Don Mouth Naturalization & Port Lands Flood Protection Project Environmental Assessment

Site Walk #2 and Boat Cruise
Summary Notes

October 14, 2006

SITE WALK #2 AND BOAT CRUISE

Don Mouth Naturalization and Port Lands Flood Protection Project

Saturday, October 14, 2006

1:00 – 4:30 p.m.

SUMMARY NOTES

The primary purpose of this event was to generate public excitement by kicking-off the consultation component of the Environmental Assessment for the Don Mouth Naturalization and Port Lands Flood Protection Project with a hands-on, on the ground (and on the water) information tour within the project study area, in order to show first-hand the range of possibilities and challenges associated with the project. The event participants were also presented with information regarding the industrial and natural heritage of the area, and shown the range of adjacent projects that are currently underway or will be undertaken in the near future.

177 people signed in at the meeting at the Villiers Parkette registration table. As participants arrived, they were divided into one of three groups and were provided with the following as they signed in:

- Route map showing the location of four stations within the Port Lands;
- Brief overview of the information to be presented at the four stations; and
- Feedback form to provide comments.

Tour guides led the groups through the four information stations located at Villiers Parkette, the corner of Commissioners Street and Don Roadway, near the corner of Cherry Street and Lake Shore Blvd. (470 Lakeshore Boulevard) and aboard the Island Princess (the tour boat for the event) which traveled between the Keating Channel and the Turning Basin of the Ship Channel. Experts led discussions at the various stations on the following topics:

- Hydraulics, hydrology and flood risk;
- Flora and fauna;
- Industrial history of the Port Lands;
- Soils and groundwater;
- Filmport Studios;
- Roadways and infrastructure;
- East Bayfront Precinct Plan;
- Toronto Transit Commission's environmental assessments in the area;
- Ecological linkages between Tommy Thompson Park and the Don watershed;
- Fish and aquatic habitat;
- Toronto Port Authority operations; and
- Commissioners Park, Interim Sports Fields, Lake Ontario Park and the Port Lands Strategy.

All groups were welcomed to the event by Adele Freeman (TRCA) and Paul Murray (Gartner Lee Ltd.) while a concurrent electrofishing demonstration was featured at the Keating Channel adjacent to the Villiers Parkette. Summaries of the talks are included in section 1.0 of these notes.

The following points summarize the feedback received (18 comments received):

- 55% of respondents had no previous participation in the Don Mouth Naturalization and Port Lands Flood Protection Project
- 100% of respondents were interested or somewhat interested in attending future Don Mouth Naturalization and Port Lands Flood Protection Project events
- 78% of respondents would like to attend another site walk, with 60% interested in public meetings and open houses
- 100% of respondents found the site walk useful to understand the project
- Asked what was most useful or interesting about the event, respondents most often mentioned the opportunity to see the plans from the perspective of the land and the water, seeing the scale of the project, learning about the other projects in the area, and learning about the history and biology of the area
- Suggestions for future events included holding site visits in the spring or summer and trying to have smaller groups or more sound equipment to better hear speakers

Please refer to the remainder of this report for more detailed notes.

1.0 Presentations

Prepared by:
Michelle Vanderwel
Don Watershed Administrative Clerk
Toronto and Region Conservation
5 Shoreham Drive
Downsview, Ontario M3N 1S4
416-661-6600 ext. 5280
Fax: 416-667-6278
Email: mvanderwel@trca.on.ca

SITE WALK NOTES

Saturday, October 14, 2006

INTRODUCTION

Paul Murray, Garter Lee Limited
Ken Dion, Toronto and Region Conservation (TRCA)

In July 2006, the Ministry of the Environment approved the Terms of Reference for the Don Mouth Naturalization and Port Lands Flood Protection Project. The ToR establishes the framework for the studies and analysis that the project team will undertake during the Environmental Assessment process.

During today's site walk, we hope to illustrate several key elements of the project that are presented in the ToR. First and foremost, the site walk is an excellent opportunity to become familiar with the southern portion of the project study area, which includes the Don Mouth from the railway bridge south to the lake and lands adjacent to the Lower Don River. The combination of a walking tour and a boat tour will provide many of you with a unique perspective on the study area.

Second, the site walk will also help demonstrate the need for this project. The ToR identifies three main problems with the Don Mouth as it exists currently, which are its lack of ecological function, its vulnerability to flood risk, and the derelict nature of this area. As a forward-looking document, the ToR identifies opportunities for addressing these problems through naturalization of the river mouth and flood protection measures. We have stations set up to discuss these problems and opportunities and outline how the Environmental Assessment intends to come up with solutions.

Naturalization and flood protection are the two primary objectives of this project and the solution that we develop during the EA must effectively address these two objectives, along with the other 5 objectives outlined in the ToR. The ToR presents a detailed methodology for developing a solution that will reshape the Don Mouth in a way that establishes and sustains the form, features, and functions of a natural river mouth within the context of a revitalized City environment while providing flood protection up to the Regulatory Flood.

During the preparation of the ToR, the project team determined that there were three alternatives that could provide such a solution and that would need to be evaluated during the EA. The first proposes to discharge the flow of water to the Inner Harbour through the area currently containing the Keating Channel and the lands to the north. A second alternative proposes to discharge the flow south through the Port Lands to the Ship Channel, and a third alternative combines the first two, with one primary channel and one regional flood overflow channel.

The project team has recently begun the task of identifying a preferred alternative for naturalization and flood protection through a 5-step process. The first step involves developing detailed alternatives, or alternative methods, by combining the three discharge points described above with different cross-sections and habitat types for the river mouth. Once we screen out those alternative methods that are not technically feasible, we will refine the remaining methods by incorporating recreational opportunities, and integrating existing and proposed infrastructure and river options including the management of sediment, ice and debris, and navigation. The final step will involve a thorough comparison and evaluation of the remaining alternative methods to identify a preferred alternative.

