

Hal Beck is YQNA's representative in matters regarding the Island Airport. On October 16, 2013 he sent the following document, listing issues, questions and process suggestions to Golder and the Waterfront Secretariat who are conducting the City's Health Study pertaining to a Jet Expansion of the Island Airport.

### **Requests concerning Dec 2013 Health Study Report Contents**

1. Please provide a matrix of how the potential health impacts relate to the health assessment factors. I.e. 'physical health, mental health, and well-being impacts' versus 'environmental, economic, social and cultural factors'. It is not clear.
2. Please tabulate all typical potential mitigation alternatives that could be considered for both the health impacts and health factors, and identify those that the study team focused on in the study.
3. Please provide a more fulsome list of relevant key resource documents that the study team believe are most applicable for this health study, for waterfront stakeholders to educate themselves.
4. Please provide information to the extent required by the Council Decision Items of May 7, 2013 (see attached page 2).
5. Please confirm if there are any health benefits possible for any waterfront stakeholders of introducing jet aircraft at Island Airport i.e. are we only looking at a negative situation.
6. Please document specific populations reviewed and their geographic location. Per HIA Background materials, breakdown the populations based on: physical environment, social environment, income and employment considerations, genetics, and child development.
7. Please document the potential impacts to the physical health, mental

health, and well being of the public.

## **Health Scenarios**

8. Three airport operating scenarios were presented to the public for the first time on Oct 9, 2013. These have not yet been defined for the study team or the public. Please clarify the following for each scenario:
  - (a) Specific horizon years assumed for each scenario
  - (b) Number of slots of Q400 vs CS100 for each scenario
  - (c) terminal building/ gate configurations, terminal building, runway capacities, hush houses, etc. assumed for each scenario (What potential outcomes of Airport Master Plan not yet completed are assumed.)
  - (d) ultimate airport service capacity and unused airport capacity under each scenario
  - (e) slot schedules assumed for each scenario, clearly showing time and concentration of arrivals and departures separately, marked at 15 minute intervals. (Increased concentrations of flight movements affect health impact intensity. Departing pax will use Eireann Quay over longer duration than arriving pax.)
  - (f) buffer times between runway movements assumed, including time separating the turning on of each plane engine on any part of the airport grounds
  - (g) flight passenger slot loading and associated boarding pass rationing assumptions for each scenario, broken down into 15 minute intervals
  - (h) the proportionate increase in number of heavy post maintenance runups relative to May 2012 numbers
  - (i) the assumed number of planes moving on the ground simultaneously, or with engines turned on at any one time prior to using the runway

## **Data Collection (Noise, Air, Traffic)**

9. Please provide a list of all test conditions that are typically reviewed prior to commencing Data Collection, and then clearly identify those actually investigated in the report.
10. Please calculate the statistical relevancy of technical data collected.
11. Please document the exact time, duration, and method of data collection.
12. Please document proposed net increase in background pollution anticipated due to Pearson heavy rail link.
13. Please comment on extent of reduction in health impact of airport since May 2012 due to reduction in airport passengers.

#### **Electronic Modeling (Noise, Air, Traffic)**

14. Please clearly document how electronic models used under the Health Study for the Dec 2013 report were calibrated and validated.
15. Please summarize all test criteria, comparing the standards against the study findings.

#### **Noise Health Impact Technical Work**

16. Please document conditions at comparable airports with respect to residential tower proximity and ability to overlook airport ground activities from resident sleeping and living quarters. A direct line of sight is a direct line of sound.
17. Please confirm healthy number of sleeping hours for community members ie. were Signatories reasonable in agreeing to current

operating hours of airport or ferry.

18. What is maximum decibel reading at pillow elevation permissible that will ensure any community member at any age will not be woken up by airport runup, ferry, or flights.
19. Discuss dBA vs dBC measurement thresholds with respect to monitoring window rattling effects and sleep deprivation.
20. Provide a feasibility review of installing permanent web-enabled noise monitoring equipment on the outside of towers at targeted elevations.
21. Provide information with respect to emerging community noise mapping projects using smart phones, which can input into airport noise management programs.
22. Please provide information on banning car alarms from airport parking lots.
23. Provide practical advice for residents in coping with all airport related noise impacts and resulting stress from sleep deprivation eg. any dietary considerations, exercises during mid day to improve alertness at work due to airport sleep loss exhaustion.
24. Summarize all airport related noise impact considerations: flight movements on runways and in air beside towers, plane warm-ups and taxiing, ferry horn blasts, rolling luggage noise annoyance concerns, post maintenance runups, helicopter night flight noise propagation and reflection, etc.
25. Summarize order of magnitude of existing Q400 noise considerations eg. takeoff noise at bedroom windowpane ranging 75dBA, ferry noise impact during sleeping hours ranging 64 dBA at bedroom windowpane, etc

26. Please assess impact of constant roar from multiple planes warming up or rolling around simultaneous at any time of day, and impact of planes lining up at end of runway pointed toward residents in May 2012 (photos available) eg. there is sometimes a noise peak as plane turns a corner.
27. Quantify number of bedroom windowpanes which no longer meet MOE interior noise criteria of NEF=0.
28. Confirm which waterfront buildings are Class 2 vs Class 1 under MOE noise criteria. At what tower elevation or storey do residential units change from Class 1 to Class 2. (Eg. in 2002, I used to sit on bench after work beside ferry slip and hear my pulse over the faint dull white noise of Gardiner Expressway. This indicates that 34 Little Norway Crescent and adjacent park would be assessed at Class 2. Any units facing Gardiner Lakeshore would be Class 1. Please confirm for Dec 2013 report.)
29. Document the geographical range and statistical likelihood of the Actual 0 NEF Contour location. Need to look at external face of buildings as waterfront towers do not have noise protection or HVAC capable of supporting AC during summer months and are designed with large south facing bedroom windows to open 24/7 to cool lake breezes eg. takeoffs audible at Queen Street.
30. Confirm max vibration criteria to avoid wakeup from rattling windows (airborne vibration) or ferry operation (waterborne vibration transmitting to bedroom floor).
31. Provide practical guide for residents in obtaining, using and understanding noise meters and vibration meters.
32. Document ambient (ie. background) noise as it varies across the waterfront, at targeted elevations, over the 24 hour day. The ambient

noise must exclude any airport impact related noise ie. desirably excludes ferry conveyance system so that full cumulative impact of airport operation can be understood.

