

# **Short Term Monitoring Program**

## Keilor East, VIC

## Version Control

Version 1: 18 June 2015	
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
EMU	Environmental Monitoring Unit
H	Helicopters
LAm <sub>ax</sub>	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
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 ACT 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 cannot 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.

## Deployment Purpose

Short term noise monitoring was conducted at Keilor East to evaluate an alternate location for the permanent monitor currently located in Keilor Village. The majority of noise events captured by the permanent monitor located in Keilor are not compliant with ISO 20906 due to the angle between the aircraft and noise monitor (below 30°).

The purpose of this report is to provide a technical summary of the recorded aircraft noise and operational data collected at Keilor East during October 2014 to December 2014.

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

A comparison of the events recorded at both the permanent Keilor Village EMU and the short term Keilor East EMU will be tabled at the August 2015 [Melbourne Airport CACG](#) (was raised at the May 2015 CACG) and summarised in the Q2 2015 Melbourne [ANIR report](#).

## Deployment Monitoring Period

21/10/14 12:00 am – 27/12/2014 12:00 am

## Environmental Monitoring Unit (EMU) Details

Location	Private Residence, Cecelia Drive, East Keilor VIC 3033
Latitude	37° 44' 53.44"S
Longitude	144° 51' 08.27"E
EMU Altitude	223 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	53.0 dB(A) to 61.0 dB(A) depending on time of day

## Keilor East Findings

- The noise monitor was located in Keilor East 7km to the south of Melbourne airport.
- 9,735 movements flew through the capture zone during the reporting period. 9,138 of these were Melbourne operations.
- 59% of total operations that flew through the capture zone (as shown in figure 2) were Runway 16 Departure operations.
- There were a total of 7,512 correlated noise events above 60 dB(A). These were most common during the hours of 3:00pm and 4:00pm on both weekdays and weekends.
- 824 correlated noise events exceeded 60 dB(A) occurred during the hours of night (11:00 pm to 6:00 am).
- The number of correlated noise events exceeding 60 dB(A) in any one day ranged from 33 to 247, with an average of 119 events daily.
- 3,390 noise events that exceeded 75 dB(A) were recorded during the reporting period. This occurred 643 times during the hours of night (11:00 pm to 6:00 am).
- The loudest correlated aircraft noise event with a max level of 79.5 dB(A) was an A320 arriving onto Runway 34.
- The correlation summary for all movements was 78%. This is a similar correlation to the fixed Environmental Monitoring Units in Melbourne.

For more information please refer to Figure 1, Figure 2 and Table 1 on page 4.

