

Memo

To: Aircraft Noise Community Consultative Group

From: Jeremy Lo

Date: 30 May 2023

Subject: Annual Review of Noise Monitor Locations

Summary of 2023 Review

Auckland Airport proposes to:

- Continue the Prices Rd, Velodrome, Puhinui Rd, Mt Eden, Wiri and Wattle Downs noise monitors in their current locations.
- Deploy a noise monitor (previously in Mount Wellington) in the East Tamaki area to monitor noise levels on the GREEN SMART approach and departure flight paths in an Easterly condition.

Noise Monitor Requirements

Auckland Airport is required under Condition 5 of Designation 1100 of the Auckland Unitary Plan to have three permanent noise monitors, located at:

- Prices Road
- The Velodrome
- Puhinui Road

In the future, when the Northern Runway is commissioned, two further permanent noise monitors are also required under the Unitary Plan.

Additional Noise Monitoring Voluntarily Undertaken

In addition, Auckland Airport supplements these mandatory noise monitors with temporary monitors. The Airport's policy in relation to such temporary monitors is to locate these where there is a demonstrated need to:

- Monitor noise under areas of future/proposed approach/departure paths.
- Monitor current approaches/departures.
- Assess areas where a number of approaches/departures intersect.
- For other Airport operational reasons

There are currently five temporary monitors deployed.

It is important to note that under Designation 1100, Auckland Airport is not required to install any additional monitors over and above the required three for the existing southern runway and two for the northern runway once it is operational. These additional monitors are voluntarily provided by the Airport. All noise monitoring is paid for by Auckland Airport (with the costs flowing into the cost base used to determine aircraft landing charges which are paid by airlines). Noise monitoring costs are not funded by Auckland Council or by the Government.

The noise monitoring results are publicly available for individual flights on line using the Casper system available at [Auckland - flight tracker \(casper.aero\)](https://casper.aero). Complaints or queries on aircraft noise can also be

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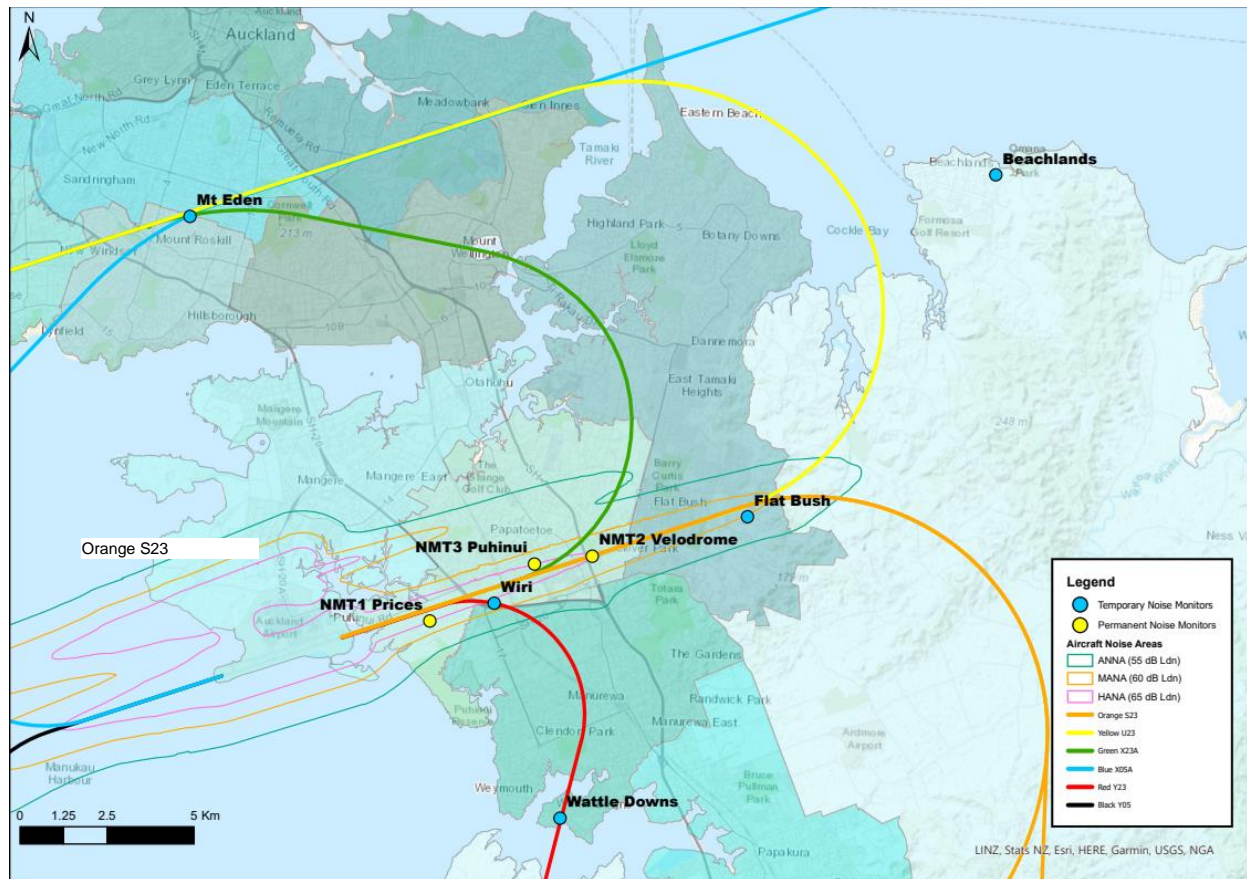


