



BBTCA Expansion Review Summary Report

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Cover image:

Looking North, up Spadina Avenue, from Billy Bishop Toronto City Airport
(Flickr - Prayitno)

1

Introduction

This report summarizes the technical findings of the Billy Bishop Toronto City Airport Review (“the Review”) that was initiated in May 2013. Toronto City Council instructed City staff to review Porter Airlines’ proposal, put forward by the Toronto Port Authority (“TPA”), to extend the existing Runways 08 and 26 and to introduce jet-powered aircraft.

1.1 The Scope and Progress of the Review

To complete this Review The City of Toronto engaged a number of consultants to identify and study the potential impacts of Porter’s proposal on the waterfront area and the broader city. Technical studies were conducted to assess the proposal’s implications for health (including air quality), infrastructure, noise, the economy, long-term planning and urban design, transportation, and the terrestrial and aquatic environments.

To separate the potential impacts of expansion from existing Airport impacts, three study scenarios were developed. All three scenarios were based on the assumption that the Billy Bishop Toronto City Airport’s (“BBTCA” or “the Airport”) self-imposed daily movement cap of 202 would remain (one movement entails either one landing or one take-off). However, this daily movement cap is not subject to the Tripartite Agreement, and the TPA and the airlines operating out of BBTCA can exceed this limit without input from the City provided that they comply with existing Noise Exposure Forecast (NEF) limits.

The three established study scenarios are:

Scenario 1 <i>2012 Baseline</i>	Scenario 2 <i>Maximizing existing facilities</i>	Scenario 3 <i>Proposed airport expansion</i>
2.3 million passenger capacity No jets No runway expansion Approx. 15 movements / hour	3.8 million passenger capacity No jets No runway expansion Approx. 15 movements / hour	4.3 million passenger capacity Jets Runway expansion Approx. 15 movements / hour

As the Review progressed it became clear that two additional scenarios were required to assess the removal of the self-imposed movement cap and the maximization of Airport passenger capacity. Neither Porter Airlines or the Toronto Port Authority have indicated that they intend to exceed the self-imposed cap. However, given the fact that Airport growth is clearly being sought and the fact that the City does not directly control movement limits, it is prudent to consider how an increase in daily movements would affect the Airport’s negative or positive impacts. The first additional scenario would therefore involve significant growth in Airport operations without jets by exceeding the self-imposed movement cap

to a maximum of 30 - 36 movements per hour.¹ The second additional scenario would also involve 30-36 movements per hour but with the inclusion of jet aircraft and the proposed expansion of Runways 08 and 26. Under this scenario, the maximum capacity of the Airport would potentially increase to 4.8 million passengers per year, more than double the 2012 baseline capacity.²

As these scenarios were assessed during the Review process, there were a number of opportunities for input from City Councillors and the public. City Councillors considered the progress of the Review at one meeting of Council, two meetings of the Executive Committee and two meetings of a dedicated Sub-Committee of the Toronto and East York Community Council (the second of which will take place December 3, 2013). There were also four public meetings where the City heard input from attendees and made available the terms of the Review and findings to date. The input from City Councillors, deputants and participants at the public meetings played a key role in refining the priorities for the Review process and identifying additional areas of consideration. As a result of this input, the Review was expanded in scope to include a more detailed evaluation of impacts on the economy and land values and an assessment of the risk of bird strikes. The results of these studies are not known at the time of publication.

1.2 The Purpose of this Report

This report draws on the findings of the technical studies to establish how current and proposed Airport operations fit within the Toronto context. The purpose of this approach is to emphasize the cumulative impacts of the Airport rather than to itemize individual findings. The fit of the Airport is therefore considered within three scales of context: the region, the city/waterfront, and the local neighbourhood. Key conclusions are provided for each of these scales.

This report ends with recommendations for how to proceed after the Review. The consideration of the expansion proposal is too important and nuanced to conclude with a simple 'yes' or 'no' from Council. There are serious issues to address concerning the Airport's current situation, as well as conditions to set for the Airport going forward whether the proposal is approved or not. The "next steps" provided here are intended to help guide future discussions toward the achievement of best possible outcomes.

