Short Term Monitoring Program

Shelley, WA

connecting australian aviation

Version Control

Version 1: 7 November 2014	
Section	**Summary**

Glossary of Terms

A	Arrivals
Background noise level (L90)	The sound level in dB(A) that is exceeded 90% of the time
Correlated Noise Event (CNE)	A noise event correlated to an aircraft operation that flew through the capture zone
Correlation Summary	Percentage of captured aircraft operations correlated with noise events recorded by the noise monitor
D	Departures
Day	6:00am to 11:00pm
H	Helicopters
LAmax	Maximum sound level in dB(A)
Local	Operation that departs and arrives at the same airport. Local movements include circuits and training flights.
Movement	An aircraft operation, such as a arrival or departure
Night	11:00 pm to 6:00 am
NFPMS	Noise and Flight Path Monitoring System
Noise Event	A noise that exceeds the threshold sound level for longer than the threshold time that is set
NMT	Noise Monitoring Terminal
O	Overflight i.e. an aircraft movement that flew over the area but did not arrive or depart from the airport of concern
T	Local Operation (Departure and Arrival)
Threshold	Determined level on noise monitor that triggers a noise event when exceeded

For further information on the metrics used in this report refer to Australian Standard 1055.1–1997 “Acoustics – Description and measurement of environmental noise”.

Airservices Noise Monitoring Program

Information about Airservices noise monitoring program is available on the Airservices website, including reports of the noise and operational data collected by the Noise and Flight Path Monitoring System, as well as fact sheets about topics related to aircraft noise. The website is available at: www.airservicesaustralia.com/aircraftnoise/

Contact Us

To lodge a complaint or make an enquiry about aircraft operations,
you can go to WebTrak (www.airservicesaustralia.com/aircraftnoise/webtrak/)
use our online form (www.airservicesaustralia.com/aircraftnoise/about-making-a-complaint/)
telephone 1800 802 584 (freecall) or 1300 302 240 (local call –Sydney)
fax (02) 9556 6641 or write to, Noise Complaints and Information Service, PO Box 211, Mascot NSW 1460.

Deployment Purpose

Short term noise monitoring was conducted at Shelley following recommendations made by the community.

The purpose of this report is to provide a technical summary of the recorded aircraft noise and operational data collected at Shelley between July and September 2014.

An explanation of terms used within this report can be found in the Glossary on page 2 of the report.

Deployment Monitoring Period

07/07/2014 12:00 am – 29/09/2014 12:00 am

Noise Monitoring Terminal (NMT) Details

Location	Private Residence, Nearwater Way, Shelley, WA 6148
Latitude	32° 1' 25.56" S
Longitude	115° 53' 35.97"E
NMT Altitude	26 ft above mean sea level
Capture Zone	2.5 km radius with 8,000 ft (above ground level) height for noise data capture
Threshold Settings	47.0 dB(A) to 56.0 dB(A) depending on time of day

Shelley Findings

- For more information please refer to Figure 1, Figure 2 and Table 1 on page 4.
- The noise monitor was located in Shelley 13 km to the south west of Perth airport.
- 4,402 movements flew through the capture zone during the reporting period. 4,009 of these were Perth operations.
- 89% of total operations that flew through the capture zone (as shown in figure 2) were Perth Runway 21 Departures.
- 3,553 correlated noise events exceeded 65 dB(A), 651 of these occurred during the hours of night.
- The number of correlated noise events exceeding 65 dB(A) in any one day ranged from none to 96.
- Residents of Shelley experienced 169 correlated noise events that exceed 75 dB(A) during the reporting period.
- The loudest correlated aircraft noise event with a max level of 95.2 dB(A) was a Runway 21 Airbus A330-300 departure.
- The correlation summary for all movements was 93%. This is considered a good result based on reviews of fixed noise monitoring terminals nationally.

