Billy Bishop Toronto City Airport

Noise Management Sub Committee Meeting 2 – Summary

July 25th, 2018
6pm to 8pm

Billy Bishop Airport Boardroom

PARTICIPANTS

Angela Homewood (PortsToronto)
Gary Colwell (PortsToronto)
Bryan Bowen (City of Toronto, Waterfront Secretariat)
Hal Beck (York Quay Neighbourhood Association)
Wayne Christian (York Quay Neighbourhood Association)
Lesley Monette (Bathurst Quay Neighbourhood Association)
Max Moore (Bathurst Quay Neighbourhood Association)
Alex Lavasidis (Lura Consulting - Notetaker)

COMMITTEE MEMBER OBJECTIVES

The following provides a summary of Committee members' desired outcomes from the Noise Management Sub Committee process. These desired outcomes will inform the creation of future Sub Committee meeting agendas.

Noise standards:

- Define current noise standards.
  - Define standards in relation to a) Stationary Source Noise; b) Single Flyby Event Noise; and c) Continuous Flyby Noise which is a measurement calculated through the noise exposure forecast (NEF) process and used at airports across Canada.
  - Identify what (if any) noise is not covered by existing noise standards.
- Define how noise is measured and quantified now (how data is collected and compared to the standard).
  - Identify potential improvements to measurement and quantification of noise. The goal of these improvements should be to more accurately represent the real noise experience (e.g. provide suggestions for where to place monitoring points; define the best unit of measure for noise issues; identify or develop standards for ground noise monitoring).
  - Work towards the creation of mutually agreed upon methods for noise data collection and analysis.
- Define benchmarks for ground noise in the communities around BBTCA to allow for accurate noise measurement and tracking.
- Clarify how the airport noise is best measured and monitored in the field.
- Understand how meteorological effects of the marine environment on airport noises should be assessed.
- Understand the noise standards applicable to the airport and how these are confirmed in the field.

- Identify noise management projects that will reduce noise and meet the standards.

Compliance and Enforcement:

- Clarify how compliance with noise standards are enforced by the Ministry of the Environment, Conservation and Parks.
- Identify potential tools and variables that could be used to update the Tripartite Agreement (during the next round of renewal) to allow the agreement to better manage the impact of noise (and other impacts) from BBTCA on neighbouring communities.

Land Use:

- Build a better understanding of the land use conflict between the noise produced by BBTCA and residential areas around BBTCA.
    - Identify whether residential development around BBTCA has triggered any noise studies, or if zoning in the City needs to be updated, to reflect the realities of the noise produced from BBTCA activities. Understanding this could help the City identify zoning changes that need to be made to better reflect the noise issues experienced on the ground, and better identify which areas of the City need to conduct noise assessments before developments move forward.
    - Provide a list of 60 key words related to noise management, and their explanations, online.
    - Create and share a "How to file a noise complaint online" guide.
    - Review land planning processes with respect to waterfront airport noise.

Studies:

- Establish a consistent pattern for tracking run-ups to be able to compare this to noise issues.
- Clarify how noise impacts will be considered in the Master Planning Process.

Experts:

- Bring in noise experts and other subject matter experts when relevant to inform discussion and answer technical questions (e.g. Ministry of Environment, Conservation, and Parks or a noise consultant).
    - Create a list of questions in advance of visiting experts to ensure good use of time.

Terminology

- Learn industry noise terminology for more effective discourse

Terms of Reference (TOR):

- The TOR should be reviewed and updated. The TOR will help to ensure the Noise Management Sub Committee is accountable to the BBTCA Community Liaison Committee (CLC) and that all Sub Committee members understand the Sub Committee process.
    - City Council or staff representation can be removed, and this can become a briefing instead.
    - Consider changing the name from Sub Committee to something less broad (e.g. the Airport Noise Management Committee).
        - The Sub Committee will share suggestions for committee names in follow-up emails.
    - Participants suggested meeting more often, potentially every 2 months for a six-month period to ensure progress on priority items.

SUMMARY OF DISCUSSION

The following provides a summary of discussion based on theme. This is not a verbatim account of the discussion.