33. Please quantify modeled data for Leq (1), Leq (8), so that City can actually look at the noise impacts (not as shown in workshop presentation). Also need to breakout Leq (evening) for MOE Class 2 areas so that City can evaluate appropriateness of as-constructed waterfront building materials to withstand airport noise.
34. Document in report that residents currently do not have possibility of 8 hours of sleep due to approved slot schedule, curfew violations, helicopter movements, airport maintenance construction activities during sleeping hours, and ferry operation and testing schedule (which only guarantees 3.75 hours quiet prior to commencement of ferry testing at 4am).
35. Please include graphs and clearly document in Dec 2013 report the relationship between passenger loading, fuel weight by destination, and the resulting noise impact at various tower elevations. An example comparison table, including the current typically empty new flight runs, would be helpful.
36. Please assess the volume of noise pollution which is not benefitting anyone eg. a noise event assumed for Q400 flying into Toronto with 10 people and departing with 20 people. The value of each unit of noise pollution supporting the under-capacity Q400, affecting all waterfront stakeholders, is low. This information will assist in establishing noise efficiency benchmarks for noise impact vs slot count.

### **Air Pollution Health Impact Technical Work**

37. Please document assumptions with respect to recovery timeline of US

Mid-West, which is the primary source of Toronto air pollution.

38. Please obtain samples of film forming on area yachts and balconies to confirm human safety for children's toys, and also cleaning requirements for external brickwork and various HVAC systems.
39. Please document health and safety issues related to the transportation and handling of various fuels.
40. Please provide a simulation of the anticipated impact on surrounding residential towers and areas should there be a massive aircraft fuel explosion (of a truck, an underground tank, an aircraft or any combination thereof) for each Health scenario eg. which tower windows will implode with air pressure from blast.
41. Please document meteorological statistics for airport, including applicable stats relevant to health impacts. For example:
  - (a) Wind direction re plumes
  - (b) Wind speed re distance
  - (c) Updrafts on water surface
  - (d) Barometric high/low pressure
  - (e) Temperature
  - (f) Calm reflective water surface

### **Traffic Health Impact Technical Work**

42. Please set up stakeholder meeting to discuss Transportation Study immediately. The Transportation Study has not yet been completed or issued, and is critical in completing the Health Study.
43. Please provide summer grid lock operating assumptions, and discuss

ambulance access to Little Norway Crescent.

44. Further to the above comments regarding the 3 Health Scenarios presented Oct 9, 2013, please clarify the following for each scenario:
- (a) Passenger modal split breakdown
  - (b) Number of employment trips to and from airport including modal split
  - (c) Total trips in each direction on each leg of Bathurst/ Queens Quay intersection.
  - (d) Assumed volumes of idling on Lakeshore boulevard caused by increased southbound movements with trip ends at airport.
  - (e) Assumed volumes of taxis idling on Eireann Quay.
  - (f) Assumed circling passenger traffic looking for airport parking and effects of idling traffic inside Bathurst Quay eg. south end of Little Norway Crescent
  - (g) Assumed number of employee parking trips and location of parking.
  - (h) Maximum number of trips assumed on east leg of Bathurst/ Queens Quay intersection, including modal split, in conformance with Queens Quay Revitalization EA Study document and appendices.
  - (i) Assumptions for additional circling tourist traffic at Bathurst/ Queens Quay intersection destined for Ripley Aquarium (traffic not considered under Queens Quay Revitalization).
  - (j) Road and transit infrastructure assumed for each scenario eg. post-Queens Quay Revitalization road capacity, transportation network configuration, and transit service frequency and capacity assumptions

### **Report Disclaimers**

45. Please issue each report with professional seal eg. engineer's stamp, signed and dated.
46. Please label each report 'Very Preliminary Draft'.

47. Please include a statement on the introductory page of the Dec 2013 report in large bold font size which states: “Work covered by this document was commenced in October 2013 to meet a November 2013 report deadline, established by Council in advance of a December 2013 Council vote on whether CS100 jets should be approved at the Island Airport. This report deadline does not allow for some standard project protocols to be carried out. Some fundamental engineering practices were either partially completed or otherwise not carried out in order to meet the deadline established for the study team. Some of the technical information presented herein may not be legally supportable under ‘balance of probabilities’ testing and/or under ‘fair and reasonable’ testing. “
48. Immediately following the above, please include any disclaimers which Golder needs to insert in order to protect themselves corporately, keeping the onus of responsibility for the report contents and findings solely with the City of Toronto. Please also include in the report all disclaimers which Golder felt compelled to include in their approved professional services proposal.
49. Please explicitly state on the introductory page of the report that the contents, opinions, and findings of the Dec 2013 report are exclusively those of the City of Toronto.
50. Please include in the report the typical flowchart showing study steps, and identify the steps where shortcuts in methodology or process was necessary in order to meet the unrealistic Council deadline for Dec 2013.

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