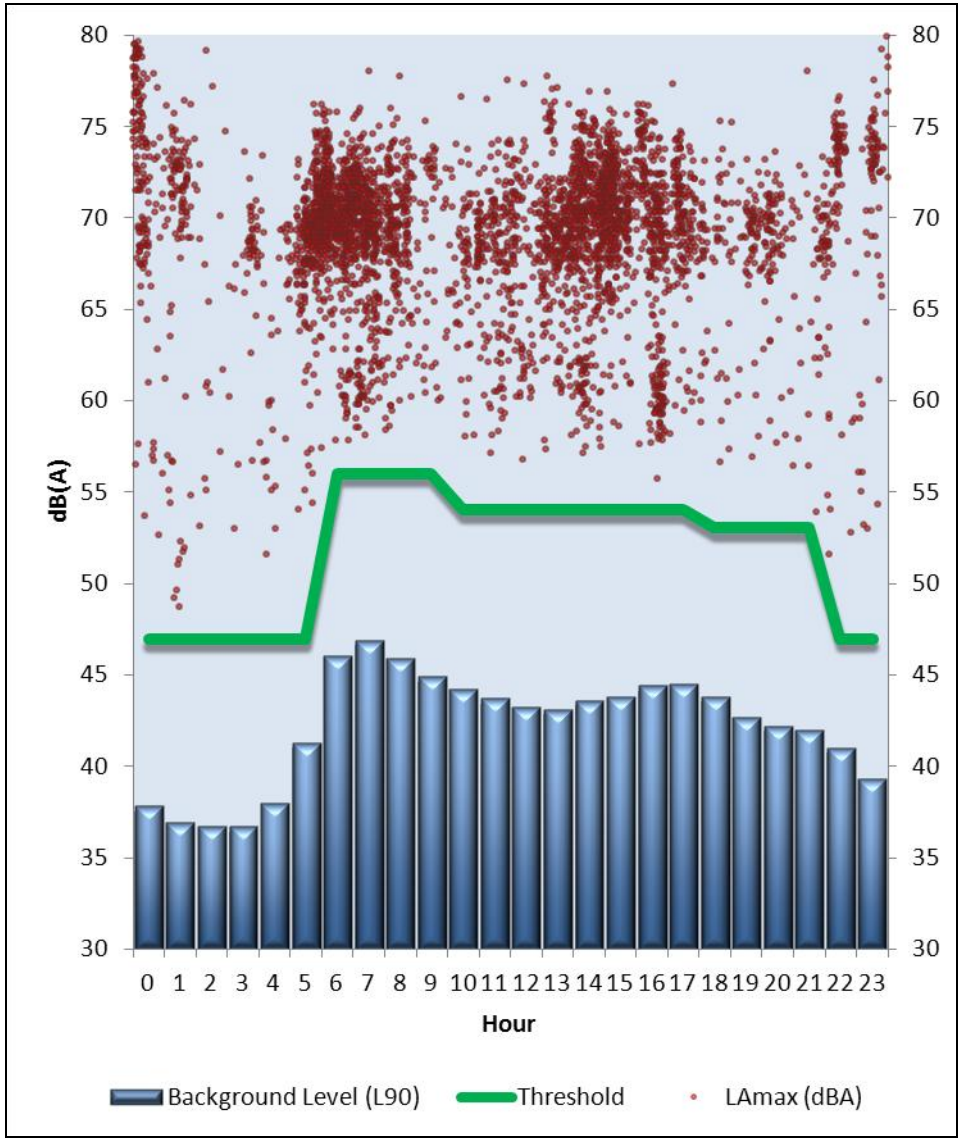

FIGURE 1: SHELLEY NOISE SUMMARY
07/07/2014 12:00AM – 29/09/2014 12:00AM

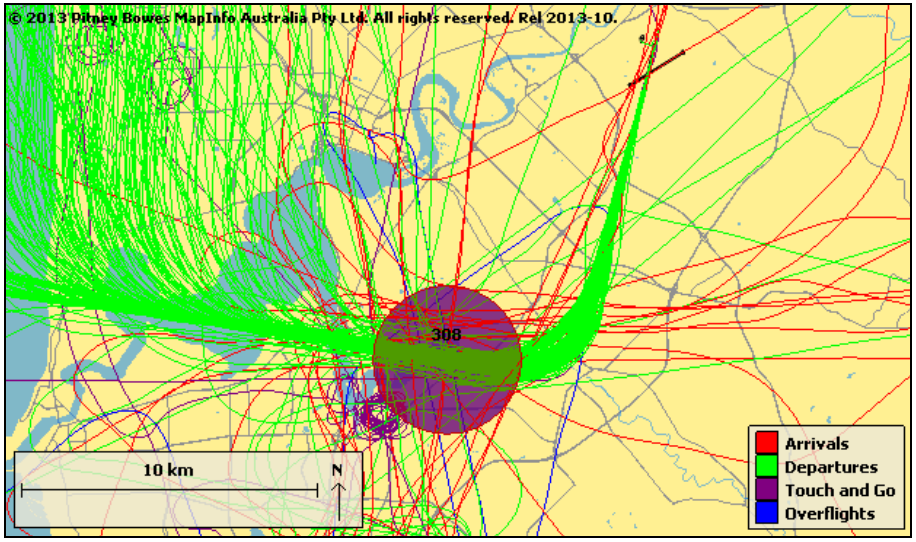

FIGURE 2: INDICATIVE TRACK PLOT OF OPERATIONS THAT TRAVERSED SHELLEY (03/08/2014 12:00AM – 10/08/2014 12:00AM)

TABLE 1: TOP 10 MOST CORRELATED AIRCRAFT TYPES OVER THE SHELLEY NOISE MONITORING TERMINAL

Aircraft Type	Airport	Operation Type	RWY	No. Correlated Noise Events	LAmax dB(A)	
					Average	Maximum
Fokker 100 (J)	Perth	D	21	791	70.5	82.5
Boeing 737-800 (J)	Perth	D	21	681	69.9	75.3
Airbus A330-200 (J)	Perth	D	21	530	68.8	77.7
Boeing 717-200 (J)	Perth	D	21	384	67.9	81.1
Airbus A330-300 (J)	Perth	D	21	344	72.3	95.2
Avro RJ-100 Avroliner (J)	Perth	D	21	202	70.7	77.5
Boeing 777-300 (J)	Perth	D	21	165	73.7	77.5
Boeing 777-200 (J)	Perth	D	21	134	71.8	75.3
Fokker 50 (T)	Perth	D	21	116	60.7	72.4
Bombardier Dash 8 400 (T)	Perth	D	21	114	61.1	74.4

Aircraft Category: Jet (J), Turboprop (T), Propeller (P), Helicopter (H), Unknown (U)
Operation Type: Arrival (A), Departure (D), Local Operation (T), Overflight (O)