Noise Standards and Measurement

- Hal stated there are three types of airport noise sources: a) Stationary Source Noise; b) Single Flyby Event Noise; and c) Continuous Flyby (Calculated through the NEF process). Hal explained that the NEF measurement is primarily structured for airports with more than one runway (resulting in multiple flights in the air at one time), and airports with overnight flights; neither of which conditions exist at BBTCA.
- Hal would like to use the Noise Management Sub Committee to understand how noise is measured; how standards are being complied with (e.g. is this through self-checking and what enforcement is involved); how noise is quantified (e.g. how data is collected and compared to standards); if there are noise levels experienced in the community that are not captured by any of the standards.
- Bryan inquired where nuisance noises (e.g. truck movements) would fall. Hal explained this would be classified as stationary source noise. Max added that stationary source noise includes all airport ground noises (e.g. airplane taxing, truck and construction noise, and ferry noise).
- Bryan inquired what source documents point to the definition of stationary source noise. Hal responded that NPC-300 (2013) was the source document. Hal explained the background to NPC-300: In 1978, the Ontario government published Model Noise By-laws. These were issued to all municipalities, who were then instructed to create their own noise by-laws. This contained many of the exclusion limits that exist today. In 1995, NPC-205 was created, and in 1997, LU-131 was created, which were both predecessor documents to NPC-300. NPC-300 is useful as it compiles all the guidelines that came before it into one document.
- Max explained that because of the unique setting of the BBTCA (close proximity to the city, tall building shapes, and water surrounding the airport), ground noise is a much bigger problem at BBTCA than other Canadian airports. He asserted that the International Civil Aviation Association (ICAO) standards, which are currently used as a gauge of ground noise, are incorrectly used as such. Max explained that ICAO standards are used to certify airplane noise in comparison to other aircrafts, not to measure ground noise experienced by a community. To measure to ICAO standards, three points of measurement are used to gather data as the plane flies; all three points are far away from the airport and therefore irrelevant to measuring airport noise in local communities. Max asserted that ICAO is irrelevant for documenting ground noise in a

community and should not be used for such purposes, as this was never the intention of ICAO standards. Wayne stated there are no considerations in ICAO for local conditions (e.g. the presence of water).

  - Hal further explained that the three spots of measurement for ICAO standards are incorporated into the Tripartite Agreement and are used to decide which planes are allowed to fly out of BBTCA. The three measurements used for ICAO are
    a) Landing approach reference point is 2000m from touchdown location; b) Flyover takeoff reference point is 6500m from the beginning of the runway; c) Lateral reference point is 450m parallel to the runway at the loudest point on the ground. Max added that these three measurements are then averaged and statistically manipulated and the outcome does not represent a specific point of noise level experienced nor should it, as this in not the intent of the ICAO measurements.

- Max would like the Noise Management Sub Committee to lead to the creation of a clear and rigorous process for measuring noise levels experienced in the community.
- Max suggested the BBTCA develop a clear process for setting a benchmark for ground noise in the communities around the airport and a measurement process for ground noise. Max suggested this would be the first ground noise measure for airports developed in the world. This would allow for accurate and consistent noise measurement and therefore provide accurate tracking of noise impacts based on airport actions. Max noted that this reflects on the broader need to identify how to measure noise accurately and meaningfully and what standards should be used to do so, as well as how data should be measured and documented.
- Max explained the difference between measuring sound in dBA and dBC units. dBA does not measure the sound base, which is around half of the noise generated from airplanes; measuring sound using dBC is more useful and accurate as it measures complete decibels, therefore giving a fuller picture of the noise experience. The difference between 70 dBA and 80 dBC is about a doubling of volume, illustrating that the unit of measure used is important in understanding the noise experience accurately.
- Gary suggested the noise expert who is currently writing the report to suggest placement of noise meters around BBTCA, attend the CLC and Noise Management Sub Committee to answer technical questions around noise. The Sub Committee supports bringing this noise expert in to meetings.
  - Hal would like to discuss the locations for noise meters with the noise expert and suggested a community walk.
  - Bryan questioned how the information gathered from the placement of noise meters would be useful, as there is yet to be a set of mutually agreed upon standards for collecting and assessing noise data in a way that all parties view as valid.
  - Other subcommittee members echoed this sentiment and would like to ensure meters are placed in valid locations and measurements are collected that truly reflect the noise impacts experienced by the community. This would lead to the BBTCA better understanding what activities are most problematic and why,

