



PORTSTORONTO

BILLY BISHOP TORONTO CITY AIRPORT

**NOISE MANAGEMENT SUB-COMMITTEE
MEETING #8**

MEETING MINUTES

October 17th, 2019

5:00 pm - 9:30 pm

Billy Bishop Airport Boardroom (Mainland Passenger Transfer Facility)

Toronto, Ontario

Minutes prepared by:





These meeting minutes were prepared by LURA Consulting. LURA provides neutral third-party consultation services for the PortsToronto Noise Management Sub-Committee. These minutes are not intended to provide verbatim accounts of committee discussions. Rather, they summarize and document the key points made during the discussions, as well as the outcomes and actions arising from the committee meetings. If you have any questions or comments regarding the Meeting Minutes, please contact either:

Angela Homewood

Project Manager & Environmental
Specialist – Infrastructure,
Planning & Environment

PortsToronto

Phone: 416-863-2046

AHomewood@portstoronto.com

OR

Alexander Furneaux

Meeting Notetaker

LURA Consulting

Phone: 416-410-3888 x708

afurneaux@lura.ca



Summary of Action Items from Meeting #8

Action Item	Action Item Task	Who is Responsible for Action Item
M#8-A1	Michael David and Gary Colwell to provide Harvey Watson with data on airport movements for the development of an accurate noise model.	Michael David /Gary Colwell
M#8-A2	Hal Beck to discuss supplementary noise guidelines for waterfront development with Bryan Bowen.	Hal Beck
M#8-A3	Gary Colwell to circulate a map pinpointing the exact locations proposed for the additional permanent noise monitors being installed by PortsToronto.	Gary Colwell
M#8-A4	Angela Homewood to correspond with Waterfront Toronto about collaborating on noise data sharing.	Angela Homewood
M#8-A5	Alexander Furneaux to circulate information on the permanent noise monitors upon receiving it from Gary Colwell.	Gary Colwell /Alexander Furneaux
M#8-A6	Bryan Bowen to circulate City of Toronto Noise Study Requirement scope and relevant case examples for discussion at the next NMSC meeting.	Bryan Bowen
M#8-A7	Bryan Bowen to request a guest speaker on the relationship of NPC-300 to city planning approvals.	Bryan Bowen

List of Attendees

Name	Organization (if any)	Attendance
COMMITTEE MEMBERS		
Hal Beck – Co-Chair	York Quay Neighbourhood Association	Present
Wayne Christian	York Quay Neighbourhood Association	Present
Max Moore	Bathurst Quay Neighbourhood Association	Present
Lesley Monette	Bathurst Quay Neighbourhood Association	Present
Bryan Bowen	City of Toronto – Waterfront Secretariat	Present
PORTSTORONTO REPRESENTATIVES		
Angela Homewood – Co-Chair	PortsToronto	Present
Gary Colwell	PortsToronto	Present
Michael David	PortsToronto	Present
FACILITATION		
Jim Faught – Lead facilitator	LURA Consulting	Present
Alexander Furneaux - Notetaker	LURA Consulting	Present
GUESTS		
Harvey Watson	R.J. Burnside & Associates Limited	Present
Gene Cabral	PortsToronto	Present – Observing

Contents

1.	Background Noise Monitoring Plan – Site Walk	8
2.	Welcome, Action Items from Previous Meetings, and Agenda Review	9
3.	Background Noise Monitoring Plan	10
	Study Purpose	10
	Methodology.....	11
	Model Calibration	13
	Measurement Techniques – dbA versus dbZ	14
4.	Noise Management Terminal Installation	17
5.	City of Toronto Noise Study Requirements Update	18
6.	Business Arising.....	19

Appendices:

Appendix A: Meeting Agenda

Appendix B: PortsToronto Background Noise Monitoring Plan

1. Background Noise Monitoring Plan – Site Walk

Prior to the start of the Noise Management Sub-Committee (NMSC) meeting, members of the NMSC undertook a short site walk of the proposed temporary noise monitor locations for R. J. Burnside's Ground Noise Monitoring Study. Harvey Watson (R.J. Burnside) was present during the site walk to answer questions from the NMSC and listen to the local knowledge provided by members of the NSMC about the overall sound characteristics of the proposed sites. What follows is the feedback and questions organized by the proposed addresses of the temporary noise monitors.

