



PORTSTORONTO

BILLY BISHOP TORONTO CITY AIRPORT

**NOISE MANAGEMENT SUB-COMMITTEE
MEETING # 16**

May 5, 2022

Meeting Minutes

7:00 PM to 9:30 PM
Zoom Online Meeting
Toronto, Ontario

Minutes prepared by:



First Publication: December 16, 2022

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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 #16

Action Item	Action Item Task	Who is Responsible for Action Item
M#16-A1	Transport Canada to provide NMSC with a copy of its NEF Practitioner's Guide to Noise Energy Calculations.	PortsToronto (Angela Homewood)
M#16-A2	Transport Canada to provide an answer for the meaning of the '- 88' factor in the NEF formula.	PortsToronto (Angela Homewood)
M#16-A3	Transport Canada to address additional questions provided by Ms. Monette.	PortsToronto (Angela Homewood)
M#16-A4	Alexander Furneaux, Hal Beck, and Angela Homewood to discuss planning of future meetings with Transport Canada.	LURA (Alexander Furneaux)
M#16-A5	Angela Homewood to forward Lesley Monette's questions submitted by email to Transport Canada.	PortsToronto (Angela Homewood)
M#16-A6	Michael David to send an email with details on the request for Ground Noise Study volunteers, including a map showing the monitoring locations that have already been confirmed.	PortsToronto (Michael David)
M#16-A7	Michael MacWilliam to investigate data table templates for the Ground Noise Study.	PortsToronto (Michael MacWilliam)
M#16-A8	Discuss considerations for the naming of the Ground Noise Study at the next NMSC meeting.	LURA (Alexander Furneaux)
M#16-A9	PortsToronto to recirculate information on how to use WebTrak.	PortsToronto (Michael MacWilliam)
M#16-A10	Michael MacWilliam to send a recording of the air conditioning cart noise to NMSC members.	PortsToronto (Michael MacWilliam)

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
Meg St John	City of Toronto – Waterfront Secretariat	Present
PORTS TORONTO REPRESENTATIVES		
Angela Homewood – Co-Chair	PortsToronto	Present
Gene Cabral	PortsToronto	Present
Michael David	PortsToronto	Regrets
Michael MacWilliam	PortsToronto	Present
Michael Antle	PortsToronto	Present
Noah Meneses	PortsToronto	Present
FACILITATION		
Alexander Furneaux – Lead Facilitator	LURA Consulting	Present
Sayan Sivanesan - Notetaker	LURA Consulting	Present
GUEST		
Wendy Bailey	Transport Canada [Environmental Protection and Standards Division]	Present
Gilles Bourgeois	Transport Canada (retired)	Present
Dave Dawson	Transport Canada [Airports and Air Navigation Services Policy Group]	Present
Hanif Mawji	Transport Canada [Ontario Regional Office]	Present
Ted McDonald	Transport Canada [Environmental Protection and Standards Division]	Present
Jon Obnamia	Transport Canada [Environmental Protection and Standards Division]	Present
Mary Pollock	Transport Canada [Ontario Regional Office]	Present
Jacques Savard	SNC-Lavalin	Present

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Appendices:

Appendix A: Meeting Agenda

Appendix B: Transport Canada Presentation

Appendix C: Questions Submitted by Email

Appendix D: Additional Comments Submitted by Email

1. Agenda Review and General Updates

Alexander Furneaux (LURA Consulting) welcomed the members of the Noise Management Subcommittee (NMSC) to their 16th meeting held virtually via Zoom. Mr. Furneaux thanked the representatives from Transport Canada for joining the meeting and facilitated a round of introductions with all meeting participants.

- Mr. Meneses introduced himself as a new PortsToronto representative on the NMSC. He noted that he is the new Safety Management and Regulatory Compliance Officer at Billy Bishop Airport.
- Ms. St John introduced herself as the new City of Toronto Waterfront Secretariat representative on the NMSC. She noted that Bryan Bowen has moved on to a different internal position at the City.
- Mr. Cabral noted that he normally does not attend the NMSC meetings, but he is joining this meeting to listen to the presentation and discussion on Noise Exposure Forecast (NEF) modeling.

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**.

- Mr. Cabral thanked Ms. Monette, Mr. Beck, and Mr. Moore for their dedication to the work of the NMSC. Mr. Cabral also thanked the Transport Canada team for their participation in this meeting and indicated that their participation means a lot to Billy Bishop Toronto City Airport (subsequently abbreviated to Billy Bishop Airport) and the community.
- Ms. Monette asked for confirmation that Transport Canada's NEF presentation would be shared afterwards.
- Mr. Furneaux confirmed that he would circulate the presentation after the meeting, and that both the presentation and the questions sent in advance by Mr. Beck and Ms. Monette would be included in the appendix of the meeting minutes.
- Mr. Furneaux noted that because the questions sent by Ms. Monette were received the day before this meeting, they will not be addressed in the presentation but will be addressed through written responses instead.
- Ms. Monette confirmed that this was appropriate. She noted that she primarily wanted the Transport Canada representatives to review the documents she referenced so they understand how close her building is to Billy Bishop Airport's east runway.

