

# **Short Term Monitoring Program**

## **Bickley, WA**

## Version Control

Version 1: 18 June 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
LAmx	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 an 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/](http://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/](http://www.airservicesaustralia.com/aircraftnoise/webtrak/)) use our online form ([www.airservicesaustralia.com/aircraftnoise/about-making-a-complaint/](http://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.

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This report contains a summary of data collected over the specified period and is intended to convey the best information available from the NFPMS at the time. The system databases are to some extent dependent upon external sources and errors may occur. All care is taken in preparation of the report but its complete accuracy can not be guaranteed. Airservices Australia does not accept any legal liability for any losses arising from reliance upon data in this report which may be found to be inaccurate.

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## Deployment Purpose

Short term noise monitoring was conducted at Bickley 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 Bickley during April 2014.

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

## Deployment Monitoring Period

31/31/2014 12:00 am – 28/04/2014 12:00 am

## Noise Monitoring Terminal (NMT) Details

Location	Private Residence, Walnut Road, Bickley, WA 6076
Latitude	32° 0' 6.36" S
Longitude	116° 7' 37.26"E
NMT Altitude	1,102 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	44.0 dB(A) to 48.0 dB(A) depending on time of day

## Bickley Findings

- For more information please refer to Figure 1, Figure 2 and Table 1 on page 4.
- The noise monitor was located in Bickley 16 km to the east of Perth airport.
- 1,086 movements flew through the capture zone during the reporting period. 1,015 of these were Perth operations.
- 63% of total operations that flew through the capture zone (as shown in figure 2) were Perth Runway 03 Arrivals.
- 39 correlated noise events exceeded 65 dB(A), none 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 five.
- Residents of Bickley experienced four correlated noise events that exceed 80 dB(A) during the reporting period.
- The loudest correlated aircraft noise event with a max level of 90.4 dB(A) was a Bell 412 rescue helicopter arriving at Royal Perth Hospital.
- The correlation summary for all movements was 75%. This is considered a good result based on reviews of fixed noise monitoring terminals nationally.