At our upcoming public forum on December 5, we will present the project team's findings from Steps 1 and 2. The focus of today's site walk is to share information about the study area and the various challenges and opportunities it presents.

VILLIERS PARKETTE

Hydraulics, Hydrology, and Flood Risk
Don Haley, Toronto and Region Conservation (TRCA)

Flora and Fauna
Dale Leadbeater, Gartner Lee Ltd.

Hydraulics, Hydrology and Flood Risk

Don Haley, Toronto and Region Conservation (TRCA)

Flooding within the area of the Lower Don River has a written history dating back to the early 1800s, the principle causes being ice jamming and late fall flooding.

As recently as August of 2005, flooding occurred within this area resulting from a series of severe thunderstorms. While most of the flooding over the last few decades has resulted in mainly nuisance type flooding, the area is subject to extensive flooding under a tropical storm similar to Hurricane Hazel which occurred on October 15 and 16 of 1954.

For this area of the Province, the rainfall from Hurricane Hazel centered over the Watershed is used to define the limits of flooding. Under this rainfall, the river is anticipated to rise to levels which will exceed the channel of the river and begin to spill to the extent that the valley allows.

Upstream of Queen Street, the valley feature is narrow and will contain the flood although depths and velocities will be extremely high. South of Queen Street, the valley expands outwards to form the historical Lake Ontario shoreline and the flood expands outwards with it, spilling south and west into the downtown core of the City and eastward towards the beaches area. The elevated CNR lines aggravate this condition. (Flood protection works currently underway upstream of the CNR are designed to eliminate this flooding)

The area south of the CNR under the regulatory flood will also flood, but to depths much less than those upstream. The floodplain widens into a large spill area as it enters the Portland's spilling well east and south to the Ship Channel. With upstream flood protection works, all flood waters will be directed south through the widened railway bridge over the Don River.

Developing a strategy and deal with the flooding South of the CNR is a key component of this Environmental Assessment. This project will address the types of works necessary as well as the land base required to contain the floodwaters. This will be undertaken in a process which merges flooding, ecological and socio-economic needs.

Flora and Fauna

Dale Leadbeater, Gartner Lee Ltd.

The coastal marshes of Lake Ontario have suffered as a result of many slings and arrows; all flung in the name of improving the quality of life for people in the Great Lakes basin. Changes have occurred as a result of deforestation of the watersheds; intensive agriculture; urbanization; construction of the St. Lawrence Seaway; dredging for harbours and ship passage; filling to control disease and insects; reclamation of wetlands for development.

The marshes of the Don River mouth once covered many hectares and appear to have been extensive mats of cattail, bulrushes and sedges that would have provided habitat for a plethora of birds, mammals, amphibians and fish. Marshes are among the most productive ecosystems in the world.

The goal of the Don River Naturalization project is to establish the form, features, and function of a natural river mouth within the context of an urban environment. One of the prime objectives is to recover a fraction of this lost immense biodiversity. But just as the historical biodiversity is irrevocably changed, so has the environmental basis for that diversity. The quantity and quality of the water, not only chemistry but the micro and macro fauna and flora and the ecosystems they support; even the chemistry of the air has changed. Therefore, the ecosystem that can be reclaimed at this site will be uniquely urban and adapted to the coast of Lake Ontario in 2006.

This EA process will look at the existing conditions to determine what building blocks are available to assemble a river mouth that is sustainable and, among other things provides habitat for a variety of urban tolerant species and looks for opportunities to create "stepping stones" to connect the wildlife of the Toronto Islands and the spit with those of the Don River watershed. Although recreation of a wetland would be a good target to compensate for those lost, due to the constraints of the modern world, a range of options will be considered that include not only wetlands, but also upland forests and meadows.

COMMISSIONERS / DON ROADWAY

History of the Area
Michael Moir, City of Toronto

Soils/Groundwater
Mike Longland

Film Port
Frank Serafini

History of the Area

Michael Moir, City of Toronto

In the beginning, there was . . .

- Ashbridge's Bay, approximately 1,300 acres of marsh, the largest wetlands in eastern Canada
- Wide variety of wildlife in the area
- Residential communities develop during the mid and late 18th century near the foot of Morse Street and Carlaw Avenue (including a boatbuilding factory) and at Fisherman's Island, located just east of the East Gap

It seemed like a good idea at the time . . .

- Clumps of marsh broke free, floated into the harbour, and became a hazard to navigation
- Solution was the construction of the Government Breakwater during the 1870s, which ran south in a gentle arc from the Rolling Mills Wharf at the south side of the mouth of the Don River, to the area now known as Cherry Beach
- Not only did the breakwater restrain the marsh, it also contained the large amount of manure that drained directly into the marsh from the cattle byers of Gooderham and Worts
- Manure, combined with the outfall of sanitary sewers along the north shore of the bay, resulted in the serious deterioration of water quality and outbreak of disease
- Coghill's dry dock built in mouth of the Don in the 1880s, and small industry established east of the breakwater and south of the river's mouth by the early 20th century

If at first you don't succeed . . .

