other stakeholders. It was not considered appropriate to incur the substantial delay that public consultation would have imposed. It is important to note that the role of the ANO is ongoing, and the reform of aircraft noise information will continue in response to further engagement with the public and other stakeholders.

Some complainants to the ANO have reflected a degree of confusion in relation to the noise information currently available. This issue has been useful in establishing how information provision could be enhanced. Furthermore, the open and willing participation of Airservices' staff and other aviation stakeholders in their dealings with the ANO has provided valuable insight into the significant complexities that surround the provision of aircraft noise information.

IV. Role of Airservices Australia and of other industry bodies

Ministerial Direction⁴ under the *Air Services Act 1995*⁵ gives Airservices a clear responsibility in aircraft noise issues. Nevertheless other members of the aviation sector have an important role to play in delivering information to the public about aircraft noise. In particular it is important that airports, airlines other aviation operators (such as flying schools and aero clubs) and even local councils should play a part in informing the public about aircraft noise. Significantly most major airports have accepted that they should provide information about aircraft noise as part of their responsibilities to the public through the master planning process and beyond.

⁴ Ministerial direction - responsibility for aircraft noise <http://www.comlaw.gov.au/Details/F2009B00156>

⁵ Air Services Act 1995 is available at <http://www.comlaw.gov.au/Details/C2012C00003>

Some airports such as Perth and Brisbane international airports have put considerable effort into improving the information that they make available about aircraft noise:

- Perth airport has put effort into providing a brochure on noise and web based information⁶.
- Brisbane airport has created an 'Airport Experience Centre' both online⁷ and as a physical facility at Airport Village. This centre addresses a core commitment in the Airport's 2009 Master Plan. To quote the website:
"[T]he centre incorporates information displays on the airport's operations, multimedia presentations, interactive maps and a unique Australian-designed software program enabling the community to understand the current and future operations of Brisbane Airport and how these will impact on aircraft noise patterns across Greater Brisbane".

More recently major industry members have committed to providing significantly enhanced web and paper-based information about aircraft noise. This initiative flows from a forum convened under the joint leadership of Airservices and the Australian Airports Association. Although this initiative is in its formative stage those participating should be congratulated on their commitment to address the current information shortfalls in this area.

V. Previous ANO recommendations relating to noise information

In December 2011, the ANO finalised the Perth Review and raised seven recommendations, all of which have been accepted by Airservices. As these recommendations have national significance, and directly relate to the issues identified in this assessment, they are included below and referred to throughout the report.

Recommendation 1: In its ongoing development of public reports on aircraft noise, Airservices should review the reports with the aim of making the reports as easy as possible to understand. This should include using 'plain English' in place of technical terminology, considering the usefulness of averages in cases of a wide spread of data, incorporating some analysis of the data, and establishing a simple system for obtaining public feedback on reports.

Recommendation 2: Airservices, in addition to implementing the recommendations from the ANO's *Complaint Handling Review*, should continue to improve information provided to the public and industry, through an increased focus on complaint issues and identifying opportunities for possible improvements in noise outcomes. Public and industry reporting on complaints should provide analysis in addition to the data.

Recommendation 3: Airservices should undertake regular reviews of the information provided on its website and in printed material to ensure that the material is current, relevant to the audience, and responds to feedback from stakeholders.

⁶ Available at <http://www.perthairport.com.au/AboutUs/NoiseManagement.aspx>

⁷ Available at <http://bne.com.au/experience-centre>

Recommendation 4: Airservices should further develop its capacity to provide comprehensive information on all aspects of aircraft noise through NCIS⁸ as well as via fact sheets, and its website. This could include such matters as explaining flight paths and why planes fly where they do, explaining changes in air traffic over time (even where there has been no specific action to bring about that change), and explaining the processes for determining the location of aircraft noise monitors and the role of those monitors. It should also include a process for reporting publically on initiatives to improve noise outcomes, including cases where those initiatives result in a conclusion that improvements cannot be achieved.

Recommendation 5: Where complaints/enquiries relate to matters for Government, Airservices should advise complainants of this and, where possible, refer to available material which presents the Government's position. Where complainants wish to pursue their complaints with the Department, Airservices should assist in transferring the complainant directly to the Department.

Recommendation 6: Airservices should develop an information package that presents an accurate aircraft noise information picture for Perth, and make this available on its website and in other formats as appropriate.

Recommendation 7: Airservices should ensure that it has a clearly defined assessment process for considering possible changes to improve noise outcomes, which should include appropriate public reporting. Such reporting could encompass the WARRP⁹ Post Implementation Review.

VI. Airservices Australia's Response to this Assessment

Airservices has welcomed and strongly support this assessment. The organisation has provided access to data and personnel without hesitation. This reflects the strong commitment within Airservices to improve information provision and to meet the information needs of complainants as effectively as possible.

The Board of Airservices has accepted the nine recommendations contained in this report.

⁸ NCIS is the Airservices' Noise Complaints and Information Service.

