Toronto Port Authority Proposed Pedestrian/Services Tunnel and Perimeter Road Project

Environmental Screening Report

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Submitted by

Dillon Consulting Limited

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Project Location:	City of Toronto, Ontario
Project Proponent:	Toronto Port Authority
CEAA Trigger:	Project Proponent (under the Canada Port Authority EA Regulations)
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EXECUTIVE SUMMARY

The Toronto Port Authority (TPA) is proposing to construct a pedestrian/services tunnel to the Billy Bishop Toronto City Airport (BBTCA), which would include access facilities, elevators/escalators/moving sidewalks, and some minor improvements to the access at the foot of Eireann Quay. The tunnel would also allow for improved access for airport/island-related services (e.g., fiber optics cable). The proposed Project also includes a perimeter road to be used by airport security personnel and other airport vehicles. The proposed road would be built on airport property within the perimeter fence. Together, the proposed tunnel and road are referred to as the "Project".

The TPA is conducting an Environmental Assessment (EA) of the Project pursuant to the requirements of the Canada Port Authority Environmental Assessment Regulations, made under the *Canadian Environmental Assessment Act*.

The Study Area for the EA in relation to the pedestrian tunnel is bounded by Lakeshore Boulevard, Stadium Road, Dan Leckie Way and the BBTCA. For the airport perimeter road, the Study Area included lands adjacent to the proposed road alignment (which roughly follows the BBTCA perimeter fence). These areas were identified as the areas expected to be potentially affected by Project effects. The scope of this EA includes the environmental effects of the Project, including the environmental effects of malfunctions or accidents that may occur in connection with the Project, and any cumulative environmental effects that are likely to result from the Project in combination with other projects or activities that have been or will be carried out. A listing of the scope of the factors assessed in this EA is provided in Section 3 (Scope of the Project) of this report.

Direct effects considered and assessed in the EA include both the short-term Project construction impacts and the longer-term effects from the operation of the Project. Baseline environmental conditions have been described, which represent existing conditions (i.e., before the Project). For construction effects, it was assumed that construction of the pedestrian tunnel would commence in 2011 and take up to 18 months. The construction of the perimeter road is assumed to commence during or just after construction of the tunnel (in order to assess reasonable maximum effects).

The BBTCA is expected to achieve the maximum aircraft movement capacity under the Tripartite Agreement (the use of 202 aircraft slots per day) as early as June 2011, and thus would occur whether or not the Project were to proceed. The infrastructure that exists is able to continue to be used to operate the BBTCA to achieve capacity, including the ferry passenger transfer facilities, parking and road access. As such, it is not the Project that would result in increased aircraft movements, passenger volumes or road traffic, because these can, and are

expected to occur whether or not the Project proceeds. The TPA would likely need to use a second ferry to use all of the aircraft slots, but this would not require any physical changes, approvals or an EA.

For the cumulative effects assessment, the EA assessed the effects of the Project in combination with other proposed developments and activities in the Study Area.

The results of the assessment of the direct and cumulative effects associated with the Project on each of the environmental factors included in this EA are presented in Section 5 (Environmental Effects and Mitigation) of the report. Some minor, localized and short-term project construction related nuisance effects are expected. Very minor to no effects are expected for the operations period of the Project. The EA predicts that neither the direct effects nor the cumulative effects of the Project would result in significant adverse effects on the environment.

To minimize the short-term construction related effects, the EA has recommended a number of mitigation measures and monitoring activities that would be implemented by the TPA if a decision were made to proceed with the Project.

Further, while not required for the purpose of assessing the effects of the Project, air quality and noise impact assessments of aircraft movement, passenger volumes and traffic in the area of Eireann Quay were conducted. Summary results of these assessments are included in this screening report, and in more detail in the appendices to this screening report. This provides additional information about this area, including to interested persons, such as persons in the local community. The results of these assessments, which were done in addition to what is required for the EA, demonstrate that BBTCA related activities do not and would not result in significant effects in terms of air quality and noise impacts.

1.0 PROJECT

1.1 Background

The Billy Bishop Toronto City Airport ("BBTCA") is operated by the Toronto Port Authority ("TPA") in accordance with the Tripartite Agreement between the TPA, the City of Toronto and the Federal government (collectively the "Tripartite Parties"). The Tripartite Agreement provides for what is permitted, or not permitted, at the BBTCA. For example, the TPA must not:

- construct or permit to be constructed additional runways or extensions to existing runways;
- expand the airport beyond the area in the agreement;
- permit jet-powered aircraft (with the exception of medical evacuations and other emergency use and during the CNE air show); and
- permit aircraft generating excessive noise to operate to and from the airport (with the exception of medical evacuations and other emergency use and during the CNE air show).

Further, the Tripartite Agreement requires that the TPA not cause a nuisance to occupiers of lands or premises adjoining or in the vicinity of part of the lands at the BBTCA, with the proviso that the operation of the BBTCA in accordance with the Tripartite Agreement shall not be deemed to be a nuisance.

We note that the Tripartite Agreement requires the TPA to "administer, control, maintain, manage and operate the [BBTCA] in an efficient and businesslike manner so as to ensure the most effective operation thereof that is consistent with good management aimed at meeting the overall objective of cost recovery". In that regard, the TPA is considering the Project to improve access to the BBTCA. Whether or not the Project proceeds, the BBTCA would continue to operate under the Tripartite Agreement. The TPA has indicated that this will include the use of 202 slots per day for aircraft movements, with the resulting aircraft and passenger volumes and road traffic.

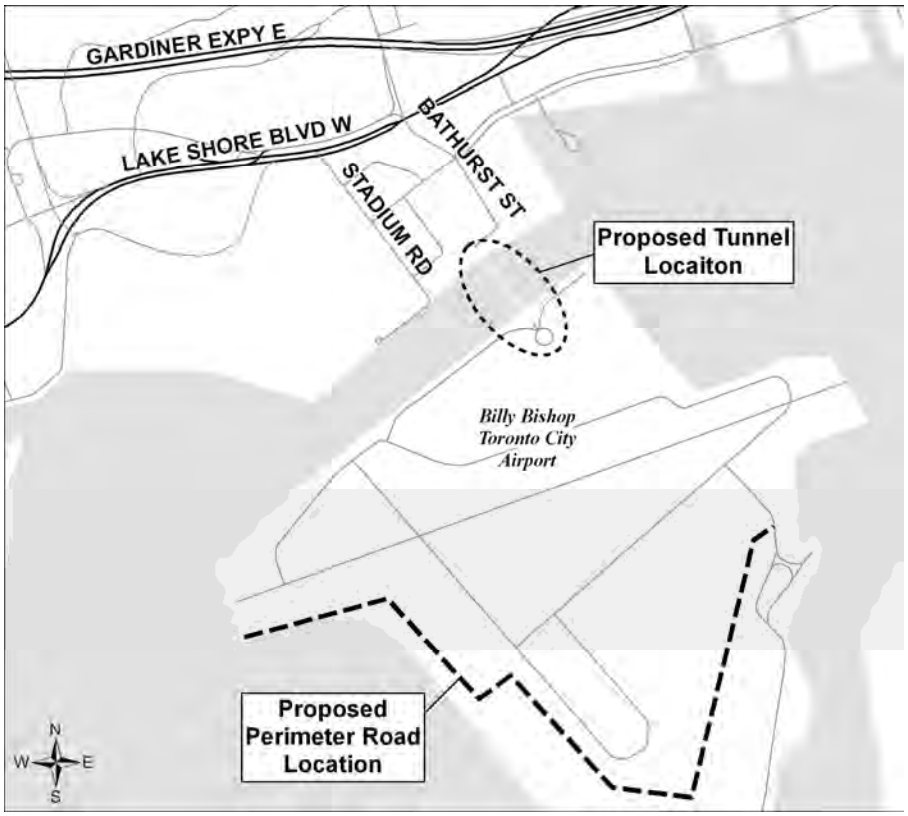
Given that the BBTCA will achieve the estimated capacity it is capable of accommodating under the Tripartite Agreement without the Project (i.e., the use of 202 aircraft slots per day), it is reasonable to conclude that the Project would not affect aircraft or passenger volumes or road traffic, because these will occur whether or not the Project proceeds. We understand that the infrastructure that exists is able to continue to be used to operate the BBTCA at such level, including the ferry passenger transfer facilities, parking and road access. We understand that the TPA would likely need to use a second ferry to use all of the aircraft slots, but this would not likely require any physical changes or approvals, and as such no EA.

1.2 Project Location and Description

Project Location

The site of the Project is Toronto, Ontario, south of the foot of Eireann Quay (formerly called Bathurst Street) and at the BBTCA. The proposed pedestrian/services tunnel access (referred to hereafter as the "pedestrian tunnel", "pedestrian/services tunnel" or "tunnel") part of the Project would go through the bedrock that joins the land side (also referred to as the mainland) and airport side under the approximately 120 m wide Western Gap. On the airport side, the airport perimeter road part of the Project would generally follow just inside the airport's existing security fence. (See **Figure 1.1**).

Figure 1.1 Project Location



Project Description

The Project would involve the construction and use of pedestrian tunnel access through the bedrock between the land side and airport/island side and a perimeter road to improve security access to airport lands. The pedestrian tunnel would improve access to the BBTCA. The tunnel would also allow for improved access for services (e.g. fiber optics cable). The tunnel would not be designed to allow road vehicle access (we note that a vehicular tunnel is not permitted under the Tripartite Agreement). Ferry service would continue for other access, such as the

movement of goods, materials and vehicles, as well as a backup to the pedestrian tunnel. The scope of the proposed Project is described in Section 3.

1.3 Scheduling

Subject to completion of the EA, and any other matters that the TPA would need to complete to proceed with the Project, construction initiation of the pedestrian tunnel could be expected in late 2011, with completion anticipated within 18 months of that. The timing for the construction of the airport perimeter road would likely be determined in coordination with the tunnel part of the Project. For the purpose of the EA, we have assumed that the perimeter road would be constructed during or just after the tunnel construction, in order to assess reasonable maximum effects.

2.0 CANADA PORT AUTHORITY EA REGULATIONS AND CEAA

In accordance with the Canada Port Authority Environmental Assessment Regulations (the "*Port Authority EA Regulations"*), which were made under the Canadian Environmental Assessment Act (the "CEAA"), the Toronto Port Authority (the "TPA") is conducting this Screening Level Environmental Assessment (EA) for the Project, which is considered to be a "physical work" being proposed by the TPA.

Transport Canada has reviewed the Project and has advised the TPA that no federal approvals are required from Transport Canada.

The Department of Fisheries and Oceans has also indicated that approvals (under the *Fisheries Act*) for the Project are not expected to be required.

Appendix B documents the correspondence with Federal Agencies.

3.0 SCOPE OF THE PROJECT

3.1 Project Components Description

Section 6 of the *Port Authority EA Regulations* requires the TPA to determine the scope of the Project to which an EA is to be conducted. The Project includes the following components:

- Pedestrian/services tunnel access through the bedrock under the Western Gap of the Toronto Harbour, including moving sidewalks;
- Elevator/escalator/stairwell shafts at either end of the pedestrian/services tunnel to transition between the tunnel access elevation and ground level;
- Connecting structures between the elevator/escalator/stairwell shafts and the existing Ferry Passenger Transfer Facilities (FPTF) on the mainland and airport sides and connection to the existing terminal building on the airport side;
- Potential limited retail/concession space in the structures;
- Minor reconfiguration of the existing circulation (traffic circle/ parking) areas on the mainland and airport sides; and
- Airport perimeter road.

For the purposes of the EA conceptual designs of the pedestrian tunnel have been developed in order to assess reasonable maximum effects. As is typical for environmental assessments, the final design details of the tunnel would be determined through a design-build process if the Project were to proceed. To assess reasonable maximum effects of the proposed Project, it is assumed that the total length of the pedestrian tunnel would be approximately 170 - 205 m in length with a width and height of approximately 8 - 10 m. The approximate depth of the tunnel access would be 25-30 m.

The dock walls on the north and south sides of the Western Gap consist of timber cribs with concrete superstructure. The Project would not interact with these dock walls.

The total length of the airport perimeter road would be approximately 2 kilometres.

The components included in the Project for the purposes of the EA are further described in **Table 3.1**.

For the purposes of the EA, two potential conceptual options for the tunnel design have been developed. **Figure 3.1 illustrates** the planning-level concepts for the proposed pedestrian tunnel and **Figure 3.2** (see **Figure 1.1** for plan view) illustrates the airport perimeter road. Figure 3.1 identifies an envelope for the routing of the tunnel that is the same for both concepts. Also shown is a to-scale example of the possible tunnel routes. The final alignment of the tunnel would be confirmed as part of any future detailed design stage. This level of detail is typical for an EA, given that the EA is conducted as part of the project planning stage, and has been included for illustrative purposes and to allow for an assessment of the reasonable maximum effects of the Project. The conceptual design that has been developed for the purpose of this EA represents the reasonable largest "footprint" of the Project (i.e., that would reasonably have the most impact). As such, the EA is conservative in assessing potential impacts of the proposed Project.

Table 3.1 – Project Components Description

Project Component	Project Component Description	Physical Works and Activities
Construction Activities		
Vertical Shafts and Open Cut	Construction of two vertical shafts at the south and north end of the tunnel access. This includes an open-cut area at the south end (island side) where escalators may be provided.	Excavation of the two shafts and open cut would be carried out by mechanical methods involving excavation machinery with support of the deep excavation sides with an engineered, continuous wall. Excavated materials on the mainland side would be placed in trucks for removal. Excavated materials on the airport side would be placed on a barge or truck for off-site use/disposal or placed on the perimeter road alignment to build up the new road's sub-base. It is possible that some of the excavated material could be stockpiled at the airport side for future use in the construction of the perimeter road. Construction of the mainland shaft may require the temporary use of a barge to hold excavation equipment and or cranes. It is expected that the need for the handling of ground water during construction will be minimal with the use of water tight shaft walls. See construction water management further below.
Tunnelling	Construction of tunnel access approximately 8-10 m wide and approximately 8-10 m high, approximately 25-30 m below the existing land grade.	Typically for tunnels of this size, the tunnel access would be excavated by an incremental method referred to as the Sequential Excavation Method (SEM) or New Austrian Tunnelling Method (NATM). This would require that the tunnel access cross section be divided into smaller sections which are incrementally excavated and supported. The openings are

Project Component	Project Component Description	Physical Works and Activities
		finally combined to form the final desired cross section. This method would ensure that the tunnel access can be excavated safely without uncontrolled collapses in the shale below the Western Gap. See construction water management further below. The actual tunnel excavation method would be determined by the contractor. Excavated materials on the mainland side would be placed in trucks for removal. Excavated materials on the airport side would be placed on a barge or truck for off-site use/disposal or placed on the perimeter road alignment to build up the new road's sub-base. It is possible that some of the excavated material could be stockpiled at the airport side for future use in the construction of the perimeter road. See construction water management further below.

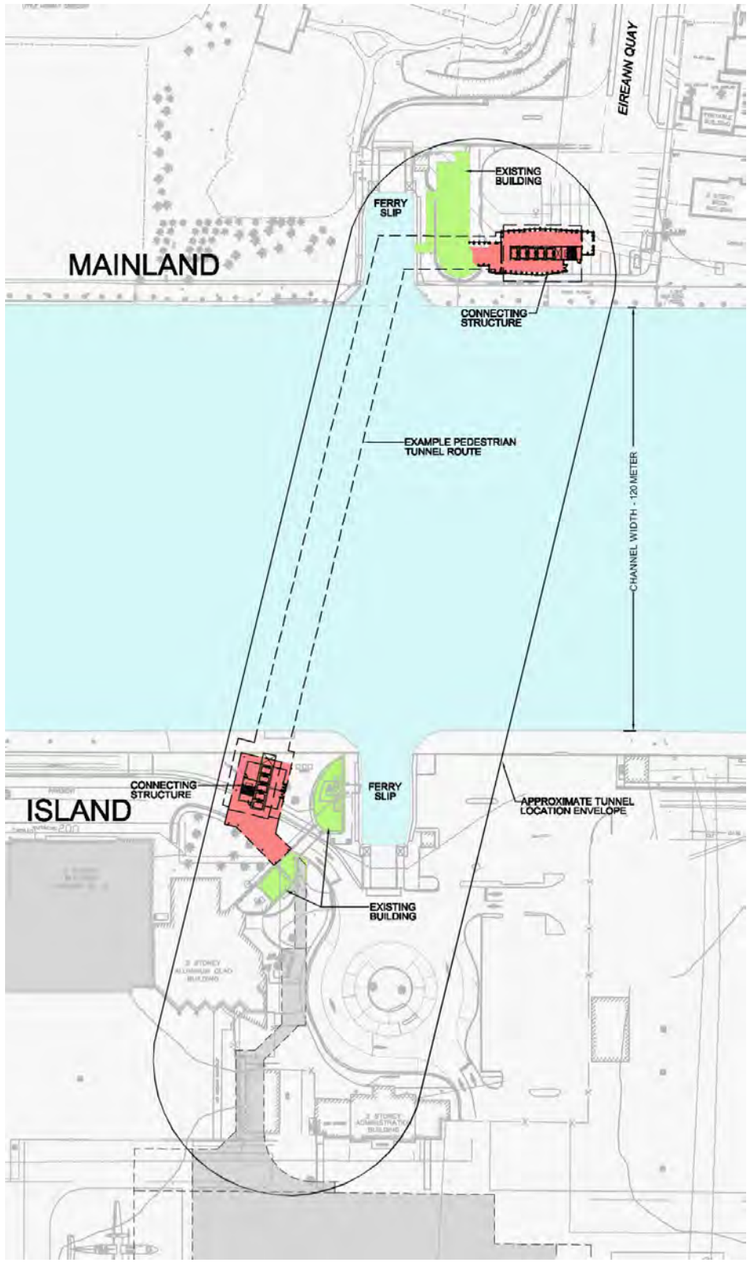
Project Component	Project Component Description	Physical Works and Activities
Water Management	Stormwater and groundwater management during construction.	Plans would be prepared to manage water flow on the construction site during storm events and from potential groundwater seepage into the tunnel and shafts during excavation. There may be some need to manage infiltrated groundwater during shaft construction. As the tunnel would be through bedrock, only minimal seepage is expected. Shaft construction would be completed using water tight walls to avoid seepage. Any extracted groundwater that is encountered during construction would be managed in one of 2 ways: discharge to a City storm sewer or discharge to the Western Gap. Under both scenarios, the extracted groundwater would receive primary treatment (on-site) prior to off-site discharge to meet applicable water quality criteria.
Tunnel and Shaft Facilities	Construction and installation of heating and ventilation equipment, lighting, moving walkways, elevators, escalators, and stairwell facilities into the tunnel access and vertical shafts.	This would require the delivery and installation of tunnel and shaft facilities such as heating and ventilation equipment, moving sidewalk facilities, elevators, escalators, stairwells, and other finishing elements such as lighting, signage, wall treatments, etc.
Connecting Structures	Construction of structures.	This would include construction of structures to connect the elevator/stairwell shafts with existing buildings on both sides.

Project Component	Project Component Description	Physical Works and Activities
Access Areas (including sidewalks, roads, parking, FPTF)	Minor work required for improved access to the FPTF/tunnel entrances, including potentially minor adjustments to sidewalks, circulation area, ferry passenger transfer facility (FPTF) and parking.	No material changes to any existing roadways are expected as a result of the Project. Minor changes to the FPTF's access/vehicle entranceway may be required, and parking spaces may be removed to further improve access. Work would include site preparation, road base construction, granular and drainage, possible lane closures, paving, sidewalks, curb and gutter, illumination, pavement markings, signage and landscaping plantings. This may also include minor alterations of the FPTF buildings and airport terminal.
Perimeter Road	Construction of an airport perimeter road potentially using the excavated materials from the tunnel and vertical shafts. The road would consist of a granular base and have a paved surface. Drainage swales and culverts may be required to manage stormwater.	Work would include site preparation, road base construction, granular and drainage.
Operation Activities		
Pedestrian Tunnel Use and Maintenance	Use of tunnel by pedestrians (airport passengers, airport workers and staff). Regular inspection of the tunnel and maintenance activities as required for safe operation.	No material physical works or activities are expected during the pedestrian tunnel operations period.

Project Component	Project Component Description	Physical Works and Activities
Water Management	Stormwater collected from the tunnel accesses would be conveyed to the existing storm system, which would be designed during the facility detailed design stage process. While groundwater seepage is not expected in any material quantity, potential seepage would be monitored. Surface waters on the mainland side south of the foot of Eireann Quay would be collected, treated and released to the City storm sewer system or Western Gap. Specific details of the stormwater management system would be finalized during the design stage.	No major physical works or activities are expected in relation to water management (including groundwater seepage) during the operations period.
Perimeter Road Use and Maintenance	Use of the perimeter road by airport security staff. Some typical road maintenance activities are expected to keep the road in good condition.	No major physical works or activities are expected. Maintenance activities would include periodic grading and snowploughing as necessary.
Decommissioning Activities		
As usual for a project of this nature, no decommissioning activities are planned at this time, but at the appropriate time in the future, decommissioning would be expected to occur in compliance with law.		

Figure 3.1 Conceptual Design of Project (Site Plan)

CONCEPT 1



CONCEPT 2

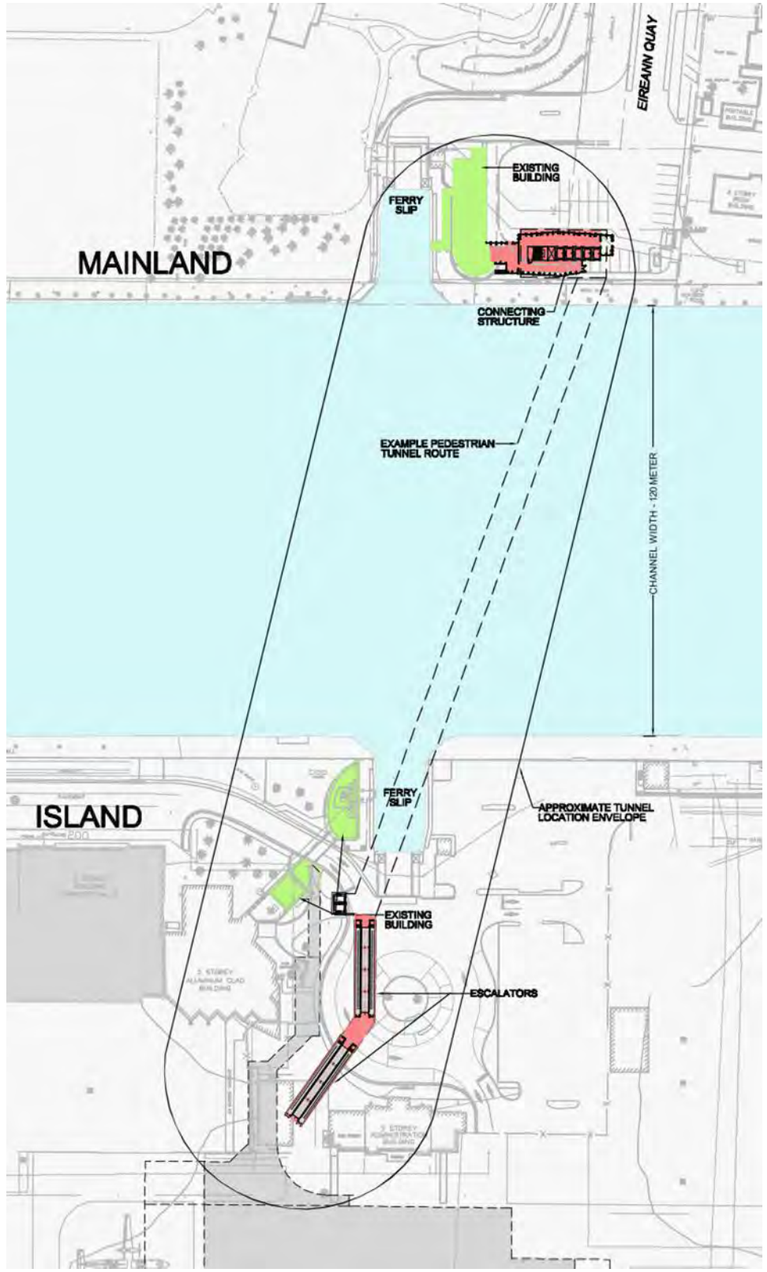
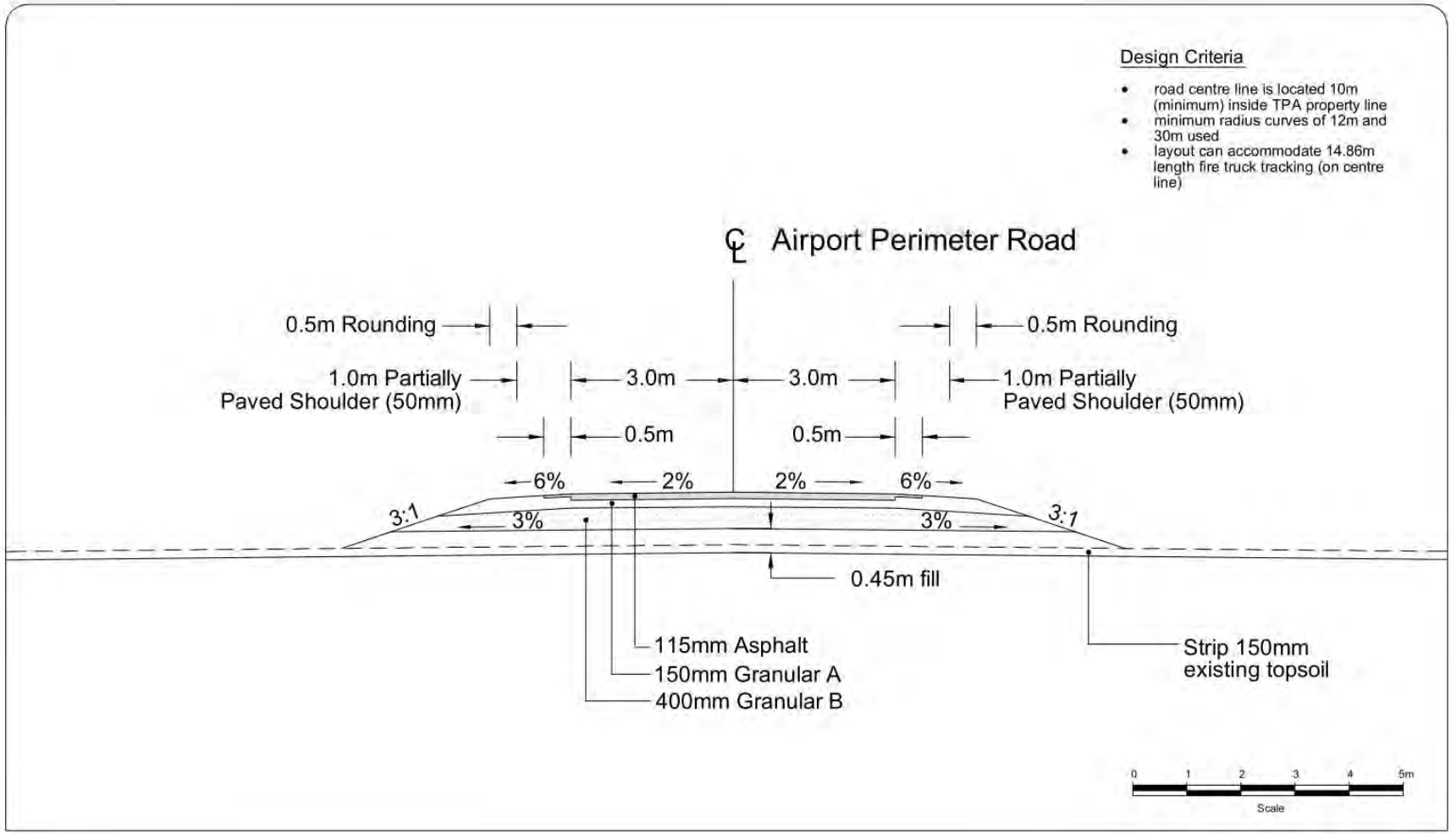


Figure 3.2 Perimeter Road Concept Plan



3.2 Scope of Assessment

Subsection 10 (2) of the *Port Authority EA Regulations* identifies the factors that must be considered in an EA, which have been and will be considered in this EA.

10(2) *Every screening of a project shall include a consideration of the following factors:*

(a) the environmental effects of the project, including the environmental effects of malfunctions or accidents that may occur in connection with the project and any cumulative environmental effects that are likely to result from the project in combination with other projects or activities that have been or will be carried out;

(b) the significance of the effects referred to in paragraph (a);

(c) comments from the public that are received as part of an assessment process, if any; and

(d) technically and economically feasible measures that would mitigate any significant adverse environmental effects of the project.

"**Environment**" means the components of the Earth, and includes:

(a) land, water and air, including all layers of the atmosphere;
(b) all organic and inorganic matter and living organisms; and
(c) the interacting natural systems that include components referred to in paragraphs (a) and (b).

"**Environmental effect**" means, in respect of a project:

(a) any change that the project may cause in the environment, including any change it may cause to a listed wildlife species, its critical habitat or the residences of individuals of that species, as those terms are defined in subsection 2(1) of the *Species at Risk Act*;
(b) any effect of any such change referred to in paragraph (a) on
    (i) health and socio-economic conditions,
    (ii) physical and cultural heritage,
    (iii) the current use of lands and resources for traditional purposes by aboriginal persons, or
    (iv) any structure, site or thing that is of historical, archaeological, paleontological or architectural significance, or
(c) any change to the project that may be caused by the environment, whether any such change or effect occurs within or outside Canada.

Subsection 10 (3) of the Port Authority EA Regulations requires the TPA to determine the scope of the factors to be considered under paragraphs 10 (2) (a), (b) and (d) [which are included above].

This EA includes consideration of the environmental effects of the Project and other factors as required by the Port Authority EA Regulations, including the environmental effects of malfunctions or accidents that may occur in connection with the Project, and cumulative environmental effects that are likely to result from the Project in combination with other approved projects or activities that have been or will be carried out; the significance of the environmental effects and cumulative effects; comments from the public that are received; and technically and economically feasible measures that would mitigate any significant adverse effects of the Project.

The spatial boundaries for the effects assessment for the pedestrian tunnel part of the Project are focused on the lands and waters in the vicinity of the Project site ("Principle Study Area") including the local Bathurst Quay Community (located south of Queens Quay). For the airport perimeter road part, the spatial boundaries for the effects assessment include lands along and adjacent to the proposed road route at the BBTCA. For some environmental components, depending on the nature of the potential environmental effects, consideration of effects has been made using a larger Study Area. This is detailed in the relevant sections.

The temporal boundaries of the Project include:

1) **Construction** (the period from initial site preparation to the completion of construction and site restoration – tunnel construction is expected to be about 18 months – with the perimeter road construction assumed to be initiated during or just after the tunnel is constructed, in order to assess reasonable maximum effects), and
2) **Operations** (the facilities, such as the tunnel access and airport perimeter road, are expected to last in excess of 20 years).

No decommissioning activities are anticipated at this time, which is typical for this type of project. Decommissioning would be required to comply with applicable laws at the relevant time.

Scope of Factors

Environmental Factors

The EA includes consideration of the effects caused by the Project during the short-term construction period and longer-term operations period. The EA includes consideration of the following environmental factors (even though it may not need to because, for example, the

Project would not be expected to cause a particular effect, especially during the operations phase), as appropriate and necessary:

- Biophysical
    - Air Quality
    - Fish & Fish Habitat
    - Groundwater
    - Migratory Birds
    - Soils & Sediments
    - Species at Risk
    - Surface Water Quality and Quantity (drainage, hydrology, hydraulics and flooding)
    - Terrain & Topography
    - Vegetation
    - Other Wildlife & Wildlife Habitat

While not expressly or necessarily required to be assessed unless an environmental/biophysical effect is anticipated to result in a socio-economic effect, the EA includes consideration of the effects of the Project on the following:

- Socio-economic
    - Economics/Businesses
    - Aboriginal Use of Traditional Lands(TL)/Resources(R)
    - Heritage & Archaeological Features
    - Human Health (e.g., due to noise/vibration, air quality)
    - Land Use and Communities (existing and planned)
    - Social & Visual
    - Transportation
    - Navigation

- Effects of the Environment on the Project
    - Flooding due to extreme and/or prolonged weather events
    - Earthquakes
    - Climate Change

Construction and Operational Effects

An EA considers the potential effects of a project, which are typically the expected effects without the project compared to the effects that would be expected to occur with the project in place. In this case, even if the Project were not to occur, aircraft and passenger volumes, and road traffic, would increase as the 202 aircraft slots will be used regardless. Thus, increased aircraft and passenger volumes, and road traffic, and related effects, are going to occur with or without the Project, which itself would not be the cause of such effects. As such, these changes (and related effects) would be the same whether or not the Project were completed.

For the purpose of considering the potential effects of the Project, we have considered and assessed: the environmental effects of the Project, including the environmental effects of malfunctions or accidents that may occur in connection with the Project and cumulative environmental effects that are likely to result from the Project in combination with other projects or activities that have been or will be carried out; the significance of such effects; comments from the public; and measures that are technically and economically feasible that would mitigate any significant adverse effects of the project. For example, we have considered and assessed the potential effects of the Project, such as effects expected during its construction, and air and noise emissions from the tunnel portion and the perimeter road.

Both short-term (construction) and longer-term (operational) effects are considered. The construction and commissioning period is estimated to be 18 months. The Project's facilities are expected to last in excess of 20 years, and the decommissioning of the Project would be required to comply with applicable laws at the relevant time.

We have completed the EA in light of the above. However, although not required for the EA, the TPA has also undertaken additional analyses and assessments that consider the potential effects related to additional aircraft and passenger volumes at the BBTCA. This was done in part as a result of questions that were raised as a result of public consultation. In that regard, noise and air quality studies were conducted between August and October 2010. Noise and air emissions from a variety of sources including City roads and BBTCA-related air traffic and road traffic were considered. Additional information regarding the results of the noise and air quality assessments are included in **Appendix C** to this screening report.

Potential Effects and Significance

To determine the potential for environmental effects and the significance of the effects, the following were considered:

- What are the environmental effects of the Project?
- Are the identified effects positive or negative?
- Can the predicted negative effects be avoided or mitigated?
- After mitigation of negative effects, are there residual effects?
- Will other projects or activities cause negative effects that could combine cumulatively with effects of the Project?
- Taking into consideration any cumulative effects, what are the magnitude, geographic extent, duration and frequency of negative residual effects or positive effects?
- Are the residual negative effects reversible?
- Is the ecological setting of the undertaking sensitive?

Cumulative Effects

As indicated, the EA includes assessment of the environmental effects of the Project, as required by the CPA EA Regulations, including an assessment of cumulative environmental effects.

Activities and projects that exist, or will reasonably be expected to exist before/during construction of the Project, are included in the description of the baseline environmental conditions.

The consideration of cumulative effects requires that there must first be an effect resulting from the Project. Where there are Project effects, the EA includes consideration of such effects in combination with the effects of other applicable projects and activities to determine whether there would be cumulative effects. The cumulative effects assessment includes consideration of effects from projects or activities where there is a reasonable expectation for the project or activity to occur (such as a commitment to develop a project) and there is potential for effect overlap with the Project in terms of time and space.

4.0 BASELINE ENVIRONMENTAL CONDITIONS

The following provides a description of existing environmental conditions in the Study Area. More information is included than is required to conduct the EA, but such information has been included, including because it may assist interested persons to have a better understanding of the Project and the conditions in the area. The boundary of the Study Area was based on the area that may be affected by the Project (even though in fact it may not be). This included the area generally bounded by the lands and waters in the vicinity of the Project site ("Principal Study Area") including the local Bathurst Quay Community (located south of Queens Quay between Stadium Road and Dan Leckie Way) and lands in the vicinity of the airport perimeter road. For some environmental components, depending on the nature of the potential environmental effects, consideration of effects has been made using a larger study area. Where the larger study area is used, it is described in the appropriate subsection.

The following description of existing (referred to as "Baseline") conditions considered the most recent available data that generally involved data from 2003–2010. Field visits in the Study Area were also undertaken. All of the environmental components required for the EA and this screening report have been included and considered.

4.1 Biophysical Environment

4.1.1 Air Quality

For this environmental component a wider Study Area was considered for the Project activities relating to the pedestrian tunnel. This included the lands south of the Gardiner Expressway, west of Spadina Avenue and east of the Exhibition Park lands. Existing and future residential developments in the area have been considered, as well as park spaces, schools, and other sensitive land uses.

The dominant sources of airborne emissions in the Study Area for the pedestrian tunnel are road vehicles traveling on the elevated Gardiner Expressway and Lake Shore Boulevard. For the airport perimeter road, aircraft are expected to be the dominant contributor to air quality conditions, particularly due to the distance of the alignment from roadways on the mainland side. Elevated levels of carbon monoxide (CO) and total suspended particulate (TSP) commonly occur along roadway corridors. Relative to automobile emissions, rail traffic contributes a minor impact, and the distance between the Study Area and the rail corridor is far enough that it is not a significant source.

Other contributors to overall emission levels include long-range transport from Hamilton and the U.S., marine activity (recreational and commercial boating and the Island Ferries) and aircraft activity at the BBTCA. There are no significant industrial air pollution sources in the Study Area.

The identified receptors (locations where air quality was assessed) within the Study Area are shown in **Figure 4.1** and include the Harbourfront Community Centre, the Waterfront School (elementary) and City School (secondary) which are all located at the corner of Queens Quay and Eireann Quay. The nearest residential housing is located west of the Project site, along Little Norway Crescent and Stadium Road south of Queens Quay.

Air quality conditions for the baseline situation (late 2010) are based on air quality modelling work that RWDI conducted in 2005, which modeled future (i.e., assumed future 2011 at that time) air quality conditions that reflected anticipated growth in BBTCA air traffic (and associated road traffic). The use of these previously modeled results to reflect current conditions is reasonable for the purposes of this EA because the then assumed BBTCA aircraft and related road traffic volumes are similar to current (2010) volumes and the modeled air quality results are reasonably expected to be within 10% of actual current conditions. This approach is considered to be conservative, because the effects considered are being assessed based on the difference between the current (2010) aircraft movements and the aircraft movements using 202 slots, even though the latter is permitted under the Tripartite Agreement and will likely occur before construction and operation of the Project (if it were to proceed).

Figure 4.1 Air Quality Receptor Locations

Table 4.1 presents a summary of current emissions levels, as well as the Ontario MOE ambient air quality criteria (AAQC) (which represent the maximum desirable pollutant levels in the ambient air, and thus are used for reference). These criteria are provided in Table 4.1 for the principle pollutants associated with vehicles and airport-related activities. Ambient air quality guidelines published by the World Health Organization (WHO) are also included for reference where there is overlap with the contaminants and averaging times from the AAQC. The current levels are well below applicable air quality criteria maximums.

Table 4.1 Summary of AAQC and Current Emissions Levels from Combined Roadway, Ferry and Airport Emissions

	Averaging Period	Current ($\mu g/m^3$)	AAQC - Criterion ($\mu g/m^3$)
Carbon Monoxide (CO)	1 Hour	2, 903	36,200
	8 Hour	1, 268	15,700
Nitrogen Dioxide (NO_2)	1 Hour	125	400 [200]
Inhalable Particulate Matter (PM_{10})	24 Hour	14	50*
Respirable Particulate Matter ($PM_{2.5}$)	24 Hour	3.2	30† [25]

[ ] World Health Organization Guideline Standard

† Canada Wide Standard (CWS) by year 2010 based on the 98th percentile ambient measurement annually, averaged over 3 consecutive years.

* Interim Ambient Air Quality Criterion.

4.1.2 Fish Habitat

The channel between the mainland and the BBTCA within the Study Area is known as the Western Gap portion of the Toronto Harbour. The study area considered for fish habitat extends east to Lower Spadina, west to Stadium Road, north to Lake Shore Boulevard and south to encompass the BBTCA.

Based on a review of background data from the Ministry of Natural Resources (MNR, 1994) and the Toronto and Region Conservation Authority (TRCA, 1997–2002) the primary composition of fish species within this Study Area includes white sucker (*Catostomus commersoni*), common carp (*Cyprinus carpio*), and northern pike (*Esox lucius*). Other species include yellow perch (*Perca flavescens*), rock bass (*Ambloplites rupestris*), largemouth bass (*Micropterus salmoides*), gizzard shad (*Dorosoma cepedianum*), pumpkinseed (*Lepomis gibbosus*), brown bullhead (*Ameiurus nebulosus*) and alewife (*Alosa pseudoharengus*) (MNR, 1994).

Electrofishing studies in the Western Gap usually resulted in very low abundances throughout

the growing season (Rick Portis, TRCA, *personal communication*). The most common fish species surveyed in nearby Spadina Quay (approximately 440m east of the Western Gap) from 2005 to 2009 included alewife, northern pike, emerald shiner (*Notropis atherinoides*), spottail shiner (*Notropis hudsonius*), pumpkinseed and common carp. Adjacent to the eastern edge of the Western Gap is the Bathurst Quay which, in the most recent studies, was dominated by round goby (*Neogobius melanostomus*) and alewife populations in 2007 – 2009. (Mike Correa, TRCA, *personal communication*). To the west of the Study Area (approximately 590m) along the Ontario Place shore, fish populations were dominated by white sucker.

According to mapping of Fisheries and Oceans Canada (DFO) and Conservation Ontario (2009), two species at risk were identified within and adjacent to the Study Area. Atlantic salmon (*Salmo salar,* Lake Ontario population) is mapped along the Toronto shoreline extending from Humber Bay through Brigantine Cove, across the Toronto harbour (including the study area) to the Don River. Currently, Atlantic salmon are considered *Extirpated* at the provincial and federal level (Government of Canada, 2010) but they have been listed as a priority species to be assessed and classified by the Committee on the Status of Species at Risk in Ontario (COSSARO) as of November 23, 2009 and are expected to be listed in the next year (MNR, 2009). The shoreline of the entire Toronto Island including the Western Gap has been deemed habitat for the American eel (*Anguilla rostrata*) which has been designated *Endangered* provincially and *Special Concern* federally.

Aquatic habitat resources of the Western Gap along the Eireann Quay (previously Bathurst Street) alignment are relatively homogeneous exhibiting little variation in water depth, substrate type, underwater structure and shoreline variability. The channel sides are steel sheet pilings with the bottom at a depth of 10.5 m at the shoreline. Further out in the channel the depth increases slightly to 11.0 m, with one trough approaching 12.0 m. On the airport side, the bottom is again at 10 m at the side of the wall. Substrates are hard packed sand, but the trough in the centre of the channel is limestone bedrock. One small area of fine sand occurs on the BBTCA side, tight in against the sheet piled wall. A previous substrate survey showed that sediments along this alignment consist of approximately 65% sand over bedrock and 35% bare bedrock. As an aside, and further to other investigations completed, no aquatic plants were observed here during 1996 field work.

The Western Gap provides migratory access for fish from the Harbour and the lagoons at the Toronto Islands westward to the Ontario Place shoreline where more favourable fish habitat characteristics exist (i.e., shallower shorelines or littoral zones for cover, aquatic plant beds, forage, and spawning and nursery areas). Sheltered embayments, such as the Toronto harbour, provide thermal habitat, significant areas of aquatic vegetation, various shoreline configurations

and important centres of biological organization. Water currents between embayments and open areas attract forage fish, providing a concentrated feeding area for predator species (Aquatic Habitat Toronto, 2002). Further, the conditions of the Western Gap and connecting harbour and channels have been impacted by maintenance dredging.

4.1.3 Migratory Birds

In the vicinity of the pedestrian tunnel, some bird habitat does exist. However, the lands that may be directly affected by the pedestrian tunnel provide limited to no bird habitat. The proposed airport perimeter road is not considered as prime bird habitat (maintained grass), but the adjacent lands do provide potential migratory bird habitat. The following provides a summary of birds and bird habitat in the larger area that extends beyond the Study Area, in order to be conservative in the assessment, as there is some, albeit limited, potential that birds could be affected by the Project. Details of wildlife and wildlife habitat in the Study Area are documented in **Section 4.1.10**.

The following provides a summary of birds and bird activity in an area that includes virtually the entire Toronto waterfront and Island system including the Leslie Street Spit:

- 300 species of birds have been reported in this area, with 220 to 225 species expected to be present regularly each year, whereas 75 to 80 species would only be present on an irregular basis;
- 90 species would be found nesting each year in Toronto waterfront areas;
- Most nesting species would be in very small numbers; only 3 to 5 species are present in large numbers, and one species in very large numbers; and
- While most species are non-breeding visitors, some are present in substantial numbers as migrants, and some remain through the winter in large numbers. At any time of year, a significant number of individual birds may be found in the vicinity of the BBTCA. Two species, Canada Goose and Ring-billed Gull are found in particular abundance.

Further to the above, the following describes some of the more abundant birds found in the area:

Double-Crested Cormorant

The Double-crested Cormorant is an abundant species from mid April to mid November, but is rare to absent in winter. About 3,000 pairs nest in Tommy Thompson Park, with birds flying low within this area, and swimming in the Western Gap much of the year. The number of birds present nearly doubles in the summer as the young leave nests. Most would likely stay out of

the inner harbour, but they readily perch on piers and docks, and could be in the immediate vicinity of the proposed Project

Black-Crowned Night-Heron

More than 1,000 pairs nest in Tommy Thompson Park. Being partially nocturnal, they fly about the harbour area from April to November at almost any time of day or night. Again, numbers may double through the summer as the young leave nests. They readily perch on buildings and fences and may be in close proximity to the proposed Project.

Waterfowl

Waterfowl**,** including ducks, geese, and swans are numerous all year. Between 20,000 and 35,000 waterfowl are likely to be present during mid winter. Five species make up the majority of these wintering birds, including Long-tailed Duck (7,000 to 11, 000), Canada Goose (4,000 to 10, 000), Greater Scaup (2,000 to 6,000), Mallard (1,000 to 6,000), and Common Goldeneye (1,000 to 2,000). Another 1,000 to 4,000 waterfowl are regularly present including Redhead, Bufflehead, American Black Duck, Gadwall, Common Merganser, and Red-breasted Merganser**.** Less predictably, hundreds of scoters may add to these numbers.

During summer, waterfowl are at their lowest numbers in this area, as most have dispersed to other areas for the breeding season. However, several hundred pairs of those that do remain, principally Canada Geese and Mallards**,** and their broods of young, are often found directly in the path of any activities by people, both on land and in the water. Hundreds of additional waterfowl generally return to this area by mid summer to molt.

Throughout the spring and autumn migration periods, thousands of additional waterfowl stop temporarily on their movements to and from nesting and wintering areas. Some 29 species regularly contribute varying numbers to this flow of waterfowl. The northward movement begins in March and continues at least into early June. Birds are returning by late August, with passing birds lingering for various periods of time through the next four months.

Canada Geese

Canada Geese are of concern apart from other waterfowl. They are undoubtedly one of the two most significant species in the Toronto waterfront. They are abundant year round and nest in hundreds in the waterfront lands. As many as 3,000 birds could be expected in mid-summer in the vicinity of the proposed Project. By mid-winter, numbers of Canada Geese have increased to between 4,000 and 10,000 birds. They are tolerant of human activity, noise and disturbance, and wander or fly into many places, including airports, where they represent a potential

nuisance. Control efforts have been undertaken for a number of years. Geese are rounded up when flightless and shipped to places where they are less numerous.

Raptors

Each autumn thousands of birds of prey (raptors) of 14 species (including osprey, harrier, hawks, eagles, falcons) migrate over Toronto along the north shore of Lake Ontario. The Turkey Vulture**,** although no longer considered a diurnal raptor, is generally also included with this group. From the beginning of their movements in late August, until the last few pass in early November, about 16, 000 to 17, 000 raptors could be expected. Numbers are variable from day to day, depending upon weather conditions. They fly at varying heights, depending upon the species, most moving relatively high overhead. However, some species regularly move through the trees, and in passing westward from the Toronto Islands would cross the Study Area. Most are generally wary and reluctant to approach people, but are less wary around machines, even if noisy.

Shorebirds

Most shorebirds will occur as migrants in the Toronto Harbour and generally in relatively small numbers (fewer than 100). Sixteen species can be expected as regular migrants, and another 9 species are possible. Most shorebirds will fly high and right over southern Ontario during migration. However, on occasion, weather may interfere, and larger numbers will land for a short stay. As many as 3,000 Whimbrel have been seen at one time, for example, in Tommy Thompson Park. Typically they choose more remote shorelines to forage on, but any beach offering open spaces, even in close proximity to the airport, may be used. The grasslands near the proposed Project have been resting places for several plover species, and a few other sandpipers

Gulls and Terns

The most numerous is the Ring-billed Gull with between 50,000 and 60,000 pairs nesting in Tommy Thompson Park each spring. When their young are flying in late summer and autumn, there could be more than 200,000 Ring-billed Gulls in the Greater Toronto waterfront area. Current population levels are such that there is a continual presence in the Study Area.

Herring Gulls also nest in colonies on Tommy Thompson Park with more than 100 pairs in recent years. With the influx of more northerly nesting birds passing southward on migration, numbers climb to more than 1,000 birds by early winter, many of which remain for the winter. Although fewer in numbers than Ring-billed Gulls, Herring Gulls may also regularly fly close to or frequent the Study Area. In winter they will be joined by smaller numbers of Atlantic and arctic-nesting gulls.

In the past, Common Terns were formerly more abundant but now have about 300 nesting pairs in Tommy Thompson Park. An additional 50 pairs nest on the west end of the Toronto Islands south of the BBTCA. Through the spring and summer months they forage in waters of the Toronto waterfront, and frequently pass through the Western Gap.

Song Birds

Just over 100 species of songbirds (passerine birds) are/would be regularly expected close to the Study Area during the course of a year. Some are present all year, and others are both migrants and breeders. There are significantly more migrants than breeders. During the summer season about 45 species of songbirds can be expected as breeding birds in the Study Area. At least six of those species are/will be common to abundant, while the rest will be uncommon to rare.

4.1.4 Noise

The sound environment in the Study Area is typical of a downtown urban area. For all receptors (locations in the Study Area where sound was calculated), a level of background noise or "urban hum" is present, which is generated from traffic on the Gardiner Expressway and nearby roadways such as Lake Shore Boulevard, Queens Quay, Bathurst Street, and Eireann Quay. Road traffic noise from the Gardiner Expressway and other major arterial roads in the area is the dominant noise source for most locations. For receptor points closer to the BBTCA, airport activity plays a greater role in the background sound levels.

Baseline sound conditions were estimated for selected points of reception in the vicinity of the BBTCA. The points of reception are shown in **Figure 4.2.** As is typical for studies such as this, actual field measurements of sound levels were not undertaken.

Figure 4.2 Noise Receptor Locations

Contributions to noise have been considered from road, Light Rail Transit, BBTCA ferry, aircraft, and aircraft support equipment activities. The estimated current sound levels were modeled for three different averaging periods: 24 hr day, day time period, night time period. The sound levels, expressed using the L_{eq} (24), L_{eq} (Day) and L_{eq} (Night) metrics, are shown in **Tables 4.2** through **4.4**, respectively.

For current 2010 conditions, sound level estimates were taken from a recent (October 2010) noise assessment study completed by RWDI which compares current (2010) sound conditions to future (2016) conditions (for further information regarding the RWDI study, see Appendix C).

Current sound levels due to road and LRT traffic in the area are comparable to or higher than the sound levels from groundside airport activity for both the L_{eq} (24) and L_{eq} (Day). Airside sound levels are less than the road and LRT traffic sound levels for both L_{eq} (24) and L_{eq} (Day). Road and LRT traffic is a significant contributor to the local sound environment. Activities at the BBTCA currently result in sound levels that are similar to or less than road and LRT sound levels. Road and LRT sources dominate noise levels in the Study Area (i.e., they are the largest contributors), and due to the nature of sound (which is logarithmic), when BBTCA related noise sources are added, this only results, at most receptors, in a 0 or 1 dBA increase in noise levels (which is such an insignificant increase and would not be noticeable**).** At receptors R4 (little Norway Park) and R8 (Southwest corner of South Beach Marina Town Residences) the increase is slightly higher. Sound levels at R4 and R8 from groundside activities are anticipated to be greater than ambient levels from road and LRT traffic. Ambient (road traffic) sound exposures at R4 and R8 are generally lower than at other receptors because of building screening of the Gardiner Expressway and other major arterial roads in the area.

