

## **Appendix A: NSC 3 Meeting Agenda**

# **Billy Bishop Toronto City Airport**

## **Noise Sub Committee Meeting 4**

January 16, 2019

7pm to 9pm

Billy Bishop Airport Boardroom  
(Mainland Passenger Transfer Facility, above Aroma Café)

### **AGENDA**

- 7:00 Welcome and Agenda Review
- 7:05 Finalize Terms of Reference for the Committee
  - Address email suggestions from Max to remove Section 3.2
    - The term/termination of the NSC is addressed in section 5.2 paragraph 2.
- 7:15 Airfield Rehabilitation Program Letter of Support
- 7:20 Draft Noise Study Scope of Work (for committee to review after meeting)
- 7:30 Noise Standards
  - Presentation from Angela Homewood followed by discussion.
  - Review/add to list of Noise Standard questions for the Ministry (anticipated visit: next meeting).
- 8:15 Community Noise: Concerns and Feedback
  - Address email suggestions from Leslie:
    - Noise curfew infractions - use of collected fine money.
    - Feedback on the Aug 1-Oct 31 West to East am Take-offs/Landings.
    - Potential noise monitors and barriers.
    - Decision making and noise impacts.
    - Additional community concerns.
- 9:00 Adjourn

**Appendix B: Draft Noise Study Scope of Work  
Issued January 16, 2019  
To Noise Management Sub-Committee**

# DRAFT SCOPE OF WORK

## Assumptions

- Assess the noise effect from all ground activity associated with airport operations
- Copies of draft and final reports at each key step of the assessment work will be shared in advance with the Noise Sub-Committee for review and input:
  - o Scope of Work,
  - o Preliminary Noise Monitoring Plan, and
  - o Findings and Recommendations of the Noise Assessment Study
- A qualified consultant will be retained to conduct the Noise Assessment Study

## What is in scope for this Noise Assessment Study

- The study will gather, assess and model data with the intention of identifying mitigation strategies.

## What is out of scope for this Noise Assessment Study

- This is not a desk-top exercise and will require in field measurements and monitoring.

## 1.0 NOISE ASSESSMENT STUDY

### 1.1 INTRODUCTION

#### 1.1.1 The Project

The intent of the Noise Assessment Study is to assess the noise effect from the ground activities associated with the Billy Bishop Toronto City Airport (BBTCA, the Facility) operations, such as aircraft ground activities and movements, as well as other sources of noise (i.e. mechanical equipment, vehicle movements, noise associated with maintenance activities, etc.) located within the Facility. The noise assessment will include both ferry facilities located at the island and at the mainland. The facility footprints are shown in **Figure 1**.

As required to commence the procurement process to hire a qualified Consultant (Consultant), PortsToronto will include the approved Scope of Work in the MERX posting to garner interest from external consultants who are subject matter experts in conducting noise assessments.

#### 1.1.2 Study Objectives

The study is expected to:

- Assess baseline conditions in the study area through a measurement program;
- Establish noise assessment criteria based on applicable regulatory guidelines;

- Complete a predictive analysis and provide recommendations to reduce the noise effect at the surrounding existing and future noise sensitive receptors, using sound attenuating barriers and/or other noise control measures;
- Assess technical, economical, operational and administrative feasibility of recommendations; and
- Summarize the findings and recommendations in a technical report for planning and implementation purposes.

### **1.1.3 Study Area**

The Study Area encompasses the area where there is potential for effects on the environment from the Facility. The Study Area should extend a minimum 1000 m from airport operational areas.

### **1.1.4 Points of Reception (PORs)**

Identify the noise sensitive receptors, PORs, within the Study Area. The assessment will include all existing PORs, as well as future PORs on lands zoned to allow noise sensitive uses. The same definition provided in the Publication NPC-300 document shall be used to define PORs.

## **1.2 GUIDELINES AND REFERENCES**

The noise assessment will be completed in accordance, but not limited to, with the following standards/guidelines, methods and procedures listed below. All referenced publications may be replaced with the updated and/or amended versions.