⁹ WARRP is the Western Australian Route Review Project.

1 ANO Complaint analysis

In undertaking complaint analysis for this assessment, the ANO reviewed all complaints (to the ANO) relating to Sydney Airport received in the period September 2010 (when the ANO commenced operations) up to and including 17 October 2011. In total, 27 complaints were considered. In addition to the concerns raised directly with the ANO, this assessment has also considered a selection of issues raised in media, web blogs and other internet forums relating to aircraft noise at Sydney.

1.1 ANO complaint analysis relating to information provision

The following table summarises the key issues of the 27 ANO complaints referred to above and the relationship between the issues raised in the complaint and the provision of noise information.

Table 1 – Issues and relationship to information provision

| ANO reference and suburb | Issues | Relationship to information provision |
|-------------------------------|--|--|
| ANO004 Suburb not provided | <ul style="list-style-type: none"> • General concern re noise • Curfew breaches • Changes to flight-paths | <ul style="list-style-type: none"> • Non specific • Curfew information • Information explaining the variations in flight activity |
| ANO007 Sutherland Shire | <ul style="list-style-type: none"> • LTOP implementation • Concentration of flight paths • Lack of consultation | <ul style="list-style-type: none"> • LTOP information • Noise sharing versus concentration • Consultation protocols |
| ANO010 Concord | <ul style="list-style-type: none"> • Curfew breaches | <ul style="list-style-type: none"> • Curfew information |
| ANO014 Maroubra | <ul style="list-style-type: none"> • Concentration of flight paths • LTOP implementation • Unfair share of noise • Information on noise insulation | <ul style="list-style-type: none"> • Noise sharing versus concentration • LTOP information • Noise sharing • Noise insulation information |
| ANO015 Castle Hill | <ul style="list-style-type: none"> • Concentration of flight paths • Aircraft should fly higher • Increase curfew hours | <ul style="list-style-type: none"> • Noise sharing versus concentration • Information explaining the variations in flight activity • Curfew information |
| ANO016 Kensington | <ul style="list-style-type: none"> • Unfair share of noise • Concentration of flight paths • Runway use (more operations over water) | <ul style="list-style-type: none"> • Noise sharing • Noise sharing versus concentration • Runway selection and mode use information |
| ANO017 Wolli Creek | <ul style="list-style-type: none"> • Aircraft not on 'flight paths' • Concern re the value of 'property pack' | <ul style="list-style-type: none"> • Information explaining the variations in flight activity • Clarity and value of Sydney property pack |
| ANO018 Engadine | <ul style="list-style-type: none"> • Changes in flight activity | <ul style="list-style-type: none"> • Information explaining the variations in flight activity |
| ANO026 Cronulla | <ul style="list-style-type: none"> • Curfew operations | <ul style="list-style-type: none"> • Curfew information |
| ANO033 Spit Junction | <ul style="list-style-type: none"> • Curfew operations | <ul style="list-style-type: none"> • Curfew information |
| ANO036 Eastlakes | <ul style="list-style-type: none"> • LTOP operations • Unfair share of noise • Runway and 'mode' usage • Noise monitoring terminals (NMTs) | <ul style="list-style-type: none"> • LTOP information • Noise sharing • Runway selection and mode use information • NMT purpose and site selection |