Tables 4.2, 4.3, and 4.4: Estimated Current Sound Levels

Table 4.2: Cumulative Weekly Noise Impacts - Leq (24) (in dBA) (Fig. 4.2 shows receptor locations)

Receptor No.	Road and LRT	Ferry	Groundside	Airside	Total
R1	68	33	52	55	**69**
R2	75	9	35	56	**75**
R3	65	39	57	56	**66**
R4	58	39	57	57	**62**
R5	65	21	49	56	**66**
R6	65	16	55	55	**66**
R7	65	22	52	56	**66**
R8	58	34	58	57	**62**

Table 4.3: Cumulative Weekly Noise Impacts - Leq (Day)
(in dBA) (Fig. 4.2 shows receptor locations)

Receptor No.	Road and LRT	Ferry	Groundside	Airside	Total
R1	70	34	53	57	**70**
R2	76	10	37	58	**76**
R3	66	40	58	58	**67**
R4	59	40	59	59	**64**
R5	67	22	51	58	**67**
R6	67	17	57	57	**68**
R7	66	23	54	58	**67**
R8	59	36	59	59	**64**

Table 4.4: Cumulative Weekly Noise Impacts - Leq (Night)
(in dBA) (Fig. 4.2 shows receptor locations)

Receptor No.	Road and LRT	Ferry	Groundside	Total
R1	64	29	37	**64**
R2	70	5	20	**70**
R3	61	35	41	**62**
R4	54	35	42	**55**
R5	59	17	34	**59**
R6	61	12	40	**61**
R7	59	18	37	**59**
R8	54	30	42	**55**

There are no sensitive noise receptors located near the perimeter road. For the purposes of this EA, the current noise conditions for the perimeter road consist of groundside and airside aircraft activity.

4.1.5 Species at Risk

The lands that would be affected by the construction of the pedestrian tunnel are highly degraded and contain no valued natural wildlife habitat. As a result no species at risk or species of special status would be affected by the pedestrian tunnel portion of the Project.

The alignment of the perimeter road is set back 10 meters from the existing south perimeter fence on the BBTCA lands (see Figure 4.3 in Section 4.1.10). Within the south perimeter fence and along the proposed right-of-way for the perimeter road there are no species at risk or species of conservation concern. However, outside the south perimeter fence, within 5 metres of the fence one species of conservation concern has been identified. The Kentucky Coffee

Tree (*Gymnocladus dioicus*) is listed as Threatened under both Provincial and Federal legislation. The location, sensitivity and perimeter road alignment and construction considerations are discussed further in **Section 4.1.10**, Vegetation and Wildlife. The tree is located outside the area of anticipated Project activities and would not be impacted by the Project.

4.1.6 Terrain and Topography

The Study Area (both mainland and airport areas) is fairly flat, with a faint relief on both the mainland and at the BBTCA sloping towards the Western Gap. The Western Gap is approximately 120 metres wide, with steel and concrete seawalls along both shorelines.

Investigations of the dockwall indicate that the dockwall on the north side of the channel (constructed in 1912) is in poor condition; the dockwall on the south side of the channel is in better condition and has been reconstructed in the last 20-25 years. The dock walls consist of timber cribs with concrete superstructure.

The terrain around the proposed perimeter road is flat and has been landscaped for airport activities. The perimeter road is proposed on what is currently grass/lawn inside the TPA property line and perimeter fence.

4.1.7 Soils and Sediments

Geotechnical investigations at the pedestrian tunnel site, as well as the following documents were used to describe the regional physiography and expected local geology/hydrogeology below the Site.

- The Physiography of Southern Ontario, Chapman and Putnam, 1984.
- Quaternary Geology of Toronto and Surrounding Area, Southern Ontario. Map 2204, Ontario Geological Survey, 1980.
- Bedrock Geology of Ontario, Southern Sheet, Ontario Geological Survey, 1991.

Chapman and Putnam describe the Site as being in the Iroquois Plain physiographic region. The Iroquois lake plain consists of clay till deposits and sand deposits as a result of deposition from glacial Lake Iroquois.

Bedrock geology mapping for the area indicates that the Site is underlain by bedrock of Upper Ordivician age Georgian Bay Formation, which consists of shale, limestone, dolostone and

siltstone. The results of geotechnical investigations completed describe the overburden and bedrock to consist of approximately 8 m of silty sand fill, underlain by bedrock of the Georgian Bay Formation, which is primarily shale with minor interbeds of siltstone and limestone that slopes gently to the south. It is suspected that the fill was placed during historic filling of Lake Ontario with hydraulically dredged material during the Toronto Harbourfront development in the 1950s. The proposed tunnel access would be within the bedrock, between 20 and 26 m depth (56.1 and 50.1 metres above sea level (masl)). No combustible gas was reported during geotechnical investigations.

4.1.8 Groundwater

The observed depth to groundwater during geotechnical investigations was approximately 1.0 to 1.5 metres below ground surface (mbgs). This depth is equivalent to the elevation of Lake Ontario (water table) and the flow direction is inferred to be southerly towards the lake.

Straddle packer tests conducted in boreholes in 3 m long sections determined the in-situ hydraulic conductivity (K) of the fractured shale bedrock. In each borehole, 5 pressure injection tests were done over a total tested core length of 13 m. The zone tested was between approximately 61.0 and 47.0 masl, or 5 m above to 3 m below the proposed tunnel excavation. The measured values ranged from $1.7x10^{-5}$ m/s to $4x10^{-7}$ m/s in the zone above 51.0 masl, which includes the proposed tunnel excavation. In the zone below 51.0 masl (and below the proposed tunnel invert), a single measured K value was $4.2x10^{-9}$ m/s.

The effective hydraulic conductivity measured during packer tests indicates that groundwater would be encountered during the construction of the shafts and the tunnel. The effects and management of this is discussed in Section 5.

4.1.9 Surface Water

The water quality in the Western Gap is generally poor, quite similar to the water quality in the Inner Harbour. The Toronto and Region Remedial Action Plan (RAP) and Aquatic Habitat Toronto are charged with improving water quality in the Great Lakes, specifically the Toronto waterfront area. The Toronto RAP report, *Moving Forward: 2007 RAP Progress Report,* was published in 2009 and describes current water quality conditions. There have been concentrations of nutrients and fecal coliform bacteria along the entire Toronto Waterfront that are above Provincial Water Quality Objectives. Within the harbour, heavy metals and organics are particularly common. The harbour is negatively affected by the contaminated waters from the combined loadings of the Don River and the numerous storm and combined sewer outfalls,

as well as point sources of contaminants such as the shipping channel at the Toronto Port Lands.

Water level conditions in the Western Channel are influenced by 1) the levels in the Inner Harbour and the Lake, 2) wind (due to the channel's east-northeast, west-southwest orientation, which provides an exposure to the frequent winds) and 3) to a small extent by local runoff draining into the channel. Studies conducted by the Toronto Harbour Commissioners showed that moderate to strong westerly winds prevailing over a sufficiently long time can cause inflow through the Western Gap and outflow through the Eastern Gap. Winds from the northeast or southeast reverse the trend causing an inflow through the Eastern Gap and the outflow through the Western Gap. The wind data recorded at the BBTCA indicate that the winds from the northwest and southwest directions persist more strongly and frequently than from the northeast and southeast directions. This tends to promote inflow through the Western Gap and outflow through the Eastern Gap.

4.1.10 Vegetation and Wildlife

Vegetation and wildlife have been considered in two parts; the study area concerning the pedestrian tunnel and the study area concerning the airport perimeter road. This is due to the variations in vegetation and wildlife between these two. The Study Area related to the pedestrian tunnel is highly urbanized and has been studied and surveyed, including in the past for other projects. The Study Area related to the airport perimeter road comprises some natural conditions that have not been urbanized.

For the pedestrian tunnel, previous field studies from 2003 and 2005 have been considered as vegetation has not materially changed in the area. In 2003, field studies were conducted along both sides of the Western Gap. The results of these studies, which are still relevant and useful for the purpose of this EA, included the recording of plant species and the assessment of potential wildlife habitat in the Study Area. Results from the 2003 studies were confirmed in September 2005 and again in September 2010, which confirmed that conditions have not materially changed in the area.

The shoreline of both sides of the western gap/channel are hardened with no natural shoreline habitat existing. Northwest of the ferry slip and south of Queens Quay is Little Norway Park. Little Norway Park contains landscape vegetation including trees and shrubs, but has no natural vegetation. The only natural vegetation in the immediate area of the pedestrian tunnel project site consists of weeds that have grown in cracks in the pavement. These weeds include goldenrod, redtop, dandelion, smartweed, prickly lettuce, climbing nightshade, wild oats, lambs

quarters, black medic, rough cinquefoil, shepards purse, foxtail barley and broadleaved plantain. The wildlife observed in the area during field studies consisted of mallards, Canada geese, rock doves, American robin and ringbilled gulls. Residents have reported observing a number of bird/waterfowl species and small mammals (e.g., squirrels, raccoons) in the Study Area.

For the Study Area for the perimeter road portion, studies were conducted in August 2010 as this area had not been recently surveyed. The follow description includes survey methods and results.

Methods – Ecological Land Classification and Vegetation

Ecological communities are the product of the vegetation, fauna and physical substrates that comprise them. Ecological Land Classification (ELC) uses these parameters to objectively classify ecological communities according to the soil conditions, dominant vegetation, level of disturbance (i.e., natural versus anthropogenic) that sustain the community. ELC has become the standard method of classifying ecological communities in Ontario (Lee et al, 1998), and was conducted throughout the Study Area, which for this purpose is generally within 120 m of the proposed airport perimeter road. Vegetation communities were then mapped on aerial photography according to ELC nomenclature to graphically represent the specific spatial pattern of the vegetation cover according to species composition, physiognomy, and physical site characteristics.

In order to more fully understand the habitat in the Study Area, to preclude activity in areas with provincially and/or federally listed Species at Risk and to mitigate activity in areas with regionally significant species, a botanical inventory was completed for the Study Area, which for this purpose is primarily within 30 m of the road alignment. The vegetation study involved traversing the Study Area on foot and recording flora species observed during the mid-summer (2010) site visit. Species nomenclature is based on the Ontario Plant List (Newmaster *et al.* 1998). The coefficient of conservatism and the coefficient of wetness for each plant were used to evaluate the quality of the habitat, and the potential for wetland habitat, respectively.

Methods – Tree Survey

In addition to the vegetation survey that was completed, the location of trees ≥15cm within five metres of the airport south perimeter fence was recorded. Individual tree records include species name, tree size, a tree condition assessment and the hedgerow location where the tree was observed. For multi-stem trees, the tree size was determined by measuring the largest stem at the diameter at base height (DBH). Shrub-like trees (i.e., European buckthorn and hawthorn) were inventoried if the lead stem (main stem) was over 15cm dbh.

Each identified tree was given a condition rating (i.e. poor, fair, good or excellent), based on a visual inspection of its condition.

Results - Ecological Land Classification

Four different ecological communities were identified through the ELC protocol including one cultural community and three natural vegetation communities (see **Figure 4.3**). These communities are listed below and additional detail is provided for each community.

Cultural Communities

- GGL-2: Parkland

Natural Communities

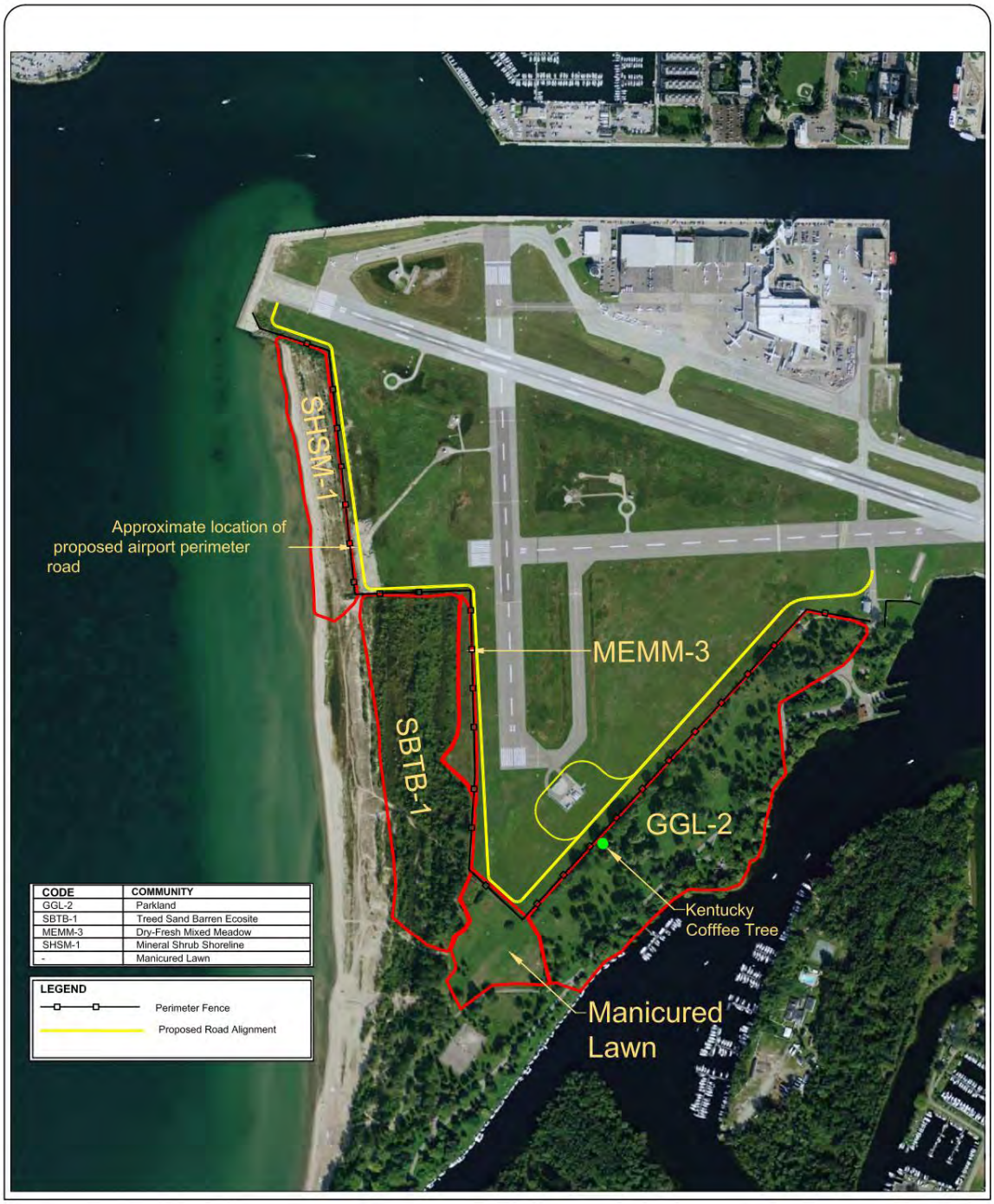
- SBTB 1: Treed Sand Barren Ecosite
- MEMM 3: Dry-fresh Mixed Meadow
- SHSM 1: Mineral Shrub Shoreline

The results of the survey are presented in **Appendix A**. The proposed road alignment passes through an area of maintained grass and does not support natural habitat. All of the vegetation communities identified are not within the proposed alignment for the road

During the completion of the ELC and tree inventory surveys, twenty bird species and three butterfly species were encountered. All bird species except one were provincially listed as either Secure (S5) or Apparently Secure (S4). The one exception was the Caspian Tern (*Hydroprogne caspia*), which was listed as Vulnerable (S3). Two of the three butterflies were Secure (S5) while the Monarch was listed as Special Concern. The Caspian Tern was located in the Mineral Shrub Shoreline, which is consistent with the general habitat requirements of this bird. However, the Mineral Shrub Shoreline is not a breeding habitat for this species. In order for an area to be qualified as a Caspain Tern nesting habitat, 75 breeding pairs must exist. The breeding pair numbers observed in the Study Area was less than 10, considerably low, verifying the area is not a Caspian Tern nesting habitat.

The Monarch butterfly was found at all the identified vegetation communities in the vicinity of the road alignment. This is common as the butterfly migrates through Ontario and is commonly seen throughout the province. The primary habitat needed in Ontario for this species is the Milkweed (*Asclepias*) plant, which serves as a host for breeding. Milkweed was found in the Parkland, the Treed Barren and the Mixed Meadow portions of the Study Area. However, the number of Monarchs seen was few and the area would not qualify as a migratory butterfly stopover area. Monarchs are common in Ontario.

Figure 4.3 Ecological Land Classification



DILLON CONSULTING

Toronto Port Authority Pedestrian Tunnel

Ecological Land Classification

Proj. Manager:	PAM	Drawn By:	ITR	Figure:
Scale:	N.T.S.	Checked By:	ITR	
Date Issued:	October, 2010	Project No:	10-3010	
Location:	G:\CAD\TPA- Pedestrian Tunnel\Design	File Name:	TPA_ELC Plan (Combined).dwg	

4.1.11 Wetlands

There are no wetlands in the Study Area.

4.2 Social & Economic

The socio-economic Study Area is the area by the lands and waters in the vicinity of the pedestrian tunnel project site, generally bounded by Queens Quay to the north, Stadium Road to the west and Dan Leckie Way to the east (the "S-E Study Area"). The S-E Study Area is based on the anticipated area likely to be affected by the Project (and in particular the pedestrian tunnel; the only notable land use in the vicinity of the proposed road is the BBTCA).

4.2.1 Economics/Businesses and Community Facilities

The businesses and services on the mainland side in the vicinity of the proposed Project are:

- Two private yacht clubs (at the end of Stadium Road);
- Parking for access to the BBTCA (foot of Bathurst Street and foot of Stadium Road and Little Norway Crescent);
- Harbourfront Community Centre: the building houses a community centre (which provides community programs and services to all age groups), a day care centre, The Waterfront School (elementary JK-grade 8), and City School (an alternative secondary school grade 9-12). The centre employs approximately 71 people, many of whom are part-time students. All of this is contained within the same building.
- TV Station and offices (Omni, CityTV, Rogers) at Bathurst and Queens Quay;
- A small number of businesses contained on the ground floors of the condominiums located along Queen’s Quay; and
- Marine Quay West (Spadina Marina).

In addition to recreational boating and commercial shipping, this area is used by the tour boat industry. Over 30 tour boats operate in the Toronto Harbour and surrounding area. The tour boats operate from approximately April to October.

There are a number of businesses located on the island at the BBTCA. These include:

- BBTCA Administration and Business Offices
- Porter Airlines
- Canada Border Services Agency
- Ministry of Health/ORNGE (plans to relocate)

- Airborne Sensing Corporation (aerial photographers);
- Business Wings Air Charter;
- Cameron Air Services;
- Canadian Flyers Flight Training and Charters;
- Canadian Helicopters;
- The Helicopter Co.;
- Flight Executive;
- Eagle Aircraft Inc.;
- Island Airlink Corporation;
- Island Air Flight School;
- J.A. Spears and Assoc.;
- Nav Canada / Control Tower;
- Flight Information Centre;
- Tourism Toronto;
- Trans Capital Air/Stolport Corporation;
- Trans Capital FBO;
- Druxy's.

4.2.2 Aboriginal Claims/Traditional Use of Lands/Resources

On May 29, 2010, the Mississaugas of the New Credit First Nation voted in favour of a land claims settlement with the federal government pertaining to land in Toronto and Burlington Ontario. The land claim and agreement is known as the *Toronto Purchase and Brant Tract Specific Claim Settlement Agreement and Trust Agreement*. The settlement resolves two land claims: the Brant Tract purchase of 1797, and the Toronto purchase of 1805, which include lands in the Study Area, stretching from present day Etobicoke Creek in the west to Ashbridge's Bay in the east, and from the Toronto Islands to north of the city limits. The settlement does not affect ownership of any of the land for the Project, as indicated by the Department of Indian and Northern Affairs Canada (http://www.ainc-inac.gc.ca/ai/mr/nr/j-a2010/23312bkg-eng.asp). We are not aware of any other land claim within the Study Area or any traditional uses by Aboriginals of relevant land or resources. Further detail regarding contact made with First Nation communities is discussed in Section 6.0.

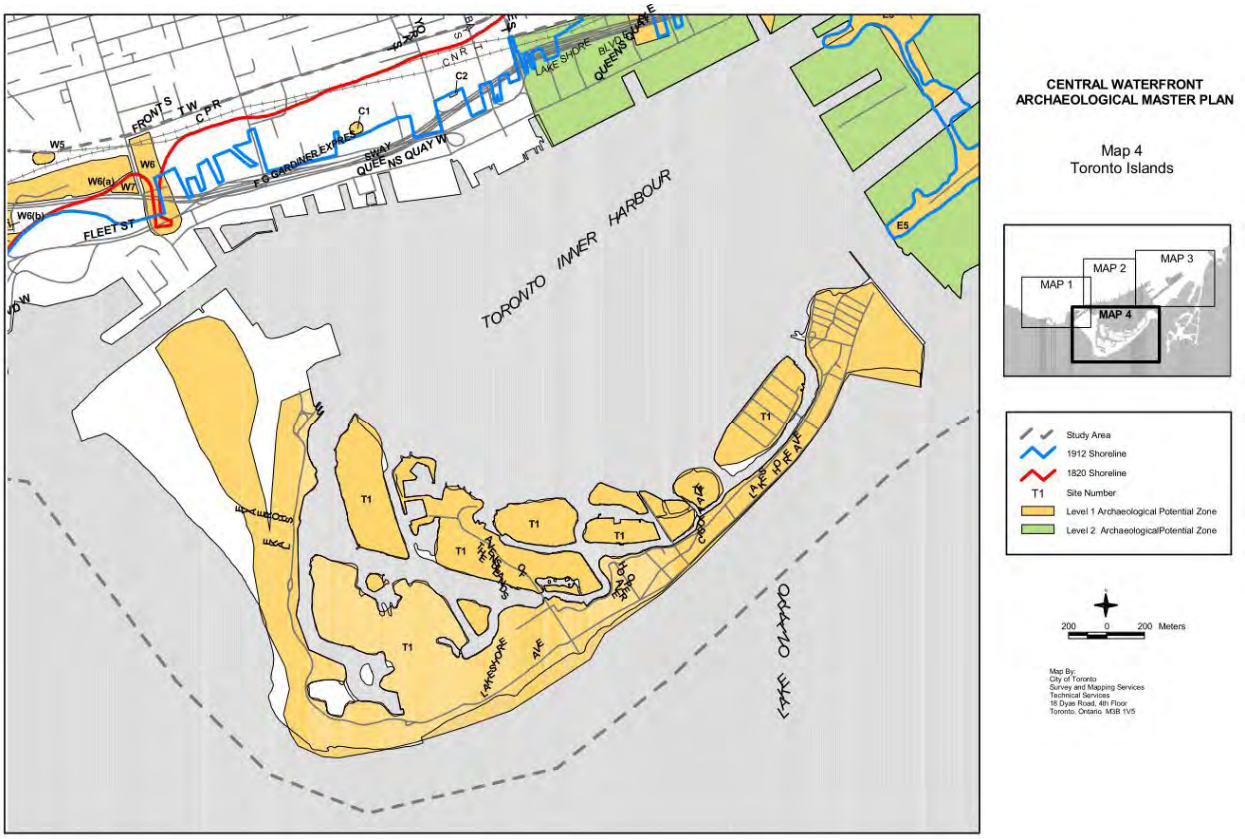
4.2.3 Heritage and Archaeological Features

A review of historic maps of the Toronto waterfront indicates that the original shoreline lies between 600 and 700 metres north of the Western Gap. Although various wharves were built along this section of the Lake Ontario shoreline, none falls in the immediate area of the

proposed pedestrian/services tunnel and perimeter road. The most notable nineteenth century wharf in the area was Queens Wharf, built in 1833. This wharf followed a similar alignment to Bathurst Street south of Fort York, but did not extend past the area of present Lake Shore Boulevard. The shallow Lake Ontario foreshore was infilled extensively during the latter decades of the nineteenth and early decades of the twentieth century to accommodate larger lake-going vessels. The current Western Gap reflects this vastly altered shoreline. The physical separation of the potentially affected lands from the historic shoreline of Fort York and the associated wharves and harbour facilities, together with the disturbed nature of the infill, results in the area proposed for the pedestrian tunnel being of inconsequential archaeological resource potential.

To consider the archaeological potential of the airport side (with respect to the proposed road) a review of *The Archaeological Master Plan for the Central Waterfront, City of Toronto, Ontario* (2003) was completed. The Toronto Islands, including the airport lands, were created by the confluence of easterly sand-bearing currents, westerly winds and the outflow of the Don River along the Toronto central waterfront. **Figure 4.4** below illustrates the archaeological classification of the Study Area. The yellow highlighted area depicts the original shape and location of the islands. The yellow also indicates the portion of the Study Area that is classified in the City's report as a Level 1 Archaeological Potential Zone.

Figure 4.4 Archaeological Potential Classification



According to the City's ASI Report, Level 1 Archaeological potential zones "comprise those lands where archaeological potential has been confirmed to exist on the basis of the results of this and other studies"[1]. The archaeological potential in the Study Area relates to precontact aboriginal potential, potential of burial sites, temporary encampments, military settlement, historic cottages, and the potential for the 1809 lighthouse and lighthouse keeper's cottage.[2] However, the ASI report does state that it is unlikely, given the massive disturbance to the original Gibralter Point area (in particular, the construction of the Toronto Island Airport, now known as the BBTCA), that any evidence of the York military settlement still exists.[3]

The City's ASI report recommends that impacts within Level 1 zones be preceded by a Stage 1 and 2 archaeological resource assessment. Parks Canada can have an advisory role for the protection and management of archaeological resources on lands and waters under federal jurisdiction. Parks Canada is not required to be involved in the EA, including because the TPA

[1] Archaeological Services Inc., *The Archaeological Master Plan for the Central Waterfront, City of Toronto, Ontario*. 2003. pg. 64.
[2] Ibid, pg. 63.
[3] Ibid, pg. 63.

does not require a permit or approval from Parks Canada for the Project. Nevertheless, the TPA is committed to completing an archaeological assessment of the "Level 1" lands on and adjacent to the perimeter road alignment, which is a very small portion of land within the City's Level 1 zone, prior to any construction, which would be provided to Parks Canada for review. A copy of an assessment would also be sent to the City's Heritage Preservation Services department.

Built heritage features on the airport side of the Study Area consist of two structures at the BBTCA: the original Toronto Island Air Passenger Terminal and a brick hangar. The Toronto Island Air Passenger Terminal (referred to as the Administration Building) was designated as a national historic site in 1989. The building no longer functions as an airport terminal but is part of the operating airport and has been used for various commercial and administrative purposes in more recent years. It is surrounded by airport related infrastructure including for example: runways, hangars, the current terminal building and other support buildings. The formal National Historic Site of Canada recognition consists of the building on its footprint.

Built heritage features on the mainland side of the Study Area consist of the Former Canada Malting Silos and Complex at 5 Eireann Quay. The Canada Malting complex was built by the Canada Malting Company in 1928 to supply the growing Ontario barley market. At the time of its construction, it was considered a new innovation. The facility was closed by the Canada Malting Company in 1987 and has since remained vacant. The Canada Malting complex was listed in the City's Inventory of Heritage Buildings in 1973 due to its architectural and contextual significance. The 1929 and 1944 silos were designated by the City of Toronto under Part IV of the Ontario Heritage Act on February 1, 2010. As noted below, demolition of adjacent buildings on the site was undertaken in 2010.

4.2.4 Land Use

Land use conditions were determined during field visits to the Study Area, a review of relevant planning documents/maps and discussions with City planning staff. **Figure 4.5** illustrates the existing land use in the Study Area.

The existing land use in the vicinity of the pedestrian tunnel area consists of park space (e.g., Little Norway Park and Ireland Park) and mid-rise residential condo buildings, many of which contain small ancillary retail uses at ground level. Other notable land uses include the Waterfront School, City School and Harbourfront Community Center at the intersection of Eireann Quay and Queens Quay. The City of Toronto Official Plan designates the portion of the Study Area west of Eireann Quay as "Apartment Neighbourhood", with "Parkland" along the

western channel, and the area east of Eireann Quay as a “Mixed Use Area” with “Parkland” south of Queens Quay. Not all of the Official Plan designations are what currently exists on the ground. Figure 4.5 illustrates the existing land use.

Figure 4.5 Existing Land Use

The City of Toronto was contacted to identify planned land uses in the Study Area. The only known planned land use in the Study Area is:

- 90 Stadium Road – OPA/Rezoning (approved by the OMB) to allow a 365 unit residential condo (Phase 2 of Tip Top site redevelopment). The development consists of a 22-storey residential tower atop a 7-storey base and a 9-storey mid-rise street related residential building along Stadium Road, east of Coronation Park. This is currently being constructed and is anticipated for completion in 2011.

Although there are no firm plans for redevelopment, the Toronto City Council has passed a number of motions (2008, 2009, and 2010) regarding the former Canada Malting Silos and Silos Complex site at 5 Eireann Quay. Council approved a phased plan to preserve the Canada Malting silos, complete a master plan for the remainder of the site, and undertake the demolition of deteriorated buildings on the site. The master planning exercise has not been initiated and does not have a determined time line. The City of Toronto recently demolished and removed the germination and kiln buildings in the Canada Malting complex. The City has also been working to restore the dock wall on the east side of the Canada Malting Complex, and has done so with the removal of a marine leg, which was once used to transport malt. Future plans for the Canada Malting Silos Complex will likely continue to be considered by the City of Toronto. No development activities are anticipated on the site during the construction of the proposed Project.

The proposed redevelopment of Toronto's waterfront has been the subject of a number of reports, including *Our Toronto Waterfront* (Toronto Waterfront Revitalization Task Force; Robert A. Fung – Chair), and *Making Waves: Principles for Building Toronto's Waterfront – Central Waterfront Part II Plan (*City of Toronto's Urban Development Services Department). *Our Toronto Waterfront* describes its study area as being the western portion of The West Bayfront including the portion of the waterfront from Bathurst to Yonge Street, and also a portion of Garrison Common from Strachan to Bathurst Street. The development concept for The West Bayfront does not specifically describe anything west of Lower Spadina, but instead concentrates on the core features including Union Station, Rogers Centre, Air Canada Centre, Harbourfront Centre and the CN Tower.

Making Waves (Central Waterfront Part II Plan) proposed a similar vision. In Map C (Parks, Open Space and Public Use Area Plan) and Map D (Pedestrian, Cycling and Water Routes Plan), the waters edge from Coronation Park to the Portlands has been identified as an opportunity for a "waterfront promenade" including the area at the ferry docks and the foot of Bathurst Street.

Although these concept plans are somewhat general and vague in nature, the proposed Project would likely be consistent with plans for this area. The waterfront conceptual plans for transportation infrastructure to support the vision for redevelopment of the waterfront area are not expected to affect the BBTCA, including access to the BBTCA, and vice versa.

4.2.5 Social and Visual

There is a mixture of existing residential, open space, institutional, recreational, commercial, (e.g., former Tip Top Tailors) and former industrial (e.g., Canada Malting) land uses in the Study Area. Some of these land uses and the people who live in them/use them have the potential to be affected by the proposed Project, including:

- Co-op and City Home housing at Eireann Quay (approximately 650 units);
- South Beach Marina Town homes;
- Little Norway Park;
- Waterfront Public School and Community Centre;
- Former Canada Malting Silos (current plans for redevelopment are uncertain);
- Ireland Park (with monument)
- Martin Goodman Trail (which passes through the north end of Eireann Quay);
- National Yacht Club and the Alexandra Yacht Club;
- Several condominiums; and
- Marine Quay West (Spadina Marina).

Residents of the Bathurst Quay community live in two City Home complexes, several co-op housing complexes (e.g., Harbour Channel, Harbourside, Arcadia, Windward) and the South Beach Marina town homes. The boundaries of this community are generally described as extending from Stadium Road to the west, the Western Gap to the south, Portland Slip to the east and Lake Shore Boulevard to the north.

Based on information received, some community members believe the community faces a number of issues, such as high traffic. Community attributes include the waterfront, access to parkland and a sense of community identity.

The visual features in the Study Area are diverse and highly urban: Former Canada Malting Silos, Ontario Place, Rogers Centre, Harbourfront, and the BBTCA. As indicated in the previous

section, the Canada Malting Silos are protected heritage features under the Ontario Heritage Act.

The nature of the Study Area's high and medium density residential, commercial and industrial land uses make this landscape compatible with the proposed Project.

4.2.6 Transportation and Navigation

The following describes existing road traffic and ferry traffic patterns and volumes in the Study Area for the pedestrian tunnel project. Although much of this information is not required to complete the EA, it is being included to assist interested persons to better understand the conditions in the area.

Access to the BBTCA from the mainland is from Eireann Quay. A pick-up and drop-off circulation road is located adjacent to the Ferry Passenger Transfer Facility (FPTF) at the foot of Eireann Quay, and is used by taxis, shuttle buses, and private automobiles. There is a small short-term parking area for private automobiles, including those waiting for passengers on arriving flights.

There are three queuing lanes to the west of Eireann Quay (often referred to as the "Finger Lot"). The westernmost lane is used for vehicles waiting to board the ferry to access the BBTCA. The other two lanes are used by taxis.

There is a limited amount of parking available on the mainland and at the BBTCA:

- short-term parking near the pick-up and drop-off circulation road;
- 192 parking spaces at the south end of Stadium Road, west of the FPTF; and
- approximately 220 parking spaces at the BBTCA.

There are several other ways to access the BBTCA. For example, Porter Airlines, which operates an airline business, has frequent, free shuttle buses between the mainland FPTF and the northeast corner of Front and York Streets (adjacent to the Royal York Hotel, across from Union Station). The shuttle buses are timed to match ferry service times. Other ways to access the BBTCA are taxi; walking; the nearby Harbourfront (Queens Quay) or Bathurst streetcars, or drop-off by private automobiles.

Traffic Survey

Traffic surveys were undertaken along Eireann Quay and at the drop-off access on Wednesday, March 10 and Thursday, March 11, 2010. These were surveyed as typical days of activity (non-holiday weekday). This likely means the results for potential effects are conservative (i.e., the results are likely exaggerated compared to the effects that would be expected) because passenger volumes and road traffic have increased since March 2010, and would further increase before the Project would be constructed and operated. Surveys were undertaken between 6:00 and 11:00 AM, and between 2:00 and 6:00 PM. These surveys included the following:

- Number of vehicles queued in the Finger Lot, at one-minute intervals
- Number of pick-ups and drop-offs in front of the FPTF (number of vehicles and passengers)
- Number of pedestrians walking up and down Eireann Quay
- Number of vehicles entering and exiting the ferry
- Total northbound and southbound vehicle movement at the north entrance to the Finger Lot

Overall Ferry Passenger Transfer Facility Activity

The distribution of passenger activity at the FPTF throughout the day is different for inbound and outbound movements. Drop-off activity exhibits a reasonably smooth profile, with low to moderate volumes during both the morning and afternoon. While activity increases somewhat in advance of busier flight departures, peaking is moderated by the fact that not all passengers will arrive for a departing flight at the same time; some arrive well in advance, others at the last minute, depending on personal preference or circumstance, and the specific passenger's arrival time is not tied to the ferry schedule (which operates four times per hour).

By comparison, pick-up activity for inbound passengers is peaked for two reasons: after a flight arrives, most activity occurs within a short period of time; and this activity is then further concentrated by the ferry schedule, which discharges all passengers from that flight at the mainland FPTF at the same time. For the most part, pick-up activity associated with a flight arrival extends for 5 minutes or less, followed by 10 minutes of inactivity until the next ferry arrival (or longer, if there has been no subsequent flight). Even during the busiest time (for example, 9:15 on March 11, when one ferry trip carried passengers from at least two fully-loaded flights), more than 80% of inbound passengers were accommodated within 5 minutes, with substantially lower activity beyond that time.

Two observations were made in the vicinity of the FPTF access area:

- During periods of peak pick-up activity, some taxis and private vehicles were observed stopping in the circulation lane, which temporarily blocks vehicles attempting to pass through.
- If the parking adjacent to the FPTF is fully utilized, it is unavailable for short-term parking for a person who is waiting to meet someone from an arriving flight.

The survey recorded shuttle bus utilization separately, based on total passengers boarding or alighting from buses at the FPTF. Shuttle bus occupancy was observed to vary significantly from trip to trip, since the shuttle operates continuously, independently of flight schedules. Shuttle bus trips that occur when there is not a flight arriving or departing typically operate with fewer than 5 passengers. Shuttle bus trips serving departing flights typically serve around 10 to 20 passengers; trips serving arriving flights typically serve around 25 passengers and more. Although the seating capacity of the shuttles is 22 passengers, in one case, when at least two flights crossed to the mainland on the same ferry trip, 41 passengers boarded the shuttle and others waited for the next shuttle (or took a taxi).

Shuttle occupancy tends to be higher (and more variable) leaving the FPTF due to two factors:

- As noted above, a higher proportion of travelers choose to use the shuttle when leaving the BBTCA, likely due to the fact the shuttle is very visible when exiting the FPTF.
- Passengers tend to leave the BBTCA at the same time (i.e., most passengers take the same ferry to the mainland and thus arrive at the FPTF at the same time). Outbound passenger arrivals at the airport tend to be more spread out (e.g., some passengers will arrive earlier for their flight than others).

Modal Split

The volume of passengers traveling to and from the FPTF was divided by access mode (taxi, private auto, shuttle, and walking/public transit) based on observations during the March 2010 surveys. Modal split was calculated separately for the morning and afternoon / evening periods, and for arriving / departing passengers. **Table 4.5** illustrates Modal Split results.

Table 4.5 — Average Modal Split at Drop-off Area

Travel Mode	Morning		Afternoon / Evening	
	Drop-off (Departures)	Pick-up (Arrivals)	Drop-off (Departures)	Pick-up (Arrivals)
Taxis	47%	50%	55%	29%
Private auto	12%	4%	10%	10%
Shuttles	29%	35%	25%	45%
Pedestrians / TTC	13%	11%	10%	16%

As indicated, the shuttles tend to attract a greater number of passengers from arriving flights than departing flights. The shuttle service is timed so that a shuttle is always available to meet a flight and waiting when passengers leave the FPTF. This tends to increase the shuttle use compared to those arriving at the FPTF.

While departures tend to have lower shuttle usage (and thus greater taxi and car activity) than arrivals, the impact of the taxi and car activity in front of the FPTF is lower because drop-offs only require vehicles to be on-site for a few minutes, whereas arrivals tend to involve queuing and waiting in advance of the flight arrival.

Ferry Queues

Queues of vehicles waiting to board the ferry reach approximately 10-14 vehicles for two ferry trips prior to 7:00 AM, and from 5 to 10 vehicles at other times during the morning. In the afternoon, vehicular access to the BBTCA is minimal, and ferry queues generally do not exceed 2 to 3 vehicles.

Taxi Queues

Taxi queues are in two designated lanes. When the lanes are full (for example around 8:00 and 9:30 am, and about 2:45 pm), taxis have been seen idling along the east side (northbound curb lane) of Eireann Quay waiting for an opportunity to enter the queue lanes.

The maximum sustained taxi activity for inbound passengers occurred between 9:10 and 9:25 on March 11, when 54 taxis picked up passengers. Again, this level of demand was representative of passengers from two flights crossing on the same ferry trip. At all other times, taxi activity was limited to isolated 5-minute periods of 20 taxis or fewer.

The queue of taxis dissipates as passengers arrive from the FPTF; however, there are periods during both the morning and afternoon when at least 15 to 25 taxis remain in the queue lanes even after all demand from an arriving flight has been met.

Traffic Volumes on Eireann Quay

Through and turning vehicle movements (at 15 minute intervals) were recorded on Eireann Quay at the north entrance to the queue lanes, opposite the entrance to the Waterfront School / Harbourfront Community Centre parking garage. Specific movements included:

- Northbound and southbound through traffic (cars, taxis, and shuttle buses)
- Southbound right turns and northbound left turns into queue lanes (ferry bound cars and taxis)
- Southbound left turns and northbound right turns to/from school / community centre

Table 4.6 summarizes the total surveyed peak hour traffic volume, by direction, north and south of the queue lane entrance. South of the queue lane entrance, southbound volumes do not include vehicles traveling in the queue lanes; northbound volumes include taxis queuing along the east curb before turning into the southbound queue lanes.

Table 4.6 — Eireann Quay Surveyed Traffic Volumes

Location	March 10, 2010				March 11, 2010			
	AM Peak		PM Peak		AM Peak		PM Peak	
	SB	NB	SB	NB	SB	NB	SB	NB
North of Queue Entrance	239	228	196	196	218	194	209	253
South of Queue Entrance	100	226	161	225	85	195	159	254

In general, peak hour traffic volumes along Eireann Quay are in the order of 200 to 250 vehicles per hour per direction south of Queens Quay. In terms of traffic volumes and analysis, this is a low number. For example, the capacity of Eireann Quay is in the order of 500 vehicles per hour per direction. It was observed that northbound traffic flow is concentrated into brief periods of demand following the arrival of a ferry (i.e., taxis and private vehicles picking up arriving passengers), followed by low levels of “background” traffic at other times.

Pedestrian Activity

The survey data included the number of pedestrians walking along Eireann Quay north of the FPTF. These include passengers walking to local destinations, and passengers walking to the Harbourfront or Bathurst streetcars. **Table 4.7** provides the peak hour pedestrian activity.

Table 4.7 — Peak Hour Pedestrian Activity, Eireann Quay north of FPTF

Date	AM Peak			PM Peak		
	SB	NB	Total	SB	NB	Total
March 10, 2010	33	18	51	10	39	49
March 11, 2010	24	17	41	28	14	42

There were approximately 40 to 50 pedestrians walking along Eireann Quay during the peak hour. Approximately 60% of pedestrians walk along the east side and 40% along the west side.

It is noted that the northbound/southbound split is reversed during the PM peak hour (predominantly northbound on March 10; predominantly southbound on March 11). This is because the peak hour occurred later in the afternoon on March 10 (predominantly outbound passengers) and earlier in the afternoon on March 11 (predominantly inbound).

Navigation

As of June 2002, the Western Channel has been closed to vessels with a draft greater than 3.6 meters. The channel provides a link between the Inner harbour and Lake Ontario that is used by recreational boats. Based on past surveys, as many as 45,000 vessels pass through the channel on an annual basis. The ferry service operates on the following schedule and takes approximately 90 seconds to cross the channel.

From Mainland	From Airport
05:30	05:37
05:45	05:52
06:00	06:07
06:15	06:22
06:30	06:37
... every 15 minutes...	
22:45	22:52
23:00	23:07
23:15	23:22
23:30	23:37
23:45	24:00

5.0 ENVIRONMENTAL EFFECTS AND MITIGATION

This section describes the potential environmental effects of the proposed Project, taking into account the Project's physical works/activities and the baseline environmental conditions as presented in Section 4.0. This is a conservative approach, given that the baseline conditions before the Project would be constructed would include the use of 202 slots.

Table 5.1 outlines the potential Project components/environmental feature interactions that the assessment was based on.

In assessing construction-related effects, it was assumed that construction of the tunnel would be initiated in 2011 and last for approximately 18 months. The construction of the perimeter road would likely take up to 6 months to complete, which for the purpose of the EA is assumed to occur during or just after the construction of the tunnel.

The effects assessment describes how the conditions in the Study Area would change with the Project in place (i.e., compared to the baseline conditions). Both construction and operational periods were considered. Activities during the operation period would be related mostly to the actual use of the tunnel, including maintenance. This would include routine minor service interruptions up to more significant shut-downs of specific components for longer periods of time (e.g. elevator replacement/repair).

For each of the identified environmental components, the following sections describe the assessment of (i) the potential for effect, (ii) the significance of the effect, and (iii) proposed mitigation, as necessary and appropriate. **Table 5.2** (located at the end of the discussion) summarizes the potential environmental effects (including the significance) and the recommended mitigation measures.

Table 5.1 - Project Components/Environmental Feature Interactions

Environmental Component **Note:** ✓ = Potential interaction X = no interaction																
Construction Activities																
Vertical Shafts (concrete perimeter wall and excavation)	✓	✓	✓	X	✓	X	✓	✓	✓	✓	X	X	✓	✓	✓	✓
Shaft Components (elevators, escalators and stairwells)	✓	✓	X	X	X	X	✓	X	X	✓	X	X	✓	✓	✓	✓
Tunnelling excavation	✓	✓	✓	X	✓	X	✓	✓	X	X	X	X	✓	✓	✓	✓
Water Management (containment facility and discharging)	X	✓	X	X	X	X	✓	✓	✓	X	X	X	✓	✓	✓	✓
Internal Tunnel Construction (liner, lighting, moving walkways, utilities, etc.)	X	✓	X	X	X	X	✓	✓	X	X	X	X	✓	✓	✓	✓
Connecting Structures (connections to and from shafts)	✓	✓	X	X	✓	X	✓	✓	X	✓	X	X	✓	✓	✓	✓
Access Areas (including sidewalks, roads, parking, FPTF)	✓	✓	✓	X	✓	X	✓	✓	✓	✓	X	X	✓	✓	✓	✓
Perimeter Road	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	X	✓	✓	✓	✓	✓
Operations																
Pedestrian Tunnel Use and Maintenance	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Water Management	X	X	✓	X	X	X	X	X	X	X	X	X	X	X	X	X
Perimeter Road Use and Maintenance	✓	X	X	X	✓	X	✓	X	X	X	X	X	X	X	X	✓
Decommissioning or Abandonment																
Would be completed in compliance with applicable laws in the future.																

5.1 Biophysical Environment

5.1.1 Air Quality

Air Quality Construction Effects

During tunnel excavation, grading and construction activities, temporary increases in particulate matter (dust) could be experienced by nearby receptors (e.g. residences, businesses, school/community centre users, park users, etc.) During perimeter road grading and construction activities, temporary increases in particulate matter (dust) would be negligible as no receptors are in the area. Truck traffic to haul excavated materials away (approximately 1-2 trucks/hour), trucks to bring machinery and materials for the construction of the tunnel and perimeter road to the airport, and emissions from the diesel engines of construction machinery would impact air quality. The following mitigation measures, which are standard construction practices, are recommended:

- Use well-maintained heavy equipment and machinery, preferably where feasible, fitted with muffler/exhaust system baffles and engine covers;
- Comply with operating specifications for heavy equipment and machinery;
- Minimize operation and idling of gas-powered equipment and vehicles, in particular, during smog advisories;
- Minimize vehicular traffic on exposed soils and stabilize high traffic areas with a clean gravel surface layer or other suitable cover material;
- Avoid excavation and other construction activities that will release airborne particulates during windy and prolonged dry periods;
- Stabilize stockpiled excavated soils where feasible in areas that are upwind of sensitive receptors;
- Cover or otherwise contain loose construction materials that will release airborne particulates during transport, installation or removal;
- Spray water to manage the release of dust from gravel, paved areas and exposed soils. Use chemical dust suppressants only where necessary; and
- Restore disturbed areas as soon as feasible to minimize the duration of soil exposure.

Truck traffic would use the ferry to deliver machinery and materials to the airport side. When materials for perimeter road construction are needed, limited truck traffic would occur for delivery only as required. Machinery for the perimeter road construction would be parked on the airport side until construction of the perimeter road was complete.

Air Quality Operation Effects

Air emissions from the tunnel during operations would be negligible. Heating/ventilation associated with the pedestrian tunnel has negligible effects because heating would only be provided by natural gas comfort heating, which is a negligible source of emissions. Particulates from dust through ventilation and air circulation would also be negligible. Limited traffic activity on the perimeter road by security personnel (and maintenance activities such as snow ploughing as required) would result in a negligible source of emissions (dust).

Air Quality Effects Significance

Construction related air quality effects would be localized and temporary, with mitigation and monitoring plans to manage (and thus minimize) short-term effects. By using standard practices, construction effects would not be significant. Considerations of emissions from the Project operation activities are predicted to be negligible. As such, the Project is not expected to have a significant impact on air quality.

5.1.2 Fish Habitat

Fish Habitat Construction Effects

Project activities are restricted to on-shore areas and would not result in effects to fish or fish habitat. The construction areas for the shafts would be set back from the water's edge and the sensitive land side dock walls of the Western Channel by a minimum of 6.1 metres. The construction techniques for the shafts would involve first constructing concrete perimeter walls prior to excavation. This would minimize any potential for water leakage. This would also minimize vibrations, which would further reduce risk to dock wall stability. Minimal dewatering that may be required during shaft/tunnel excavation would be managed to meet applicable water quality criteria for discharge. It is likely that any water from construction dewatering on the mainland side would be sent to the City sewer system, which would meet the applicable water quality criteria.

Fish habitat has the potential to be affected by erosion/runoff from near shore construction activity. As is outlined in the Surface Water subsection, erosion and sediment control measures will be in place during construction to protect any potential fish in the Western Channel.

To be vigilant, and as is outlined in the Surface Water subsection, standard erosion and sediment control measures would be in place during construction to protect any potential for fish habitat effects in the Western Channel.

As previously noted in the baseline conditions section for Terrain and Topography, the north side dock wall is in poor condition. Potential impacts to fish habitat could result if the dock walls were to fail. The dock walls would be monitored during construction to assess whether any lateral or vertical movement is occurring (due to vibrations) at the front face of the dock wall. A monitoring program and management plan are recommended, even though this would be a very conservative approach, as failure of the dock wall is not expected. This would include:

- A monitoring program to be carried out on a daily basis while critical operations are being performed.
- Assessing results on the spot.
- Develop a plan for and address situation if excessive movement were detected.

Surface water runoff during construction of the perimeter road is unlikely to reach fish habitat as construction activities would be well removed from areas of fish habitat. To be conservative and account for any possibility of impacts, the Surface Water section discusses mitigation plans to avoid runoff and sedimentation effects. It is anticipated that with mitigation in place for Surface Water, the perimeter road construction activities would not have effects on fish habitat.

Excavated materials from tunnel construction would be placed in trucks for removal. There would be no effects to fish habitat from this activity. Excavated shaft and open-cut materials on the airport side may be placed on a barge for off-site use/disposal. Spillage of excavation materials into the channel/harbour could raise turbidity and have effects on fish and fish habitat. The placement of soil on the barge would be monitored. While not expected to be a concern, should there be a risk of soil going into the channel during barge loading, a silt curtain could be installed.

It is possible that some of the excavated material could be stockpiled at the airport for use in the construction of the perimeter road. This would occur for a short period of time as the materials would degrade if left stockpiled. Where materials could be used for the perimeter road construction, transferring materials would be done as soon as feasible from the excavation area on the airport side to the perimeter road construction area.

Fish Habitat Operation Effects

Fish habitat would not be impacted during operation of the Project. Use of the tunnel and the perimeter access road by security personnel (and maintenance activities such as snow ploughing as required) would not impact fish habitat.

Fish Habitat Effects Significance

It is not anticipated that the Project would result in effects to fish habitat, and as such no adverse significant effects are expected. To be conservative, monitoring programs and water quality protocols are recommended to ensure fish habitat would not be impacted.

5.1.3 Groundwater

Groundwater Construction Effects

As identified in the baseline conditions, the effective hydraulic conductivity measured during packer tests indicates that groundwater would be encountered during the construction of the tunnel access. However, for the construction of the shafts, groundwater infiltration would be avoided by using construction techniques, such as water-tight shaft wall construction (e.g. secant piles or slurry walls). For the construction of the tunnel portion, groundwater infiltration is anticipated to be minimal due to the highly impermeable limestone shale. The construction specifications should include a monitoring program for addressing any groundwater infiltration that may be encountered.

As in any construction project, groundwater supplies could potentially be affected by spills of hazardous materials (e.g. fuels, lubricants). Spills of hazardous materials at the Project site are not expected, but if a spill were to occur, it would likely be small and have no impact on the environment. These materials would be handled in compliance with legal requirements, and in the event of a spill, it is reasonable to expect that cleanup procedures would be undertaken in accordance with standard construction practices. The construction specifications should include the following standard measures to manage/prevent/respond to potential spills:

- Prevent debris from construction, fabrication and landscaping activity, including concrete, steel, sawdust, topsoil, compost, and any chemicals or waste materials from entering the channel**;**
- Equipment refuelling, maintenance, etc. and handling/storage of toxic materials (e.g., fuel, lubricants, paints, solvents, form oils, chemicals, etc.) should be carried out away from the channel using procedures to avoid contamination of soils, groundwater and surface waters; and
- Minimize impacts of accidental spills (adequate supply of clean-up materials on site and construction crew trained on their use), including preparation of contingency plans to ensure timely and effective responses to spill incidents.

