



PORTSTORONTO

BILLY BISHOP TORONTO CITY AIRPORT

**NOISE MANAGEMENT SUB-COMMITTEE
MEETING #17**

MEETING MINUTES

October 26, 2022
7:00 PM to 8:30 PM
Zoom Online Meeting
Toronto, Ontario

Minutes prepared by:





These meeting minutes were prepared by LURA Consulting. LURA provides neutral third-party consultation services for the Ports Toronto 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:

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Summary of Action Items from Meeting #15

Action Item	Action Item Task	Who is Responsible for Action Item
M#17-A1	Michael Antle to follow up with Toronto Police Service regarding community impacts from October 22 security incident and improving communication with the community.	PortsToronto (Michael Antle)
M#17-A2	Michael Antle to consider what information can be presented at a future CLC meeting regarding its emergency plans.	PortsToronto (Michael Antle)
M#17-A3	Angela Homewood to confirm with Transport Canada that the 1990 NEF System Users Manual Sections 1 to 3 are used for noise energy review calculations.	PortsToronto (Angela Homewood)
M#17-A4	Alexander Furneaux to circulate email from Transport Canada noting the use of the NEF System Users Manual to NMSC members.	LURA (Alexander Furneaux)
M#17-A5	Alexander Furneaux to update Action Item M#16-A1 to clarify that NMSC is requesting Transport Canada to provide their practitioners guide for noise energy reviews.	LURA (Alexander Furneaux)
M#17-A6	PortsToronto to follow-up with Transport Canada on receiving responses to Ms. Monette's questions.	PortsToronto (Angela Homewood)
M#17-A7	PortsToronto to share Ground Noise Study material for review at least 1 month before the meeting it is intended to be discussed.	PortsToronto (Michael David)
M#17-A8	Michael MacWilliam to circulate a picture of the noise monitor installation at Ontario Place.	PortsToronto (Michael MacWilliam)
M#17-A9	Michael MacWilliam to investigate whether the noise monitor at Ontario Place has sightlines to the nearby playground and boat mooring sites.	PortsToronto (Michael MacWilliam)
M#17-A10	Michael MacWilliam to investigate options for a noise monitor that can be installed at Windward Co-op.	PortsToronto (Michael MacWilliam)

M#17-A11	Michael MacWilliam to arrange a check on the noise monitor at King's Landing.	PortsToronto (Michael MacWilliam)
M#17-A12	Alexander Furneaux to share calendar holds for potential meeting times in January and March and coordinate agenda items.	LURA (Alexander Furneaux)

List of Attendees

Name	Organization (if any)	Attendance
COMMITTEE MEMBERS		
Hal Beck – Co-Chair	York Quay Neighbourhood Association	Present
<i>Vacant position</i>	York Quay Neighbourhood Association	N/A
Max Moore	Bathurst Quay Neighbourhood Association	Present
Lesley Monette	Bathurst Quay Neighbourhood Association	Present
Jay Paleja	City of Toronto – Waterfront Secretariat	Present
PORTS TORONTO REPRESENTATIVES		
Angela Homewood	PortsToronto	Present
Michael David	PortsToronto	Present
Michael MacWilliam	PortsToronto	Present
Michael Antle – Co-Chair	PortsToronto	Present
Noah Meneses	PortsToronto	Regrets
FACILITATION		
Alexander Furneaux – Lead Facilitator	LURA Consulting	Present
Sayan Sivanesan – Notetaker	LURA Consulting	Present

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Appendix A: Meeting Agenda

1. Agenda Review and General Updates

Alexander Furneaux (LURA Consulting) welcomed the members of the Noise Management Subcommittee (NMSC) to their 17th meeting held virtually via Zoom. Mr. Furneaux welcomed Mr. Paleja as the new City of Toronto Waterfront Secretariat representative on the NMSC and facilitated a round of introductions with all meeting participants.

- Mr. Paleja noted that Meg St John is still working at the City, but he is replacing her as the Waterfront Secretariat representative due to a shuffling of responsibilities.
- Mr. Beck asked if Mr. Paleja could share his professional background.
- Mr. Paleja explained that he has a background in public policy, but does not have a background in urban planning, engineering, or sound.

Mr. Furneaux then provided an overview of the agenda and asked if the committee had additional items to add. The meeting agenda is included in **Appendix A**.

2. Update from PortsToronto

Michael Antle (PortsToronto) provided a brief update on the Toronto Police Emergency Disposal Unit (EDU) investigation at Billy Bishop Toronto City Airport (BBTCA) on October 22, 2022. Mr. Antle noted that because of the way that a secondary battery was connected to an electric bike brought to the airport, EDU officers responded to a call for a suspicious package. EDU officers investigated the bike and the owner of the bike, and eventually disabled the device using a water blast. Once EDU officers disabled the device, they were confident that there was no further risk to BBTCA operations. Mr. Antle expressed appreciation for the support of water taxis which were used to evacuate staff and passengers off the island during the EDU investigation, as the airport ferry was not in service during the investigation. Mr. Antle noted that the ferry resumed service around midnight to transport the remaining employees off the island after the conclusion of the EDU investigation.