| ANO reference and suburb | Issues | Relationship to information provision |
|---------------------------------|---|--|
| ANO042 Bangor | <ul style="list-style-type: none"> • Concentration of flight paths • Respite • Amending flight paths | <ul style="list-style-type: none"> • Noise sharing versus concentration • Explanation of respite • Constraints associated with flight path design |
| ANO051 Arncliffe | <ul style="list-style-type: none"> • Changes to flight paths • Information on noise insulation • Noise Monitoring terminals (NMTs) | <ul style="list-style-type: none"> • Information explaining the variations in flight activity • Noise insulation information • NMT purpose and site selection |
| ANO070 Matraville | <ul style="list-style-type: none"> • Concentration of flight paths | <ul style="list-style-type: none"> • Noise sharing versus concentration |
| ANO073 La Perouse | <ul style="list-style-type: none"> • Changes to flight paths • Noise monitoring terminals (NMTs) | <ul style="list-style-type: none"> • Information explaining the variations in flight activity • NMT purpose and site selection |
| ANO074 Hurlstone Park | <ul style="list-style-type: none"> • Concern re operations of SACF (responsiveness and timings of publishing minutes) • Runway and 'mode' usage | <ul style="list-style-type: none"> • SACF operations and processes • Runway selection and mode use information |
| ANO081 Five Dock | <ul style="list-style-type: none"> • Concentration of flight paths | <ul style="list-style-type: none"> • Noise sharing versus concentration |
| ANO083 Yarrawarrah | <ul style="list-style-type: none"> • Concentration of flight paths • Changes to flight-paths | <ul style="list-style-type: none"> • Noise sharing versus concentration • Information explaining the variations in flight activity |
| ANO086 Bexley | <ul style="list-style-type: none"> • Runway and 'mode' usage | <ul style="list-style-type: none"> • Runway selection and mode use information |
| ANO089 Canterbury | <ul style="list-style-type: none"> • Runway and 'mode' usage • Concern re the value of 'property pack' • Aircraft not on 'flight paths' | <ul style="list-style-type: none"> • Runway selection and mode use information • Clarity and value of Sydney property pack • Constraints associated with flight path design |
| ANO099 Bonnyrigg | <ul style="list-style-type: none"> • Curfew operations | <ul style="list-style-type: none"> • Curfew information |
| ANO101 Randwick | <ul style="list-style-type: none"> • Concentration of flight paths • Concern re operations of SACF (responsiveness and timings of publishing minutes) | <ul style="list-style-type: none"> • Noise sharing versus concentration • SACF operations and processes |
| ANO108 Kingsford | <ul style="list-style-type: none"> • Concentration of flight paths • Runway and 'mode' usage | <ul style="list-style-type: none"> • Noise sharing versus concentration • Runway selection and mode use information |
| ANO114 Carlingford | <ul style="list-style-type: none"> • Concentration of flight paths • Noise monitoring terminals (NMTs) • Amending flight paths • Aircraft should fly higher | <ul style="list-style-type: none"> • Noise sharing versus concentration • NMT purpose and site selection • Constraints associated with flight path design • Information explaining the variations in flight activity |
| ANO115 Kingsford | <ul style="list-style-type: none"> • Noise monitoring terminals (NMTs) • Runway and 'mode' usage | <ul style="list-style-type: none"> • NMT purpose and site selection • Runway selection and mode use information |
| ANO119 Lane Cove | <ul style="list-style-type: none"> • Changes to flight-paths • Runway and 'mode' usage | <ul style="list-style-type: none"> • Information explaining the variations in flight activity • Runway selection and mode use information |
| ANO122 Cronulla | <ul style="list-style-type: none"> • Concern re the value of 'property pack' • Information on noise insulation | <ul style="list-style-type: none"> • Clarity and value of Sydney property pack • Noise insulation information |

The table above points to the main topics of noise information being sought by complainants, as indicated in the following table. The topics have been broken down further to ascertain whether the issue is primarily Sydney specific or national.

Table 2 – Information issues and priority

| Information issue | No. of times mentioned | Primarily national or Sydney specific issue |
|--|------------------------|--|
| 1. Noise sharing versus concentration, noise respite and LTOP | 18 | Sydney (due to LTOP issue) |
| 2. Runway selection and mode use | 8 | Sydney (due to mode usage, although similar issues arise nationally) |
| 3. Noise insulation information | 3 | National |
| 4. Curfew information | 6 | National for the 4 Australian airports with federally legislated curfews |
| 5. Information explaining the variations in flight activity | 9 | National |
| 6. NMT purpose and site selection | 5 | National |
| 7. Constraints associated with flight path design | 3 | National |
| 8. Clarity and value of Sydney property pack | 3 | Sydney |
| 9. SACF operations and processes | 2 | Sydney |
| 10. Consultation processes | 1 | National |

Many complaint issues are inter-related. For example, mode usage and LTOP have a direct impact on runway selection, noise sharing and noise respite. Noise sharing versus concentration has been combined with noise respite and LTOP as they are inextricably linked in the Sydney context.

While the above table has been compiled from ANO data, it is consistent with the complaint issues raised with Airservices and also those raised in media and web-based articles and comments.

As SACF operates independently of Airservices, **Issue 9** in table 2 above has not been included in this assessment. In addition, consultation processes, **Issue 10**, have not been included as they are being addressed through new procedures recently published by Airservices¹⁰.

¹⁰ Available at <http://www.airservicesaustralia.com/publications/>

1.2 Addressing the identified issues

The eight issues identified in Table 2 above will be addressed according to the following table. A number of issues will be addressed through Airservices' response to the recommendations contained in the Perth report.

Table 3 – Addressing the identified issues

| Issue | How it will be addressed |
|---|---|
| Issue 1 - Noise sharing versus concentration, noise respite and LTOP | Refer sections 2 and 3 of this report |
| Issue 2 - Runway selection and mode use | |
| Issue 3 - Noise insulation information | |
| Issue 4 - Curfew information | <p>While curfew information was addressed in the Perth review (see below), there are additional concerns in the Sydney context and it is therefore considered as part of this assessment. Refer sections 2 and 3 of this report</p> <p>Perth Recommendation 5: Where complaints/enquiries relate to matters for Government, Airservices should advise complainants of this and, where possible, refer to available material which presents the Government's position. Where complainants wish to pursue their complaints with the Department, Airservices should assist in transferring the complainant directly to the Department.</p> |
| Issue 5 - Information explaining the variations in flight activity | <p>Issues 5, 6 and 7 will be addressed through the Perth Recommendation 4: Airservices should further develop its capacity to provide comprehensive information on all aspects of aircraft noise through NCIS as well as via fact sheets, and its website. This could include such matters as explaining flight paths and why planes fly where they do, explaining changes in air traffic over time (even where there has been no specific action to bring about that change), and explaining the processes for determining the location of aircraft noise monitors and the role of those monitors. It should also include a process for reporting [publicly] on initiatives to improve noise outcomes, including cases where those initiatives result in a conclusion that improvements cannot be achieved.</p> <p>Note: Emphasis in above paragraph added for context in this assessment.</p> |
| Issue 6 - NMT purpose and site selection | |
| Issue 7 - Constraints associated with flight path design | |
| Issue 8 - Clarity and value of Sydney property pack | <p>Issue 8 will be addressed through the Perth Recommendation 6: Airservices should develop an information package that presents an accurate aircraft noise information picture for Perth [Sydney], and make this available on its website and in other formats as appropriate.</p> |