- Concern over health problems and the drive for commercial and industrial expansion led to several plans for the reclamation of Ashbridge's Bay, such as the design by Beavis and Browne in 1889 and the Grand Trunk Railway during the early 1890s
- In the short term, City Council accepted the recommendations of City Engineer E.H. Keating, which involved cutting a channel through the Government Breakwater into the harbour (now known as the Keating Channel) and a second channel through the sandbar on the south edge into Lake Ontario (Coatsworth Cut) to create circulation

Engineering on a grand scale

- Toronto Harbour Commissioners established in 1911, and given sweeping powers to plan, construct, and operate new waterfront to pay for itself through industrial and commercial development (including port operations)
- Waterfront Plan adopted by federal and municipal governments in 1912, which includes reclamation of Ashbridge's Bay to create industrial district with residential neighbourhood and boulevard drive along its south edge
- Dock wall construction started in 1914, followed by reclamation using hydraulic suction dredges and straightening of Don's mouth due to difficulties with neighbouring landholder
- Steel plant constructed north of the Ship Channel in 1917, but failed by early 1920s due to world market conditions; same problem thwarts plans for shipbuilding industry on Polslon Quay
- Plans for residential development abandoned due to concerns about co-existence with industry; Fisherman's Island residents expropriated in 1917
- District becomes the site for storage of fuel (oil and coal) and aggregate, recycling industries, incinerator, power plant, and other uses requiring large, open space, and proximity to city core while maintaining a respectful distance that was out of the sight of most residents
- Legacy of this land use history includes environmental contamination and deteriorating infrastructure

Soils and Groundwater

Michael Longland, Toronto Waterfront Joint Venture

Subsurface Environmental Conditions

Two areas, one north and one south of the Keating Channel, will be affected by the Don Mouth Naturalization and Portland Protection program. In terms of soil and groundwater quality, most is known at present about the area north of the Keating Channel.

This north site was for many years occupied by an oil refinery. The many large petroleum and petroleum product (gasoline and diesel, for example) storage tanks that occupied most of the site can be seen clearly on aerial photographs taken in the past (see example taken in 1965 over). The tanks were installed within secondary containment systems consisting primarily of perimeter berms.

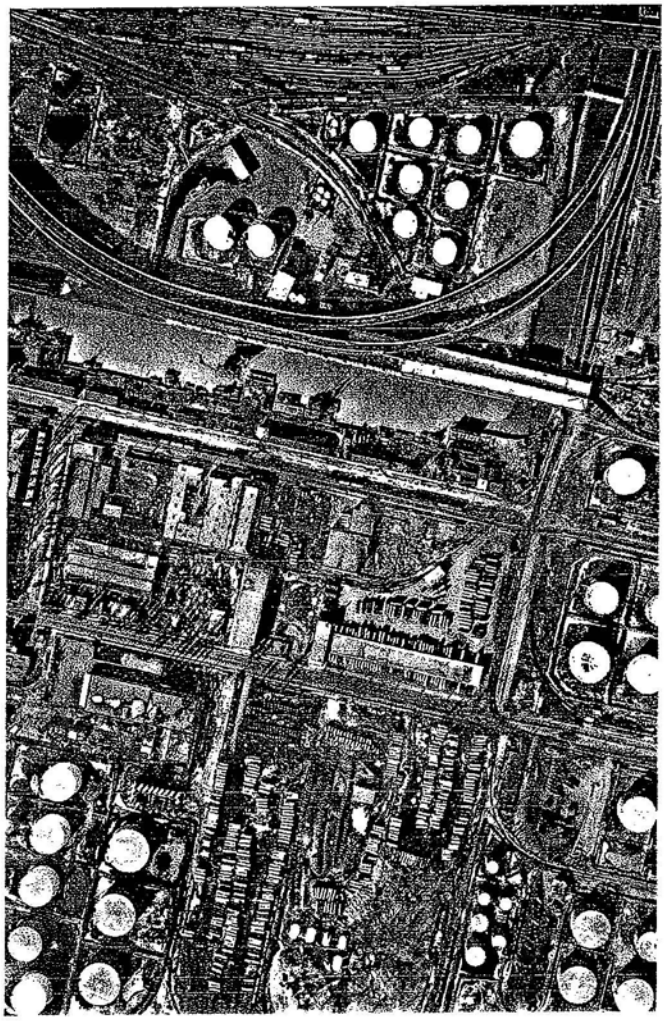
At the time that they were built, the secondary containment systems were designed primarily to contain burning fuel in the event of catastrophic tank failures coupled with petroleum liquid ignition. Usually, these berms were effective in preventing released petroleum liquids from flowing laterally – but not vertically. Only in relatively recent years has the need to line aboveground petroleum hydrocarbon storage tank secondary containment systems been accepted and, in some cases, regulated.

Spills likely occurred quite frequently at petroleum refineries in the past. One classic spill scenario involved tank overfilling. Most petroleum and petroleum product storage tanks have vents that prevent the pressure within the tank headspace from exceeding atmospheric during filling. This was necessary as the tanks were not designed as pressure vessels. These same vents allowed petroleum liquids to flow from the tank if pumping continued for even a short time after filling of the tank was complete. Modern petroleum liquid storage tanks are typically equipped with overflow prevention systems so that overfilling is now much less of a problem.

Spilled petroleum liquids tend to flow overland to low points then infiltrate the subsurface. Unless the secondary containment system is equipped with a liner system to prevent it, the liquids will continue to move downward until they encounter the water table. The water table within the subject lands is approximately two metres below the ground surface. At the water table, the liquids tend to "float" as their specific gravities are less than that of water. In zones that become saturated with these liquids, the floating lenses formed tend to flatten under the force of gravity with consequent lateral movement of the lens edges.

Subsurface investigations were performed at the site during the 1990s. During 2006, the Toronto Waterfront Revitalization Corporation commissioned further investigations to confirm and update the earlier investigation findings. The investigations consisted of digging test pits and drilling boreholes. This allowed both qualitative and quantitative assessment of the subsurface conditions. Qualitatively, the conditions could be assessed by directly viewing the subsurface in the case of test pits and examining soil samples in the case of boreholes. In addition, soil samples were analyzed in commercial laboratories for parameters associated with petroleum hydrocarbons (as well as other commonly-analyzed parameters). The qualitative investigations indicated that, for the reasons indicated above, the soils within a metre (and sometimes considerably more than a metre) of the ground surface are generally free of impacts. The quantitative investigations revealed that soils at and near the water table are impacted with petroleum hydrocarbons at concentrations exceeding standards considered by the Ministry of the Environment to be acceptable for sites where sensitive redevelopment is planned.