- Ms. Monette noted that they heard that some of the neighbouring buildings were evacuated and that the residents were not allowed back inside until late at night.
- Ms. Monette expressed that they were surprised that no notices were shared with nearby buildings on the day of the incident. Ms. Monette suggested that communications about such incidents can be sent to the Bathurst Quay Neighbourhood Association (BQNA), and that BQNA can then relay this information to community members and building managers.
- Ms. Monette noted that there was lots of confusion that day, especially with traffic due to road closures. Ms. Monette asked whether Lake Shore Boulevard was closed off that day.
- Mr. Antle indicated that he is not sure about the full extent of the road closures but knows that several roadways were blocked off. Mr. Antle indicated that he would need to check with the Toronto Police Service (TPS) to confirm what they had done.

- Ms. Monette recommended that if something like this happens in the future, TPS should be asked to inform PortsToronto about the full extent of community impacts, so that PortsToronto can relay this information to the community.
- Mr. Moore noted that he knows of three buildings that were evacuated. Mr. Moore indicated that lots of people were upset about the commotion and road barriers. Mr. Moore indicated that though this is a police matter, it would be helpful if in the future the police could share information through the airport, or if there was a source of information that the community could access.
- Ms. Monette added that BQNA does have a structure in place to communicate rapidly with the neighbourhood, particularly to support people with disabilities and other vulnerable populations. Ms. Monette noted that the TPS may not know about this and suggested that PortsToronto could mention this next time PortsToronto is in contact with TPS.
- Mr. Moore added that there was confusion in the community because of the airport emergency exercise scheduled earlier in the day that had been communicated in advance by PortsToronto and shared widely. People didn't know if they were involved in a real bomb-threat or a staged emergency preparedness exercise.
- Mr. Antle agreed that there was a lot of confusion due to the emergency training exercise occurring the same day. Mr. Antle indicated that PortsToronto would follow-up with TPS to inquire about the extent of community impacts, what can be done to improve communication flows with the community, and how PortsToronto could support with this communication.

M#17-A1 PortsToronto to follow up with Toronto Police Service regarding community impacts from October 22 security incident and improving communication with the community.

- Mr. Beck noted that there are a lot of questions from the community about this incident and indicated that there are concerns about what the community impacts would be if a more serious threat occurred. Mr. Beck asked if an overview of BBTCA's disaster mitigation plans could be presented at a future CLC meeting.
- Mr. Antle noted that PortsToronto is limited in what it is allowed to disclose from the emergency plans, as these are restricted documents with Transport Canada.
- Mr. Beck indicated that while the community would not want to jeopardize airport security, the community representatives on the CLC would still like to have a presentation on this topic. Mr. Beck suggested that this discussion could be an 'in camera' session, and that sensitive security information can be omitted from the publicly posted meeting minutes.
- Mr. Antle indicated that he would take this request away and consider what can be done.

M#17-A2 PortsToronto to consider what information can be presented at a future CLC meeting regarding its emergency plans.

Mr. Antle then shared a brief update on Connect Airlines. Mr. Antle noted that Connect Airlines is looking to restart their proving runs at BBTCA on November 15, 2022.

3. Transport Canada Presentation Action Item Review

Alexander Furneaux (LURA Consulting) and Angela Homewood (PortsToronto) provided a status update on NMSC #16 action items related to the Transport Canada presentation. Mr. Furneaux noted that in response to Action Item M#16-A1, Transport Canada provided a copy of its Noise Exposure Forecast (NEF) System User Manual, which was circulated to NMSC members on October 7, 2022. Mr. Furneaux then noted that PortsToronto is waiting on Transport Canada to provide an answer for the meaning of the '- 88' factor in the NEF formula (Action Item M#16-A2), and to address the additional questions provided by Ms. Monette (Action Items M#16-A3 and M#16-A5). Ms. Homewood noted that Transport Canada has reviewed the NMSC#16 meeting minutes and asked the NMSC members to review the minutes as well to confirm that the minutes are clear and accurate and identify if there are any additional follow-up questions that can be submitted to Transport Canada. Mr. Furneaux added that the NMSC #16 meeting minutes were circulated to NMSC members on September 26.

- Mr. Beck inquired why it took so long to turnaround the NMSC #16 minutes.
- Ms. Homewood responded that Transport Canada and their external consultants were reviewing the minutes over the summer, but a key Transport Canada resource was on leave during this period, so it took time to coordinate Transport Canada's responses. Ms. Homewood noted that she was also away during the month of July. Ms. Homewood added that Gilles Bourgeois (retired) and Jacques Savard (SNC-Lavalin) who also contributed to the NMSC #16 Transport Canada Presentation needed to be coordinated with to review the minutes as well.
- Mr. Beck expressed frustration that this coordination of reviewing the meeting minutes took four months.
- Ms. Homewood responded that she does not know the reason why the Transport Canada staff was on leave, so there could have been many external factors that contributed to the delay. She indicated that it would have taken the resource time to catch up on the email chain after they returned to work. Ms. Homewood also noted that BBTCA is not the only airport that Transport Canada supports.
- Mr. Beck expressed frustration that the minutes for the Airport Slots Follow-up Meeting on January 13, 2022, also took four months to be distributed, and then took an additional month after that for revisions before being finalized.