28 Stadium Road

R.J. Burnside is proposing to install a temporary noise monitor on the south face of the building, approximately three to four storeys above the ground. The noise monitor would be placed off the surface of the building façade. PortsToronto will coordinate with the building and property owners to install the noise monitor in the most non-invasive method possible. If the noise monitor cannot be affixed to the building façade, there is another option to install the noise monitor on a 5-metre tall freestanding pole.

Members of the NMSC approved of the site given that there is minimal traffic noise in this location and very little background noise. Hal Beck (YQNA) inquired whether the trees in the nearby park would distort the recording in high wind. Mr. Watson responded that the noise monitors do not record when wind speeds exceed 20-kilometres per hour. At this wind speed, wind generates noise on the face of the microphone distorting the recordings. Noise created by the trees moving in the wind would likely be low and contribute to determining the level of background noise around the airport.

650 Queen's Quay West

R.J. Burnside is proposing to install a temporary noise monitor on the south face of the building near the middle of the building. This noise monitor is proposed to be installed closer to the top of the building so that it has line of sight with the airport.

Members of the NMSC noted that this is a high impact noise area, especially on warm summer evenings. Anecdotally NMSC members noted the noise is louder here with vehicular movements and streetcar wheel screeches. Mr. Beck suggested that the noise monitor should be located further west on 680 Queen Quay West (Arcadia Building) given that there are residents in that building who are members of the PortsToronto Community Liaison Committee (CLC) that might be more agreeable to install the monitor on their balcony and communicate easily with study consultants.

560 Queen's Quay West

R.J. Burnside is proposing to install a temporary noise monitor on the south face of the building near the middle of the building approximately 1-metre from the top of the building so as not to overemphasize the background noise coming from the street. The location of this noise monitor offers a direct line of sight to the eastern end of the airport's runways.

Members of the NMSC were most concerned about the amount of background road noise at this location.

498 Queen's Quay West

Members of the NMSC indicated they preferred this site more than the 560 Queen's Quay West location.

401 Queen's Quay West

R.J. Burnside is proposing to install a temporary noise monitor on the south face of the building near the middle of the building to reduce exposure to background noise from Queen's Quay, specifically the screeching of streetcars turning at this intersection. The owner of this building may be amenable to working with PortsToronto on this study are they are on the PortsToronto board.

Mr. Beck indicated that there should be a noise monitor further east near the kayak and canoe recreation area given that these are waterfront uses that can be significantly impacted by noise. Members of the NMSC discussed that the placement of a noise monitor on a building roof (as was done at the City of Toronto Police Marine unit building) is not great given that these monitors don't have line of sight with potential sources of noise.

111 Princes' Boulevard (Hotel X)

For sake of time, this site was not visited by the NMSC during the site walk. Members of the NMSC were concerned that this site is not an effective use of noise monitor resources given its distance from the airport.

2. Welcome, Action Items from Previous Meetings, and Agenda Review

Angela Homewood (PortsToronto) welcomed members of the NMSC to the eighth meeting of the sub-committee. Ms. Homewood indicated that meeting minutes from previous NMSC meetings have been circulated for review by the NMSC and will be posted to the PortsToronto website once they are finalized. Ms. Homewood indicated that as the NMSC is approaching its first anniversary, the sub-committee should determine what deliverables should be set and if there is a need to renew the sub-committee. Gene Cabral (PortsToronto) noted that he is grateful for the pressure the Billy Bishop Airport CLC and NMSC have placed on PortsToronto to instigate behaviour change. Mr. Cabral noted that it is becoming common practice among PortsToronto employees to be more aware of noise and potential disturbances caused by work and contractors. Ms. Homewood provided an overview of the meeting agenda and led a round of introductions to familiarize Harvey Watson (R.J. Burnside) with the NMSC members.

