Noise Monitor Data

Sunshine - 2024

Melbourne Airport installed three new portable noise monitors in 2023 to increase and improve the data available for residents about aircraft noise around the airport. The installation of these monitors is a direct response to community feedback received during the 2022 public exhibition of Melbourne Airport's Third Runway Major Development Plan. The monitors provide the public with accurate measurements of overhead flight noise.

The relocatable noise monitors were positioned in Keilor, Sunshine and Bulla and supplement the six permanent noise monitors already located in nearby suburbs (see below).

The portable noise monitors linked directly to Airservices Australia's Webtrak system allowing anyone to access the data online in almost real time.

This report provides a summary of the aircraft noise data collected during 2024 for the Sunshine Noise Monitor (see below). Other reports have been prepared on the Keilor and Bulla monitor locations.

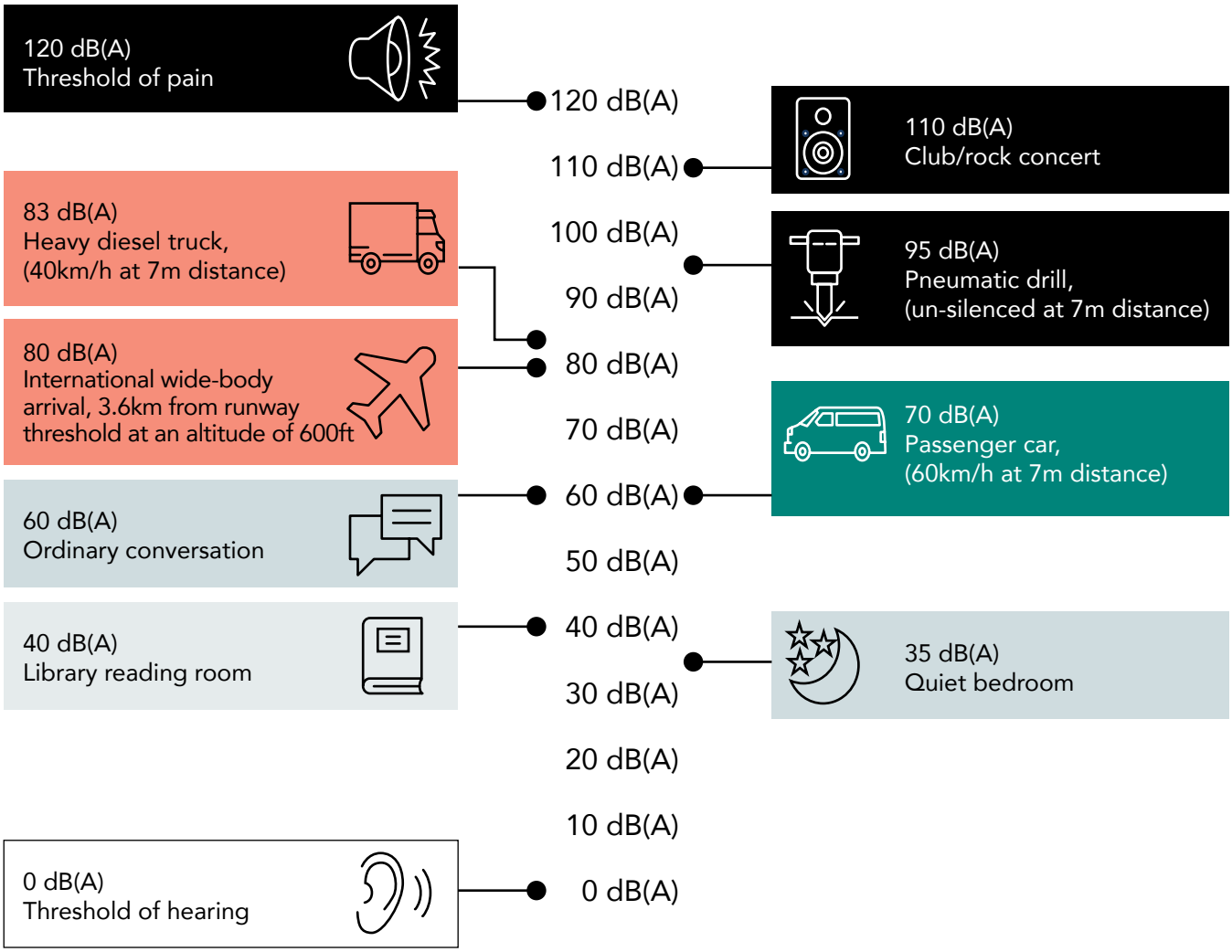
Data presented in this report covers the maximum noise level detected for an aircraft event.

NOTE: The noise levels presented in this report may include aircraft noise events contaminated by neighbourhood noise events, such as birds or vehicles.