¹ BA Consulting Group Ltd., Billy Bishop Toronto City Airport Transportation Assessment of Proposed Jet Activity – DRAFT Executive Summary and Key Findings, October 2013.

² Ibid.

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What is BBTCA's current and future impact on its regional, city and neighbourhood contexts?

Airports create benefits, costs, impacts and opportunities at different urban scales and at different locations. To assess the negative and positive effects of BTCA's current and proposed operations, its impacts have been considered at the scale of the urban region, at the scale of the city and at the scale of the local neighbourhood.

At each of these scales this report asks the following questions:

- What is the existing condition at this scale?
- What objectives would expansion achieve?
- What benefits would expansion convey?
- What burdens would expansion impose?
- What are the associated long term positive and negative impacts of expansion?



Aerial View of Billy Bishop Toronto City Airport (Flickr - vitodens)



Existing and Planned International Airports in the Greater Toronto and Hamilton Area

2.1 The Regional Scale

Background

BBTCA has very recently become a regionally significant transportation asset. The Airport's operations grew from 23,000 passengers per year in 2006 to 2.3 million in 2012. This represents a considerable level of growth that now places BBTCA as Canada's 9th busiest airport.³ This growth has been so recent and rapid that the Airport has grown to a scale that was not envisioned in Toronto's 2006 Official Plan. At the time of its writing, the Plan recognized Pearson International Airport as a major hub in the regional economy that improves access for passenger travel and air cargo, and recognized the importance of Union Station as the major hub in the regional transit system. BBTCA was not identified as a regionally significant transportation asset at the time.

BBTCA's passenger volume growth since 2006 and the current expansion proposal coincide with the recognition that substantial increased airport capacity will be required in the Greater Toronto and Hamilton Area (GTHA) over the next two decades or so. Transport Canada anticipates that a new major airport will be needed in the GTHA by either 2027 or 2037.⁴ To meet the region's capacity needs in the meantime, Transport Canada is promoting the expansion of Toronto Pearson International Airport and the strategic use of Hamilton International Airport and possibly Waterloo International Airport as "reliever airports"⁵. Transport Canada anticipates that these three international airports can expand to capacities of 54, 7 and 4.6 million passengers per year, respectively.⁶ BBTCA is not mentioned as a possible regional "reliever airport."

³ HLT Advisory Inc., Economic Impact Considerations of an Expanded Billy Bishop Toronto City Airport, June 2013, p. 12

⁴ Transport Canada, Executive Summary: Needs Assessment Study – Pickering Lands (2010). No Date. <http://www.tc.gc.ca/eng/ontario/pickeringstudy.htm>

⁵ Transport Canada, Executive Summary: Needs Assessment Study – Pickering Lands

⁶ Ibid.

Conclusions

- BBTCA currently provides needed air transport capacity in the region. Jets could increase its regional significance somewhat, especially if the self-imposed movement cap were removed.

Though Transport Canada has not identified BBTCA as a significant “reliever” for air travel, its current passenger volume of 2.3 million per year suggests that the Airport does help meet air travel demand in the GTHA region. In fact BBTCA is likely able to provide even greater air travel capacity simply by maximizing its current operations without jets. It is estimated that the Airport can achieve a maximum passenger volume of 3.8 million per year utilizing the Q400 aircraft and observing the self-imposed movement cap, and without requiring amendments to the Tripartite Agreement.⁷

If jets are introduced at BBTCA and existing daily flight movements remain capped at 202, BBTCA's annual passenger capacity would increase to 4.3 million and the Airport would be nearly equal in significance to an expanded Waterloo International Airport. If jets were introduced and the self-imposed movement cap were lifted, BBTCA could surpass Waterloo International Airport and achieve an annual passenger capacity of 4.8 million.⁸

- BBTCA's constrained site and urban setting will likely prevent it from playing a significant role in the international air transport capacity planning for the GTHA.

Other airport sites are better suited to meet growing regional air transport demands, given their potential to expand and incorporate complementary employment land uses, and their relative distance from residential areas and other sensitive uses. Transport Canada's interest in developing the Pickering International Airport to meet air travel demand in GTHA illustrates what they consider constitutes a desirable airport site from a transportation planning standpoint. Transport Canada sees the Pickering site as ideal because of its:

- Large site size;
- Proximity to potential markets;
- Accessibility to major highways (401 & 407); and

- Relatively low population in the immediate vicinity of the lands.⁹

Clearly BBTCA's location does not match these standards, with the exception of the Airport's proximity to potential markets.