To permit the quantitative assessment of groundwater as well as soil quality, small- diameter wells known as monitoring wells were installed within the boreholes. These were designed to allow the detection of residual petroleum liquids as well as the extraction of groundwater samples for testing. Residual petroleum hydrocarbons were detected at a few of the sampling locations. Groundwater flowing across the site boundaries was found to generally conform with Ministry of the Environment standards, reflecting the low solubility in water of most of the compounds constituting petroleum and petroleum products.



Naturalization of this area may require the removal of the upper one metre or more of soil. As indicated above, the upper soil layer is generally free of impacts. It is likely this soil will prove useful for landscaping purposes. As the soil below this upper layer is impacted by petroleum hydrocarbons, some means of protecting the health of people using this area as well as the natural resources within and near this area will be required. Risk assessments will be required to confirm that the protective measures will be effective in controlling exposure.

As groundwater flowing from the site is generally not impacted at levels exceeding Ministry of the Environment standards, the impact of the subsurface petroleum hydrocarbons on nearby aquatic ecosystems is unlikely to be a critical concern. The residual petroleum hydrocarbons found at some locations within the subject area will likely have to be removed. Mechanical systems that do not require soil removal are often used to extract subsurface liquids of this type.

As part of the environmental assessment program, various options for achieving the naturalization and flood protection objectives will be considered. The problems presented by the subsurface conditions associated with the lands both north and south of the Keating Channel will be fully taken into account.

FILMPORT

FILMPORT & THE NEW DON

The District

- Our mandate is to create a landmark film and television production complex and raise Toronto's profile as a global film/media center.
- Located between Lakeshore Boulevard to the north, the ship channel to the south. Don Roadway to the west and Bouchette to the east.
- FILMPORT will revitalize barren land previously used for tank farms by the petroleum industry.
- FILMPORT to be a 550,000 SF state of the art production facility plus 1 million SF media district for producers, broadcasters, production companies and knowledge based industries complimented by restaurants, retail, entertainment venues and public spaces.
- Phase 1 (currently under construction) is 23,500 square meters (260,000 SF); contains 7 sound stages ranging from 10,000 SF to 45,500 SF, 86,000 SF of office space and 25,000 SF of shop space.
- Features the largest sound stage in the world and state of the art support features in communications, security and systems management.
- Future phases include office building complex for film and media related industry, support spaces for film and media equipment industry, retail and entertainment uses and prestige space for media industry leaders.

Relation to the Don Mouth Naturalization and Port Lands Flood Protection

- Buildings have been elevated to prevent flood effects under present conditions.
- Building locations and elevations for present and future phases will help accommodate the alternatives for the new mouth of the Don River including the Don Greenway extending south from Commissioners Park to the ship channel.
- The public entrance to the studio lot will be located on the future Don Roadway across from the Don Greenway and will become an internationally recognized symbol for FILMPORT.

Greening FILMPORT

- Roof storm water used for irrigation of landscaped areas.
- Bio-swales used as a natural means of treating storm water runoff.
- Green walls and living fences designed to grow and enhance the streetscape used throughout the complex.
- Reusing and renewing materials for construction intended to reduce use of non renewable resources and divert materials from landfill.
- Diversions include crushing concrete for reuse, mulching shrubs and bush, composing grubbed materials, use of engineered fill from site and recycling construction packaging and materials through separation on site.
- Some sustainability options include use of green roofs and the possible use of solar panels and co-generation for peak-shaving.

Contact Information

- Ken Ferguson (416) 406-1235 #2225
- Frank Serafini (416) 406-1235 #2382
- Web site www.filmport.ca

KEATING CHANNEL WEST

Roadways and Infrastructure
Jim Gough, Toronto Waterfront Joint Venture

East Bayfront
Angus Cranston, City of Toronto

TTC Environmental Assessments
Bill Dawson, TTC

Linkages between Tommy Thompson Park and Don Watershed
Ralph Toninger, Toronto and Region Conservation (TRCA)

TORONTO
WATERFRONT JV

207 Queens Quay West
Suite 822
Toronto, Ontario M5J 1A7
Tel: (416) 214-1344
Fax: (416) 214-4591

MEMORANDUM

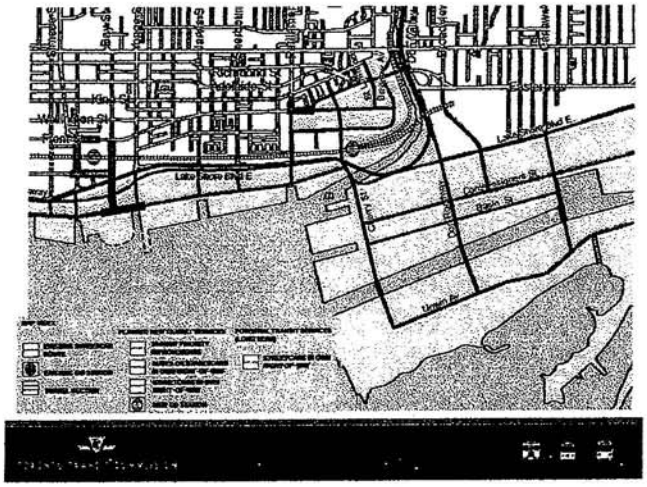
From: Jim Gough, TWJV

Subject: **Infrastructure Presentation Outline, Don Mouth Site Walk**

Active EAs and Studies

1. The Transit EA is underway for 3 projects involving streetcar service on an exclusive right-of-way. This is an individual EA, involving development of Terms of Reference for all 3 projects, and completion of the EA for two of these:
   - Queens Quay Streetcar Extension from Union Station to Small Street (just east of Parliament)
   - West Don Lands Streetcar service, extending from the King Street service either via Front Street or Cherry Street, to a terminus just north of the rail corridor
   - Port Lands Streetcar service, extending the Queens Quay and/or West Don Lands streetcar services into the Port Lands
   - The Queens Quay and West Don Lands projects will proceed through the full individual EA process now; the Port Lands Streetcar EA will be completed at a later date
   - Terms of Reference have been submitted to Ministry of the Environment for review
   - The key issue for the Don Mouth area is how these transit services will connect through this area along Cherry Street