Facilitator's Note: After the January 13, 2022 Airport Slots Follow-up Meeting, LURA circulated the first publication of minutes on February 14, 2022. Following this publication, Mr. Beck provided three rounds of redlines on March 2, April 6, and May 3. LURA worked with PortsToronto and Mr. Beck to address each round of redlines and republished the current version of the summary on June 1, 2022.

- Mr. Beck expressed desire for improving the process so that the review of minutes is sped up. Mr. Beck suggested that if a third-party such as Transport Canada needs to review the minutes, that this can happen at the same time as when the NMSC members are reviewing the minutes.

- Ms. Homewood noted that when there is a meeting with highly technical discussions, such as in NMSC #16, it takes all parties more time to review the minutes to ensure that it is factual. Ms. Homewood indicated that she herself had to review the NMSC #16 minutes twice due to the level of technical detail in the discussion, to confirm that it was captured accurately. Ms. Homewood indicated that as a result she was not inclined to rush Transport Canada and their two consultants.
- Mr. Beck agreed that NMSC #16 was a technical meeting and that it is important for the discussion to be captured accurately in the minutes. Mr. Beck reiterated that effort should still be made to accelerate the turnaround of the minutes going forward. Mr. Beck noted that NMSC #16 and the Airport Slots Follow-up meeting pertained to critical issues around determining the number of flights at the airport.
- Mr. Moore added that beyond improving the turnaround time of meeting minutes, he would like the NMSC to focus on developing more cooperation with Transport Canada to advance the NMSC's priorities. Mr. Moore expressed his belief that the NMSC's work on the Ground Noise Study is ground-breaking and is the first ground noise study for an airport in the world. Mr. Moore indicated that for the NMSC to succeed in exploring what the development of better noise management standards might look like, the NMSC needs to get Transport Canada and the International Civil Aviation Organization (ICAO) to be more responsive to the NMSC's requests.
- Mr. Beck then asked whether the chart detailing the status of NMSC #16 Action Items that Mr. Furneaux reviewed had been circulated to NMSC members.
- Mr. Furneaux responded that this chart had not been circulated because the status of most of the action items either are waiting on a response from Transport Canada or are to be discussed at today's meeting.
- Mr. Beck expressed that there is no harm in sharing this chart as an update and indicating that it reflects the status of action items as of the current date.
- Mr. Beck then asked for clarification regarding Action Item M#16-A1 – 'Transport Canada to provide NMSC with a copy of its NEFCalc practitioner's guide'. Mr. Beck indicated that the document that was circulated to NMSC members on October 7 is a 'users manual' for the NEF computer system software and not a practitioner's guide.
- Mr. Furneaux responded that what was circulated on October 7 is the document received from Transport Canada in response to Action Item M#16-A1.
- Mr. Beck noted that what he originally asked for is the practitioner's guide for noise energy reviews. Mr. Beck indicated that a practitioner's guide would lay out how an engineering practitioner would do their calculations and would also help reviewers such as the City of Toronto, PortsToronto, and Transport Canada to review these calculations.
- Ms. Homewood then read the following note from Transport Canada regarding the 1990 NEF System Users Manual that they provided:
 - "Please note that this was the last paper document produced on how to use the NEF Software. It reflects the technological status of the NEFCalc software before the National Research Council integrated the NEFCalc

within a Windows platform (later in the 1990s). At the time, the relevant contents of the document were integrated into the current software under the Help tab. Sections 1 to 3 do however contain some useful background to the software's method of calculations."

- Ms. Homewood noted that the email from Transport Canada indicates that Transport Canada uses Sections 1 to 3 of the NEF System Users Manual provided as the method of calculation. Ms. Homewood added that she would follow up with Ted McDonald from Transport Canada to confirm this.

M#17-A3 PortsToronto to confirm with Transport Canada that the 1990 NEF System Users Manual Sections 1 to 3 are used for noise energy review calculations.

- Mr. Beck asked whether the email from Transport Canada noting the use of the NEF System Users Manual can be shared with NMSC members.
- Ms. Homewood confirmed that there is no issue with sharing the context from that email. Ms. Homewood indicated that she would forward the email to Mr. Furneaux and that he would distribute it.

M#17-A4 Mr. Furneaux to circulate email from Transport Canada noting the use of the NEF System Users Manual to NMSC members.