Excavation activities would use construction techniques that would not be expected to affect ground water supplies.

Groundwater Operation Effects

Seepage of groundwater into the tunnel and tunnel access shafts is not anticipated due to water-tight lining and walls put in place during construction. Regular maintenance of the tunnel would include periodic review of the performance of the tunnel lining. The maintenance program would include any necessary tunnel lining repairs. The perimeter road would not effect groundwater because the road is located on fill above the surface of the ground. Therefore, no significant effect on groundwater would be expected during operation of the Project.

Groundwater Effects Significance

Spills prevention and contingency measures would be implemented to prevent groundwater impacts during the construction period. It is anticipated that groundwater would not be affected by the Project, particularly given the urban environment, standard techniques used in construction and what would exist once the project is in operation. Further, the significance of the groundwater supply in the Study Area is considered to be low as it is not used as a potable water supply.

5.1.4 Species at Risk

The Project would not be expected to affect any species at risk. There are no species of concern in the Study Area for the tunnel. A species of concern has been identified in proximity to the perimeter road. A Kentucky CoffeeTree (*Gymnocladus dioicus*) was identified during the field survey (see Section 4.1.10). The tree is located outside of the airport south perimeter fence, within five metres of the fence. The tree has been considered in the preliminary design of the perimeter road, the alignment of the road, and taking into account potential construction and operation impacts. The alignment of the perimeter road would be located within the airport lands, set back 10 meters from the south perimeter fence and therefore more than 10 metres from the Kentucky CoffeeTree. As such, the tree would be avoided during Project activities. Hence, there are no expected effects to any species at risk.

5.1.5 Surface Water

Surface Water Construction Effects

Potential water quality impacts from the construction of the Project relate primarily to the potential for sediment transport/deposition into the Western Channel from the tunnel construction and into surrounding water channels of the island from the perimeter road construction. Sediment/deposition into the Western Gap from the tunnel construction may occur during rainfall events. To manage this, any temporary stock piles of fill would be covered with a tarp and trucked/barged off site in a timely manner. Other measures such as provision of a silt

fence would be considered as part of the construction plan and management program. Sediment transport/deposition during construction of the perimeter road is unlikely to reach surrounding water bodies as construction activities would be well removed from these areas. To be conservative, during the construction of the perimeter road, installation and maintenance of silt fences downstream of the perimeter road to trap any sediment would be considered as part of the construction plan and management program.

As part of detailed design, drainage design concepts would be developed (including drainage area plan, design flow rates, water quality management measures, and sediment and erosion control practices), which would include relevant drawings such as a plan of Best Management Practices (silt fences, mud mats, etc.). For guidance, consideration could be given to: the *Ontario MOE Stormwater Management Planning and Design Manual (2003)*; *the Ontario Provincial Standards and Specifications (OPSS 518 & 577); the Ontario MOE Stormwater Pollution Prevention Handbook (Part I) and the Part II – Pollution Prevention and Flow Reduction Measures Fact Sheets; the Ontario MNR Guidelines on Erosion Control for Urban Construction Sites (1989), the MNR Technical Guidelines- Erosion and Sediment Control (1989), and the City of Toronto Wet Weather Flow Master Plan 2003.*

To provide source controls and prevent/minimize impacts on adjacent lands and the channel, the following drainage mitigation should be undertaken:

- Minimize disturbance of existing vegetation where regrading is required;
- Minimize time exposure of unvegetated soils;
- Maximize length of overland flow through to points where storm water leaves the site;
- Use of in-line erosion control measures such as an erosion blanket thereby mitigating high flow velocities and excessive erosion/sedimentation;
    - Any stockpiled materials should be stored and stabilized away from the open water;
    - Materials and equipment used for the purpose of site preparation and the completion of any work should be operated and stored in a manner that prevents any deleterious substance from entering the water;
    - Refuelling and handling of potential hazardous substances should be done away from the channel;
    - Sediment and erosion control measures should be left in place until all disturbed areas have been stabilized;
    - The sediment control plan should be designed and implemented to mitigate impacts associated with construction of the Project, to prevent suspended sediment, mud, debris, fill, rock dust, etc. from entering the channel or the lake (even though this is very unlikely given the distance). Silt fences/curtains, sediment traps should be installed as necessary and appropriate;

- Measures should be in place to minimize mud tracking by construction vehicles and to ensure timely cleanup of any tracked mud, dirt and debris along access routes and areas outside of the immediate work area where the above sediment controls would not be in place;
- Work should be suspended if excessive flows of sediment discharges occur and any appropriate action should be taken to reduce sediment loading;
- Temporary mitigation measures should be installed prior to commencement of any site excavation, filling or grading works and maintained on regular basis, prior to and after runoff events. Accumulated material should be cleaned out during maintenance and prior to removal. Disturbed areas on the airport and mainland to be restored to natural conditions and should be re-vegetated as soon as conditions allow, thus preventing erosion. Mitigation measures should be kept in place until vegetation has been re-established to a sufficient degree so as to provide adequate erosion protection to disturbed work areas.

Surface Water Operation Effects

For the tunnel portion of the Project, the storm sewer catch basins would trap sediment and prevent it from flowing into the channel. Due to the close proximity of the tunnel entrance to the channel, some stormwater runoff into the Western Channel would likely be expected. This is not expected to result in a material change over existing conditions. In regards to the proposed airport perimeter road, the road would be developed slightly above the surrounding ground level throughout its length. Cross culverts would be installed at appropriate locations to allow the transfer of water from the upstream side of the road (closer to the runways) to the downstream side (closer to the lake). Grassed roadside ditches would be required in sections along the upstream side to collect water in advance of the cross culverts. For the perimeter road, there may be effects on surface waters. The road's drainage system should:

- Safely convey upstream run-off through the roadway without adverse impacts on the road and upstream and downstream land uses;
- Convey runoff from the right-of-way to existing ditches and drainage swales; and
- Ensure that runoff from the new road does not adversely impact existing ditches and drainage swales.

The stormwater management strategy would mitigate potential adverse impacts to the existing surface drainage features and swales caused by the new road during operations. Grassed ditches have historically been associated with rural drainage and constructed primarily for stormwater conveyance. More recently, grassed ditches are also being promoted to filter, detain, and infiltrate storm water runoff to promote sedimentation and water quality

enhancement. The water quality benefits associated with grassed ditches depends on the contact area between the water and the swale, and the swale slope. The design of the grassed swales along the road could take into consideration, and would likely be consistent with, the Ontario Ministry of Environment's (MOE) *Stormwater Management Planning and Design Manual, 2003* for water quality control. The longitudinal gradient of the new roadside ditch would be very flat and would meet the minimum velocity requirement for effective sedimentation. The introduction of temporary straw bale flow checks and silt fence barriers would promote control of sedimentation during construction activities and before new vegetative cover is established in areas which have been disturbed by grading operations.

Surface Water Effects Significance

Construction effects would be short term, approximately 18 months, and with the recommended mitigation in place, there would be minimal to no impact. There would be minimal effects during operations. Implementation of recommended mitigation measures would prevent, or at least minimize (to the point of being negligible) effects on surface water during construction and operation. As such, effects on surface water resources are therefore not expected to be significant.

5.1.6 Soils and Sediments

Soils and Sediments Construction Effects

During construction activities, particularly with respect to grading for the perimeter road and excavation for shafts and the tunnel, there is the potential for erosion and sedimentation entering the Western Channel and/or water body surrounding the island. The potential effects and possible mitigation measures are addressed within the Surface Water section. These include standard measures such as the use of silt curtains/fences.

In addition, soils could potentially be impacted through the improper handling of fuel and oil for construction equipment. A fuel management/clean-up contingency plan, as referenced under the Groundwater section, should be implemented.

Excavated soils/fill from the shafts and the tunnel would either be used in constructing the perimeter road portion of the Project or disposed of off-site at an appropriate location/facility (e.g., for another construction project). Soils to be disposed of would be visually screened and where required, tested for contamination. Any contaminated soils would be managed in a manner that meets legal requirements.

Soils and Sediments Operation Effects

It is expected that soils and sediments would not be affected during the operation of the tunnel. For the perimeter road, there is potential for sedimentation and/or erosion during precipitation events. This is addressed in the Surface Water Operations.

Soils and Sediments Effects Significance

Potential effects to soils from the tunnel, if any, would be temporary, and are expected to be of minimal to no impact. The effects from the perimeter road could occur during precipitation events, but are expected to be minimal and would be mitigated by the recommended mitigation measures described herein. As such, significant adverse effects are not expected.

5.1.7 Terrain and Topography

Terrain and Topography Construction Effects

The existing terrain and topography of the tunnel Study Area is not considered to be significant from a natural heritage or a human-interest perspective. The area is highly urbanized and has been significantly altered in the past. The terrain/topography of the perimeter road Study Area would be impacted through construction activities. Given the airport land use, the perimeter road must be kept low and consistent with airport functions. The road would be constructed slightly above the surrounding terrain, resulting in no effect on terrain/topography. As such, due to the nature and uses of lands in the Study Area, including the use of the BBTCA as an airport, the Project would not result in significant effects to the existing terrain and topography.

Terrain and Topography Operation Effects

There would be no operations effects to terrain and topography.

Terrain and Topography Effects Significance

Construction of the perimeter road would result in minimal terrain alteration. The existing terrain and topography would not be significantly affected by the Project.

5.1.8 Vegetation

Vegetation Construction Effects

The construction of the Project is expected to result in minor localized impacts on the terrestrial environment. The effects of the tunnel construction are not expected to be significant, particularly since the surrounding habitat is of such low quality. A landscape plan should be developed as part of the detailed design stage.

For the construction of the perimeter road, the road would be approximately 10 metres inside the perimeter fence on lands that are currently maintained grass. The lands do not support natural habitat. Any trees found to be of any significance are located outside the perimeter fence, and are therefore outside the area of construction (and operation). Further, trees would be sufficiently protected as they are beyond the location of the perimeter road. Beyond this, there are eight other vegetation species of regional concern located in the adjacent natural areas outside the airport perimeter fence. These would be protected by having the works and staging areas located inside the perimeter fence, set back from the natural areas.

Vegetation Operation Effects

Vegetation would not be affected during the operations phase. Use of the perimeter access road by security personnel (and maintenance activities such as snow ploughing as required) would not impact vegetation, including because the road would be sufficiently removed from natural areas to avoid impacts.

Vegetation Effects Significance

Given that the vegetation to be removed for the tunnel and the perimeter road is of low quality and is not designated for protection, vegetation effects are not expected to be significant. Landscaping activities would reduce the overall effect so that the net loss to existing vegetation would be insignificant.

5.1.9 Wetlands

There are no wetlands in the Study Area.

5.1.10 Wildlife and Wildlife Habitat

Wildlife and Wildlife Habitat Construction Effects

The Study Area for the tunnel is highly urbanized, and there is almost no natural vegetation that could provide wildlife habitat. This area is not known to serve as valued habitat for migratory birds.

Wildlife and wildlife habitat that were identified during field studies for the perimeter road would not be affected, including because these areas are outside the construction area. There are two wildlife species of regional concern located in the adjacent natural areas beyond the road alignment. These are the Caspian Tern (*Hydroprogne caspia*) and the Monarch Butterfly. Although not likely required, to manage their protection, works and staging areas should be set outside of these natural areas. The construction sites are unlikely to host nesting birds in the breeding season, and it is expected that there would not be adverse effects on breeding birds.

Wildlife and Wildlife Habitat Operation Effects

Wildlife and wildlife habitat would not be affected during operations. Use of the perimeter access road by security personnel (and maintenance activities such as snow ploughing as required) would not impact wildlife, including because the road would be sufficiently removed from wildlife habitat. The road would be within the fenced perimeter of the airport lands, which would limit wildlife from passing over the roadway. While there is potential (low) for wildlife to enter onto the roadway during its use, the low frequency of road use and low speed of travel by security personnel is not expected to result in adverse effects to wildlife.

Wildlife and Wildlife Habitat Effects Significance

The Project would result in the loss of a limited area of poor quality vegetation, due to the limited value of this area as wildlife habitat (low ecological sensitivity in the study areas related to the tunnel access and perimeter road), the effects, if any, are expected to be insignificant.

5.2 Social and Economic

5.2.1 Economic and Business Activity

Economic and Business Activity Construction Effects

Short-term nuisance-type effects that may result from construction activity would not likely cause effects to mainland or BBTCA businesses in the Study Area. Businesses at the BBTCA

would not likely experience delays in accessing the BBTCA, and the ferry would continue operating to service the airport.

Economic and Business Activity Operation Effects

No negative adverse effects to economic and business activity in the Study Area would be expected during the operation period. The potential for some limited retail/concession space in the new facility may create the opportunity for new services in the local area which would create some benefits.

Economic and Business Activity Effects Significance

The short-term nature of construction effects would not be expected to significantly affect businesses in the Study Area. No significant adverse effects during the operations period are expected. The potential for limited new retail/concession space could create some services/economic benefits for the area.

5.2.2 Aboriginal Use of Traditional Lands/Resources

The Study Area is not known to be used by any First Nations for traditional uses, and as such no adverse effects would be expected.

5.2.3 Heritage and Archaeological

Heritage and Archaeological Construction Effects

Effects would only be experienced as a result of disturbance of lands, such as by construction. The area that would be disturbed by construction activities for the tunnel is not considered to have a significant potential for the discovery of archaeological resources, as the area is primarily disturbed fill. As such, effects on archaeological resources are not expected.

On the mainland side, the Canadian Malting Silos are located northeast of the construction area, and no heritage buildings are located in close proximity to the construction area for the tunnel.

On the island side, the Toronto Island Airport Terminal Building (referred to as the Administration Building) was designated as a national historic site in 1989 under the Historic Sites and Monuments Act. This building is located south and east of the proposed tunnel and connecting structure. Construction activities would occur within close proximity to the building, but will be monitored daily to ensure no impacts to the historic building's structure or footprint. It is expected that construction can be completed without adverse impact to the building.

Heritage & Archaeological Operational Effects

No effects on heritage and archaeological features are expected during operation of the Project.

Heritage and Archaeological Effects Significance

Built heritage features on the mainland side (Canada Malting Silos), east of the tunnel portion of the Project site, are well set-back from the Project. It is expected that the built heritage feature on the island side (referred to as the Administration building) that is located south of the tunnel portion and west of the connecting structure, would not be adversely impacted by construction and operation of the Project.

There are no archaeological features on the mainland side of the Study Area. On the airport side of the Study Area, archaeological features may potentially exist, although it is expected that effects would be insignificant. In the event that archaeological resources are detected, Parks Canada (and the Ontario Ministry of Culture) can be contacted and construction activities managed to address any such matter.

5.2.4 Human Health

Human Health Construction Effects

Human health has the potential to be affected by construction activities, as a result of air emissions and noise.

During the construction of the proposed Project, there would be an increase in airborne particulates (dust) and emissions from diesel engines. These effects would be typical of a construction site, and would be localized and temporary. As outlined in the Air Quality section, standard mitigation measures to minimize dust and emissions should be applied. It is expected that such mitigation measures would be effective, and in any event, the effects would be temporary. As such, air quality effects on human health are not expected to be significant.

The use of construction equipment during all phases of construction activity would result in noise effects that could potentially affect nearby receptors. During the construction period, the contractor would have to comply with applicable laws (including with respect to noise), which it would likely do, for example, by keeping the idling of construction equipment to a minimum, and maintaining equipment in good working order, with effective muffling devices. Construction activity at night would be minimized. Noise complaints, if any, would be addressed as with any similar work, depending on the circumstance. The TPA should establish a monitoring, reporting and response program to deal with all aspects of construction, including complaints regarding noise.

Human Health Operation Effects

There would be no direct effects on human health from the Project. The operation of the tunnel, which would be for pedestrian use, would not result in significant effects to human health. The perimeter road, which would be used by approved persons at the BBTCA, is not in proximity to residents. As such, perimeter road activity would be minimal and would not have any significant adverse effect on human health.

Human Health Effects Significance

The Project is not expected to significantly affect human health.

5.2.5 Land Use

Land Use Construction Effects

Construction of the proposed Project would not have any significant impact on the use of land. A few parking spaces used for access to the BBTCA at the foot of Eireann Quay and at the BBTCA may be removed. This would not result in a significant effect.

The Project would not likely have effects on land use, including development activity, in the Study Area, particularly given the temporary and confined nature of the construction activities related to the Project. Land use, including development beyond the Project's construction area (e.g., for the tunnel, at the foot of Eireann Quay) would be able to continue.

The perimeter road would not affect land use, including development activity, as the lands are currently being used for airport purposes, and would continue to be used for the same purpose.

Land Use Operation Effects

The perimeter road would have no operation effects on land use. During the operation of the Project, the potential elimination of a few parking spaces used to access the BBTCA area could result in better access, such as improved pick-up and circulation. Further details regarding traffic improvements are detailed in the Transportation and Navigation section. As such, the operation of the Project is not expected to have any adverse effects on land use.

Land Use Effects Significance

Lands in the Study Area continue to be used, and developed, which is expected to continue in this highly urbanized area. The Project would not impact land uses, including waterfront concept plans, or plans for the Canada Malting Complex site. The potential elimination of parking spaces at the foot of Eireann Quay could improve access to the BBTCA. As such, the Project would have no significant adverse effects on land use.

5.2.6 Social & Visual

Social and Visual Construction Effects

There would be no effects on (i.e., removal of) social features as a result of construction of the Project.

Local residents and visitors to the area would likely experience some disruption effects from noise, dust and related truck traffic during construction. This could have some effect on residents' and visitors' use and enjoyment of property during these periods. People may be less likely to use Little Norway Park, for example, during these periods. The Harbourfront Community Centre (including the Waterfront School and City School) may experience periods where trucks carrying fill material away from the site cause disruption to traffic, and create noise and dust. However, this would be limited (e.g. 2 trucks per hour removing tunnel excavation materials during the construction period). Given that these effects would be for a relatively short duration (likely about 16-18 months), and that there is a reasonable separation distance between the construction area and the closest residences, these effects would not be significant. However, it is recommended that the TPA investigate methods to mitigate these potential effects. This could involve measures to establish off-site materials handling areas and access routes

Social and Visual Operation Effects

The pedestrian tunnel would not result in adverse effects during its operation. While the use of the road by security personnel could generate some vehicle noise, the road is well removed from any persons who could be affected (such as residents of the area).

The tunnel access (connecting) structures on both the mainland and airport sides would result in minor changes to the visual character of the area. They would be designed in a manner that is architecturally pleasing and in character with the area. Although not required for the EA, it is recommended that the TPA consider the City of Toronto's Bird Friendly Guidelines to consider bird friendly less-reflective glass materials in the design of the connecting structures. The tunnel access structure on the mainland side would be landscaped to provide visual improvements to the area, and would result in minimal interruption of views of the water down Eireann Quay. The detailed design of the connecting structures would include consideration of visual and social effects. The perimeter road would not result in visual effects.

Social and Visual Effects Significance

Nuisance effects to local residents and other receptors would likely result from the Project's construction activities related to the tunnel. Tunnel construction effects would be similar to other

construction in the downtown area. Standard construction measures would be put in place to minimize disturbances, and applicable laws would be complied with (see Air Quality, Noise and Human Health sections). Any complaints received during construction should be followed up and appropriate action taken. Given that the construction effects would be temporary and localized (and not unlike many other construction projects that regularly occur in the City), the potential for adverse significant social effects during the construction period is considered to be minimal, and not significant. With the exception of some minor visual changes related to the tunnel access structures, which would be negligible (if not positive), there would be no social effects during the operation of the tunnel.

5.2.7 Transportation and Navigation

Beyond the EA, the TPA is continuing to develop a transportation and traffic management plan to improve the taxi queuing, pick-up and drop-off circulation, shuttle bus circulation, and parking conditions on Eireann Quay and at the BBTCA. The plan is being completed by the TPA independent of the proposed Project, and would be done whether or not the Project were to proceed. Should the proposed Project proceed, the transportation and traffic management plan would assist in improving transportation conditions in the Study Area, and the construction and operation effects discussed here would likely be further reduced.

Transportation Construction Effects

Due to the location of the Project (the tunnel portion at the foot of Eireann Quay and the perimeter road at the BBTCA), construction of the Project would have little impact on existing traffic patterns. Some delays can be expected as a result of construction traffic entering and exiting the Project site. Traffic delays would be monitored to avoid bottlenecks of traffic entering and exiting, where appropriate and feasible.

In regards to boat navigation in the Western Gap, works would be conducted on land and would not result in obstruction to boat traffic. The exception is that a barge may be moored in the Western Gap during some phases of the construction work. This barge could hold the fill and excavation materials from the excavation prior to shipment off-site. Details of the barge location, movement and duration would depend on contractors' operations. These plans would be presented and reviewed by the TPA prior to commencement to ensure minimal impact to navigation in the Western Gap

As was done with the recent airport terminal construction, for island side construction, efforts would be made to minimize disruption to ferry service for passenger access to the BBTCA.

Transportation Operation Effects

Adverse transportation and navigation effects are not expected as a result of the Project. As indicated above, aircraft movements, passengers and road traffic associated with the BBTCA will occur with or without the Project. In fact, there would likely be transportation benefits, as the tunnel would moderate (or "smooth out") the flow of passengers, particularly with respect to passengers leaving the BBTCA, smoothing out traffic and reducing bottlenecks that could otherwise occur. Minor improvements at the foot of Eireann Quay would improve the safe use and operation of the BBTCA, as access would be improved by having increased capacity for pick-up and drop-off.

Transportation Effects Significance

The Project is not anticipated to significantly affect transportation, including at the BBTCA, the mainland or navigation in the Western Gap. In fact, there may be positive effects as the tunnel would provide a more level flow of passengers accessing the BBTCA, and relieve bottlenecks that may otherwise occur.

5.3 Mitigation Plans

It is expected that the Project would result only in minor construction related effects and no significant environmental effects. Nevertheless, there are mitigation measures that would be beneficial during construction, and which could assist in avoiding disturbance, managing risk and avoiding (or minimizing) potential minor effects. **Table 5.2** on the following page includes such mitigation measures.

TABLE 5.2 – ENVIRONMENTAL EFFECTS ANALYSIS AND PROPOSED MITIGATION MEASURES				
Environmental Component	**Description of Environmental Effects**	**Description of Recommended Mitigation Measures**	**Likelihood of Residual Effects**	**Significance of Residual Effects**
Biophysical Environment				
Air Quality	Construction During excavation, increases in particulate matter (dust) could impact residences and businesses located in the vicinity of the Project. Increase in emissions from diesel engines of construction machinery is also expected.	Standard mitigation options to reduce dust levels include the wetting of exposed soil surfaces, application of dust suppressants and restoring disturbed areas as soon as possible to minimize the duration of exposed soil. Emissions would be reduced through the use of well-maintained heavy equipment and machinery and minimizing operation and idling of equipment, especially during smog advisories.	Minimal	Air quality effects (dust, exhaust) during the construction period will be temporary, localized and mitigation measures to reduce dust levels are expected to be effective. Effects are not expected to be significant.
	Operation No effects that would require or benefit from mitigation.	Not required	None	None
Fish Habitat	Construction Fish habitat would not be removed as a result of the Project. Fish habitat has the potential to be affected by runoff/sedimentation from near shore construction activity.	As outlined in the Surface Water subsection, erosion and sediment control measures could be used during construction to protect water quality and fish habitat in the Channel/Lake Ontario	Minimal	Although effects are unlikely, with mitigation measures in place, no effects to fish habitat would be expected.
	Operation No effects that would require	Not required	None	None

TABLE 5.2 – ENVIRONMENTAL EFFECTS ANALYSIS AND PROPOSED MITIGATION MEASURES				
Environmental Component	**Description of Environmental Effects**	**Description of Recommended Mitigation Measures**	**Likelihood of Residual Effects**	**Significance of Residual Effects**
	or benefit from mitigation.			
Groundwater	Construction Potential for some infiltration of groundwater and the need for dewatering during tunnel shaft construction. Potential for contamination of ground water resulting from spills during construction. Operation No affects that would require or benefit from mitigation.	Construction methods would minimize that amount of groundwater infiltration into the area of excavation. Standard measures would be used during construction to avoid (and where necessary, manage and mitigate) fuel and lubricant spills. Not Required	Minimal None	It is expected groundwater supplies would not be significantly impacted given the expected relatively minor amount of infiltration. (low magnitude of effect). As well, the ground water supply in the Study Area is not considered to be sensitive, as the area is serviced by municipal water. Significant environmental effects are not expected. None
Migratory Birds	Construction There is no migratory bird habitat within the Study Area for the pedestrian tunnel. The perimeter road would pass through an area of maintained grass. This area is not considered to provide any notable habitat for migratory birds. While there is habitat adjacent to the perimeter road (outside the airport perimeter fence), this habitat would not be affected.	Not required	None	None

TABLE 5.2 – ENVIRONMENTAL EFFECTS ANALYSIS AND PROPOSED MITIGATION MEASURES				
Environmental Component	**Description of Environmental Effects**	**Description of Recommended Mitigation Measures**	**Likelihood of Residual Effects**	**Significance of Residual Effects**
	Operation No effects that would require or benefit from mitigation.	Not required	None	None
Soils and Sediments	Construction Ground excavation activities can result in erosion and sedimentation into adjacent water bodies (Lake Ontario).	Mitigation to minimize erosion is addressed under the surface water component. Excavated soils would be visually monitored for contamination, and if encountered, properly managed.	Minimal	See surface water component. No significant adverse environmental effects.
	Operation No effects that would require or benefit from mitigation.	Not Required	None	None
Surface Water	Construction Exposed soil during the construction period could result in increased sediment into the City's storm sewer system, channel and surrounding water body of the Island during storm events.	Specific stormwater management measures would be developed during facility design. Runoff would be controlled and BMP measures (e.g. minimize time exposure of unvegetated soils) put in place to prevent/reduce sediment loadings in channel/water bodies and storm sewer system.	Minimal	Mitigation measures would be effective and would minimize effects on surface water quality during the construction period. Construction effects would be short-term and of low magnitude.
	Spills of hazardous construction materials (e.g. fuels, hydraulic fluids) could affect surface water quality.	Standard construction practices (e.g. defined fuel storage locations, spill control devices available on-site) would be		

TABLE 5.2 – ENVIRONMENTAL EFFECTS ANALYSIS AND PROPOSED MITIGATION MEASURES				
Environmental Component	**Description of Environmental Effects**	**Description of Recommended Mitigation Measures**	**Likelihood of Residual Effects**	**Significance of Residual Effects**
		implemented to minimize effects from spills. In the event of a spill, it would be properly managed through the contractors spill contingency plans.		
	<u>Operation</u> Increase in overland flow from the reduced impervious area from paved road.	A detailed drainage plan for the tunnel facility and road would be developed prior to construction. It is expected that some swales and culverts (for surface flow to pass under the road) would be required for the access road. Stormwater would be managed by implementing appropriate control measures and through ground infiltration.	Minimal	No significant surface water effects are expected during operations
Terrain and Topography	<u>Construction</u> No effects that would require or benefit from mitigation.	Not required	None	None
	<u>Operation</u> No effects that would require or benefit from mitigation.	Not required	None	None
Vegetation	<u>Construction</u> The construction of the tunnel would not result in the removal of any natural vegetation.	A landscape plan would be developed as part of the detailed design stage. Landscaping is expected to involve sodding of excavated/ disturbed areas in the	Minimal	Recognizing that the vegetation to be affected consists of maintained grassed areas and contains no notable species, vegetation effects are not considered to be significant. Landscaping activities

TABLE 5.2 – ENVIRONMENTAL EFFECTS ANALYSIS AND PROPOSED MITIGATION MEASURES				
Environmental Component	**Description of Environmental Effects**	**Description of Recommended Mitigation Measures**	**Likelihood of Residual Effects**	**Significance of Residual Effects**
	The airport perimeter road alignment consists of maintained grassed areas. No significant terrestrial vegetation expected to be affected. <u>Operation</u> No effects that would require or benefit from mitigation.	vicinity of the tunnel entrances. Exposed soils in the vicinity of the airport perimeter road would be seeded with grass once construction is completed. Not Required	None	would be undertaken that would include some plantings and seeding of construction areas. No significant adverse environmental effects are expected. None
Wildlife/ Habitat	<u>Construction</u> The Study Area related to the Project is highly urbanized. The area for the tunnel construction has no natural vegetation that could provide wildlife habitat. The perimeter road passes through maintained grassed areas. These lands are not considered to provide any wildlife habitat of note. Natural habitat lands exist beyond the perimeter road (outside the perimeter fence). Potential for some disturbance to these areas during the construction period. Wildlife that inhabits these lands would be	Landscaping and plantings of disturbed areas	Minimal	The loss of some maintained grassed areas at the BBTCA property is not considered to be significant.

TABLE 5.2 – ENVIRONMENTAL EFFECTS ANALYSIS AND PROPOSED MITIGATION MEASURES				
Environmental Component	**Description of Environmental Effects**	**Description of Recommended Mitigation Measures**	**Likelihood of Residual Effects**	**Significance of Residual Effects**
	accustomed to disturbances from aircraft activity. Project site is not known to serve as valued habitat for migratory birds or Species at Risk. <u>Operation</u> Minimal to nil potential for wildlife conflicts with use of new road by security staff.	Not Required beyond responsible driving practices.	None	None
SOCIAL & ECONOMIC				
Economic	<u>Construction</u> During the construction period, it is unlikely that businesses in the area would be negatively affected. Access to the BBTCA would be maintained – Island based businesses would not be affected. <u>Operation</u> No effects that would require or benefit from mitigation.	Not required beyond measures to manage/minimize nuisance-type noise and air quality effects in the local area. Not required	Minimal None	None None

TABLE 5.2 – ENVIRONMENTAL EFFECTS ANALYSIS AND PROPOSED MITIGATION MEASURES				
Environmental Component	**Description of Environmental Effects**	**Description of Recommended Mitigation Measures**	**Likelihood of Residual Effects**	**Significance of Residual Effects**
Aboriginal Use of Traditional Lands/ Resources	Construction No effects to First Nations traditional use of lands/resources. Operation No effects expected	None. If requested, continue discussions with the Mississaugas of New Credit.	None None	None None
Heritage and Archaeo-logical Features	Construction The pedestrian tunnel is largely located on lake fill lands and as such, it is unlikely that archaeological features would be encountered. A small portion of the perimeter road lands is located on lands that were identified by the City as being part of the original Toronto Islands. However, given the extensive amount of disturbance that would have occurred to these lands from lake filling activity, the potential to encounter archaeological features is minimal. The construction of the tunnel and connecting structure on the island side is north and	Conduct as required and appropriate, an archaeological survey on that portion of the land that has been identified as having archaeological potential. In the event that archaeological features are discovered during construction, standard procedures should be followed to protect cultural resources. Construction plans would include requirements for the consistent monitoring of construction	Minimal None	No potential for effects on built heritage resources. If encountered, archaeological resources would be properly managed, as per standard protocols. Potential cultural resource effects are not considered to be significant. None

TABLE 5.2 – ENVIRONMENTAL EFFECTS ANALYSIS AND PROPOSED MITIGATION MEASURES				
Environmental Component	**Description of Environmental Effects**	**Description of Recommended Mitigation Measures**	**Likelihood of Residual Effects**	**Significance of Residual Effects**
	west of the former air terminal building that has been designated as a national historic site. Construction occurring in proximity to the building would be managed to ensure no impacts to the building or footprint. <u>Operation</u> No effects that would require or benefit from mitigation.	activities in proximity to the former air terminal building to ensure no construction effects to the building or footprint. Not Required	None	None
Human Health	<u>Construction</u> Dust and air quality impacts on nearby residential areas during the construction period of the tunnel may occur. While some noise disturbance effects are possible, the levels would not be significant enough to result in human health effects Potential safety risks to pedestrians/school children/community centre users, because access to the Project site during the construction period requires the use of Eireann Quay. As an example, during construction, it is expected	Air quality impacts would be minimized by the use of mitigation measures as previously described under the Air Quality subsection. Through the use of these mitigation measures, dust effects would be minimized. Work would be undertaken according to applicable laws, which may result in restricted hours of construction; equipment should be kept in good working order – including the use of muffling devices and keeping the idling of construction equipment to a minimum to minimize impacts on nearby land uses. The safe operation of	Minimal	Given that mitigation measures are expected to be effective and that the effects would be temporary, air quality effects on human health during construction are not expected to be significant. Noise effects from construction activities would be temporary, with the frequency and magnitude differing throughout the construction period. Construction noise effects are not expected to be significant. With the implementation of appropriate safety measures, it is expected that risks to human safety would not be significant.

TABLE 5.2 – ENVIRONMENTAL EFFECTS ANALYSIS AND PROPOSED MITIGATION MEASURES				
Environmental Component	**Description of Environmental Effects**	**Description of Recommended Mitigation Measures**	**Likelihood of Residual Effects**	**Significance of Residual Effects**
	that truck traffic to remove the excavated soils would be 1-2 trucks/hour. This frequency would depend on the rate of excavation. After excavation of the tunnel, additional traffic would involve the delivery of concrete and other materials. <u>Operation</u> Tunnel operations will not result in human health effects	construction equipment on public roads will be important. The Project's contractors should ensure that equipment operators are properly trained and obey posted speed limits. The TPA should work with the Harbourfront Community Centre to ensure that its concerns are identified and addressed appropriately in a timely manner. None required	None	None
Land Use	<u>Construction/Operation</u> The Project is unlikely to affect land uses, including planned land development activity in the Study Area.	None required.	Minimal	No significant effects on land use
Transportation & Navigation	<u>Construction</u> Construction activities would result in some delays to local road traffic due to construction traffic entering and exiting the site. There would be no effects (or minimal effects related to a barge that may be used) to	Measures would be put in place to facilitate traffic flows (e.g. signage). Through the ongoing TPA traffic management plan, TPA is continuing to investigate options to address construction stage traffic (e.g. construction routing and lay-down areas).	Minimal	There would be some delays to traffic in the local area during the construction period. These effects are not considered significant, and any effects would be temporary.

TABLE 5.2 – ENVIRONMENTAL EFFECTS ANALYSIS AND PROPOSED MITIGATION MEASURES				
Environmental Component	**Description of Environmental Effects**	**Description of Recommended Mitigation Measures**	**Likelihood of Residual Effects**	**Significance of Residual Effects**
	boat traffic through the Western Gap. <u>Operation</u> There would be no adverse effects to transportation & navigation during operations.	None required	None	None
Visual	<u>Construction</u> Some alteration to the area outside of the shoreline area of the Western Gap. The proposed Project would be in character with the existing area. <u>Operation</u> No effects that would require or benefit from mitigation.	Not required Not required	Minimal None	None None

5.4 Accidents and Malfunctions

During Construction

There is limited potential for environmental effects as a result of accidents or malfunctions during construction. The potential for spills of construction equipment fuels, oils and hydraulic fluids is described in Section 5.1 of this report. These spills could result in soil, groundwater and surface water contamination. If a spill occurs, it would be of minimal magnitude (as low volumes of these materials are typically handled) and spill contingency plans of the contractor would be followed. It is reasonably assumed that these clean-up practices would be effective in managing these events and as a result, these types of accidents are not expected to result in significant effects on the environment.

During the construction period of the project, there would be an increase in construction related vehicles and equipment in the area. During the excavation it is projected that about 1-2 trucks/hour would be required to haul the fill material off-site. After excavation of the tunnel, additional traffic would involve the delivery of concrete and other materials. The use of the local roads (e.g. Eireann Quay) for construction activity does increase the potential for accidents in the area. The study area is highly urbanized and the local roads are heavily used. Construction related truck traffic in the local area is not untypical. The anticipated level of construction traffic on local roads would be similar to that recently experienced with the airport terminal construction activities. We are not aware of any community safety issues that resulted from this activity.

The risk for accidents will be managed through driver education and enforcement of speed limits. This will be monitored by the TPA. The TPA will also consult with the community including the Harbourfront School/Community Centre to receive their input on how construction traffic can best be managed.

For the proposed perimeter road, only authorized personnel at the BBTCA will have access to the road and construction area. There are no anticipated risks associated with accidents and malfunctions related to perimeter road construction activities.

Also considered was the potential for tunnel collapse during both construction and operation, a scenario that while potentially possible, is highly unlikely. The proposed pedestrian tunnel is considered to have a very low risk for collapse as the tunnel will be bored through bedrock and will be done in a manner that meets required building design and safety protocols and codes.

During Operation

For operations, the tunnel and elevator/escalator/stair buildings would have comprehensive fire protection, security, communications and power systems. This would include the following components:

- Electronic security with closed circuit television for interior and exterior monitoring
- Fire alarm and detection system
- Fire doors to isolate sections of the tunnel
- Sprinkler system
- Heat and smoke detectors
- Standby/emergency power for elevators and moving sidewalks
- Paging/announcement/communications system
- Emergency exits

The fire detection system would be designed to isolate problem zones within the tunnel and elevator/stair buildings and ensure that users can be cleared and directed to safe areas in the event of an incident. If a power failure were to occur, there would be back-up power in place.

For the proposed perimeter road, it would only be accessible to authorized personnel at the BBTCA, who would not likely have any material risk associated with accidents and malfunctions related to the operation of the perimeter road.

Accidents and malfunctions could also occur as a result of changes in the environment, such as extreme weather events or natural disasters. The potential effects of changes in the environment on the Project are discussed in section 5.5.

5.5 Effects of the Environment on the Project

This EA also considers “any change to the project that may be caused by the environment”. Through the potential for climate change there is a potential for a change in rainfall patterns and amounts. Excessive rainfall, perhaps as a result of climate change, could result in increased water levels within the channel, but this is not anticipated to result in issues related to the Project that would not be able to be managed.

The project is not considered to be susceptible to flooding or extreme weather events. As with any building construction in Ontario, the tunnel would be designed to meet building codes as they relate to earthquake events. If a power failure were to occur there would be back-up power available for emergency use.

5.6 Cumulative Effects

The potential for effects from the Project to combine with the effects of other likely projects and activities in the Study Area was considered in this EA screening. For cumulative effects to occur there must be an overlap of effects in both time and space. As previously described, while the project is expected to result in some short term construction effects, no material longer term operations related effects are anticipated. As such, the focus of the cumulative effects assessment was on the short term construction period. Possible future projects that could occur in the Study Area and might result in cumulative effects include:

- Other planned land development projects in the Study Area; and
- Toronto waterfront redevelopment initiatives

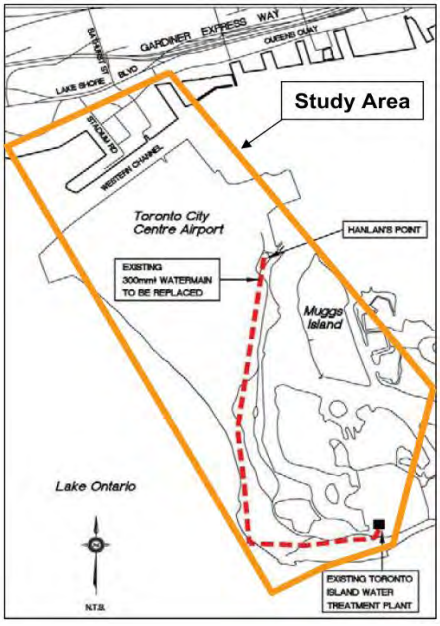
5.6.1 Other Proposed Developments

90 Stadium Road

The 90 Stadium Road condominium development consists of a 22-storey residential tower atop a 7-storey base and a 9-storey mid-rise street related residential building along Stadium Road, just east of Coronation Park. This is currently being constructed and is anticipated for completion in 2011. The development, which is close to completion, is located at the western edge of the Study Area. There are no anticipated cumulative effects of this development with the proposed Project, as the condo development will likely be completed, or will be near completion, before the construction of the proposed Project. In addition the 90 Stadium Road site is sufficiently distanced from the proposed Project construction areas.

City of Toronto, Toronto Island Water Supply Route Study Municipal Class EA

In order to secure municipal water supply to the Toronto Islands, the City of Toronto has identified the need for a new 400 mm diameter watermain that would extend from the City's mainland to the Toronto Islands. In addition, the City has also identified the need to replace a portion of the Islands' municipal water distribution system from south of the BBTCA to the Islands' Water Treatment Plant located at Hanlan's Point, south of the BBTCA lands. The City is currently engaged in completing a Class EA with respect to these matters. The figure on the right illustrates the study area for this Class EA. The City anticipates that the Class EA notice of completion would be issued in Spring 2011.



The construction work would likely be carried out in two phases. The first phase of work would be on the Island side where construction could start late 2011/early 2012. This portion of the City work is outside of the TPA's property, south of the airport perimeter fence and would extend further south and away from the proposed perimeter road and tunnel.

While there is potential for the pedestrian tunnel construction period and the water main construction (on the Islands) period to overlap in time, the projects would be physically separated from each other, and as such the potential for construction related nuisance effects to combine and impact receptors is considered to be low. In any event, the TPA would monitor the construction effects of the Project to confirm that noticeable construction related cumulative nuisance effects do not occur. There are no receptors (residents) in the vicinity of the perimeter road should there be any construction related cumulative effects.

Phase two of the City's watermain construction work would involve watermain construction along the east side of Eireann Quay and in a tunnel under the Western Gap and the BBTCA to connect with the works on the Island developed under Phase 1 of the water main project as noted above. This is a long range plan and is not currently planned for construction; therefore, cumulative effects of construction are not anticipated as the pedestrian tunnel construction would be completed before this phase started. The TPA and City should consider the possible use of the Pedestrian Tunnel, should it proceed, for this watermain, in order to avoid the need for a separate tunnel in the area.

Cumulative operation effects are not anticipated as the operation effects of the Project (pedestrian tunnel and perimeter road) are so minimal (likely close to nil).

As previously identified, other projects that could potentially occur in the same period are either not planned for the same construction time period or not in direct proximity to the Project site. Given the separation distance between the Project and other land development activity in the Study Area, adverse significant cumulative effects are not expected.

5.6.2 Toronto Waterfront Initiatives

At this time we are not aware of other waterfront initiatives in proximity to the Project that would likely result in cumulative effects. The potential for other initiatives and resulting cumulative effects will be monitored.

5.7 Other Matters

No other matters of relevance to the screening were identified

5.8 Environmental Effects Summary Checklist

Table 5.3 provides a summary checklist of potential environmental effects of the Project, which takes into consideration all project phases.

Table 5.4 provides a summary of proposed mitigation measures.

Table 5.3 – Environmental Effects Checklist

Environmental Component	**Potential Project Effects**				**Residual Effects**	
	Potential Adverse Effect?		**Can It Be Mitigated?**		**Is it Significant?**	
	Yes	*No*	*Yes*	*No*	*Yes*	*No*
Topography		✓				
Species/Habitat of Special Status		✓				
Vegetation	✓		✓			✓
Wildlife / Habitat		✓				
Fish Habitat		✓				
Soils	✓		✓			✓
Groundwater	✓		✓			✓
Surface Water / Hydrology	✓		✓			✓
Wetlands		✓				
Sediments	✓		✓			✓
Climate and Air Quality	✓		✓			✓
Noise	✓		✓			✓
Vibration	✓		✓			✓
Transportation and Navigation	✓		✓			✓
Land Use		✓				
Human Health[1]	✓		✓			✓
Socio-economic Conditions[1]	✓		✓			✓
Physical/Cultural Heritage[1]	✓		✓			✓
Aboriginal Use of Traditional Lands/Resources[1]		✓				
Structures/Sites of Significance[1]		✓				
Accidents and Malfunctions	✓		✓			✓
Effects of Environment on the Project		✓				

Table 5.4 – Mitigation Summary		
Project Component/ Activity	**Environmental Component Potentially Affected**	**Proposed Mitigation**
General Construction Activities	Surface Water	• Develop in the design phase appropriate stormwater management measures that would include stormwater erosion procedures to be followed during construction. In preparing the drainage design, a primary objective would be to maintain existing drainage patterns. As is the case now, stormwater would be directed to the City's stormwater system. Where feasible the stormwater management plan should incorporate source controls and minimize adverse impacts on adjacent lands and on the channel. The following drainage mitigation would be incorporated, as necessary and appropriate, into the design: • Minimize disturbance of existing vegetated areas where grading is required; • Minimize time exposure of un-vegetated soils; • Maximize length of overland flow through to points where stormwater leaves the site; • Any stockpiled materials should be stored and stabilized away from open water; • All materials and equipment used for the purpose of site preparation and the completion of any work should be operated and stored in a manner that prevents any deleterious substance from entering the water; • Refuelling and handling of potential hazardous substances are to be done away from the channel and stormwater outlets; • Sediment and erosion control measures are to be left in place until all disturbed areas have been stabilized; • The sediment control plan should be designed and implemented to mitigate impacts associated with construction of the Project - to prevent suspended sediment, mud, debris, fill, rock dust, etc. from entering the channel/stormwater system. Areas disturbed by work need to be minimized. Silt fences/curtains, sediment traps, check dams would be installed as necessary and appropriate; • Measures would be in place to minimize mud tracking by construction vehicles, and to ensure timely cleanup of any tracked mud, dirt and debris along access routes and areas outside of the immediate work area where the above sediment controls would not be in place; • Work would be suspended if excessive flows of sediment discharges occur, and appropriate action should be immediately taken to reduce sediment loading; and

Table 5.4 – Mitigation Summary		
Project Component/ Activity	**Environmental Component Potentially Affected**	**Proposed Mitigation**
		• Temporary mitigation measures would be installed prior to commencement of any site excavation, filling or grading works and maintained on regular basis, prior to and after runoff events. Any accumulated materials would be cleaned out during maintenance and prior to their removal. All disturbed areas on land would be restored to natural conditions and be re-vegetated as soon as conditions allow to prevent erosion, and restore habitat functions. Land based measures would not be removed until vegetation has been re-established to a sufficient degree (or surface soils stabilized using other measures) so as to provide adequate erosion protection to disturbed work areas.

	Groundwater	• Construction methods would minimize the amount of groundwater infiltration into the area of excavation. The construction specifications would include a monitoring program for handling any groundwater infiltration that may be encountered.
		• Measures would be put in place during construction to avoid fuel and lubricant spills.
		• The construction specifications would include the following measures to manage/prevent/respond to potential spills:
		  • Prevent debris from construction, fabrication and landscaping activity, including concrete, steel, sawdust, topsoil, compost, and any chemicals or waste materials from entering the channel/stormsewer system;
		  • Equipment refuelling, maintenance, etc. and handling/storage of toxic materials (e.g., fuel, lubricants, paints, solvents, form oils, chemicals, etc.) will be carried out well away from the channel/stormsewer system using procedures to avoid contamination of soils, groundwater and surface waters; and
		  • Minimize impacts of accidental spills (adequate supply of clean-up materials on site and construction crew fully trained on their use), including preparation of contingency plans to ensure timely and effective responses to spill incidents – consistent with recommendations in pertinent Ontario Ministry of the Environment (MOE) guidelines regarding spills management and reporting.

Table 5.4 – Mitigation Summary		
Project Component/ Activity	**Environmental Component Potentially Affected**	**Proposed Mitigation**
	Soils	• The potential for effects on soils/erosion and possible mitigation has been addressed within the Surface Water sub-section. These include a variety of measures, such as erosion control. • Soils could also be contaminated through spills in the handling of fuels and oils for construction equipment. Fuel management/clean-up procedures as described under the Groundwater environmental component are to be followed.
	Air Quality	• Mitigation options to reduce dust levels include the wetting of exposed soil surfaces, application of dust suppressants and restoring disturbed areas as soon as possible to minimize the duration of exposed soil. • Use new or well-maintained heavy equipment and machinery, preferably fitted with muffler/exhaust system baffles and engine covers; • Comply with operating specifications for heavy equipment and machinery; • Minimize operation and idling of gas-powered equipment and vehicles, in particular, during smog advisories; • Minimize vehicular traffic on exposed soils and stabilize high traffic areas with a clean gravel surface layer or other suitable cover material; • Avoid excavation and other construction activities with potential to release airborne particulates during windy and prolonged dry periods; • Stabilize stockpiled excavated soils in areas that are upwind of sensitive receptors; • Cover or otherwise contain loose construction materials that have the potential to release airborne particulates during transport, installation or removal; • Spray water to minimize the release of dust from gravel, paved areas and exposed soils. Use chemical dust suppressants only where necessary on problem areas; and • Restore disturbed areas as soon as possible to minimize the duration of soil exposure.
	Vegetation/Wildlife Habitat	• The perimeter road activities would be set-back sufficiently from natural habitat and within the airport perimeter fence. • A landscape plan would be developed for any disturbed areas using native plant species. Landscaping is expected to involve sodding of excavated/disturbed areas. Use of invasive species and species sensitive to salt exposure (adjacent to paved areas) should be avoided.

Table 5.4 – Mitigation Summary		
Project Component/ Activity	**Environmental Component Potentially Affected**	**Proposed Mitigation**
	Fish & Fish Habitat	• Erosion and sediment control measures on shore as described in the Surface Water subsection; • Applying sediment control measures (i.e., silt curtains) during construction to prevent the entry of sediment into the lake; • Dockwall monitoring program and management plan
	Heritage & Archaeology	• In the event that archaeological features are discovered during construction, standard procedures would be followed to protect cultural resources. • During the construction period the contractor would be required to manage and monitor construction to ensure no impacts to the former air terminal building that has been designated as a national historic site.
	Social- Visual	• Complaints monitoring and follow-up. See human health and air quality mitigation.
	Human Health	• See air quality. • During the construction period the contractor would be required to abide by applicable laws, including with respect to noise, keeping the idling of construction equipment to a minimum and maintaining equipment in good working order, with effective muffling devices to reduce noise from construction activities. Construction activity during the night time would be minimized, and noise complaints would be followed-up and addressed by the contractor (or by the TPA, where necessary). • Monitor vibration effects during key construction activities.
	Transportation	• Maintain access to adjacent properties. • There is also ongoing traffic management planning by the TPA, which will improve parking, taxi queuing, pick-up and drop-off circulation, etc.

6.0 CONSULTATION

As with other environmental assessments that have been conducted related to the BBTCA, consultation has been an important aspect of this EA. The Port Authority EA Regulations include requirements for public consultation where the Port Authority is aware of any special circumstances of the Project that would make the Project of interest to the public. In such a case, the TPA would be required to give the public notice of the screening, an opportunity to participate in the screening and to examine and comment on the screening report and on any record filed in the public registry established with respect to the Project. Although the TPA is not aware of any such special circumstances with this Project, an extensive public consultation program has been carried out for this project, which has included giving the public notice of the screening and an opportunity to participate in the screening. The public has been able to examine and comment on documents prepared for the screening (described below), and had the opportunity to comment on the draft screening report released in November 2010. In addition to consultations that are described elsewhere in this report, consultation has included:

- Project notice (notice of commencement) on the TPA's website and Canadian Environmental Assessment Agency public registry (as of March 15, 2010);
- Notice of Commencement of the Project and notice of initial public meeting on the TPA's website, as well as in the Metro, Toronto Star and L'Express newspapers;
- Initial Public Meeting (held on March 24, 2010) to provide initial information on the project and screening process and to answer questions about the proposed Project and solicit comments from interested persons, including the public, stakeholders and agencies;
- Documents available on the TPA's website, including Project Description, Scoping Document, Public Meeting Display Panels, Contact Lists, Frequently Asked Questions (FAQ), Question and Answer sheets, Draft Screening Report, notices of public consultation events, background studies;
- Responding to enquiries from the public, agencies and other interested persons;
- Consultation with the City of Toronto, including providing and obtaining information (e.g. traffic, planned land use);
- Communications with the Canadian Environmental Assessment Agency, Transport Canada and the Department of Fisheries and Oceans;
- Notification letters dated March 11, 2010 to the Mississaugas of the New Credit First Nation (and attendance at a meeting) and the Mississaugas of Scugog Island First Nation, which provided information about the proposed Project. Follow-up phone calls were placed to discuss the proposed Project. A follow-up letter was sent in June 2010. Response was received from one First Nations community (see Section 6.1);

- Ongoing communications, including discussions and meetings, as requested, with interested persons (e.g., stakeholders) regarding the Project, which included providing information and obtaining comments;
- Notice of availability of the Draft EA screening report for review, examination and comment on the TPA's website, as well as in the Metro, Toronto Star and L'Express newspapers. The notice also included an invitation for the public to attend a public meeting on November 30, 2010 to discuss the Draft Screening Report.
- A second public meeting on November 30, 2010 which included a presentation of the findings of the EA and provided the public with an opportunity to discuss the Draft EA screening report and ask questions. All comments were recorded and considered in the final EA document.
- A Question and Answers sheet was developed based on the comments and questions heard at the November 30, 2010 meeting. The Q&A was emailed out to the contact list and posted on the TPA website.
- A third public consultation event was held on January 12, 2011, including for people who could not attend the November 30, 2010 meeting or who wanted another opportunity to comment on the Draft Screening Report. At this event the Project team made a summary/re-cap presentation which included the findings of the EA, the information in the Draft Screening Report, and provided answers to questions from the November 30, 2010 meeting and via email.
- After the January 12, 2011 meeting, interested persons, including the public, were able to submit comments about the EA, the Project and the Draft Screening Report.
- The questions and comments submitted, including at public meetings and emailed to the Project's email address, were considered, including in order to complete the EA Screening. These will also be considered by the TPA in order to make its decision with respect to the Project and the EA. Responses have been provided. . **Appendix B,** the Consultation Summary Report, includes a table with the comments/questions received and responses.

