

MEMO

<b>Project:</b>	Auckland Airport	<b>Document No.:</b>	Mm 009 r01		
<b>To:</b>	Auckland Airport Ltd	<b>Date:</b>	17 May 2024		
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<b>Delivery:</b>	Email	<b>Project No.:</b>	2015175A		
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<b>Subject:</b>	Temporary monitor summary - East Tāmaki				

**The East Tāmaki monitor has been deployed for over 9 months**

The East Tāmaki monitor was deployed on 3 August 2023 at Lilybank Crescent. As of today, the monitor has been installed for 9.5 months.

**The East Tāmaki monitor measured the Green SMART track and Runway 05 departures**

The primary purpose was to measure the noise levels of the Runway 05R (RW05) departures during easterly wind conditions and to collect more recent data on the Green SMART Track approach for arrivals.

Previously the monitor was located in Mt Wellington to also measure the Green SMART track.

*Runway 05 departures*

From January 2022 to June 2023 there was an increased usage of RW05 mode due to predominantly easterly wind patterns. This meant there were more planes than normal departing to the east over Auckland (rather than to the west over the Manukau Harbour).

This may have resulted in an increased number of complaints from two complainants in the East Tāmaki / East Tāmaki Heights area. From October 2022 to July 2023 these two complainants complained a total of 265 times, making up 45% of the total complaints during that period.

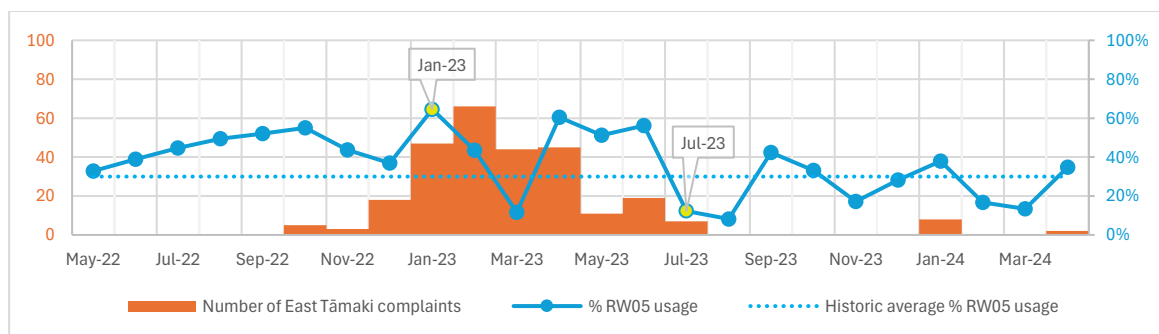
The residents may have also become accustomed to the low flight numbers during the COVID-19 lockdowns and border closures, where flight numbers were effectively halved. As the New Zealand border reopened in mid-2022 the number of domestic and international flights very quickly increased back to almost pre-covid (2019) levels. As of today, the flight numbers are 12% lower than in 2019 but are still increasing.

Essentially this means that flight numbers almost doubled in two years – a short period of time.

This factor combined with the increased RW05 usage, meant that those living to the east of the airport may have experienced higher noise levels than expected (but the airport is still readily complying with the noise limits in the Auckland District Plan).

This can be seen on Figure 1; when the RW05 usage increases past 60% (in January 2023), the residents may have noticed the increased number of RW05 departures and become sensitised to aircraft noise, and then once the usage drops below 30% (typical RW05 usage) in July 2023 there are fewer complaints.

**Figure 1: Comparison of East Tāmaki complaints and RW05 Usage**



### Green SMART Tracks

In the past year, flights on the Green SMART Track have averaged 3 flights per day and 23 flights per week, and never exceeded the limit of 10 per day and 70 per week. This is lower than pre-COVID levels where in 2019 the flights averaged 5 per day and 30 per week.

During the 9-month period analysed there were only 3 enquiries relating to Green SMART approaches and these were from a complainant in Remuera.

Table 1 below compares the number of “noticeable” flights for Green SMART flights and non-SMART flights (captured by the East Tāmaki monitor). The threshold of 60 dB  $L_{Amax}$  was used as events above this noise level are “noticeable” as aircraft noise events.