West Don Lands/East Bayfront Transit Projects



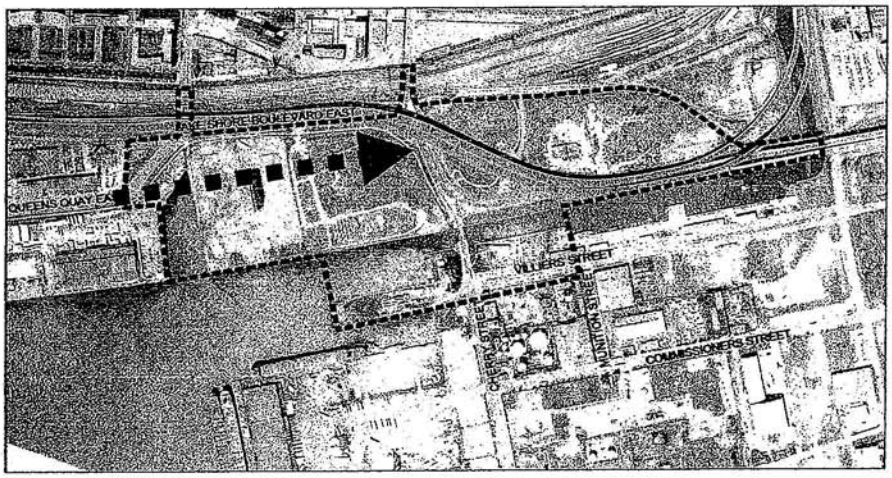
TORONTO WATERFRONT JV

2. Queens Quay Extension/Lower Don River Roads EA. This study will define the road needs in the area between Parliament Street and the Don Roadway, addressing:

   Extension of Queens Quay from Parliament to Cherry Street

   - Alignment of Cherry Street from the rail overpass to Villiers Street
   - Connections between Cherry Street and Queens Quay/Lake Shore Boulevard
   - Alignment of Lake Shore Boulevard east to the Don Roadway, and bridge over Don River
   - Cherry Street bridge capacity and alignment requirements over the Don River
   - This is a complex project in terms of defining a functional road network as well as a well-designed urban space that builds on whatever the recommendation for the Don Mouth may be

Study Area



Issues to Consider

1. Short spacing on Cherry Street between the rail overpass and the (relocated) Don River, in which Lake Shore Boulevard and the proposed intersection of Queens Quay must be accommodated, together with an appropriate profile for accommodating the bridge over the River;
2. Width of the Cherry Street bridge into the Port Lands – is one bridge sufficient for travel demands by auto, transit, bike and walking? Should there be a second bridge, perhaps exclusively for one or two modes (e.g. bike/pedestrian or transit only)?
3. Potential Broadview Avenue extension intothe Port Lands (as per City Secondary Plan);
4. Clear span of the bridge(s) required over the Don River, and the relationship of this issue to the Cherry Street profile;
5. Re-alignment of Lake Shore Boulevard to create a separate road from Cherry Street and a more typical grid intersection with Cherry Street;
6. Accommodation of rail spur linking from Redpaths to the east side of the Don River;
7. Potential changes to the Gardiner Expressway and Lake Shore Boulevard, ranging from "Transformation" (leaving it in place and changing some of the ramp locations to reduce interference with pedestrian/cyclist movement) to removal of the Gardiner in this area and introduction of the "Great Street / Waterfront Boulevard".

Jim Gough, P.Eng.
Senior Project Manager
Transportation Planning

EA/TRCA memo site walk.doc

East Bayfront

Angus Cranston, City Of Toronto

- **Background**: Preparation of the Central Waterfront Secondary Plan, work leading up to the adoption of the Central Waterfront Plan in April, 2003

- **Progress with the creation of Precinct Plans**
  - adoption of the East Bayfront West Precinct Plan – December 2005
  - other plans adopted include the West Don Lands and Commissioners Park

- **Outline of Consultation with the Public and Landowners 2006**

- **Adoption of the East Bayfront West Precinct Zoning By-law (1049-2006)**
  - adopted by City Council at its last session on September 27, 2006

- **Significant components of the By-law for this area**
  - the bylaw provides for 2 major types of land use – open space and mixed use development including residential uses and employment with ground floor animation uses along the park/open space edges and the north side of Queens Quay East and defines building envelopes and setbacks rather than density
  - the proposed by-law recommends that a holding classification be placed on all the lands until the land owners can demonstrate their ability to meet the Section 37 conditions – many of these are "green" criteria including the provision of district heating, compliance with storm water management programs and providing a minimum of LEED Silver standard buildings
  - all developers will be asked to pay a Section 37 contribution for the residential component of any development
  - all developers must agree to participate in a Design Review Panel process to try to elevate the quality of buildings within the Waterfront

- **Next Steps**
  - staff will be working at the creation of Design Guidelines to be available for public review over the course of the next couple of months
  - staff continues with the approval processes related to appeals of the Central Waterfront Plan and any appeals of the Zoning By-law 1049-2006
  - work on the East East Bayfront Precinct will commence shortly for the lands to the east of Parliament Street as well as Environmental assessment for the transportation connections in the area
  - proposal calls for the development of the publicly owned lands will be proceeding soon

- **More Information**

  East Bayfront Precinct Plan - http://www.toronto.ca/waterfront/reports.htm
  East Bayfront Zoning By-law - http://www.toronto.ca/waterfront/index.htm#more
  Central Waterfront Secondary Plan - Making Waves - http://www.toronto.ca/waterfront/waterfront_part2.htm
  Other information from the TWRC - http://towaterfront.ca/index.php?home=true

TTC-TWRC Waterfront Transit Environmental Assessment Studies

TTC-TWRC Transit Environmental Assessments Project Team

The Toronto Transit Commission (TTC), in conjunction with the TWRC and the City of Toronto, is proceeding with Environmental Assessment (EA) studies to identify the transit improvements required to support planned development in the West Don Lands and the East Bayfront precincts. The studies will identify a preferred approach to providing an effective transit network to serve these new waterfront communities.