2 Current noise information

This section contains an analysis of the data currently published by Airservices that relates to the issues raised in Section 1.2.

2.1 Information currently published

The following table lists the key issues and the corresponding information published by Airservices. In addition, Airservices does provide information on direct request from an enquirer through email, telephone, internet, fax or mail.

Table 4 – Noise information currently published

| Issue | Source of information - currently published |
|---|---|
| Issue 1 - Noise sharing versus concentration, noise respite and LTOP | <ul style="list-style-type: none"> • Sydney Airport Operational Statistics monthly reports • Sydney Airport and Associated Airspace LTOP report • Noise and Flight Path Monitoring quarterly reports • Sydney Property Pack (available on request only) • Links to original LTOP documents |
| Issue 2 - Runway selection and mode use | <ul style="list-style-type: none"> • Sydney Airport Operational Statistics monthly reports • Sydney Airport and Associated Airspace LTOP report • Noise and Flight Path Monitoring quarterly reports • Sydney Property Pack (available on request only) |
| Issue 3 - Noise insulation information | Airservices provides a link on its website to the Australian Government website containing information on the now closed insulation scheme. |
| Issue 4 - Curfew information | <ul style="list-style-type: none"> • Sydney Airport Curfew Act (1995) (Airservices provide web link) • Airservices' curfew fact sheet (Available from Airservices FAQ section on web). |
| Issue 5 - Information explaining the variations in flight activity | <ul style="list-style-type: none"> • Airservices FAQ section – 'Who decides on flight paths?', 'Can Flight Paths be changed?' and 'What are minimum flight heights?' |
| Issue 6 - NMT purpose and site selection | <ul style="list-style-type: none"> • Airservices FAQ section – 'How do I get an NMT in my area?' |
| Issue 7 - Constraints associated with flight path design | <ul style="list-style-type: none"> • Airservices FAQ section - 'Can Flight Paths be changed?' |
| Issue 8 - Clarity and value of Sydney property pack | <ul style="list-style-type: none"> • Sydney Property Pack (available on request only) |

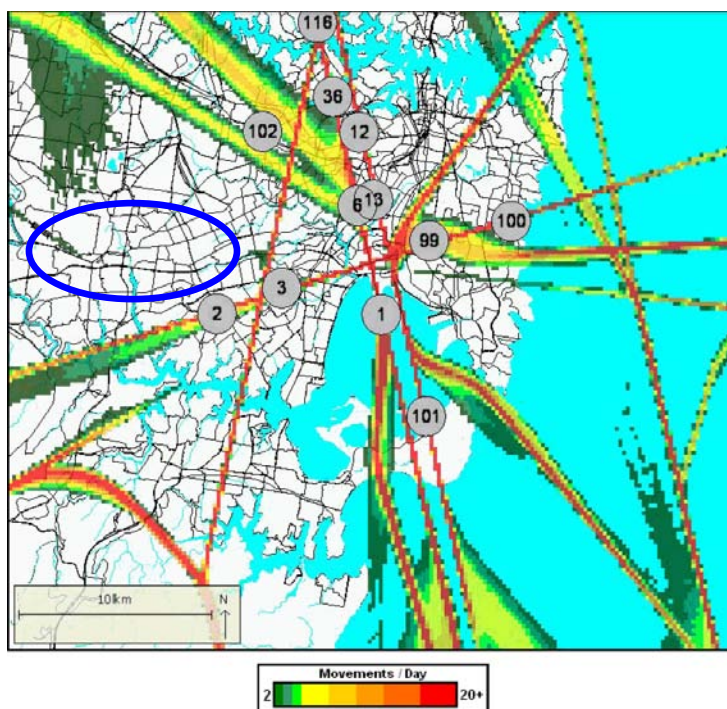
2.2 Data structure and content

Data structure can be considered on two levels. The first is the structure of the full suite of information sources available, and the second is the structure of each individual item. In relation to the broader issue of all available sources, many complainants have expressed difficulty, or seem to have been unable, to access the answers that they are seeking for their individual concerns. There would be benefit in having a consolidated list of documents, their purpose and objective, together with a brief summary of the content available in each of the reports.