2. NEF Presentation and Questions (Transport Canada)

Hanif Mawji, Ted McDonald, and Gilles Bourgeois (Transport Canada) provided a presentation including a review of Transport Canada roles and responsibilities for aircraft noise management, and responses to submitted questions regarding the NEF metric. The presentation is included in **Appendix B**.

Transport Canada (TC) representatives in attendance are as follows:

- Representatives at this meeting represent a range of TC organizational units including Ontario Regional Office (Hanif Mawji, Mary Pollock), Airports and Air Navigation Services Policy Group (Dave Dawson), and Environmental Protection and Standards Division (Wendy Bailey, Ted McDonald, Jon Obnamia).
- Gilles Bourgeois now retired, used to work in Environmental Protection and Standards Division, but still supports on work related to noise management under contract.
- Mr. Bourgeois' former position is now held by Ms. Bailey acting as Canada's lead representative to International Civil Aviation Organization (ICAO) for environmental protection issues. All Environmental Protection and Standards Division members at this meeting participate in one or more ICAO committees responsible for developing international standards related to aviation noise and emission controls.
- Jacques Savard (SNC-Lavalin) is contracted by TC to conduct the NEF contour reports for Billy Bishop Airport.
- Environmental Protection and Standards Division is the technical lead for aircraft noise and emissions at TC and is responsible for tools and metrics for aircraft noise exposure and Part IV of the [TP 1247 Land Use in the Vicinity of Aerodromes](#) guidelines.

Transport Canada provided the following opening remarks to their presentation:

- Because of the reference in the Tripartite Agreement, NEF contours are used as a potential limit on the aviation activity at Billy Bishop Airport. NEFCalc is the only tool that exists in the Tripartite Agreement to govern the maximum allowable movements and was agreed to by all parties of the Tripartite Agreement.
- The Billy Bishop Airport Master Plan utilized the same NEFCalc tool and methodology to complete all scenarios contained within the Master Plan.
- At the request of the City of Toronto, TC conducts annual noise exposure contours at Billy Bishop Airport.
- NEF is a cumulative 24-hour noise metric that quantifies exposure to airport noise on an average busy day. NEF metric is computed using the TC NEFCalc program. In quantifying this noise exposure, NEFCalc reflects the airport's aircraft fleet mix, runway use, daytime and nighttime movements, and average flight tracks. Contour lines that are calculated are interpreted through the land-use compatibility tables in the TP 1247 guidelines.

Mr. Bourgeois then provided responses to the questions submitted to LURA Consulting (PortsToronto's facilitator) by Mr. Beck on January 11, 2022. Mr. Beck's full email detailing these questions is included in **Appendix C – Email #1**. Mr. Bourgeois noted the following key points in his responses, grouped by question:

Q1 Incorrect Interpretation of modelled flight numbers

- NEF metric represents a cumulative 24-hour exposure of noise.
- Peak Planning Day traffic levels, which represent the average of the seven busiest days for the three busiest months, are used to calculate NEF contours.

- Within the Peak Planning Day, the day is divided into two operational periods, representing daytime (07:00-21:59) and nighttime (22:00 – 06:59) periods for the traffic. The annoyance caused by aircraft noise at night is considered higher than during the day, so the movements during the nighttime period are multiplied by 16.67 to reflect a 10-decibel penalty. Daytime and nighttime periods are independent from actual operating hours.
- Given the 24-hour period of the NEF metric, the model can be limited in assessing noise impacts of many types of operating scenarios. The model was developed for the purpose of land use planning and not for detailed noise management analysis. The NEF is not meaningful when looking at noise from an hourly or portion of the day basis.
- The NEF model is fixed within the 24-hour period, and this is the same parameters that were used for the original set of contours in the Agreement, as well as the contours that are used to monitor the airport on an annual basis.

Q2 Incorrect ground noise attenuation assumptions (same answer as Q4 Terrain noise modeling not completed)

- Ground attenuation is very complex as the acoustical properties of the local geography and meteorological conditions vary at every airport.
- Models are meant to be generic in nature and to make certain assumptions. The NEFCalc model was designed to assume a horizontal flat ground surface, and does not make any compensations for airports that are surrounded by water, elevated terrains or high-rise residential housing.
- The NEFCalc's ground attenuation algorithms are considered to be conservative as it attenuates sound less than other tools that are used internationally.
- Nothing has changed in the model's ground attenuation algorithms since the production of the original contours in the Agreement.