- Mr. Beck then requested that the language in Action Item M#16-A1 be changed to say, 'Transport Canada to provide NMSC with a copy of the practitioners guide to noise energy reviews' instead of 'a copy of its NEFCalc practitioners guide'. Mr. Beck emphasized that the practitioners guide for noise energy reviews that he requested would provide information that is different then what is in the NEF Systems Users Manual.
- Mr. Furneaux confirmed that the distinction would be made in this round of minutes.

M#17-A5 Mr. Furneaux to update Action Item M#16-A1 to clarify that NMSC is requesting Transport Canada to provide their practitioners guide for noise energy reviews.

- Ms. Homewood asked for clarification whether a practitioners guide would contain the desired information about noise energy reviews.
- Mr. Beck responded that he had noted in NMSC #16 that there should be a practitioners guide that details how engineers are supposed to do the calculation for noise energy reviews, and that Gilles Bourgeois had indicated that he could share this with the NMSC.
- Ms. Homewood requested that Mr. Beck review the draft NMSC #16 minutes to make sure that this point is captured accurately there.
- Mr. Beck confirmed that he would review the draft NMSC #16 minutes, and requested that in the meantime PortsToronto follow-up with Transport Canada about receiving the requested practitioners guide.

- Mr. Moore noted that he had reviewed the NEF System Users Manual that was provided, and that he believed it contains the information Mr. Beck was asking for. Mr. Moore noted that the user's manual details the procedures for the calculations of the NEF model, and that he would be surprised if there was another manual.
- Mr. Beck expressed his view that if there is no practitioners guide, then this is extremely alarming.
- Mr. Furneaux noted that it would be helpful if Mr. Beck could provide by email a short description in his own words of what he is looking for.
- Mr. Beck responded that the description he would email would simply be 'a practitioners guide to noise energy reviews.' Mr. Beck indicated that every time someone calculates the number of flights, they would conduct a noise energy review. Mr. Beck added that the NMSC would want to look at the practitioners guide to determine what information Transport Canada is providing to engineers for them to look at noise energy compliance to the established NEF standard for the airport, and secondly how that information is assisting parties like City of Toronto and Transport Canada to review the information that is prepared by consultants.
- Ms. Homewood noted that Transport Canada conducts a compliance check every year as part of their annual report.
- Mr. Beck expressed his belief that the annual reports are inconsequential. Mr. Beck indicated that the annual reports do not represent a compliance check, noting that the 25 NEF standard is not discussed at all in the annual reports. Mr. Beck indicated that in the annual reports they are simply calculating the NEF value, and that the result of this is 24 hours worth of flights being calculated which are then programmed to operate within the 16.25 hours available at the airport. Mr. Beck indicated that he wants to see what Transport Canada has been telling its consultants in terms of how to do a compliance review and check of an operating scenario and how this relates to the 25 NEF decibels (dB) per hour standard.
- Ms. Homewood noted that the NMSC #16 meeting was with Transport Canada policy and regulatory development staff, and not with compliance staff.
- Mr. Beck inquired why the policy staff were presenting at a NMSC meeting.
- Ms. Homewood responded that Transport Canada was provided seven questions and were requested to deliver a presentation based on the questions that the NMSC raised. Ms. Homewood explained that the NMSC did not ask for Transport Canada compliance staff to do a presentation on how they do compliance. Ms. Homewood noted that compliance and policy are two different arms of Transport Canada that have very different roles.
- Mr. Beck asked why it was not recognized that the questions raised had to do with compliance. Mr. Beck also noted that Transport Canada did not address the list of seven additional questions he had submitted on March 17, in advance of the meeting with Transport Canada.
- Ms. Homewood responded that at the end of Transport Canada's presentation at NMSC #16, Transport Canada verbally addressed the additional questions.

- Mr. Beck expressed that there was a complete disconnect between the questions that were raised and the answers given at the meeting. Mr. Beck indicated that he would definitely review the meeting minutes but there are still unanswered questions that need to get answered.
- Ms. Monette noted that prior to NMSC #16, she had submitted three questions regarding the March 2019 report from the House of Commons Standing Committee on Transportation, Infrastructure, and Communities titled [Assessing the Impact of Aircraft Noise in the Vicinity of Major Canadian Airports](#). Ms. Monette noted that her questions were primarily policy questions seeking clarification on what has happened at the government level to address the report's recommendations. Ms. Monette asked for clarification on whether Transport Canada has received these questions.
- Ms. Homewood explained that Transport Canada has received Ms. Monette's questions, but that they did not receive the questions in time to be able to address the questions in their presentation at NMSC #16.
- Ms. Monette requested that Transport Canada provide responses to her three questions. She indicated that information regarding the status of the March 2019 report's recommendations would be very important for the NMSC to understand, because the report highlights from a policy perspective what Mr. Beck is speaking about from a technical perspective. Ms. Monette noted that one of the report's conclusions is that the NEF is out of date, so even an update on whether Transport Canada is considering this report would be good to know.
- Mr. Furneaux confirmed that Transport Canada would be followed-up with regarding responses to these questions.

M#17-A6 PortsToronto to follow-up with Transport Canada on receiving responses to Ms. Monette's questions.