BBTCA's location also runs contrary to Provincial policy preferences for airports because of the proximity of homes and other sensitive uses and the absence of available land for expansion and complementary employment uses. The Provincial Policy Statement (PPS) (2005) identifies an incompatible land use relationship between airport operations and residential development and other sensitive uses. The PPS acknowledges that airport operations create noise, contaminants and odors that affect residential and sensitive uses, and that this land use mis-match can threaten the long-term operation of airports or cause aviation hazards.¹⁰

The location of BBTCA also prevents it from supporting the development of complementary employment land uses in its vicinity and from realizing the full potential for goods movement normally associated with international airports. The Growth Plan for the Greater Golden Horseshoe (2006) envisions airports as being surrounded primarily by relatively heavy employment uses.¹¹ The Plan encourages municipalities to reserve lands around airports for manufacturing, warehousing, and associated retail, office and ancillary facilities,¹² and for other land uses that support the use of long-haul airports as goods movement facilities.¹³ This will not be possible for BBTCA given its urban and waterfront park surroundings.

The accessibility provided by BBTCA's location adjacent to Canada's largest downtown office employment centre may, however, counterbalance the absence of any potential for conventional airport-associated land uses. In today's economy moving human capital can be as important as moving goods, and BBTCA significantly facilitates employment-related travel to and from Toronto. A question remains, however, as to whether long-haul flights with a focus on leisure destinations would be compatible with BBTCA's current business-oriented services and the associated degree of convenience. In any case it is possible that the introduction of jets will have positive regional employment effects in the aerospace and related manufacturing industries.¹⁴

⁷ Airbiz Aviation Strategies Ltd., Billy Bishop Toronto City Airport Porter Airlines Proposal Review – Interim Results/Findings, 26 June 2013, p. 4

⁸ Ibid. p. 31

⁹ Transport Canada, Executive Summary: Needs Assessment Study – Pickering Lands (2010)

¹⁰ Ontario Ministry of Municipal Affairs and Housing, Provincial Policy Statement, 2005, s.1.6.7.1

¹¹ Ontario Ministry of Infrastructure, Growth Plan for the Greater Golden Horseshoe, 2006 (Office Consolidation, January 2012), January 2012, s.7

¹² Ibid. s.2.2.6.9

¹³ Ibid. s.3.2.4.5

¹⁴ HLT Advisory Inc., Economic Impact Considerations of an Expanded Billy Bishop Toronto City Airport, p. 24



Distance from a Runway to the Nearest Residential Building at Pearson International Airport



Distance from a Runway to the Nearest Residential Building at Billy Bishop Toronto City Airport

- The proposed expansion is not part of a coordinated regional transportation planning process. Despite the lack of coordination, expansion would likely not have negative impacts on Pearson or the Union-Pearson Express.

The Growth Plan for the Greater Golden Horseshoe (2006) promotes the coordination of land use and transportation planning by all levels of government and transportation stakeholders.¹⁵ The BBTCA proposal was submitted in isolation from the broader transport planning and operations context. Despite the fact that BBTCA's location lends itself to potential integration with other public transit services and sustainable travel modes (e.g. TTC, VIA Rail, and GO Transit services; Bixi bicycle stands; and walking routes to the downtown core), passengers mostly travel to and from the Airport by car or taxi.¹⁶ No exploration of a truly integrated, multi-modal approach as envisioned in the Central Waterfront Secondary Plan has ever been undertaken for either the existing condition or the proposed expansion.

Operating two or more airports in the same geographic market can also cause concerns of market fragmentation, but there is no indication that BBTCA's current or future operations pose such a risk. Though this Review did not specifically address how the BBTCA proposal would affect business at Pearson International Airport, the proposed introduction of jets at BBTCA is not expected to affect Pearson's air movements significantly.¹⁷ This is because Pearson's air movement growth is expected to be based on new international markets—which will presumably not be served by BBTCA flights—and because BBTCA's maximum capacity constraints will limit its potential as an alternative for travelers accessing Pearson.¹⁸ This Review would benefit from clear analysis of any anticipated economic impacts from the proposal on operations at Pearson International Airport.

