Short Term Monitoring Program

Heatherton, VIC

connecting australian aviation

Version Control

Version 1: 25 Mar 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
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 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	Pre-set 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 ACT 1460.

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Deployment Purpose

Short term noise monitoring was conducted at Heatherton following consultation with the community.

The purpose of this report is to provide a technical summary of the recorded aircraft noise and operational data collected at Heatherton during October 2014 to January 2015.

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

Deployment Monitoring Period

30/10/14 12:00 am – 20/01/2015 12:00 am

Environmental Monitoring Unit (EMU) Details

Location	Private Residence, Heatherton VIC 3202
Latitude	37° 59' 25.58" S
Longitude	145° 6' 19.52"E
NMT Altitude	88 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	49.0 dB(A) to 53.0 dB(A) depending on time of day

Moorabbin Airport Noise and Flight Path Monitoring System Improvement Program (NFPMS)

Aircraft movements from Moorabbin Airport have been visible in the Melbourne component of Airservices Noise and Flight Path Monitoring System (NFPMS) for many years. For example flight tracks in and out of Moorabbin Airport can be seen in WebTrak. The NFPMS was originally setup to monitor operations at major airports and relied upon obtaining the details of the operations from a lodged flight plan.

Moorabbin Airport is a General Aviation airport with a high proportion of operations relating to training schools. As a result, the majority of movements at Moorabbin Airport do not have a detailed flight plan and therefore there is limited data captured in the NFPMS.

Recently Airservices has developed new capability within the NFPMS to determine movement details in the absence of lodged flight plans at Moorabbin. This improved capability has been trialled since October 2014 and the short term monitoring included in this document has benefitted from the improved NFPMS at Moorabbin.

Heatherton Findings

- The noise monitor was located in Heatherton 1. 5 km to the north of Moorabbin airport.
- 25,862 movements flew through the capture zone during the reporting period. 24,605 of these were Moorabbin operations.
- 34% of total operations that flew through the capture zone (as shown in figure 2) were Runway 17L local Touch and Go operations.
- There were a total of 13,765 correlated noise events above 60 dB(A). These were most common during the weekday hours of 11:00 am, 2:00 pm and 3:00 pm.
- 45 correlated noise events over 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 4 to 287, with an average of 169 events daily.
- 1,774 noise events over 75 dB(A) were recorded over the reporting period. This occurred 11 times during the hours of night (11:00 pm to 6:00 am).
- The vast majority of operations at Moorabbin Airport are general aviation (GA) aircraft. The most common, during the period reviewed, being the Piper Cherokee Warrior (PA-28-161). There are also a few arrivals and departures of regular passenger transport.

  The breakdown for common general aviation aircraft types is given in Table 2 and 3.

- The loudest correlated aircraft noise event with a max level of 92.9 dB(A) was an aircraft undertaking Touch & Go circuit operations. The aircraft was coming onto Runway 17L, when the noise event occurred.

  Events as high as a max level of 96.2 dB(A) were recorded during the reporting period however these are not correlated to any aircraft operations, where community noise is believed to be either a contributing factor or responsible for these events. Community activities including construction, mowing and traffic can cause such events to be recorded on the monitor.
- The correlation summary for all movements was 64%. This is considered an improvement on similar studies conducted at secondary airports.

For more information please refer to Figure 1, Figure 2 and Tables 1-3 on page 5.