Recommendation 1: Airservices should develop a consolidated list of information sources, including the purpose and/or objective of each document, as well as a brief summary of content.

The content of some of the reports has often been misunderstood by residents. For example, if a resident was seeking information on jet flight paths in their area, they may consider only the track density plot for jets during a particular quarter as detailed in the *Noise and Flight Path Monitoring Reports – Sydney*¹¹ hereinafter referred to as Sydney NFPM Report. One such map is identified below:

Map 1 – Track density jet ops 3rd quarter 2011

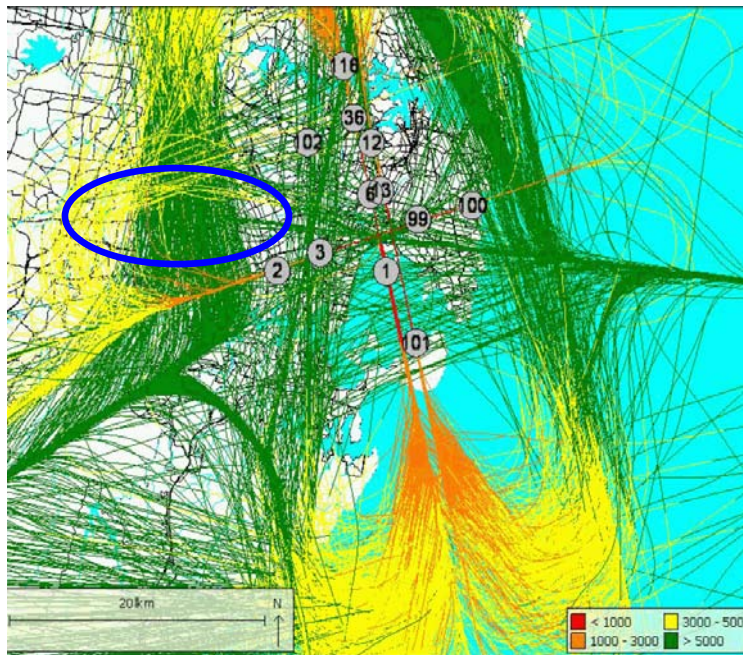


This map shows all jet operations for a quarter averaged out to movements per day, with the lowest unit being two movements per day. This suggests that there are large areas around the airport that have, on average, less than two movements per day. Perhaps it is reasonable for some to believe that living within the blue oval would be suitable if they were sensitive to aircraft noise.

In comparison, Airservices also publishes a map, in the same Sydney NFPM Report, showing the flight paths of jets over an indicative week divided between arrivals and departures. The following map shows jet arrivals during the period 2 September to 8 September 2011, which is within the same quarter covered by the map above.

¹¹ Available at <http://www.airservicesaustralia.com/publications/>

Map 2 – Track plots jet arrivals 2/9/11 – 8/9/11



This map perhaps suggests that the same blue oval area is not an ideal location to live if a resident is sensitive to aircraft noise.

While neither map is technically incorrect, the second map more accurately shows that there are few, if any inner residential areas that are free from aircraft noise. Having the area displayed as clear, on the first map, may not be an ideal representation of flight paths.

Recommendation 2: Airservices should improve the clarity of maps produced in reports used to convey aircraft noise information.

While the above example demonstrates the issues associated with maps, it is also the word content of the report that can be problematic to complainants. The Sydney NFPM Report commences with a few lines of introduction followed by a few lines of text about the location of noise monitoring terminals. The next paragraph, without any explanation, mentions the terms LAeq, N70, N80, N90, CNE and dB(A). While the terms are defined elsewhere in the report, the definition is often not understood. For example, LAeq is defined as 'Time Average A-weighted sound pressure level'. For some, such a level of technical reporting may be informative, however the report is less likely to be of value to the average complainant. This issue may be addressed by defining the objective or purpose of these reports (and the potential audience) as detailed in Recommendation 1 above.

In essence, many of the reports lack any textual or qualitative assessment of noise, albeit to do so is problematic given individual thresholds to acceptable noise differ so dramatically. Textual or qualitative information on noise would be beneficial to those not familiar with the technical concepts of noise propagation.