There was a very similar number of “noticeable” SMART and non-SMART flights. These equate to approximately 3 “noticeable” Green flights and 3 “noticeable” non-SMART flights per day.

**Table 1: Measured noise levels ( $L_{Amax}$ ) – Green SMART flights compared with non-SMART flights**

	No. noise events above 60 $L_{Amax}$  (SMART / non-SMART)	Average $L_{Amax}$ of noise events above 60 $L_{Amax}$		
		SMART flights	Non-SMART flights	Difference (dB)
East Tāmaki	953 / 1052	66 dB	66 dB	0 dB

### The graphs overleaf show overall low noise levels and numbers of louder flights

Overleaf are two graphs showing the noise levels (monthly Aircraft Noise Exposure in  $L_{dn}$ ) and the number of louder flights at East Tāmaki. These are similar to the graphs in the ANCCG quarterly report but focussing only on East Tāmaki and showing the time period from its installation to the end of April 2024.

### Conclusions

- From Figure 2, we can see the noise levels are well below the NZS 6805 Guideline of 55 dB  $L_{dn}$  (on average 18dB lower).
- Figure 3 shows there is on average fewer than 1 flight a day that exceeds 70 dB  $L_{Amax}$ .
- The data collected shows the noise from aircraft at the East Tāmaki monitor is relatively low. This is to be expected of the East Tāmaki logger’s location. It is approximately 3 km outside the ANNA boundary and to the north of the runway centreline. There are also a small number of flights flying past East Tāmaki (on average there are 8 per day since its installation, increasing to 10 on RW05 days).
- Overall, the number of flights flown on the Green SMART Track have not exceeded the daily or weekly limits and the noise from Green SMART flights is comparable to non-SMART flights. This is reflected in the low number of enquiries received which related to the Green SMART Track.
- Because of the reasons outlined above, we consider that there no longer remains any technical reason to continue noise monitoring at East Tāmaki so therefore accept the removal of the noise monitor.

Figure 2: East Tāmaki AIAL NMT – Measured monthly noise exposure (L<sub>dn</sub>)