which would allow causes to be better addressed.
    - Bryan suggested additional experts are brought in, specifically from the Approvals Unit of the Ontario Ministry of Environment, Conservation, and Parks. He suggested that prior to experts attending meetings, the Sub Committee should create a list of questions for each expert so their time is spent effectively.
- Hal noted there has never been a comprehensive Environmental Assessment. He noted that his community members observed a heightened noise impact due to the Q400 aircraft.
- Gary commented that there are many different aspects that can influence the noise from a plane, including weight and the way a pilot lands. Gary noted that turbulence produced by wind interacting with tall building impacts how planes land.
- Participants realized that the direction and level of approach of a pilot landing can lead to heightened noise in one community and lessened noise in another.
- Wayne agreed with previous comments that the Noise Management Sub Committee should result in participants gaining a better understanding of sound and noise. Wayne suggested this understanding be transferred to the public by providing a list of key words and their explanations online.
- Wayne suggested considering the meteorological aspects of noise seasonally in creating a better understanding of noise around BBTCA.
    - Wayne explained that due to Canada's prevailing west winds, the cooling effect of water from Lake Ontario in the summer, and the hot air rising in the city, winds increasing from a south-westerly direction, this affects the direction of plane landings and takeoffs, as well as impacting how noise travels into surrounding communities.
- Wayne explained that he has tracked flights throughout various weather conditions, seasons, days, and times, and that these conditions result in varying flights and therefore varying noise impacts. He asserted that this variance must be accounted for in any noise studies.
    - Wayne noted that peak times for flights are around summer travel season and Christmas, with daily peak times around 7:30-9:30 am and 4:00-6:00 pm, and a lower volume of flights on Tuesdays and Wednesdays.

Noise and Land Use decisions

- Hal is interested in how residential buildings were approved around the airport based on the NPC-300 guideline. Hal wants to ensure the noise standards that were in place when the residential buildings were built are followed.
- Bryan noted that if an area is already zoned residential, and an application for a residential development is put forward, a noise impact study might not be required. He noted that the residential zoning for the land around the airport was designated as such, at a time when the maximum capacity of the airport was set to be limited to 1 million annual users. Bryan questioned what assumptions were made about the airport when the land use and zoning regulations for the neighbouring communities were set.
- Bryan also emphasized that there are buildings currently being approved based zoning by-laws that may be informed by outdated assumptions about the size and impact of

the airport; these assumptions may no longer apply and therefore suggest a need to update zoning regulations in relation to the size of the airport.

- Bryan would like to know if the developments proposed around BBTCA must undergo an acoustic assessment for noise mitigation associated with background transportation noises, or if, because the communities are outside of the 30 NEF contour, as outlined in the City's Official Plan, there is the assumption that no additional noise study needs to be conducted for these residential properties. If the latter is the case, this illustrates that although a proposed development may be in compliance with the Official Plan (and therefore the Provincial Policy Statement), there would still be an issue of noise experienced in the community. This would therefore suggest the NEF contours are inadequate at ensuring protection from noise disturbances in areas surrounding BBTCA.
- Bryan stated that the Tripartite Agreement is not nuanced enough to address the impact of the airport and is a poor instrument for managing growth. Eventually the terms of the Tripartite Agreement will need to be re-evaluated. In the Porter Review, the City put forward a phased framework for growth, which provided a more nuanced take on phased growth for the airport. The goal of this alternate framework was to ensure the airport's growth would occur at a level at which the City could absorb and abate (e.g. managing transportation needs to and from the airport).
- Bryan would like the committee to discuss the potential new tools and variables that could be used in a changed Tripartite Agreement in the future.
- Bryan questioned if there were best practices to look to measuring ground noise and ideas around how to possibly identify what residential developments would require noise feasibility studies in the future. For example, should residential developments proposed for the base of the Don River, in the Portlands, and along East Bayfront need to consider noise impacts from the BBTCA.