Wayne Christian (YQNA) indicated that as of mid-January 2020, he will be resigning from his position on the NMSC to move out west. He expressed his thanks to the sub-committee and PortsToronto working collaboratively on this committee and remains committed to discussing noise mitigation efforts with members of the sub-committee in the future.

3. Background Noise Monitoring Plan

Harvey Watson (R.J. Burnside) provided a brief overview of the Background Noise Monitoring Plan, expanding on information discussed during the site walk prior to the meeting. The Background Noise Monitoring plan is the first step in PortsToronto's efforts to better understand the sound characteristics of the airport and adjacent areas. Mr. Watson made it clear that this study's scope of work is focused solely on identifying the background noise present in the area to determine what the base level of noise is if there was no airport present. Mr. Watson's presentation handout can be found in Appendix B. The following is a summary of the discussion pertaining to the Background Noise Monitoring Plan:

- Michael David suggested that if Hotel X is less valuable for this study, it should be substituted for 680 Queen's Quay West with a revised mounting location and method.
- Lesley Monette noted that it makes the most sense to have temporary noise monitors on buildings where PortsToronto can secure permission easily.
- Gene Cabral inquired whether there would be six permanent locations.
- Michael David explained these monitors are distinct from the permanent noise monitors being installed by PortsToronto. The temporary noise monitors will be installed for no more than a week. The temporary noise monitors will be battery powered with a 12-volt battery to top-up.
- Harvey Watson expanded that the noise monitors will be Type 1 B&K 2250. These monitors record in 1/3 octave bands between 20 hertz up to 8,000 hertz (this requires the ability to record at 20,000 hertz to capture a full sin wave at 8,000 hertz). These monitors can record A and Z weighted frequencies, LEQ, and a host of statistics. The meters measure at 20,000 hertz. Mr. Watson explained that the purpose of this study is to determine the background ground noise only, to determine what the background noise would be if the airport did not exist.

Study Purpose

- Gene Cabral sought to clarify that this study does not include fly-by noise.
- Harvey Watson confirmed that the study does not include fly-by noise.
- Lesley Monette inquired whether 'stationary noise' would include planes taxiing to and from the runway.
- Harvey Watson clarified that 'stationary noise' includes noise generated on PortsToronto property by a noise source that is touching the ground; this excludes planes in the air. For the purposes of establishing the background noise conditions, Mr. Watson indicated that when examining the noise data, he will remove any noise where aircraft is heard to establish the background noise of the area surrounding the airport.
- Max Moore indicated he does not see the usefulness of this study as part of a larger report, stating that the results will likely indicate an ambient noise level of between 55 and 75dbA. Furthermore, he asked what happens with the background noise value?
- Harvey Watson responded that over the course of the seven (7) nights the noise monitors are active; they will select the lowest average hour noise reading to establish the

background noise level. Mr. Watson indicated that he anticipates this will be from 2:00am to 3:00am and likely give a noise reading of 45dbA.

- Hal Beck indicated that the airport and surrounding areas are a Class 2 'Semi-Urban' noise environment not a Class 1 'Urban' environment as mentioned by Mr. Watson.
- Harvey Watson indicated this study seeks to create a model that can be used to predict the noise impacts of the area surrounding the airport. As such it seeks to understand what all the contributing noise-making elements are in this environment (excluding airplane noise) to understand the disturbance posed to residents. For instance, if it is determined that the ambient background noise is 45-50 dbA, it would be challenging to hear noise with a value of 35 dbA originating from the airport.
- Max Moore questioned whether the process involved deducting the different of the airport's dbA value from the ambient noise value.
- Harvey Watson replied to Mr. Moore indicated the intent is to look at the two observations to identify the extent of disruption.
- Max Moore pointed out that 10dbA translates to a noise being perceived as twice as loud.
- Harvey Watson provided an overview of dbA explaining it functions as a measure of perception and energy. 10dbA is perceived to be twice as loud but 10 times the energy. Part of the reason dbA was created was to make the values fall within a more reasonable range of 0-130dbA.
- Hal Beck indicated that he has measured 51 dbA with no noise from the airport.