The potential impacts of any market fragmentation or restructuring are particularly relevant because of the 2015 commencement of the Union-Pearson Express rail link, led by Metrolinx. However, Metrolinx has stated that Porter Airlines' operations do not impact the Union-Pearson Express business model.¹⁹

¹⁵ Ontario Ministry of Infrastructure, Growth Plan for the Greater Golden Horseshoe, 2006 (Office Consolidation, January 2012),s3.1

¹⁶ BA Consulting Group Ltd., Billy Bishop Toronto City Airport Transportation Assessment of Proposed Jet Activity—DRAFT Executive Summary and Key Findings

¹⁷ HLT Advisory Inc., Economic Impact Considerations of an Expanded Billy Bishop Toronto City Airport

¹⁸ Ibid, p. 24

¹⁹ Metrolinx - Union Pearson Express, Letter to Deputy City Manager John Livey RE: Porter Airlines Request for Exemption from Commercial Jet Ban, October 15, 2013

2.2 The City Scale

Background

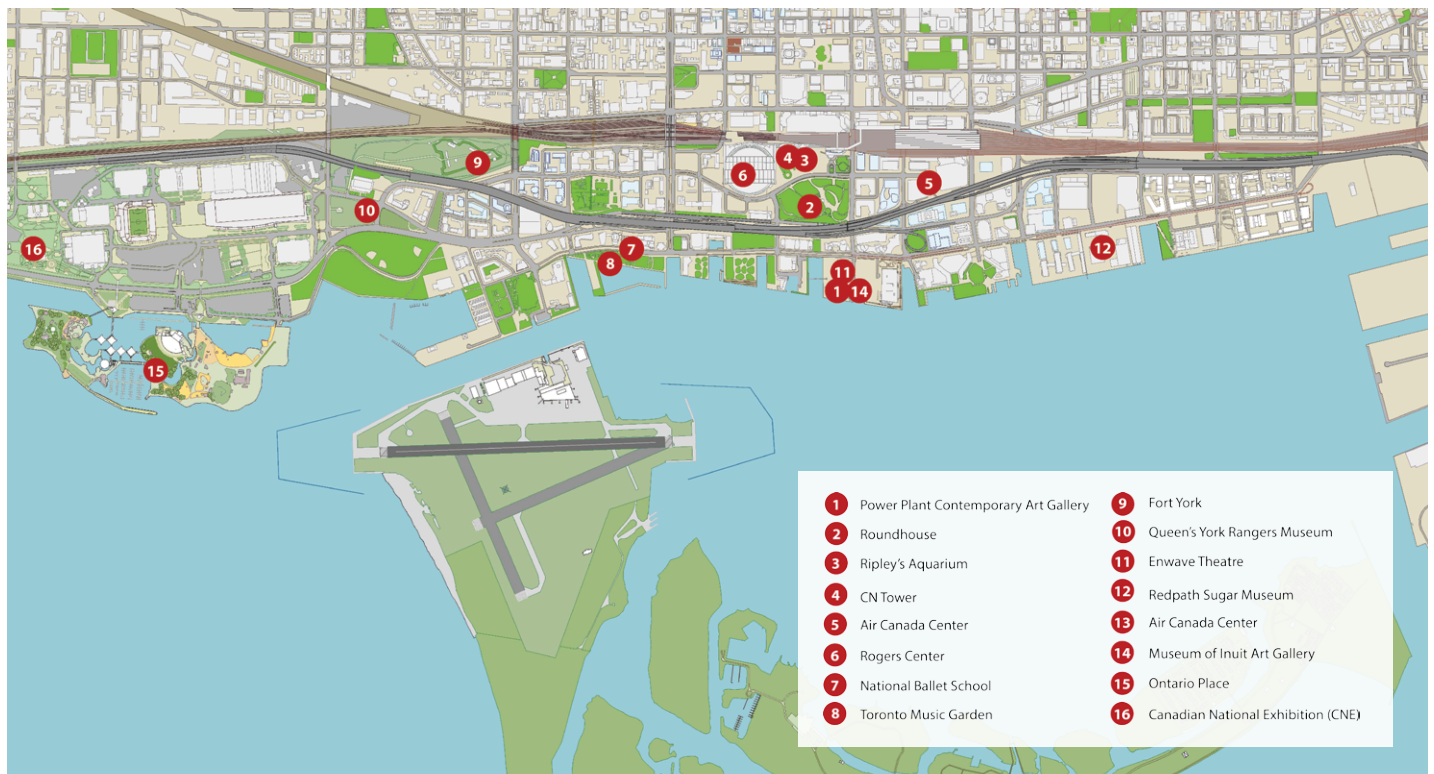
Toronto is growing physically, economically and in population size. With a population of 2.79 million, the city is now the third largest in the U.S. and Canada and it leads the continent in new large scale development and financial sector growth.