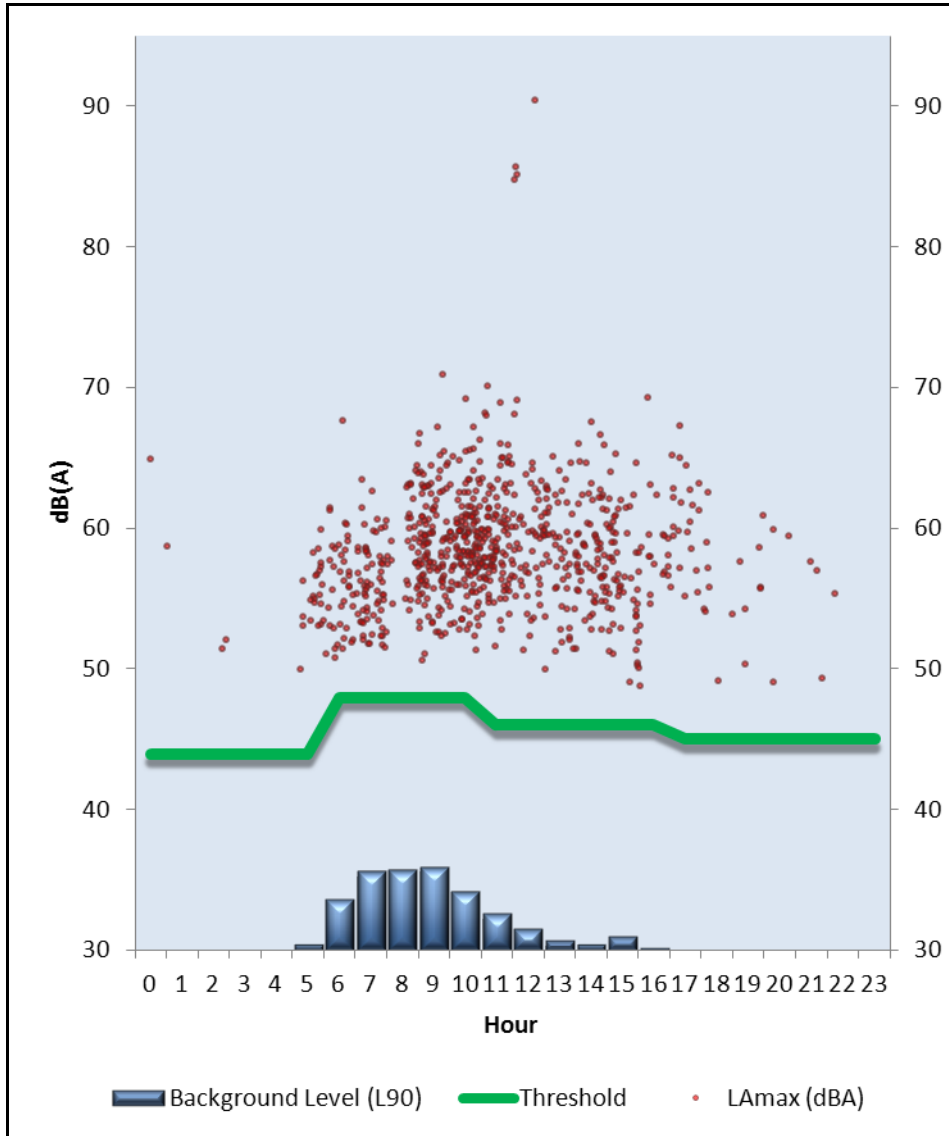


FIGURE 1: BICKLEY NOISE SUMMARY  
31/03/2014 12:00AM – 28/04/2014 12:00AM

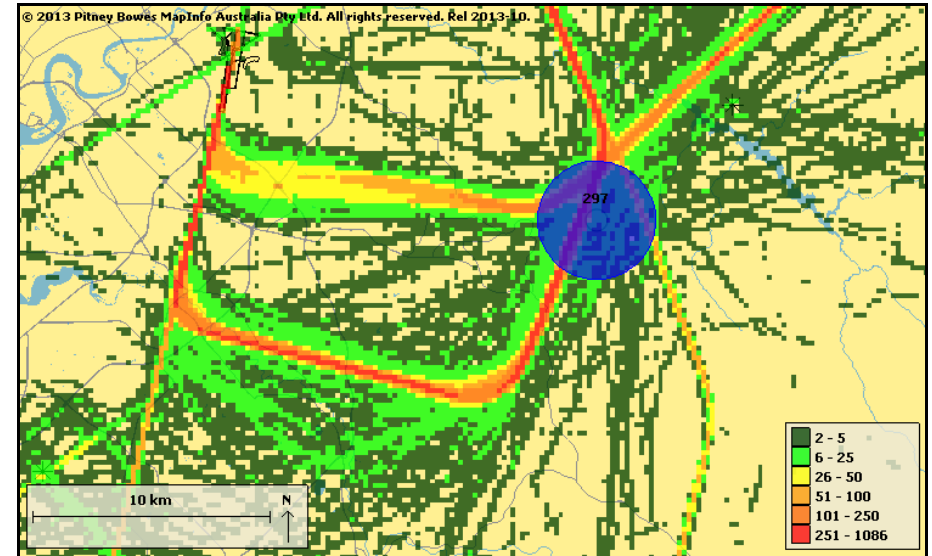


FIGURE 2: TRACK DENSITY OF OPERATIONS THAT TRAVERSED BICKLEY

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

Aircraft Type	Airport	Operation Type	RWY	No. Correlated Noise Events	LAmx dB(A)	
					Average	Maximum
Fokker F100 (J)	Perth	A	03	138	58.6	69.2
Boeing 737-800 (J)	Perth	A	03	136	59.3	70.1
de Havilland Dash 8-100 (T)	Perth	D	21	80	54.1	62.4
Embraer E120 (T)	Perth	D	21	67	57.8	65.9
Boeing 717-200 (J)	Perth	A	03	61	59.6	67.3
de Havilland Dash 8-300 (T)	Perth	D	21	47	56.6	67.6
de Havilland Dash 8-100 (T)	Perth	A	03	23	60.5	67.2
Embraer E190 (J)	Perth	A	03	23	58.6	63.2
Airbus A320 (J)	Perth	A	03	19	63.1	70.9
Embraer E120 (T)	Perth	A	03	19	58.6	65.2

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