Methodology

- Hal Beck expressed that he feels the study methodology is a problem. Taking average hour LEQ will mask the impacts of highly disruptive noise that will be averaged out over the hour.
- Max Moore added to Mr. Beck's point indicating that he questions the use of the study when the most disruptive noises are the sudden explosive noises generated by aircraft thrusts. Noise is cumulative, so it doesn't matter what the source noise is, what matters is the peak reading. Mr. Moore acknowledges that noise measurements have decreased by approximately 10dbA over the years however anything other than a study of peak noise values is a purely academic exercise.
- Michael David reminded the NMSC that the purpose of this study is to develop a mitigation model that can better account for environmental elements that impact the areas surrounding the airport, and that this is the beginning of PortsToronto's inquiry into the noise characteristics of the airport and surrounding area. As such it is important to understand a reliable baseline set of noise conditions to compare individual noise sources to identify how disruptive these noises are.
- Max Moore reiterated the concern that taking average hour LEQs will downplay the peak noise levels which are disruptive.
- Bryan Bowen asked whether the desire to understand the background noise level is to set a target for mitigation?
- Harvey Watson provided an example from another client where R.J. Burnside were studying the noise impacts of an industrial plant. During this study, they wanted to establish what the background noise of the area was without the industrial plant operating. By

understanding this average hour ambient LEQ, they were able to look at how much the industrial plant was adding to the overall noise profile of the area, and subsequently identify ways to reduce the noise through mitigation tactics. The current noise study on the airport is not and was never intended to be the full answer, but rather a starting point for understanding systematically the noise profile of the area. It is understood anecdotally from NMSC observations that peaks have been observed at 75 dbA.

- Lesley Monette noted that the wind has been from east to west. It is significantly quieter when the wind blows west to east meaning aircraft idle on the east end of the runway. Ms. Monette inquired how to address how environmental factors such as wind direction and speed, and cloud-cover feed into a comprehensive understanding of the area's noise profile when the study only lasts a week. Ms. Monette noted that noise varies by season and needs to be observed across the entire year.
- Harvey Watson inquired about whether Ms. Monette is expecting the study will pick up observations of the west wind with close aircraft in the measurements?
- Lesley Monette identified that she is concerned about the noise and its duration.
- Harvey Watson reiterated that in this study, noise recordings that contain aircraft sounds will be deleted given that the purpose of the background noise study is to determine what the noise level of the area would be without airport activity. Additional steps will be taken later to identify source noise of various PortsToronto facilities and operations that will be incorporated into the model with the background noise characteristics.
- Lesley Monette asked if the base noise is added to the daytime noise.
- Harvey Watson responded that the background noise is not added to the airport noise, they are compared. These two sets of noise are compared because background noise impacts how other noises are perceived. A quieter background means it is easier to distinguish a noise disturbance compared to a noisier background. It is highly likely that the noise generated by the airport will be greater than the background noise. The model will help the consultants understand which sources are emitting disruptive noise (such as an HVAC system, the ferry, and aircraft). Currently we know what the major sources of noise are but not how much each noise source is and how it fits into the surrounding noise profile. Building a model of this noise will help to understand how this noise is perceived, identify opportunities for mitigation, and account for environmental factors.
- Michael David added that noise emission is measured at the source to design a model that predicts noise at the point of reception accounting for the decay of energy over distance.
- Harvey Watson added the model helps develop 'what if' scenarios to understand what noise sources are generating the most impact to inform what mitigation measures would do the best job.
- Jim Faught inquired why there the noise terminals are not being installed to account for the noise created by the Gardiner.
- Harvey Watson indicated that picking up on the noise from the Gardiner would give an inaccurate picture of difference in ambient noise compared to the airport for residents of south facing condos. Incorporating the noise of the Gardiner would bring up the average hour LEQ. Given that the south side condos do not have line of sight to the Gardiner they are less likely to be disturbed by this noise compared to the airport. Mr. Watson offered the

hypothesis that incorporating sound from the Gardiner would lead to a higher average hour LEQ, and that when compared to the noise created by the airport would show less disturbance.