- Mr. Paleja asked for clarification on whether the report being discussed is from the House of Commons Transportation Committee.
- Ms. Monette confirmed that it was and noted that the full report is included in the appendix of the NMSC #16 minutes.
- Mr. Paleja noted that there is usually a government response to a committee report. Mr. Paleja indicated that Transport Canada would best know what this government response would be.
- Mr. Paleja then asked for clarification on whether all of Transport Canada's responses to the questions asked would be circulated to all NMSC members.
- Mr. Furneaux confirmed that once received, he would circulate the responses in a document that notes the questions asked and their respective responses.
- Mr. Furneaux then reiterated that all NMSC members are asked to review the draft NMSC #16 minutes. Mr. Furneaux noted that the questions submitted by both Mr. Beck and Ms. Monette, as well as Transport Canada's presentation, are included in the appendix.

4. Ground Noise Study Update

Michael David (Ports Toronto) provided a brief update on the Ground Noise Study. Mr. David noted that the site measurement component of the study is almost complete, with the Ornge air ambulance helicopter, a small number of air conditioning units, and the air conditioning carts being the only remaining stationary equipment to measure. Mr. David noted that the study will also include modeling of non-stationary sources of ground noise such as taxiing aircrafts, airport vehicles, and bird deterrence devices. Mr. David noted that the study team is starting to develop metrics for annoyance which will be used in the report. These metrics will consider factors such as the frequency, pitch, and harmonics of the sound, so that the study is not reliant on the NEF contour as a metric. However, the report appendices will also include the raw data. Mr. David noted that the study team is also formulating a one-page summary containing annoyance metrics and graphic representation for each scenario that is modeled. Mr. David indicated that a template for the one-page scenario summaries containing dummy-data would be circulated to NMSC members in advance, so that at the next NMSC meeting the proposed metrics and format can be discussed. Mr. David concluded that the outcome of the ground noise study is to develop mitigation recommendations for addressing the annoyance metrics from the scenarios. Mr. David also indicated that he does not have an update on the naming of the study.

- Mr. Beck indicated that current name of the study – the Ground Noise Study – is problematic because the word ‘ground’ is also used in ground noise attenuation, which is an algorithm in the NEF software, and this may be difficult to differentiate. Mr. Beck also noted that the airport uses the term ‘ground’ side of the airport, referring to the mainland, and the ‘air’ side of the airport referring to the island. Mr. Beck requested that the word ‘ground’ not be used in the naming for the study, to minimize any confusion.
- Mr. David responded that the study has not been named officially, but that he is open to the suggestion. Mr. David agreed that the title of the study should be clear and avoid overlapping with other noise discussions.
- Mr. Beck recommended that there should be a glossary of terms used in the report. Mr. Beck indicated that if the report uses the term ‘ground’ in a specific way, then this should be defined.
- Mr. David agreed that a glossary is necessary.
- Ms. Homewood noted that ‘Ground Noise Study’ is a working title that came from the BBTCA 2018 Airport Master Plan process.
- Mr. Beck asked for clarification on why Mr. David indicated that the software used for the study will produce NEF values. Mr. Beck noted that Mr. David previously mentioned that this study will not include noise from aircrafts once their wheels lift off the ground, however NEF values are based on fly-by noise metrics only.
- Mr. David responded that he misspoke and indicated that what he meant was that the software would produce ‘contours’ that show lower gradations of noise as the noise moves further in the three-dimensional model. Mr. David explained that the point he meant to make was that the model would not be dependent on the contours because even when there is a low average exposure of noise, there

could still be several annoyances that peak which would be captured in the other metrics.

- Mr. Beck indicated that it would be helpful if the information on the sample summaries can be shared as far in advance of the next meeting as possible. Mr. Beck indicated that it would be ideal if this information can be shared a month in advance, or at least two weeks in advance.
- Mr. David confirmed that he intends to circulate the information in advance to give NMSC members sufficient time to review.

M#17-A7 PortsToronto to share Ground Noise Study material for review at least 1 month before the meeting it is intended to be discussed.