Q3 Flyby noise energy omitted from NEF calculations

- The noise energy that is included in the NEF is not drawn from data on noise collected from monitoring equipment at the airport.
- Noise energy inputted into the NEF are from noise energy measurements that are conducted during the certification of aircrafts. One of the simplifying assumptions in calculating these noise levels are to include only noise energy that is reasonably significant.
- Given that sound is measured on a logarithmic scale, any sound value that is 10 decibels (dB) lower than the peak during a flyby event is washed out and are considered negligible.

Q5 NEF model scale not considered

- The Effective Perceived Noise in Decibels (EPNdB) measurement that is calculated during the aircraft certification process is not directly used by the NEFCalc. However, the data collected during the certification process is used to prepare separate noise and distance data points that are used in the NEFCalc.
- When the NEF model computes the contours it calculates noise exposure levels at points in a grid of a sufficient size to cover the contours in the vicinity of the

airport. After the noise levels are computed at the grid points an interpolation algorithm is used to define the specific contour levels of interest.

Q6 Airport site ground noise resulting from NEF flight numbers not considered

- The NEFCalc only models noise from takeoff and landings and does not include other noises from ground vehicles, maintenance engine runup, or reverse thrust.
- The NEFCalc is consistent in providing an estimation of noise exposure useful for land use planning in the vicinity of airports. It is meant to be an independent assessment of noise exposure and annoyance in the vicinity and is not intended to link to any other local ordinances (such as municipal noise by-laws).

Q7 NEF Compliance Studies not yet completed to confirm flight numbers

- NEF model was intended to be used for land-use planning with a long-term outlook of five to fifteen years, as was done at Billy Bishop Airport. It can be sensitive to airport traffic levels, runway utilization, fleet mix, and the time of day of movements, but only within the context of a 24-hour average noise exposure.
- Simultaneous landings and takeoffs are not a criterion for the use of the NEF. Many airports do not have simultaneous operations, and the NEF model can still apply, so it is reasonable to be used at Billy Bishop Airport.

Mr. Furneaux then opened the floor up for any questions from NMSC members.

- Mr. Beck noted that a lot of information was presented very quickly and requested if a copy of Transport Canada's presentation slides can be provided for further review.
- Mr. Beck indicated that he would like to discuss the specifics of the NEF formula. He noted that one of his concerns is that the engineers that have used the NEF model to assess the number of flights at Billy Bishop Airport have not documented their calculations.
- Mr. Beck noted that regardless of what sum of noise is inputted into the NEF formula, it is being divided by a fixed 24-hours to arrive at a third number on the other side of the equal sign which is the NEF value including a constant. Mr. Beck expressed his opinion that the number of flights calculated in the Master Plan cover a 24-hour modelling period, and need to be prorated to the official operating period of 16.25 hours.
- Mr. Beck expressed his opinion that the past reporting on the assessment of the number of flights at Billy Bishop Airport should not be titled 'slot capacity reports' but should be instead titled 'flight number reports'.
- Mr. Beck noted that the Q400 aircraft represents roughly half the total number of aircrafts, but that all the flights at Billy Bishop Airport matter in terms of noise impact. Mr. Beck indicated that due to reports being framed around slot capacities, the public are being misled to focus only on the slot regulated flights when the total flights should be considered.
- Mr. Beck requested that an action item from this meeting be to review the calculations prepared using the NEF model so that the number of flights during the 16.25 hour commercial operating period are confirmed and documented for the proposed operating scenario.