1. ISO 1996-2:2017 – Acoustics – Description, measurement and assessment of environmental noise – Part 2: Determination of sound pressure levels.
2. ISO 9613-2:1996 – Acoustics – Attenuation of sound during propagation outdoors – Part 2: General method of calculation.
3. ISO/PAS 20065:2016 – Acoustics – Objective method for assessing the audibility of tones in noise – Engineering method.
4. Model Municipal Noise Control By-Law – Final Report, August 1978. Ontario Ministry of the Environment.
5. Publication NPC-102 – Instrumentation. (part of Reference 4).
6. Publication NPC-103 – Procedures. (part of Reference 4).
7. Publication NPC-104 – Sound Level Adjustments. (part of Reference 4).
8. Publication NPC-300 – Environmental Noise Guideline, Stationary and Transportation Sources – Approval and Planning. August 2013. Ontario Ministry of the Environment.
9. Toronto Municipal Code, Chapter 591, Noise. City of Toronto. August 27, 2009.

### **1.3 BASELINE CONDITIONS STUDY**

A baseline condition study is needed to establish the existing acoustical environment at each identified POR located within the Study Area.

#### **1.3.1 MEASUREMENT PROTOCOL**

As a minimum, the baseline/background sound levels are to be established by means of monitoring which will be performed based on current best management practices or regulation. The scope of work includes the development of a preliminary Noise Monitoring Plan (a project-specific protocol) and to perform monitoring in order to quantify baseline conditions. The measurement plan/protocol shall be submitted to PortsToronto and agreed to prior to completing the measurement program. Such plan shall include:

- Equipment to be used including make and model (see below for instrumentation requirements);
- Selection of measurement period and measurement locations (see below for weather conditions and location selection); and
- Include figures showing measurement locations; methods to install meters (i.e. on tripod or on a tall structure), any permissions/permits requirements; and how they will be obtained (if required). It is the responsibility of the Consultant to apply for any and all permitting required to perform the job.

In addition, the following also should be considered and presented in the plan (i.e. how the Consultant is proposing to address the following).

- Equipment calibration and power supply - it is Consultant's responsibility to calibrate and maintain all monitoring equipment and be responsible for all power supply required to complete the work.
- Equipment protection – the Consultant shall be responsible for its own equipment, including damaged or lost equipment.
- Health and Safety - Submit copies of corporate Health and Safety, Environmental Protection, and Quality Control plans.

#### **1.3.2 Instrumentation**

A Type 1 precision integrating sound level meter (SLM) is the preferred instrument for ambient noise monitoring. However, a Type 2 precision integrating SLM may be used. SLMs and acoustic calibrator shall have valid calibration certificates for the entire duration of the measurements.

The SLMs must be capable of recording  $L_{eq\ 1-Hr}$  and various  $L_n$  values. Also, the SLMs shall be outfitted with appropriate environmental protection kit. The use of environmental protection shall be discussed in the measurement plan/protocol.

### 1.3.3 Weather Conditions

Measurements shall not be completed during extreme weather conditions (i.e. extreme temperatures, etc.), continuous precipitation (i.e. rain, snow, etc.), continuous wind speed exceeding 20 km/h, and outside the tolerances of the instrument.

### 1.3.4 Ambient Noise Measurements

Ambient noise monitoring shall be completed at locations representative of the existing acoustical environment experienced by the PORs within the Study Area, without the influence of the Facility.

As a minimum, baseline conditions can be established using a measurement program conducted from at least two locations on the mainland and two locations on the island, at representative locations of the receptors within the study area.

### 1.3.5 Deliverables

The findings of the baseline study shall be summarized in a draft report submitted for review and comments and provided in a final report.

## 1.4 APPLICABLE SOUND LEVEL LIMITS

The lowest measured  $L_{eq\ 1-Hr}$  in each period (daytime – 07:00 to 19:00 hours, evening – 19:00 to 23:00 hours and nighttime 23:00 to 0700 hours) shall be used to represent the ambient sound level.

The applicable sound level limits at the PORs shall be the higher of either the exclusion limits summarized in **Table 1** below, or the ambient sound level obtained from measurements.

**Table 1. Exclusion Limits**

Time of Day	Exclusion Limits, $L_{eq\ 1-Hr}$ , dBA
05:00 to 19:00	50
19:00 to 23:00	50
23:00 to 07:00	45

In addition to reporting noise in dBA, the Consultant will also be required to report noise in dBZ.