- Mr. Moore indicated that he disagrees with Mr. Beck regarding not using the word 'ground' in the study title, and that the study should have a title that is geared for public consumption. Mr. Moore expressed his belief that the title 'Airport Ground Noise Study' would allow the public to easily understand what the study is doing. Mr. Moore indicated that if the study is given a more scientific name, then it may risk going unnoticed. Mr. Moore indicated that he is hoping that this study will be noticed by ICAO, and that calling it 'Airport Ground Noise Study' would catch their attention.
- Mr. Beck responded that one of the main challenges he would like to address is that the people who are responsible for administering the NEF software are not aware that the ground noise attenuation algorithm exists within the software. Mr. Beck explained that the ground noise attenuation algorithm assumes that the ground is absorbing noise when an airplane is flying by, and therefore more noise can be generated. Mr. Beck indicated that it is this hidden algorithm within the NEF software which has allowed for the proposed increase in slots at BBTCA from 202 to 246 slots.
- Mr. Beck concluded that he would like to ensure that the public has a clear understanding of the purpose of the study report, while also not confusing and trying to improve the understanding of the technical people who are supposed to be applying its information.
- Mr. David noted that the internal title that he is using for this project also includes the term mitigation. Mr. David indicated that all the study's measurements are designed to suggest actionable mitigations.
- Mr. David added that most readers of the report will skip to the 'executive summary', so though the title will need to be catchy, the first few paragraphs of the report may be most important.
- Mr. Moore asked for clarification on who will be doing the software programming to produce the raw data.
- Mr. David responded that the consulting team, consisting of Colin Novak (University of Windsor) and Harvey Watson (R.J. Burnside) and their staff are responsible for the tabulations. Mr. David noted that most of the work is completed by computers.
- Mr. Moore noted that what he is interested in is the raw data reports, which as previously discussed, should include reporting in dBA and dBZ. Mr. Moore asked

for clarification on whether the consultants have been instructed to include columns for dBZ values.

- Mr. David responded the microphones used can record in two different dB weightings at the same time. It is well established on the subcommittee that dBA and dBZ values are desired for this study.
- Mr. Moore reiterated that he is wondering how will the dBZ values be included as a separate column. He indicated that dBA values do not measure bass noise and that half of the noise produced by the aircrafts are bass noise, so it is important to do the noise values in dBZ because that captures the full sound.
Mr. Furneaux noted that it has been discussed at previous meetings that the microphones can record in both dBA and dBZ, and that the consultants have spoken to this.
- Mr. Moore asked whether Mr. David has instructed the consultants to include the dBZ values in the data table.
- Mr. David responded that it depends on what Mr. Moore means by data tables. Mr. David suggested that Mr. Moore can email him the question, and that he can ask the consulting team.
- Mr. Moore noted that the NMSC had already received some tables with the raw noise data that contained dBA measurements.
- Mr. MacWilliam clarified that those data tables that were sent were from PortsToronto's [WebTrak](#) system.
- Mr. Moore asked when the NMSC can see the tables with the dBZ values included. Mr. Moore indicated that if the whole study is conducted only reporting in dBA, then the study is invalid in his perspective.
- Mr. David responded that dBZ values will be included in the study, but that he does not know what it will look like yet.
- Mr. Beck noted that when the example templates are shared in advance of the next meeting that this will help the NMSC to have discussions about how the data is being interpreted. Mr. Beck noted that Mr. Moore and himself prefer to see the data in tables, even though at a previous meeting Mr. David had indicated a preference for representing the data graphically. Mr. Beck noted that having the data represented in both ways will be good.
- Mr. David noted that for any given scenario that is modeled, there will be about 60 different pieces of equipment in the model of the airport that have noise data measurements. Mr. David emphasized that the point of the study is to understand at the point of reception, for example a resident's window on Queens Quay, what is the sum of all those noises.
- Mr. Moore responded that he believes that the summation of the noise measurements will just be statistical adjustments to make the noise readings look lower. Mr. Moore expressed his belief that the only thing that will really be valid in this noise study is the dBZ values.
- Mr. Furneaux indicated that the point has been taken that Mr. Moore would like to see the raw data. Mr. Furneaux noted that until Mr. David shares the example templates, the discussion is not able to go further. Mr. Furneaux noted that Mr. Moore will have a chance to review the example templates at least 1 month prior

to the meeting where they are discussed, and that further discussion can occur then.

- Ms. Monette noted that one of the issues when the planes are being pushed out is that the exhaust of the planes are often over the water. Ms. Monette asked whether the study has looked at what the noise might be at a given point behind the back of a plane when its noise is travelling over water.
- Ms. Monette noted that another issue is that sometimes there are multiple planes lined up and idling all at once. Ms. Monette asked whether the model could identify the cumulative amount of this noise, or whether the study was able to measure multiple planes at the same time.
- Mr. David responded that the site monitoring involved one piece of equipment at a time, recorded at the quietest spot in that airport that could be found, so that the sound produced by the equipment being measured would be as isolated from other sounds as reasonably possible outside. Mr. David confirmed that the software used for the modeling can stack noises on top of each other. Mr. David explained that if a scenario involves three airplanes stacked nose-to-tail, then the magnified noise impact is appropriately simulated by the software.
- Ms. Monette asked if there is any way of differentiating the noise of the exhaust over the tarmac, versus the exhaust over the water when the plane is pushed out, or the ricochet of noise that comes back from the buildings.
- Mr. David responded that though measurements were not taken over water, the software does account for the reflectivity of different materials such as water, grass, concrete and asphalt. Mr. David explained that the three-dimensional model that has been constructed does differentiate between the different surfaces in the study area.
- Ms. Monette asked if any planes were facing the buildings during the measurements, so that the ricochet noise off the face of the buildings can be recorded.
- Mr. David responded that this was not done because then the recording would only be valid in an instance with that ricochet. Mr. David explained that the airplane baseline measurements were done in the south field as far away from the airport terminal as possible, during the COVID-19 pandemic when there was no general aviation flights and no other fly-bys. Mr. David indicated that the microphone was off the back of the airplane to capture the loudest readings.
- Mr. David noted that the software can turn the airplane in the model to face different directions, and that the contour would show a plume of louder noise when the noise travelled across the water.
- Ms. Monette indicated that factoring this noise will be important because a lot of the noise experienced by the community is the noise being amplified over the water, and all the noise ricocheting from building glass.
- Mr. David confirmed that though the study did not record the noise that way, it will report the noise in a way that factors those effects.
- Mr. Beck noted that when two decibels of equal value are added together this leads to a three dB increase, and that decibels look at the totality of an instantaneous noise. Mr. Beck indicated that adding up the frequency of