The logo for Auckland Airport, consisting of a large, stylized letter 'A' followed by the text 'Auckland Airport'.

made using the Casper system. Quarterly reports are prepared for the Aircraft Noise Community Consultative Group (ANCCG) on the noise monitoring, which are also available publicly on Auckland Airport's website.

Summary of Current Noise Monitoring

The locations of current noise monitors are set out with the new locations Beachlands and Flatbush with Smart Tracks also being shown on the same map for ease of reference.



The table below summarises the installation date, rationale for the monitor being installed and the noise recorded at each monitor as per the 2023 March Quarterly Noise Report prepared by Marshall Day and presented to the ANCCG.

Location	Installed	Rationale	dB L _{dn} (average)	L _{Amax} (average)	# noise events >70dB (daily average)
Prices Rd	Circa 2000	Designation requirement	58.0		68
Velodrome	Circa 2000	Designation requirement	57.7		41
Puhinui Rd	Circa 2000	Designation requirement	56.0		38
Mt Eden	2015	Installed originally for Green SMART trial. Continued as it captures Yellow/Green/Blue SMART flights as well as conventional arrivals.	38	62	<1
Wiri	2017	Installed as area receives noise above the NZS6805 guidance of 55 dB L _{dn} . Captures Red SMART track flights.	58	75	52
Wattle Downs	2017	Installed to measure noise under the Red SMART track	46	67	11

Clevedon Terminated	2018 - 2022	Installed for the Orange SMART Track trial	31	58	0
Whitford Terminated	2019 - 2022	Installed to measure noise from the modified Yellow SMART track post-trial.	42	60	0
Beachlands*	4 Nov 22	Where the Standard Arrivals path for flights from the North and East turn to join the centre approach	43	63	<1
Flatbush*	20 Dec 22	The edge of the Medium Aircraft Noise Area contour (predicted 60 dbLdn)	57	69	18

*Note, the Beachlands and Flatbush noise monitors recordings are from their date of deployment up to 31 January 2023, so their levels are not yet fully representative of the noise experienced.

Assessment of Current Noise Monitor Locations

The Prices Road, Velodrome and Puhinui noise monitors are all required under Designation 1100 and need to remain in their current locations.

The Mt Eden monitor is located close to the LOSGA way point where three SMART arrival tracks intersect. It is therefore considered a multi-use monitor capturing noise events for a number of flight paths, and a productive use of a noise monitor resource.

The Wiri and Wattle Downs noise monitors both monitor noise primarily associated with flights to and from the South which turn off (or join) the runway over Manurewa. As this is a well-used flight path, Auckland Airport considers it is important to continuously monitor aircraft noise in this area. In particular, the Airport wants to ensure that data is able to provide an early indication of whether use might be getting close to permissible noise levels, thus enabling changes to be made to flight routes or times of use so as to ensure breaches of noise contours are prevented from occurring.

The Flatbush Monitor sits on the outer MANA Contour, under the centre runway approach to provide data and confirm that there is no noise exceedance risk in relation to the MANA. It was a previously a missing element in the noise monitor strategy and was raised by one of the Community Representatives.

The Beachlands Monitor captures the standard arrivals route for aircraft coming from Australia, Singapore and Kuala Lumpur landing on Runway 23. They cross Auckland over LOSGA (where the Mt Eden noise monitor is located) continuing via Point England, Eastern Beach and on to Beachlands where it turns to join the centre approach path. Flights coming down the East Coast of New Zealand also join the main approach at this point, as do flights crossing to the North of Auckland. A number of flight paths intersect at this point and have reduced in height to approximately 4000 feet at this point.

Proposed Noise Monitor Relocations

1. A Noise Monitor in East Tamaki

To monitor the noise levels of the Green SMART approach for arrivals and the departure route for a number of aircraft in easterly wind conditions (which we have been experiencing at greater than historic levels).

Feedback Requested

The ANCCG is asked to:

- Note that the Prices Rd, Velodrome and Puhinui Rd noise monitors are required under the Unitary Plan and cannot be changed in location.
- Note that the Mt Eden, Wiri and Wattle Downs monitors continuing to remain in their current locations.
- Endorse the Noise Monitor placement in East Tamaki