Appendix B describes the consultation program undertaken by the TPA. It includes copies of notices, presentations, display panels, contact lists (where appropriate), Question and Answer sheets, comments and response tracking tables, letters mailed out to stakeholders, agencies and First Nations, and all other applicable consultation documentation developed over the course of the EA. The TPA's website was also updated throughout the course of the EA as part of the consultation process, including to maintain communication with the public and provide access to information.

Comments Received During Consultation:

In general, questions and comments were received during the consultation program related to:

- Air Quality and Noise
- Traffic and transportation
- Tripartite Agreement
- Expansion of the BBTCA
- Birds and wildlife
- Construction schedules and truck traffic on local roads
- Cost of building the Project, including who would pay for it
- What constitutes consultation and what is required in a consultation process
- What the Screening process is
- Applicable regulations, and who the approval authorities are

Many questions and comments related to the proposed Project, and many went beyond the Project. Questions and responses are documented in **Appendix B**. The TPA made every effort to answer all questions, and will consider all questions, comments and responses before making its decision as to whether to proceed.

Where appropriate, amendments to draft documents have been made based on comments received, including from the public, other stakeholders and government. Background studies for air quality and noise were also completed as a result of questions and comments that were received. Although these were beyond the Project, they provide additional information for the benefit of the public, and will be considered by the TPA before making its decision.

6.1 First Nations

The TPA provided written notification of the proposed Project to the Mississaugas of the New Credit First Nation and the Mississaugas of Scugog Island First Nation on March 11, 2010. Follow-up letters of June 4, 2010 were also sent, which included an updated project description and draft scoping document. The TPA offered to answer questions or to meet in person to discuss the Project.

Follow-up phone calls were made to First Nations and Indian and Northern Affairs Canada (INAC) to discuss the Project, including any interest the First Nations may have. In May 2010, at the request of Chief Brian LaForme of the Mississaugas of the New Credit First Nation, the TPA

met with Chief LaForme and learned about the Toronto purchase and pending land claim agreement.

Communications with First Nations has been maintained, and a draft EA screening report has been provided for review and comment to INAC, the Mississaugas of the New Credit First Nation and the Mississaugas of Scugog Island First Nation.

No other expression of interest or information request regarding the Project has been received from First Nations or INAC.

6.2 BBTCA Additional Information

Community comments were received throughout the screening EA. In some cases, comments pertained to airport operations that are unrelated to the proposed Project. As indicated, although not required for the purpose of the EA (increased aircraft movements, passenger volumes and traffic will occur whether or not the Project proceeds, and can be accommodated with the current infrastructure, likely with the addition of a second ferry), the TPA requested that studies be conducted to provide information about air quality and noise impacts in this area. Studies were conducted by RWDI AIR Inc., summaries of which are included in **Appendix C** for informational purposes.] These studies considered effects related to aircraft movements, passengers and road traffic. RWDI concluded that there would not be significant effects on air quality or noise impacts from the BBTCA once the aircraft slots are fully utilized. Thus, even if one were to assume that increased aircraft movements, passenger volumes and road traffic would result from the Project, there would not be any significant effect on air quality or noise impacts.

The full RWDI reports are available under separate cover.

The TPA is aware of, and sensitive to, the comments in regards to traffic volumes and circulation. As one initiative, the TPA is examining options with respect to taxi queuing along Eireann Quay, and hopes to be able to provide further improvements, which would occur whether or not the Project were to proceed.

7.0 FOLLOW-UP PROGRAM AND MONITORING

The following monitoring activities are recommended for the project:

- Resident complaints program during the construction period to monitor and address noise and air quality effects, if any, on surrounding residents and businesses;
- Monitoring of stormwater runoff from the construction site during rainfall events;
- Monitoring of groundwater infiltration into the shaft and tunnel during construction and the appropriate management of any collected water;
- Monitoring of excavation areas to ensure that the length of time that soils are exposed is minimized so as to reduce erosion and sedimentation effects;
- Monitoring of local transportation routes during the construction period to ensure that truck cleaning efforts (if required), are effective to reduce the accumulation of soil/mud along local roadways;
- Monitoring of vegetative plantings and natural areas, particularly where the perimeter road alignment is proposed, to ensure that they are surviving and that invasive species are not taking hold;
- Monitoring of Dock Wall condition during construction; and
- Monitoring historic air terminal building during construction on the island side.

The TPA commits to keeping local stakeholders informed during the construction period and would be willing to meet with local stakeholders, such as the Harbourfront Community Centre and Waterfront School, to hear their concerns and suggestions in regards to the project.

8.0 REFERENCES

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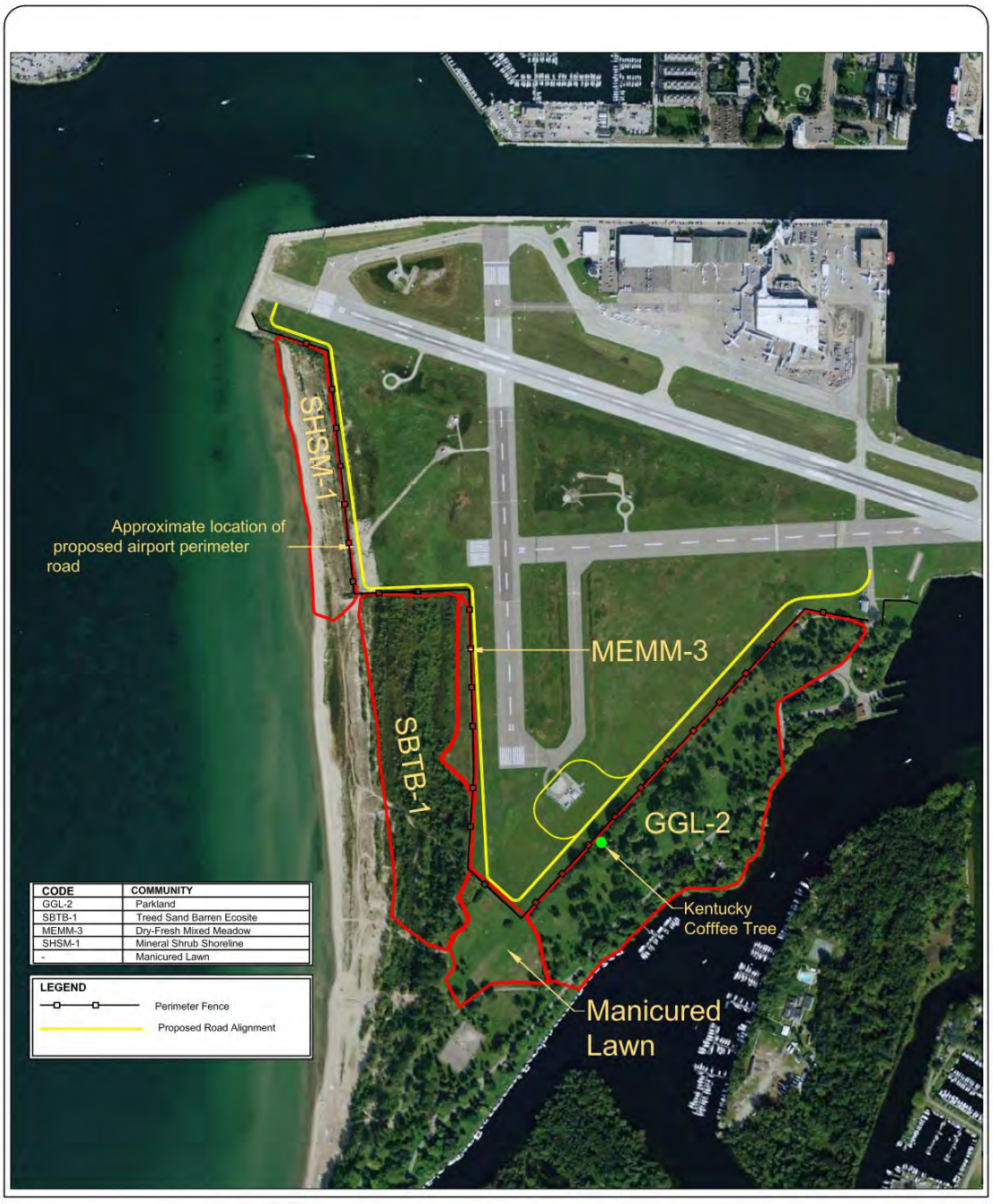
APPENDIX A
Vegetation and Wildlife Survey

APPENDIX A – VEGETATION SURVEY

Figure 1 illustrates the study area for the vegetation and wildlife survey.



DILLON CONSULTING

Toronto Port Authority Pedestrian Tunnel

Ecological Land Classification

Proj. Manager: PAM		Drawn By: ITR		Figure: 1
Scale: N.T.S.		Checked By: ITR		
Date Issued: October, 2010		Project No: 10-3010		
Location: G:\CAD\TPA- Pedestrian Tunnel\Design		File Name: TPA_ELC Plan (Combined).dwg		

Parkland (GGL – 2)

The parkland community is a treed area that is found on the south and east of the runway for the BBTCA. The stands within the parkland are comprised of Eastern Cottonwood (*Populus deltoides*), White Willow (*Salix alba*) and Sugar Maple (*Acer saccharum*). The tree canopy ranges in size from 10 cm diameter at breast height (dbh) to over 50 dbh. There are very limited standing snags and no deadfall was found. This is consistent with actively managed parkland areas.

Sub-canopy and understory layers of this community are dominated by Austrian Pine (*Pinus nigra*), White Poplar (*Populus alba*), and Horse Chestnut *(Aesculus hippocastanum)*, Tartanian Honeysuckle (*Lonicera tatarica*), European Buckthorn (*Rhamnus cathartica*) and Red Osier Dogwood (*Cornus stonolifera*). Both Honeysuckle and Buckthorn are aggressive, invasive plants that are common in disturbed urban areas.

The ground layer was dominated by exotic plants including White Clover (*Trifolium repens*), Cow vetch (*Vicia cracca*) and Dandelion (*Taraxicum officinale*). None of these speceis are native and all are commonly found to aggressively take over disturbed lands.

The soils in the Parkland community consisted of poorly drained Silt Loam and Silt. The soil core extended to 60 cm before encountering heavily compacted material that prevent further excavation. Mottles were encountered at 40 cm below the ground surface, which is an indication of soil moisture. The soil moisture regime in the parkland is moist (5).

Incidental wildlife observations identified 13 birds and 2 butterflies. Of note is the presence of the Monarch (*Danaus plexippus*), which is listed as Special Concern both provincially and federally. This species of butterfly migrates long distances and is commonly found both passing through sites and breeding on Milkweed plants in Ontario. Common Milkweed (*Asclepias syriaca*), was found in this community. The complete list of incidental wildlife found on the site is provided in **Appendix 1**.

In total, 18 tree species, 10 shrub species and 35 ground layer plants were found in the Parkland community. Of note is the presence of Kentucky Coffee Tree (*Gymnocladus dioicus*), which is listed provincially and federally as Threatened. The location of this tree has been recorded and is shown on **Figure 1**. The list of flora/fauna observed in the parkland is provided in Appendix 1.

The Parkland community was moderately disturbed, with the main sources being tracks/trails, recreational use, noise and non-native, invasive species.

Treed Sand Barren Ecosite – SBTB 1

The Treed Sand Barren community is a pioneer vegetation community (found west of the runway). The tree canopy is dominated by Eastern Cottonwood (*Populus deltoids*), White Birch (*Betula papyifera*) and White Poplar (*Populus alba*). The understory is dominated by Red-Osier Dogwood (*Cornus stolonifera*) and Sandbar Willow (*Salix exigua*), while the ground layer is heavily dominated by Scouring Rush (*Equisetum hyemale*). Other plants found in the ground layer include Canada Goldenrod (*Solidago canadensis*) and Canada Bluegrass (*Poa compressa*). The tree size ranged from less than 10 cm up to 25 cm. The trees were rarely greater than 25 cm and there were no trees observed greater than 50 cm.

The soils consisted of wet medium, textured sand throughout the soil core. The first core was excavated to 64 cm depth without encountering the water table. The second core, closer to the water, encountered the water table at only 8 cm below the surface. In general, the site was well drained above the water table and no mottles or gley-coloured soils were found.

The incidental wildlife observations found only two bird species and one butterfly species in this area. As with the Parkland community, the only listed species was the Monarch which is listed as Special Concern both provincially and federally. Common Milkweed (*Asclepias syriaca*), the host of Monarch Butterflies, was found in this community. The list of flora/fauna observations is provided in Appendix 1.

In total, 9 tree species, 4 shrub species and 22 ground layer plants were found in the Parkland community. The list of vascular plants observed on the treed ground barren community is provided in Appendix 1.

Dry-fresh Mixed Meadow - MEMM 3

The Mixed Meadow is a pioneer community found on the west side of the Airport, between the south perimeter fence and the Treed Sand Barren. It did not have a tree canopy and the sparse understory was dominated by Single-seed Hawthorn (*Crataegus monogyna*). The ground layer was dominated by Canada Bluegrass, Sweet Clover (*Melilotus alba*) and Wild Carrot (*Dacus carrota*). Both Sweet Clover and Wild Carrot are non-native plants that are typical on disturbed sites.

The soils in this community consisted of well drained silt loam overlaying medium sand . No mottles or gley-coloured soils were observed in the soil column which was excavated to 80 cm. The water table was also not encountered in the 80 cm soil core. The soil moisture regime for this community was classified as 0 (Dry).

As noted, there were no trees found in this community. The only shrub was Single-seeded Hawthorn (*Crataegus monogyna*) and 16 ground layer plants. One of the ground layer plants was Dog Strangling Vine (*Vincetoxicum rossicum*), a non-native, invasive species. The only incidental wildlife species observed in this community was the Monarch butterfly. Common Milkweed (*Asclepias syriaca*), the host of Monarch Butterflies, was found in this community. The list of vascular fauna observed in the mixed meadow is provided in Appendix 1.

Mineral Shrub Shoreline – SHSM 1

The Mineral Shrub Shoreline is a pioneer community found west of the Airport on the northern side of the island. The community is too young to have a true tree canopy but the sub-canopy is dominated by Eastern Cottonwood, American Elm (*Ulmus americana*) and Freemans Maple (*Acer freemanii*). The ground layer is dominated by Beachgrass (*Ammophila breviligulata*) and Canada Wild Rye (*Elymus canadensis*).

This soils in this beach community consisted of well drained medium sand. The water table was not encountered, nor was mottles or gley-coloured soils. The moisture regime of this community was classified as 0 (Dry).

Four birds and one butterfly were observed during the incidental wildlife surveys. Similar to all sites, the only species of note is the Monarch butterfly. The list of flora/fauna observed in the mineral shrub shoreline is provided in Appendix 1.

In total, three tree species, one shrub species and ten ground layer species were observed in the Mineral Shrub Shoreline.

Results – Vegetation Survey

With the exception of the Kentucky Coffee Tree, species observed in the study area are either non-native or provincially ranked as S5 (Secure) or S4 (Apparently Secure) (see Appendix A). Kentucky Coffee Tree is listed as Threatened under both Provincial and Federal legislation. The location of this tree was recorded with a GPS and is shown on **Figure 1**.

The natural range of the Kentucky Coffee Tree extends into limited parts of south-western Ontario. In general, its natural range is typically south of Ontario in the American mid-west. This tree is easily transplantable and tolerant of urban conditions, and as such, has been planted as a landscape tree outside of its native range. The specimen found on the Toronto Island lands is likely a landscape planting. The specimen is thriving in this area and there is evidence of seedlings of this plant in the immediate surrounding area. Due to the origin of the tree being a landscape planting and not natural, no permission for Project activities is required from Environment Canada or the Ministry of Natural Resources.

From a regional perspective, the vegetation survey found that the vegetation communities in the study area were typical of naturalized urban sites. The majority (84%) of the species encountered were either non-native or ranked as L5 (Not of Concern) regionally. There were 15 species ranked L4 (Urban Concern) or lower (Regional Concern). The Toronto and Region Conservation Authority considers species to be of concern when they are ranked L4 or lower in urban areas. These species are listed below:

- *Utricularia spp.* Bladderwort
- *Larix laricina* Tamarack
- *Picea glauca* White Spruce
- *Viburnum acerifolium* Maple-leaved Viburnum
- *Ammophila brevliigulata* Beachgrass
- *Aster laevis* Smooth Blue Aster
- *Elymus canadensis* Canada Wild Rye
- *Panicum virgatum* Switchgrass
- *Scirpus acutus* Hardstem Bulrush
- *Betula papyifera* White Birch
- *Pinus strobus* White Pine
- *Populus grandidentata* Large Toothed Aspen
- *Quercus macrocarpa* Bur Oak
- *Salix discolor* Pussy Willow
- *Rudbeckia hirta* Blackeyed Susan

The distribution of these species within the four different communities varied with the Mixed Meadow only containing one regional species of concern, while the Treed Sand Barren contained the most with eight species. The Mineral Shrub community contained three species listed as L3 or lower, the Manicure Lawn contained four species while the Parkland community contained five.

In general, the proposed works do not interfere with these regional species of concern or with the Kentucky Coffee Tree, as the activities will be within the airport perimeter fence, and further, within the proposed perimeter road right-of-way which is set-back from the perimeter fence by 10 metres (see Figure 1 above).

Results – Tree Survey

In total nine trees were found within five metres of the airport south perimeter fence. The results of the survey are provided below in **Table 1.**

Table 1: Tree Survey Results

Species	**Common Name**	**DBH (cm)**	**Health**	**TPZ***
Populus deltoides	Cottonwood	104	Excellent	6.2m
Pinus nigra	Austrian Pine	33	Excellent	2.4m
Pinus nigra	Austrian Pine	34	Excellent	2.4m
Pinus nigra	Austrian Pine	30	Excellent	2.4m
Pinus nigra	Austrian Pine	38	Excellent	2.4m
Salix alba	White Willow	137	Fair	8.2m
Acer saccharum	Sugar Maple	75	Excellent	4.8m
Acer saccharum	Sugar Maple	90	Excellent	5.4m
Gymnocladus dioicus	Kentucky Coffee Tree	32	Excellent	2.4m

*Tree Protection Zone prescribed by the City of Toronto Tree Protection Policy. Distance is measured from the base of the tree trunk.

Results – Incidental Wildlife Survey

During the completion of the ELC and tree inventory surveys, twenty bird species and three butterfly species were encountered. All bird species except one were provincially listed as either Secure (S5) or Apparently Secure (S4). The one exception was the Caspian Tern (*Hydroprogne caspia*), which was listed as Vulnerable (S3). Two of the three butterflies were Secure (S5) while the Monarch was listed as Special Concern. The Caspian Tern was located in the Mineral Shrub Shoreline, which is consistent with the general habitat requirements of this bird. However, the Mineral Shrub Shoreline is not a breeding habitat for this species. In order for an area to be qualified as a Caspain Tern nesting habitat, 75 breeding pairs must exist. The breeding pair numbers observed in the study area was less than 10, considerably low, verifying the area is not a Caspian Tern nesting habitat.

It is not expected that the proposed works will have a negative effect on the Mineral Shrub Shoreline, nor is it expected that the project will result in impacts to Caspian Terns or their breeding habitat.

The Monarch butterfly was found at all vegetation communities on the island. This is common as the butterfly migrates through Ontario and is commonly seen throughout the province. The primary habitat needed in Ontario for this species is the Milkweed (*Asclepias*) plant, which serves as a host for breeding. Milkweed was found in the Parkland, the Treed Barren and the Mixed Meadow portions of the study area. However, the number of Monarchs seen were few and the area would not qualify as a migratory butterfly stopover area. Monarchs are common in Ontario and should continue unaffected by the proposed road construction inside the airport south perimeter fence.

APPENDIX 1

Vegetation Survey Result									
Species	**Common Name**	**Native /Exotic**	**Regional Rank ***	**Provincial ** (Federal Status)**	**Parkland**	**Treed Sand Barren**	**Mixed Meadow**	**Mineral Shrub Shoreline**	**Lawn**
TREES									
Acer freemanii	Freemans Maple	N	LH	SNR				**X**	
Acer negundo	Manitoba Maple	E	L+	-	**X**				
Acer saccharum	Sugar Maple	N	L5	S5	**X**				
Aesculus hippocastanum	Horse Chestnut	E	-	SNA	**X**				
Betula papyifera	White Birch	N	L4	S5		**X**			
Fraxinus pennsylvanica	Green Ash	N	L5	S5	**X**	**X**			
Gymnicladus dioica	**Kentucky Coffee Tree**	**N**	**-**	**Threatened (Threatened)**	**X**				
Juglans nigra	Black Walnut	N	L5	S4	**X**				
Larix laricina	Tamarack	N	**L3**	S5		**X**			
Morus alba	White Mulberry	E	L+	SNA	**X**				**X**
Picea abies	Norway Spruce	E	L+	SNA	**X**				
Picea glauca	White Spruce	N	**L3**	S5		**X**			

Vegetation Survey Result									
Species	**Common Name**	**Native /Exotic**	**Regional Rank ***	**Provincial ** (Federal Status)**	**Parkland**	**Treed Sand Barren**	**Mixed Meadow**	**Mineral Shrub Shoreline**	**Lawn**
Pinus nigra	Austrian Pine	E	L+	SNA	**X**	**X**			
Pinus strobus	White Pine	N	L4	S5	**X**				
Populus alba	White Poplar	N	L+	SNA	**X**	**X**			**X**
Populus balsamifera	Balsam Poplar	N	L5	S5		**X**			
Populus deltoides	Eastern Cottonwood	N	L5	SU	**X**	**X**		**X**	
Populus grandidentata	Large Toothed Aspen	N	L4	S5		**X**			
Quercus macrocarpa	Bur Oak	N	L4	S5	**X**				
Ulmus americana	American Elm	N	L5	S5				**X**	
Salix alba	White Willow	E	L+	SNA	**X**				
Tilia cordata	Small Leaved Linden		L+	SNA	**X**				
SHRUBS									
Cornus stolonifera	Red Osier Dogwood	N	L5	S5	**X**	**X**			
Crataegus monogyna	Single-seeded	E	L+	SNA			**X**		

Vegetation Survey Result									
Species	**Common Name**	**Native /Exotic**	**Regional Rank ***	**Provincial ** (Federal Status)**	**Parkland**	**Treed Sand Barren**	**Mixed Meadow**	**Mineral Shrub Shoreline**	**Lawn**
	Hawthorn								
Elaeagnus angustifolia	Russian Olive	E	L+	SNA	**X**				
Ligustrum vulgare	Privet	E	L+	SNA	**X**	**X**			
Lonicera tatarica	Tartanian Honeysuckle	E	L+	SNA	**X**				
Rhamnus cathartica	European Buckthorn	E	L+	SNA	**X**				
Rosa spp.	Wild Rose	E	L+	SNA	**X**				
Salix discolor	Pussy Willow	N	L4	S5		**X**			**X**
Salix exigua	Sandbar Willow	N	L5	S5	**X**	**X**		**X**	**X**
Solanum dulcmara	Bittersweet Nightshade	E	L+	SNA	**X**				
Syringa vulgaris	Common lilac	E	L+	SNA	**X**				
Viburnum acerifolium	Maple-leaved Viburnum	N	**L3**	S5	**X**				
Viburnum lentago	Nannyberry	N	L5	S5	**X**				
Vitis riparia	River Grape	N	L5	S5	**X**				**X**
GROUND COVER									
Achillea millefolium	Yarrow	E	L+	SNA	**X**	**X**			**X**

Vegetation Survey Result									
Species	**Common Name**	**Native /Exotic**	**Regional Rank ***	**Provincial ** (Federal Status)**	**Parkland**	**Treed Sand Barren**	**Mixed Meadow**	**Mineral Shrub Shoreline**	**Lawn**
Ambrosia artemisiifolia	Common Ragweed	N	L5	S5	**X**				
Ammophila brevliigulata	Beachgrass	N	**L3**	S4				**X**	**X**
Artemissia vulgaris	Wormwood	E	L+	SNA					**X**
Asclepias syriaca	Common Milkweed	N	L5	S5	**X**	**X**	**X**		
Aster laevis	Smooth Blue Aster	N	**L3**	S5				**X**	
Barbarea vulgaris	Yellow Rocket	E	L+	SNA					**X**
Bromus inermis	Brome Grass	E	L+	SNA	**X**				
Centaurea spp.	Knapweed	E	L+	SNA		**X**	**X**		**X**
Chenopodium album	Lambs Quarters	E	L+	SNA					**X**
Cichorium intybus	Chickory	E	L+	SNA	**X**				**X**
Cirsium arvense	Canada Thistle	E	L+	SNA	**X**				
Cirsium vulgare	Bull Thistle	E	L+	SNA	**X**				
Convolvulus arvensis	Field Bindweed	E	L+	SNA	**X**				
Daucus carrota	Wild Carrot	E	L+	SNA	**X**	**X**	**X**		**X**

Vegetation Survey Result									
Species	**Common Name**	**Native /Exotic**	**Regional Rank ***	**Provincial ** (Federal Status)**	**Parkland**	**Treed Sand Barren**	**Mixed Meadow**	**Mineral Shrub Shoreline**	**Lawn**
Dianthus armeria	Grass Pink	E	L+	SNA					**X**
Echium vulgare	Blueweed	E	L+	SNA			**X**		**X**
Elymus canadensis	Canada Wild Rye	N	**L3**	S4S5				**X**	**X**
Epipactis helleborine	Helleborine	E	L+	SNA	**X**				
Equisetum arvense	Field Horsetail	N	L5	S5	**X**				**X**
Equisetum hyemale	Scouring Rush	N	L5	S5	**X**	**X**			**X**
Erigeron annuus	Daisy Fleabane	N	L5	S5	**X**	**X**			**X**
Fragraria virginiana	Wild Strawberry	N	L5	S5	**X**				
Hypericum perforatum	St. John's Wort	E	L+	SNA	**X**	**X**	**X**		**X**
Juncus tenuis	Slender Rush	N	L5	S5		**X**			**X**
Linaria vulgaris	Butter and Eggs	E	L+	SNA	**X**				**X**
Lythrum salicaria	Purple Loosestrife	E	L+	SNA	**X**				**X**
Medicago lupulina	Black Medick	E	L+	SNA	**X**	**X**			**X**

Vegetation Survey Result									
Species	**Common Name**	**Native /Exotic**	**Regional Rank ***	**Provincial ** (Federal Status)**	**Parkland**	**Treed Sand Barren**	**Mixed Meadow**	**Mineral Shrub Shoreline**	**Lawn**
Medicago sativa	Alfalfa	E	L+	SNA					**X**
Melilotus albus	Sweet White Clover	E	L+	SNA			**X**		**X**
Nepetia cataria	Catnip	E	L+	SNA	**X**				
Oenothera biennis	Evening Primrose	N	L5	S5	**X**	**X**	**X**		
Panicum virgatum	Switchgrass	N	**L3**	S4		**X**			
Phalaris arundinacea	Reed Canary Grass	E	L+	SNA		**X**			
Plantago lanceolata	Ribgrass	E	L+	SNA	**X**				**X**
Poa compressa	Canada Bluegrass	E	L+	SNA		**X**	**X**		
Poa pratense	Kentucky Bluegrass	E	L+	SNA	**X**	**X**	**X**		**X**
Polygonum persicaria	Lady's Thumb	E	L+	SNA					**X**
Potentilla anserina	Silverweed	E	L+	SNA		**X**			**X**
Potentilla recta	Rough-fruited Cinqfoil	E	L+	SNA	**X**				**X**
Rudbeckia hirta	Blackeyed Susan	N	L4	S5	**X**	**X**	**X**		**X**

Vegetation Survey Result									
Species	**Common Name**	**Native /Exotic**	**Regional Rank ***	**Provincial ** (Federal Status)**	**Parkland**	**Treed Sand Barren**	**Mixed Meadow**	**Mineral Shrub Shoreline**	**Lawn**
Rumex crispus	Curled Dock	E	L+	SNA	**X**				
Saponaria officinalis	Soapwort	E	L+	SNA					**X**
Scirpus acutus	Hardstem Bulrush	N	**L3**	-		**X**			
Sedum acre	Mossy Stonecrop	E	L+	SNA					**X**
Silene noctiflora	Night-flowering Catchfly	E	L+	SNA	**X**				
Silene vulgaris	Bladder Campion	E	L+	SNA			**X**		
Solidago canadensis	Canada Goldenrod	N	L5	S5	**X**	**X**	**X**		**X**
Sonchus arvensis	Field Sow-Thistle	E	L+	SNA	**Xx**				
Taraxicum officiale	Dandelion	E	L+	SNA	**X**				**X**
Tragopogon pratensis	Meadow Goatsbeard	E	L+	SNA		**X**			**X**
Trifoliatum pratense	Red Clover	E	L+	SNA	**X**				**X**
Trifolium repens	White Clover	E	L+	SNA	**X**				
Utricularia spp.	Bladderwort	N	L1	-	**X**				

Vegetation Survey Result									
Species	**Common Name**	**Native /Exotic**	**Regional Rank ***	**Provincial ** (Federal Status)**	**Parkland**	**Treed Sand Barren**	**Mixed Meadow**	**Mineral Shrub Shoreline**	**Lawn**
Verbascum thapus	Common Mullein	E	L+	SNA	**X**	**X**	**X**		
Vicia cracca	Cow Vetch	E	L+	SNA	**X**	**X**			**X**
Vincetoxicum spp.	Dog-strangling Vine	E	L+	SNA			**X**		
Xanthium strumarium	Cocklebur	N	L5	S5					**X**

Incidental Wildlife Survey Results								
Species	**Common Name**	**Regional Rank**	**Provincial (Federal Status)**	**Parkland**	**Treed Sand Barren**	**Mixed Meadow**	**Mineral Shrub Shoreline**	**Lawn**
BIRDS								
Tyrannus tyrannus	Eastern Kingbird	L5	S4B	**X**				
Turdus migratorius	American Robin	L5	S5B	**X**	**X**			
Phalacrocorax auritus	Double-Crested Cormorant	-	S5B	**X**				
Carpodacus mexicanus	House Finch	L5	SNA	**X**				
Melospiza melodia	Song Sparrow	L5	S5B	**X**				**X**
Molothrus ater	Brown Headed	L5	S4B	**X**				**X**

	Cowbird							
Spinus tristis	American Goldfinch	L5	S5B	**X**				
Corvus brachyrhynchos	American Crow	L5	S5B	**X**				
Falco sparverius	American Kestral	L5	S4	**X**				**X**
Bombycilla cedrorum	Cedar Waxwing	L5	S5B	**X**				
Colaptes auratus	Northern Flicker	**L4**	S4B	**X**				
Hirundo rustica	Barn Swallow	L5	S4B	**X**				
Picoides pubescens	Downy Woodpecker	L5	S5					
Hydroprogne caspia	Caspian Tern	**L3**	S3B				**X**	
Larus argentatus	Herring Gull	**L3**	S5B				**X**	
Larus delawarensis	Ring-Billed Gull	L5	S5B				**X**	
Charadrius vociferus	Killdeer	L5	S5B				**X**	
Poecile atricapillus	Black-capped Chickadee	L5	S5		**X**			
Cardinalis cardinalis	Northern Cardinal	L5	S5					**X**
Actitis macularius	Spotted Sandpiper	**L4**	S5					**X**

BUTTERFLIES								
Danaus plexippus	Monarch	-	**Special Concern (Special Concern)**	**X**	**X**	**X**	**X**	**X**
Limenitis archippus	Viceroy	-	S5					**X**
Vanessa gonerilla	Red Admiral	-	S5	**X**				

* L5 – Not of concern, L4 –Urban Concer, L3 – Regional Concern, L1 Regional Concern, L+ - Exotic

** S5 –Secure, S4 – Apparently Secure, S3 Vulnerable, SNA – Not Applicable (Exotic), SNR – Not Ranked, SU – Unrankable,

Reference to species listed as Special Concern, or Threatened refers to their listing on the Provincial COSSARO List or the Federal COSEWIC List.

APPENDIX B
Consultation Report

Toronto Port Authority

Environmental Screening for Proposed Pedestrian/Services Tunnel and Perimeter Road

APPENDIX B

Consultation Summary Report

March 2011

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APPENDICES

1 Introduction

1.1 Consultation Overview

To complete the environmental screening for the Proposed Pedestrian/Service Tunnel and Perimeter Road Project (the Project), the Toronto Port Authority (TPA) was committed to a public consultation program that involved communicating with government agencies, stakeholders, First Nations and the public throughout the course of the screening. The consultation goals included:

- To gather input and feedback on the proposed Project.
- To answer questions regarding the proposed Project.
- To determine government and First Nations interest in the Project.
- To gather information regarding the bio-physical and socio-economic conditions in the study area that should be considered in the screening.
- To work with the government, stakeholders, First Nations and the public to complete the screening with consideration and attention to all interests.

This Consultation Summary report summarizes the consultation efforts for the screening, including:

- Public consultation events
- Letters to government agencies, stakeholders and First Nations
- Face-to-face meetings with agencies, stakeholders First Nations and interested parties
- Notices in Newspapers
- Mass emails to contact lists
- Media Releases
- Website updates and materials
- Frequently Asked Questions and Q&A sheets for of comments and questions received
- Availability of documents and materials produced throughout the screening

1.2 Process for Consultation

The consultation completed for the environmental screening was done in accordance with the Canada Port Authority Environmental Assessment Regulations (CPA EA Regs). As with other TPA environmental assessments that have been conducted, consultation has been an important aspect of this environmental screening. The CPA EA Regulations include requirements for public consultation where the Port Authority is aware of any special circumstances of the Project that would make the Project of interest to the public. In such a case, the TPA would be required to give the public notice of the screening, an opportunity to participate in the screening and to examine and comment on the screening report and on any record filed in the public registry established with respect to the Project. Although the TPA was not aware of any such special circumstances with this Project, an extensive public consultation program was carried out for this project, which included giving the public notice of the screening and an opportunity to participate in the screening. The public has been able to examine and comment on documents prepared for the screening (described in subsequent sections), and had the opportunity to comment on the Draft Screening Report released in November 2010.

2 Consultation and Communication Activities – Terms of Reference

2.1 Consultation and Communications Activities

The following section outlines the key consultation activities that were conducted during the preparation of the Draft Environmental Screening Report. **Appendix A** contains all initial correspondence and consultation efforts, and **Appendix B** contains all public consultation event materials and information. **Appendix C** contains a series of questions/comments and responses documents that were generated throughout the screening. These documents provide answers to questions and comments submitted to the Project team and include responses to questions submitted by the York Quay Neighbourhood Association (YQNA) and the City of Toronto (the City). The YQNA and City submitted detailed question/comment documents at the end of the comments submission period. These submissions covered all of the topics of the questions and comments received throughout the screening. Therefore, the TPA directs the public to these response tables, in addition to the other documents in Appendix C, to address the questions and comments received throughout the screening.

Project Mailing List

A project mailing list was developed as an initial step to commence the screening. The list was drafted to include:

- Federal government review agencies
- Municipal (City of Toronto) departments, Ward Councillors, City Manager/CAO
- Known stakeholders in the area
- First Nations

The contact list (without names of individuals) is attached in **Appendix A.**

Notice of Commencement (NOC)

The NOC was published in the Metro, Toronto Star and L'Express newspapers on March 12, 2010. The NOC announced the project screening start-up, included contact information, and provided notice of the first public event. A copy of the Notice of Commencement is attached in **Appendix A**.

The NOC was also distributed via:

- Admail (flyer put in mailboxes of those with postal codes in the area) to all residents and businesses in the surrounding community (March 16). 3,320 mailboxes received the NOC,
- Email to the project mailing list, and

- Posted on the TPA website: www.torontoport.com.

Project notice was also placed on the Canadian Environmental Assessment Agency public registry (as of March 15, 2010).

The approach to distributing the NOC was to ensure that the TPA reached as many interested parties as possible and reasonable.

Letters to Government Agencies, Stakeholders and First Nations

Letters dated March 11, 2010 were sent to government agencies, stakeholders and First Nations. The letters introduced the proposed Project and screening, asked for any relevant information on the study area to be sent to the project team, asked for identification of interest in the screening and proposed Project, and provided contact information and follow-up details. Copies of the Project Description and the NOC were sent out with the letters where appropriate. **Appendix A** includes copies of these letters.

Public Consultation Event #1

The project team hosted a public information centre (held on March 24, 2010) at the Harbourfront Community Centre to introduce the proposed Project to the public and obtain feedback on issues, opportunities and scope of the screening. The focus was to explain the rationale for the proposed Project, what will be considered in the screening, the proposed EA screening process, the comment and contact information, and the schedule of the study. The plan for the event consisted of walk around panels with team members throughout the room to discuss the project. No formal presentation was planned but due to public demand, a questions and answer period occurred whereby members of the team fielded questions and comments from the audience.

At the event, attendees could get copies of the Project Description, submit written comments on comment sheets and sign-up for the mailing list. 55 people signed-in at the event. The display panels were also posted on the TPA website. Copies of the materials at Public Consultation Event #1 are attached in **Appendix B**.

After this public event, a Frequently Asked Questions (FAQ) sheet was developed which included the questions heard at the consultation event plus the additional questions emailed to the project team from March 24, 2010 to June 1, 2010. The FAQ was emailed to the contact list of people who attended the event and posted on the TPA website is attached in **Appendix C.**

Public Consultation Event #2

To notify the public of the second public consultation event, a notice was placed on November 16, 2010 in the Toronto Star, Globe and Mail, National Post and SUN. The notice is attached in **Appendix B.**

The project team hosted a second public consultation event on November 30, 2010 at the Radisson Hotel on Queens Quay. The event included display panels and provided time at the beginning for people to speak one-on-one with project team members, sign-in and pick-up materials. Materials available included the Draft Screening Report, Media Release regarding the report, and Comment Sheets. A presentation was made by the project team to present the findings of the EA and to discuss the Draft EA screening report. In addition to providing information about the Project and the EA, questions were fielded by the project team. The event also had a facilitator from Lura Consulting preside over the Q&A period to direct questions and comments from the audience. Lura Consulting also documented the questions and comments made.

54 people signed-in at the event. The handouts from the event were also posted on the TPA website. Copies of the materials at Public Consultation Event #2 are attached in **Appendix B**.

After this public event, a Q&A sheet was developed which included the questions heard at the consultation event plus the additional questions emailed to the project team from November 16, 2010 to December 16, 2010. The Q&A was emailed to the contact list of people who attended the public event and posted on the TPA website and is attached in **Appendix C.**

Public Consultation Event #3

The TPA held a third public consultation event on January 12, 2011 at the Radisson Hotel. This meeting was scheduled for people who could not attend the November 30, 2010 meeting or who wanted another opportunity to comment on the Draft Screening Report. At this event the project team made a summary/re-cap presentation which included the findings of the EA, the information in the Draft Screening Report, and provided answers to questions heard at the November 30, 2010 meeting and via email. Materials were made available for attendees and included the Draft Screening Report, Media Releases regarding the report, Comment Sheets, and previous FAQ and Q&A sheets. After the presentation, questions were fielded by the project team. The event had Lura Consulting facilitate again to preside over the Q&A period and direct questions and comments from the audience. Lura Consulting also documented the questions and comments made.

28 people signed-in at the event. The handouts from the event were also posted on the TPA website. Copies of the materials at Public Consultation Event #3 are attached in **Appendix B**.

After this public event, a Q&A sheet was developed which included the questions heard at the consultation event. After the January 12, 2011 event, interested persons, including the public, were able to submit comments about the EA, the Project and the Draft Screening Report until January 28, 2011. Questions and comments received by the project team by January 28, 2011 were documented in tables and responses were provided. The comments and responses were released with the final screening report and are attached in **Appendix B.**

Website

The TPA website was used to communicate information regarding the screening, in both English and French languages. The website materials included:

- Notice of Commencement
- Project Description
- Display Panels
- Scoping document
- Draft Screening Report
- FAQ and Q&As
- Contact Lists
- Notices of Public Consultation Events and Media Releases
- Final Screening Report

Meetings with Specific Stakeholders

When requested, the TPA met with specific organizations and stakeholders as appropriate. These meetings were organized to address potential concerns of the proposed Project and to clarify the proposed Project details and what the screening would assess as required under the Canada Port Authority Environmental Assessment Regulations. Meetings were held with:

- Toronto Public Health
- The Toronto School Board and Harbourfront Community Centre.
- York Quay Neighbourhood Association
- Community Air

Government and Agencies

Consultation with federal agencies included communications with the Canadian Environmental Assessment Agency, Environment Canada, Transport Canada, Navigable Waters Protection Agency, the Department of Fisheries and Oceans, and Indian and Northern Affairs Canada. The proposed Project was discussed with the appropriate agency representatives and confirmation of level of interest was obtained. These agencies received the NOC, Project Description, and the Draft Screening Report. Further, any requests for information were satisfied. All three federal agencies confirmed that they would like to be kept informed of the Project as it progresses and that they do not see a need to be Responsible Authorities (RAs) for the screening (i.e. would not be required to sign-off as approvals for the screening document)..

Appendix A includes documentation from Transport Canada that confirms they do not need to be an RA. This document also notes that “any usage of barges needs to meet the requirements of the Collision Regulations of the Canada Shipping Act.” These requirements will be met should a barge be used if the Project proceeds.

Consultation with the City of Toronto included providing various City staff with letters informing them of the proposed Project, the NOC, Project Description, Scoping Document, and the Draft Screening Report. The City departments and staff that were communicated with include:

- City Deputy City Manager, CAO office
- Ward 20 and Ward 28 Councillors
- Waterfront Secretariat
- Transportation Division
- Community Planning Toronto
- Toronto Emergency Medical Services
- Toronto Fire Services
- Toronto Water
- Toronto and Region Conservation Authority (although not a City department, was included in municipal agencies contact list)

Requests from the City for information about the project and different background reports generated for the screening were met by TPA. The documents provided include:

- Property ownership surveys and information
- Air Quality studies
- Noise studies
- Dock Wall condition studies
- Planning studies
- Geo-science reports (soil conditions)

Further, the TPA worked with the City to obtain information about the study area, including information regarding traffic and planned land use.

The City submitted a number of comments and questions to the TPA regarding the proposed Project. Responses to these comments and questions were put into a table and the table is provided in **Appendix C.** All of the comments and questions have been considered in the EA.

In addition to consultation with federal and municipal agencies, Aquatic Habitat Toronto was informed of the proposed Project. This group includes members of the Ministry of Environment, Ministry of Natural Resources, Toronto and Region Conservation Authority, staff of Waterfront Toronto, and representatives from the City of Toronto. As a federal agency, the TPA does not

require confirmation of involvement from provincial agencies; by informing Aquatic Habitat Toronto of the Project provincial environmental agencies were also informed.

First Nations

The TPA provided written notification of the proposed Project to the Mississaugas of the New Credit First Nation and the Mississaugas of Scugog Island First Nation on March 11, 2010. Follow-up letters of June 4, 2010 were also sent, which included an updated project description and draft scoping document. The TPA offered to answer questions or to meet in person to discuss the Project.

Follow-up phone calls were made to First Nations and Indian and Northern Affairs Canada (INAC) to discuss the Project, including any interest the First Nations may have. In May 2010, at the request of Chief Brian LaForme of the Mississaugas of the New Credit First Nation, the TPA met with Chief LaForme and learned about the Toronto purchase and pending land claim agreement.

Communications with First Nations has been maintained, and a draft EA screening report has been provided for review and comment to INAC, the Mississaugas of the New Credit First Nation and the Mississaugas of Scugog Island First Nation.

No other expression of interest or information request regarding the Project has been received from First Nations or INAC.

3 Summary of Consultation Questions and Responses

Comments Received During Consultation:

In general, questions and comments were received during the consultation program related to:

- Air Quality and Noise
- Traffic and transportation
- Tripartite Agreement
- Expansion of the BBTCA
- Birds and wildlife
- Construction schedules and truck traffic on local roads
- Cost of building the Project, including who would pay for it
- What constitutes consultation and what is required in a consultation process
- What the Screening process is

- Applicable regulations, and who the approval authorities are

Many questions and comments related to the proposed Project, and many went beyond the Project. Questions and responses are documented in **Appendix C**. The TPA made every effort to answer all questions, and will consider all questions, comments and responses before making its decision as to whether to proceed.

With respect to questions posed regarding the cost of building the potential Project and who would pay for it, a letter to the Honourable Olivia Chow was provided on February 22, 2011 which addresses this matter. The Honourable Olivia Chow had raised questions regarding financing and costs at the January 12, 2011 public meeting. The letter is included in **Appendix C**. Further, the comments and responses table produced based on the January 12, 2011 public meeting also includes responses on the matter of Project financing.

Where appropriate, amendments to draft documents have been made based on comments received, including from the public, other stakeholders and government. Background studies for air quality and noise were also completed as a result of questions and comments that were received. Although these were beyond the Project, they provide additional information for the benefit of the public, and will be considered by the TPA before making its decision.

4 Conclusion

The CPA EA Regulations for an environmental screening do not include specific consultation program requirements. As such, the TPA executed a consultation program that included multiple forms and opportunities for communication: public events, face-to-face meetings, email and website updates, review of draft documents, and email, website and telephone contact opportunities. These occurred throughout the screening, from the initial project start-up to gather feedback on what should be studied, to providing opportunities to review and comment on the draft screening report.

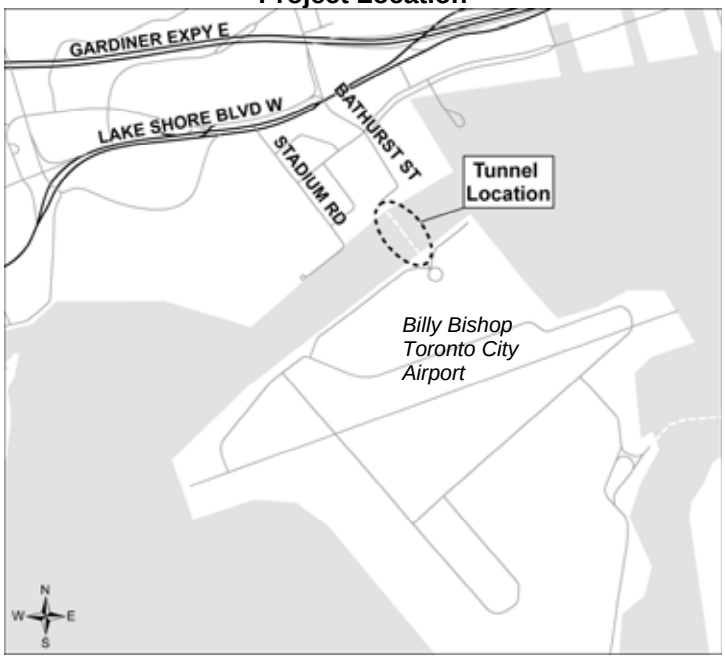
Great effort is being made to continue communication with the community regarding the proposed Project and all other activities related to the Billy Bishop Toronto City Airport. A Community Consultative Committee has been developed that includes local residents and stakeholders, City staff, Councillors and TPA staff. This committee will be focused on sharing information about the TPA and BBTCA, and will work together to manage the issues and opportunities with the airport and the community.

APPENDIX A
to
CONSULTATION SUMMARY REPORT

Commencement of
Environmental Assessment Screening
Proposed Pedestrian/Services Tunnel & Perimeter Road
Billy Bishop Toronto City Airport
Initial Public Meeting

The Toronto Port Authority ("TPA") is commencing an environmental assessment (EA) screening under the Canada Port Authority Environmental Assessment Regulations to consider proposed pedestrian tunnel access to the Billy Bishop Toronto City Airport ("BBTCA"). The project would also allow for improved access to services for the BBTCA and a perimeter road to improve access to airport lands. The proposed tunnel access would be constructed in the bedrock under the Western Gap of the Toronto harbour. This notice confirms the commencement of the EA screening, which will include public consultation.

Project Location



There will be an initial consultation event on ***Wednesday March 24, 2010***, where information about the project and the EA screening will be available. You are encouraged to attend to provide your views about the project, the EA screening and how you wish to be consulted. People are welcome to drop-in at any time during the event. Representatives of the TPA and Dillon Consulting Limited, which has been retained to assist with the Project and the EA screening, will be available to provide information, answer questions and receive comments.

Wednesday March 24, 2010, 6:00-8:00pm
Harbourfront Community Centre - 627 Queens Quay West (southeast corner of Bathurst and Queens Quay)

To obtain information or submit comments on the Project or the EA, please email or write to:
Merrilees Willemse
Public Consultation Coordinator
Dillon Consulting Limited
235 Yorkland Blvd.
Suite 800
Toronto, ON. M2J 4Y8
mwillemse@dillon.ca

AGENCIES & STAKEHOLDERS INITIAL CONTACT LIST – Contacted prior to March 2010 public meeting (in addition to the AdMail sent to all local residents and businesses in the study area as well as the Newspaper Ads informing the public of the March public meeting).

Agency	Project Initiation Letter and PIC Notice Sent (format and date)	Project Description
Department of Fisheries and Oceans Canada	email/letter - March 12	email/letter - March 12
Transport Canada	email/letter - March 12	email/letter - March 12
Canadian Environmental Assessment Agency	email/letter - March 12	email/letter - March 12

Affiliation	Department/Position	Project Initiation Letter, Consultation Introduction, and PIC Notice Sent (format and date)
Department of Indian and Northern Affairs	Ontario Research Specific Claims Branch	email and letter - March 12
Department of Indian and Northern Affairs	Environment Officer, Environmental Assessment Coordination	email and letter - March 12
Mississaugas of the New Credit	Chief Bryan LaForme	email and letter - March 12
The Mississaugas of Scugog Island	Chief Tracy Gauthier	email and letter - March 12

Agency/Affiliation	Department	Project Initiation Letter and PIC Notice Sent (format and date)	Project Description
City of Toronto	Waterfront Project Secretariat	email/letter - March 12	email/letter - March 12
City of Toronto	Transportation Division	email/letter - March 12	email and mail
City of Toronto	Community Planning, Toronto/East York District	email/letter - March 12	email and mail
City of Toronto	Toronto Emergency Medical Services	letter - March 12	letter - March 12
City of Toronto	Toronto Fire Services - Facilities and Materials Management	letter - March 12	letter - March 12

Agency/Affiliation	Department	Project Initiation Letter and PIC Notice Sent (format and date)	Project Description
City of Toronto	Toronto Water	letter - March 12	letter - March 12
Toronto & Region Conservation Authority	N/A	email/letter - March 12	email/letter - March 12
City of Toronto	Ward 28 Councillor	email/letter - March 12	email/letter - March 12
City of Toronto	Ward 20 Councillor	email/letter - March 12	email/letter - March 12
City of Toronto	Chief Administrative Office	email/letter - March 12	email/letter - March 12
Community Air	N/A	email/letter - March 12	email/letter - March 12
Billy Bishop Toronto City Airport Community Advisory Committee	N/A	email/letter - March 12	email/letter - March 12
Sailing Clubs	Council of Commodores	letter - March 12	letter - March 12
National Yacht Club	N/A	letter - March 12	letter - March 12
Alexandra Yacht Club	N/A	letter - March 12	letter - March 12
Queens Quay Sailing and Powerboating	Sailing and Powerboating Department	letter - March 12	letter - March 12
Jubilee Queen Cruises Lines	N/A	letter - March 12	letter - March 12
Harbourfront Canoe & Kayak Centre	N/A	letter - March 12	letter - March 12
Charter Miss Toronto	N/A	letter - March 12	letter - March 12
The Island Princess	N/A	letter - March 12	letter - March 12
Yankee Lady Yacht Charters	N/A	letter - March 12	letter - March 12
Mariposa Cruises	N/A	letter - March 12	letter - March 12
Great Lakes Schooner Company	N/A	letter - March 12	letter - March 12
Porter Airlines	N/A	email/letter - March 12	email/letter - March 12

AGENCIES & STAKEHOLDERS ADDED TO CONTACT LIST – Added following March 2010 public meeting and through public input at March meeting

York Quay Neighbourhood Association
Queens Quay Harbourfront Business Improvement Area (QQHBIA)
Harbourfront Community Centre
Toronto District School Board
The Waterfront School (Elementary)
City School (Secondary)
Aquatic Habitat Toronto

PUBLIC CONTACT LIST

The project team has a separate public contact list with the contact information of individuals who wish to be informed of project updates, information and public meetings.