- Mr. Cabral responded that to exclude the overnight period that Mr. Beck identifies outside of the commercial operating period, would mean to exclude overnight medevac flights. Mr. Cabral noted that in March 2022 there were 74 overnight movements that occurred, which are factored into the NEF compliance modeling that is done.
- Mr. Cabral emphasized that the NEF modeling captures all flight movements and not just Q400 aircraft movements.
- Mr. Beck thanked Mr. Cabral for flagging this important resident concern and note that this should not impact the broader issues under discussion.
- Mr. Moore expressed his belief that the NEFCalc serves to advance the airport's objectives and not the community's objectives.
- Mr. Moore expressed his opinion that the NEF model should not apply to Billy Bishop Airport because of its unique proximity to a waterfront community. Mr. Moore noted that no other community in Canada has such a busy airport close to it. Mr. Moore indicated that the surrounding surface of water instead of land contributes to the community hearing significantly more noise than the NEF model is calculating.
- Mr. Beck asked for clarification on what is meant by the average busy day in Transport Canada's presentation.
- Mr. Beck noted that the Peak Planning Day instead of the 95th percentile day is discussed in the annual contour reports.
- Mr. Bourgeois responded that the Peak Planning Day is the terminology used for the amount of activity that is put into the NEF model. There are various approximations that are used to calculate the Peak Planning Day, including the 95th percentile day which is the day where traffic is exceeded only 5% of the time. Another allowable approximation is the average of the seven busiest days of the three busiest months.
- Mr. Bourgeois indicated that it was a conscious choice made at the beginning of the NEFCalc program to use a busy day, as opposed to the average day, and this is reflected in the interpretation of the contour lines.
- Mr. Beck noted that the considerations are important ones as the 1996 NEF Validation Study found that at Ottawa airport, there was a 40% discrepancy between the number of Peak Planning Day movements and the 95th percentile day movements.
- Mr. Beck noted in passing that even though the NEF Validation Study was clearly not written by or for engineers and contains some typos, he would still recommend that NEF beginners read all 3 volumes of it.
- Mr. Beck noted that the public doesn't see that data that goes into arriving at the Peak Planning Day calculations in the annual noise reports. He requested that the data for the 21 days being considered for the Peak Planning Day including number of flights by specific aircraft be shared as a table. Mr. Beck noted that, based on his review of American documents that were referenced when establishing the Canadian standards, he appreciative that Canada is modelling for the 90th percentile day of movements. Mr. Beck stated that he believes this is better than the American standard of modelling for the average day.
- Mr. Bourgeois noted that the [NEF Validation Study](#) found that by using the busy

day, the NEF model is more conservative in that it assumes more noise.

- Mr. Beck indicated that if the Peak Planning Day number of movements is expected by noise engineers to be exceeded 5% of the time, this would equate to approximately 18 days of the year. Mr. Beck noted that the waterfront community will be significantly impacted on those days and this should be considered in planning the total number of daily flights on those days.
- Mr. Beck noted that the unit measurement of an NEF contour value is dB/hour.
- Mr. Bourgeois responded that this is not correct and noted that the NEF contour is a cumulative 24-hour standard, there is no hourly value.
- Mr. Beck indicated that if it was a decibel per 24 hours he would agree with Mr. Bourgeois. Mr. Bourgeois indicated that this is what it is.
- Mr. Beck disagreed with Mr. Bourgeois indicating that you're dividing the EPNLs by 24 hours and a constant to arrive at a third number which is the NEF value. If the NEF value was equal to the numerator, he would agree, but you're actually calculating a new number which is the NEFdecibel per hour.
- Mr. Bourgeois countered that there is no division by 24, whereas Mr. Beck disagrees. Mr. Beck then indicated that it would be essential to see a breakdown of the NEF formula to discuss this.
- Mr. Beck noted he was surprised that the NEF modelling formula was neither shown nor discussed in tonight's TC presentation, and noted he was expecting a presentation on the TC practitioner's guide
- Mr. Beck asked if it would be possible to receive a copy of the TC's practitioners guide for the noise energy calculations that is provided to private consultants.
- Mr. Bourgeois confirmed that this would not be a problem.

M#16-A1 Transport Canada to provide NMSC with a copy of its NEF Practitioner's Guide to Noise Energy Calculations.

- Mr. Moore expressed his view that a problem with NEF model is the noise level inputs that it is based on. Mr. Moore expressed concern that the original noise level data that is used is not based on actual noise measurements but rather categories of noise modeling used for certifying airplanes.
- Mr. Beck then shared his screen to show the following calculation for the NEF:
 - $NEF = EPNL + 10 \log_{10} (Nd + 16.7 Nn) - 88 \text{ (dB)}$
- Mr. Bourgeois confirmed that this is the correct formula.
- Mr. Beck noted that immediately following presentations by five noise consultants who have presented flight numbers since 2008, he had asked for clarification on what the 'minus 88' in the formula means, noting that it seems to be lowering the NEF value. At the time of asking the question to these consultants, Mr. Beck noted that none were able to provide a verbal response to him at the time they presented their recommendations. One of these consultants subsequently confirmed by email that this question lay beyond his level of expertise.
- Mr. Bourgeois responded that he remembers asking the same question in the past, and the best answer he received was that this was meant to differentiate the NEF value from other metrics that yielded similar kinds of numbers. Mr. Bourgeois noted that he is uncertain that this is the full reason. Mr. Bourgeois confirmed that he would investigate this and report back with an answer.

M#16-A2 Transport Canada to provide an answer for the meaning of the ‘- 88’ factor in the NEF formula.