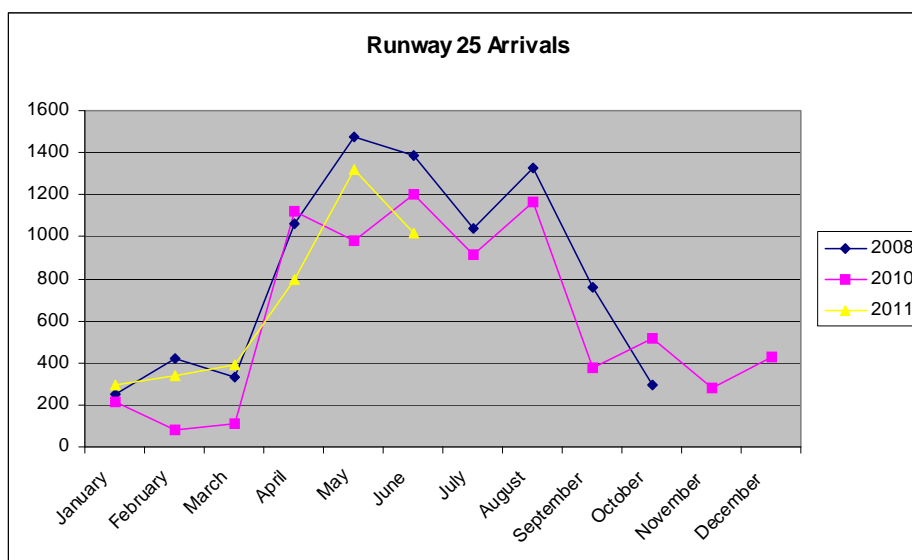
Recommendation 3: Airservices should provide more textual and qualitative assessment of aircraft noise in reporting.

A common theme among complaints to the ANO is the request by many to obtain a greater understanding of flight paths, seasonal (and daily) variations and why Airservices are unable to implement what seem to be simple solutions to noise concerns. Case Study 1 (below) highlights some of the issues associated with seasonal changes. Airservices are currently working on the provision of fact sheets to address common noise complaint issues, and the ANO office will continue to support Airservices in the development of fact sheets to address the concerns mentioned above.

Case Study 1 – Traffic has quadrupled, but nothing has ‘changed’?

Mr M of Kingsford moved into a new apartment building at the beginning of 2011. For the first few months of the year, Mr M experienced around 300 to 400 arrivals per month directly over his home onto Runway 25. In April this increased to 800 and in May, there were over 1,300 arrivals to Runway 25, approximately 4 times the average from the first three months of the year.

Mr M went to Airservices seeking an explanation for what he described as a ‘bombardment’ of aircraft noise. Perhaps this is not surprising given his experience in the first three months of the year. While Airservices responded with information relating to runway modes, LTOP, weather factors and respite, there was no advice to suggest anything had ‘changed’. In particular nothing was provided to show the regular seasonal variation that sees an increase in the use of Runway 25 for arrivals from April through to August. These trends are identified in the graph below, which was created by the ANO office, yet not available through Airservices (unless an individual transposed the statistical data from 10 different reports and generated their own graph).



Note: Data for some months has been excluded due to runway works.

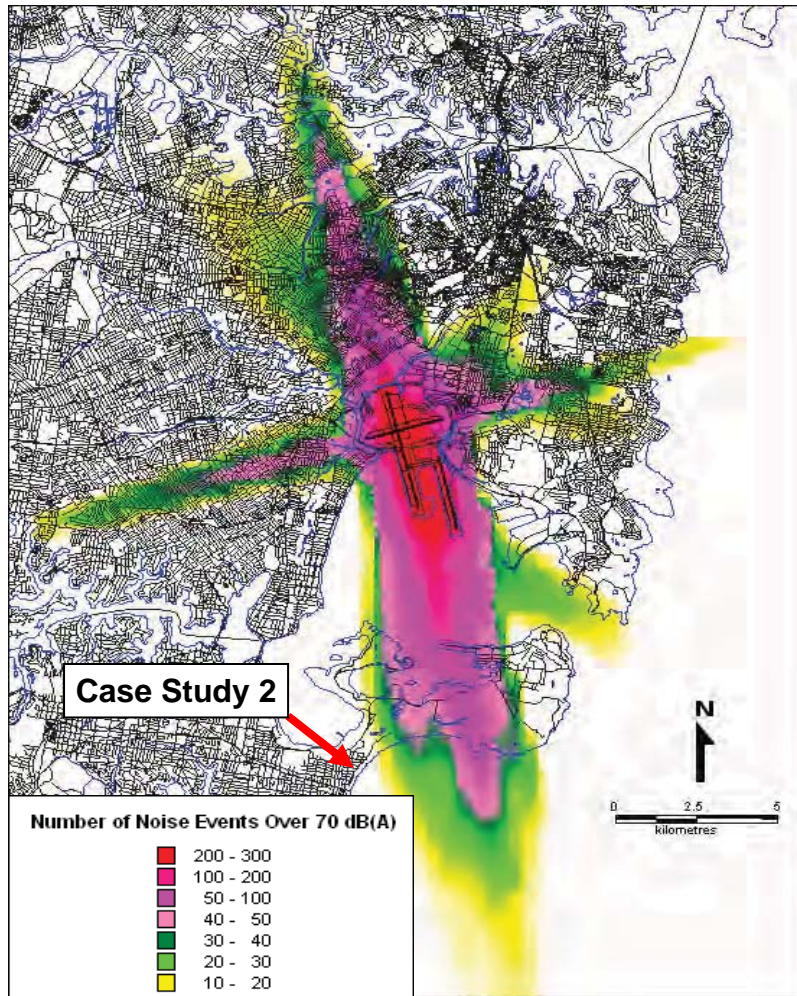
Reference: ANO115

Recommendation 4: Airservices should provide more information, clearly presented, on daily or seasonal variations, where significant.