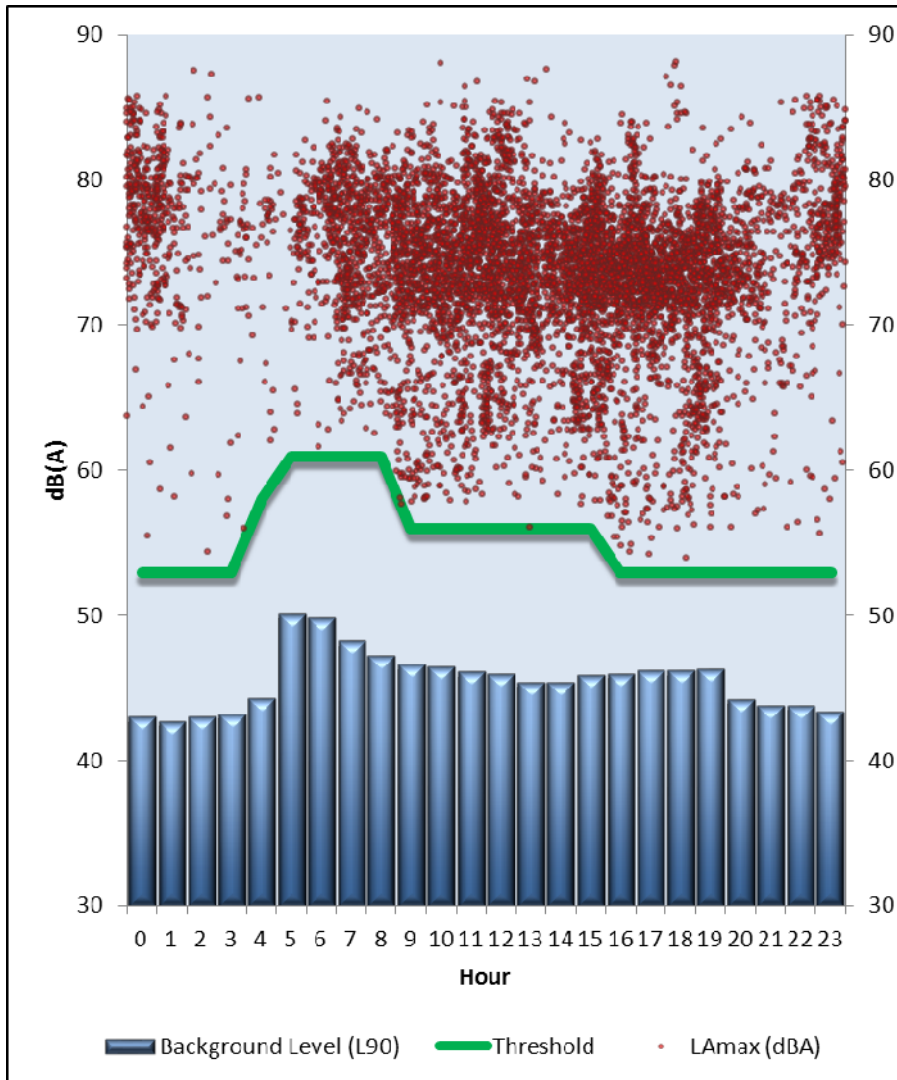


FIGURE 1: KEILOR EAST NOISE SUMMARY  
21/10/2014 12:00AM – 27/12/2014 12:00AM

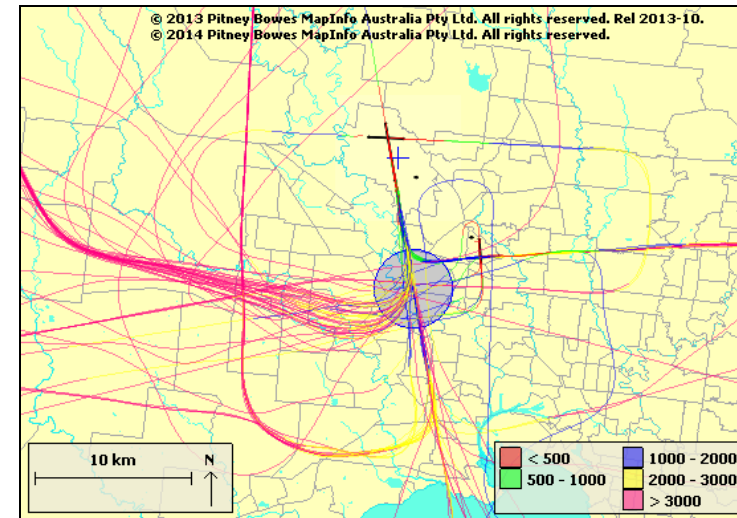


FIGURE 2: OPERATIONS THAT TRAVERSED KEILOR EAST ON 10/12/2014

TABLE 1: TOP 10 MOST CORRELATED AIRCRAFT TYPES OVER THE KEILOR EAST ENVIRONMENTAL MONITORING UNIT

Aircraft Type	Airport	Operation Type	RWY	No. Correlated Noise Events	L <sub>Amax</sub> dB(A)	
					Average	Maximum
Boeing 737-800 (J)	Melbourne	D	16	1508	73.3	85.1
Airbus A320 (J)	Melbourne	D	16	860	72.0	78.3
Boeing 737-800 (J)	Melbourne	A	34	546	73.9	83.2
Airbus A330-300 (J)	Melbourne	D	16	444	77.9	86.8
Airbus A320 (J)	Melbourne	A	34	386	74.6	83.1
Airbus A330-200 (J)	Melbourne	D	16	381	75.7	84.6
Boeing 777-300ER(J)	Melbourne	D	16	293	79.1	85.8
Saab SF340 (T)	Melbourne	D	16	280	64.4	80
Airbus A330-200 (J)	Melbourne	A	34	257	76.6	86.8
Airbus A330-300 (J)	Melbourne	A	34	219	77.7	83.6

**Aircraft Category:** Jet (J), Turboprop (T), Propeller (P), Helicopter (H), Unknown (U)

**Operation Type:** Arrival (A), Departure (D), Local Operation (T), Overflight (O)