Noise scale

The scale below explains noise in the context of common experiences. It describes the noise modelled 3,600 metres south of Melbourne Airport's third runway, at the intersection of the Calder Freeway and Green Gully Rd, for wide-body[1] jet arrivals (typically serving international routes).

Noise Scale dB(A) with examples of noise



Source: APAM and NASF Guideline A: Attachment 1

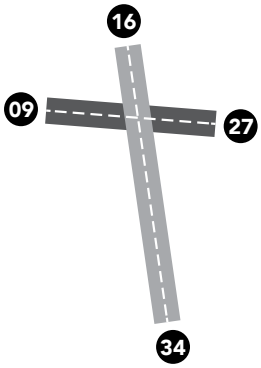
**3.6km is approximately the distance from Runway 34R threshold to the Calder Freeway. Aircraft noise values are based on modelling used in Melbourne Airport's Third Runway Major Development Plan.*

1 'Wide-body' refers to aircraft that have two passenger aisles. Examples include Boeing 787 and Airbus A380 fleets.

Want to understand more about the data in this fact sheet? Contact us at **community@melair.com.au**

Aircraft movements

Below are the number of aircraft movements captured by the Sunshine monitor by operation (arrivals / departures) and runway for 2024.



Arrivals	
Runway 16	5
Runway 34	114
Runway 09	-
Runway 27	99
Runway 16/34	**119**
Runway 09/27	**99**

Departures	
Runway 16	22,177
Runway 34	3
Runway 09	-
Runway 27	30
Runway 16/34	**22,180**
Runway 09/27	**30**

N-above noise events

One way to describe aircraft-noise impacts is by the number of noise events that exceed a certain level. These metrics are referred to as 'N-above' (as in, number above) contour levels.

It aims to provide information in a form that is better understood by the public. It does this by providing a description of aircraft noise exposure at a given location and time period. The National Airports Safeguarding Framework (NASF) Guideline A: Measure for Managing Impacts of Aircraft Noise, recommends the use of N-contours for strategic planning purposes.

The data collected from the Sunshine noise monitor is presented in the N-above format below, indicating the average number of events during 2024.

For example, on average there were
37 daily departure events above 70 dB and
<1 daily arrival events above 60 dB.

		Arrival Events	Departure Events	Total Events
N60 24hr	N60 24 hours provides the number of events at or above 60dB(A) over a 24-hour period	**<1**	**57**	**57**
N70 24hr	N70 24 hours provides the number of events at or above 70dB(A) over a 24-hour period	**<1**	**37**	**37**
N60 night	N60 night provides the number of events at or above 60dB(A) over the night period (11pm to 6am)	**<1**	**4**	**4**

Aircraft noise can be different for arrivals and departures. The following pages provide information broken down by operation (arrival and departures).

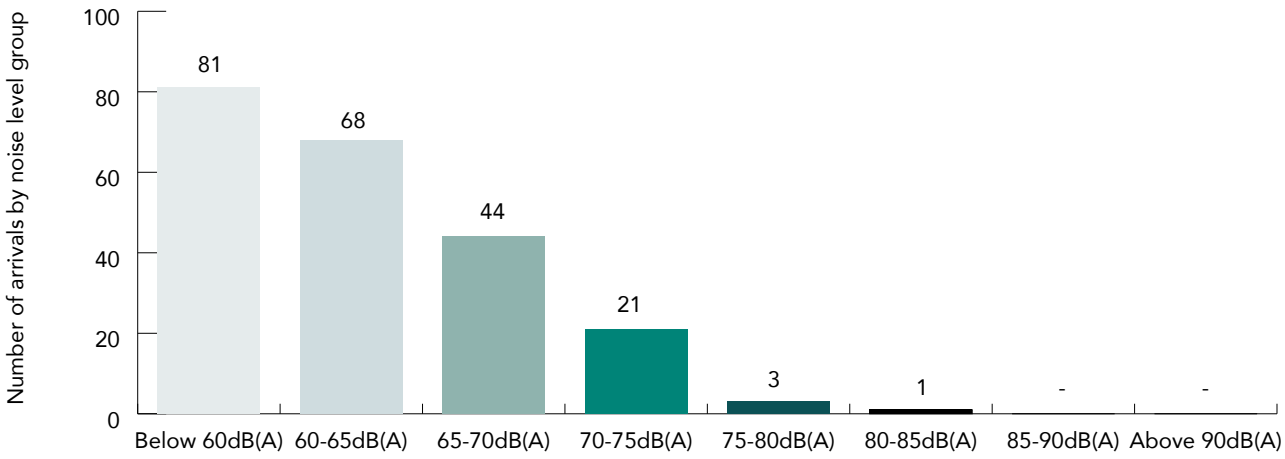
Arrivals

Noise results from the 218 arrivals collected in 2024 have been allocated into noise level 'groups' and by periods of the day.