- Mr. Bourgeois added that regardless of the purpose of the ‘- 88’ factor, the results of the NEF calculations with that factor are what led to the interpretation of the contours that exist.
- Mr. Beck noted that he also asked three of these noise consultants a related question of what the noise energy per hour is where the NEF value equals zero. He noted that a lot of people think that NEF=0 means zero noise, but that is not the case and this was considered when the NEF formula was being developed. None of the consultants were able to provide him with a verbal response to this related question at the time they presented their recommendations.
- Mr. Bourgeois inquired if what Mr. Beck is seeing in the formula that would suggest an hourly element.
- In consideration of the variety of meeting discussion items remaining and the high level context of the discussion, Mr. Beck suggested to look into the American Day Night Average Sound Level (L_{dn}) modelling formula, and why it has a 49.4 factor at the end of its formula instead of 88. Mr. Bourgeois indicated he would look into it.
- Mr. Moore noted his recurring concern with the use of dBA readings for noise levels that are used in the modeling, because dBA measurements do not measure the base component of the noise which can make up half of the noise that is heard. Mr. Moore indicated that the noise readings would be more accurate if it was based on dBZ measurements which does measure the base component of the noise.
- Ms. Monette expressed appreciation that the presentation acknowledges that the NEF model does not account for the local area. Ms. Monette indicated that the NEF model does not capture the noise experienced by nearby waterfront residents because it does not account for the significant level of noise being ricocheted off the water instead of being absorbed by land as in a typical airport.
- Ms. Monette noted that the noise from thrusting during takeoffs and the reverse engines during landings are the largest contributors to the noise that the community experience. She indicated that this would not be accounted for in the NEF model because it does not consider noise produced below 200 feet.
- Ms. Monette also noted that the residential buildings along the waterfront are largely made of concrete and glass, which also contributes to the noise that is experienced.
- Ms. Monette indicated that though the NEF was used when the Agreement was created, there was not as much research back then about the impact of noise on the human body. She noted that current research suggests that noise can contribute to cardiac issues and other human health ailments. Ms. Monette emphasized that the human experience of noise needs to be considered in setting standards as much as the technical side.
- Ms. Monette noted that 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](#) – which was included in her email with questions – suggests that the NEF may not be an appropriate measure of airport noise impacts in community settings.
- Ms. Monette added that Recommendation 7 of the report recommends that

“Transport Canada support efforts to modernize outdated noise metrics. These efforts should include the review of Canada’s NEF model to ensure that it is in keeping with the most recent scientific evidence and international norms on noise management and human perception of noise.

- Mr. Furneaux noted that because Ms. Monette’s email with questions was received late, the TC staff will not be able to provide a full answer at this time, but responses will be provided by email.
- Ms. Monette clarified that she does not expect a response at this time. She requested that the TC staff review the March 2019 Standing Committee report if they are not familiar with it, and expressed her desire that action on Recommendation 7 be taken.
- Mr. Beck clarified that the statement ‘in keeping with international norms’ in Recommendation 7 should be interpreted as having the goal of improving the experience of residents and not catering to airline business interests wanting to lower the standard.
- Ms. Homewood noted that because the report was issued in March 2019, it would likely take some time to implement the recommendations.

M#16-A3 Transport Canada to address additional questions provided by Ms. Monette.

- Mr. Moore indicated that noise modeling is not quite good enough and that noise measurements should be conducted instead. Mr. Moore suggested that the error with current standards originates with ICAO, and that an outcome of this meeting could be to involve ICAO in developing new international standards.
- Mr. Furneaux asked whether TC could speak to its relationship with ICAO.
- Mr. McDonald noted that Wendy Bailey is Canada’s top representative to ICAO, and that everyone at this meeting that reports under Ms. Bailey participates on ICAO committees.
- Mr. McDonald added that as the host country for ICAO, TC fully supports the ICAO program and is fully involved in all its rule-making bodies.
- Mr. Bourgeois indicated that ICAO serves to provide international standards and guidance material on a wide number of environmental topics for states to adopt if they choose.
- Mr. Bourgeois noted that there is a lot of work on aircraft certification that is currently happening to look at reducing noise at the source, and that TC brings Canadian input into those discussions.
- Mr. Bourgeois clarified that although the NEF noise versus distance values from a range of 200 feet to 20,000 feet are prepared, the model can interpolate for distances involved in the grid point that are less than 200 feet as required.
- Mr. Beck asked if this means the NEF model can extrapolate as well.
- Mr. Bourgeois responded that the model could extrapolate if needed.
- Mr. Bourgeois added that when he had referred to reasonable noise in the presentation, this was with regards to how the EPN dBs are calculated. He noted that all the noise energy for which there is a summation represents the entirety of the reasonable energy to use in calculations, while the rest is negligible.