MAINTENANCE of LISTS

The project team will continuously update the contact lists as public, stakeholders and agency contacts are identified. Please email requests to be added to a list to: ea_comments@torontoport.com.

March 11, 2010

[*LETTER TO FEDERAL AGENCIES]*

DILLON CONSULTING

235 Yorkland Blvd.
Suite 800
Toronto, Ontario
Canada
M2J 4Y8
Telephone
(416) 229-4646
Fax
(416) 229-4692

Re: Billy Bishop Toronto City Airport: Proposed Pedestrian/Services Tunnel Environmental Assessment Screening

Dear _____,

The Toronto Port Authority (TPA) is initiating an environmental assessment (EA) screening under the Canada Port Authority Environmental Assessment Regulations (CPA EA Reg) for a proposed pedestrian/services tunnel access to the Billy Bishop Toronto City Airport (BBTCA Tunnel). The BBTCA Tunnel would be constructed through bedrock under the Western Gap of the Toronto harbour. Dillon Consulting Limited (Dillon) has been retained to assist with the EA screening, which will include completion of the requirements under the CPA EA Reg. This notice confirms the commencement of the EA process.

Although not expressly required, the TPA will be conducting public consultation for this project, including initial consultation to obtain comments and information from interested stakeholders, such as government agencies, First Nations, non-government organizations and the public about the project and how such agencies and persons wish to be consulted. Attached you will find the letter that we provided to INAC.

The TPA is the proponent of the project, and as such is the designated Responsible Authority (RA) for the purpose of the EA screening. We ask that you please review the attached Project Description (PD) to confirm, as soon as possible, whether your agency or department has any interest in participating in the EA. We would like to hear from you before March 19, 2010.

We will follow up within the next week, and if you would like to have a meeting to discuss this, please let us know as soon as possible. You are also welcome to contact Ken Lundy, Director, Billy Bishop Toronto City Airport, Toronto Port Authority (60 Harbour Street, Toronto, ON., M5J 1B7) or via email at klundy@torontoport.com.

The attached project commencement notice provides some project background information and includes initial consultation information, including notice of an initial public meeting that you may wish to attend. If you have any questions or concerns, please contact the undersigned.

Yours sincerely,

DILLON CONSULTING LIMITED

Don McKinnon
Environmental Assessment Screening Coordinator
Encl.
Our File: 103010

Dillon Consulting
Limited

March 11, 2010

[*LETTER PROVIDED TO Indian and Northern Affairs Canada - INAC]*

RE: Billy Bishop Toronto City Airport: Proposed Pedestrian/Services Tunnel

Dear _____,

The Toronto Port Authority (TPA) is initiating an environmental assessment screening under the Canada Port Authority (CPA) Environmental Assessment Regulation for proposed pedestrian/services tunnel access to the Billy Bishop Toronto City Airport from the mainland under the Western Gap of the Toronto harbour (the "BBTCCA Tunnel"). Dillon Consulting Limited (Dillon) has been retained by TPA to conduct this screening, which will include public consultation.

The attached notice of commencement provides background information about the BBTCCA Tunnel and the EA, including an initial consultation event on March 24, 2010.

The TPA is open to consulting with First Nations that may have an interest in this project. In 2005, during the EA for the TPA's improvement of access to the BBTCCA (ferry passenger transfer facilities), letters dated August 8, 2005 were sent to the Mississaugas of the New Credit First Nation and the Mississaugas of Scugog Island First Nation to inform them of that project. No responses were received during the EA from these First Nations.

We have sent a letter to the same First Nations for the proposed BBTCCA Tunnel, a copy of which is attached for your information. We have also sent a copy of this letter to the Canadian Environmental Assessment Agency, for its information (and input), as well as the Department of Fisheries and Oceans and Transport Canada. Although there is currently no need for a federal approval from those government agencies, we are in the process of confirming that with them.

We request confirmation from INAC as to which aboriginal communities should be informed of this project. We would like to receive a response by April 1st, 2010. I can be reached at the above address or by email to dmckinnon@dillon.ca.

Yours sincerely,

DILLON CONSULTING LIMITED

Don McKinnon
Environmental Assessment Screening Coordinator

Encl.
Our File: 103010

DILLON CONSULTING

235 Yorkland Blvd.
Suite 800
Toronto, Ontario
Canada
M2J 4Y8
Telephone
(416) 229-4646
Fax
(416) 229-4692

Dillon Consulting
Limited

March 11, 2010

[*LETTER PROVIDED TO FIRST NATIONS]*

DILLON
CONSULTING

235 Yorkland Blvd.
Suite 800
Toronto, Ontario
Canada
M2J 4Y8
Telephone
(416) 229-4646
Fax
(416) 229-4692

RE: Toronto Port Authority: Proposed Pedestrian/Services Tunnel & Perimeter Road, Billy Bishop Toronto City Centre Airport (BBTCCA)

Dear _____,

The Toronto Port Authority (TPA) is initiating an environmental assessment screening under the Canada Port Authority Environmental Assessment Regulations to consider proposed pedestrian tunnel access to the Billy Bishop Toronto City Airport (the "BBTCCA"). The project would also allow for improved access to services for the BBTCCA and a perimeter road to improve access to airport lands. The proposed tunnel access would be constructed in the bedrock under the Western Gap of the Toronto harbour. Dillon Consulting Limited (Dillon) has been retained by the TPA to assist with the project and the EA process. The Project Description and Notice of Commencement are attached, for your information.

Representatives of the TPA and Dillon are available to consult with First Nations about this project and to learn about your interests or concerns, if any. Please contact me at your convenience to set up a meeting or phone conference to discuss this, or provide us with information that you believe should be considered as part of the EA process. I will also follow-up with a phone call to you in the coming weeks. We have also sent a copy of this letter to Indian and Northern Affairs Canada and the Canadian Environmental Assessment Agency for their consideration and input.

If you have questions about the project, please do not hesitate to contact me directly at 416-229-4646 or via e-mail at dpmckinnon@dillon.com.

Yours sincerely,

DILLON CONSULTING LIMITED

Don McKinnon
Environmental Assessment Screening Coordinator

Encl.
Our File: 103010

Dillon Consulting
Limited

March 11, 2010

[*LETTER PROVIDED TO STAKEHOLDERS, MUNICIPAL DEPARTMENTS & COMMUNITY GROUPS]*

DILLON CONSULTING

235 Yorkland Blvd.
Suite 800
Toronto, Ontario
Canada
M2J 4Y8
Telephone
(416) 229-4646
Fax
(416) 229-4692

RE: Billy Bishop Toronto City Airport: Proposed Pedestrian/Services Tunnel Environmental Assessment Screening

Dear _____,

The Toronto Port Authority (TPA) is proposing to construct and operate a pedestrian/services tunnel access to the Billy Bishop Toronto City Airport (BBTCA Tunnel). The TPA, as proponent of the project, is conducting an environmental assessment (EA) screening under the Canada Port Authority Environmental Assessment Regulations (CPA EA Reg). Dillon Consulting Limited (Dillon) has been retained to assist with the EA screening, which will include completion of the requirements under the CPA EA Reg. This confirms the commencement of the EA screening process.

Although not expressly required, the TPA will be conducting public consultation for the project, including initial consultation to obtain comments and information from interested stakeholders, such as government agencies, First Nations, non-government organizations and the public about the project and how such agencies and persons wish to be consulted.

We are attaching the Project Description (PD) and a public commencement notice, which is also being placed in local newspapers, to inform interested stakeholders, including the public, of the project, the EA screening and an initial public consultation event.

The initial public information session will be held on **Wednesday March 24, 2010**, from 6pm to 8pm at the Harbourfront Community Centre (627 Queens Quay West) in the Medium Assembly Room. We welcome your attendance, including obtaining your comments about the project, the EA and how you wish to be consulted.

If you would like to submit comments via email or mail, please contact either:

Ken Lundy, Director, Billy Bishop Toronto City Airport, Toronto Port Authority (60 Harbour Street, Toronto, ON., M5J 1B7), or via email at klundy@torontoport.com.

OR

Merrilees Willemse, public consultation coordinator, at the Dillon address above or via email to mwillemse@dillon.ca.

Yours sincerely,

DILLON CONSULTING LIMITED

Don McKinnon
Environmental Assessment Screening Coordinator
Encl.
Our File: 103010

Dillon Consulting Limited

APPENDIX B
to
CONSULTATION SUMMARY REPORT

PANEL DISPLAYS FOR MARCH PUBLIC CONSULTATION EVENT

WELCOME

Environmental Assessment Screening

Proposed Pedestrian/Services Tunnel & Perimeter Road Billy Bishop Toronto City Airport

Public Consultation

MARCH 24, 2010

PROJECT DESCRIPTION

The Toronto Port Authority is proposing a pedestrian/ services tunnel to improve access to the Billy Bishop Toronto City Airport (BBTCA). The project would provide underground access between the land side and the airport side and allow a perimeter road to improve security access to airport lands. The project would include the following components:

- Pedestrian/services tunnel access through the bedrock under the Western Gap of the Toronto Harbour, including moving sidewalks;
- Elevator/escalator/stairwell facilities at either end of the BBTCA Tunnel to transition between the tunnel access elevation and ground level;
- Connecting structures between the elevator/escalator/ stairwell facilities and the existing ferry Passenger Transfer Facility buildings on the land and airport sides;
- Potentially minor reconfiguration of the existing access, circulation and parking areas on the land and airport sides; and
- Construction of an airport perimeter road using material excavated from the tunnel access.

The total length of the BBTCA Tunnel would be approximately 130 - 180 m with a width of approximately 8 - 10 m and height of approximately 5 - 8 m. The approximate depth of the tunnel access would be 25 - 40.

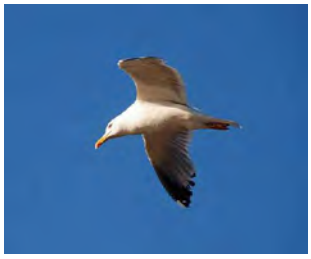
EA Screening

Environmental Assessment Screening

For the proposed project, the TPA is undertaking an environment assessment screening under the Canada Port Authority Environmental Assessment Regulation ("CPA Reg").

The screening will assess potential impacts of the construction and operation of the proposed project in accordance with the CPA Reg., including:

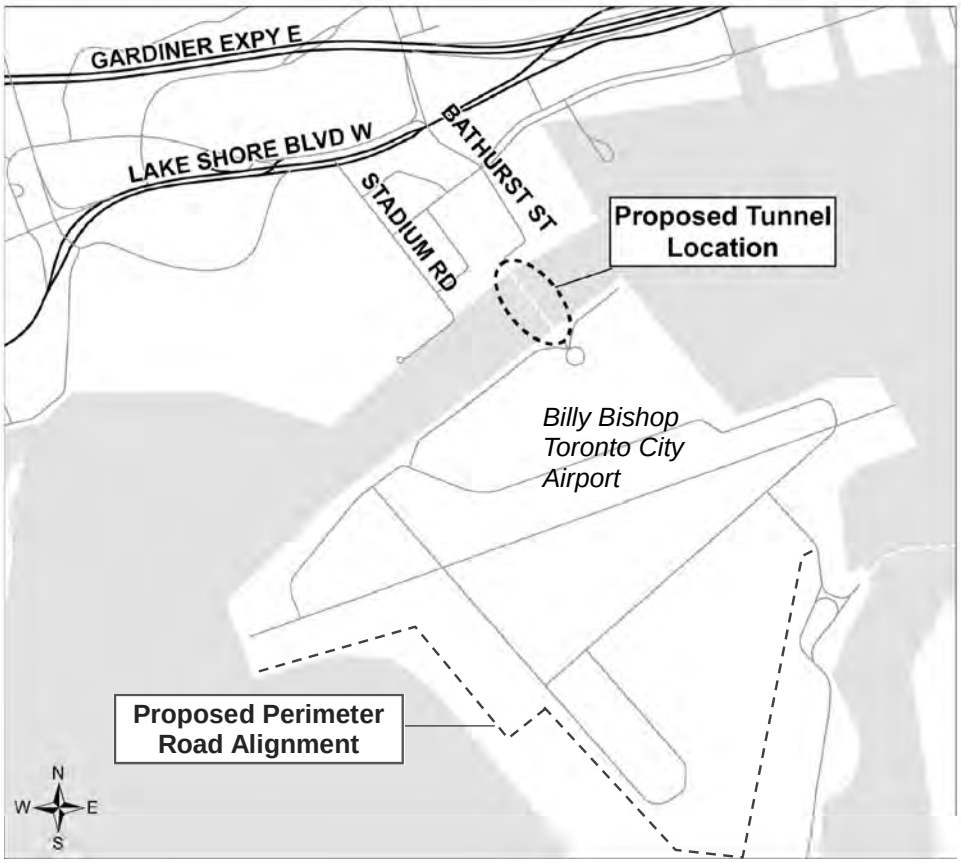
- on the biophysical environment (for example: vegetation, wildlife, air quality and noise)


- and on human health and socio-economic conditions


PROJECT LOCATION

Proposed Pedestrian/Services Tunnel & Perimeter Road



The location of this project is Toronto, Ontario at the foot of Eireann Quay (formerly called Bathurst Street). The Billy Bishop Toronto City Airport Tunnel (BBTCA Tunnel or "the Project") would go through the bedrock that joins the land side and airport side under the approximately 120 m wide Western Gap.

The approximate location of the perimeter road will generally follow just inside the airport's security fence as illustrated above.

CONSULTATION

The public consultation will provide opportunities for interested parties (including government agencies, First Nations, local residents, ratepayers' associations, non-government organizations and the public) to obtain information about the proposal and provide comments and input.

To initiate the screening and consultation, letters and the project description have been sent to:

- Government Agencies (Federal and Municipal)
- First Nations
- Non-Government Organizations/Community Groups

Public notices of the screening and initial public meeting were sent to local residents, placed in newspapers and provided to various community and business organizations.

CASE STUDIES

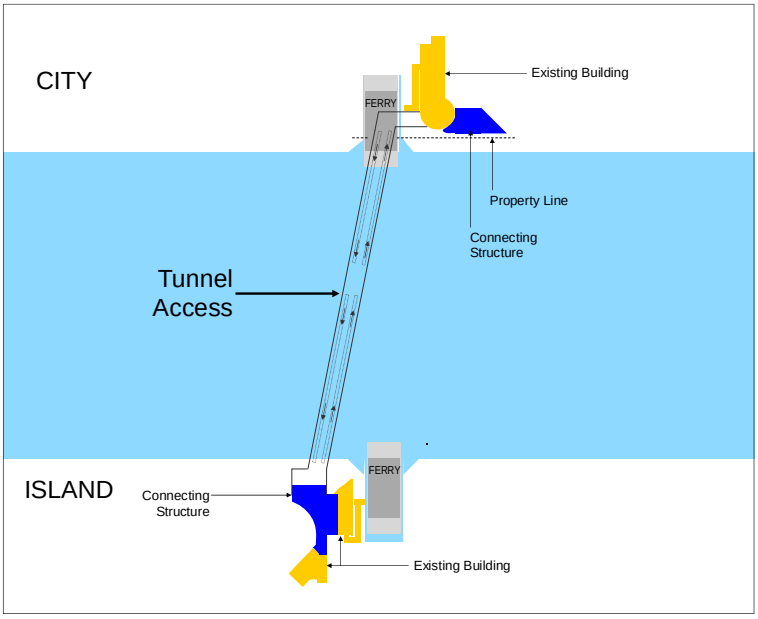
Pedestrian Tunnel under the Wilhelminaplein– Rotterdam, Netherlands (*Zwarts & Jansma Architects)*

Pedestrian Tunnel at O'Hare International Airport – Chicago, USA (*Helmet Jahn, architect)*

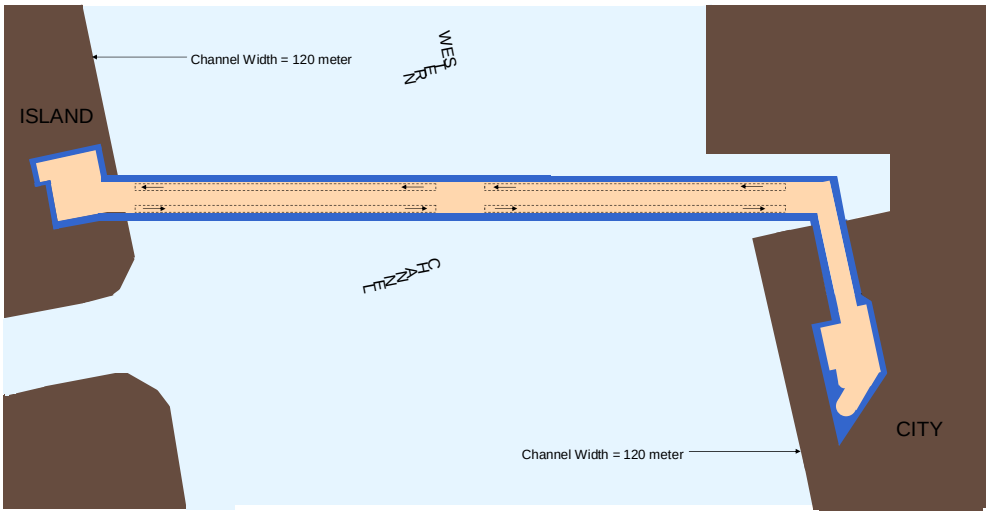
EXAMPLE DESIGNS

These figures have been generated as conceptual designs for the project and are for illustrative purposes only.

Example Project Design (Birds-Eye)

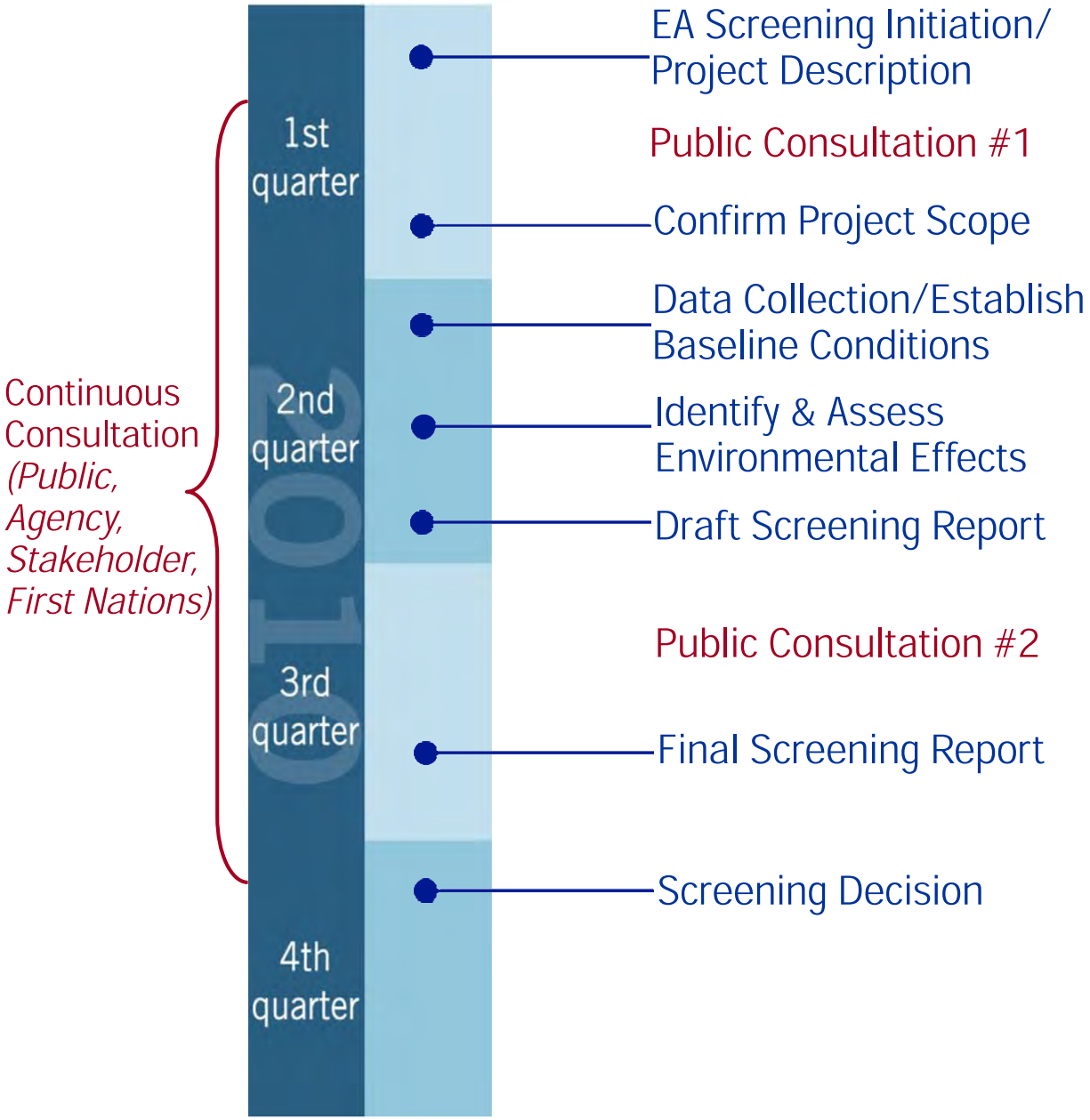


Example Project Design (Tunnel Level)



PROJECT SCHEDULE

This EA screening is proposed to take place over a period of 6 months, running from March 2010 through August 2010.



Thank You

Thank you for attending this initial public meeting. We hope to work with you over the course of this EA screening.

Please feel free to ask questions to any of the project team members here today or fill out a comment form located at the table at the front.

If you have any questions or comments throughout the course of this EA screening please submit them to:

Ken Lundy
Director, Billy Bishop Toronto City Airport
Toronto Port Authority
60 Harbour Street
Toronto, ON. M5J 1B7
ea_comments@torontoport.com

Merrilees Willemse
Public Consultation Coordinator
Dillon Consulting Limited
235 Yorkland Blvd.
Toronto, ON
M2J 4Y8
mwillemse@dillon.ca

NOTICE FOR 2nd and 3rd PUBLIC CONSULTATION EVENTS

Billy Bishop Toronto City Airport
Proposed Pedestrian Tunnel
And Perimeter Road

Notice of Release of
Draft Environmental Assessment
Screening Report and
Public Meetings

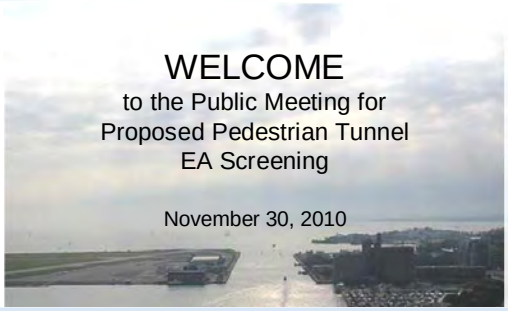
The Toronto Port Authority has released a Draft Environmental Assessment (EA) Screening Report to consider a proposed pedestrian tunnel to the Billy Bishop Toronto City Airport (BBTCA).

KEY DATES: November 16, 2010 – Report available at torontoport.com
November 30, 2010 –**PUBLIC MEETING, 6:00-8:30pm**
Radisson Admiral Hotel – Admiral Ballroom,
3rd floor - 249 Queens Quay West
January 12, 2011 **–PUBLIC MEETING**
(check torontoport.com for details in early January **2011)**
January 28, 2011 – Final date for public comments

The proposed tunnel, which would improve access to and from the BBTCA, would be built in the bedrock under the Western Gap of the Toronto harbour. The EA Screening is being conducted under the Canada Port Authority Environmental Assessment Regulations.

To obtain information or submit comments on the Project or the draft EA Screening, please email or write to Ken Lundy at ea_comments@torontoport.com or at: Toronto Port Authority, 60 Harbour Street, Toronto, ON, M5J 1B7.

Toronto Port Authority



1

Agenda & Introductions

- Toronto Port Authority
  - Ken Lundy, Suzanna Birchwood, Bill Sahid
- Dillon Consulting Limited
  - Don McKinnon, Paul MacLeod, Merrilees Willemse
- 6:30 – 7pm – Presentation
- 7:00 – 8:15 – Q&A, Facilitator: Jim Faught
- 8:15 – Wrap-Up

2

Project Purpose

- Why are we proposing this project?
  - To improve the quality of access to and from the airport
  - Provide opportunities for services such as communications and electricity
  - To provide reliable access during poor weather

3

EA Screening Process

- The 1999 Canada Port Authority EA Regulations (under Canadian Environmental Assessment Act) were followed
- The CEAA screening process is followed by federal agencies
- The TPA did not develop this process but is obligated to follow it

4

What a Screening Requires

- Need to consider:
  - the environmental effects of the project, including the environmental effects of malfunctions or accidents
  - cumulative environmental effects
  - the significance of such effects
  - comments from the public
  - feasible measures that would mitigate any significant adverse effects

Screening Results

- Potential effects of the construction phase and operation phase of the Project were assessed
- Results of screening:
  - **Very minor to no operations effects**
  - **Temporary construction related disturbance effects**
- Conclusion: No adverse significant effects are anticipated from the project

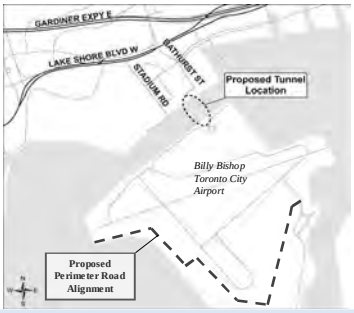
What is the Project?

- Tunnel
- Shafts
- Connection Structures
- Perimeter Road

What It May Look Like

What It May Look Like

Project Location



How Would it be Constructed?

- Construction period is expected to be about 18 months
- Construction to be staged from both mainland and Island side
- Shafts would be constructed in a method to minimize ground water infiltration
- Tunnel would be excavated/supported in sections
- Excavated material on mainland would be trucked or barged off-site
- Excavated material on Island side would be utilized/placed on barge

Summary of Effects

- Essentially no operations effects to the environment
- Construction Related
  - Temporary increase in dust and noise
  - Minor surface-water runoff effects
  - No effects to natural features
  - Traffic operations
  - Effect of construction barge in channel

Mitigation Plans

- Recommended construction mitigation measures:
  - dust control
  - noise control
  - traffic management
  - stormwater management
  - fuel/oils spill response
  - public safety
  - re-vegetation

Follow-up

- Construction period monitoring commitments:
  - Community complaints
  - Stormwater run-off
  - Ground water infiltration and management during excavations
  - Local road usage by construction vehicles
  - Landscaping
  - Dockwall condition

Additional Studies

- The TPA heard the concerns of the community at the last public meeting
- While not required for the project screening, future noise and air quality conditions of the BBTCA were examined
- RWDI Consulting Engineers and Scientists
- These studies completed for a future scenario of all 202 slots being utilized – still consistent with Noise Exposure Forecast (NEF) contours

BBTCA – Noise Effects

- Future (2016) noise levels were modeled for receptor locations
- Noise from BBTCA, Light Rapid Transit (LRT) and road and expressway traffic were considered
- Vehicle traffic and LRT is the dominant noise source
- Additional BBTCA noise results in future maximum 2 dBA increase
- To measure noise, worst case was assessed
- TPA is committed to install noise barriers/enclosures for aircraft “run-up” noise

BBTCA – Air Quality Effects

- AQ conditions were modeled at various receptor points
- Results compared to current conditions & AQ criteria
- Future levels for all parameters to be below AQ criteria
- Concentration of particulates may increase as a result of increase in area road traffic volumes

Comments & Questions

Ground Rules for Q&A

- All questions should be directed through the facilitator who will chair the Q & A.
- Please introduce yourself, and where you live or the organization you are with before your question or comment.
- Two questions only please with a maximum time limit per person to allow a chance for all who want to be heard.
- Please do not interrupt the response to your question.
- Please do not interrupt a speaker who has the floor. The person with the microphone has the floor.
- One speaker or discussion at a time please.

To submit written comments please fill in a comment sheet OR email: ea_comments@torontoport.com

Next steps

- Next EA meeting **January 12, 2011**
- Ongoing consultation, final comments due **January 28, 2011**
- Email: ea_comments@torontoport.com
- Decision will be made based on final report, public comments and applicable factors in the regulations
- Commitment to make final report and TPA's decision public

Other Activities

- **Consultative Committee** starting in early 2011
- Neighbourhood associations to submit their choices for membership by December 17, 2010 to Jim Faught: jfaught@lura.ca

Thank You for Attending

Reference Figures

Noise Receptors

Air Quality Receptors

APPENDIX C
to
CONSULTATION SUMMARY REPORT

Toronto Port Authority
Billy Bishop Toronto City Airport (BBTCA)
Proposed Pedestrian/Services Tunnel – Environmental Assessment Screening

CEAA Federal Authority Information Form

Name of department/agency: Transport Canada

Assessor's name: Haya Finan

Please return this form as soon as possible (but maximum 30 days) after its receipt to Don McKinnon by fax at 416-229-4692.

Please indicate (by checking the appropriate box) whether or not your department/agency:

a)	is likely to require an EA of the whole or part of the project under section 5 of CEAA (i.e., is an RA):	Yes ☐ No ☒
b)	is in possession of specialist or expert information or knowledge that is necessary to conduct the environmental assessment of the whole or part of the project i.e., is an Expert Federal Authority (FA):	Yes ☐ No ☒
c)	requires additional information to make a determination referred to in a) or b) above:	Yes ☐ No ☒
d)	has already exercised a power in respect of the proposed project or any part thereof: (If so, please attach a copy of the environmental assessment report, where applicable, and indicate what course of action was taken pursuant to section 20(1) or 37(1) of CEAA.)	Yes ☐ No ☒

Based on a review of the provided project description by a Navigable Waters Protection officer, no NWPA approval will be required for the work done; however, any usage of barges needs to meet the requirements of the Collision Regulations of the Canada Shipping Act

(http://laws.justice.gc.ca/eng/C.R.C.-c.1416/)

Name: Haya Finan

Address: 4900 Yonge Street Toronto, Ontario M2N 6A5

Telephone: 416-952-0486 Facsimile: 416-952-0514

If your response to a) or b) above is YES, TPA will be contacting you for further consultation as per section 8 of the Federal Coordination Regulations.

If the answer to c) is YES, forward the request for additional information within 10 days after reaching that conclusion to Don McKinnon at dpmckinnon@dillon.ca.

Frequently Asked Questions

ID #	Question/Comment/Concern	Response
1.	Is this proposed pedestrian tunnel in violation of the Canada Marine Act prohibiting a "bridge or similar fixed link" to the island airport? Will the tunnel be used for automobiles?	The project would comply with law, including the Canada Marine Act and Toronto Port Authority Regulation SOR/2005-120, which was made under the Canada Marine Act. This regulation prohibits a bridge or similar fixed link. The proposed project is not a bridge or similar fixed link, including because it would involve tunnel access through the existing bedrock for pedestrians (no automobiles).
2.	Is the airport handling more air traffic than it has approval for?	No. Operations at the airport are governed by a Tripartite Agreement (Federal Government, City of Toronto, and the Toronto Port Authority), including restrictions on air traffic based on noise contours.
3.	Is this tunnel being built to enable airport expansion?	The tunnel access is being proposed to provide more reliable access to the BBTCA, including for emergency services that are required beyond the time in which commercial aircraft activity is permitted. There is no proposed expansion of the airport, which would require an amendment to the Tripartite Agreement (which is not proposed).
4.	Are you doing a cumulative effects assessment of the entire airport and all airport operations (existing and planned)? How are you incorporating the increase in the number of flights and the number of slots at the BBTCA? Will you look at both the existing and future planned numbers for these?	The environmental assessment (EA) will meet all applicable requirements to assess the effects of the Project, which includes an assessment of cumulative effects. The EA will include consideration of whether the Project would cause changes to aircraft activity and vehicular traffic. These matters will be considered as part of the EA, including to determine the effects of the Project. Likewise, the EA will include assessment of the effects of the Project in combination with other projects and activities, potentially including future expected aircraft activity (if there are project effects that could combine with the effects

		associated with aircraft activity).
5.	How much will this project cost and who is paying for it?	Estimated cost of the Project is $45 million. No taxpayers' money would be used. The financing would be generated by passenger user fees.
6.	Will the EA consider increases in local noise and air pollution as a result of the project?	This will be considered as part of the EA.
7.	Will the pedestrian tunnel result in increased air and car traffic?	BBTCA related vehicular traffic and aircraft activity will likely increase in the future regardless of whether the Project proceeds. It is expected that the maximum aircraft activity will likely be achieved before the Project would be constructed and operated, which would be confirmed as part of the EA. (see answers above, including for question 4).
8.	Traffic congestion along this section of Bathurst Street is a problem and this will make it worse. How will this be addressed?	The TPA has considered and implemented measures to address BBTCA related traffic. The TPA will continue to monitor BBTCA-related traffic and will continue to consider measures to address this, as needed. This may include, for example, efforts to impose further restrictions on vehicles along Erieann Quay. Encouraging public transit and shuttle bus service will continue to be part of this.
9.	How are you going to address traffic impacts to park users and school children, including the traffic issues that already exist?	The EA will include assessment of the effects of the Project, which may include changes to vehicular traffic and effects from that. If appropriate, mitigation measures would be considered.
10.	How will construction impacts to transportation traffic be dealt with?	The Project will require excavation activities. The majority of this material would be removed to the island side and used for the construction of the airport perimeter roadway. This would minimize the amount of construction related traffic on Eireann Quay (formerly Bathurst Street). The EA Screening report will discuss and assess the effects of construction activities, including management, phasing, and mitigation as appropriate.

11.	How will you address impacts to the community and residents, including human health impacts?	The EA will consider effects of the Project that may impact the community and its residents. Although it is difficult to predict everything that will be included before the studies are conducted, effects may include those related to noise, air quality and traffic/pedestrian safety. The EA will include assessment of the environmental effects of malfunctions or accidents that may occur in connection with the Project.
12.	Why is the tunnel going to be approximately 8-10 metres wide and 5-8 metres high?	The approximate dimensions described for the Project are for the purpose of the EA, which is part of the planning process. These are dimensions to allow for the assessment of the reasonable "maximum effects". As is usual for any project, if the Project were to proceed, the final dimensions would be determined at the final design stage. This would include accommodation of a variety of facilities such as moving and non-moving sidewalks, allowances for air intake and exhaust ducts, utilities, drainage pipes, etc.
13.	How will the tunnel be accessed at the surface? Will there be elevators, stairs, and/or escalators?	At this level of preliminary design, as part of the EA and the planning process, the TPA anticipates that shafts going down to the tunnel access would contain stairs and elevators, and possibly escalators. These shafts would be accessed at the ground level through improvements to the existing facilities on both the airport and land sides.
14.	What services and/or utilities will be in the new tunnel?	This has yet to be finally determined, and is not necessary for the purpose of the EA, which is proceeding on the assumption that there could be the usual services, such as fiber-optics, electricity, water, communications and the like. If the Project were to proceed, this would be part of the final design stage, as usual.
15.	How will you make sure that this tunnel is safe for users? How will you address an emergency in the tunnel? (e.g. someone has a heart attack or there is a fire?)	The tunnel will be designed to meet applicable public safety regulations. The EA will include an assessment of the environmental effects of malfunctions or accidents that may occur in connection with the Project. The final design would also take these

		matters into account.
16.	Where will the material from the tunnel be put?	The material would be used as the sub-base for the airport perimeter road, which is part of the Project.
17.	What is the purpose of the perimeter road?	The perimeter road would enhance safety and security for the airport and would be used by airport staff for maintenance and operations.
18.	How long will this project take to build?	It is anticipated that it would take 18 months to complete the Project if it were to proceed.
19.	Can I have a copy of the study results and technical analysis?	All final reports and studies will be available to the public for review and comment. These will be provided on the TPA's website, and likely in hard copy/CD form at locations to be specified.
20.	Why is an open house consultation format being used by TPA and not a formal question and answer period?	Although not necessarily required by the CPA EA Regs, the TPA has given the public notice of the EA screening, and has given and will continue to give the public an opportunity to participate in the screening. Again, although not required, the TPA is hosting public meetings. The open house consultation format is appropriate for this purpose. It is a common and well-recognized format for consultation as part of an EA, including to provide an opportunity to participate in the EA screening. There will be opportunities for questions and comments to be provided as the EA proceeds and the EA report is developed. This FAQ provides answers to many of the questions asked through email to TPA and Dillon, and that were asked at the consultation meeting of March 24, 2010. The TPA and Dillon welcome questions and comments from anyone. It may not be feasible to provide an individual answer to each question or comment, but the TPA will update information, post information on its website, provide a draft of the EA Report and consider all comments and questions provided during the EA process.
21.	Can I have a copy of the list of agencies, stakeholders and community groups that were	These lists will be provided in the draft EA Report. These are working lists that are updated throughout the course of the EA. Any requests to be added to the

	contacted about the initiation of the screening and the first public meeting to be held on March 24th?	contact list should be made to: ea_comments@torontoport.com. Anyone who made a request at the March 24th 2010 meeting to be added to the contact list has been added.
22.	What approvals are needed in order to build this tunnel?	It is not anticipated that any federal approvals will be required. There may be the need to obtain a provincial Permit To Take Water.
23.	How will this EA be reviewed/approved and by who?	The Toronto Port Authority (TPA) must complete the EA before it can decide whether to proceed or not. The TPA must and will consider the matters required by the CPA EA Regs before making its decision. The Project Description and Scoping Report have been sent to other federal authorities and the Canadian Environmental Assessment Agency including to determine whether any federal agency will be involved.
24.	How will our input be used in this study?	The TPA must consider all comments from the public that are received as part of the environmental assessment process. In deciding whether to proceed or not, the TPA must take into consideration the EA screening report and comments emanating from public participation in its review. All questions and comments received will be considered by the TPA, including for the scoping of the Project and the scoping of the factors to be considered. A list of all comments and questions received and responses will form part of the EA screening report.
25.	When is the next meeting?	The next meeting had been tentatively scheduled for June 2010. We now expect that the next meeting will be held in September 2010, which will allow even more time for the assessment to be conducted. Public notices with the date, time and location of the next public meeting will be circulated in advance of the event. You may also check our website for more information. If you would like to receive notice of the next meeting, please email: ea_comments@torontoport.com .

You Asked Us – The TPA Responds to Public Questions

Q1: Can the TPA project team provide a written commitment explaining that the Canadian Airport Authority EA process does not apply to this project?

If it does apply, the written statement should indicate how the screening process would differ under the Canadian Airport Authority EA, and note any difference in conclusions.

A1: *There is no "Canadian Airport Authority EA" process. The TPA is following the specific process that is required by the Canada Port Authority EA Regulations. The requirements for this process, which was created specifically for port authorities, are based on and similar to those required by the Canadian Environmental Assessment Act*

Q2: Can you provide a written statement that the TPA will not use Stadium Road for construction and truck traffic during construction of the pedestrian/services tunnel?

Request to provide this statement in the Screening Report document.

A2: *The Toronto Port Authority would – if it decides to go ahead with the project - be directing contractors to use Eireann Quay, which is the most direct route. Stadium Road does not lead directly to the proposed construction site. According to Dillon Consulting, this will be part of the project documentation that would be provided to the successful contractor.*

Q3: Can you provide a copy of the Globe and Mail article in which the TPA Chairman noted that the BBTCA will not go beyond 202 slots?

A3: The Chairman of the Board of the TPA had prepared the following statement in response to the Globe and Mail article, that quoted the head of Porter. *"The president of Porter does not speak for the TPA. TPA has just gone through a capacity review, including a detailed NEF Contour study, and have worked with the community on a noise mitigation strategy. That process is now complete, and we have no plans to add additional slots."*

This statement was not used in any publication, however, the TPA Board and staff stand behind this statement.

Q4: Can you verify if contact information, specifically email addresses, provided during sign-in at public meetings are being used to distribute meeting notices and related information?

A4: *According to Dillon Consulting , all those who left their contact information with the TPA were advised via email in mid-November, after the news release issued by the TPA, of the November 30 meeting.*

It should be noted as well that all four major English-language dailies ran the TPA's advertisements on November 17, the same day that they each carried a news story.

Q5: How can I be added to your mailing list?

A5: Anyone who wants to be added to the mailing list should email ea_comments@torontoport.com. We also post all information on The TPA News facebook page, and are on Twitter.

Q6: Can you provide information about the elevation of the receptors used for the air quality and noise studies

A6: The noise receptors were located at ground or grade-level because the NEF contours are based on at-grade sound levels. For the air quality assessment some of the receptor locations were elevated wherever there were multi-storey buildings, this is to reflect various levels of living/working spaces.

Q7: Can you provide a written statement indicating that the TPA owns all the land required to proceed with this project and build the tunnel?

A7: The TPA owns the land that would be required to build the Project's infrastructure (with a small portion of the perimeter road on leased land), and will continue to lease land on the mainland side that is used for access.

Q8: Can you provide the air quality report and the noise study to the public via the TPA website?

A8: Yes. The TPA will be posting it on its website, torontoport.com, in the Airport News section in the week of December 13.

Q9: Can you commit to provide all meeting materials and relevant reports prior to each public meeting?

A9: Yes, we are committed to providing all relevant information to the public in a timely way. We released the draft report on the environmental assessment for the tunnel, two weeks ahead of the November 30 public meeting. This is standard practice.

Q10: Can you provide hard copies of the draft report?

A10: Yes. We would prefer that you download the report from our website from an environmental point of view, however, we do have a limited number of hard copies and CDs that are available. Please contact Suzanna Birchwood at sbirchwood@torontoport.com to arrange to get a copy.

Responses to Questions from the January 12, 2011 Public Meeting – including subsequent questions received by TPA

The following table provides responses to the questions received at the January 12, 2011 public meeting. The responses are either those given at the meeting or updated to provide additional clarification.

Questions From the Jan 12th Meeting	Response
1. What are the potential options for the tunnel design?	The EA, as part of the planning process, considers potential effects related to the Project. The scope of the EA and the Project is broad enough to accommodate several different options, and the final option, as is typical, would be finalized during the design stage. In order to give people an idea of what the Project would include, particularly for the purpose of assessing potential environmental effects, two options were discussed. Option 1 would have 5 elevators at each end of the Western Gap. This option would have a tunnel that would start with an alignment heading west, followed by a "dog leg" turn (at the ferry slip), and then straight across the Western Gap. Option 2 would have a straight alignment across the Western Gap, which would go under the dock wall owned by the City of Toronto (and thus, an easement would be needed). Elevators and escalators would likely be used. The elevator at the island side would be for people with disabilities and people with children. Option 1 would connect the two existing ferry passenger transfer facilities. Option 2 would connect the ferry passenger transfer facility on the mainland side directly with the air terminal on the island side. Option 2 would be approximately 90m longer than Option 1.
2. With respect to proposed Option 2, would the escalators	As is typical for an EA, the diagram is not intended to be the

Questions From the Jan 12th Meeting	Response
protrude above the circle?	final, detailed design. It is expected that this option would bring the escalator to ground level in the airport terminal. During construction there would be interruption to the traffic circle, which would be managed.
3. Our neighbour received a call about a phone survey, which asked whether they would prefer a bridge or a tunnel. The survey provided the cost of the bridge as $35 million, and the cost for the tunnel as $65 million. • What is the current estimate for cost of the proposed tunnel? • Is this all about getting a bridge? • Is TPA behind the survey? • Who is behind the survey?	These questions are beyond the EA. However, we have the following responses. • The TPA is in the planning stage of this proposed Project. The cost of the Project was previously estimated at approximately $45 million. • A bridge is prohibited by federal regulation. • The TPA has no knowledge of the survey, and did not conduct or commission the survey. • The TPA does not know who is behind the survey.
4. This tunnel is prohibited under the same regulation, because it is a fixed link. A bridge and a tunnel are both fixed links.	The federal regulation prohibits a bridge or similar fixed link. The TPA is considering using the bedrock between the mainland and the airport to build a pedestrian tunnel, which is not a bridge or similar fixed link.
5. Can you explain to us what would be another similar fixed link? Can you explain the definition to us?	One example of a similar fixed link may be a causeway.
6. I would like to go back to Question 14 in the slides. I gather from the answer that Mr. McQueen did prepare a statement but it was not published in the Globe & Mail. Can you please provide this statement in writing? I think he said there was "no plan to add slots" but that sounds like there may be a plan to increase slots later. Does that mean Mr. McQueen currently has no plans, or does he have plans in the future, or does never plan to increase slots?	On December 17, 2010, that question was answered on the TPA's website (it is question 3 in the list on the website). Mr. McQueen stated that the president of Porter does not speak for the TPA. The TPA has just gone through a capacity review, including a detailed NEF Contour study, and has worked with the community on a noise mitigation strategy. That process is now complete, and we have no plans to add additional slots.
7. Going back to Question 4 on the slides. The question asked where were the noise receptors located and why? They are	There is a map of noise receptors on slide 65 of the presentation.

Questions From the Jan 12th Meeting		Response
	at ground level, but where? Etobicoke? Bathurst Quay? York Quay? The lakefront? You should go beyond the legal requirement and tell us where they are located. We do have noise above ground level, we live in condominiums. So you should test at the levels where people actually live.	Noise levels at receptor locations were calculated at ground level. The locations were in the residential area west of Little Norway Park (4), in Little Norway Park, south of Lake Shore Boulevard west of Bathurst Street, at the corner of Queens Quay and Eireann Quay and on Queens Quay east of Dan Leckie Way.
8.	Would you be able to expand the scope of the EA to address our concerns, although it would go beyond legal requirements?	The TPA assessment meets (and goes beyond) the requirements of the CEAA. The TPA is aware of community issues, such as operations at the BBTCA. Although not required as part of the EA, the TPA undertook air quality and noise quality assessments, which the TPA has made available.
9.	Can you do actual measurements for noise, rather than modelling?	Proper protocols and procedures were followed, and the appropriate parameters were addressed. It is likely that your concern would be appropriate to discuss at the consultative committee that has been implemented, and which will meet next month.
10.	I am a recreational sailor, and I am concerned that the barge in the gap will affect sailing in the area. During what 6 month period will the barge be there?	The use of a barge was considered as part of the EA, and by Transport Canada. The specific times that the barge would be in operation would be determined by the contractor. At most times the barge, if used, would be anchored to the dock wall. No significant impact on boats travelling through the Western Gap is expected.
11.	Have you had poor communications and security all this time, have people complained about taking the ferry? What is the advantage of the tunnel over the current route via ferry? Why take a devious route, when you already have an expensive ferry route operating?	The proposed pedestrian tunnel would provide improved quality of access to the BBTCA, which the TPA must consider (including because of its obligations under the Tripartite Agreement with the City of Toronto and the federal government).
12.	How long does the ferry ride last?	The ferry ride itself takes approximately 90 seconds.
13.	I have been attending these public meetings for quite some time, and I always sign in yet I have never received an	We use the sign in sheets to send materials to those interested. We will continue to take steps to ensure information is sent out

Questions From the Jan 12th Meeting	Response
email.	to those who sign-in and provide contact information.
14. Please further explain Option 1 and Option 2 using the presentation slide. Would the red building be the shaft on the city side? Would it be a new building on the City side? Will it extend to the parking lot? Why not just use the building that already exists?	Option 1 would connect the two existing ferry passenger transfer facilities. Option 2 would connect the mainland ferry passenger transfer facility directly to the new airport terminal building. Constructing the tunnel shaft under an existing building would not be possible. The ferry operation would remain in use, which would require the existing ferry use of the existing passenger transfer facility.
15. What would the existing city-side building be used for?	The ferry would continue to transport cars, delivery trucks and other vehicles, as well as pedestrians who may decide not to use the tunnel. The existing building would be used to access the ferry.
16. My concern relates to the people who would use the tunnel. In respect to where the tunnel would be in the context of Queens Quay and the waterfront. My concern is that the tunnel is about half the size of this room?	The pedestrian tunnel would be approximately 7.6 meters wide by about 4 meters high.
17. Have any psychological studies be done about walking through a tunnel underground? Would people be comfortable with that? Will they be willing to get into a small tunnel? Are there precedent studies to show tunnels like this have been successful in other locations?	A tunnel of this height would avoid the perception of a small, closed-in space. There are many examples of similar sized underground walkways in use around the world. Dulles International Airport's pedestrian tunnel (Washington) is an example at an airport.
18. I have a question that relates to creature comforts. I see no landscape amenity in your artistic representation of the entrance structure. Any of the projects that the TPA has undertaken seem to have very poor landscaping. We need trees, benches, and bicycle parking. What I see is very barren, and the winds that come across there are very	The rendering in the presentation is of the structure itself, which is for the purpose of the planning process. There would be landscaping. Your comments are appreciated and will be considered.