Transit in these precincts will be interconnected and connect with future transit service in the Port Lands precinct to eventually form a continuous system linked to the downtown core, the subway system, the grid of local transit routes in the area and the GO commuter rail system. Full development of the three precincts is expected to generate twice as many daily transit users as are currently carried on the 510 SPADINA streetcar, one of the busiest streetcar routes in the City.

City Council has approved a transportation strategy for the waterfront communities with a particular focus on encouraging walking, cycling, transit use, and water transportation. The strategy includes:

- A "Transit First" approach to provide for the early construction and operation of planned higher-order transit services;
- Exclusive streetcar rights-of-way for the proposed waterfront transit network;
- Extensions of the existing bus and streetcar network into the waterfront area to provide numerous north-south connections.

Achieving Council's objectives, along with the TWRC's objectives of excellence in sustainability and urban design, will require that high quality transit services and facilities be provided which are effectively integrated into the fabric of the community. Terms of Reference for the EA studies, one for each precinct, have been submitted to the Ministry of the Environment. The stated purpose of each project is:

> **To determine the transit facilities appropriate to serve the long term residential, employment, tourism and waterfront access needs in the study area while achieving the City's and TWRC's objectives for land use, design and environmental excellence.**

The EA studies will address a range of corridor, transit technology, and right-of-way treatment options for each study area. As part of each study there are Community Workshops planned for January and May 2007 to develop and assess alternatives.

The results of the studies will be presented to City Council and the TWRC Board for approval before formal submission to the Ministry of Environment, which is planned for late in 2007. If approvals proceed as expected, new transit facilities could be completed and in operation in the West Don Lands area as early as 2010 and in the East Bayfront area in 2013.

October, 2006

Tommy Thompson Park

Located on the Toronto waterfront, Tommy Thompson Park is a unique urban wilderness that offers many public recreational opportunities in the heart of the city.

The park is located on a man-made peninsula that extends five kilometres into Lake Ontario. The Toronto Harbour Commissioners began construction of the spit in the late 1950s and, since that time, it has been the site for the disposal of dredged material from the Outer Harbour and surplus fill from development sites within Toronto.

The Toronto and Region Conservation Authority currently owns the land and water bodies included in Tommy Thompson Park. Those areas still under construction are owned by the Ministry of Natural Resources and are leased to the Toronto Harbour Commission. The TRCA is responsible for the development and implementation of the "master plan" and the annual operating program, which includes both biological and public interest activities.

One of the most significant features of Tommy Thompson Park is the colonization and succession of various plant communities. These wetlands, meadows and forests now support many threatened and unusual species.

The park has become well known as a significant nesting and staging area for a wide range of birds and other wildlife. In total, more than 290 bird species have been observed on site. Of these, 45 are known to breed here, including ring-billed gulls, herring gulls, common terns, black-crowned night herons and double-crested cormorants.

The ecological approach to development of Tommy Thompson Park has been guided by the principles of conservation by design. These principles are defined as the purposeful act of designing for a variety of wildlife habitats to assist in the restoration of rare, endangered or significant plant and animal communities. Natural succession is the key concept behind the philosophy of conservation by design.

The Natural Area Enhancement Plan will be designed to facilitate the growth and natural development of indigenous plant and animal communities. Planting and seeding will be done to inoculate areas with vegetation adapted to the specific environment. These areas will then be left to grow, reproduce and spread naturally and unhindered as much as possible. The Natural Area Enhancement Plan will focus on both terrestrial natural area and aquatic habitat enhancement.

BOAT CRUISE

Fish and Aquatic Habitat
Deb Martin-Downs, Toronto and Region Conservation (TRCA)

Port Authority Operations, Inner Harbour, Ship Channel
***Michael Riehl**, Toronto Port Authority*

Commissioners Park, Interim Sports Fields, Lake Ontario Park, Port Lands Strategy
Chris Glaisek, Toronto Waterfront Revitalization Corporation (TWRC)

Fish and Aquatic Habitat

Deb Martin-Downs, Toronto and Region Conservation (TRCA)

Are there fish in the Don? Yes! There are a variety of species, including forage (fish that are food for other fish) and sport fish (fish that food for people). We have low numbers of sport fish, such as northern pike, walleye and salmon or trout; higher numbers of more tolerant species such as white sucker. Of interest is a recent find of some juvenile walleye, which we suspect may have been reproduced in the Don and if that is the case, it is very promising and suggests that some of the habitat works we have been introducing in the lower Don may be paying off (e.g. creating rocky ramps at old weirs).

Why are there so few sport fish? The low numbers of sport fish in the Don is related to the type of habitat and water quality in the river. Fish like pike need a wetland to spawn in. They spawn over flooded vegetation in the spring and then the young move into adjacent deeper waters when large enough. Historically, there was a wetland at the mouth of the Don and pike were common in the river, according to Mrs. Simcoe. Walleye spawn on shoals in the lake, or in rapids. The young are transported into slower moving waters with a good food source for growth. While walleye like water that is a little murky (they have sensitive eyes), they also need a good food source in the water column, like algae and zooplankton. If there is too much sediment in the water it limits light such that algae, which are plants, cannot grow. Zooplankton, which depend on algae to grow, will also be limited. Many fish need to see to catch their dinner, particularly the sport fish.