- Max Moore added that the study should determine the level of disturbance experienced by people living near the airport.
- Harvey Watson reiterated that in order to measure disturbance there needs to be a baseline background noise level to compare against. Mr. Watson indicated he does not doubt the experience of disturbance that members of the NMSC are sharing, and that these experiences are an important way to test if the model is performing as expected. If these impacts are not apparent in the model, this may mean the methods need to change. Currently R.J. Burnside is starting with the standard methodology for establishing a noise profile for an area utilizing provincial standards but is open to adjusting the methodology if it is viewed to be performing inaccurately.
- Max Moore indicated he is worried that an academic modelling exercise will not get the noise measurements of aircraft.
- Michael David reminded the NMSC that the purpose of the study is to develop a model composed of background and point source noise to develop a noise profile for the area surrounding the airport.

Model Calibration

- Hal Beck inquired about how the model would be calibrated, and that this is a fundamental component of developing the model.
- Harvey Watson explained that calibration is difficult but that the equations work most of the time. The expectation is that the model will indicate a level of disturbance reflecting the anecdotal experiences of community members.
- Hal Beck inquired how R.J. Burnside intends to confirm these assumptions.
- Harvey Watson explained they assume each noise source is running as much as it will in one (1) hour. For instance, if in one hour five airplanes take off, the model will apply that level of noise. All of this will be recorded in depth.
- Hal Beck explained that in personal experience, there is a constant roar of aircraft, and that the model should be based on the currently approved operating scenario. For instance, this would mean up to sixteen (16) flights per hour as approved.
- Gene Cabral added that in addition to the sixteen (16) flights per hours the model should account for general aviation.
- Harvey Watson noted that he hasn't asked about airport operations yet and intends to spend two weeks with PortsToronto staff as part of the study to understand what a day-in-the-life of the airport is to understand where noise is being generated from.
- Gene Cabral indicated that PortsToronto can provide data on airport movements to assist in calibrating the model.

ACTION

M#8-A1 Gene Cabral to provide Harvey Watson with data on airport movements for the development of an accurate noise model.

- Harvey Watson explained that the model is based on a one (1) hour scenario (one hour at night and one hour during the day) of what the worst conditions are to build a worst case hour that serves as the point of comparison with background noise to assess potential mitigation measures.
- Wayne Christian expressed that getting a better understanding of the background noise context is a great start. Ideally the study should look at what the ambient noise away from the airport is, what the ambient noise at the airport is, and how noise is impacting the community. Mr. Christian echoed Ms. Monette's point that it is essential to consider the environmental conditions when examining noise, necessitating that a long-term study over the duration of a year be undertaken.
- Max Moore inquired whether there will be data available on peak noise levels.
- Harvey Watson explained they will be measuring continuously over a week (seven days) to determine the lowest average hour LEQ to inform the background ambient noise level. The point of this study is not to get individual measurements of maximums, it's designed to understand the minimums.
- Max Moore indicated he was under the impression that getting these measurements was the purpose of the study.
- Harvey Watson explained that taking individual measurements on balcony does not add value to furthering our understanding of noise in the area, it only indicates that a certain noise level was observed at this time, in this place. Taking an average hour LEQ from several sites over a week provides a more comprehensive picture of noise over time. Mr. Watson rearticulated that if the model is performing correctly, it will show what the NMSC are saying. If the model doesn't show what the NMSC are saying, then the model is performing incorrectly and requires adjustments to the calibration.