2.3 Quantitative versus qualitative data

A number of complainants have referred to the Sydney property pack as supplied by Airservices. While the property pack does include some general commentary, many of the complainants referred directly to the maps supplied in the property pack to ascertain whether their house, or proposed residence, would be affected.

Map 3 – Noise events over 70 dB(A)



The Sydney Airport N70 chart (left) depicts areas where aircraft noise reaches a certain threshold, namely 70 decibels. Some residents, however, have misinterpreted the map and assumed areas not shaded are not significantly affected by noise.

Unfortunately the chart only depicts average daily movements and does not depict areas exposed to less than an average of 10 movements per day. As reported in previous reviews, the use of averages is problematic, and there may be periods where the actual experience is significantly different from that presented by the use of averages.

Additionally, the chart does not show any data for noise levels just under the 70 decibel threshold, which may also be significant for many residents. The potential confusion is demonstrated in Case Study 2 below.

Case Study 2 – ‘We are outside the aircraft noise affected zone’

Mr W from Cronulla (location shown on map above) contacted the ANO as he was experiencing a ‘significant impact on (his) lifestyle from aircraft noise’. This was despite Mr W checking with Airservices prior to building in Cronulla and ascertaining that their residence was outside the ‘yellow 10-20 70 decibel events per day’. Their actual experience was almost consistent aircraft noise to the extent they were unable to relax outside and had their sleep significantly disrupted. This is somewhat understandable given the proximity to the N70 contour and the many events likely to be experienced in the 65 to 70 dB(A) range.

Mr W believes he is now disadvantaged and needs to spend a significant amount of money for noise insulation, a cost that would have been much less had it been incorporated during construction.

Reference: ANO122

3 Gap analysis on data provision

At the conclusion of section 1 of this assessment, there were four noise information issues identified that were not likely to be addressed, either partially or completely, through the recommendations of the Perth Review. These issues are addressed in the following sections.

3.1 Issue 1 - Noise sharing, noise respite and LTOP

The concepts of noise sharing, LTOP and noise respite are inextricably linked, but not necessarily well understood by complainants. This is not due to the lack of information, for example, a Google® search on LTOP will find over 3,000 Australian entries. One of the better sites for information is the one maintained by the Sydney Airport Community Forum¹² which contains a link to a fact sheet produced by the Department of Infrastructure and Transport (the Department). This fact sheet explains that the purpose of LTOP is to 'share the noise'. This statement is interpreted in many ways, including, for some residents, an expectation that the noise will be distributed evenly across the Sydney suburbs. The reality is that the noise is 'shared' by the use of varying Runway Modes, that is, the runways used for arrivals and departures are changed, throughout the day, to redirect the concentration of flights over Sydney suburbs. To allow pilots, and air traffic controllers, to operate with some degree of predictability, the flight paths are defined corridors, and due to modern technology, can be quite narrow¹³. This is often referred to as noise concentration, which some may consider as counter to noise sharing. This means that once a Runway Mode is selected (and often the options are limited due to weather, traffic demand, runway works, etc) certain suburbs will likely be exposed to consistent flight operations.

The complexities associated with LTOP, Runway Modes and also the constraints that limit the variability of flight operations, are not generally well understood by the public. While the information is available for those willing and able to search through the many documents and reports that are published, there would be benefit in Airservices establishing one or more fact sheets specifically on LTOP and runway mode selection. Such fact sheets would complement the one published by the Department, to explain the concerns of complainants and direct them to the most useful information available, if they are seeking more detail.

Recommendation 5: Airservices should provide at least one Sydney specific fact sheet explaining Airservices' roles in noise sharing, LTOP, runway selections and noise respite and when appropriate, refer enquirers to other existing noise information sources.

¹² Available at <http://sacf.infrastructure.gov.au/airport/LTOP/>

¹³ This is not to suggest that the *only* flight paths to be flown are narrow corridors (refer to map shown on page 13).

Another common question posed is in relation to the LTOP targets and why they are not currently being achieved. While the ANO office has been fortunate to be privy to a thorough explanation of the constraints in reaching the LTOP targets, unfortunately such information can be difficult for the public to access. There would be benefit in Airservices providing information on why the targets are currently not being met and what is being done currently (both tactically and strategically) to achieve the best possible results.

Recommendation 6: Airservices should produce a short report on LTOP performance, and the efforts currently being made to ensure the best possible noise sharing results are delivered.

3.2 Issue 2 - Runway selection and mode use

Runway selection and Runway Mode usage has, to some extent, been covered in the discussion above. The remaining issue relating to runway selection is that of more timely information for residents to understand why a particular Runway Mode is being used at certain times of the day. Many complaints to the ANO office are from individuals seeking an understanding of why a particular runway was used, at a particular time, on a particular day. Complainants are often sceptical about the reason for runway selections.