BBTCA Efforts to Reduce Noise

- Gary stated that BBTCA has been working with NAV Canada to hold a pilot project where instead of commercial planes taking off in a westerly direction (as per usual), on low- traffic volume, calm wind days, commercial flights take off west to east in an effort to reduce idling noise in neighbouring communities. Lesley supported this effort stating that a west to east flight path would result in buildings buffering some of the noise experienced in her community.
- Gary highlighted a number of additional efforts of BBTCA to improve noise management including: personalized responses to noise issues and complaints; research into the creation of additional sound walls; moving general aviation to the south end of the field to alleviate related noise, and; ferry electrification.
- Wayne and Max volunteered to help Gary write a guide for the community on the topic of "How to file a noise complaint online".

Congestion Leading to Idling

- Lesley explained that her condominium overlooks the east runway and that she often sees plane congestion, which lead to increased noise, and pollution, as planes can't enter their gate or take off and must therefore idle. Lesley noted that she would like the Noise Management Sub Committee to help address high noise levels experienced by the community including ground roar. She is interested in the creation of an east side noise barrier. Lesley stated that her building is interested in hosting a noise meter to allow for a substantial review of noise levels to be completed in her community. She noted thatthe noise study should cover the changes that occur over days, weeks, seasons, and weather, as noise levels are highly variable. Lesley's community finds summer to have the greatest noise levels. Overall, Lesley would like the airport to more accurately and consistently measure noise levels in the community; this would allow the impact on noise levels from any changes completed by BBTCA to be measured meaningfully (e.g. in the case of any rearrangement of the airport, the noise impacts could be observed). Lesley would like the noise impacts on the community to be considered in all decisions regarding airport operations.
- Gary explained that congestion is often due to ground stops caused by weather issues at BBTCA or other airports. For example, if there is a stop in Newark, those planes will be backed up and eventually leave around the same time (once the issue is cleared), which will lead to a buildup of flights arriving at BBTCA and result in congestion around gates. BBTCA has recently instituted a busing procedure and contingency plan to prevent idling. After a set amount of time spent idling (no specific timeline identified yet by the airlines), planes can be brought to the GRE where passengers will be unloaded onto the ground and the plane will be parked nearby.
- Gary explained that engines remain running while planes are waiting to enter a gate to power air conditioning and cabin needs.
- Bryan inquired if international flights can only doc at international gates. Gary replied that although the airport attempts to keep things as streamlined as possible for passenger flow, in disturbances (e.g. backups due to weather) planes can dock at different gates.

Number of Flights and Runups

- Lesley suggested limiting the number of flights into and out of the airport may be one method of addressing sound impacts on the neighbouring communities.
- Bryan noted that the 202-slot cap is a limit put in place by PortsToronto, and that there is no cap specifically outlined in the Tripartite Agreement. If PortsToronto wanted to increase the cap they would not have to ask the City of Toronto for permission, as the responsibility is for PortsToronto to show they are in compliance with the NEF noise contours for the management decisions they make around the number of daily flights.
    - Wayne doubts the slot limit would increase, as he does not believe it would be economically viable for Porter based on demand.

- Hal noted that helicopters are being modeled using NEF software. Helicopter flights are not slot related. He also asserted that “emergency” service movement allowances should be restricted to air movement related to emergencies at the airport, not emergency vehicles that operate as a business.
    - Gary responded that the term “medivac” is used to allow for any movement related but not limited to organ transplant, disasters, car accidents, critically ill patients, etc. Max noted that emergency service aircraft go to BBTCA to park after dropping off patients. Additional landing bases exist in London and Sudbury.
- Wayne explained that the method for tracking the number of run-ups conducted has changed over the past four years, making comparison of run-up numbers impossible. He would like to see a consistent methodology for tracking run-ups established through the Noise Management Sub Committee.
    - Hal would like to see a 10-year rolling statistics around run-ups and does not find the information relayed through the 2017 Noise Report to be adequate.
    - Angela confirmed that there is approximately one high-powered run per day in the Ground Run-up Enclosure (GRE).
    - The Sub Committee recognizes that the GRE has had a positive impact on noise in different communities. The Sub Committee would like to have a tour of the GRE and witness a run-up.

Ports Governance Review

- Lesley noted that Transport Canada is undergoing a governance review of Port Authorities, for which input is due in September. She will share an email with the Noise Management Sub Committee in an effort to increase public feedback into the governance review process.