cumulative sound on an octave band basis would produce a slightly different result then adding up the totality of all the decibels.

- Mr. David responded that he does not know how the software achieves the cumulative noise and that he would ask the consultants to describe this. Mr. David explained that while the totality of the noise is important, it is not the whole story, as there are other annoyance factors that the study will report on as well, such as the vibration of windows.
- Mr. David added that though the study will not report on the level of impact at specific residential units due to there being too many local factors to account for, the study will identify when a scenario, depicting a particular configuration of noise sources, produces disproportionate impacts compared to other scenarios.
- Mr. Beck noted that it sounds like the study is going in the right direction.
- Mr. David noted that he likes that each scenario will have its own one-page summary but is concerned that the report may become rather large given how many scenarios will be looked at, as well as the inclusion of appendices containing the raw data.
- Mr. Beck suggested that the executive summary can focus on the most evocative scenarios.
- Mr. David agreed that the most evocative scenarios are the ones that the study would like to highlight for the purpose of developing mitigations.
- Ms. Monette noted that one of the annoyances experienced by the community is the first airplane takeoff at 6:45 am on weekend mornings when community members are trying to sleep in. Ms. Monette suggested that if the gates for early morning flights were switched from the east side of the airport building to being docked at the south side ports, then the airplanes tails (engines) would face south instead of towards the community (north and east), and this would make the warmup and idling of planes before takeoffs much quieter. The engines would then face south away from the community. Also when the planes are pushed out and do the engines checks the engines would also be facing south or southeast/southwest and the airport building would block much of the noise of the revving during the warm ups and checks before take-off.
- Mr. David agreed and noted that the study can model different gate scenarios for takeoffs to show the impact difference at the King's Landing condominiums. Mr. David indicated that this type of mitigation is referred to as an operational mitigation, as it only requires a change in process and does not require new equipment.
- Ms. Monette emphasized that there are things that BBTCA can do almost immediately to alleviate some component of the noise impacts.

5. Permanent Noise Monitor Terminal Update

Michael MacWilliam (PortsToronto) provided a brief update on the Permanent Noise Monitor Terminal. Mr. MacWilliam noted that the noise monitor at Ontario Place had been installed in July 2022 on a lamp post. Mr. MacWilliam noted that the noise monitor has been operating since its installation and that the data is available on WebTrak.

- Mr. Beck inquired whether the noise monitor was installed at the top of the lamp post.

- Mr. MacWilliam confirmed that it was installed near the top of the lamp post. Mr. MacWilliam indicated that he would coordinate getting a picture of the noise monitor installation to share with the NMSC.

M#17-A7 PortsToronto to circulate a picture of the noise monitor installation at Ontario Place.

- Mr. Beck indicated that he is concerned about how high the monitor is installed because there is a playground to the east and a boat mooring area to the west. Mr. Beck noted that during the summer months there may be higher levels of background noise at those locations. Mr. Beck indicated that if the noise monitor does not have a direct line of sight to the playground and boat mooring locations then this may not be a problem.
- Mr. MacWilliam responded that he does not think this would be very impactful. Mr. MacWilliam noted that he would investigate this.

M#17-A8 PortsToronto to investigate whether the noise monitor at Ontario Place has sightlines to the nearby playground and boat mooring sites.

- Mr. MacWilliam then noted that Brüel & Kjær (B&K) has rejected the proposed methodology for installing a monitor at the side of the Windward Co-op building. Mr. MacWilliam indicated that this means that the noise monitor would either need to be installed on the roof of Windward Co-op or remain at its current location.
- Mr. Beck noted that he would like to look at the B&K response because this conflicts with Ontario Noise Standards, which indicate that noise impacts should be measured from the windows facing the water and not from the roof. Mr. Beck indicated that the reason for this is that background sound levels will be much higher on the roof than at the plane of the residential units.
- Mr. MacWilliam responded that the B&K noise monitors being used are monitors specialized for airport use, whereas the standards Mr. Beck is referring to would apply to more commercial monitors.
- Mr. MacWilliam indicated that the B&K monitors may not be the right units for the testing that is desired.
- Mr. Beck agreed that this is an unlikely scenario for an airport noise monitor, noting that an airport would typically not install a monitor on the side of a building a few hundred meters away from its runway.
- Mr. MacWilliam noted that these monitors are meant to be installed on the roofs of airports, as they are intended to capture omni-directional noise and are not meant to be shielded from one side.
- Mr. Beck concluded that the sides of buildings on the waterfront may require a different type of noise monitor.
- Mr. Moore inquired whether the City's maintenance building beside the public washrooms would be an alternative location if the noise monitor cannot be installed at Windward Co-op.