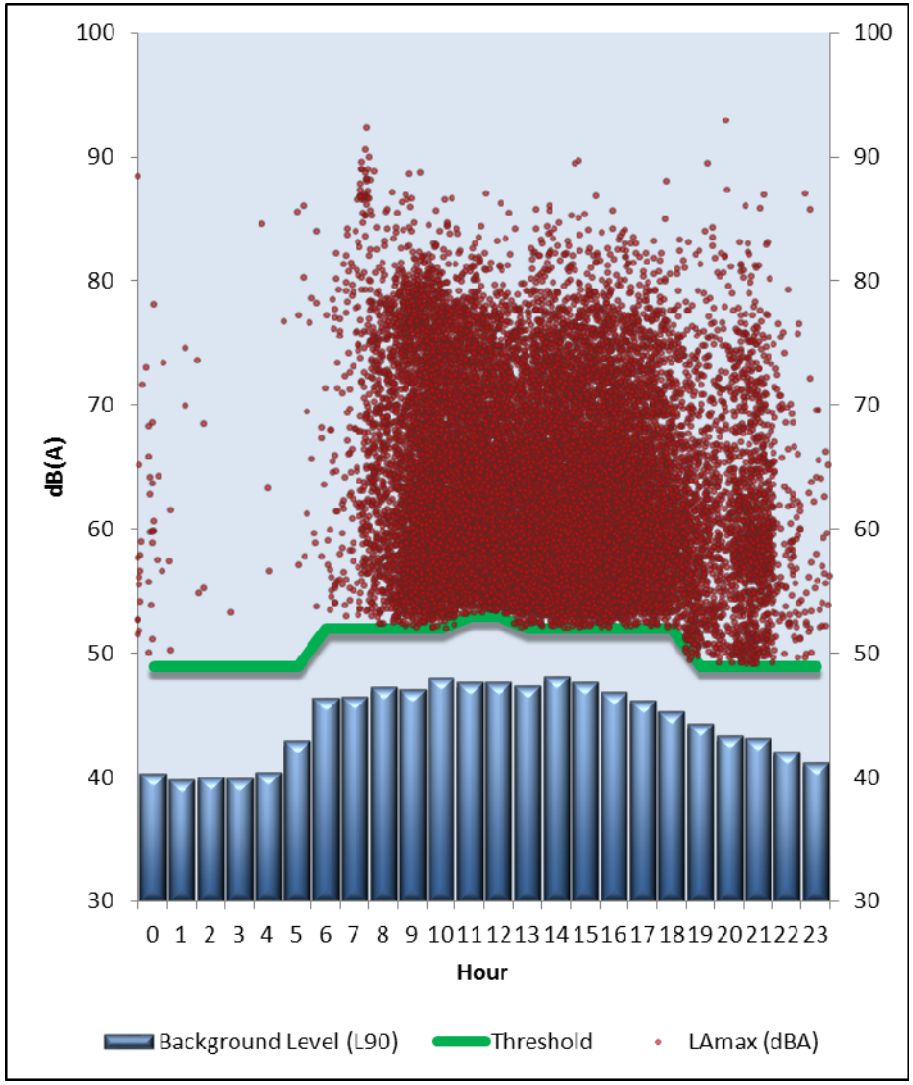

FIGURE 1: HEATHERTON NOISE SUMMARY
30/10/2014 12:00AM – 20/01/2015 12:00AM

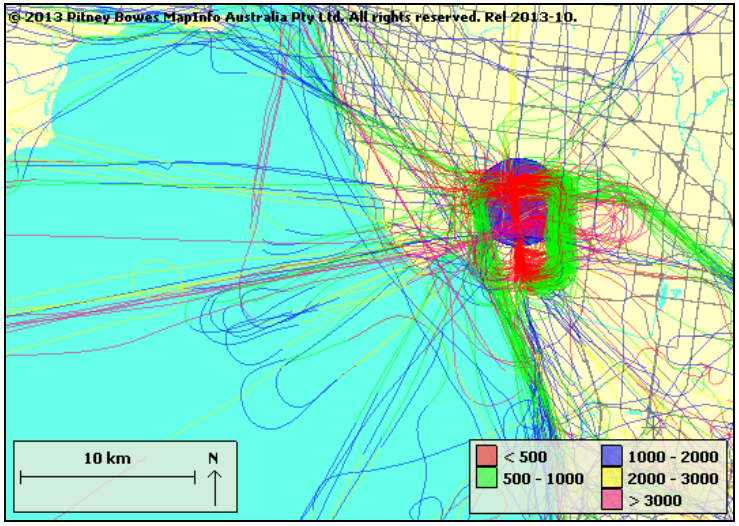

FIGURE 2: OPERATIONS THAT TRAVERSED HEATHERTON ON 10/12/2014

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

Aircraft Type	Airport	Operation Type	RWY	No. Correlated Noise Events	LAmax dB(A)	
					Average	Maximum
General Aviation (GA)	Moorabbin	T	17L	9948	61.7	92.9
General Aviation (GA)	Moorabbin	T	35R	1752	70.5	88.7
General Aviation (GA)	Moorabbin	A	17R	1563	61.5	84.9
General Aviation (GA)	Moorabbin	A	17L	1548	62.1	85.6
General Aviation (GA)	Moorabbin	T	H	1389	61.1	88.4
General Aviation (GA)	Moorabbin	T	17R	966	61.0	83.0
General Aviation (GA)	Moorabbin	T	31R	688	64.6	89.0
General Aviation (GA)	Moorabbin	A	H	539	62.2	88.0
General Aviation (GA)	Moorabbin	T	13L	534	58.0	82.6
General Aviation (GA)	Moorabbin	D	35R	262	70.5	89.5

Aircraft Category: Jet (J), Turboprop (T), Propeller (P), Helicopter (H), General Aviation (GA)
Operation Type: Arrival (A), Departure (D), Local Operation (T), Overflight (O)
Airport: Moorabbin (YMMB)

TABLE 2: TOP 4 AIRCRAFT TYPE RECORDED AT MOORABBIN AIRPORT, 3-9 NOVEMBER 2014

Aircraft Type	Airport	Arrivals	Departure	Touch & Go	All Movements
PA-28-161	**Moorabbin**	14%	14%	31%	22%
172S	**Moorabbin**	10%	9%	15%	12%
152	**Moorabbin**	3%	3%	13%	8%
Light Sports Aircraft	**Moorabbin**	6%	6%	9%	7%
Total Movements (3/11/14-9/11/14)	**Moorabbin**	**724**	**715**	**1321**	**2760**

TABLE 3: TOP 4 HELICOPTER TYPE RECORDED AT MOORABBIN AIRPORT, 3-9 NOVEMBER 2014

Aircraft Type	Airport	All Helicopter Movements
269C-1	**Moorabbin**	21%
R44 II	**Moorabbin**	16%
206B	**Moorabbin**	12%
AS.350BA	**Moorabbin**	10%
Total Helicopter Movements (3/11/14-9/11/14)	**Moorabbin**	**228**