Runway Mode is decided by taking into account many variables, such as wind, weather, traffic loads, time of day, forecast weather, noise sharing, runway works and operator requirements, to name just a few. Some of these influences, such as weather, can occur 40 or more kilometres from the airport. To respond to complainants after the event, in a satisfactory manner, requires significant research and analysis. There would be benefit in Airservices exploring the provision of a more timely (as well as historical) method for complainants to understand why a particular Runway Mode was in use, or why a preferred Runway Mode (noise sharing) was not able to be used at that time. Alternative measures should be adopted to provide greater transparency and to provide some degree of public visibility into the decision making processes.

Recommendation 7: Airservices should explore the provision of a more timely (as well as historical) method for complainants to understand why a particular Runway Mode was in use, or why a preferred Runway Mode (noise sharing) was not able to be used at that time.

3.3 Issue 3 - Noise insulation information

The only reference on the Airservices' website to insulation directs complainants to the now closed Federal Government insulation scheme that existed for Sydney and Adelaide. Many complainants are interested in what steps they can take to provide an improved noise outcome within their homes. While this is not directly the responsibility of Airservices, there are a number of sites available that do provide such information. There would be benefit in Airservices assisting the public to find such information.

Recommendation 8: Airservices should provide links to applicable sources of information on sound insulation for homes, especially information addressing cost effective means of reducing the intrusion of aircraft noise.

3.4 Issue 4 – Curfew information

The curfew concerns raised by complainants are generally related to either the regulations regarding the curfew, or information about a specific aircraft operation during curfew hours. This is often brought about by a public expectation that a curfew means that no aircraft operate, which is not the case. The ANO acknowledges the fact sheet¹⁴ recently published (December 2011) by Airservices on Airport curfews which addresses the regulatory component of airport curfews.

As well as the general regulations pertaining to curfews, members of the public are often seeking information about curfew dispensations for aircraft operating during curfew hours. There would therefore be benefit in Airservices publishing a link from their site to the Department of Infrastructure and Transport's webpage¹⁵ that includes regular reports on Sydney curfew dispensations, and the circumstances leading to the approval to operate during curfew hours.

Recommendation 9: Airservices should publish a link directing complainants to the Departmental website containing reports on curfew dispensations.

¹⁴ Available at <http://www.airservicesaustralia.com/aircraftnoise/airport-information/>

¹⁵ Available at <http://www.infrastructure.gov.au/aviation/environmental/curfews/CurfewDispensationReports/>

4 Conclusion

At times it can be almost impossible to present comprehensible information to explain aircraft noise. The management of air traffic is often perceived in the same manner as the management of vehicle traffic: air routes are understood in terms of roads, turns are seen as corners in streets and climbing or descending aircraft are expected to behave much like cars on a mountain road. In practice nothing is so clear-cut and air routes are much more variable. Equally the noise aircraft make is often understood in terms of the noise from a fixed source on the ground (such as a machine in a factory) but in practice is much more variable in terms of both the noise generated and how it is perceived.

Given the difficulty in understanding, let alone explaining, aircraft noise, it is no wonder that there is much that can be done to change the way this information is conveyed. This analysis presents ideas on how this could be done differently. This is not a criticism of what has been done in the past, but rather a part of a process to do better in the future, something that many in the industry have been working on for a long time.

Attachment 1 – Recommendations

| Recommendations arising from this review |
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| Recommendation 1: Airservices should develop a consolidated list of information sources, including the purpose and/or objective of each document, as well as a brief summary of content. |
| Recommendation 2: Airservices should improve the clarity of maps produced in reports used to convey aircraft noise information. |
| Recommendation 3: Airservices should provide more textual and qualitative assessment of aircraft noise in reporting. |
| Recommendation 4: Airservices should provide more information, clearly presented, on daily or seasonal variations, where significant. |
| Recommendation 5: Airservices should provide at least one Sydney specific fact sheet explaining Airservices' roles in noise sharing, LTOP, runway selections and noise respite and when appropriate, refer enquirers to other existing noise information sources. |
| Recommendation 6: Airservices should produce a short report on LTOP performance, and the efforts currently being made to ensure the best possible noise sharing results are delivered. |
| Recommendation 7: Airservices should explore the provision of a more timely (as well as historical) method for complainants to understand why a particular Runway Mode was in use, or why a preferred Runway Mode (noise sharing) was not able to be used at that time. |
| Recommendation 8: Airservices should provide links to applicable sources of information on sound insulation for homes, especially information addressing cost effective means of reducing the intrusion of aircraft noise. |
| Recommendation 9: Airservices should publish a link directing complainants to the Departmental website containing reports on curfew dispensations. |

The ANO office will report on progress against the recommendations identified above through regular quarterly reports, published on the ANO website¹⁶.

¹⁶ ANO reports available at www.ano.gov.au