- Mr. David responded that this would not be a good location because it does not have clear lines of sight to flyover noise due to the trees that surround it.
- Mr. Beck added that the objective of this noise monitor would be to capture measurements of noise experienced at a bedroom or living room window. Mr. Beck indicated that the noise monitors have to be installed in a shielded location to not pick-up noise from traffic on Lakeshore Boulevard, so it cannot be on the top floor of a building.
- Mr. Beck noted that as Windward Co-op is an eight storey tower, the installation would have to be located between the fifth and seventh floors. Mr. Beck noted that the monitor would have to be placed above the fifth floor because there are existing noise barriers that was installed based on the PortsToronto commissioned 2010 [Noise Management Study report](#), which found that the noise barriers would lower noise up to the fifth floor.
- Ms. Homewood clarified that the Noise Management Study report and its recommendations for noise mitigation measures were prepared by Jacobs Consultancy between 2008 and 2009, independent of PortsToronto and BBTCA.
- Mr. Beck noted that the report is an interim report and indicated that the study was abruptly terminated after Geoffrey Wilson was hired as CEO of PortsToronto.
- Mr. MacWilliam noted that the takeaway from the discussion is to look for a different type of noise monitor.
- Mr. Beck suggested that Mr. MacWilliam can ask Harvey Watson (R.J. Burnside) for recommendations on appropriate noise monitor options.
- Mr. MacWilliam confirmed that he would investigate options for a noise monitor that can be installed at Windward Co-op, and that he would ask Mr. Watson for recommendations.

M#17-A9 Mr. MacWilliam to investigate options for a noise monitor that can be installed at Windward Co-op.

- Ms. Monette noted that she is back in the city more often now and is available to help arrange for someone from PortsToronto to check on the noise monitor installed at her building.
- Mr. MacWilliam confirmed that PortsToronto can conduct a check on the monitor and indicated that PortsToronto's electrician might be the person that is sent over.

M#17-A10 Mr. MacWilliam to arrange a check on the noise monitor at King's Landing.

6. Business Arising

Alexander Furneaux (LURA) began the discussion of Business Arising topics.

- Mr. Furneaux reminded NMSC members to review the minutes from NMSC #16 and indicated that committee members can send any comments to him.
- Mr. Furneaux then asked for feedback on availability for the next NMSC meeting.

- Mr. David asked for clarification on the window of time that would be appropriate for scheduling the next meeting, so that it does not conflict with CLC meetings.
- Mr. Furneaux clarified that the CLC meetings are generally scheduled in February, May, September, and November. Mr. Furneaux then asked whether it would be manageable to schedule a NMSC meeting in late January.
- Ms. Monette confirmed that January would work well for her and noted that she will be away for a large part of February.
- Mr. Beck confirmed that January would work well for him. Mr. Beck then asked whether the next meeting would have the slot regulator and indicated that the availability of this resource should be considered as well.
- Mr. David noted that he expects there will be a lot to discuss on the noise study and recommended that two big topics not be scheduled in the same meeting.
- Mr. Beck asked whether it is realistic to have the example summaries prepared in time for the January meeting.
- Mr. David agreed that scheduling the noise study in January would be aggressive, because there would need to be time to send materials in advance as well. Mr. David indicated that he would be comfortable with aiming to have the example summaries completed by the end of January and sharing them then, which means they would be discussed at the March meeting.
- Mr. Furneaux indicated that he would send temporary calendar holds for the end of January and March and would work with NMSC members to confirm the agenda items and sequence of topics.

M#17-A11 Mr. Furneaux to share calendar holds for potential meeting times in January and March and coordinate agenda items.

- Mr. Furneaux thanked the NMSC members for their participation and called the meeting to a close.

The meeting adjourned at 9:00 PM.

Appendix A
Meeting Agenda
Billy Bishop Toronto City Airport
Noise Sub Committee Meeting 17

Wednesday October 26, 2022
7:00 PM to 8:30 PM
Zoom Virtual Meeting

AGENDA

- 7:00 Welcome and Introductions
- 7:05 Agenda Review
- 7:10 Update from Michael Antle (Michael Antle)
- 7:15 Transport Canada Presentation Action Item Review (Alexander Furneaux & Angela Homewood)
- 7:40 Ground Noise Study Update (Michael David)
- 7:50 Permanent Noise Management Terminal Update (Michael MacWilliam)
- 7:55 Business Arising
- 8:00 Adjourn