Salmon, Atlantic that is, used to be abundant in Don until they were extirpated in the mid-1800s. This loss was related to dams blocking their upstream movements and changes in water quality when forested lands were converted to agricultural lands and into the Town of York. Degradation of water quality in the Don started in 1794 and continues to today. Salmon and trout spawn in the river upstream on gravel river beds. While today we have removed dams to allow pacific salmon and rainbow trout to access the Don, the water quality is such that they cannot spawn successfully. We also have added a lot of sediment to the river beds upstream such that they are not good for incubating the eggs. Sediment settles on the eggs and smothers them.

What Causes the Poor Water Quality? You are hearing now about the role that sediment plays in fish habitat. Sediment comes from many sources, including erosion within the river, delivered from exposed soils at construction sites, and from our streets where, for example, sand is applied during winter. Sediment concentrations in the river are higher when it rains. The river can be very clear during dry weather. Runoff to the stream carries other pollutants to the river, such as oil and grease, bacteria, salt, pesticides, fertilizers. So concentrations of these contaminants also increase when it rains. In addition, there may be spills on roads and industrial areas any time, which may be toxic to fish.

So What do we Need to Consider for a Naturalized River Mouth? To provide habitat for the fish that are in the Don and the Harbour, the edge of the river much be more gradual and have wetland vegetation. Fish need shade for cover from predators, as well as other cover types, such as rocks and logs. Fish need food, so there must be a variety of habitat types for forage fish, algae, plankton and benthic invertebrates. The water needs to be cleaner, and plans are in place with the City of Toronto, to tackle wet weather flow and its effects on water quality. The fish need refuge, away from the floods, away from people, away from sediment and its contaminants. Fish that move through the mouth to access habitat upstream need to have good habitat to go to. This is not part of this project but the wet weather flow plan and fish management plans for the Don will identify needed upstream naturalization.

KEATING CHANNEL DREDGING

Volume of sediment in recent years: 40,000 m3/Yr (approx.)

Cost: $450,000/Yr (approx.)

Share: Toronto Port Authority (1/3)

Toronto and Region Conservation Authority (2/3)

The "Keating Channel / Leslie Street Working Committee" with representatives of TPA, TRCA and the City of Toronto oversee the project.

KEATING CHANNEL DREDGING

Quality of sediments flowing into the KC & Inner Harbour:

Early polluted sediment produced by agricultural & industrial activities. Before 1914 accumulated in Ashbridge's Bay. Since 1914 accumulated at NE section of Harbour after Don River realigned.

Since the 1960's, sources of contaminants: Don River, storm sewer and combined sewer overflow discharges.

Studies identify source control, for Waterfront and watershed of the Don River, as the most effective means of improving the conditions in the Inner Harbour. (Golder Associates Ltd., 2001)

KC has provided the opportunity of managing the flow of sediment originated in the Don River watershed.

Keating Channel Debris Management

For the May 12, 2000 storm: 337 tonnes of debris (most of it at the expense of TPA).

Regular removal of floating debris using two control booms.

Increased debris following storm events.

Annually the debris collected is approximately 400 tonnes.

Derrick THC 50 removing debris.

Commissioners Park, Interim Sports Fields, Lake Ontario Park, Port Lands Strategy

Chris Glaisek, Toronto Waterfront Revitalization Corp. (TWRC)

Commissioners Park

TWRC is now planning Commissioners Park, a 41-acre waterfront park located in the Portlands between the Keating Channel and Commissioners Street. The park is being designed to be both a waterfront landmark and an active recreation space that will help meet existing demand for playing fields and park space as well as the future needs of new waterfront communities in the West Don Lands, East Bayfront and Portlands.

The diverse landscape of Commissioners Park will accommodate a range of activities: larger fields for recreational sports, forests for causal walks, groves for intimate gatherings. These features along with views back to the downtown core will make Commissioners Park one of the best in the city. The history and ecology of the site and the Don Greenway are also important elements of the park design.

Vision Statement: *The park design must provide for a high quality, urban, active recreation park incorporating social, environmental and financial sustainability principles, and must consider the emerging nature of the surrounding context.*

Lake Ontario Park

Located along the Outer Harbour between Cherry Beach and Ashbridges Bay, Lake Ontario Park is one of TWRC's signature projects. The park is included in the Central Waterfront Secondary Plan and will be a landmark park not only for a newly revitalized waterfront but for the city as whole.

Developing Lake Ontario Park early on in the revitalization process demonstrates the corporation's commitment to a green, sustainable waterfront. The project has brought together the key organizations with an interest in the park - Toronto Region and Conservation Authority, Parks Canada, City of Toronto Parks and Recreation and the Toronto Port Authority.

Transitional Sports Fields

In 2004, TWRC received $5 million to develop transition sports fields in the Port Lands. The project is supported by the federal, provincial and municipal governments. The City of Toronto’s strategic plan for parks and recreation, “Our Common Ground,” identifies the need for playing fields as a top priority, especially in the south end of the city. The fields are in keeping with TWRC’s mandate to expand recreational opportunities on the waterfront.

Two regulation sports fields are being built on the south side of Unwin Avenue just west of Regatta Road. This area falls within the boundaries of the future Lake Ontario Park. With a life of about 10 years, these sports fields are considered transitional. The number and location of permanent playing fields will be determined through the Lake Ontario Park Master Plan.

Additionally, by 2010, Commissioners Park will be complete. This park will include four regulation size playing fields.

Site preparation work for the transitional sports fields will begin in January 2007 and construction will be complete in the spring—in time for the 2007 children's soccer season.

Don River Park

Overview

Don River Park will be an active, vibrant and inviting neighbourhood park serving the West Don Lands community, the City and visitors. It will transform an abandoned and contaminated post-industrial site into a dynamic, re-natured public park that is animated year-round. It will invite the city to the Don River and enhance the experience along the river's edge.