Questions From the Jan 12th Meeting		Response
	fierce. If you had a landscape consultant you could make the whole place feel more humane.	
19.	Other major cities are closing their downtown airports. It makes sense if you want to make money, but what about our life, health, and community? The City of Toronto seems just to care about money.	This question is beyond the EA. However, we have the following response. An Ipsos Reid survey conducted in the summer of 2010 indicated that the majority of people living south of Queen Street were in favour of a tunnel.
20.	How can I trust the consultant? You are the same company that proposed the bridge, are you not? I think it was proven that the bridge was not a good idea.	Dillon Consulting Limited has been in business for over 60 years It has extensive expertise in conducting similar studies and environmental assessments. Dillon does not propose projects, and it did not propose a bridge; Dillon assisted with the EA of the proposed bridge project.
21.	Many commitments have been made to the community by the TPA. With respect to noise abatement, we need to see concrete examples of this. When do we get to see the noise abatement plan? When will the noise abatement plan be implemented? Can we be assured it will be implemented before more slots are added to the airport?	The results of the EA indicate that the Project will not result in noise impacts. Nevertheless, beyond the EA requirements, the TPA has proposed noise mitigation walls along the water's edge on the east side and north side of the BBTCA. The TPA also has an enclosed area for aircraft run-ups. The TPA continues to be prepared to meet with people in the local community to discuss these matters, and such a meeting is being planned for February.
22.	Can we have your commitment to implement these walls before you add more slots?	The TPA must meet the noise requirements imposed by the Tripartite Agreement, which it does. The TPA hopes to have noise barriers in place as soon as possible (hopefully as soon as May or June of 2011 if all requirements to proceed can be met by then).
23.	When will we get a timetable of when the barge will be utilized and where? Did you submit something to Navigations Canada? Can we get these documents?	The specific times that the barge would be in operation would be determined by the contractor. At most times the barge, if used, would be anchored to the dock wall. No significant impact on boats travelling through the Western Gap is expected. Discussions were held with Transport Canada, which was provided a copy of the draft EA Screening Report.
24.	You talk about modelling, but you do not use monitors for	Field measurements were not required to undertake the noise

	Questions From the Jan 12th Meeting	Response
	data samples.	study.
25.	Does Transport Canada not do an annual review, and come and measure to ensure you are in compliance?	This is beyond the EA. It is our understanding that Transport Canada does not conduct an annual review.
26.	You mentioned that you did supplementary studies to mitigate concerns regarding noise and air pollution. Can you also consider performing a study on waterfront birds? We have a petition with over 400 signatures and comments, which I will send to you. I have a concern about the building you suggest for the entrance, having a glass building at the waterfront will kill thousands of birds. I strongly recommend that you have a LEED certified building. The City of Toronto also has bird friendly building guidelines, and I strongly recommend you look at these as well. I would like to have your commitment to look at waterfront birds, and please don't tell me the scope of the EA is too small to consider migratory birds.	There is not expected to be any significant impact on birds from the Project. The migratory bird study that was completed by LGL Limited (July 30, 2003) for the proposed bridge project noted and concluded that: the airport has been in operation for more than 60 years; bird populations that reside near the airport are already habituated to aircraft traffic; and there would be no significant negative effects, including no adverse effects on any species at risk, associated with the construction and operation of a bridge.
27.	I live very close to the airport, and I can wave to the air traffic controllers. I'm willing to accept that the tunnel may be a good thing for the airport for the purpose of relieving the pressure of time. I'm also willing to accept that maybe Porter Air is a viable operation. I'm concerned about the environmental impacts study. Over the many years I've lived in this area, I've seen increased noise, pollution, and traffic. You need to look at the context and peripheral operations that go on in this area. For example, I smelled diesel fuel in my house on Friday night because snow removal equipment was operating so close. You need to look at everything, not just the airplanes taking off.	Your comment is acknowledged, and will be considered as part of the EA. The EA has considered all necessary and applicable potential effects.
28.	We were told people would be encouraged to take the TTC. How will you control traffic? We have the Gardiner, taxis, buses etc. How will you encourage people to take	People can take the TTC and walk approximately 200 meters along a sidewalk. Public transportation is encouraged, as is the shuttle service. The TPA is committed to continuing to consider

	Questions From the Jan 12th Meeting	Response
	public transit when they arrive and leave the airport?	and implement steps to encourage the use of public transit.
29.	Why do you say you are doing a good job consulting the community? Your website is out of date. The last noise complaint from the public on the website is from March 2010, you are not keeping up to date. You are not posting recent comments and noise study results. When people make a complaint they are entitled to a rapid response and rapid feedback. A year ago you received fourteen noise recommendations from Jacobs and these have not been implemented. You have not even started an EA for the noise barriers.	The consultation process for the EA has exceeded what is expressly required by the regulations. Beyond the EA (your comment about noise complaints), the TPA is implementing improvements to its website. Again, beyond the EA, the TPA has been considering the sixteen recommendations from Jacobs. One of the recommendations is to have an airport consultative committee, which is underway. This committee is expected to have its first meeting in February. Many of the people at the public meeting are on this committee. The TPA has committed to providing responses with respect to the other fifteen recommendations.
30.	Is this really in the public interest? It seems to serve a narrow demographic, but in the public interest is another story. The Aeronautics Act says, on page 8, under the responsibilities of the Minister, that the Minister is responsible for safety and security standards, it says that prohibition or restriction if it is necessary for the security or protection of the public will be allowed by the Minister. So the Minister may prohibit TPA operations. Will the three tripartite partners have a referendum for City of Toronto residents asking: "Do you want an expanded airport plus a pedestrian tunnel and a perimeter road on the Toronto Islands? Yes or no?" Would you be willing to have a referendum?	Your comments are noted, and will be considered as part of the EA. The EA considers safety matters related to the Project, such as the assessment of accidents and malfunctions. A referendum is beyond the EA.
31.	It is my understanding that this pedestrian tunnel will cost $45 million, and the money will come from passengers. Is that correct?	Although beyond the EA, the answer is yes.

Questions From the Jan 12th Meeting	Response
32. I hear conflicting reports that Porter Air is doing well and not doing well. They are in the newspaper all the time with discounted flights. What if Porter goes belly up? There will be no passengers to pay for it. Who will pay for it then?	Although beyond the EA, the expectation, which is supported by passenger volumes, is that people want to have access to flights from the BBTCA. The TPA expects that Porter Airlines, as well as others, will be successful at the BBTCA.
33. Who picks up the tab for the tunnel if Porter goes bankrupt?	Although beyond the EA, the proposed tunnel would be a private-public partnership, which would be responsible for the tunnel.
34. Will the legal agreement between TPA and the private and public partners be made public? When is this being signed? When is the critical path? When is it decision making time? When will you award the bid?	This is beyond the EA. The TPA will follow procedures, which do not provide for disclosure of confidential, proprietary information.
35. Once you sign the contract, is the contract public? We want to see the contract to see that it is air tight and to be certain that no tax payers' money will be used.	This is beyond the EA. See above for responses with respect to commercial matters and who would pay for the tunnel (passengers).
36. I looked at your 2009 Annual Report, and your net operating income is about $5 million, so you are not planning on using any of your dollars on this project?	This is beyond the EA. The tunnel would be paid for from an airport improvement fee, which is paid by passengers.
37. How many passengers do you need to pay for the tunnel? How long will it take? You will likely have a debt. Where will you get the money in the meantime? You will need a loan in order to build it. Who will hold your debt? Just for perspective; Pearson has the highest user fees in Canada. Can you do the math to tell me how many passengers you need over what period of time to pay this off?	This is beyond the EA. If the Project were to proceed, the cost of the Project would be determined through a private proponent bidding. Airport user fees would fund the cost of the Project.
38. You are not going to spend the entire $20 fee on the tunnel? So what percentage of the fee will go towards paying for this project? You need to have a basic business	This is beyond the EA. If the Project were to proceed, the cost of the Project would be determined through a private proponent bidding process, and actual costs would be determined at that

Questions From the Jan 12th Meeting	**Response**
plan.	time.
39. I need your assurance that no tax payers' money will go pay for the tunnel. Who pays for the noise walls, beefed up fire department, and beefed up security? I'd like to know how many tax payers' dollars go into the airport at present to maintain infrastructure, and operations.	This is beyond the EA. Please see previous responses.
40. So no tax payer dollars are used at all?	The TPA does not receive government funding. One exception was that last year the TPA applied for and obtained $160,000 from the federal government for new snow removal machines.

Toronto Port Authority
Administration Portuaire de Toronto

Geoffrey A. Wilson
President & Chief Executive Officer
Président-directeur général

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February 22, 2011

1611-P-3

20110301 05

Honourable Olivia Chow
Member of Parliament for Trinity-Spadina
144 Augusta Avenue
Toronto, ON M5T 2L5

Dear Ms Chow:

I am responding to the questions you raised at the January 12 public consultation meeting. My apologies about the delay of this reply.

At that meeting you asked when the RFP is being awarded and signed, when the decision will be made and generally what the elements of the critical path are.

Thank you for raising these important questions. The process for the RFP is as follows:

1) The TPA conducted a Request for Qualifications (RFQ) in 2010
2) Five (5) consortia responded, and together with P3 Canada, the Toronto Port Authority developed a short-list. It should be noted that Porter is not a member of any of the consortia.
3) The next step is to issue a Request for Proposals (RFP) to the short-list. We expect the period for response, review and decision-making to take about six (6) months, from the date on which we issue the RFP. Consortia on the short list will receive the RFP package which is being prepared by our technical, legal and financial experts.

You also posed a series of questions about how the pedestrian tunnel would be paid for, and, if it was to rely on public money, whether the legal agreement between the TPA and the private consortia, would be made public.

Under a P3 process, the private sector consortium makes the initial investment with the public partner, in the case the Toronto Port Authority, paying the consortium back over a set number of years. In the financial model the TPA is considering, the project is expected to be paid off over 20 years. The financial model has taken into consideration low, medium and high passenger loads to confirm the viability of the project. *No public money would be used to pay*

for the tunnel. The source of the TPA's payments is the Airport Improvement Fee. That fee is paid by passengers only. Like the 407 P3 partnership, only those who use the service, pay for it. The Toronto Port Authority will, as mentioned at the meeting, follow P3 Canada's recommendations on agreement confidentiality.

You also asked who would repay the loan, in hypothetical situation that the airlines failed. First, private sector investors will consider this scenario when they submit their proposals. If there were to be any doubts about the viability of the airlines, this would have probably shown up in the initial Request for Qualifications. We received five (5) solid bids.

Having said that, the Toronto Port Authority is always considering how to attract carriers to the airport. Air Canada and Continental are both slated to start here in the coming months. In the scenario you provide, which assumes a carrier goes out of business, the TPA would find another carrier. There is no shortage of demand for flights from the airport. Business has increased 50 fold in the last 5 years, and more than 40 per cent in the last year alone.

Finally, in response to your query about how many passengers would be required to pay for the process, I'm sure you can understand that any answer would be premature. First, we are looking to the private sector investors to potentially develop other revenue streams as a return on their investment. We don't know what these may be yet, but for example, advertising revenue from the tunnel could be one. Second, these consortia have not even been asked to cost the project. That would happen through the RFP process. These are just some of the variables that would make it irresponsible to assess how many passengers we would need.

If you have any other questions please do not hesitate to contact me. In the meantime, we will be posting these answers to our website in a Q&A form, so that all attendees and parties interested in the proposed pedestrian tunnel project can benefit from this information.

Thank you.

Sincerely,

TORONTO PORT AUTHORITY

Geoffrey A. Wilson
President & Chief Executive Officer

Response to Comments Received from the City of Toronto (January 27, 2011)

ID #	Question/Comment/Concern	Response
A. Letter From Waterfront Secretariat January 27, 2011		
1.	This letter is in response to the draft Environmental Screening Report (ESR) for the Billy Bishop Toronto City Airport by Dillon Consulting Ltd. dated November 2010 completed as part of an Environmental Assessment for the construction of a pedestrian tunnel and perimeter road. These comments are in addition to the previous comments provided by the City dated October 6, 2010 (attached).	Response to the October 6, 2010 letter is included in this table.
2.	Below is a summary of comments received from City staff based on the draft ESR dated November 2010. Staff also reviewed the BBTCA Air Quality Assessment dated November 2010 and the BBTCA Noise Impact Assessment dated November 2010, both completed by RWDI Air Inc.	
<u>Transportation Planning, City Planning Division</u>		
3.	The draft ESR indicates that there will be some changes/re-configuration to the existing pick-up and drop-off area on the land side resulting from the new connecting structure to the tunnel. The report does not, however, include any information or plan which documents the potential change. This information is important in order to fully understand the implications of the project. Generally, it should be acknowledged that there are congestion issues along Eireann Quay related to the operation of taxis, shuttles and private vehicles.	A conceptual layout of the proposed pick-up and drop-off area has been provided to the City. This concept illustrates a layout for the ferry passenger transfer facility circulation, curb drop-off and pick-up allowance and a parking/kiss-and-ride area. The screening report includes reference to the capacity and use of lower Eireann Quay, and confirms that the Project will not result in an adverse effect. Nevertheless, the TPA is pursuing taxi and shuttle bus management options to further improve this area. Although not part of the assessment, it is likely that the pedestrian tunnel would reduce the peak loading and traffic situation that can occur when a ferry arrives at the mainland side. The current peak loading periods would likely be reduced should the pedestrian tunnel proceed.
4.	The ESR states that the pedestrian tunnel is not designed to accommodate vehicles, but based on the proposed width and height of 8-10 metres, this would suggest that vehicles could be accommodated (6 metre driving area with 2 metre sidewalks on each side). This comment was mentioned in an earlier response provided	The proposal is for a pedestrian tunnel, not a vehicular tunnel (which is prohibited by the Tripartite Agreement). The size of the tunnel is to allow for air ducts, utilities and sufficient room for a centre walkway and two moving walkways, as well as ensure that the size is sufficient to address any user issues with respect to visual restriction/confinement.

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	for the previous draft report.	Further, vehicles would not be able to access the tunnel level.
5.	The connecting structure on the land side appears to be almost the same size as the existing terminal building (with potential for retail uses noted in the document), and based on the possible tunnel alignment (Figure 3.1), it would seem to be more efficient to access the tunnel from the existing building.	Constructing the tunnel shafts under the existing building would not be possible. The ferry operation would remain in use, which would require the existing ferry use of the existing passenger transfer facility.
Heritage Preservation Services, City Planning Division		
6.	Heritage Preservation Services has advised that there are no built heritage concerns.	Comment noted.
7.	The draft ESR referred to the Archaeological Master Plan for the Central Waterfront completed in 2003. Since that time the Archaeological Management Plan has evolved and additional research has been completed. Information on the Archaeological Master Plan can be obtained at the following link: http://www.toronto.ca/heritage-preservation/archaeology.htm	Comment noted. The reference in the final Environmental Screening Report will be updated.
8.	Within the ESR study area, the lands on the mainland are located within an area of archaeological potential. An archaeological assessment (Stage 1 and/or Stage 2) should be undertaken for any areas of soil disturbance on the mainland in the archaeological potential zone, as well as lands in the potential zone which will be impacted by the service road.	A Stage 1 archaeological assessment was completed by the TPA as part of previous EA work in this area. This assessment concluded that no resource potential exists on the mainland side. A Stage 1 and Stage 2 (if required) assessment will be completed for the proposed Airport Perimeter Road before any construction is initiated on this road.
9.	Also in accordance with the Waterfront Toronto Archaeological Conservation and Management Strategy, dated October 2008, a protocol should be established in the event that deeply buried unknown significant resources are encountered.	See Response #8. Note that the area in which the tunnel is situated generally consists of 5-8 metres of fill underlain by a deep shale deposit.
10.	Heritage Preservation Services requests that all archaeological reports related to the project be submitted for review and comment.	See Response #8 Any such reports will be provided to the City.
Air Quality Assessment Review		
11.	The Toronto Environment Office has reviewed the BBTCA Air Quality Assessment dated November 2010 by RWDI Air Inc. and has provided comments in the attached memorandum dated January 27, 2011. The	See Section D of this table.

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	purpose of the Air Quality Assessment is to provide information about air quality impacts in the area for 2010 to 2016 based on projected airport usage.	
12.	The Toronto Environment Office's comments represent a high level review of this report and do not represent a full in-depth review of the Air Quality Assessment.	Comment noted.
Fixed Link		
13.	As set out in our letters to the TPA dated July 16, 2010 and October 6, 2010 (see attached), it appears that the tunnel is a fixed link and is therefore not legally permitted. Please provide further clarification on the legal opinion that confirms that the tunnel is permitted under the Tripartite Agreement and Regulation.	The Project would comply with law, including the Canada Marine Act and Toronto Port Authority Regulation SOR/2005-120, which was made under the Canada Marine Act. This regulation prohibits the TPA from using the port to build a bridge or similar fixed link. The proposed Project, which would involve tunnel access through the existing bedrock for pedestrians, would not involve the use of the port to build a bridge or similar fixed link. In any event, an underground pedestrian tunnel for pedestrian use is not a bridge or similar fixed link. As an aside, Transport Canada has initiated a process to consider making a regulation to expressly permit a pedestrian tunnel.
14.	If you have any further questions, please contact Christopher Dunn, Technical Coordinator at (416) 395-1211.	Noted.
B.	**July 16, 2010 Letter to Geoffrey Wilson, President and CEO, TPA (from Waterfront Secretariat)**	
15.	We are following up on an issue arising from the Toronto Port Authority's proposed plan to build a pedestrian tunnel connecting to the island airport. As you know, concerns have been expressed that the tunnel is a fixed link and is therefore not permitted. I understand from the recent Annual General Meeting that the TPA has a legal opinion that indicates the tunnel is permitted. It would be helpful if we could have a copy of the opinion or even the basis for the conclusions. This will assist us in our review of the TPA's proposal and in responding to questions we receive on this issue.	See Response #13

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C. October 6 2010 Letter to Ken Lundy, Director BBTCA, TPA (from Waterfront Secretariat)		
16.	This letter is in response to correspondence received from Dillon Consulting Limited advising us that the Toronto Port Authority is conducting an Environmental Assessment (EA) under the Canada Port Authority Environmental Assessment Regulations. The purpose of the Environmental Assessment is to review the proposal for a pedestrian and service tunnel to provide underground access between the airport and the mainland and the construction of a new airport perimeter service road.	Comment noted.
17.	Below is a summary of comments received from City Staff based on the materials circulated to the Waterfront Secretariat (Project Description, dated March 2010 and revised May 27, 2010, the March 24, 2010 Public Meeting Presentation materials, and the Scoping Document, dated May 31, 2010). Please be advised that these comments are based on the materials submitted to date and further comments may be provided upon submission of the draft EA to the City.	Comments noted.
<u>Transportation Planning. City Planning Division</u>		
18.	The Canadian Environmental Assessment Act (CEAA) Regulations indicate that the preparation of a Screening Report is the key component of the project, but the Project Description does not provide an outline of how the Screening Report will be conducted. The Central Waterfront Secondary Plan identifies a public promenade along the northern edge of the Western Gap. The preservation of the promenade should be maintained through the EA and construction process.	The Central Waterfront Secondary Plan was considered in the EA. This information was made available during the conduct of the EA, and is contained in the Draft Screening Report (it is noted that this comment was provided before the report was available for review). The promenade at the foot of Eireann Quay will be unaffected by construction.
19.	The size of the tunnel is larger than the typical requirements for a pedestrian tunnel. The service function of the tunnel is unclear in the submitted material.	See Response #4. The EA is conducted at the planning stage, to determine potential effects. If the Project were to proceed, utility service providers would be asked to indicate their interest in using the pedestrian tunnel for the provision of services. It is contemplated that these may include communications cabling, fibre-optics and power and, perhaps, City services.

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20.	The Project Description makes a reference to "minor reconfiguration of the existing access, circulation, and parking areas on the land and airport sides." It is unclear to what this work actually entails.	See Response #3.
Water Infrastructure Management, Toronto Water		
21.	The project should comply with the appropriate sections of the City's Wet Weather Flow Management Guidelines (November 2009).	Comment noted.
22.	The Toronto Port Authority should confirm the presence of any Toronto Water infrastructure within the project limits and mitigate any impact on said infrastructure to the satisfaction of Toronto Water.	Comment noted. The TPA will discuss this further with Toronto Water.
Toronto Emergency Medical Services		
23.	Toronto EMS should be consulted on the final design of the security/notification features within the tunnel.	Discussions have been held with Toronto EMS. Future discussions would be held if the project were to proceed.
24.	Further, as set out in our letter to the TPA dated July 16, 2010 (attached), it appears that the tunnel is a fixed link and is therefore not legally permitted. In addition, the terms of the Tripartite Agreement do not permit a vehicle tunnel. This highlights the need for clear information on the service function of the tunnel as noted above. If you have any further questions, please contact Christopher Dunn, Technical Coordinator at (416) 395-1211.	See Response #13.
D. January 27, 2011 Letter (Toronto Environmental Office Letter to Waterfront Secretariat)		
25.	The following bullet points contain our general remarks regarding the report by RWDI on the air quality assessment of the proposed pedestrian tunnel at the Billy Bishop Toronto City Airport (BBTCA):	Comment noted. Although the Project is not expected to result in emissions (emissions that would affect air quality, including noise) that would have an adverse effect, questions were raised by members of the public about air quality and noise. Thus, although beyond the Project, RWDI was retained to assess air quality and noise, including to provide additional information in response to questions about these matters. RWDI's studies were based on the use of 202 slots. . This information is provided in response to the questions #26 through #37, and the references are to the studies conducted by RWDI.

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26.	This report does not include trans-boundary sources or all local sources	All principal emissions sources are included in some fashion. The principal local sources (airport activity, local sections of roadways and ferry traffic) were explicitly simulated using the computer dispersion model, AERMOD. Predicted maximum contributions from these sources were shown in Section 5 of the report. Contributions from other sources, including trans-boundary sources were estimated using archived ambient monitoring data from a background monitoring site in the Downtown area. These data were summarized in Table 3 of the report.
27.	No PM10 or PM2.5 emission estimates from aircrafts are included	The best available software tool for estimating emissions from airport activities is EDMS. EDMS includes PM emissions to the extent that information is available. The primary commercial aircraft used at the airport is the Bombardier Q400, for which EDMS does not have information on PM emissions. Nevertheless, PM emissions from all ground-side activities were included. The modelling indicated that road dust from the Gardiner Expressway, Lakeshore Road and the local roads heavily dominate the predicted PM concentrations. In fact, so much so, that including emissions from the Q400 aircraft among the airport PM emissions would not alter the results.
28.	It is unclear whether the consultant included road dust or construction dust as PM_{10} or they only have tailpipe $PM_{2.5}$ emissions	Estimated emissions from road dust were included in the estimates for PM10 and PM2.5, in addition to tailpipe emissions, as discussed in Section 4.1.3 of the report, at the bottom of p. 8. These estimates are representative of normal traffic operations during dry weather. The modeling represented pre and post-construction operational scenarios. Potential added emissions during the temporary construction phase were not assessed, consistent with typical practice in environmental assessments for similar projects.
29.	Ambient PM_{10} estimated from ambient $PM_{2.5}$ measurements is not accurate as this calculation ignores height differentials and height of receptors for $PM_{2.5}$ and is often too high for PM_{10} (see MOE station parameters). In addition the PM_{10}= $PM_{2.5}$/0.54 assumption is dubious and especially so without standard deviations and it ignores that the coarse fraction sources are very different	Since PM10 is no longer monitored in Ontario, current background levels can only be estimated. The approach used represents the best estimate available. The same approach has been used by authorities such as the WHO in setting its current guidelines for PM10. The WHO guidelines for PM10 were based on epidemiological studies that used PM2.5 as the indicator. A scale factor 0.5, which is very similar to our value 0.54, was used to derive PM10 guidelines.

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30.	Assumptions about runway use would be better if assumptions of worst case scenarios adopted for the selected receptor points rather than using the average (the aircraft emissions seem to come from one table at the end of the report that uses the annual number of aircraft movements spread across the entire year — this is scenario does not reveal the air quality impacts that could occur during peak times of aircraft movement)	The modeling accounted for the "worst-case" (i.e., maximum impact) hour of aircraft activity on a typical day. Aircraft activity at the airport was reported as being relatively consistent from day to day throughout the year, with the main variations being by time of day. As shown in Table 5 of the report, a representative hourly profile was provided to RWDI, which was used to generate hour-by-hour emissions for the entire simulation period.
31.	This report assumed traffic emissions occur when vehicles are driving at posted speeds limits without including the much greater emissions contribution of the 'stop-start-acceleration' rush hour congestion. Again worst case (being highly congested roads) scenarios should ideally be identified.	Stop-start-acceleration activity was included in the estimated emissions. The mean travel speed in free-flow sections of roadways was matched to the posted speed limit. The emissions simulator, MOBILE6.2, then adopts an average driving cycle around that average speed, which includes accelerations, decelerations and some idling. In general, MOBILE6.2 yields equal or higher mean emission rates for the posted speed limit than for lower mean speeds that would occur during congested periods. The exception among the contaminants studied is carbon monoxide on roads with 50 km/hr or lower speed limits. In this case, emissions may be somewhat higher at speeds below the posted limit. However, this is not material to the finding of the study because CO levels are far below the applicable criteria and exhibit a declining trend in future.
32.	We all know carbon monoxide (CO) is not a problem outdoors — it is just an indicator. But conclusions regarding CO only comment on the Ambient Air Quality Criteria this is not helpful	Results for CO are discussed in Section 5, 1st paragraph after Table 14. Not only are they discussed in relation to the criteria, but they are also discussed in terms of the trend between 2010 and 2016. A declining trend in the contribution from the significant local sources is noted and is attributed to ongoing declines in fleet-averaged tailpipe emissions from on-road vehicles using the Gardiner Expressway, Lakeshore Rd. and the local roads.
33.	Most NOx coming from traffic is not a surprise.	Comment noted.
34.	The City's recent Air Quality modelling shows higher concentrations exceeding 24 hr AAQC not only near Gardiner & DVP but in adjacent neighbourhoods as well (even after discounting US Toxic Release Inventory "estimates" as too high). This report shows a	This comment does not clearly state what area the City's Air Quality modelling was done for. Further, the comment refers to the "Gardiner and DVP". The Study area for the Project is much further west than the DVP. The RWDI report is specific to the Study Area for the proposed Project. Therefore it is not clear as to whether the City's Air Quality modelling covers the same area

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	very different result	as the RWDI modelling. Further, the predicted concentrations shown in the RWDI report appear to be comparable or high compared to MOE monitoring data from sites near major transportation corridors. Consider, for example, the Toronto West monitoring site, located near Highway 401 where approx. 400,000 vehicles travel each day (about double the daily traffic on the Gardiner Expressway). The observed maximum 1-hour NO2 concentration at that location in 2007 was 72 $\mu g/m^3$; whereas, maximum concentrations shown in RWDI's study for the year 2010 are in excess of 150 $\mu g/m^3$ when background is added to the predicted concentration. Similarly, the maximum 1-hr CO concentration observed at the Toronto West site in 2007 was approx. 1700 $\mu g/m^3$ (1.4 ppm); whereas, the maximum predicted concentrations in RWDI's study for the year 2010 are closer to 3000 $\mu g/m^3$. A similar result is also found for PM2.5, with the maximum 24-hour concentration at the Toronto West station being 41$\mu g/m^3$ in 2007, and the maximum predicted concentrations in RWDI's study being similar in magnitude for 2010 and higher than that for 2016. As such, the RWDI study is conservative in its approach, because predicted concentrations are high relative to the Toronto West station where significantly greater traffic volumes exist, but they are still below the criteria maximums.
35.	In Table 13 (Predicted Maximum 24-hr PM_{10}) all receptors show at least a doubling between the predicted 2010 and 2015 concentrations, except for R19 which shows a slight decrease. If this is valid there ought to be an explanation as to why. However, it could be just a typo?	This was explained briefly in the 2nd last paragraph of Section 5 of the RWDI report. The increase in predicted PM contributions from the modeled emission sources is related to uncertainties in road dust estimation techniques. The 2010 results were derived from RWDI's previous study, conducted in 2005. The 2016 results are based on an updated analysis. The predicted increase in PM concentrations between 2010 and 2016 is due to changes in road dust emission estimation techniques used now, as opposed to 2005. Road dust emission factors published by the U.S. EPA were revised. RWDI also updated some of the estimated road surface silt loadings used in 2005. This resulted in an increase in predicted PM emission rates from some of the roadways (particularly Lake Shore Boulevard)
36.	Disagrees with previous RWDI studies (albeit	This comment requires clarification as to which

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	from 1980s/90's) regarding background PM_{10}.	previous studies are being mentioned, and in what way there is potential disagreement.
37.	Commenting that PM_{10} could exceed AAQC "if background and max concentration were to occur at same time" implies this is a rare occurrence. Why? The road dust occurs at same time as high vehicle movements (especially if ignoring stop start accelerations and braking PM_{10} creation) and as background increases dramatically on smog days — the conclusion is questionable.	In the present case, the maximum predicted PM concentrations from the modeled emissions sources occur under low wind speed conditions with the wind coming from northerly directions that would direct emissions from the Gardiner Expressway and Lakeshore Road toward the modeled receptors. Elevated background levels of PM10 and PM2.5, on the other hand, are most often associated with summer smog events, which tend to occur under southwesterly wind directions (coming across Lake Ontario or along the Lakeshore) and are also often associated with moderate wind speeds.

Response to Comments Received from the York Quay Neighbourhood Association – January 28, 2011

Introduction

A. The EA has been conducted to consider the potential environmental effects that are likely to be caused by the Project. The EA included public consultation. Some of the questions relate to matters that are beyond the Project or not related to the Project, but instead concern matters that a person may have questions about. As such, although some of the responses indicate that the question goes beyond the Project and the EA, we have also provided information in order to be as responsive as possible. All questions, issues, concerns and responses have been and will be considered as part of the EA, including by the TPA before it makes a decision as to whether the Project will proceed.

B. Some of the questions suggest that the Project will expand the BBTCA. The TPA does not have a proposal to expand the BBTCA, which is governed by the Tripartite Agreement between the TPA, the federal government and the City of Toronto. The Tripartite Agreement includes conditions that have the effect of limiting the capacity of the BBTCA, which the TPA has complied with and will comply with. Given that the BBTCA will achieve the estimated capacity it is capable of accommodating under the Tripartite Agreement without the Project (i.e., the use of 202 aircraft slots per day), whether or not the Project proceeds, there will be more (or less) aircraft and passenger volumes and road traffic, independent of the Project.

   The assessment of the potential cumulative effects, as stated in section 5.6 (page 83) of the draft screening report, is the assessment of the potential for effects from the Project to combine with effects of other likely projects and activities in the Study Area. For cumulative effects to occur there must be an overlap of effects in both time and space. The draft environmental screening indicated "while the Project is expected to result in some short term construction effects, no material longer term operations related effects are anticipated". Given there would not be effects resulting from operation of the Project, there would be no cumulative effects to assess during this period.

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1.	The questions and concerns contained herein have been compiled by the York Quay Neighborhood Association for submission to the Toronto Port Authority with respect to the report entitled `Proposed Pedestrian/ Services Tunnel and Perimeter Road Project, Draft Screening Report' dated November 2010.	Comment noted.
2.	The Draft Screening Report identified several local environmental factors which require immediate study by the TPA. We	All applicable matters and factors have been included and assessed as part of the EA. The results of the EA

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	believe that significant adverse environmental effects are likely to occur from the project, which are not justifiable, based on the quality and quantity of information included in the Draft Screening Report to date. Our review of community concerns indicates that there clearly is insufficient information available to all stakeholders including the Toronto Port Authority (TPA) to confirm a decision on this project at this time.	indicate the Project would not likely cause significant adverse environmental effects, including taking into account the implementation of technically and economically feasible mitigation measures. The information relied on is more than sufficient to support the EA, including based on Dillon's extensive experience with EAs. Please see the draft environmental screening report, including the summary at page (vi): "*Some minor, localized and short-term project construction related nuisance effects are expected. Very minor to no effects are expected for the operations period. The EA predicts that neither the direct effects nor the cumulative effects of the project would result in significant adverse effects on the environment.*"
3.	The questions and concerns provided are not intended to frustrate the planning process, but rather to identify, clarify, quantify, and properly document those issues that cannot or have not been dealt with under any other planning process.	Comment noted.
4.	The questions remaining and arising from the Public Information Centers of November 30, 2010 and January 12, 2011 have been bolded below; please reference the line numbers shown in the left hand margins of this submission. The comments compiled herein are not necessarily listed in order of priority. Should there be any questions contained in this submission that the TPA feels are not fair and reasonable, please flag these individual questions separately from the rest of your responses for discussion.	Comments noted.
5.	As we are unsure as to what the next steps the TPA will take regarding the Tunnel Screening Project, we request the following	

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	with respect to this submission: a) that this submission be included in an Appendix to the final Screening Report document on which the decision is made whether to construct the proposed works b) that YQNA be furnished with complementary hard and soft copies of the complete Final Screening Study Report on which the decision is made whether or not to proceed with this project c) that this submission be included in the document reviewed by the parties front-ending the project construction costs	This submission will be included in the final Environmental Screening Report, which will be used by the TPA in making its decision as to whether to proceed. The YQNA will be provided with a hard and electronic copy of the final Environmental Screening Report. If the Project were to proceed, the final Environmental Screening Report would be included in the reference documents for future design-build-finance-maintain aspects.
STUDY PROCESS		
6.	Waterfront residents were introduced to two new EA processes they had not seen before despite high levels of community participation: the Canadian Environmental Assessment Act (CEAA) and the Canada Port Authority EA Regulations (CPA EA). These processes are unfamiliar and appear to be sharply at odds with several EA processes undertaken over the past decade by various levels of government and private interests along the Waterfront. Though some information is contained in the Screening Report, it is not clear how the EA processes work together.	The EA process is not new, and has been followed by the TPA for other projects, including the development of the ferry transfer passenger facilities. For the Project, the TPA has followed the process that is required by the Canada Port Authority EA Regulations (made under the Canadian Environmental Assessment Act).
7.	**Can the TPA include concise bullet overviews of both assessment and approval processes as they apply to this project, showing the linkages between the two EA processes? Can the TPA incorporate decision-making process flowcharts, including alternative feedback loops,**	Please refer to question 6 above. There is one EA process. For certain projects, such as the Project, the Canada Port Authority Environmental Assessment Regulations require that an environmental assessment (EA) be conducted as early as practicable in the planning stages

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	appeal mechanisms for bump-ups, etc. that are typically included in reports of this nature? Can the TPA include current copies both Acts (in whole or in part) in the Appendices of the Final Report for permanent record purposes?	and before irrevocable decisions are made. The EA must include a screening and screening report if the project is not described in the comprehensive study list (the Project is not on the list). The scope of the Project must be determined by the TPA. The screening of the Project must include consideration of: the environmental effects of the Project, including the environmental effects of malfunctions or accidents that may occur in connection with the Project and any cumulative environmental effects that are likely to result from the Project in combination with other projects or activities that have been or will be carried out; the significance of such effects; comments from the public that are received as part of an assessment process; and technically and economically feasible measures that would mitigate any significant adverse environmental effects of the Project. The scope of such factors must be determined by the TPA. If the TPA is aware of any special circumstances that would make the Project of interest to the public or if public participation is required by any Act or regulation, the TPA must give the public notice of the screening and must give the public an opportunity to participate in the screening and an opportunity to examine and comment on the screening report and on any record that has been filed in the public registry. The TPA must take into consideration the screening report and comments emanating from public participation, and can take one of three courses of action: (1) unless public concerns warrant a reference to a review panel, where, taking into account the implementation of any technically and economically feasible mitigation measures, the Project is not likely to cause significant adverse environmental effects, the TPA may decide (i.e., commit itself) to carry out the Project; (2) where, taking into account the implementation of any technically and economically feasible mitigation measures, the Project is likely to cause significant adverse environmental effects that cannot be justified in the circumstances, the TPA must not commit itself to carrying out the Project; or (3) the TPA must refer the Project to the Minister of

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		Transport, who must submit it to the Minister of Environment for referral to a review panel if (i) the TPA is uncertain whether the Project, taking into account the implementation of any technically and economically feasible mitigation measures, is likely to cause significant adverse environmental effects; (ii) the Project, taking into account the implementation of any technically and economically feasible mitigation measures, is likely to cause significant adverse environmental effects and the Project cannot be justified in the circumstances; or (iii) public concerns warrant a reference to a review panel. If the TPA were to proceed, it must ensure that mitigation measures are implemented; design and implement a follow-up program, if appropriate for the Project; and advise the public of its course of action, mitigation measures to be implemented, and the follow up program (if any) and the results of same.
8.	The vast majority of City of Toronto residents understand the words 'Environmental Assessment' and 'EA' in terms of an Ontario Class EA process. When someone refers to an EA having been completed, the words are understood to mean a comprehensive review has been undertaken to that extent. The Tunnel Screening Report document includes the words 'Environmental Assessment' and 'EA' throughout, though the report is informal in comparison to a Class EA. This will set up avoidable confusion in future public meetings, as someone could inadvertently state or write that 'an EA was done and everything was reviewed'. Both speaker and receiver would be interpreting these words quite differently, resulting in escalating avoidable debate. Can the TPA completely remove the word 'EA' from all Screening Report literature and 'Environmental' from the title page for clarity? The report should be clearly referred to as 'Screening Report' and not 'EA' throughout the document.	The TPA is required to follow the Canada Port Authority Environmental Assessment Regulations, which it has done Refer to Responses #6 and #7 above for additional information regarding the EA process.

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9.	The results of the Tunnel study will effect one of the most prominent and intensely developed waterfronts in Canada. It appears reasonable that a rigorous EA study be completed that meets the expectations of local citizens and is more sensitive to the local human and environmental issues than to the extent that would typically be studied inside a large industrial port district. **Can the TPA confirm if there is anything which prevents it from expanding the project scope from a Screening Report to one similar to a Comprehensive Study Report, such that it meets requirements of a more rigorous assessment process that would be typically employed locally, in order to address the higher complexity of issues and potential outcomes of the proposed tunnel?**	Although the EA is referred to as a "screening" in the legislation, it is very rigorous. There are no issues related to the Project that would warrant taking a different approach to the assessment of the potential environmental effects of the Project. The EA is more than sufficient to address any potential environmental effects of the Project. Refer to responses #6, #7 and #8 above for more information about the EA process.
10.	During the Tunnel PIC No. 2 on November 30, 2010, Dillon Consulting responded to a resident question with a few general remarks concerning the CPA EA process during which it was twice noted that the TPA was not obligated to hold any public meetings on this tunnel project under this Regulation. Upon review, this comment does not align with CPA EA Regulation Clause 11 which essentially states that public participation is required. **Can the TPA clarify these matters?** The Dillon comments would otherwise leave an impression of being self-gratuitous or misleading.	Dillon's statement confirmed that public meetings are not expressly required under the CPA EA Regulation. The regulation requires that if the TPA is aware of any special circumstances that would make the Project of interest to the public or if public participation is required by any Act or regulation, the TPA must give the public notice of the screening and must give the public an opportunity to participate in the screening and an opportunity to examine and comment on the screening report and on any record that has been filed in the public registry. There is no reference to the need for any public meeting. Public participation for EAs often include notice of the project and access to documentation only. For the Project here, without commenting on whether any special circumstances exist, the TPA has given the public notice of the screening, and the opportunity to participate in the screening and examine and comment on the screening report and on any record that has been filed in the public registry. There has been extensive public consultation undertaken, which included three public meetings.

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11.	A purpose of a CEEA EA process is to ensure federal authorities carry out their responsibilities in a coordinated manner with a view to eliminating unnecessary duplication in the EA process, while achieving greater efficiency and effectiveness in use of all public and private resources. An additional purpose of the CEEA EA process is to promote coordination between federal and provincial governments and agencies to ensure that projects carried out on federal lands do not cause significant adverse effects outside the jurisdiction in which the projects are carried out. The data collection and analyses discussions for several of the assessment factors do not appear to be coordinated with other levels of government and adjacent agencies. Generally, report chapters have the appearance of having been written 'in isolation' by the TPA. **Can the TPA confirm who is the designated Federal EA Coordinator (FEAC) for this project?**	The TPA is the proponent. A Federal Environmental Assessment Coordinator was not required.
12.	The References listed in Chapter 8 are few and do not contain several obvious requirements for review regarding effects assessment. For example, it is not clear from the report to what extent the Master Plans and working documents pertaining to the following projects have been reviewed by the TPA: Queens Quay Revitalization project including Waterfront Trail, Fort York revitalization, East Bayfront residential community, Tommy Thompson Park, proposed waterfront park and residential community in Port Lands, Lake Ontario Park, proposed Ripley Aquarium, revitalized Ontario Place among several others. Chapter 5.6.2 states these have likely have not yet been reviewed by the TPA though they will obviously be contributing to the effects resulting from cumulative airport activities.	The references described and the extent of the study areas assessed in the Screening are appropriate for the Project.

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13.	**Can the TPA include a typical 'Policy Inventory' in the Screening Report to show which documents, reports and adjacent study recommendations from other levels of government were reviewed and incorporated while preparing this Tunnel Screening Report?** Desirably these policies are footnoted throughout the Screening Report where they have been incorporated.	Reference documents have been noted in the Environmental Screening Report.
14.	**Can the TPA list the other activities and projects to be carried out that it has reviewed for cumulative effect assessment of airport activities?** Chapter 5.6 lists only two local projects while several others of greater scope are not included.	Beyond the BBTCA, two projects (90 Stadium Road and City of Toronto's Island Water Main) were identified as potential projects that could result in cumulative effects with the Project during the construction phase. The Canada Malting site was not included as the area does not currently have plans for redevelopment and therefore had no potential project to assess that could result in cumulative effects. The project would not result in increased airport activity. Given that the BBTCA will achieve the estimated capacity it is capable of accommodating under the Tripartite Agreement without the Project (i.e. the use of 202 aircraft slots per day), it is reasonable to conclude that there would be increased aircraft or passenger volumes or road traffic independent of the Project. Cumulative effects, as stated in Section 5.6 (page 83) of the draft screening report, is the potential for effects from the Project to combine with the effects of other likely projects and activities in the Study Area. For cumulative effects to occur there must be an overlap of effects in both time and space. The Draft Environmental Screening indicated "while the project is expected to result in some short term construction effects, no material longer term operations related effects are anticipated". Since there are no operations effects of any significance from the Project (e.g. no increased aircraft activity and no traffic increases attributable to the Project), any cumulative effects during this period would also not exist.

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DO NOTHING' ALTERNATIVE		
15.	On November 30, 2010, the community requested that the TPA include the 'Do Nothing Alternative' with respect to this project as per typical EA studies. This would provide an open and transparent check on the cost effectiveness of the proposed project. There is also a planning advantage in doing so, as the requested report chapter would then focus on the range of environmental effects likely expected to occur without constructing the tunnel. This would then address a number of resident concerns regarding current and projected airport activities, exclusive of the increased potential effects that could result after tunnel construction.	The assessment of a "Do Nothing" alternative may be required for provincial EAs. Although not expressly required under the CPA EA Regulations, doing nothing is an alternative if the TPA were to decide that the Project would likely cause significant adverse environmental effects and should not proceed.
16.	**Can the TPA include a clear statement in the report which confirms that the current and projected effects of airport activities (exclusive of the tunnel), for each of the environmental assessment factors shown in the Screening Report, have never been clearly documented or reviewed in any public forum to date?**	The EA for the Project has included all relevant and applicable matters and factors, including the appropriate assessment of cumulative effects.
17.	**Can the TPA include a statement in the Report that it now takes this opportunity under this CEAA EA Process to complete a quantification of all effects to date, in order to properly assess the significance of the increased cumulative effect resulting from the proposed project?** The Screening Report notes that certain modeled cumulative effects would occur with or without the tunnel.	The EA for the Project has included all relevant and applicable matters and factors, including an assessment of the significance of effects and the appropriate assessment of cumulative effects. Also refer to Response #14 and Introduction B regarding cumulative effects.
18.	Information pertaining to the `Do Nothing Alternative' would already have to be included in the Screening Report under the	The potential environmental effects are described in the Screening Report, as well as the assessment of

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	various passages on cumulative effects, however the info is currently too heavily embedded for any stakeholder including the TPA to review and comment on with certainty. **Can the TPA include a section in the Screening Report (similar to the 'Do Nothing Alternative') which shows separately the portions of environmental effects currently embedded in various passages on cumulative effects, that relate to current and projected conditions without the tunnel?**	cumulative effects. There would be no cumulative effects from the Project if the Project were to proceed. However, if the Project were not to proceed, there would be increased aircraft and passenger volumes, anyway. Although not required for the EA, the TPA has provided additional information regarding air quality and noise, which considers such increases. Refer to Response #14.
19.	Showing current and projected information separately in the Screening Report would also assist all stakeholders in confirming whether or not any likely significant cumulative effects have already occurred. Several of the comments made at the public meetings would suggest to the reasonable person that this could in fact be the case: gas fumes at the dinner table, films left on balcony railings, furniture, and toys, sleep loss caused by nighttime airport activity, performance interruptions at Music Garden, intervals of traffic saturation along Queens Quay and Bathurst Street corridors due to N-S airport traffic, etc. Some of these comments appear to be quite serious from a community health perspective. **Can the TPA include the mitigation plans previously prepared to deal with these existing cumulative effects, caused solely by airport activities, so they can be compared with those in the Screening Report? Can the TPA confirm if the observations above regarding existing conditions, all of which have arisen since 2006, could reasonably be considered 'significant effects'?**	These questions go beyond the Project and the EA. The EA for the Project has included all relevant and applicable matters and factors, including an assessment of the significance of effects and the appropriate assessment of cumulative effects. Refer to Response #14.
20.	It was noted on November 30, 2010 by Dillon Consulting that the CPA EA Regulations do not force the TPA to prepare a `Do Nothing Alternative' (mandatory in	Refer to Response #15.

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	most EA studies familiar to Waterfront residents). **Can the TPA confirm if there is anything which prevents its analyses of the `Do Nothing Alternative' from being included in its Tunnel Screening Report? Can TPA confirm if anything prevents the EA process from being tailored or customized to suit local needs?**	
21.	It is worth noting that the 'Do Nothing Alternative' would NOT be a typical requirement for a typical seaport. These ports initiate studies when there are irreconcilable or emerging conflicts between private users of the given port's facilities. The lack of a 'Do Nothing Alternative' in these circumstances is an important political mechanism that ensures that something will indeed be done to resolve the problem to the satisfaction of all parties and forces both the port and the competing private users to arrive at a solution.	Comments noted.
22.	The circumstances surrounding this TPA Tunnel Study are different than just described, in that there are no competing private port-user interests surrounding the use of the port facilities. In fact, all private interests currently conducting business through the existing Port of Toronto (of which there are few relative to other seaports) have to date been able to resolve concerns between them without any assistance of the Toronto Port Authority, to our knowledge. Yet, the TPA is needed to resolve conflicts between (a) the private interests who are operating in the port area and (b) the private interests surrounding the port facilities who are non-users of the facilities.	Comments noted. No response required.
23.	Given that the tunnel study primarily benefits only one private interest user of port facilities (ie. Porter Airlines) and appears on all	Refer to Response #15,

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	accounts to disbenefit local resident and recreational non-users of the port facilities, the inclusion of a `Do Nothing Alternative' assessment in the Tunnel Screening Report appears to be highly appropriate for the TPA to introduce, given these circumstances. Its inclusion becomes even more appropriate if the tunnel is being promoted by the TPA to serve more than the one port user at the complete expense of the non-port users.	
STUDY SCOPE		
24.	The objectives of the Screening Report are not clear and are inconsistent. A review of the Tunnel Screening Report literature demonstrates or states at several junctures, that the Tunnel Screening Report has multiple explicit or implicit objectives embedded within it: i. to summarize construction impacts for a tunnel and road project ii. to head-off anticipated concerns with respect to potential airport expansion 'after tunnel construction', the pressures for which will likely and reasonably emerge as a result of tunnel construction (300 slots discussed publically by Porter CEO) iii. to head off anticipated concerns with respect to an increase from current airport activity to levels projected and modeled to occur 'without tunnel construction' (202 slots were apparently modeled in Year 2005 without surrounding landowner knowledge) iv. to close the door on growing community opinion that the current level of airport activity (say 120 slots) has reached and at times exceeded the limitations of the confined airport site	Comment noted, but the characterization is not accepted. Please note that the objective of the Proposed Pedestrian/Services Tunnel and Perimeter Road Project, as stated on Page 1, is to "improve access to the BBTCA". The Screening Report provides details of the EA screening that was completed for the Project.

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25.	**Can the TPA initiate supporting mini-studies to separately and more transparently address each of the objectives embedded within the current Draft Tunnel Screening Report? Can the TPA present information currently in the Screening Report such that the effects of each of the above objectives are clear?**	The EA for the Project has included all relevant and applicable matters and factors. Although not required for the EA, the TPA has provided additional information regarding air quality and noise.
26.	The broader issues of activity growth, airport expansion possibilities, and site limitations needs to be thoroughly studied with the community in order to subsequently ensure appropriate tunnel design and construction expenditure. **Can the TPA scope the Tunnel Screening Report such that it is clear in purpose with respect to the above objectives?**	The Project and EA were properly scoped by the TPA, and the objectives of the Project and the Screening Report are described in the report. Also refer to Response #14,
27.	For example, the TPA could scope the Draft Report of November 2010 on just the tunnel and road construction alternatives. All extraneous analysis of broader issues not related to specific tunnel construction alternatives could be relocated to other working documents. The other working documents would then support the additional analyses required for the higher-order Screening Report whose recommendations are being assumed for the purposes of the Draft Report. The Draft Report could then be filed to await the results of the higher level studies being completed by the TPA to which it would conform. In future, the TPA could then introduce more sub-chapters to the Draft Report including information extracted from the higher level studies once completed, to cover off each of the above objectives.	Refer to Response #25.
28.	At this preliminary stage of investigation, the community views all objectives as having likely outcomes of significant environmental	The EA for the Project has included all relevant and applicable matters and factors. The use of the BBTCA

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	effects. Accordingly, the study scope should be such that all explicit and implicit objectives of this tunnel report are thoroughly and transparently studied and documented, including incremental and cumulative effects of direct and indirect effects. The effects of any airport activity should be clearly understood by the surrounding landowners who made past investments based on earlier less onerous airport service criteria.	is governed by the Tripartite Agreement between the federal government, the City of Toronto and the TPA. The airport has been in existence since 1939, and the Tripartite Agreement has been in place since 1983. The Project does not propose any changes to the Tripartite Agreement. Also refer to Response #14 regarding cumulative effects.
29.	A single, consistent Study Area was not developed in order to review the cumulative effects of airport activities. The scope of the assessment factors contained in the Tunnel Screening Report varied in turn to suit the individual Study Areas. This is not often seen in EA studies and is not desirable as it can be confusing for the Study Team as well as the public.	Study areas vary depending on the environmental component being assessed, which is normal for EA studies. For example, the lands potentially impacted by potential vegetation removal will be different from those potentially affected by air quality impacts. Also refer to Response #14 regarding cumulative effects.
30.	Different study limits and varying geographic extents can result in inconsistent level of review of the project effects. For example, it is unsettling for any reader when the least contentious assessment factor in this study, Vegetation, has the most information included in the Screening Report document.	Refer to Response #29. An inventory of the vegetation south of the current airport runways was required due to the proposed Perimeter Road located adjacent to natural features in this area.
31.	The Study Area used for effects assessment should consider that there will be severe social and economic effects of noise and traffic-generated pollution well beyond Queens Quay to the north and Dan Leckie Way to the east as shown. Currently, noise is heard at York Quay to the east and as far as Queens Street to the north. The traffic and transportation issues will affect the intersections along Lake Shore West, Stadium Road, Lower Bathurst Road, and Spadina. Rogers Center and Ontario Place are mentioned on p.44 but do not appear in any	The Project will not result in such effects. The Draft Environmental Screening indicated "minor, localized and short-term project construction related nuisance effects are expected. Very minor to no effects are expected for the operations period. The EA predicts that neither the direct effects nor the cumulative effects of the project would result in significant adverse effects on the environment."

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	figures. Tommy Thompson Park as well as affected areas to the west of the airport are not shown.	
32.	**Can the TPA complete the Screening Report using one Study Area? Alternatively, can the TPA include a sub-chapter under Project Scope which discusses the rationale behind the need for various study area limits including figures of each?**	Refer to Responses #29 and #30. The areas considered were based on the Project and the particular component being considered and assessed.
33.	**Can the TPA include a statement under Project Scope confirming that there will be absolutely no access for recreational users between the island park and the mainland provided by either the tunnel or road project?**	The Project would provide access between the mainland and the BBTCA (tunnel portion of the Project) and security access on the perimeter road portion. .
34.	The scope of some of the assessment factors discussed in the Screening Report apply to a report focusing exclusively on comparing tunnel construction alternatives, but others appear to be aimed at capturing the effects of increased airport activity. Some of the report chapters include cursory analyses of background and existing conditions, which seem to be aimed toward the typical requirements of a Screening Report, but fall short. Regardless of assessment factor scope or depth of background discussion included in the Report, all embedded findings in the Screening Report appear to be subsequently interpreted as 'a comprehensive review of anticipated environmental effects'. **Can the TPA include in the report more fulsome discussions of the rationale used in setting various aspects of the study: (a) project scope, (b) factors to be assessed and the scope of the factors, (c) coordination with other parties, (d) public consultation program in context of Noise Study PIC No.1 on February 17, 2010 which immediately preceded Tunnel Study**	The scope of the Project and the factors to be assessed are described in Chapter 3 of the draft Environmental Screening Report. Chapter 6 contains information about the involvement of stakeholders and public consultation. Even more details about public consultation are provided in the Appendix to the report.

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CUMULATIVE EFFECTS		
35.	Chapter 5.6 is called 'Cumulative Effects' though the material contained in that chapter discusses two construction projects surrounding the proposed tunnel. The Chapter contents attempt to show that a comprehensive and integrated review was completed as required. The choice of word selection for the Chapter heading is a curious one, given that the study recommendations suggest that 'direct and cumulative effects' were reviewed. A qualified engineering consultant would typically avoid the potential for any legal misinterpretation, as Dillon has done on other projects. **Can the TPA confirm whether it was the TPA's intention to purposely introduce confusion into the Tunnel EA process by its alternate use of the word 'cumulative'? Can the TPA advise how the word 'cumulative' came to have two definitions in the same document? Can the TPA resolve this confusion in the Screening Report?**	There are not alternative definitions. Cumulative effects, as stated in Section 5.6 (page 83), is the potential for effects from the Project to combine with the effects of other likely projects and activities in the Study Area. For cumulative effects to occur there must be an overlap of effects in both time and space. The EA included the appropriate assessment of cumulative effects. Also refer to Response #14.
36.	The study has stated its intention to review cumulative effects which include those pre-existing the current level of airport activity. After a series of clearly worded questions from various residents during the Jan 12 public meeting, Dillon Consulting clearly confirmed to the audience that all cumulative effects of current and future airport related activities were not fully reviewed under this Screening Report.	The EA included the appropriate assessment of cumulative effects related to the Project. Refer to Response #14.
37.	Regarding air quality effects, different residents have complained in every public meeting in 2010 that fuel can be smelt at various times of day along the Waterfront. The TPA appeared surprised on Jan 12 when one resident noted fuel smells inside his home, however, this is not a new concern. It	The questions go beyond the Project and the EA. The EA has included all relevant and applicable matters to be considered for the Project. Also refer to Response #14 and Introduction B regarding cumulative effects.