## 1.5 BBTCA NOISE ASSESSMENT

The potential noise effect associated with the ground activities (during “peak” and “off peak”) of the Facility shall be assessed and compared against the applicable sound level limits. The assessment shall, in consultation with the Airport operation, define the “peak” and “off peak” activities.

Where noise excesses are predicted at the PORs, noise mitigation measures shall be investigated for technical, administrative and economic reasons. Such measurements shall be based on site specific source measurements, and analysis methods discussed below.

### **1.5.1 Source Sound Measurements**

All potential noise sources associated with the ground activities shall be identified. All efforts must be made to ensure that all potential noise sources be measured on site. However, for noise sources that are not feasible to measure at the time of the visit, manufacturer's data or similar sound data with the same capacity may be acceptable.

The following activities and noise sources, but not limited to, shall be included in the assessment:

- Mechanical equipment (i.e. AHUs, EFs, generators, pumps, HVAC units, etc.)
- Aircraft ground maneuvering and pushback from various gates
- Aircraft holding on taxiways and apron areas
- Engine run-ups
- Noise associated with maintenance activities
- Ferry travelling back-and-forth between the island and the mainland
- Vehicle activities and movements within the Facility boundaries (includes truck deliveries, etc.)
- Other noise from airport operations

Sound measurements shall be conducted in accordance with the procedural guidelines outlined in the Publication NPC-103 – "Procedures".

The calibration of the SLMs shall be verified in the field before and after the completion of the measurements using an acoustic calibrator. The measured data shall not be reported if the difference between the SLM calibration before and after the measurements is more than 0.5 dB.

#### **1.5.1.1 Instrumentation**

Sound measurements of noise sources located within the Facility shall be completed using a Type 1 precision integrating SLM. The SLM and acoustic calibrator shall have valid calibration certificates. A windscreen shall be used in all outdoor measurements.

The SLM must be capable of recording 1/1 and/or 1/3 octave band, from 25 Hz to 10000 Hz.

#### **1.5.1.2 Weather Condition**

Similar to baseline measurements, source measurements also shall not be completed during extreme weather conditions (i.e. extreme temperatures, etc.), precipitation (i.e. rain, snow, etc.), wind gusts exceeding 20 km/h, and outside the tolerances of the instrument.



### **1.5.1.3 Sound Level Adjustments**

The audibility of tones (i.e. tonal, etc.) shall be assessed based on the ISO/PAS 20065 standard and tonal penalties shall be taken from Table J.1 in Annex J of the ISO 1996-2:2017 standard.

### **1.5.2 Analysis Method**

The acoustic assessment of “peak” and “off peak” conditions shall be performed using the algorithm contained in the ISO 9613-2 “*Acoustics – Attenuation of sound during propagation outdoors*”. There may be several commercially available software packages available for noise predictions that implement the ISO 9613-2 algorithm. However, only software packages verified and/or approved by the Ministry of Environment, Conservation and Parks (MECP) shall be used.

The acoustic model shall consider the distance attenuation, source-receptor geometry, ground and air (atmospheric) attenuation, effects due to the surrounding water environment, and temperature and humidity effects on noise propagation. The model shall also consider downwind condition. Reflections on the structures/buildings located within the Study Area shall also be included in the assessment. For vacant lands that are zoned for residential or multi-land use applications, a 35-storey residential building shall be assumed.

### **1.5.3 Noise Mitigation**

Where noise excesses are predicted at the PORs, noise mitigation measures (source-based and/or receptor-based mitigation) needed to reduce the noise effect to acceptable levels, shall be investigated for technical, economical, operational and administrative reasons. A minimum of two feasible recommendations shall be provided in the assessment.

### **1.5.4 Deliverables**

The findings and recommendations of the assessment shall be summarized in a draft report, submitted for review and comments and provided in a final report.

## **1.6 INFORMATION TO INCLUDE IN THE REPORT**

The following information, but not limited to, shall be included in the report.