- Mr. Moore expressed concern that the noise experienced by the community is considered negligible. Mr. Moore reiterated his concerns that the NEF model uses dBA measurements which eliminate the base component of noise and does not factor in ground noise which is the biggest component of the noise experienced by the community.
- Mr. Bourgeois indicated that this is not what he meant regarding what is negligible to the model, but perhaps the point can be made clearer in writing.
- Mr. Beck noted that he agrees with Mr. Bourgeois that there are environments where any noise below the top 10 dB can be excluded, due to the nature of logarithmic summation. He noted that the NEF formula was developed for continuous noise environments, at large airports with more than one active runway where there are always simultaneous landings and takeoffs producing overlapping noise events within the top 10 dB, and not appropriate for environments dominated by single flyby events. Mr. Beck indicated that this concern in his emailed questions of January 11, 2022 was not addressed.
- Mr. Beck noted that the noise experienced by the waterfront community are from single flyby events as they are not overlapping with the noise event of the next landing or takeoff, let alone their top 10dB.
- Ms. Homewood indicated that TC had only been asked to stay until 8:15 p.m., so any additional questions, including those submitted by Ms. Monette can be forwarded to them.
- Mr. Beck inquired why Transport Canada was not invited for two hours and asked whether it would be possible for him to connect with Mr. Bourgeois directly.
- Ms. Homewood responded that this would not be fair to the other NMSC members because they would not be privy to the outcomes of those discussions. Ms. Homewood noted that all members should have the opportunity to ask questions and increase their understanding of the issues.
- Ms. Homewood suggested that the committee members could meet with her to compile additional questions together. The NMSC could then reach out to TC again with those follow-up questions.
- Mr. Beck noted his interest in addressing the community's concerns with the Billy Bishop Airport Master Plan.
- Ms. Homewood noted that the Master Plan has already been completed.
- Mr. Beck emphasized that the community has some serious concerns that need to be discussed.
- Mr. Beck indicated that the presentation that was delivered today was a high-level discussion but does not address his questions. Mr. Beck noted that there is a lot more he would like to talk about with Mr. Bourgeois and the full committee.
- Mr. Furneaux reasoned that he would like to respect the time of the TC representatives and not hold them for longer than they had agreed to attend the meeting. He noted that though there is a need for more conversation, the information presented at this meeting provides a grounding point for future discussion.

- Mr. Furneaux indicated that as a next step Ms. Homewood and Mr. Beck, as the NMSC co-chairs, should meet to discuss the planning of future meetings with TC. Mr. Furneaux offered to sit in on this discussion.
- Mr. Moore expressed appreciation for the time the TC representatives have given. He added that he would like to continue to work with TC in the development of better noise measurement standards.
- Mr. Beck indicated he is appreciative to PortsToronto for setting up this meeting with the TC representatives.
- Ms. Monette expressed her thanks to the TC representatives as well. She noted that at some point she would like to speak with Ms. Bailey and other members of the Environmental Protection and Standards Division about environmental issues at the airport, including air pollution.
- Mr. Furneaux thanked the TC representatives on behalf of the NMSC and noted that there would be ongoing communication on how the conversation between TC and the NMSC can evolve. Mr. Furneaux welcomed the TC representatives to log off from the meeting.
- Mr. Furneaux then confirmed with Ms. Homewood and Mr. Beck that they would meet as a group offline to discuss the process for getting additional clarity on the questions posed to TC.

Transport Canada staff departed the meeting at 8:30p.m.

M#16-A4 Mr. Furneaux and NMSC co-chairs to discuss planning of future meetings with Transport Canada.

- Mr. Beck expressed concern that TC already received his questions but they were not addressed in this meeting. He noted that only the first issue from the January 11 email was discussed today, while the other six issues from that email were only given brief responses, and there were no responses to the issues raised in his March 17, 2022 email.
- Mr. Beck indicated that he does not know what else he should do because the questions will be the same.
- Ms. Homewood suggested that once the meeting minutes are issued, Mr. Beck can review the minutes and highlight the gaps in the responses, which would provide a starting point for future discussions. Ms. Homewood noted that she could forward the questions provided by Ms. Monette for TC to respond to in the meantime.

M#16-A5 Ms. Homewood to forward Ms. Monette's questions submitted by email to Transport Canada.

- Mr. Moore noted that in addition to the NEF questions, there are other points raised by Ms. Monette and himself regarding noise measurements that he is hoping will be carried forward as well.
- Mr. Beck inquired whether Mr. Moore would like to send TC his questions for ICAO.