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	appears fair and reasonable to have confirmed through this Screening Report whether or not the current level of occasional airport fuel smells at the resident's guest dinner table will increase further still, and to what extent, or remain at current levels after the project is constructed. The contributions to smog or air contaminants in the downtown core contributed by projected and\potential airport activities were not part of the study, though it seems intuitive that cumulative effects from an airport would be studied.	
38.	Regarding noise effects, the cumulative effects at the receptor locations determined through modeling in the report have been disputed by resident field measurements that were obtained using noise meters calibrated with those of local noise consultants. The modeled cumulative results presented by the TPA do not align to resident behavior observed by the TPA. The resident behavior is in reaction to the cumulative effects that are currently experienced in the field today.	Comment noted. Field measurements were not conducted, nor required, as part of the noise assessment.
39.	Regarding traffic effects, the Level of Service (LOS) of the Bathurst Street, Stadium Road, and Queens Quay corridors and intersections have apparently not been modeled for the noted horizon years. Yet some modeling has been done by the TPA suggesting there are no cumulative effects of airport activity on the surrounding road network. Given that some local road sections are nearing saturation during the peak hours, based on field observation of airport related activity, the cumulative effects to the road network caused by increased airport activity today and in the future are still not known.	This goes beyond the Project and the EA. As stated previously, the project would not result in increased airport activity. Given that the BBTCA will achieve the estimated capacity it is capable of accommodating under the Tripartite Agreement without the Project (i.e., the use of 202 aircraft slots per day), it is reasonable to conclude that the Project would not affect aircraft or passenger volumes or road traffic, because these would occur whether or not the Project proceeds. The Project would not affect the traffic accessing the airport and traffic on Bathurst Street, Stadium Road and Queens Quay, corridors and other surrounding roads. Also refer to Response #14 regarding cumulative effects.
40.	Regarding bird effects, it appears from the report that the small number of bird species	The TPA has had comprehensive examinations of bird

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	living within the airport perimeter have been reviewed, but the number of migratory birds including Species at Risk (threatened and vulnerable), travelling along the airport flight path to and from the immediately adjacent Toronto Islands bird sanctuary, were omitted from the study of cumulative effects.	species in the area completed for prior recent projects and the related EAs. This information is still current, useful and relevant. Migratory birds that are relevant to the Project Study Area were documented in Section 4.1.3. The Project would not have an adverse effect on migratory birds or the habitat of migratory birds.
41.	**Will the TPA commit to completing the analyses commenced in this study, whether or not the tunnel project proceeds, to the extent such that cumulative environmental effects of airport activities are transparently and thoroughly studied with the community for given horizon years, and then clearly documented so that the extent of community concerns can be clarified and/or confirmed once and for all?**	The question goes beyond the Project and the EA. The EA has included all relevant and applicable matters to be considered for the Project. Also refer to Response #14 regarding cumulative effects.
REPORT DOCUMENTATION		
42.	The report documentation is currently presented in a very consolidated way which makes the project purpose, scope, and incremental and cumulative environmental effects of the tunnel project unclear, difficult to review, understand, and discuss. Improvements are required to the Draft Screening Report to benefit current or future stakeholders (including current and future TPA Board members) to help focus, trace, and clarify the specific community discussion points which are likely to arise. Access to clearly documented information saves everyone time.	While there is no standard format or express requirement on how to document the results of the EA under the CPA EA Regulation, the draft screening report follows a format that is typical and standard for such EAs.
43.	An unexpectedly high number of redlines were needed to understand this draft Screening Report, far too numerous to enumerate here. Some chapters appear to be heavily edited (ie. information removed) or otherwise not prepared systematically. **Can the TPA ensure that the next draft of this**	Comments noted. The final Screening Report will undergo appropriate reviews.

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	Screening Report is reviewed twice: (i) by a qualified technical document reviewer and (ii) by someone familiar with community perspectives? This will hopefully clarify loaded passages and more effectively focus all stakeholders on the technical concerns remaining.	
44.	The report document itself does not appear to have been completed to the same level of professional rigorousness as is typically demanded by federal agencies when completing EA studies. In places, the draft report has the feel of an internal briefing memo to the TPA. Can the TPA include the list of documents to which the Screening Report must comply? Can the TPA include a clear statement confirming its position that the Draft Screening Report literature conforms to fullest extent possible to typical documentation requirements submitted under the CEAA?	The EA and the draft environmental screening have been conducted and completed in compliance with the Canada Port Authority Environmental Assessment Regulations. Also refer to Response #7 regarding the EA process.
45.	There are a host of interconnected and mutual supportive issues requiring review with respect to this Screening Report. The Study Area contains a number of sensitive environmental concerns which are not comparable to a typical port. One would expect the analysis and documentation completed to date, as summarized in the Draft Screening Report, should have been much more substantive in quality and in quantity for such a sensitive area. From reading the Screening report, it would appear as though the engineering consultant was severely constrained by his fee budget in completing this assignment. **Will the TPA significantly increase the engineering consultant fee budget, so that sufficient analysis can be undertaken and the Final Report be confidently relied upon by all Stakeholders including the TPA?**	See previous responses, including responses #42-44.

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46.	After reading the report, it is not still clear why the tunnel is needed. **Can the TPA include a concise clear statement of Project Need - separating this from other desirable project attributes not dependent on a tunnel ie. a tunnel is not needed for the fiber optics and other services noted?**	The CPA EA Regulations do not require the EA to include an assessment of the need for the Project. However, the objectives of the Project are included in the draft screening report.
47.	There are in fact two (2) projects covered by the Screening Report: the tunnel and the perimeter road. The issues and justification for the expense of the perimeter road is hard to trace through the current draft document which blends the two projects. **Can the TPA create a separate 'Section II' in the document to contain all info related to the Perimeter Road: background, effects, and mitigation measures?** This should be straightforward given the low volume of information which appears to be documented for the perimeter road in the current draft. It will also assist all stakeholders in confirming if any effects or concerns as they are currently not clear.	Comment noted. *Table 5.2, Environmental Effects Analysis and Proposed Mitigation Measures*, contains references where the impacts are associated with the Perimeter Road.
48.	**Can the TPA revise the Draft report structure (Table of Contents) so that the content of each Chapter is clearer and traceable, as follows?** • Reformat information contained in Chapters 1 -3 under these more typical report headings: 'Purpose of Project' and 'Scope of Project' • Structure Chapters 4 and 5 so they have the same sub-chapters in same sequence. • Breakout the Chapter 5 Mitigation issues so that they are in a separate Chapter, presented in the same sequence of sub-chapters.	The draft Environmental Screening Report was organized in a logical manner, which is typical and standard for such reports, as follows: • Project (description of the Project) • CEAA (legislative requirements) • Scope (what will be assessed and how) • Baseline Conditions (existing conditions) • Effects and Mitigation • Consultation • Follow-Up and Monitoring

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	• Reduce or limit the information shown in Chapter 5 'Environmental Effects' to the effects resulting 'after the tunnel project is constructed'. Transfer discussion of environmental effects that are 'prior to tunnel construction' to Chapter 4 'Background/ Baseline Conditions'. • Breakout information shown in Chapter 5 related to 'indirect effects' of the project and include in a sub-chapter for each factor (ie. show separately from 'direct effects' of project). • Breakdown the information shown in Chapter 4 'Background/ Baseline Conditions' into sub-chapters called 'Pre-Existing Conditions' and 'Existing/ Current'.	
49.	'Baseline conditions' on page v are defined to mean 'Existing Condition' information. **Can the TPA reformat Chapter contents with sub-headings to clarify what portion of the cumulative effects for a given assessment factor are being discussed: Background/ Pre-existing, Existing/ Current, Projected, or Post Tunnel Construction?**	Refer to Response #14.
50.	From the communities' perspective, the contents of the 'Pre-existing Conditions' sub-chapter would contain environmental data and analysis of conditions that were present prior to the dramatic change in airport activity which started in 2006. The change occurred without advisory from TPA to stakeholders and resulted in a gradual increase in the number of resident complaints from this time. In Year 2002, the TPA first announced airport expansion plans. It is presumed that significant environmental effects information would have been updated by the TPA immediately prior to making that announcement, in conjunction with a	This goes beyond the Project and the EA. Refer to Response #28.

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	technical due diligence exercise. Accordingly, available background conditions prepared as of Year 2002 should be included under the proposed 'Pre-Existing' sub-chapter, formatted for comparison purposes with other horizon years.	
51.	**Can the TPA reorder the Biophysical assessment factors so that related factors are always closer together - to assist with report cohesiveness and follow up?** The factors could be grouped as follows: atmospheric (air, noise); water (fish, groundwater, surface water); birds (migratory, SAR); land (soils, vegetation, wetlands).	The list of assessment factors was established early in the project as part of the screening process and included as part of the Environmental Screening Scoping Document issued in May 2010 and the Draft Screening Report issued in November 2010 (this is available on the TPA's Project web site).
52.	**Can the TPA include a Definitions page in the report to clarify frequently confused or poorly understood terms and unfamiliar abbreviations used in the context of this study?** For example, define the following: impact, effect, significant effects, indirect effect, direct effect, proponent, mitigation, residual effect, cumulative effect, baseline, background, masl, slots, COSSARO, AAQC etc.	Comment noted. Definitions are provided throughout the Screening Report.
EFFECTS ASSESSMENT		
53.	The results of the Tunnel study will effect one of the most prominent and intensely developed waterfronts in Canada. It is unknown if any similar marine airport facility exists anywhere, especially in such close proximity to: a downtown core, a revitalized waterfront, and an elementary school. **Can the TPA confirm in the report if there is sufficient information from other comparable precedents to help guide or advise the TPA regarding the projected and potential airport activities noted in the Screening Report?**	The EA for the Project has included all relevant and applicable matters. Also refer to Response #14.

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54.	Even if all airport facilities which ever existed around the world, that were comparable to the Island Airport, have since closed, it is still valuable to learn what if any problems were encountered at those sites so that mitigation measures can be informed here. **Can the TPA incorporate discussion on similar or comparable airport sites existing in North America or around the world, and summarize any lessons that can be learned with respect to the projected and potential airport activity effects covered by the Screening Report?**	Refer to Response #28..
55.	A purpose of any EA process is to review the environment which will be affected either directly or indirectly by a project. The current draft Screening Report appears to address direct effects only. **Can the TPA confirm if there is anything that prevents it from studying indirect project effects?**	Direct effects relate to the "first level" effects of a project (e.g., loss of habitat from the project). Indirect effects (or "second level" effects) are additional effects that could impact other components of the environment as a result of the direct effects. An example of this is the potential noise impacts that could impact outdoor recreation use, which, in our case, would be mitigated using standard construction practices. The screening considered the potential for direct and indirect effects.
56.	**Can the TPA clarify the sentence on page vi which states that the 'direct and cumulative effects would not result in adverse effects': does this confirm whether the cumulative effects analyzed in the report also include some 'indirect' effects or just 'direct' effects for all assessment factors?**	Refer to Response #55. Also refer to Response # 14 regarding cumulative effects.
57.	**Can the TPA breakout and include more information concerning the high number of indirect effects that appear likely to occur and might reasonably be caused to the environment by this project? In addition, can the TPA include related actions that might reasonably be expected to be necessary to prevent, change, mitigate, or remedy indirect effects which might reasonably be expected?** Effects that cannot be mitigated should be flagged by the TPA.	Refer to Response #55 and the mitigation section in the Screening Report.

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58.	On Jan 12, one resident noted that reviewing the tunnel in isolation of airport activity is like focusing on a pipeline to transport gas to a burning fire, without considering the effects that the gas would have on the fire. **Can the TPA confirm if an increase in all airport related activities after tunnel construction is considered a direct effect or an indirect effect?**	Neither. Refer to Introdcution B.
59.	**Can the TPA include in the Report its criteria for each of the assessment factors applied in the both the Screening Report and in past internal studies to confirm when a 'significant effect' will be occurring or has occurred in the field?** Hopefully these criteria are ones that are not too onerous to obtain in the field and can be verified by a third party. **Can the TPA also forward its mitigation plans prepared in past showing its response plans for when these criteria are confirmed in the field?**	The criteria used in the screening report are provided in the report. Although unrelated to the Project or EA, significant environmental effects associated with past airport operations have not occurred and, as such, no monitoring programs were required.
60.	A purpose of the CEEA EA process is to ensure that projects are considered in a 'precautionary manner'. The rushed context in which this study is being completed, the superficial nature of the analyses contained in some of the Screening Report chapters, and the lack of discussion on various indirect effects of the project do not support this typical EA purpose. **Can the TPA incorporate additional comments or information under the various assessment factors addressing this EA purpose?**	The planning stage for the Project, including the EA, has proceeded in a reasonable manner, and has not been rushed. The analyses are extensive and reasonable, and are not superficial. The Screening Report will incorporate all appropriate analyses, considerations and comments.
61.	A purpose of the CEEA EA process is to encourage federal authorities to take actions to promote sustainable development and healthy environments, as well as a healthy economy. **Can the TPA include discussion under applicable assessment factors in the Screening Report addressing this EA purpose?**	The EA is being completed under the CPA EA Regulations. Although this is not one of the matters that is expressly required to be considered for the EA, the EA is consistent with and meets the purposes of the Canadian Environmental Assessment Act.

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62.	**Can the TPA include clear performance measures as envisioned for applicable assessment factors at each of the horizon years noted in the study?** For example, typical noise profile as it varies over 24 hours at sensitive receptor locations before, during, and after construction; air quality indexes in various parks and trails along the Waterfront made worse by projected and potential airport activities varying over 24 hour period, etc.	The question goes beyond the Project and the EA. The EA has included all relevant and applicable matters to be considered for the Project. Although not required for the EA, the TPA has provided additional information regarding air quality and noise.
63.	**Can the TPA clarify the opening statement of Chapter 5.3 such that it addresses 'temporary construction effects' instead of 'significant environmental effects'?** This will align this statement with information immediately following it.	Comment noted. This clarification will be added to the Screening Report.
64.	**Can the TPA add to the opening statement of Chapter 5.3 that Table 5.2 covers construction effects only and the cumulative environmental effects of projected and proposed airport activities as defined under the CEAA are not summarized?**	Comments noted. Refer to Response #14 regarding cumulative effects.
65.	**Can the TPA rename Table 5.3 to confirm it is a 'construction effects' checklist?**	The table addresses both construction and operations phases. However, there would only be very minor or no operations effects.
66.	**Can the TPA make these miscellaneous redlines as follows?** • Change heading at bottom page 2 from Project Description to Project Benefits. • List all federal and provincial departments from whom input is requested or required on page 3 • Table 3.1 on project components does not	"Project Description" is more indicative of what is contained in this section of the report. This information is contained in the Consultation chapter and in the detailed Consultation Report provided in the report's Appendix. The items in Table 3.1 are generally consistent with the

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	match bullets on page 4 • Remove Xs from Table 5.1 so the concerns stand out from table • Rename heading Chapter 5.6 'review of adjacent projects' instead of 'Cumulative Effects' • Improve connections between Tables 5.2 and 5.4	list on page 4. The Xs convey information about the conclusion of the assessment and will remain. This is properly referred to under "Cumulative Effects". Tables 5.2 and 5.4 have been prepared for different purposes but they are based on the same information.
AIR QUALITY Although the Project is not expected to result in emissions (contaminants and noise) that would have an adverse effect, questions were raised about air quality and noise. Although beyond the Project, RWDI was retained to assess air quality and noise matters, assuming the BBTCA is used to capacity. This information is provided in response to questions that were received. As indicated earlier, all questions, issues, concerns and responses have been and will be considered as part of the EA, including by the TPA before it makes a decision as to whether the Project will proceed. References under the sections related to air quality and noise are to the studies conducted by RWDI.		
67.	Different residents have complained in every public meeting that fuel can be smelt at various times of day. **Can the TPA forward those documents prepared in past by health care professionals of sufficient industry pedigree, that support the view that the cumulative effects of air pollutants generated by current, modeled and expanded airport activities, present no short or long term harm to permanent Waterfront residents and workers?** Desirably, confirmation letters from peer reviewers completed as part of the TPA's due diligence are also attached.	The question goes beyond the Project and the EA. The EA has included all relevant and applicable matters to be considered for the Project. Although not required for the EA, the TPA has provided additional information regarding air quality. Also refer to Response #14 and Introduction B regarding cumulative effects.
68.	There is currently an elementary school facility located one block away from the airport. Local parents are naturally concerned on how airborne contaminants might affect their growing children. **Are there any other instances in North America where a school is so close to an airport of similar relative size? Can the**	Refer to Response #28 Although not related to the Project or the EA, and as general background information, we are aware of at least one study in connection with air quality at schools located near an airport. The Minnesota Pollution

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	TPA forward health study information for other schools located the same distance from an airport, which will help allay or at least address parental concerns regarding current and projected airport usage? This information would desirably be in a format that it can be compared by a layperson to the portions of contaminates from current and projected airport activities which make up the cumulative environmental effect to be clarified in the Tunnel Screening Report ie. the Background/ Pre-existing air quality contaminants already present without airport related traffic activity should be broken out for a fair comparison.	Control Agency produced a report in 2006 called the "*Update on Air Monitoring near the Minneapolis St. Paul Airport*". As part of this program, monitoring was undertaken at several sites including at least two schools near the airport. The study concluded that "in general, concentrations of monitored compounds were similar to levels at other sites in the Twin Cities." Air quality monitoring conducted by the Illinois Environment Protection Agency near O'Hare Airport in Chicago in 2000 reached a similar conclusion" " emissions from the Airport have an impact on the air quality in adjacent communities, but the impact did not result in levels higher than those found in a typical urban environment." (*Chicago O'Hare Airport Air Toxic Monitoring Program, June-December, 2000*)
69.	**Can the TPA review the incremental health effect caused by airport activities with respect to airborne pollutants on the volumes of daily bicycle commuters projected by Waterfront Toronto?** This would include a review of background smog conditions in the summer.	Refer to response #28. Although not related to the Project or the EA, but as general background information, the incremental effect of airport activities on a bicycle commuter's air emissions exposure is very small for two reasons: 1. The analysis indicates that pollutant levels in the study area are dominated by roadway emissions rather than by the airport. 2. Since a bicycle commuter would spend only a short portion of his total commute in the vicinity of the airport, his/her incremental exposure to air pollution on that portion of the trip would be small compared to the rest of the trip.
70.	Additional information was included on noise and air quality for the purposes of interested persons understanding the results of study. The Appendix information provided raises more questions than it answers as both the data collection and analysis are not transparent. The makeup of cumulative effects at various horizon years is difficult to understand. **Can the TPA confirm that more comprehensive and integrated study information will be forthcoming so that a**	The EA has included all relevant and applicable matters to be considered for the Project. Although not required for the EA, the TPA has provided additional information regarding air quality and noise.

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	decision can actually be made on this project?	
71.	On p.17 it is noted that noise and air quality studies were completed August-October 2010. **Can the TPA confirm if any physical measurements were obtained to support the modeling work? Can the TPA confirm that future field measurements will be obtained in a transparent fashion with the community so that community concerns can be addressed?**	The questions go beyond the Project and the EA. The EA has included all relevant and applicable matters to be considered for the Project. Although not required for the EA, the TPA has provided additional information regarding air quality and noise. As is typical, field measurements were not included. If field measurements were required to be done in the future, they would be done in a transparent nature.
72.	**Can the TPA note in the report that both gases and odours were included in the assessment of project or potential effects from airport activities? What air quality contaminants were not studied?**	Refer to Response #28. Although not related to the Project or the EA, and as general background information, the study focused on key representatives of contaminants associated with motor vehicle and aircraft emissions: oxides of nitrogen, carbon monoxide and fine particulate matter. Motor vehicles and aircraft also emit volatile organic compounds (VOCs). VOC's were not analyzed explicitly, but NO2 and particulate matter served as worst-case surrogates. In general, if NO2 and PM species are within their applicable limits, then levels of VOC species are also within their applicable limits.
73.	The TPA has chosen not to confirm modeled results with field data this time. **Can the TPA acknowledge in the report that modeling of effects involves empirical formulae and that the empirical results modeled have not be confirmed through field measurement at this airport?**	Comment noted. Text has been added to the report regarding no use of field measurements for the noise assessment. Field measurements were not required as is typical in air quality and noise studies. The modeling uses empirical predictions.
74.	**Can the TPA note in the report that it is reviewing its analysis together with information from Toronto Board of Health?**	The City of Toronto has provided comments, which have been and will be considered as part of the EA. The Toronto Board of Health has been consulted.
75.	The Study Area is not sized appropriately.	

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	Can the TPA size the Study Area so that all cumulative effects are captured in the Screening Report?	The EA has included all relevant and applicable matters to be considered for the Project, including the appropriate study areas. Refer to Response #14 regarding cumulative effects.
76.	**Can TPA include additional information as follows?** There appear to be residual effects that are significant, contrary to information in Table 5.3.	There would be no residual effects from the Project
77.	• Were existing or future rail corridors modeled on p.19?	The rail corridors were not included in the study, due to the fact that they are located considerably farther away than the Gardiner Expressway (approx. 400m from the nearest sensitive receptor in the study area versus about 150m in the case of the Gardiner), and the level of emissions there is significantly less that that of the Gardiner. Therefore, the contribution from the rail corridors was considered negligible in relation to that of the Gardiner Expressway and Lake Shore Boulevard.
78.	• How were ambient smog domes which cover the city incorporated into the modeling of cumulative effects?	The "reasonable maximum background" levels presented in the report for PM10 and PM2.5 reflect elevated concentrations of particulate matter that occur during smog events. They represent the maximum ambient concentrations that are likely to coincide with the predicted maximum concentrations from the airport and other local sources included in the model.
79.	• Were receptor locations at ground level or at tower height?	Receptor heights were indicated in Table 1 of the RWDI report. Most receptors were placed near ground level. Since the majority of the modeled emissions are all located near ground level, these receptors experience higher predicted concentrations than would be experienced at elevated receptors. Selected receptors were placed at other heights on multi-storey buildings (at receptors 18, 19 and 20 in Figure 3 of the RWDI report).
80.	• What is the air quality effect variation with respect to number of flights and flight load?	Although this is beyond the scope of the EA, the 2016 scenario represents a 7% increase in landings and take-offs at the airport compared to the 2010 scenario. It also represents a similar level of increase in road traffic on the sections of major roadways that were included in the simulation. The results for 1-hour NO2 give the

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		best indication of how these changes in emissions translate into changes in the air pollutant concentrations at receptors. Predicted changes in NO2 concentrations between 2010 and 2016 are consistent with the change in activity levels, i.e., less than 10%. When looking at other pollutants, other factors come into play that make it difficult to discern the effect of changes in activity level. In the case of CO (carbon monoxide) for example, the results are affected by a predicted decline in average tailpipe emissions from on-road vehicles between 2010 and 2016, so that the predicted concentrations at receptors actually decrease.
81.	• What land use was assumed for max desirable pollutant levels (port or residential) on p.21?	Air contaminant levels were predicted at the receptors shown in Figure 4.1. As discussed in the report, the receptor locations represent Harbourfront Community Centre, the Waterfront School (elementary) and City School (secondary) and the nearest residential housing areas.
82.	• Which roadway(s) were analyzed on p.21?	Modelled sections of roadway are shown in Table 8 of the RWDI report, including the Gardiner Expressway, Lakeshore Road, and Queens Quay between Stadium Road and Spadina Ave., as well as Bathurst Street from the Gardiner to Queens Quay and Stadium Road from Lakeshore Road to Lake Ontario.
83.	• Please include peak information in addition to average info on Table 4.1	Average air contaminant levels were predicted at the receptors shown in Figure 4.1. As discussed in the report, the receptor locations represent Harbourfront Community Centre, the Waterfront School (elementary) and City School (secondary) and the nearest residential housing areas.
84.	• What are seasonal effects caused by smog domes etc on p.21?	The "reasonable maximum background" levels presented in the report for PM10 and PM2.5 reflect elevated concentrations of particulate matter that occur during smog events. They represent the maximum ambient concentrations that are likely to coincide with the predicted maximum concentrations from the airport and other local sources included in the model.
85.	• Taxi idling times on Eireann Quay not discussed?	It was reasonably assumed that taxis abide by the City of Toronto's idling policy.

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86.	• Control of tunnel exhaust to not affect adjacent buildings re particulates p.54	The proposed tunnel is a pedestrian tunnel with no significant exhaust emissions anticipated.
87.	• The negligible modeled results for cumulative air quality effect does not align with observed and documented resident behavior, which includes one family relocating to another unit inside the same Coop due to the cause of sticky film forming on balcony railing p. 28?	The air quality results are consistent with ambient air quality measurements in the vicinity of other airports and urban environments (see Response 68). These levels are consistent with urban environments. Ambient air quality is typically consistent in localized areas, provided there are no sources of air emissions in the in the immediate vicinity. We cannot comment on the cause of the sticky film on the balcony railing.
88.	• To what extent has local road idling time affects increased during peak summer season due to lengthening of N-S traffic signal time at Bathurst/ Queens Quay intersection?	Idling of vehicles at the Bathurst/Queens Quay intersection was not modelled. The air quality impacts associated with the idling vehicles at this intersection is negligible in comparison to traffic along the Lakeshore and Gardiner Expressway.
89.	• The recreational boat mooring areas east and west of the ferry crossings are not shown. What are cumulative air quality effects at water elevation?	Air quality levels at these locations would be similar to those predicted at on-land receptors that are a similar distance away from the model sources (e.g., receptor 12, 18, 11).
90.	• Information contained in Appendix C are projections for 2016 based on 2010 conditions which were modeled in 2005 using data collected previous to 2005?	The 2016 airport and road traffic data are current projections, and were not derived from those used in the 2005 study.
91.	• Did 2005 modeling assume that Eireann Quay would be widened to accommodate all those idling taxis?	No Eireann Quay widening was assumed. See Response #85.
92.	• Appendix C seems to discuss projected car impacts but not projected plane impacts?	The effects of aircraft were included in the assessment.
93.	• There is no information concerning modeling of projected airport activities to support conclusion on Appendix C p3?	The results from the modelling of projected airport activities are included in the predicted concentrations shown in Table 1 of Appendix C.
94.	• Footnote chemical and other short forms in Appendix C eg. PM contains what contaminants?	The contaminants considered in the assessment are discussed in Section 4.1.1.
95.	• List all air contaminants that are likely to be harmful and what are associated background, current, projected, and potential cumulative projections for receptor locations Appendix C p.2?	The air quality assessment considered the most limiting air contaminants (i.e., those with the high ratio of emissions relative to their respective criteria). The predicted concentrations for the contaminants considered were less than their criteria (other than

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		PM10 – which was not attributable to airport activity). Therefore it is expected that the contaminants not assessed explicitly would also be less than their criteria.
96.	• Clear note what year is assumed for background Appendix C p.3? Clearly show all horizon years used in the study.	Background concentrations were based on ambient measurements from 2004 to 2008, inclusive. The study considered current and future operations for the Year 2016.
97.	• Existing cumulative conditions not clearly shown in Appendix C?	Existing concentrations are provided in Table 1 of Appendix C in the column entitled "2010 Predicted Concentration."
98.	• Need a sub-chapter on airport activity criteria assumed for modeling various horizon years not shown in Appendix C?	A summary of aircraft activity is provided in Table 4 of RWDI's report entitled BBTCA Air Quality Assessment (November 2010). Refer to the TPA's web site for this report.
99.	• Show what years of historical data noted at top of Appendix C p.2	Historical ambient monitoring data were based on the years 2004 to 2008, inclusive.
100.	• Confirm on Appendix C p.2 that emissions will decrease per vehicle but not in overall magnitude of all vehicles regarding cumulative effects assessment.	Emissions will decrease across the vehicular fleet due to regulatory changes and increasing infiltration of more fuel efficient vehicles, hybrids, etc. The magnitude of the decrease is somewhat offset by an increase in traffic volumes by 2016. The overall influence is dependent on the contaminant in question.
101.	**Can the TPA include information on the following items which were not included in the Screening Report?**	
102.	• Wind directions vary with respect to 'upwind' stockpile stabilization p. 53?	Comment noted. This has been clarified in the report..
103.	• Exhaust fumes from demolition and construction equipment working in close quarters blown by shifting winds toward residences	This is beyond the scope of the air The contractor would be responsible for carrying out the work in accordance with all applicable legal requirements.
104.	• Construction debris cleanup program	The contractors would be responsible for the cleanup of construction debris.
105.	• Dust control from existing building demolition and reconstruction	The contractor would be responsible for dust control activities.
NOISE Although the Project is not expected to result in emissions (contaminants and noise) that would have an		

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adverse effect, questions were raised about air quality and noise. Although beyond the Project, RWDI was retained to assess air quality and noise matters, assuming the BBTCA is used to capacity. This information is provided in response to questions that were received. As indicated earlier, all questions, issues, concerns and responses have been and will be considered as part of the EA, including by the TPA before it makes a decision as to whether the Project will proceed. References under the sections related to air quality and noise are to the studies conducted by RWDI.		
106.	Additional information was included on noise and air quality for the purposes of interested persons understanding the results of study. The Appendix information provided raises more questions than it answers as both the data collection and analysis are not transparent. The makeup of cumulative effects at various horizon years is difficult to understand. **Can the TPA confirm that more comprehensive and integrated study information will be forthcoming so that a decision can actually be made on this project?**	The question goes beyond the Project and the EA. The EA has included all relevant and applicable matters to be considered for the Project. Although not required for the EA, the TPA has provided additional information regarding noise. No additional noise or air quality studies will be conducted as part of the EA.
107.	On p.17 it is noted that noise and air quality studies were completed August-October 2010. **Can the TPA confirm if any physical measurements were obtained to support the modeling work? Can the TPA confirm that future field measurements will be obtained in a transparent fashion with the community so that community concerns can be addressed?**	Field measurements were not required to undertake these studies, as is typical in air quality and noise assessments. No additional noise or air quality work will be completed as part of the EA.
108.	**Can the TPA confirm that the airport is the dominant noise source for adjacent receptors on p.26, not just 'playing a greater role'?** Desirably a summary of peak noise levels is included which reflects magnitude of actual noise concerns.	The assessment demonstrates the variation in airport impacts by receptor location. See RWDI report, tables 15 and 16). The sound level criteria do not evaluate peak sound levels other than using aircraft volumes for the peak planning day.
109.	**Can the TPA breakdown the contributors of noise being experienced, using more realistic volumes than those shown in the report, including a sub-total of all non-airport related ambient contributions?**	RWDI report tables 14 through 17 provide breakdowns of contributions from various sources, including ambient levels.
110.	**Can the TPA include information relating the Jacobs Consultancy study information to the information in Appendix C? Were there 2 noise studies conducted in parallel?**	This goes beyond the Project and the EA. These were two independent studies.
111.	**Can the TPA clarify a comment on Appendix C p.4 which says that airborne**	This is beyond the scope of the EA. See Introduction

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	aircraft were not modeled as part of the analysis, though the Screening Report intends to look at cumulative projected effects? Were on-ground taxiing aircraft modeled but airborne not modeled?	B. For the purposes of the RWDI study, the maximum allowable sound level from airborne aircraft, as defined in the Tripartite Agreement, was used for the airborne sound contribution. The modelling conducted by RWDI was for non-airborne sources.
112.	**Can the TPA confirm if the information contained in Appendix C is intended to discuss direct effects or indirect effects?** The depth and breadth of the information provided in Appendix C appears out of scale for either.	This is presented as additional information only and goes beyond the requirements of the Project and the EA.
113.	**Can the TPA clearly connect and relate the results shown on Appendix C with observed resident behavior made in response to cumulative effects which include ambient conditions?** The disconnect between the modeled results shown and the documented in-field experiences significantly lower resident confidence in Screening Report findings.	This goes beyond the Project and the EA. Also refer to Introduction B. Appropriate modelling was used to assess noise.
114.	**Can the TPA acknowledge in the report that there are several technical aspects regarding the NEF contours referred to that have yet to be discussed in any pubic forum?**	Refer to Response #28.
115.	The TPA has chosen not to confirm modeled results with field data this time. **Can the TPA acknowledge in the report that modeling of effects involves empirical formulae and that the empirical results modeled have not be confirmed through field measurement at this airport?**	Refer to Response #73.
116.	The Study Area is not sized appropriately. **Can the TPA size the Study Area so that all cumulative effects are captured in the Screening Report?**	Refer to response #75.
117.	**Can the TPA include additional info as follows.** There appear to be residual effects that are significant, contrary to information in Table 5.3.	There would be no residual effects from the Project.

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118.	• How does a marine environment effect modeled noise results? There appear to be echoes and a lengthening of effect range.	Water has reflective sound properties. The ISO 9613 standard used for ground-based activity does not otherwise account for sound propagation over water. The standard considers conditions favourable for sound propagation.
119.	• Were receptors at ground level and show the increase in effect at higher elevations?	Receptors were located at ground level.
120.	• There were no receptors at the Irish famine memorial, top of Canada Malting, limits of recreational sail boat mooring areas to east or west at closest point toward airport, Music Garden performance areas, top of adjacent towers?	Noise sensitive receptor locations were chosen based on definitions in Ontario Ministry of the Environment publication NPC-205.
121.	• R4 and R8 were not located at SE corners of towers?	R4 and R8 were located as shown in RWDI Figure 1.
122.	• An unnoticeable modeled effect of 1db and negligible cumulative noise effect does not align with observed and documented resident behavior, measured effects, and past complaint logs on file p. 28?	Comment noted.
123.	• Peak hour info is typically modeled at top of p.28?	The sound level criteria do not evaluate peak sound levels other than using aircraft volumes for the peak planning day.
124.	• Where specifically were the road and LRT sound levels obtained? Do they effect R4 and R	Road and LRT sound levels were modelled using STAMSON version 4.1. STAMSON is an Ontario-specific model. LRT traffic volumes were from published TTC schedules.
125.	• Can the TPA confirm what portion of modeled noise at various horizon years is due to helicopters?	Aircraft mix is assumed the same for all years. See RWDI report Appendix G.
126.	• Expand on effect of logarithmic plotting of sound volumes on p.28, Appendix C p.5? How does this affect noise effects?	The decibel scale is logarithmic in nature which is how the noise effects are calculated.
127.	• What is the noise effect variation re number of flights and plane load?	The number of flights has been included in the assessment. Plane load has no on ground-based noise. Airborne impacts are not for RWDI to answer.
128.	• Need graphs showing timeline of volumes modeled	See RWDI report Appendix C, F and G.
129.	• Need corresponding data to Tables 4.1-4.3 showing peaks, not included in the report? The results shown in the report	The sound level criteria do not evaluate peak sound levels other than using aircraft volumes for the peak

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	are clearly not representative of observed and resident measured conditions.	planning day.
130.	• What times were used for day and night average modeled results?	Daytime is 0700h to 2300h. Night-time is 2300h to 0700h.
131.	• Noise and vibration effects after tunnel construction, especially with respect to elevator operation	Elevator sound and vibration will be insignificant offsite.
132.	• Effect on seasonal recreational users not considered? Eg. recreational boat users increasing noise at Harbourfront and Western gap	Noise sensitive receptor locations were chosen based on definitions in Ontario Ministry of the Environment publication NPC-205.
133.	• Goods movement, delivery noise, and garbage pickup noise effects with respect to proposed increase in retail spaces in the revamped structures, expansion of terminal building and increased projected or potential airport activity	Goods movement, delivery noise, and garbage pickup were not included in the assessment because they would be very small and of short duration.
134.	• Increase in existing ferry noise with respect to increased good movement at study horizon years	There are no proposed changes to the ferry schedule.
135.	• Potential doubling of noise effects of the existing ferry operation	There are no proposed changes to the ferry schedule.
136.	• Short term monitoring of the project effects is noted on page vi, however, long term monitoring is required for noise overall?	Long term monitoring is not required because there are no predicted long term impacts.
137.	• Effects on Provincially Significant Wetlands from noise and vibration caused by low flying accelerating and decelerating planes?	This goes beyond the Project and the EA.
138.	• Proposed elevator production specifications re noise and vibration post tunnel construction not discussed Appendix C p.4?	Elevator sound and vibration will be insignificant offsite.
139.	• Show diagram of 'future slot allotment' modeled in Appendix C and confirm all horizon years p.4?	See RWDI report Appendix G for 2016 aircraft movements.
140.	• Clarify which receptors adjacent BBTCA on Appendix C p. 5 top of page?	Receptors adjacent to BBTCA are receptors NR1 through NR8 in the RWDI report.
141.	• Relate the insignificant 1db projected noise increase to the existing observed resident behavior?	Comment noted.
142.	• The data shown for receptors on Appendix C p. 5 to be verified by open and transparent field monitoring program as the modeled results for some of the	Comment noted. However, future noise monitoring is

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	receptor do align with field observations.	not proposed or required.
143.	• Clearly show any changes in ambient conditions at various horizon years especially re Gardiner Expressway and LRT ambient noise Appendix C p.6?	See RWDI Report tables 15 and 16 for details.
144.	• Confirm which parcels of land for residential land use restrictions at top of Appendix C p.6. Include figure?	The statement does not refer to any specific parcel.
145.	• Confirm which parcels discussed in second paragraph Appendix C p.6?	The statement does not refer to any specific parcel.
146.	• Define NEF 25 Appendix C	Several mathematical models have been developed to express the combined effect of the variables that influence human response to noise as a single index. One model, the Noise Exposure Forecast (NEF), has been adopted in Canada for controlling land use in the vicinity of airports. NEF contours are set around airports and include levels beyond which noise, as defined by NEF values, will not be tolerated. The contours generated by the Canadian model are generally drawn for the 40, 35, 30, 28 and 25 NEF levels and are used only as a guide. For the BBTCA, NEF 25 is the NEF level set around the airport.
147.	• Impact of 'stationary source of sound versus 'active' source on modeled effects Appendix C p.6? How are the taxiing airplane sounds captured in modeling? Is the ferry assumed to be silent when not stationary in terms of modeled results?	The term “stationary source” refers to any ground-based source within the site, whether moving or in a fixed location. Taxiing aircraft and the ferry both while moving and stationary are all considered to be stationary noise sources, and are included in the modelling.
148.	• Connect context of MOE guidelines to noise and vibration proof building materials and HVAC requirements Appendix C p.6?	This goes beyond the Project and the EA.
149.	**Can the TPA include information on the following items which were not included in the Screening Report?** It appears some construction effects cannot be mitigated that otherwise would be.	Construction effects are either minor, localized or short-term related nuisance effects, which can be mitigated using standard measures. In addition, as part of the development of its ongoing traffic management plan, TPA will investigate options to address construction stage traffic (e.g. construction routing and lay-down areas).
150.	• Confirm working hours to be applied for this site. Confirm equipment engine start up/ warm up times.	Typical and appropriate working hours would be established by the contractors and in compliance with the applicable requirements.

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151.	• Reduction of working hours due to noise control from those typically used in the core. Material delivery and construction noise generated at all stages of pavilion building construction	Refer to response #150.
152.	• Site staging to avoid possible back up beeping noises from construction equipment during sleeping hours	Refer to response #150. Typical and standard noise mitigation measures would be implemented.
153.	• Emergency plans for temporarily relocating residents due to sleep deprivation effects during construction and method of confirming claim	Refer to response #150.
154.	• Dewatering, pumping noise control during summer months especially at night with open windows	Refer to response #150. Minimal dewatering work is anticipated.
155.	• Noise from barge loading and unloading process. Noise of barge motor.	Refer to responses #150 and 152.All construction practices would be carried out in conformance with applicable requirements.
156.	• Escalation of tour boat noise heading toward Western Gap	This is not related to the Project.
157.	• How will noise complaints be handled on this TPA project? Will 311 forward calls to TPA p.65?	Refer to responses #150 and 152. A communications program would be used for the construction period in consultation with the community.
158.	• Specific hours of construction in summer months when windows in some towers must remain open overnight? These hours cannot be a flexible as typical sites in the City given existing sleep deprivation concerns due to airport activities.	Refer to responses #150, 152 and 157.
159.	The TPA has proposed to construct noise barriers to address resident complaints, and will review proposed plans with the community shortly. We understand the TPA noise projections available for reference to the tunnel study did NOT allow for these barriers. Accordingly, clear information is needed on current, projected, and potential cumulative airport activities, in order confirm to what extent existing noise effects will be mitigated. **Can the TPA include information as to what current/existing airplane warm-up, taxiing, landing and takeoff practices are currently taking**	The questions go beyond the Project and the EA. The EA has included all relevant and applicable matters to be considered for the Project. Although not required for the EA, the TPA has provided additional information regarding noise. The use of the BBTCA is governed by the Tripartite Agreement between the federal government, the City of Toronto and the TPA. The Project does not propose any changes to the Tripartite Agreement. Also refer to Response #14 regarding cumulative effects.

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	place in the peak hour, whose cumulative effects contribute to noise levels currently received by residents? These activities would desirably be summarized comparatively with what had been projected in past for the current and future study horizon years. The operations information is desirably presented so that it can be independently verified by residents at a later date.	
WATER		
160.	Toronto Water is working to reduce the storm water negative effects on the harbour. The intention is to make the waterfront swimmable. **Can the TPA confirm if the increased industrial airport traffic pollution will wipe out the gains by Toronto Water or is the TPA counting on utilizing the proposed environmental gains by Toronto Water?**	Refer to Response #28.
161.	**Can the TPA include additional info on how the poor water quality of Western Gap and harbor compare with typical large shipping port harbours p.31?**	Refer to Response #28. The water quality of the Western Gap would not be affected by the Project.
162.	**Can TPA include additional info not included in the Screening Report as follows?**	
163.	• Summary of contaminants already in the Western Gap for comparison with measurements during construction	Information about contaminants in the Western Gap is not required for the EA. The Project would not impact the water in the Western Gap.
164.	• Confirmation no concerns from TRCA as to cleanup operation requirements at new fish habitat at foot of Spadina.	The Project would not impact fish habitat.
165.	• Barge loading and unloading process in water or spillage containment not discussed?	Any use of a barge would be controlled, including to prevent spillage or impacts to water.
MIGRATORY BIRD		
166.	The Toronto Islands are an internationally	

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	recognized migratory bird stopover, poised at the convergence of two major migratory flyways: the Atlantic and Mississippi Flyways. A bird sanctuary is located in close proximity to the busiest runway at the Island Airport, **Can the TPA include information to confirm that there are no Species at Risk (threatened or vulnerable) currently using Toronto Islands bird sanctuary that will likely be affected by projected or potential airport activities on p.29?**	See Response #40 and Introduction B.
167.	The Study Area is not sized appropriately. **Can the TPA size the Study Area so that all cumulative effects are captured in the Screening Report?**	See Response #75.
168.	**Can TPA include additional info as follows?** There appear to be residual effects that are significant, contrary to information in Table 5.3.	See Response #76.
169.	• What is the Study Area for Birds?	Information regarding the study area is provided in Sections 4.1.3 and 4.1.10 of the draft screening report.
170.	• Some bird populations are discussed in the Screening Report but no effects on them are analyzed in the report?	No impacts to bird populations were identified.
171.	• What birds listed in Chapter 4.1.3 are included in the study findings? Does this Chapter mainly discuss indirect effects or effects outside the designated study area?	See Response #170. Section 4.1.3 of the draft Screening Report discusses baseline conditions and states "*In the vicinity of the pedestrian tunnel, some bird habitat does exist. However, the lands that may be directly affected by the pedestrian tunnel provide limited to no bird habitat. The proposed airport perimeter road is not considered as prime bird habitat (maintained grass), but the adjacent lands do provide potential migratory bird habitat.*" It adds that the summary of birds and bird habitat provided pertains to a larger area that extends beyond the Project's Study Area,
172.	• What are the policies in effect with respect to enhancing bird numbers on p.23?	There are no policies to enhance bird numbers on the TPA's lands.
173.	• What are the potential bird population effects with projected or potential increase in airport activity?	Refer to Response #28.

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174.	• Are there any protection and conservation policies which may be in conflict with the project?	None that would apply have been identified.
175.	• What is relationship to other Waterfront Toronto and TRCA projects to enhance bird habitat and aquatic life	The TPA is supportive of Waterfront Toronto and TRCA projects. No significant impacts to the area's bird populations have been identified as a result of the proposed Project. No mitigation is recommended or required.
176.	• What are the bird kill numbers per year based on current, projected and potential airport activities for the study horizon years?	The question goes beyond the Project and the EA. No impacts to the area's bird populations have been identified as a result of the Project.
177.	• Include that swans used to be sighted regularly in Western Gap until approximately 4 years ago at top of p.33. The reason for their relocation is speculated to be related to increased airport activity, to be confirmed.	The question goes beyond the Project and the EA. The EA has included all relevant and applicable matters to be considered for the Project. Swans were not observed during the field work
178.	• Any objectives with respect to supporting the vulnerable Caspian Tern bird on p.34?	The question goes beyond the Project and the EA. The EA has included all relevant and applicable matters to be considered for the Project. The mineral shrub shoreline was not identified as being Caspian Tern nesting habitat and this area will not be affected by the Perimeter Road. No mitigation is required or recommended.
179.	• Consideration of using bird friendly less-reflective glass materials per City policy to minimize collisions and migratory bird deaths.	The question goes beyond the Project and the EA. The design/construction proponents will be instructed to consider the City's Bird Friendly guidelines.
SOILS		
180.	**Can the TPA include in the report information confirming that there will be no negative effects on natural features or ecological functions of the Toronto Islands Provincially Significant Wetlands located immediately beside the airport, as a result of projected or potential airport activity?**	Although the question goes beyond the scope of the Project and the EA, the Project would not result in significant adverse environmental effects. This includes the lands noted.
181.	**Can the TPA include additional info not included in the Screening Report as follows?**	
182.	• Vibration effect affecting existing sand	Typical and appropriate construction practices would

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	backfill behind dock walls?	be established by the contractors. The construction would produce minimal vibration. The mainland dock wall would be monitored during construction.
183.	• Pre-construction structural surveys of dock walls documented with City staff?	A survey of the mainland dock wall has been completed.
184.	• Vibration limits re adjacent residential?	See response #182. No vibration effects are anticipated in the residential areas, particularly given the distance from the Project.
185.	• Effect of dewatering fines in surface layers effecting boat motors etc.	The Project would not result in such an effect. Minimal dewatering would be required, and any such work would include treatment prior to discharge.
186.	• Quality of excavated material from shafts and risks to air and water	Investigations and analyses related to soils did not identify any concerns with respect to the quality of excavated materials.
187.	• Where would unusable excavate be disposed p.60?	The contractor would dispose of excess materials, which would be completed in compliance with legal requirements.
188.	• Confirmation that all sampling and testing will be by a third party?	The contractor would be responsible for testing, should this be required, including to comply with legal requirements.
ECONOMICS		
189.	All marine ports in Canada were revamped in the early 1990s to lower (but not minimize) federal expenditures with respect to our large international coastline. The objectives at the time appear to have been to consolidate port operations where possible, eliminate pork-barreling, introduce private sector best practices into public agencies, and minimize liabilities due to poorly envisioned construction projects. One of the targets extending from this was that ports should be profitable, which is a challenge for the TPA given its otherwise exceptionally low volume of port/goods related business. The target does not require that 'super-profit' be earned by the TPA but rather that it make best efforts to eliminate its annual deficit.	Comment noted. No response required.

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190.	The need for profitability has been noted by the TPA in part to justify the tunnel project. Sections in the Screening Report say that the growth of the airport will happen with or without the tunnel. **Can the TPA confirm in the report if the tunnel is needed to ensure the profitability of the TPA?**	The Project has not been proposed to ensure the profitability of the TPA.
191.	**Can the TPA provide a summary/ graph for the layman showing how its profitability trend since 1900 relates to the present day (assuming that Toronto Harbour Commission is the forerunner of the TPA)? Can TPA provide a summary/ graph for the layman showing the breakdown of its profits from shipping activities separately from the airport activities over time, to give residents an understanding as to the increasing relative importance of the airport activities in the scope of TPA operations?**	The questions go beyond the Project and the EA.
192.	Given the awkward timing of its annual meetings, most residents are unable to attend the TPA AGM to better understand the TPA's financial status, which would assist in understanding the TPA's financial need/ justification for the tunnel. **Can the TPA hold future AGMs in the evening when it is possible for residents to attend?**	The question goes beyond the Project and the EA. However, the TPA will consider this.
193.	Inquiries were made at the Public Information Centers (PICs) concerning the cost estimate amount of the tunnel. Amounts ranging from $45M to $65M and beyond have been discussed. This range in cost variance is very significant, representing a potential 50% increase or more. **Can the TPA provide both the basis for and breakdown of the cost estimate used in its financial considerations, and what cost fluctuation contingency has been assumed?** The contingency would either represent a cost to federal taxpayers in making up	If the Project were to proceed, the cost of the Project would be determined through a private proponent bidding. Airport user fees would fund the cost of the Project.

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	shortfall from projected user fees on the tunnel, and/or an additional cost which must be financed upfront by taxpayers for a longer period of time.	
194.	Several community members in both meetings made well-articulated inquiries concerning the front-end financing arrangement for the proposed project, specifically inquiring on the potential risk to the federal taxpayer. A natural resident concern is that increased flights will need to be justified in future because of the growing debt being incurred on the proposed tunnel. The line of inquiry appears fair and reasonable for anyone to ask, given the series of past federal and taxpayer bailouts on projects resulting from poorly articulated need, and financial reports suggesting that the current passenger carrier is not as profitable as others operating in a competitive situation at Pearson.	The questions go beyond the Project and the EA. The use of the BBTCA is governed by the Tripartite Agreement between the federal government, the City of Toronto and the TPA. The Project does not propose any changes to the Tripartite Agreement. See also response #193.
195.	The TPA was unable to clearly articulate the financial arrangements concerning the proposed tunnel, other than to state that user fees will pay the costs over time. This appears to be based on the modeled slot capacity not yet substantiated by any known publically available study and is currently in dispute given the lack of technical information available.	See responses # 193 and 194.
196.	**Can the TPA provide a comprehensive financial summary clearly outlining the projected cash flow and debentures for the tunnel project, and the potential liability to federal taxpayers that does exist?** The summary should be of sufficient clarity to confirm the number of tunnel users required to make this project financially viable over a given timeframe and to minimize future public debate on the actual financial arrangements envisioned by the TPA.	See responses #193 to 195.

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197.	A resident stated on Jan 12 there will be a low propensity for people to use tunnel as they will feel uncomfortable going so deep underground. **Can TPA confirm the relative percentages of future passengers that will use ferry versus tunnel for propensity to use/ marketing perspective?**	If the Project were to proceed, it is expected that the majority of persons accessing the BBTCA would use the tunnel.
198.	**Can the TPA review what are the real costs and benefits (congestion, health, potential terrorism targets) of expanding a civilian airport in such close proximity to Canada's main financial and cultural center, when every other city in the developed world is reducing the size or shutting down city center airports?**	The questions go beyond the Project and the EA. The use of the BBTCA is governed by the Tripartite Agreement between the federal government, the City of Toronto and the TPA. The Project does not propose any changes to the Tripartite Agreement. Also refer to Response #14.
199.	**Can the TPA include information in the report regarding projected negative cost impact to tourism caused by the increase in visual, noise, and odour pollution from projected or potential airport activity?** The review should include tourist views of skyline disturbed from the water side, clear sky interruptions from planes at existing and proposed beaches located east and west of airport, and bird watching in Toronto Island Park.	Refer to the previous response.
200.	The Study Area is not sized appropriately. **Can the TPA size the Study Area so that all cumulative effects are captured in the Screening Report?**	See response #14 and Introduction B.
	Can the TPA include info as follows?	
201.	• Projected value of business lost due to increased traffic congestion (employee retention problems, delivery latenesses etc.) due to projected or potential airport activities.	The question goes beyond the Project and the EA. Refer to Introduction B. In any event, no adverse effects to businesses are expected as a result of the Project
202.	• Percentage of proposed tunnel user fee going toward paying the cost of the tunnel	The question goes beyond the Project and the EA.

