



Billy Bishop Toronto City Airport (BBTCA)

Proposed Lakefill Within Marine Exclusion Zone (Keep-Out Area) - Toronto Harbour

Canada Port Authority Environmental Assessment Regulations (CPA EA Regs)

Project Description

May 31, 2012

Prepared for the Toronto Port Authority by



Dillon Consulting Limited

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1. BACKGROUND

1.1 General Information

Project Name and Nature of the Project

The name of the proposed Project is the ***Billy Bishop Toronto City Airport Proposed Lakefill within Marine Exclusion Zone (Keep-Out Area) - Toronto Harbour*** (BBTCA Lakefill, or the Project). The Toronto Port Authority (TPA) is the Project proponent. The Project includes the lakefilling (below the surface of the water) in the Toronto Harbour at the east end at the Billy Bishop Toronto City Airport (BBTCA). Specifically this is to include the filling in of an area of approximately 5,000 m² (approximately 1.0 metre below the surface of the water) within the Marine Exclusion Zone (MEZ). The Project would improve the safe use and operation of the BBTCA as it would create shallower waters to deter marine vessels from penetrating the Obstacle Limitation Surface of the runway. In addition, it is expected that the Project would result in a net benefit to fish habitat as a result of the construction of fish/aquatic habitat compensation enhancements. While not a requirement for the Project, the Project may take advantage of surplus clean material that would be excavated from the BBTCA Pedestrian Tunnel.

This screening is being completed under the Canada Port Authority Environmental Assessment Regulations (CPA EA Regs).

Project Location

The site of the BBTCA Lakefill is Toronto, Ontario at the east end of the BBTCA, within the Marine Exclusion Zone in the Toronto Harbour. ***Figure 1, Project Location Plan***, illustrates the anticipated location for the proposed lakefill. The BBTCA Lakefill would occupy an area of approximately 50 m by 100 m. The depth of the lakefilling would be confirmed as part of the Screening process.

Distribution of Project Description

This Project Description (PD) will be distributed to the government agencies (federal authorities, potential responsible authorities, as well as others for their information and input) described below. The PD will also be available for review and consideration by others, including other government agencies, First Nations, non-government organizations, local residents, businesses and the general public. The PD can be accessed on the TPA's website.

Government departments and agencies that the PD will be provided to include:

- Canadian Environmental Assessment Agency (CEAA)
- Environment Canada (EC)
- Transport Canada (TC)
- Department of Fisheries and Oceans Canada (DFO)

- City of Toronto (Deputy City Manager/CAO, local councillors, Waterfront Secretariat)
- Waterfront Toronto
- Aquatic Habitat Toronto (AHT)
- Toronto and Region Conservation Authority (TRCA)

As indicated, the PD will be made available for public review and comment through the TPA's website.



Related Environmental Assessments

Other than the federal environmental assessment (EA) screening being conducted under CPA EA Regulations, there is no other EA requirement applicable to the Project.



TORONTO PORT AUTHORITY
 BILLY BISHOP TORONTO CITY AIRPORT
 PROPOSED LAKEFILL CEEA PROJECT
 DESCRIPTION

PROJECT LOCATION PLAN
 FIGURE #1

-  MARINE EXCLUSION ZONE BUOY LOCATIONS
-  PROPOSED LOCATION OF LAKEFILL

NTS



MAP DRAWING INFORMATION:
 DATA PROVIDED BY MNR
 GOOGLE EARTH PRO

MAP CREATED BY: SFG
 MAP CHECKED BY: EC
 MAP PROJECTION: NAD 1983 UTM Zone 17N

FILE LOCATION: \\dillon.ca\DILLON_DFS\Toronto\Toronto GIS
 \126110\Mapping\Project Location Plan.mxd

1.2 Contacts

The Project proponent is the Toronto Port Authority (TPA). To obtain more information please contact:

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| Project Proponent: | Ken Lundy, P.Eng. Director, Infrastructure, Planning & Environment Toronto Port Authority 60 Harbour Street, Second Floor Toronto, ON M5J 1B7 416-863-2040 KLundy@torontoport.com | Phil Warren, P.Eng, PMP Project Coordinator Toronto Port Authority 60 Harbour Street, Second Floor Toronto, ON M5J 1B7 416-863-2046 Fax: 416-863-0495 pwarren@torontoport.com |
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1.3 Federal Involvement

The Project proponent is the TPA, and as such an EA under the Canada Port Authority Environmental Assessment Regulations (CPA EA Regs) is being completed. Other federal agencies that are expected to be involved in the EA screening include:

- The Department of Fisheries and Oceans - as authorization under the *Fisheries Act* is expected to be required; and
- Transport Canada – while the proposed lakefilling activities are located within the MEZ, the need for NWPA authorization or at least comment from Transport Canada will be confirmed.

It is not anticipated that any additional federal agencies will be required to sign-off on the screening. This will be confirmed with Transport Canada, DFO, Environment Canada and the Canadian Environmental Assessment Agency. In the event that there is any federal approval

required, the environmental screening being completed would be available to satisfy the obligations of any Responsible Authority.

1.4 Approvals

A *Fisheries Act* Authorization is expected; consequently, DFO is anticipated to be an RA for this EA screening in addition to the TPA. While approvals from the Toronto Region Conservation Authority are not required, we expect that it would work with DFO on issues related to fish habitat. The TPA will work with these agencies through AHT to manage this process.

As lakefilling would be developed within the existing marine exclusion zone, *Navigable Waters Protection Act* authorization (NWPA) may not be required. TC's involvement will depend on the need for NWPA authorization.

Provincial approvals are not expected to be required for this Project. The TPA will as part of the scoping stage confirm that there are no provincial EA requirements or permits required (e.g. MNR permit under the *Lakes and Rivers Improvement Act*).

2. DESCRIPTION OF PROJECT COMPONENTS

2.1 Project Components

The Project would include the following components:

- Material Stockpiling;
- Transporting materials to the site;
- Installation of Environmental Protection Measures;
- Possible installation of additional Marine Navigation Aids, if needed;
- Lakefilling (below the surface of the water) in the Toronto Harbour of an area of approximately 50 m by 100 m within the MEZ;
- Construction of appropriate shoreline protection; and,
- Construction of the fish/aquatic habitat compensation enhancements.

2.2 Project Activities

Table 1 contains a list of Project activities for the purpose of conducting the EA. Subject to completion of the EA, and other matters that the TPA would need to complete to proceed with the Project, construction initiation could be expected in June 2012, with completion anticipated within 18 months of that.

Table 1: Detailed Project Activities

| Project Component | Project Component Description | Physical Works and Activities |
|------------------------------------|---|--|
| Construction Activities | | |
| Material Stockpiling | Materials to be used for lake fill will be stockpiled at a location near the water's edge. | The size of any local stockpiling would be limited before the materials were placed on a barge. As such material stockpiles will be relatively small. Placement of stockpiled materials will be by dumping from dump trucks or more directly from adjacent excavation equipment. Runoff from any stockpiled materials will be strictly controlled. Some of the materials may be sorted at this time with the removal of materials unsuitable for lake filling. |
| Transporting materials to the site | Materials for lake filling will be transported to the site by barge and/or front end loaders. | <p>This activity will involve moving the stockpiled materials from temporary locations near the water's edge using excavation equipment such as backhoes/front end loaders and placement on the barge or directly into the water. Runoff control measures will be implemented to control erosion/sedimentation during loading and transport.</p> <p>It is likely that additional material sorting/screening practices will be carried out on the barge to further prepare the material for lake filling. This could include processes to remove the fine materials for disposal at more suitable locations. It is expected that the barge will anchor itself at the edge of the disposal area to facilitate the unloading of the material.</p> |