Measurement Techniques – dbA versus dbZ

- Hal Beck requested to a walkthrough of the calibration.
- Harvey Watson indicated they will be measuring in dbA.
- Angela Homewood inquired whether dbA is based on NPC-300.
- Harvey Watson explained that the choice of dbA over dbZ is based on research surrounding how people perceive noise of different frequencies and how this is best measured.
- Angela Homewood sought to clarify given that PortsToronto asked for dbZ.
- Harvey Watson clarified that they will be reporting in dbZ however he cautioned that dbA has been found to be very representative of how people react to noise.
- Max Moore disagreed that dbA is the correct measure given that dbA is an older measure related to the drop in volume over long distances and generally does a poor job of capturing large volume noises.
- Harvey Watson elaborated that when studying the impact at the point of reception (such as an apartment) then dbA is more appropriate because it is generally in the 40 dbA to 70 dbA range, something that would be anticipated for background noise. In contrast, if you are studying the impact at the source for a worker next to the object generating noise then dbZ is more appropriate.

- Max Moore noted that he has taken many measurements of both and that if you switch from dbA to dbZ the value jumps by 10 db. Mr. Moore was concerned that dbA is inaccurate because of base-end drop-off. Base presents an important part of the experience of noise, if it is missed then there is a gap in what is being measured versus what is being experienced.
- Harvey Watson agreed that dbA does not measure low frequency well but that there remains inconclusive methods and evidence when studying the physical experience of noise.
- Lesley Monette added that she wants subsonic and bass tone measurements included in the study as the vibrations caused by low bass noises can be felt in the cement and glass of buildings. These low and subsonic vibrations that can be both felt and heard over a long period of time are very disturbing. Ms. Monette indicated she felt it was necessary to have a record of the frequency and range of these tones as a baseline for the following studies which will include aircraft noise.
- Harvey Watson indicated that vibration is out of the scope of this project.
- Max Moore added that vibration can be if you use dbZ.
- Harvey Watson explained that the decision to use dbA is the tool for measurement because that is how the provincial limits are provided, and this is because the World Health Organization uses dbA. The experience from around the world around acceptable levels is recorded in dbA as a standard.
- Hal Beck and Max Moore opposed this on the assertion that dbZ provides a fuller understanding of sound including more than hearing.
- Harvey Watson explained that 'loud' is understood in as an amount of sound pressure received that is where dbA is more appropriate. Measurements can be recorded in dbA and dbZ however Mr. Watson indicated he is unconvinced dbZ would provide any additional insight that dbA could not provide.
- Hal Beck interjected that dbZ shows how much base is not included in dbA.
- Lesley Monette added that sound over time as well as peaks are important.
- Harvey Watson explained that Dr. Colin Novak who teaches a masters of acoustic engineering at University of Windsor might be able to provide a more fulsome response to the decision to utilize dbA rather than dbZ. Mr. Watson explained that the study will follow the methodology that has been established so far and will make corrections as the study evolves to ensure the model is correct.
- Wayne Christian asked how the study team would do that?
- Hal Beck advocated that there be an operating study that can control for different variables.
- Harvey Watson noted that that would a huge ask because you never know everything that is going on creating noise.
- Hal Beck reiterated that the study should be calibrated to account for the maximum 202 commercial airline slots per day.
- Harvey Watson indicated that even when trying to control variables, something would be missed which is why calibration is so difficult, which would mean something is missed.
- Hal Beck indicated residents' concerns are primarily Q400 activity on the ground and in the sky, and that an HVAC system's impact compared to the Q400 will be negligible.