Graph below highlights the number of arrivals during 2024 by noise level group.

For example, there were

- **68 arrivals** detected between **60-65 dB(A)**
- **3 arrivals** detected between **75-80 dB(A).**



The number of arrivals during 2024 by noise level group and time of day are highlighted below.

For example, there were

- **25 arrivals** detected between **60-65 dB** in the **Morning (6am-1pm)**
- **0 arrivals** detected between **75-80 dB(A)** in the **Evening (5pm-11pm).**

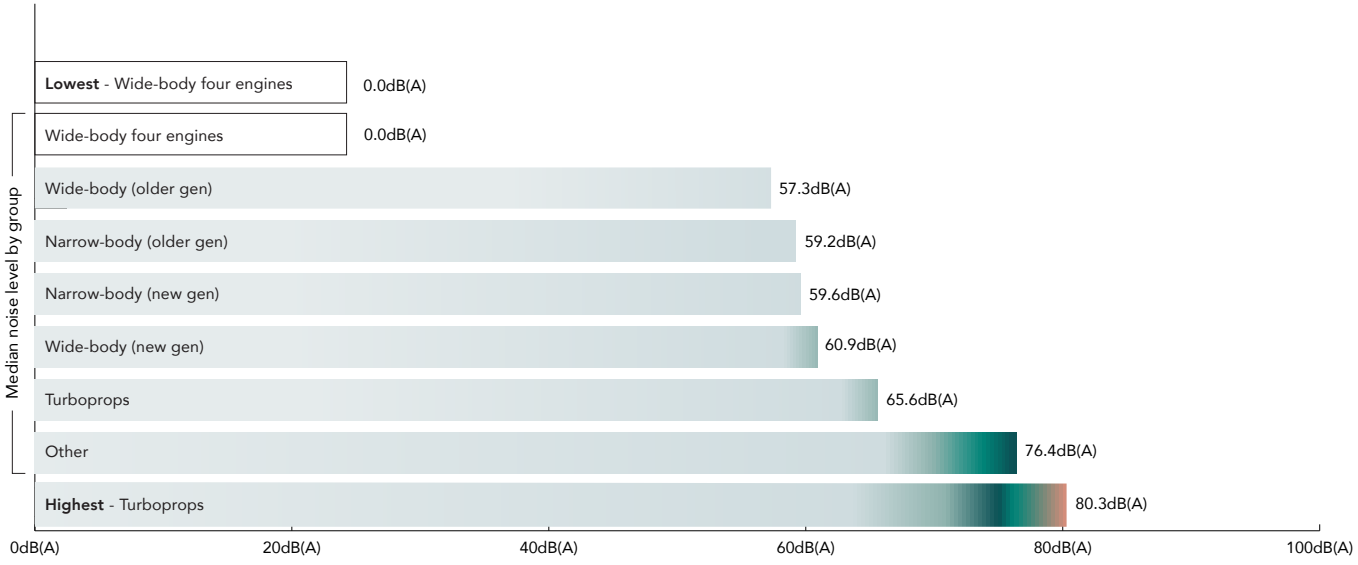
	< 60 dB(A)	60-65 dB(A)	65-70 dB(A)	70-75 dB(A)	75-80 dB(A)	80-85 dB(A)	85-90 dB(A)	> 90 dB(A)
Morning 6am-1pm	10	25	16	10	1	1	-	-
Afternoon 1pm-5pm	8	16	17	9	2	-	-	-
Evening 5pm-11pm	10	11	11	-	-	-	-	-
Night 11pm-6am	53	16	-	2	-	-	-	-
TOTAL	81	68	44	21	3	1	-	-

Below highlights the number of arrivals during 2024 by aircraft type groups along with the highest, lowest and median noise level events.

For example, there were

- **79 narrow-body (older gen) arrivals** with a **median** noise level of **59.2 dB(A)**
- **10 wide-body (new gen) arrivals** with a **median** noise level of **60.9 dB(A).**

Grouping	Example Aircraft Type	Number of arrivals captured	Maxium Noise Level dB(A)		
			Highest	Median	Lowest
Wide-body four engines	Airbus A380, Boeing 747	-	-	-	-
Wide-body (older gen)	Boeing 777, Airbus A330	16	62.6	57.3	53.2
Wide-body (new gen)	Airbus A350, Boeing 787, Airbus A330neo	10	70.0	60.9	57.7
Narrow-body (older gen)	Airbus A321/A320, Boeing 737, Boeing 717, Embraer 190, BAe-146	79	74.7	59.2	52.8
Narrow-body (new gen)	Airbus A321neo/A320neo, Boeing 737 MAX, Airbus A220	7	70.6	59.6	53.2
Turboprops	Dash-8 Q400, Saab 340, Metroliner	105	80.3	65.6	56.9
Other	Global Express, Cessna 172 etc.	1	76.4	76.4	76.4