| Project Component | Project Component Description | Physical Works and Activities |
|---|---|---|
| Site works/material placement | <p>Site Preparation: Site preparation works (installation of Environmental Protection Measures) will be put in-place prior to material placement.</p> <p>Material Placement: Material placement will be directly from the barge and/or placed from the shoreline.</p> <p>The need of construction of shoreline protection and construction of the fish/aquatic habitat compensation enhancements will be determined through the EA screening process.</p> | <p>A sediment control barrier (likely a silt curtain) will completely encompass the area to receive the fill materials. This will be extended from the water surface to the lakebed and provide total control for any suspended sediments that could result from any fines that remain in the material after processing. Initially the materials will be dumped from the barge in such a manner to ensure proper distribution along the lakebed and to establish a working perimeter. Subsequent barges will fill in the perimeter area and result in the raising of the lake fill area to its final elevation.</p> |
| Operation Activities | | |
| No operation activities are planned for the lake fill area | | If an aircraft occupies the lake fill area as a result of an over run of the runway, the aircraft will be removed and the area repaired to re-establish the fill surface. |
| Decommissioning Activities | | |
| No decommissioning activities are planned or expected to be needed. | | |

2.3 Resources/Material Requirements

Filling Material

The source of the fill material for this Project has not been confirmed. It is anticipated that up to 55,000 m³ of rock material will be excavated to construct the Pedestrian Tunnel to the BBTCA. If suitable, part of or all this material may be used for the Lakefill Project. There is the potential that some amount of the excavated materials may be impacted by contaminants, such as in the shallower layers areas of previously placed fill. This material would be properly tested and handled in accordance with applicable laws.

Project materials, including fill material, silt/sediment control containment, and fish habitat compensation components would be transported to the project site by barge and/or across the Western Channel by the BBTCA Ferry.

2.4 Waste Disposal

The Project is not expected to generate significant amounts of waste material. Any water material would be collected and transported off site for disposal at an appropriate licensed facility.

3. PROJECT SITE INFORMATION

3.1 Environmental Features

Besides the fish habitat (covered in Section 3.2), there is little to no natural habitat in the Project area. Environmental features in the Project area, including aquatic/terrestrial habitat, vegetation, soil and water quality, will be documented in the screening report. The existing shoreline and coastal environment conditions will be described. The screening will assess the potential for adverse effects on the bio-physical environment, including the potential for changes to sediment transport

3.2 Land Use

The existing land use in the vicinity of the Project consists of green space and the BBTCA. There are no other uses on or near the Project site other than for airport operations and activities (terminals, warehouses, runways, etc). Boats are not permitted on the area, which is located with the Marine Exclusion Zone.

3.3 Fish, Fish Habitat and Navigable Waters

Fish habitat is expected to be affected by the Project. DFO and the Canadian Environmental Assessment Agency are being informed of the Project. The Screening report will include an assessment of potential fish habitat impacts from lakefilling. This will be discussed with DFO and all agencies on the AHT committee. Compensation requirements for unavoidable fish habitat loss and a review of potential on-site or off-site fish compensation opportunities will be completed as part of the screening. The Project would be expected to result in a net benefit to fish habitat. Fisheries approval and compensation design requirements will be identified during the screening process.

Navigable Waters Protection Act authorization (NWPA) may not be required as lakefilling would be developed within the existing marine exclusion zone. TC's involvement will depend on the need for NWPA authorization.

3.3 Coastal and Shoreline Conditions

The screening report will include a coastal engineering screening level assessment of the shoreline, which will describe the sediment transport processes for the Project location. The results of the assessment will be used to prepare a screening level descriptive model of the shoreline processes, which will be used as the basis for the environmental effects assessment. Efforts will be focused in the littoral sediment transport and the potential for the lakefill to alter existing erosion and/or sedimentation patterns. The screening report will recommend economically feasible measures to mitigate any significant adverse effects.