- Harvey Watson agrees in principle however he has indicated he does not have enough data now to agree on specifics
- Max Moore identified that the irritating noise from the ferry occurs at 5:30am.
- Michael David clarified that it is not necessarily that the ferry is louder, but that it is more annoying relative to the background noise.
- Max Moore indicated that when he took noise measurements on and around the ferry he recorded peaks of 105 dbZ early in the morning when the background noise is lower when the airport buses travel over a metal flap causing it to slam on the slip. Mr. Moore was concerned that using average hour LEQ, this would detract from how loud that peak is, and that a model wouldn't reveal these types of peak noise that are primary causes of disturbance.
- Michael David reiterated that these types of anecdotal examples are helpful to build into the model to identify areas for mitigation.
- Harvey Watson reiterated that R.J. Burnside is following a prescribed methodology. If these methods don't show what they're looking to study, they will adjust the methods to look at other sources of noise. This may include shorter duration study. Mr. Watson reiterated that recording peak noise at this stage requires being at the right place, at the right time, and under the right conditions to get the noise.
- Gene Cabral added that PortsToronto has years of data about noise complaints that have been recorded, these may be helpful to figure out what should be examined based on prior observation.
- Harvey Watson added that the ambient noise monitor cannot determine the source, only the sound received. For instance, there have been times on similar project where 95 dbA have been recorded for ten minutes straight. Upon listening to the audio recording it was determined that this was caused by a bird singing next to the monitor.
- Hal Beck indicated he is happy the study is proceeding acknowledging that there are subsequent components to the study that will work to address NMSC members' concerns related to noise. Mr. Beck indicated he remains concerned that average hour LEQs will lead to background noise levels that are too high.
- Harvey Watson indicated that the noise monitors are measuring an energy wave reaching the diaphragm and that the standards are built on whether the overall energy collected over the hour exceeds the thresholds to establish the level of disturbance.
- Hal Beck identified that there have been two studies in the past 20 years with nice modelled background studies that are high showing no disturbance.
- Harvey Watson interjected that this is clearly not the case.
- Hal Beck discussed how he brought up the whole issue of the ambient being quieter on the water side than on the city side. Asked Hader from MOE, about whether noise consultants should be aware of this, they should. Further to this the decrease in noise with elevation as you move away from ground-level noise. Identified that there has never been documentation of the differential associated with different elevations. Mr. Beck also added the need to follow up with Bryan Bowen given his conversation with Header Merza (Senior Noise Engineer, Ministry of Environment, Conservation and Parks) about the City's capacity

to develop noise standards, supplementary guidelines for waterfront development because the marine environment is not addressed in the standards.

ACTION

M#8-A2 Hal Beck to discuss supplementary noise guidelines for waterfront development with Bryan Bowen.

- Hal Beck is not denying that it doesn't get quiet and that he has observed 51 dbA during 'quiet' times on the waterfront.
- Harvey Watson discussed how some of the noise readings will be above and below average. The one hour average LEQ is an average.
- Hal Beck indicated he wants the NPC-104 to prorate the lowest background noise.
- Harvey Watson indicated they are measuring the lowest couple hours.
- Hal Beck requested that they measure to the lowest half-second when there's no wind blowing.
- Harvey Watson reminded Mr. Beck that this gets back to the discussion of what created the noise.
- Hal Beck requested they measure everything but the airport.
- Harvey Watson reminded the NMSC that even if some sources of noise are stopped, there will still be other noises.
- Hal Beck indicated this area is a Class 2 'Semi-Rural' setting.
- Harvey Watson identified that Class 2 is poor given that it combines elements of both Class 1 and Class 3.
- Angela Homewood confirmed that Class 1 'Urban' was discussed in NMSC Meeting #7 by Header Merza.
- Hal Beck indicated he asked twice what class the area surrounding the airport is to no response in Meeting #7. Mr. Beck then recited the definition of the two classes from NPC-300 advocating that the area possesses Class 1 characteristics during the day (7:00am to 7:00pm), and Class 3 characteristics in the evening and night (7:00pm to 7:00am).
- Harvey Watson indicated he classifies the area as a Class 1 environment given that the noise of the city is predominant, including noise that persists into the night from the Gardiner.
- Hal Beck asked how this contradicts what he just said
- Harvey Watson disagrees because while Mr. Beck indicated he's only hearing the waves on the water, that is not the only noise that is being received.