The City of Toronto and its related agencies are also actively renewing Toronto’s waterfront, which was historically a predominantly industrial area. Today, the mix of uses in Toronto’s waterfront offer significant levels of housing, employment space, cultural and educational facilities, parks and spaces for activity and recreation, all within a beautiful lakefront setting. The area is home to approximately 30,000 residents and the area’s businesses and industries employ roughly 22,500 people. Residents and visitors enjoy activities and attractions at over a dozen historical and cultural attractions along the waterfront throughout the year, including theatres, museums and event spaces.

The harbour has evolved from its previous use as an industrial waterfront but commercial boat operations continue in the Inner Harbour alongside a range of



Development on Toronto’s Waterfront (Flickr - The City of Toronto)



Cultural & Entertainment Venues on Toronto’s Waterfront

recreational boating activities.

Bordering the Inner Harbour to the south, the Toronto Islands provide opportunities for tranquility and entertainment for Torontonians and visitors. Its residential community, beaches, amusement park and green and natural spaces attract 1.2 million people annually.

The waterfront area is also poised for further growth. The renewal of the waterfront is an important planning priority in Toronto that is emphasized in the Official Plan and detailed in the Central Waterfront Secondary Plan (CWSP), which is currently partially under appeal. The CSWP is aimed at achieving four core principles; removing barriers/making connections; building networks of spectacular waterfront parks and public spaces; promoting a clean and green environment; and creating dynamic and diverse new communities.²⁰

In general, the CWSP policies support the prioritization of transit and active transportation over car use and call for the completion of trail systems and for reserving the water's edge for public use, supported by the creation of new public spaces along the dock wall.

Waterfront Toronto, the agency leading the revitalization of the waterfront and its individual precincts, is overseeing many improvements that will take place over the next 10 years, including:

- The development of roughly 14,000 new residential units for approximately 27,500 residents;
- Building new community centres in the West Don Lands and the East Bayfront;
- Creating three new schools – two in the West Don Lands and one in North Keating serving both that neighbourhood and the East Bayfront;
- The introduction of approximately 7,500 people working in the waterfront neighbourhoods;
- The development of 312,000 square feet of retail space;
- The revitalization of Queen's Quay to serve as both a tourism draw and a functioning two-lane road with transit and bicycle lanes;
- North South connections – featuring public art and improved streetscaping – along Spadina Ave, Rees St, York St, Bay St and Yonge St to improve pedestrian access to the waterfront;

- The creation of two destination and regional parks – Promontory Park and Phase 1 of Lake Ontario Park in the Port Lands;
- The revitalization of Ontario Place, including a new 7.2 acre urban park and a waterfront; and
- Other parks and public realm improvements including the Yonge Street Wave Deck, new finger piers, new bridges and boardwalks and Bungee Park.

The waterfront's current vibrancy and beauty are the result of careful planning that transformed the post-industrial waterfront into one of Toronto's most enjoyable areas. On-going planning and development initiatives like the ones mentioned above will unlock even more of the area's potential and achieve one of the largest waterfront renewal projects in the world. Any changes to the Airport must support this continued waterfront renaissance.



Toronto's Active Waterfront (Waterfront Toronto)

²⁰ City of Toronto, Central Waterfront Secondary Plan (April 2003)

Conclusions

- BBTCA currently supports Toronto's role as an important economic centre and benefits the city's economy.