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LAND USE		
203.	**Can the TPA clarify the sentence at top of p.44 regarding transportation infrastructure? Were the transportation infrastructure modifications related to proposed Queens Quay Revitalization modeled by the TPA with respect to traffic, noise and air quality?** The proposed works eliminate one lane on Queens Quay and will result in increased congestion along this road due to airport related traffic. Should the airport related activities increase as have been projected, it would result in worsened traffic, noise, and air quality effects to residents — thereby increasing the cumulative effects airport activities to be documented in the Screening Report.	The referenced reports/studies have been considered. The Project would not be affected by the proposed infrastructure projects. Also refer to Response #39.
204.	**Can the TPA confirm the land uses shown on Fig 4.5?** It does not appear that the Study Team is familiar with local site conditions.	Comment noted. Figure 4.5 has been revised to make it clearer to read.
205.	• Stadium Road is shown as Industrial area when it is in fact residential? Was this modeled as such?	Refer to Response #204. The map has been revised. This area was assessed as residential in the analysis.
206.	• The elementary school is shown as an open space/ park?	The elementary school and community centre at the southeast corner of Eireann Quay and Queens Quay are designated as park land in the City of Toronto Official Plan. The map has been revised to make it clearer to read and the elementary school and community centre noted on the revised map.
207.	• There is residential not shown east of Dan Leckie Way and north of the Music Garden?	The lands east of Dan Leckie Way and north of the Music Garden are not included in the land use study area.
208.	• The recreational boat mooring areas east and west of the ferry crossings are not shown?	These facilities will not be affected by the Project.
209.	• Are Rogers Center and Ontario Place included in the study area per bottom p.44?	No. The Rogers Center and Ontario Place are not included in the study area.

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210.	**Can the TPA confirm if the land uses surrounding the airport as shown in Fig 4.5 were those assumed for modeling of transportation, noise and air quality effects?** For example, if the airport was still in its original industrial setting, the air quality and noise evaluation parameters might be different.	Figure 4.5 will be revised to reflect actual land uses in the area. All assessments were completed using actual land uses.
211.	The Study Area is not sized appropriately. **Can the TPA size the Study Area so that all cumulative effects are captured in the Screening Report? Can the TPA revise Fig 4.5 to include the full Study Area covered by the cumulative effects of current, projected and potential airport activities, including those lands owned by effected YQNA residents as well as future residential areas further east?**	See response #75. In addition, as indicated on page 16 of the draft screening report, a principal study area was identified for the project that focused on the lands and waters in the vicinity of the Project site including the local Bathurst Quay Community. This is the area highlighted in Figure 4.5. Also refer to Response #14 regarding cumulative effects.
SOCIAL/ HUMAN HEALTH		
212.	A sentence on p.44 concerning the cohesiveness of the local Co-op communities appears to suggest a dismissive attitude or that 'group think' has taken hold in Bathurst Quay. **Can the TPA also include that: ' a large population of Waterfront residents effected by the projected or potential airport activities consist of individual condo and single dwelling unit owners, and include land and water based recreational users across the Waterfront?** Note that the 10 year and 20 year study horizons, there will be additional concerned landowners and recreational users at East Bayfront, Don Lands, Port Lands, and proposed Lake Ontario Park.	Comments noted. This sentence has been removed.
213.	All community members participating in the study appear to be equally concerned about	

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	lowering property values, health, and quality of life; as well as, the decline in ability to use private and public spaces due to airport activities which have increased significantly since the time of their original property purchase. Overriding all these concerns is an unease with which increased airport activities appear to be in direct conflict with several policy documents, vision statements, and revitalization initiatives developed through extensive community consultation over the past two decades, all aiming to reduce current levels of pollution emissions and improve sustainability of year round recreational use. **Can the TPA include in the report a 'Policy Survey' of local and provincial policy documents applicable to the various study areas (including those adjacent the tunnel study areas), which were reviewed in conjunction with this tunnel study?**	The questions go beyond the Project and the EA. Refer to Responses 28.
214.	The report is missing a chapter on Baseline Conditions for Human Health, to mirror the chapter included under Environmental Effects. **Can the TPA re-attach the missing Baseline Chapter on Human Health which appears to have been edited out of the Draft Screening Report?**	This information is not required for the purpose of the EA. No such chapter has been removed or edited out. Baseline conditions In the Study Area are discussed in Section 4 of the draft Screening Report, including that for noise and air quality.
215.	It appears from all available documentation that health effects of the island airport have never been studied by the TPA. **Can the TPA forward a copy of or otherwise initiate a health risk management study to allay waterfront community concerns regarding increasing airport related activities noted in the Screening Report?** This study could draw from the resources already available from other agencies. It could cover such airport related issues such as: the contribution of air contaminants into poor ambient conditions; the projected vehicle-pedestrian-cyclist conflicts (re revitalized Queens Quay re- alignment and	The questions go beyond the Project and the EA. Refer to Response #28.

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	proposed waterfront promenade); the projected effects from community sleep deprivation; cumulative residual effects on youth lung efficiency, in response to unique local site conditions, etc.	
216.	The health effects resulting from current, projected and potential airport activities can effect different populations in different ways eg. age, race, income, access to private health care, handicapped mobility limitations, snow birds, etc. **Can the TPA include information on Waterfront demographics in an Appendix, including neighbourhood profiles?** This will assist all stakeholders including the TPA in monitoring and mitigating the as yet unknown health risks across the waterfront flowing from the recent dramatic increase in airport activity noted in the Screening Report. We assume this population data is already available to the TPA from the modeling exercises done in 2005 regarding future projected slots; technical due diligence at that time would have triggered a community health risk study to confirm the maximum sustainable pollution limits.	See response #215.
217.	**Are there any circumstances in North America where communities are living in similar close proximity to an airport handling similar projected activities to those here? What lessons can be learned from these comparable locations?** A technically qualified survey of health effects of these communities as monitored over time should assist in allaying many health concerns with the projected and potential airport activities noted in the Screening Report.	The questions go beyond the Project and the EA. Refer to Response #28.
218.	The Study Area is not sized appropriately. **Can the TPA size the Study Area so that all cumulative effects are captured in the**	Refer to Response #75.

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	Screening Report?	
219.	**Can the TPA include additional information as follows?** There appear to be residual effects that are significant, contrary to information in Table 5.3.	There would be no residual effects from the Project.
220.	• any statistics if tunnel to international airport will become a potential terrorist magnet	Security issues related to the Project would be covered as part of the security provided to protect the BBTCA.
221.	• security measures re bomb/ ventilation related terrorist explosions inside the proposed tunnel, leading to and from this international airport?	See Response #220.
222.	• security measures re hostage takings inside the tunnel	See Response #220
VISUAL		
223.	The Study Area is not sized appropriately. **Can the TPA size the Study Area so that all cumulative effects are captured in the Screening Report?**	See Response #75.
224.	There will be a projected and potential increase in the volume of flights crossing in front of our city's postcard view, especially from vantage of tourist boats, sail boats, and the Toronto Islands park. Horizon views may be disturbed from Coronation Park and Humber Bay West. Some may see the visual interruptions caused by the planes crossing the harbour to be a source of stimulation when they are rare but a source of visual annoyance when they are frequent. The visual interruptions caused by planes can be discussed in similar terms as flash rates on electronic signs. **Can the TPA include quantitative information concerning the visual blight caused to the city skyline by the projected and potential number of future planes arriving and taking off from the airport, to both east and west?** Peripheral view effects to sightlines should be included.	The questions go beyond the Project and the EA. Refer to Response #28.

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225.	**Can the TPA include quantitative information concerning the visual disturbance to views of the clouds and sky while recreational users are sunbathing on Cherry Beach caused by projected or potential airport activity?**	The questions go beyond the Project and the EA. Refer to Response #28.
226.	The 'Birds of Toronto' guidebook states that the Toronto Islands "is far and away the best location in the city to see large numbers of migrant birds in both spring and fall." This reflects that a significant community resource could be affected. **Can the TPA include quantitative information regarding the effects that projected or potential airport activity will have on notable bird watching views and activities on the Toronto Islands Park?**	The questions go beyond the Project and the EA. Refer to Response #28.
227.	The elevator entrances at both sides of the ferry crossing will result in additional structure potentially blocking water views. An artistic rendering was shown at the Jan 12, 2011 Public Information Center. **Can the TPA include in the report renderings of the proposed north and south views of both elevator entrance pavilions to be constructed at either side of Western channel?** The views should be at ground elevations, from directly across the channel and from reasonable distances north and south of the project, looking toward the pavilions to get sense of scale and impression.	At this planning stage, for the purposes of the EA, drawings are representative. As is typical, the visual qualities and views would be considered during the design stage, should the Project proceed.
228.	The TPA has proposed to construct noise barriers to address resident complaints, and stated it will review proposed plans with the community shortly. We understand the TPA noise projections available for reference to the tunnel study did NOT allow for these barriers. Accordingly, clear information is needed to be documented now on current, projected, and potential cumulative airport activities, in order confirm to what extent	The questions go beyond the Project and the EA. The EA has included all relevant and applicable matters to be considered for the Project. The use of the BBTCA is governed by the Tripartite Agreement between the federal government, the City of Toronto and the TPA.

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	existing noise effects will be mitigated. **Can preliminary information on the noise barriers including artist renderings of the proposed noise barriers and deflectors be included in a supplementary Appendix to the tunnel study?** Views would be appreciated as above and as follows: from shoreline, from the adjacent beach, typical sailing boat elevation and tourist boat elevation set at two offsets (near and far) to get sense of scale and impression upon entering the harbor through Western Gap.	Refer also to response #159.
TRANSPORTATION		
229.	A Fixed Link is not allowed to be built to the airport, yet this project proposes a tunnel. Common use and definition of the words 'Fixed Link' include: bridge, tunnel, or causeway. A quick Googling of the words 'Fixed Link' brings up several items, including a proposed Canadian project between Labrador and Newfoundland, which all include a combination of bridge, causeway and tunnel sections in project scope. During the Jan 12 public meeting, Director Ken Lundy stated that: if a Fixed Link was a bridge but not a tunnel then its alternative is a causeway. This misinformation is not respectful of the audience nor the Office, and reflects poorly on the TPA overall. It does absolutely nothing to establish the TPA as a trusted source of information for any stakeholder including the taxpayer or potential private partners.	The Project would comply with law, including the Canada Marine Act and Toronto Port Authority Regulation SOR/2005-120, which was made under the Canada Marine Act. This regulation prohibits the TPA from using the port to build a bridge or similar fixed link. The proposed Project, which would involve tunnel access through the existing bedrock for pedestrians would not involve the use of the port to build a bridge or similar fixed link. In any event, an underground pedestrian tunnel for pedestrian use is not a bridge or similar fixed link. .
230.	**Can the TPA clarify in the report what it believes a Fixed Link is, if not a bridge, causeway, or a tunnel? If there is no clarification possible, can the TPA reconfirm in writing to the community why the Tunnel Screening Report was prepared and 3 public consultation**	See Response #229. The Tripartite Agreement prohibits a vehicular tunnel. The Tripartite Agreement refers to a "Bridge", which was defined to mean a fixed link bridge between the [BBTCA] and the mainland.

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	sessions held in support of it? Can the TPA confirm in the report if there is a difference between a pedestrian tunnel and a vehicle tunnel with respect to the Fixed Link definition? Can the TPA confirm why the term 'Fixed Link' was referred to in the Tripartite Agreement rather than the simple word 'Bridge'?	
231.	The scope of the report is inadequate and does not address the issue honestly. The proposed pedestrian tunnel, coupled with continued ferry operation, effectively doubles capacity for passenger access to the Island Airport. **Can the TPA confirm if it is reasonable to believe or that is physically possible that the tunnel could someday facilitate a massive increase in airport activities and expansion?**	The questions go beyond the Project and the EA. The EA has included all relevant and applicable matters to be considered for the Project. The use of the BBTCA is governed by the Tripartite Agreement between the federal government, the City of Toronto and the TPA. The Project does not propose any changes to the Tripartite Agreement. The tunnel portion of the Project is being considered to provide more reliable access to the BBTCA, including for emergency services that are required beyond the time in which commercial aircraft activity is permitted.
232.	Waterfront Toronto has carried out extensive studies to measure the effect of traffic flows along Queens Quay, Lake Shore Blvd and peripheral roads. Any change will have an effect on the City's overall network. Can the TPA include information on the work done re the traffic flows on the roads noted, done in consultation with the latest work by Waterfront Toronto currently in the design stages, to ensure no likely significant effects?	This goes beyond the Project and the EA. As stated previously, the project would not result in increased airport activity. Given that the BBTCA will achieve the estimated capacity it is capable of accommodating under the Tripartite Agreement without the Project (i.e., the use of 202 aircraft slots per day), it is reasonable to conclude that the Project would not affect aircraft or passenger volumes or road traffic, because these would occur whether or not the Project proceeds. The Project would not affect the traffic accessing the airport and traffic on Queens Quay, Lake Shore Boulevard and peripheral roads. In any event, the TPA will continue to work with the community to address concerns regarding overall airport operations and traffic issues associated with airport access; including the ongoing efforts for traffic management plans,
233.	The discussion at the bottom of p. 1 and top p. 17 includes circular logic with respect to increase in road traffic congestion. The	Refer to Response #232.

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	comments ignore the iterative nature of trip generation and traffic assignment. **Can the TPA clarify this section? Has the TPA completed Origin-Destination surveys and modeled all required transportation studies in order to make a decision on this project: Trip Generation, Modal Split, Trip Distribution, Assignment? Has this modeling work incorporated Waterfront Toronto revitalized Queens Quay cross-section study results, which will itself be increasing intersection congestion at Bathurst and result in two LRT crossings?**	
234.	Porter CEO noted in November 2010 that if the tunnel were constructed by 2012, there could be 300 slots in operation at the airport. It appears that 202 slots were modeled in 2005. **Can the TPA include a section in the report explaining how the number of 202 slots was arrived at? Can the TPA define the word slots for the layman, and connect this to the associated number of flights?**	The questions go beyond the Project and the EA. The EA has included all relevant and applicable matters to be considered for the Project. The use of the BBTCA is governed by the Tripartite Agreement between the federal government, the City of Toronto and the TPA. The Project does not propose any changes to the Tripartite Agreement. In any event, Porter Airlines does not speak for the TPA. The TPA completed a capacity review, including an NEF Contour study, and has worked with the community on a noise mitigation strategy. The TPA has no plans to add additional slots. A slot is an available take-off or landing for a commercial aircraft. Also refer to Response #14.
235.	**Can the TPA confirm why the modeled results do not clearly break down the cumulative effects (direct and indirect) in order to address resident concerns that were extensively documented and verbally expressed in past?** The optics are such that the TPA does not want to resolve resident concerns even when convenient opportunities exist to do so.	The project would not result in cumulative effects. Refer to Response #14.
236.	The Screening Report suggests that some transportation modeling was done by the TPA in 2005 without stakeholder knowledge. The work was apparently completed prior to the dramatic increases seen in airport activities since Porter launched in October 2006. The modeled projected activities were	The questions go beyond the Project and the EA. The EA has included all relevant and applicable matters to be considered for the Project. Work was done in 2005 as part of the EA for the Ferry Passenger Transfer Facilities. The work and the Environmental Screening were available for public review and comment at that

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	never discussed or documented with stakeholders or the public. The review of environmental effects to date under the Screening Report would necessarily reference this background effects information. **Can the TPA forward or post on its website the internal planning study scoping the magnitude of transportation environmental effects projected in Year 2005 with respect to increased airport activities?**	time.
237.	In Year 2002, the TPA announced expansion plans for the airport. The actual magnitude of the expansion plans in terms of environmental effects that the increased airport activities would have were never documented or discussed with stakeholders or the public. An internal planning study would have to have been completed at that time. The review of environmental effects to date under the Screening Report would necessarily reference this background effects information. **Can the TPA forward or post on its website the internal planning study scoping the magnitude of environmental effects projected in Year 2002 with respect to airport expansion plans?**	The questions go beyond the Project and the EA. Refer to Response #28.
238.	**Can the TPA include a sub-chapter on airport parking studies completed for various horizon years?** There are not enough visitor parking spots for the surrounding community as is.	This comment goes beyond the Project and the EA. In any event, airport operational aspects such as access and parking would be addressed as part of the traffic management program and strategy being developed by the TPA in a separate study and will be discussed with the community through the ongoing community liaison activities, regardless of whether the Project were to proceed.
239.	**Can the TPA include a clear discussion on what problems currently exist regarding 'safe use and operation of airport' as noted p.68 and what problems currently exist**	The report does not suggest there are problems. It indicates that minor improvements would improve the safe use and operation of the BBTCA, as access would

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	regarding 'reliable access to airport' and to' emergency services' Appendix B Q3? How will tunnel solve these problems?	be improved.
240.	**Can the TPA include how future additional taxi demand will be handled on neighbourhood roads and discuss how the new taxi idling area on Eireann Quay was modeled in past - prior to the problem being raised by the public?**	The questions go beyond the Project and the EA. The EA has included all relevant and applicable matters to be considered for the Project. In any event,, it is not expected that the Project would increase taxis in the area. In fact, it is expected that any taxi matters, including, for example, immediately after ferry boat arrivals, would likely be improved. Also refer to Response #238.
241.	The Study Area is not sized appropriately. **Can the TPA size the Study Area so that all cumulative effects are captured in the Screening Report?**	Refer to response #75.
242.	**Can the TPA include additional information as follows?** There appear to be residual effects that are significant, contrary to information in Table 5.3.	There would be no residual effects from the Project
243.	• Proposed tunnel cross section?	At this planning stage, as is typical, the dimensions of the tunnel cross section have not been finalized. As indicated in the draft Environmental Screening report (page 4), the approximate width and height of the tunnel will be 8-10 metres.
244.	• Traffic survey not done in off hours in summer months when people use the trail p.46? What are seasonal effects?	A traffic survey conducted in March 2010 considered arrival and departure characteristics.
245.	• Traffic volumes only analyzed south of Queens Quay and Bathurst intersection but not including the intersection p.49?	The Project would not affect this intersection, and thus was not assessed. Refer to Response #39
246.	• What number of aircraft movements were modeled for 2010 on p.21?	The number of aircraft movements that were used in the model are indicated in Table 4 of the Air Quality Assessment Report (page 6). This report is available on the TPA's web site at: http://www.torontoport.com/EAforms/BBTCA_AQ_Assessment%20.pdf
247.	• In what year were the queuing lanes built p.45?	The lanes were constructed in 2006. [

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248.	• Confirm that all traffic on Eireann Quay is airport related p. 49?	Some of the traffic on Eireann Quay is related to local access, including for the community centre/school and access to the City owned property on the east side.
249.	• Is the car traffic shown on p.49 typical of local residential street with elementary school?	Local residential street traffic (with or without an elementary school) varies depending on many factors and influences. This level of traffic is not unusual for a road adjacent to a school.
250.	• Confirm that northbound left turn on Eireann Quay is in fact a U-turn p. 49?	A portion of northbound traffic on Eireann Quay is for turns by taxis into the taxi queuing area entrance.
251.	• Can the bullets on p.49 be clarified with a figure showing areas covered by the traffic survey?	The areas surveyed are clearly indicated in the text.
252.	• Safety and capacity of surrounding road network affected by airport activities not discussed p.49?	The question goes beyond the Project and the EA. The EA has included all relevant and applicable matters to be considered for the Project. The surrounding road network was not assessed because it would not be affected by the Project. Refer to Responses #14 and 39.
253.	• Increased in circling traffic through local neighbourhood and on Queens Quay looking for parking not reviewed?	Refer to response #252.
254.	• Shuttle buses and routes affecting surrounding road capacity not discussed?	Refer to response #252.
255.	• The traffic effects to the buildings listed in Section 4.2.1 are not discussed on p.64	Refer to response #252.
256.	• Confirm traffic congestions at Bathurst/ Queens Quay is primarily caused by airport related activity, and the level of service at several surrounding intersections will be worse due to projected and potential airport activities in horizon years p.64?	Refer to response #252.
257.	• What is modeled relationship between improved access to airport and increased propensity to use airport?	Refer to Introdurction B.
258.	• Were delays to transit caused by increased airport related congestion at proposed Queens Quay road crossings reviewed?	The question goes beyond the Project and the EA. The Project would not have an adverse effect on transit. Refer to Response #252,
259.	• Discuss the significant increase in projected or potential traffic signal cycle time at Bathurst/ Queens Quay affecting E-W traffic to the benefit of airport	The question goes beyond the Project and the EA. The Project would not affect traffic using the Bathurst /

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	generated traffic, including as it relates to escalating annual volumes of recreational users in summer off-hours along the Waterfront Trail.	Queens Quay intersection or recreational traffic along the Waterfront Trail. Refer to Response #252.
260.	• To what extent has local road congestion increased due to lengthening of N-S traffic signal time at Bathurst/ Queens Quay intersection? How much additional traffic will be added to Queens Quay due to projected and potential airport activities?	The questions go beyond the Project and the EA. Refer to Response #252.
261.	• What public transit upgrades needed to service projected activities?	The question goes beyond the Project and the EA. Refer to Response # 14.
262.	**Can the TPA include information on the following items which were not included in the Screening Report?** It appears s some construction effects cannot be mitigated that otherwise would be.	All construction effects would be mitigated, and mitigation measures have been included in the screening report. Some minor, localized and short-term project construction related nuisance effects are expected.
263.	• Damage to surrounding roadways due to heavy truck loads confirming who will complete repairs or be compensated for the repairs.	The question goes beyond the Project and the EA. In any event, damage to surrounding roads is not anticipated. If damage were to occur, it is expected that this would be the responsibility of the contractor (i.e., the person who caused it).
264.	• Duration of possible extension in construction schedule due to tunnel lining repairs	The need for tunnel lining repairs during construction is not anticipated.
265.	• Show proposed location of handling of potential hazardous substances on plan p.58?	All substances would be handled in compliance with legal requirements. No hazardous substances requiring any particular handling have been identified, other than as described in the report. (i.e., refuelling and the handling of hazardous substances would be done away from the channel).
266.	• Schedule duration for commissioning and testing the works not discussed?	Commissioning would occur over various periods, depending on the particular component, and would take varying lengths of time.
PERIMETER ROAD		
267.	**Can the TPA present all environmental**	

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	effects related to perimeter road separately from tunnel so that these effects can be reviewed and understood? The road project details are buried and hard to find in the current draft.	Comment noted. *Table 5.2, Environmental Effects Analysis and Proposed Mitigation Measures*, contains references where the impacts are associated with the Perimeter Road.
268.	**Can the TPA define the current problems with 'safety and security for the airport' and what current problems with 'maintenance and operations' Appendix B Q17? How will perimeter road solve these?**	The report does not suggest there are problems. The perimeter road would improve access to the perimeter area and security fencing along the west and south sides of the airport, which are currently accessible via runways.
269.	**Can the TPA include additional information as follows?** There appear to be residual effects that are significant, contrary to information in Table 5.3.	The Project would not result in residual effects.
270.	• Drawing showing perimeter road drainage control?	At this planning stage, as is typical, the perimeter road drainage control system has not been developed. However, surface water matters, including related to stormwater management, are outlined on pages 59 and 60 in the draft screening report.
271.	• Security measures along perimeter road?	The proposed perimeter road is inside the BBTCA's security fence.
272.	• What is shoreline effect regarding unloading of barge to construct road?	No effects are anticipated.
273.	• Any noise effects to adjacent beach in summer months due to new road construction, operation?	The traffic volumes along the perimeter road would be very low, and no noise effects are expected. The use of construction equipment during construction activity would result in noise effects that could potentially affect nearby receptors. During the construction period, the contractor would have to comply with applicable laws (including with respect to noise), which it would likely do, for example, by keeping the idling of construction equipment to a minimum, and maintaining equipment in good working order, with effective muffling devices. Construction activity at night would be minimized. Noise complaints, if any, would be addressed as with any similar work, depending on the circumstance. A monitoring, reporting and response program is recommended to deal with all aspects of construction, including complaints regarding noise.

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274.	• To what distance will the increased fuel smells from snow plows on the new road extend to? Will the current fuel smell duration inside the residences be intensified or lengthened?	No impacts or concerns related to the use of snow plows are expected.
PUBLIC CONSULTATION		
275.	YEAR 2010 PUBLIC OUTREACH FAILURES This is a synopsis of public consultation processes that took place over the past year, to document the adversarial context in which the TPA Tunnel Screening Report was prepared from the communities' perspective. There has been one Public Information Center (PIC) on the Draft Airport Noise Study to date, and three PICs on the Tunnel Screening Study to date.	
DRAFT AIRPORT NOISE STUDY		
276.	Tunnel PIC No.1 was scheduled for March 24, 2010 immediately after a Public Information Center that took place on February 17, 2010. The purpose of the earlier Feb 17 PIC was to present a Draft Noise Study Report for the Island Airport as prepared by Jacobs Consultancy.	Comment noted.
277.	The draft report was to have been developed through a community Advisory Group established by the TPA in November 2008. The Advisory Group consisted of representatives from all local neighbourhood associations, sailing clubs and waterfront interest groups. The invitation extended by the TPA to these various stakeholder groups showed awareness by the TPA of the geographical range and scope of effects that current and future airport activities have.	The comment goes beyond the Project and the EA as it pertains to the Jacobs report and a separate Advisory Group set up by the TPA.

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278.	Aside from a project launch meeting, the Advisory Group met only twice over a 12 month period, for reasons which were mostly related to lack of TPA initiative in setting up regular monthly meetings. The meetings that were held featured poorly structured agendas that were not circulated in advance, no follow up on discussed items or minutes, no interim status updates concerning delays in project, and a general lacking in proactive attitude on the part of the TPA to build project momentum with the community. As a result, opportunities for effective public input to this important Study suffered.	Refer to Response #277.
279.	The Advisory Group was abruptly disbanded by the TPA at the end of January 2010 without ever having had opportunity to comment collectively on the first draft report prepared in isolation by the TPA. There was not one opportunity for the Advisory Group to provide any collective input of substance regarding the technical matters of the Study, for incorporation into the Draft Airport Noise Study Report. This is in sharp contrast to the information shown in related TPA News Releases.	Refer to Response #277.
280.	Immediately after it was confirmed that the TPA had in fact disbanded the Advisory Group without its knowledge, the TPA scheduled Noise Study PIC No.1 to occur just two weeks later, on Feb 17, 2010. The contents of the Draft Noise Study as presented to the public were virtually unchanged from the first draft circulated to the Advisory Group one year before in 2009, on which the Group was not given opportunity for collective input.	Refer to Response #277.
281.	Despite very limited advance notice nor wide spread notification of the meeting, the Noise Study PIC No.1 on Feb 17, 2010 generated significant interest in the community and a	

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	significant number of concerns. Though the notice for the event stated that a 'public meeting' would be held, an 'open house' was presented by the TPA instead. Given the significant volume of concerns previously documented by residents, the switch in meeting format by the TPA to a typical Open House format, did not demonstrate an understanding by the TPA of local circumstances, despite the TPA being reminded thereof by email in the days leading up to Feb 17, 2011.	Refer to Response #277.
282.	During the ensuing communal walking tour of the Open House materials with TPA Director Ken Lundy, residents forwarded field noise measurements they had taken using meters calibrated with those of local noise consultants and articulated significant areas of concern regarding the transparency, traceability, and integrity of several chapters of the Draft Noise Study report. All technical discrepancies noted could have been avoided had the draft Noise Study report data and analyses work been completed in an open and transparent process as discussed with the TPA in the very first Advisory Group meeting one year previous.	Refer to Response #277.
283.	Public comments on Feb 17 were being documented by 3 designated 'scribes' identified by the TPA in advance of the meeting. The public commented for the purposes of documentation, consideration, and incorporation into the Airport Noise Study findings, as would normally be done at any Open House. The summary of public comments from this meeting were never issued by the TPA. **Can the TPA issue the summary of public questions and comments compiled at the Noise Study PIC No.1 on Feb 17, 2010?**	The question goes beyond the Project and the EA as it pertains to a separate study. However, the issues raised at the February 17, 2010 meeting were addressed in a public release by the TPA which took the form of an FAQ or Facts about the Airport. The link to that release is: http://www.torontoport.com/PortAuthority/media_content.asp?id=439
284.	For inexplicable reasons, the TPA scheduled	

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	Tunnel PIC No.1 immediately after the conclusion of the meeting of Feb 17, 2010 such that it would occur one month later on March 24, 2010. It appeared confusing to residents that the lower-level Tunnel Study would be commenced while significant outstanding discrepancies remained between modeled and field results shown in the higher-level Noise Study. Typical private and public sector processes would normally dictate that lower level studies conform to higher level studies and not the other way around as appears to be the case here.	The March 24, 2010 meeting for the proposed Project is not related to the February 17 meeting.
DRAFT TUNNEL SCREENING STUDY		
285.	The Tunnel PIC No.1 on March 24, 2010 was once again set up by the TPA as a typical Open House, despite the very obvious stakeholder need for a sit down public meeting as requested by the community on several occasions prior to and on Feb 17 of the previous month.	The first public meeting for the proposed Project was in the form of an open house, which is common and typical for EAs, if a meeting is held at all. When members of the public indicated a desire to have a public style discussion, the next two meetings were held in public meeting format. In fact, the format of the March 24 meeting was changed during the meeting at the request of the attendees to the meeting. The TPA agreed with altering the format of the meeting so that it ended up being a "town hall" style meeting of questions and answers.
286.	TPA staff attending on March 24 were accompanied by security personnel coordinated in advance by the TPA. In doing so, the TPA demonstrated its knowledge that it was not adhering to a code of practice in commencing the tunnel study while several higher level issues to which the tunnel study would need to conform were still being studied (see above paragraphs). Residents filmed portions of the PIC to protect themselves from potential TPA accusations of having unreasonable concerns or behaving violently. The questions and concerns expressed at the Tunnel PIC on March 24,	The questions and responses from the meeting were posted on the TPA's web site under *Frequently Asked Questions June 2010* and e-mails were sent to those on the project's mailing list with notification of the posting. The display boards used at the meeting were also posted, as well as a detailed Agencies and Stakeholders contact list. Refer to: http://www.torontoport.com/corporate_TunnelEA.asp

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	2010 have not yet been compiled or responded to by the TPA. **Can the TPA issue the summary of public questions and comments raised at the Mar 24, 2010 Tunnel PIC No.1?**	
287.	Consultation with potentially affected parties was NOT done early in the tunnel screening study nor throughout the process. In mid-November, the TPA announced to the community that it had completed a Draft Tunnel Study in isolation, and that it had pre-scheduled two public consultation meetings for Nov 30, 2010 and Jan 12, 2011. In addition, the TPA gave a final cut off date for all comments of January 28, 2011 upon which time the decision to proceed with tunnel would be made shortly thereafter. This pre-set timetable of meetings straddling the Christmas break would knowingly leave no time in between the two meetings for the TPA to ever analyze or incorporate any community input that might have been raised in the meetings. As a consequence, the timetable as presented indicated to the residents that any comments they make at the meetings will be responded to in a defensive manner by the TPA and will not be incorporated into the development of Study findings. The TPA had once again knowingly set up an avoidable adversarial context for a public meeting.	There was extensive consultation conducted as part of the EA for the Project. The March 2010 was held immediately after the EA began, which provided the public with an opportunity to have input and obtain information at a very early stage. As indicated in Chapter 6 of the draft screening report, extensive consultation and public communications were conducted, beyond that required by the CPA Environmental Assessment Regulations. For example, people have been able to examine and comment on documents prepared for the EA and screening report (described below), and have had the opportunity from November 30, 2010 to January 28, 2011 (2 months) to comment on the draft screening report. Consultation has included: • Posting of the Project notice (notice of commencement) on the TPA's website and Canadian Environmental Assessment Agency's public registry (as of March 15, 2010); • Posting and publication of the Notice of Commencement of the Project and notice of initial public meeting on the TPA's website, as well as in the Metro, Toronto Star and L'Express newspapers; • Initial Public Meeting (held on March 24, 2010) to provide initial information on the Project and EA screening process and to answer questions about the proposed Project and solicit comments from interested persons, including the public, stakeholders and agencies; • Posting documents on the TPA's website, including Project Description, Scoping Document, Public Meeting Display Panels, Contact Lists, Frequently Asked Questions (FAQ) ; • Responding to enquiries from the public, agencies and other interested persons; • Ongoing communications, including discussions and meetings, as requested, with interested persons

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		regarding the Project, which included providing information and obtaining comments; • Posting and publication of Notice of availability of the Draft EA screening report for review, examination and comment on the TPA's website, as well as in the Metro, Toronto Star and L'Express newspapers. After the end January 28, 2011 public comment period, the TPA carefully reviewed and considered all the input received before revising and finalizing the Screening Report, a process that took approximately an additional two-month period.
288.	The Tunnel PIC No. 2 on November 30, 2010 was announced with just two weeks advance notice of the meeting date, resulting in both executive members of YQNA and BQNA unable to attend. YQNA members had scheduled a meeting for Nov 30, 2010 in September and were unable to attend, though some arrived on time for the meeting to try to participate immediately at commencement. The meeting start time was delayed 30 minutes by the TPA beyond the posted start time, and therefore YQNA members could not input collectively at that meeting. In addition, active and informed members of BQNA were unaware of the Tunnel PIC No.2 meeting until 4 days prior to November 30, 2010. Neither the Board or building administrators of Windward Coop non-profit housing at 34 Little Norway Crescent were directly informed of the project or of the meetings by the TPA - even though the Coop building is situated 75 m from the proposed tunnel site. It is assumed that other directly affected stakeholders were not contacted by the TPA about this study. This is not representative of good EA planning protocol, nor does it represent the Best Practices of either the Private or Public Sectors. **Can the TPA confirm why it chose not to reach out**	Many efforts were made to consult with the community, including to provide information and to obtain comments, including as described above. Newspaper notices were placed in all the major publications, emails to the contact list were sent out (including to people who signed-up at the public meetings for the Project), the TPA's website announced the public meetings, and the TPA's Director of Communications contacted interested members of the public. Further, the TPA remained committed to gathering input from the public, and has provided the public with contact information should people have ongoing questions or comments. A third public meeting was held on January 12, 2011 to provide an additional opportunity for the exchange of information and to obtain comments from the public.

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	to the communities in advance of the meetings? Can the TPA confirm if there is anything which prevents the TPA from contacting directly affected stakeholders as would normally be done?	
289.	Tunnel PIC No.2 on Nov 30 seemed to have been packed with TPA consultants and staff. There were no maps on display showing land-use and surrounding infrastructure prior to the meeting. A key person (TPA's 'community liaison officer') was absent, and clearly the concerns previously expressed by the community, had not yet been transmitted to members of TPA's management. Almost half the public questions on Nov 30 were responded to by Dillon with the words: "those concerns are not considered part of this study". At the request of Braz Menezes, YQNA planning committee, 40 copies of the Draft Report from Dillon Consulting, were received and subsequently distributed to YQNA members and the balance to BQNA members. The main substantive comments received in response, reflect those previously made by the handful of participants at the Nov 30 meeting. **Can the TPA incorporate the issues raised by the public on Nov 30 and Jan 12 in the Screening Report, and show how the public concerns have or have not been addressed, as per typical study processes? Can the TPA compile all correspondence received in an Appendix to the report?**	All materials generated from the study were available on overhead presentation slides. Many of the questions from the November 30, 2010 meeting did not relate to the Project. All comments received and issues raised were considered in the screening report, including responses. The public correspondence received is included in the screening report's appendix via comments and response tables and other materials.
TPA CONSULTATIVE COMMITTEE		
290.	In late 2010, the TPA announced its intention to establish a new committee to meet quarterly to review airport activities and prepared a formal Terms of Reference. The idea for this Committee was floated by the TPA at the February 17, 2010 public meeting, one year ago two weeks after the	The comment goes beyond the Project and the EA.

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	TPA had disbanded the Noise Study Advisory Group without warning or explanation. Far fewer community associations will be represented on the new Consultative Committee than was previously included on the former Advisory Group, however, the new committee will include several private business interests. It is hoped this will lead to some fruitful exchanges.	
PORTER AIRLINES SPEAKS ON BEHALF OF THE TPA		
291.	We note that there have been on-going comments by Porter CEO in the national media in recent months referring to airport facility negotiations, while also discussing slot and flight numbers that are higher than anything that has ever been presented to the public by the TPA. These comments do not consider the perspectives of the community. The comments appear to undermine the ability of the TPA to affect control on airport activities with respect to the planned, promised, projected, and potential effects with or without the tunnel project.	Porter Airlines does not speak for the TPA. The TPA completed a capacity review, including an NEF Contour study, and worked with the community on a noise mitigation strategy. That process is now complete, and the TPA has no plans to add additional slots.
COMMUNITY NOISE COMPLAINTS		
292.	For the past couple years, the TPA had been posting monthly summaries of noise complaints logged by residents on its website. The complaints were accompanied by a brief response from the TPA concerning the complaint, however, these have not been detailed enough in terms of what specific ground or air maneuvers were the source of the concern. Mutual educational opportunities regarding the complaints have not been pursued by the TPA.	The comment goes beyond the Project and the EA.
293.	The monthly summaries were generally posted 3 months after the complaints were	

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	logged, leaving the complainer to wait that length of time to finally learn what caused the noise. As of March 2010, the TPA decided to stop responding to noise complaints and the monthly summaries are no longer being posted. **Can the TPA confirm how noise complaints during tunnel construction, as shown under the mitigation measures in the Screening Report, will be dealt with immediately given the lack of responsiveness evidenced to date? Can the TPA attach all monthly complaint summaries including its responses in an Appendix to the Screening Report in order to document the high number of unresolved resident noise complaints considered in the Screening Report analyses? Can the TPA post all complaints logged since March 2010 on its website?**	The comment goes beyond the Project and the EA. With respect to noise complaints during construction, any complaints would be addressed by a community consultation program that would be set up for this purpose. The TPA and contractors would be involved with community representatives.
TRUST		
294.	Several members of the community verbally noted during the Jan 12, 2011 Q&A that they do not trust Dillon Consulting. One resident recalled that in recommending a bridge alternative in the early 1990s, Dillon made comments that the airport would not be viable without the bridge. In addition, Dillon has also been referred to as "the faithful lap dog of the TPA" in past articles of a local newspaper. (The comments were not written by any active member in any neighbourhood association.)	Comments noted. Dillon is a qualified and objective consultant, which is recognized as a leader in the field of environmental assessments, having completed hundreds of EAs. .
295.	The perception of the community is that Dillon is exclusively selected by the Toronto Port Authority (TPA) because it will write a biased reports in favour of client wishes, as sometimes seen in a private sector client relationship, rather than neutral, unbiased reports typical of public sector client relationships. **Can the TPA confirm**	Refer to response #295. There are no special provisions, including with respect to limitation of liabilities. The contract for these services is the standard Municipal Engineers Association/Consulting Engineers

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	whether or not there are any special provisions included in the signed contract with Dillon Consulting with respect to limitation of liabilities regarding the codes of practice typically employed on a project of this significance? Can these provisions and/ or the terms of the fee contract document be forwarded or else reviewed in confidence with YQNA?	of Ontario agreement that can be found on-line (http://www.municipalengineers.on.ca/lib/db2file.asp?fileid=16372) Information regarding fees is proprietary and confidential, and is not provided.
296.	Desirably Dillon is not included or selected on the next couple assignments in order to eliminate these perceptions of preparing biased studies (whether founded or unfounded), as these issues reflect negatively on the TPA. Can the TPA disclose the results of its Request for Qualification (RFQ) process, confirming the list of acceptable consultants? Moving forward, can the TPA contract its consultants through an open Request for Proposal (RFP) process? This is important given the importance of studies yet to be completed and the cost effectiveness of them. It is desirable that all studies related to public infrastructure be carried out in a transparent, sensitive, and comprehensive manner.	Dillon was not allowed to participate on design-build-finance-maintain teams. The list of short-listed teams will be made public if the project is approved to proceed. TPA uses an open RFP process for its consultant selection on projects.
297.	Individual members of the community verbally noted on Nov 30, 2010 and Jan 12, 2011 that they do not trust the Toronto Port Authority (TPA). The comments appeared to be in response to the handling of responses by the TPA during Public information Centers (PICs) and also based on inaction over issues already discussed and documented in past with the community. Individuals in both recent meetings ended their line of questioning in frustration by asking 'how it was possible for TPA staff to sleep at night'. On Nov 30, one resident actually requested that Director Ken Lundy put his words in writing because the resident said he did not believe that what was being	Comments noted. The TPA continues to look for ways to improve communications with the public, including the local community. .

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	promised him in public would in fact be implemented. On Jan 12, a different resident said to Ken Lundy: "We don't trust you. You lied to us". This is a serious matter having important ramifications with respect to the approval process for this Tunnel Screening Report.	
TPA 'CONFLICT OF INTEREST'		
298.	It appears the selection of the Study EA process, evaluation of the effects, and the final decision whether to proceed with the tunnel project, is in the exclusive purview of the TPA, who is also perceived to be the project proponent likely to receive benefit from the results of this project.	The TPA is complying with the requirements to complete the EA, as described in the Canada Port Authority Environmental Assessment Regulations.
299.	A proponent is typically defined as one who carries out or proposes to carry out an undertaking, or is the owner having charge, management or control of the undertaking. In addition, the TPA is perceived to be a federal agency who is the Responsible Authority (RA) under the CEAA having the decision making authority and ability to provide information or advice. **Can the TPA confirm in the report its dual role as both Proponent and RA concerning this project, as it is not clear? What steps has the TPA done during the study to date, to address its widely perceived conflict of interest on this study?**	The TPA does not have a conflict of interest. The TPA is complying with the requirements to complete the EA, as described in the Canada Port Authority Environmental Assessment Regulations. The Regulations indicate that if there is a CPA and one or more responsible authorities, certain provisions of the Canadian Environmental Assessment Act apply. The TPA is the CPA (i.e., a port authority established under s. 8 of the Canada Marine Act).
300.	A dual role for an approval agency has not been the typical process or methodology in completing EA Studies for transportation improvements along the Waterfront or elsewhere. There is normally recourse for the public to a third party in the approval process. EA processes in general are by their very nature set up to avoid a potential for	Refer to responses #298 and 299.

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	conflict of interest that the TPA finds itself in here. **In recognition of the significant weaknesses in due process, can the TPA confirm from whom it will seek a higher level approval prior to making a decision on the proposed works?** It is recommended that the TPA seek referral through the Minister of Environment, to Minister of Transportation as provided for under Canada Port Authority Environmental Assessment Regulations (SOR/99-318) and (SOR/2007-108).	A referral is not necessary or appropriate.

APPENDIX C
Additional Information Regarding BBTCA
(Air Quality and Noise)

Appendix C - Additional Information for Community Air and Noise Assessments

Air Quality

Air quality conditions in 2016 were predicted and compared against air quality criteria, including to assess the potential for adverse effect. They were also compared to 2010 conditions. The assessment used dispersion modeling techniques to predict the maximum air contaminant contributions from relevant emission sources (local road traffic, BBTCA ferry traffic and BBTCA airport activity), and used historical monitoring data to characterize the contributions from other emission sources in the surrounding area (*i.e.,* background air quality).

For conditions in 2010, dispersion model results were used from work that RWDI had conducted in 2005 (the inputs used the 2005 modelling are considered to be representative of current conditions). When comparing the results of the previous modeling to the new modeling for 2016, some exaggeration of the difference between the two was expected to occur because of the changes in estimated traffic volumes, and also because of changes in best estimates of emission rates since 2005 (primarily the estimates of particulate matter arising from road dust).

Air contaminant contributions from the modeled emission sources were predicted for a variety of impact locations (i.e., receptors) in the study area (see **Figure 1** for receptor locations).

Figure 1: Air Quality Receptor Locations

The maximum predicted contributions of CO, NO_2, PM_{10} and $PM_{2.5}$ at the most-affected receptors are summarized in **Table 1,** along with applicable ambient air quality criterion (AAQC) and a reasonable estimate of maximum contribution from background emission sources (based on the 90th percentile of historical monitoring data).

Table 1: Summary of Maximum Predicted Concentrations in relation to Air Ambient Quality Criteria

Contaminant	Averaging Period	AAQC ($\mu g/m^3$)	Reasonable Maximum Background Concentration ($\mu g/m^3$)	2010 Predicted Concentration ($\mu g/m^3$)	2016 Predicted Concentration ($\mu g/m^3$)
Carbon Monoxide (CO)	1-Hour	36,200	496	2,903	1,960
Nitrogen Dioxide (NO_2)	1-Hour	400	64	125	126
Inhalable Particulate Matter (PM_{10})	24-Hour	50*	32**	14	26
Respirable Particulate Matter ($PM_{2.5}$)	24-Hour	30	17	3.2	3.5

Notes: * Interim Ambient Air Quality Criterion

** PM_{10} is no longer routinely monitored in Ontario. The values were estimated assuming $PM_{10}=PM_{2.5}/0.54$.

The results in Table 1 indicate that the maximum predicted CO concentrations decrease from 2010 to 2016. BBTCA sources are not a significant contributor to local CO concentrations; the major contributor is local road traffic. Traffic volumes projected for 2010 (from RWDI's 2005 report) were over-estimated; as such the corresponding CO concentrations for 2010 are over-estimated as well. For 2016, traffic is projected to increase, but the increase is offset by improved vehicle engine and emission control technology that has been legislated. Emissions will continue to decrease as older vehicles that predate the legislation are replaced. The combination of these factors results in the predicted decrease.

BBTCA sources contribute to maximum NO_2 concentrations at locations closer to the BBTCA, where emissions will increase with increased aircraft activity. Unlike vehicles, no improvements in emission control technology for aircraft engines are expected between 2010 and 2016. At locations further away from the BBTCA, NO_2 concentrations are more influenced by local road traffic.

PM_{10} and $PM_{2.5}$ concentrations are dominated by road traffic. The maximum concentrations are predicted to increase from 2010 to 2016, but those increases are highly overestimated, especially for PM_{10}. The main source of PM from road traffic is dust from the road surface that becomes re-entrained into the air as the tires contact the road surface. PM emissions from the vehicle exhaust are relatively small in comparison. There is a great deal of uncertainty in estimating re-entrained dust from roadway surfaces, and there have been significant refinements in the dust emission estimation techniques since the 2005 study. These updates have resulted in higher emissions and predicted concentrations, especially for PM_{10}.

It can be seen that the contributions from the modeled emission sources and the predicted changes between 2010 and 2016 are small in relation to the applicable criteria and have little bearing on whether the AAQC is met. A possible exception is PM_{10}, for which the maximum contribution from the modeled sources could possibly result in concentrations above the AAQC if it were to occur at the same time as the maximum background contribution. There is, however, some uncertainty associated with both the predicted concentrations and the reasonable maximum background concentrations, as these levels were estimated. The predicted PM_{10} concentrations are not attributable to BBTCA activity itself, but rather to activity on the local roadways, as well as the ferry service, which will not change from 2010 to 2016.

Therefore, RWDI concludes that the increased activity at BBTCA will not result in adverse effects in local air quality overall.

Noise

Sound level impacts at adjacent points of reception (see **Figure 2**, repeated below) were modeled considering groundside BBTCA operations, 2016 road traffic volumes, BBTCA ferry, and Light Rail Transit (LRT) activity. Noise sources associated with the pedestrian tunnel were not included because even if it were to be built, its impact would be insignificant.

Figure 2: Noise Receptor Locations

Road and LRT traffic sound levels for 2016 were modeled using the ORNAMENT algorithms and STAMSON software. Predicted traffic volumes were provided by Dillon Consulting Limited, and show an increase of a 1 dB increase in sound levels over 2010. The future TPA ferry schedule is expected to remain the same as the current ferry schedule. Aircraft support equipment, and aircraft operations are modeled to reflect future slot allotment, resulting in an approximate 3 dB increase above the current sound levels. Sound levels for airborne aircraft were not modeled as part of this analysis, but are required to meet the Tripartite Agreement limits.

The increase in sound at the points of reception adjacent to BBTCA is a result of an increase in road and LRT traffic as well as an increase in activity at the BBTCA. The combined sound level from road traffic, LRT traffic, groundside activities, and airborne aircraft activities remains dominated by the traffic and LRT noise in 2016. As presented in **Tables 2** to **4**, sound levels were modeled for three different averaging periods: 24 hr day, day time period, night time period. Road and LRT sources are the largest contributors to noise levels in the study area, and due to the logarithmic nature of sound, when BBTCA-related noise sources are added this only results in a 0 to 1 dBA increase in noise levels. This is an insignificant increase which would not be noticeable to the human ear.

Table 2: 2016 Cumulative Weekly Noise Impacts - Leq (24) (in dBA)

Receptor No.	Road and LRT	Ferry	Groundside	Airside	Total
R1	69	33	54	55	**69**
R2	75	9	38	56	**75**
R3	66	39	59	56	**67**
R4	59	39	60	57	**63**
R5	65	21	52	56	**66**
R6	66	16	57	55	**67**
R7	65	22	55	56	**66**
R8	59	34	60	57	**64**

Table 3: 2016 Cumulative Weekly Noise Impacts - Leq (Day) (in dBA)

Receptor No.	Road and LRT	Ferry	Groundside	Airside	Total
R1	70	34	56	57	**71**
R2	77	10	39	58	**77**
R3	67	40	61	58	**68**
R4	60	40	62	59	**65**
R5	67	22	53	58	**68**
R6	68	17	59	57	**68**
R7	67	23	57	58	**68**
R8	60	36	62	59	**65**

Table 4: 2016 Cumulative Weekly Noise Impacts - Leq (Night) (in dBA)

Receptor No.	Road and LRT	Ferry	Groundside	Total
R1	64	29	39	**64**
R2	70	5	22	**70**
R3	62	35	44	**62**
R4	55	35	45	**56**
R5	59	17	36	**59**
R6	61	12	42	**61**
R7	59	18	40	**59**
R8	55	30	45	**56**

Specific observations and conclusions are presented below.

- The maximum change in road and LRT traffic sound levels for averaging periods of Leq (24), Leq (Day) and Leq (Night) is predicted to be 1 dBA, which is considered to be imperceptible, and thus insignificant. The predicted noise levels are high enough that future residential development within the study area might be restricted in certain areas due to applicable noise guidelines for land use; however, these restrictions would result from road traffic sound levels from sources such as the Gardiner Expressway.

- All residences and passive land use areas within the study area lie outside of the Tripartite Agreement 1990 NEF 25 contour, and are therefore expected to have NEF values at or below NEF 25 for current and future conditions. Under current land use guidelines for new residential development, no aircraft noise-related restrictions are expected to apply for the current and future scenarios.

- With the exception of Receptors R4 and R8, all other residential locations examined are anticipated to have 2010 and 2016 groundside sound exposure levels below that of the ambient levels (which are dominated by road and LRT traffic). Considering the BBTCA ground-based activity as a "stationary" source of sound, MOE NPC-205 guidelines – which are indicative of what is generally acceptable – are met, and would continue to be met at all residential receptor locations except R4 (Little Norway Crescent) and R8 (Southwest corner of South Beach Marina Town Residences). Ambient (road traffic) sound exposures at R4 and R8 are generally lower than at other receptors because of building screening of the Gardiner Expressway and other major arterial roads in the area. At R4 and R8, sound levels from groundside activities are anticipated to be above ambient levels from road and LRT traffic by 1 dB in 2010 and 2016. This is considered to be imperceptible.

- The 2016 ferry sound levels at all residential receptors are predicted to remain the same as the 2010 sound levels as no change in the ferry schedule is anticipated. TPA ferry activity, as a stationary source of sound, is predicted to meet MOE NPC-205 guidelines at all residential receptors.

- The combined BBTCA ground-based activity and TPA ferry activities are predicted to meet MOE NPC-205 guidelines at all residential receptor locations except at R4 and R8 for 2010 and 2016. At R4 and R8, sound levels from groundside activities are anticipated to be above ambient levels from road and LRT traffic by 1 dB in 2010 and 2016. While this is considered to be

imperceptible, it is noted that the TPA is considering the installation of sound barriers at the BBTCA to reduce the sound contributed to aircraft groundside activity (which is not included in this analysis).

- The predicted maximum cumulative sound level increase in Leq (24) and Leq (Day) at all modeled receptors within the study area is between 0 and 2 dBA. Changes in overall level are predominantly caused by predicted increases in road traffic sound level. Overall changes of 1 dB to 2 dB are considered to be imperceptible to the human ear.