4. Noise Management Terminal Installation

Gary Colwell (PortsToronto) provided an update on the purchasing and installation of additional permanent noise monitors.

- Hal Beck requested that Gary forward information about the installation of the permanent noise monitors to the board of King's Landing as they have been waiting and are eager to see the monitor installed.

- Gary Colwell indicated that the new monitors will be installed as they are received and that they are still waiting on the equipment which has been the source of delay. PortsToronto is also exploring installing a noise monitor in Inukshuk Park to the west of the airport.
- Hal Beck inquired what the work predictable noise they are intending to monitor with this equipment, and questioned why PortsToronto should be concerned about this location over others where people are living.
- Gary Colwell responded that these permanent noise monitors are intended to measure fly-by noise.
- Gene Cabral inquired why a monitor was not considered for the end of the pier near leisure point.
- Gary indicated that the noise monitor would be installed right on the trail approximately 30 feet from the water's edge with line-of-sight to the airport.

ACTION

M#8-A3 Gary Colwell to circulate a map pinpointing the exact locations proposed for the additional permanent noise monitors being installed by PortsToronto.

- Angela Homewood added that additional noise monitors were set up in the Port Lands to the east as part of the Port Lands Environmental Assessment process.
- Gene Cabral inquired whether Waterfront Toronto would be willing to share this data with PortsToronto.
- Angela Homewood indicated she will check, and believe the noise monitor is located near the TTC bus station.

ACTION

M#8-A4 Angela Homewood to correspond with Waterfront Toronto about collaborating on noise data sharing.

- Michael David indicated all these noise monitor locations, including both temporary and permanent monitors should be mapped for clarity.
- Hal Beck returned to his request for basic information on the permanent noise monitors that he can bring to his Co-Op board on the monitor so that it can be installed.
- Gary Colwell indicated that he can request the information and have LURA Consulting send it.

ACTION

M#8-A5 Alexander Furneaux to circulate information on the permanent noise monitors upon receiving it from Gary Colwell.

5. City of Toronto Noise Study Requirements Update

Bryan Bowen (City of Toronto) informed the NMSC he will share the scope of work with the NMSC in two weeks time and will include three relevant case studies. This can be reviewed prior to the next NMSC and discussed by the sub-committee.

ACTION

M#8-A6 Bryan Bowen to circulate City of Toronto Noise Study Requirement scope and relevant case examples for discussion at the next NMSC meeting.

6. Business Arising

The NMSC discussed dates for future meetings, noting that discussions surrounding the airport Master Plan and other community interest items presents a large volume of communication occurring for members of the NMSC.

- Michael David indicated that the immediate next steps are to set up the temporary noise monitors and measuring source data.
- Harvey Watson indicated that R.J. Burnside will undertake source measurements over the course of approximately two weeks.
- Michael David added that NMSC should send an email regarding additional suggestions on where to place these noise monitors.
- Harvey Watson indicated that the noise model will be informed by how the airport facility operates incorporating time and location data on noise sources. Before any mitigation occurs, it will be important to meet with the NMSC to discuss additional anecdotal observations to ensure the model is reflective of these conditions.
- Bryan Bowen indicated he may be able to engage someone who has experience with NPC-300 and planning approvals to share how the city has tackled this environmental factor in the rezoning approval process. This could potentially be arranged for December

ACTION

M#8-A7 Bryan Bowen to request a guest speaker on the relationship of NPC-300 to city planning approvals.

- Hal Beck noted that there needs to be additional discussion on the meeting minute redlines from previous meetings.
- Harvey Watson indicated R.J. Burnside should have interim findings by January that could be shared with the NMSC.
- Michael David indicated he would prefer the Ground Noise study does not take up the entire time of the next meeting to ensure there is adequate time to address other issues as they arise.
- The next NMSC meeting was set for Wednesday January 8th, 2020 from 7:00pm to 9:00pm in the PortsToronto board room above the Aroma Café on the mainland.

The meeting adjourned at 9:20pm.