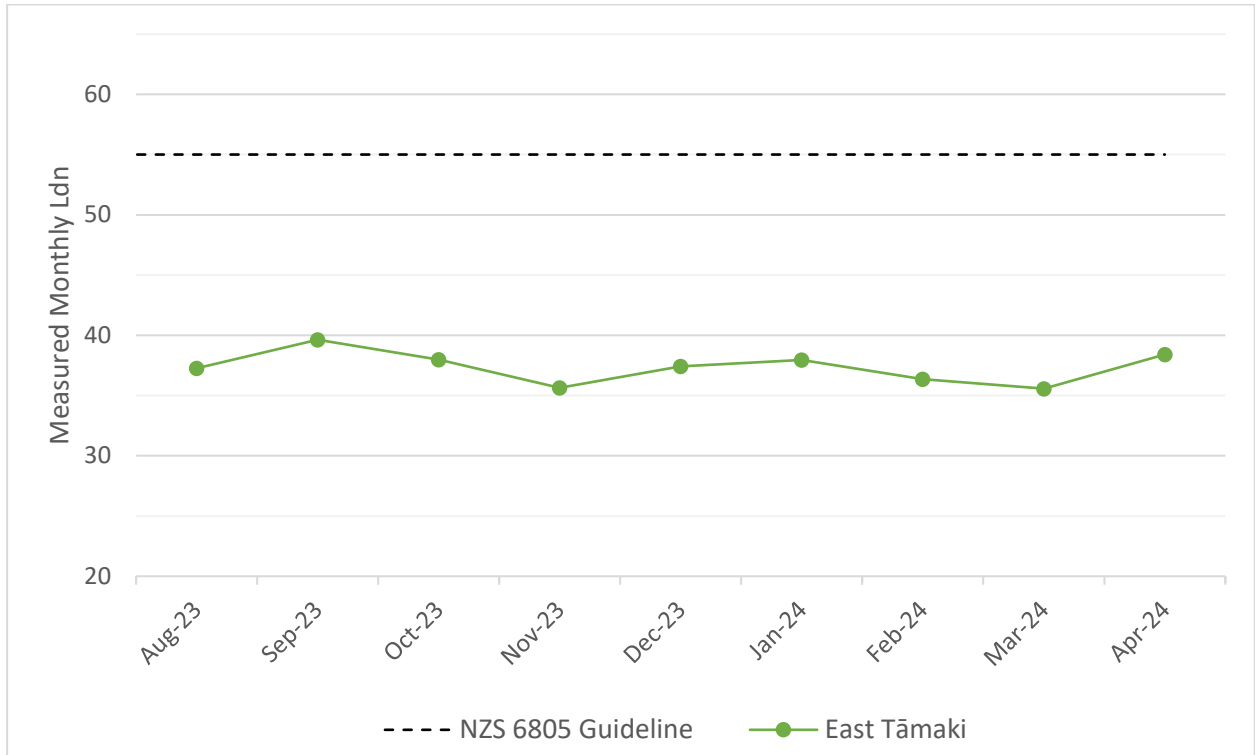
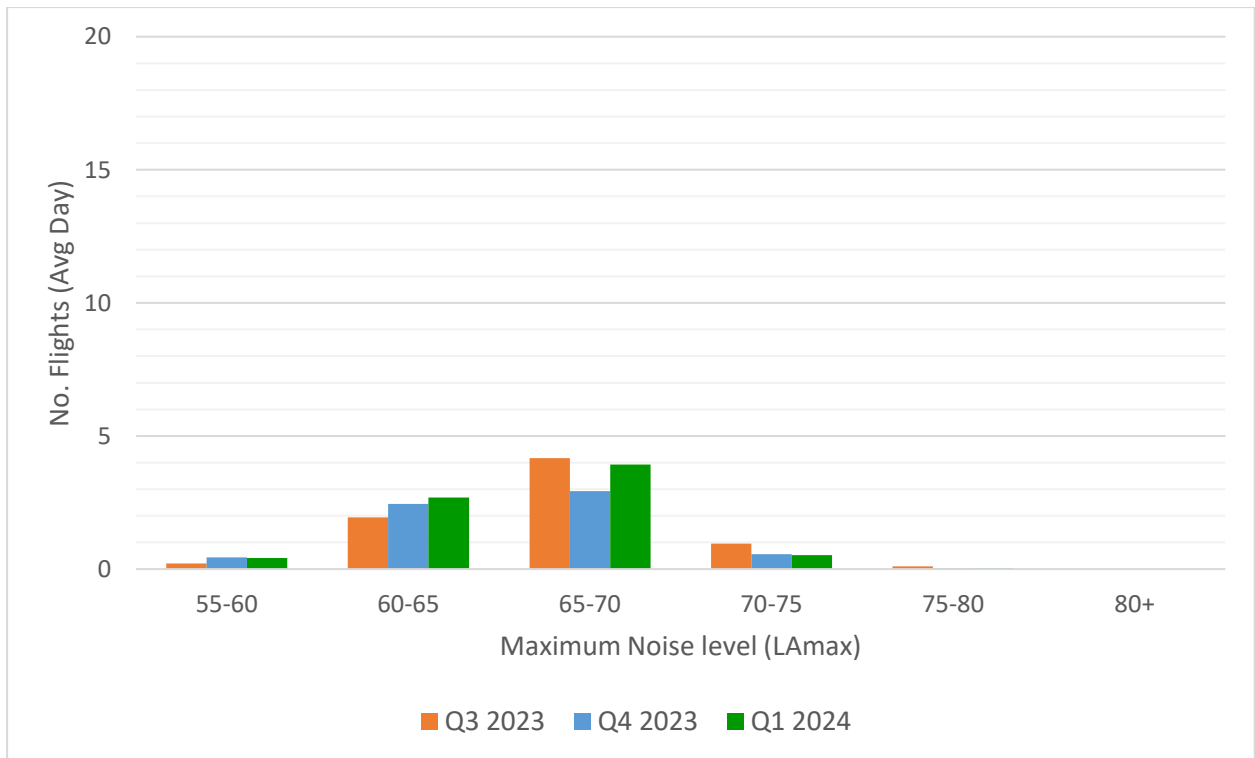


Figure 3: East Tāmaki AIAL NMT - Noise Events (All time)<sup>1</sup>



<sup>1</sup> Noise events over 70-75 L<sub>max</sub> start to become disturbing to residents if they are inside their house with their windows open. This is because they have the potential to interfere with watching tv or talking.