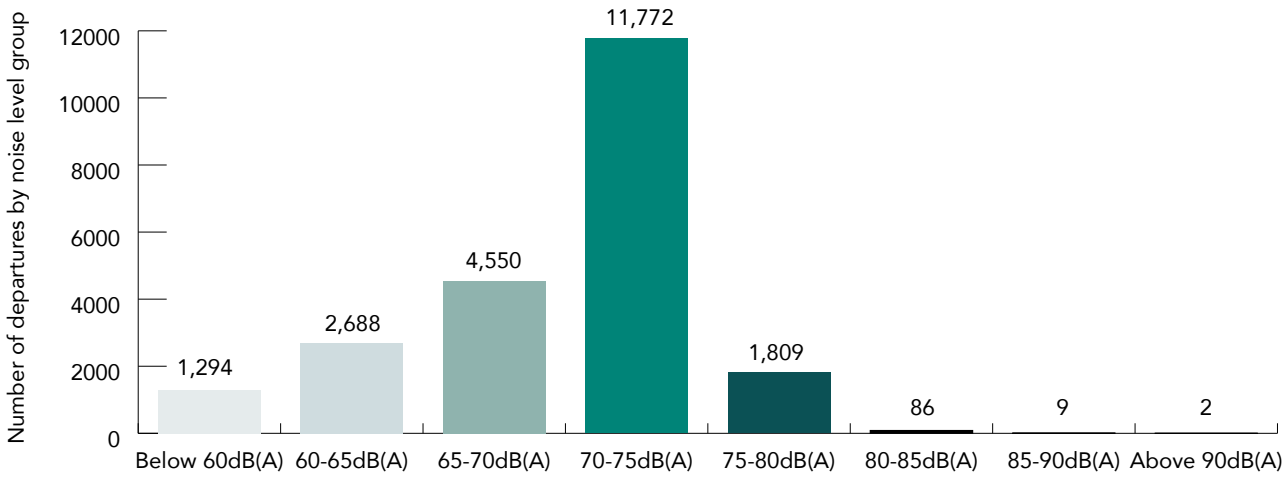
Departures

Noise results from the 22,210 departures collected in 2024 and have been allocated into noise level 'groups' and by periods of the day.

Graph below highlights the number of departures during 2024 by noise level group.

For example, there were

- **over 11,700 departures** detected between **70-75 dB(A)**
- **over 1,800 departures** detected between **75-80 dB(A).**



The number of departures during 2024 by noise level group and time of day are highlighted below.

For example, there were

- **more than 1,050 departures** detected between **60-65 dB(A)** in the **Morning (6am-1pm)**
- **602 departures** detected between **75-80 dB(A)** in the **Evening (5pm-11pm).**

	< 60 dB(A)	60-65 dB(A)	65-70 dB(A)	70-75 dB(A)	75-80 dB(A)	80-85 dB(A)	85-90 dB(A)	> 90 dB(A)
Morning 6am-1pm	561	1,057	1,248	2,946	512	29	-	-
Afternoon 1pm-5pm	237	703	1,251	3,689	551	19	3	-
Evening 5pm-11pm	302	662	1,681	4,715	602	30	2	2
Night 11pm-6am	194	266	370	422	144	8	4	-
TOTAL	1,294	2,688	4,550	11,772	1,809	86	9	2

Below highlights the number of departures during 2024 by aircraft type groups along with the highest, lowest and median noise level events.

For example, there were

- **more than 13,480 narrow-body (older gen)** events with a **median** noise level of **71.8 dB(A)**
- **more than 3,330 Wide-body (new gen)** events with a **median** noise level of **63.3 dB(A).**

Grouping	Example Aircraft Type	Number of departures captured	Maxium Noise Level dB(A)		
			Highest	Median	Lowest
Wide-body four engines	Airbus A380, Boeing 747	544	84.9	72.9	55.2
Wide-body (older gen)	Boeing 777, Airbus A330	3,642	85.8	71.5	52.7
Wide-body (new gen)	Airbus A350, Boeing 787, Airbus A330neo	3,332	87.4	63.3	52.9
Narrow-body (older gen)	Airbus A321/A320, Boeing 737, Boeing 717, Embraer 190, BAe-146	13,488	93.4	71.8	54.0
Narrow-body (new gen)	Airbus A321neo/A320neo, Boeing 737 MAX, Airbus A220	995	81.4	66.6	55.7
Turboprops	Dash-8 Q400, Saab 340, Metroliner	112	73.0	61.6	56.7
Other	Global Express, Cessna 172 etc.	97	76.0	67.6	56.7