The current operations at BBTCA are of economic benefit to Toronto. The Airport has expanded regional transportation options for GTHA residents and facilitated regional travel between major economic and business centres in eastern Canada and the United States. The Airport supports the success of Toronto's economy because it provides passengers easy air travel access to and from the downtown core (which is steadily gaining prominence as one of the world's leading financial centres), with simpler security and customs procedures than larger airports. In 2012 it was estimated that BBTCA generates \$200 million Gross Domestic Product (value added) and \$57 million in tax revenue or payments in lieu.²¹

- The introduction of jets would increase the economic impact of the Airport, although the costs of expansion are not fully known.

Depending on the percentage of flight slots that are used for jets (assumed to be between 16% and 31%), the proposed expansion could generate an additional Gross Domestic Product of between \$63 million and \$124 million, and additional tax revenue of between \$28 million and \$55 million per year.²²

At this point, the assessment of the Airport's potential economic benefits with jets has not taken into account the cost of the Airport's expansion (estimated at approximately \$80 million²³) or the associated costs of upgrading the transportation network on the mainland (estimated to range from roughly \$1 million to more than \$125 million depending on the level of infrastructure changes, keeping in mind the standard of public realm improvements on the waterfront²⁴). The Review has also not considered the potential incremental economic impact of expanding airport operations beyond the existing 202 daily movement cap with or without jets. Potential negative impacts could include loss of tourism revenues due to increased Airport operation in the waterfront, economic costs associated with accommodating more passengers on the road, and transit network or costs resulting from potential health impacts.



Toronto's Financial District – Bay Street & Wellington Street West
(Flickr - TOrebelXTguy)

- Airport and City planning are not coordinated except through the Tripartite Agreement.

There is currently no planning framework to coordinate the long-term planning of the Airport and the city. This is partly because the Toronto Port Authority does not have a publicly acknowledged airport master plan. By contrast, there are publicly available master plans and economic plans that set out the visions and objectives for other GTHA airports such as Pearson, Hamilton and Waterloo. A needs assessment study has been published for the potential Pickering airport.

From the municipal planning side, there are numerous planning policies in place for the mainland areas near the Airport, which are articulated in the Official Plan, the Central Waterfront Secondary Plan, and several local precinct plans. However, BBTCA itself is almost entirely absent within this policy framework. The main text and policies in the Official Plan do not make specific reference to BBTCA, and the Airport lands remain designated as Parks and Natural Areas despite the long-standing and recently intensified use of the site for air travel. Only Site and Area Specific Policy #194 relates specifically to the Airport, and requires that Airport operations comply with the Tripartite Agreement and that improvements to the Airport's facilities have no adverse impacts on the surrounding community.²⁵ The policy also provides that the Airport lands should revert to a park or a mix of park and residential uses should it ever close.

²¹ HLT Advisory Inc., Economic Impact Considerations of an Expanded Billy Bishop Toronto City Airport, p. 18

²² Ibid. p.p. 28-30

²³ Airbiz Aviation Strategies Ltd., Billy Bishop Toronto City Airport Porter Airlines Proposal Review, Interim Results/Findings, p. 81

²⁴ BA Consulting Group Ltd., Billy Bishop Toronto City Airport Transportation Assessment of Proposed Jet Activity—DRAFT Executive Summary and Key Findings

²⁵ City of Toronto, City of Toronto Official Plan (Consolidated), December 2010, Chapter 7, Site and Area Specific Policy 194 (c)



City of Toronto Official Plan – Land Use Plan

- The gap between the Airport’s current significance and its status in City planning policy does not serve either the Airport or the city.

Given the current status of BBTCA as a significant transport asset for the region and a contributor to Toronto’s economy it is clear there is an immediate need to determine and articulate the appropriate scale of the Airport within the City’s planning policy framework. This articulation should include a more robust vision and set of objectives for the Airport and its surroundings. The Tripartite Agreement and Site and Area Specific Policy #194 are useful tools for maintaining Airport operations and infrastructure at a basic level, but the lack of long-term vision and the mis-match between the land use designation and the actual long-standing use of the site as an airport prevent meaningful discussion on what the Airport should be and how it should be best integrated into the city.