- Mr. Moore indicated that there is a lot already being discussed, and that it is not a priority to bring that up at this time.
- Mr. Moore noted that the issues being raised by the NMSC should be resolved if the airport is to be renewed. He suggested that all the points being raised by the committee members can become a part of a work plan that frames what conditions need to be met in order for the Agreement to be renewed in 2033.
- Mr. Beck agreed and expressed that the most pressing issue for the community is the suggested increase in airport slots.
- Ms. Monette agreed and noted that the community does not believe there is a reason for increasing slots. She indicated that the noise already experienced by the community is unacceptable.
- Ms. Monette then expressed concern that the community is seeing more general aviation flights in the form of small commuter jets and helicopter tours that can be very noisy. Ms. Monette noted that these types of flights are not contained by the number of slots. Ms. Monette indicated that the increase in smaller flights was spurred by the COVID-19 pandemic and added that Porter Airlines is now flying to Muskoka.
- Ms. Homewood clarified that the Porter Airlines flights to Muskoka were happening before the pandemic.
- Mr. Beck clarified that all aircraft activity at Billy Bishop Airport are supposed to be captured by the NEF modeling, and it is just the Q400 aircrafts that are slot regulated. Mr. Beck noted that the Master Plan indicates a projected timeframe for when general aviation flights may also become slot regulated.
- Mr. Beck emphasized that the number of Q400 slots needs to be reduced. He indicated that just considering issue number one from his January 11 email would suggest that the slots should be reduced from 202 slots to 136 slots.

3. Ground Noise Study

Michael MacWilliam (PortsToronto) provided a brief update on the Ground Noise Study on behalf of Michael David. Mr. MacWilliam noted that the noise monitors for the study are currently being configured and that three volunteers have been identified for installing the noise monitors at their properties. PortsToronto is looking for three additional locations so that in total six noise monitors can be installed. Mr. MacWilliam indicated that PortsToronto would be looking to the NMSC to help identify additional volunteers, and that Mr. David would send an email the following week with information on the request.

- Mr. Beck inquired whether the email could include a map that shows where the three currently identified locations are.
- Mr. MacWilliam confirmed that this could be done.
- Ms. Monette asked what the requirements would be for the volunteers who are going to have the monitors.
- Mr. MacWilliam responded that Mr. David will explain that in his email. Mr. MacWilliam indicated that the requirements would be like those outlined the first time Mr. David was looking for volunteers.

- Mr. MacWilliam added that any additional information committee members think would be helpful for residents can be included.
- Mr. Beck suggested that a paragraph detailing the purpose of the study in plain language would be good to include so that someone who does not know anything about Billy Bishop Airport could be encouraged to volunteer.
- Mr. Beck asked whether monitors could be installed on window walls.
- Mr. MacWilliam responded that he does not know but noted that these are temporary installations meant to be set up on a tripod on a balcony.
- Ms. Monette noted that the community would need to know the duration of the monitoring and the size of the equipment.
- Mr. MacWilliam responded that he does not know but Mr. David would clarify this in his email.

M#16-A6 Mr. David to send email on the request for Ground Noise Study volunteers, including a map showing the monitoring locations that have already been confirmed.

4. Permanent Noise Monitor Terminal Update

Michael MacWilliam (PortsToronto) noted that the email he sent to the NMSC earlier that day provides his update on the Permanent Noise Monitor Terminal. Mr. MacWilliam added that his target is to install the noise monitor at Ontario Place within the next two months.

- Ms. Homewood noted for the benefit of new NMSC members that the Ground Noise Study involves temporary noise monitors, whereas the monitor being installed at Ontario Place is a permanent noise monitor.
- Mr. Beck noted that there had been discussion about preparing data table templates for the Ground Noise Study that are in a similar format to the Brüel & Kjær (B&K) software output reports for the permanent noise monitors, so that the data from the two sources could be cross-referenced.
- Mr. MacWilliam confirmed that he would take that away as an action item.

M#16-A7 Mr. MacWilliam to investigate data table templates for the Ground Noise Study.

5. Business Arising

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

- Mr. Furneaux noted that the meeting minutes for NMSC #15 were circulated by email on April 15th. Mr. Furneaux requested that any comments be shared by June 1st.
- Mr. Furneaux noted that the draft Year-In-Review was also circulated in the same email. Mr. Furneaux noted that this Year-In-Review combines the year 2020 and 2021 because those were slower years than is typical for the NMSC due to the pandemic related shutdown of airport activities. Mr. Furneaux noted that the purpose of the Year-In-Review is to report back to the CLC on what the NMSC has accomplished over the last two years.