### **1.6.1 Baseline Conditions Study**

- Study area
- Points of reception
- Ambient noise measurement locations
- Instrumentation, calibration certificates, weather data

- Analysis method and calculations
- Sound level time histories
- Applicable sound level limits at critical PORs
- Raw data (including exported csv files), analysis files

#### **1.6.2 BBTCA Noise Assessment**

- Study area
- Points of reception
- Noise sources (sound measurements, reference sound levels, summary table, etc.)
- Instrumentation, calibration certificates, weather data
- Analysis method and calculations
- Noise mitigation measures and recommendations
- Raw data (including exported csv files), analysis and modelling files

DRAFT

**Appendix C:  
Noise Curfew Infraction – Community Fund  
Board Announcement**



Memo to: Noise Sub-Committee  
From: Deborah Wilson, Vice President, Communications and Public Affairs  
Gene Cabral, EVP Billy Bishop Airport and PortsToronto  
Date: January 16, 2019  
Re:: Allocating Curfew Fines

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**Background:**

Billy Bishop Airport is a noise-restricted airport that includes provisions within the Tripartite Agreement to limit noise. One such provision is a curfew under which the airport operates that restricts commercial and General Aviation (GA) aircraft movements between the hours of 11:01 p.m. and 6:44 a.m. During this time, the airport is effectively closed except for emergency situations and Medevac services.

In a case where a commercial or GA aircraft lands or departs in contravention of the curfew, a financial penalty is applied. Although these infractions happen very rarely, they do happen. In these cases, PortsToronto levies and collects a fine.

For the last several years, PortsToronto senior management has questioned whether it is appropriate for PortsToronto to collect and deposit these fines, and as a result be seen to be benefitting from banned activity. However, given how rarely these fines are levied, the discussion has never progressed beyond a theoretical discussion.

Recently members of the community Noise Committee – a sub-committee of the Community Liaison Committee (CLC) – has asked where the money goes once the aircraft operator pays the fine to PortsToronto. This has prompted senior management to discuss the matter further and propose a recommendation. This was presented to the PortsToronto Board of Directors and the decision has been made to donate the fines collected from curfew violations to charitable organizations on the waterfront.

These donations would be in addition to sponsorship arrangements PortsToronto may already have with any of these organizations. Given that these donations would result from unexpected, unscheduled and unplanned occurrences, it would be made clear that this support is not regular, should not be counted on in future, and may never be repeated.

**Process:**

The process being recommended for administering the donation of curfew-violation fees is as follows:

The Community Liaison Committee (CLC) will be invited to put forward the names of charitable and community organizations requiring support. These names will be compiled and considered should fines be collected for future curfew violations.

All organizations on this list:

- Will require a charitable number;
- Should be located near the airport or in the surrounding waterfront community;
- Must be consistent with PortsToronto's sponsorship guidelines which include:

### **3.2 Guidelines**

Sponsorships shall be consistent with the strategic and communications priorities, and be aimed at supporting organizations or groups that are consistent with:

- Environment
- Waterfront community support
- City building
- Youth
- Airport or aviation-related efforts and causes

In the event of a curfew violation, the Billy Bishop Airport team will conduct an investigation and, should the violation of the policy be confirmed, a fine will be levied against the aircraft operator or airline that broke curfew. This fine will be assessed and levied according to the Curfew Violation Process which has been in place since 2009.

Once the fine has been received by PortsToronto, it will be put in "Trust" and a recommendation will be brought forward to the Community & Outreach (C&O) Committee of the PortsToronto Board of Directors. The recommendation will include the organization that will receive the funds and will be put forward in a memo (i.e., proposal) similar to those prepared for regular budgeted sponsorship requests.

If the C&O Committee approves the donation recommendation, the proposal will be presented to the Community Liaison Committee (CLC) at the next scheduled meeting. The committee will not be asked to approve the proposal, but members will have the opportunity to discuss. Ideally, any donation will be directed to an organization on the list provided by the CLC, so there should not be inherent concern.

With C&O and CLC in support of the proposal, the organization will be contacted to confirm the one-time donation. The donation/cheque will be accompanied by a letter which outlines why the donation is being made (curfew violation), and the fact that this is a one-time donation that should not be contemplated in future planning and budgeting.