To address this discrepancy, the City should adopt one of two positions with respect to the Airport. The first option is to acknowledge the Airport as an important asset and to establish a clear vision for its role in the city, regulated by well-defined operational and infrastructure conditions. As part of this position, the City should encourage the Toronto Port Authority to develop a publicly-sanctioned master plan to address the Airport’s challenges and maximize its economic and regional transportation benefits. Otherwise, the City

should clearly determine that Airport growth is not desired and set in place a strategy for capping/curtailing operations, prioritizing other land uses and accepting any negative economic consequences. If neither position is taken, the Airport’s role in the city will continue to be determined by its existing infrastructure capacity, prolonging the operation of a successful but sub-optimal airport that is poorly integrated with its surroundings.

- Findings on how the Airport impacts the health of people and the natural environment are not yet complete.

The impact on health in the community is one of the most important factors in determining the appropriateness of the Airport and its proposed expansion in its urban waterfront context. At the time of publication the findings of an ongoing Health Impact Assessment were not yet available. Toronto Public Health has, however, indicated that there are several vulnerable communities in the vicinity of the Airport, and it is therefore especially important to determine health effects of the proposal before a decision is made on the matter.

In terms of the natural environment, a study of the effects of the proposal on the terrestrial and water environments did not reveal any major potential impacts. There are, however, several less significant potential impacts. For instance, the proposed runway extension may slightly decrease water depths and current velocities at the runway’s western end



Birds at Tommy Thompson Park (Flickr - theharv58)

and may decrease wave heights in the Western Gap.²⁶ As well, expansion-related construction may mobilize the silt and clay surrounding the eastern end of the runway but the use of a silt curtain could potentially mitigate this effect.²⁷

Impacts on birds are a significant concern from an environmental and Airport safety point of view, especially since there are high-quality migratory bird habitats on parts of Toronto Islands, such as Mugg's Island and Tommy Thompson Park. The proposed runway extension is unlikely to displace birds in the Inner Harbour,²⁸ although the noise from construction could temporarily affect opportunities for observing birds and other wildlife.²⁹ The risk of bird strikes is not yet known, and an updated bird-strike assessment should take place to determine whether the proposal represents risks to passengers or birds.³⁰

- Details on the safety and security of the Airport or its expansion are not available.

Residents and City Councillors have raised important questions about the safety and security of the Airport expansion proposal. BBTCA's location on an island in an urban waterfront setting creates potential safety and security risks unlike those experienced at most airports. BBTCA can currently only be accessed by boat, although a pedestrian tunnel will open in 2014. Fuel is transported by trucks through the local community on the mainland and over to the Airport by ferry. The island location of the Airport also requires that

emergency response vehicles arrive by water, which may complicate response times in an emergency. If an Airport-related accident or emergency were to occur, there could be considerable risk to the surrounding community.

This Review did not include a study on how the proposed expansion would change fuel transportation and how this might affect the safety of the community. It is understood that the CS100 aircraft has larger fuel capacity and that longer-range flights will mean that jets will necessarily carry more fuel per flight than the Q400 planes do on their shorter routes.

The Review also did not consider the potential for Airport-related emergencies or the emergency response capacity in the waterfront area, or whether the Airport is sufficiently secure to prevent security risks under an expansion scenario.

These issues should be studied to determine how safe and secure the Airport is currently, whether or not the proposal entails any additional risk to the community and passengers, and how these risks might be mitigated. With or without expansion, the Toronto Port Authority and the City should collaborate to develop a comprehensive protocol for emergency services at BBTCA that includes traffic and bridge management procedures, the provision of emergency medical facilities on-site, a direct line of communication between BBTCA and appropriate dispatch services for emergency medical situations.

²⁶ CH2M Hill, Canada Ltd. Porter Airlines Runway Extension Proposal Review Coastal Processes and Environments, Preliminary Review Report, August 26 2013, p. 4-6

²⁷ Ibid. p. 2-7

²⁸ Ibid. p. 2-3

²⁹ Ibid. p. 5-2

³⁰ Ibid. p. 2-3