- Mr. Furneaux noted that the email also includes a draft revision to the NMSC Terms of Reference, that extends the mandate of the NMSC.
- Ms. Monette indicated that Mr. Furneaux's emails are going to her spam folder and that she did not receive his April 15th email.
- Mr. Furneaux confirmed that he would resend the materials from that email along with the presentation from Transport Canada to all committee members.
- Ms. Homewood asked that committee members prioritize providing feedback on the Year-In-Review so that any feedback can be incorporated for the May 24 CLC meeting.
- Mr. Beck indicated that there may be a confusion generated by the working name of the 'Ground Noise Study' because of difference between the stationary source noise issues and the flyby modelling issues, where the NEF software is applying 'ground noise attenuation algorithms' as referred to in the literature.
- Ms. Homewood suggested that this is discussed when Mr. David is present as he is the project manager for the study.
- Mr. Beck clarified that he is not suggesting a change in scope in this instance, but just a change in name.
- Mr. Furneaux indicated that this can be discussed when Mr. David is back and suggested that Mr. Beck can prepare some ideas for alternate names. Mr. Furneaux added that the public would not have the same level of technical knowledge as those on this committee, so the framing of the study should be in plain language.
- Mr. Beck noted a primary concern for him is eliminating the confusion amongst noise engineers let alone the public.

M#16-A8 Discuss considerations for the naming of the Ground Noise Study at the next NMSC meeting.

- Mr. Antle responded to Ms. Monette's comments about chartered jets earlier in the discussion. Mr. Antle clarified that there are no chartered jet operations at Billy Bishop Airport. He noted that if there is a jet aircraft operating at Billy Bishop Airport then that would be a MedEvac flight.
- Mr. MacWilliam added that Ornge contracts other companies to fly patients and those companies may use jet aircrafts for MedEvac.
- Ms. Monette noted that the fact that these are MedEvac flights does not discount the noise that they are producing. She noted that she sees about three or four jet aircrafts every day.
- Mr. MacWilliam noted that some MedEvac flights using a jet aircraft may be transporting organs, not patients.
- Mr. MacWilliam added that PortsToronto could investigate specific aircrafts to help identify them. He indicated that committee members would just need to provide the date and time of a flight and PortsToronto could investigate it.
- Mr. Moore asked if there is a website that shows the planes that are leaving and arriving at the airport.

- Mr. MacWilliam confirmed that the public can access [WebTrak](#) to see this information. He noted that clicking on a plane icon will result in a pop-up window with more details on the flight, including the aircraft type.
- Mr. MacWilliam confirmed that PortsToronto can provide a list of codes used on WebTrak for identifying aircrafts.
- Mr. Antle noted that information on how to use WebTrak had previously been shared, and this could be resent.

M#16-A9 PortsToronto to recirculate information on how to use WebTrak.

- Mr. Moore asked whether the high-pitch noise that the community has complained about could be originating from an idling jet.
- Mr. MacWilliam responded that he believes the noise is originating from an air conditioning cart and is continuing to investigate this. He noted that he will be recording the noise from the air conditioning cart and will send the recording to committee members to confirm whether this is the same noise.

M#16-A10 Mr. MacWilliam to send a recording of the air conditioning cart noise to NMSC members.

- Mr. MacWilliam noted that the air conditioning cart is typically used in the morning when planes are being started up to keep the aircraft warm in the winter or cool in the summer. He indicated that it is generally only used for the first flight of the day.
- Ms. Monette asked whether the air conditioning cart is ever used during the evening or nights for maintenance work on planes.
- Mr. MacWilliam responded that the only scenario where the air conditioning cart would be used during maintenance work is if it was the plane's air conditioning system that was being worked on.
- Ms. Monette noted that she had read that aircrafts have an auxiliary tail engine that is turned on when they dock. She inquired whether the Q400 aircrafts operating at Billy Bishop Airport either do not have or do not use that engine, and therefore use the air conditioning cart instead.
- Mr. MacWilliam responded that Q400s do have an auxiliary power unit which is called an APU, but it is smaller than those of bigger airplanes. Mr. MacWilliam noted that Q400s only need to use their APU when they do not have access to ground power. At the Billy Bishop Airport terminal, Q400s can access ground power by plugging into the gate before shutting down, so they do not need to use their auxiliary power unit.
- Ms. Monette asked whether aircrafts at Billy Bishop Airport would turn on their auxiliary power unit when they are running and waiting to dock.
- Mr. MacWilliam responded no because when an aircraft is running it gets all its power from its main engine.
- Mr. Furneaux thanked the NMSC members for their participation and called the meeting to a close.

The meeting adjourned at 9:30 PM.