

# TEMPORARY NOISE MONITORING REPORT

## Humber River Black Creek and Vaughan-Woodbridge

### Executive Summary

#### Introduction

Toronto Pearson is Canada's largest airport located in its most populated region with over six million people in the Greater Toronto Area. We are a diverse, prosperous, and growing community with business and personal connections all over the world.

Located in the heart of Canada's second-largest employment zone, Toronto Pearson is well connected to local, provincial, national, and international businesses, and is critical national infrastructure. The airport's national and regional economic benefits cannot be overstated. The Airport directly employs approximately 50,000 people while the Pearson Economic Zone is the second largest employment zone in Canada, hosting over 400,000 jobs and providing \$58 billion to Ontario's economy.

Airport operations can impact surrounding communities, and Pearson's robust Noise Management Program works daily to mitigate these effects. A key component of the program is providing residents with tools to better understand operational impacts, [including the use of noise monitor terminals](#).

There are 25 Noise Monitoring Terminals (NMTs) in neighborhoods around the airport. When residents wish to understand how aircraft noise contributes to their soundscape and believe it is not adequately captured by a permanent NMT, the GTAA may consider conducting temporary noise monitoring to supplement the data from a permanent NMT.

#### Purpose

In response to community questions about noise impacts in residential areas of Humber River - Black Creek and Vaughan, the GTAA conducted temporary noise monitoring in Spring 2024.

The objective of the temporary monitoring is to provide residents with data on how aircraft noise contributes to the existing ambient noise in their communities.

#### Background: Understanding Runway Usage

The noise from airplanes depends on how runways are used. Factors that influence which runways are used include wind (direction and speed), weather and surface conditions, runway availability, time of day, traffic levels, and operational efficiency. These factors vary, and therefore, so do runway configurations.

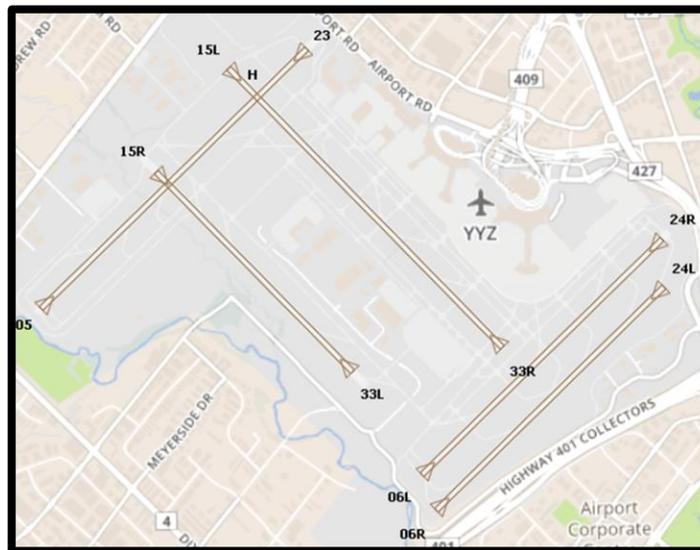
NAV CANADA, the airspace navigation provider for Canada, sets runway configurations. Toronto Pearson has five runways, with 10 operational ends:

**North/South Runways**

- Runway 15L/33R
- Runway 15R/33L

**East/West Runways**

- Runway 05/23
- Runway 06L/24R
- Runway 06R/24L



East/West runway configurations are used for approximately 95% of Toronto Pearson’s operations due mainly to prevailing east/west winds.

**The communities discussed in the report are mainly affected by departures to the east from Runway 05.**

### Temporary Noise Monitoring Study

The GTAA contracted [Akoustik Engineering Limited](#), a noise and vibration engineering firm, to conduct temporary noise monitoring and to provide an assessment of the results. The following is an overview of the study and the full report is attached to this document.

#### Approach

Akoustik Engineering followed best practice and met the Ministry of Environment, Conservation and Parks (MECP) protocols as defined in the MECP document NPC-103. The relevant section is included with this document.

Noise data was collected at both sites between April 08 and April 16, 2024. A site in each community was temporary noise monitoring.

1. Humber Summit near Rowntree Mill Road and Islington Avenue (M9L 1C4). This location was selected to capture noise from aircraft on initial departure to the east from Runway 05.
2. Vaughan near Wakelin Court and Islington Avenue (L4L 2P1). This location was selected to capture noise from aircraft turning to the north after departing from runway 05.

## Results and Conclusion

Detailed noise data is found in Tables 1 and 2 for the Humber Summit and City of Vaughan locations respectively. They depict all logged noise data and weather conditions. They also include the periods that Easterly departure operations occurred on Runway 05, including the number of these operations that occurred in each of the hourly periods.

### Findings for Humber Summit site

- Increases in the Leq noise level of 5 to 10 dB are evident during periods of Runway 05 easterly departures compared to similar time periods when there are no operations.
- The data reflects that aircraft noise does contribute to the soundscape during periods of easterly departures from Runway 05.

### Findings at City of Vaughan site

- The data collected at the Vaughan site reflects that noise levels follow a regular pattern, regardless of Runway 05 departure operations.
- While aircraft may be audible in the area, it is not greater than existing community noise levels.

## Other Resources

Assessing noise data from noise monitors is just one way to understand Toronto Pearson's operational impacts. Operational reports and location specific information available on [InsightFull](#) are often the best source for understanding Toronto Pearson's operations on individual neighbourhoods.

It is important to remember, Toronto Pearson is federally regulated and not bound to any municipal noise by-laws. Under federal regulations, there is no maximum limit for noise level. The most important tools the airport uses to manage noise levels in the community are the noise abatement procedures and continuously working on Land Use Planning.