Landscape

Don River Park will create a large inviting greenscape within the regenerating city fabric – renewing site while integrating vital urban infrastructure elements and responding to their scale. Unfolding and robust topography will build on the elevation already provided by the Don River flood protection landform that will transect the park. The landscape will open sightlines to Toronto's skyline and Lake Ontario and create a sense of scale and grandeur that expands the park. A mix of tree groves, open lawns, diverse plantings and a marshland water feature fed by captured stormwater will create an environment inspired by a woodland meadow and the site's vegetative history.

Program

Within Don River Park's 18 acres, a variety of spaces and programmatic elements will invite people of all ages to enjoy the park at all times of the year.

- Along the Don River, renewal of the multiuse trail system and new access under the Bala railway corridor will enhance the experience at the water's edge.
- On the river side of the landform, a 21st century urban meadow will provide a unique landscape in which to wander, explore and discover.
- Active play will be central to the new park including water play, a skating area, a multi-use sports field, a skateboard park and new playground equipment geared to a range of ages. The park's hills and lawns will be ideal for tobogganing, Frisbee, catch or a whole range of informal sport.
- A network of trails will connect more active areas with places to sit, picnic or enjoy the landscape.

- At one of the highest points, a pavilion, an informal amphitheater and a fire element will allow visitors to: take in views to the River, the city and the waterfront; get shelter from the weather; access facilities; and, perhaps even enjoy a cappuccino or an ice cream.

Timing and Milestones

The Toronto Waterfront Revitalization Corporation has engaged the team of Michael van Valkenburgh Associates, the Planning Partnership and Ken Greenberg to design Don River Park. The following is the schedule for completing the park.

Feb 2006 – Sept 2006 Concept Design
- 3 public forum events
- Design workshops with 300 students from 5 local elementary schools
- Regular stakeholder meetings

Sept 2006 – Feb 2007 Detailed Design
- Ongoing community and stakeholder consultation

Feb 2007 Construction tenders issued

March 2007 Construction begins

Summer 2008 Park Construction Complete

KEATING CHANNEL DREDGING

In 1972, Canada & the USA signed an agreement to ban the open water disposal of polluted sediments.

Ministry of the Environment (MOE) asked the Toronto Port Authority (TPA) to design a Confined Disposal Facility (CDF) for the disposal of polluted sediments dredged from the Keating Channel (KC).

Design & construction of the Endikement as an extension of the Leslie St. Spit (1979-today).

CDF consists of 3 cells (#1 filled in 1985; #2 in 1997; #3: 60 years to go).

Disposal of the dredgeate into the CDF carried out pursuant to the Keating Channel Environmental Assessment (1983).

Don Mouth Naturalization & Port Lands Flood Protection Project

Site Walk #2 and Boat Cruise

Appendix A
Route Map

October 14, 2006

SITE WALK #2

October 14, 2006
Don Mouth Naturalization and Port Lands Flood Protection Project

LEGEND	
Information Areas	**Boat Launch Areas**
#1 - Villiers & Don Roadway Parkette	TP - TEDCO Property
#2 - Commissioners & Don Roadway	KCP - Keating Channel Pub
#3 - Keating Channel West	- - - DMNP Study Area
#4 - Boat Cruise	
——— - Site Walk Route	
- - - Boat Cruise Route	

Don Mouth Naturalization & Port Lands Flood Protection Project

Site Walk #2 and Boat Cruise

Appendix B
Public Feedback Summaries

October 14, 2006

Site Walk Feedback SUMMARY (18 responses)

1. Have you PREVIOUSLY participated in any of the following activities held as part of the Don Mouth Naturalization and Port Lands Flood Protection Project? Please check all that apply.

Attended a public meeting and/or working session	8
Received project newsletter	5
Have NOT previously participated in DMNP Project	10

2. Would you be interested in attending future public activities/events related to this project?

Yes	16
No	0
Somewhat	2

3. If you are interested in staying informed and/or contributing to this project, what type of activities/events would be MOST APPEALING to you?

Another site walk	14
Public meeting or working session	11
Open House/Informal Drop-In to review displays and talk to team members	11

- Several respondents suggested that all events would be equally appealing.
- One respondent who suggested another site walk specified that it be a different walk from that of Oct. 14.
- One respondent who suggested an Open House specified that discussions and meetings with team members are essential components of this event.
- One respondent did not find the informal drop-in sessions as good as the other activities. They wanted to hear what other "non-members" have to say (“it's easier to get a clearer picture, see different viewpoints and I find that I walk away with a better grasp of the options available”).

4. Did you find the site walk, including boat tour, useful in assisting your further participation in this project?

Yes, it was useful	16
No, it was not useful	0
Somewhat useful	1

5. What did you find MOST USEFUL/INTERESTING about the site walk and boat tour?

- Presentations on the industrial history and on the flora and fauna aspects

- On the ground experience is always useful especially if accompanied by sound comment.
- Learning about the amount of silt and debris that has to be dredged from the Don River.
- The 'from the water's edge' perspective I gained.
  (Brings a whole new dimension to the topic.) The live fish were a nifty twist as well.
- Getting a perspective on the scale of the problem
- Learning about the whole project, the ecosystems, future projections and the political implications of the development
- It was good to see the actual size of the location relative to the rest of the City
- Fantastic learning…actually standing on the land we were talking about
- The entire thing -- the presentations were good -- the background information re flood plains, fish, development all good. I learned a lot that I didn't know before. Primarily from a development perspective, what was necessary in order to build/develop in the area, given issues of flooding, etc.
- Most useful was the history of the Ports over the past 100 years.
- The boat tour
- To hear about and see realistic changes occurring e.g. Filmport Development
- To see the area from ground and water level in person. The magnitude of the undertaking and the importance of getting it right now much more clear to me
- It was good to get out on the site and to see what exactly was being proposed, what infrastructure is currently there and what would have to be altered. By being onsite it helped to make things more concrete and to see the ultimate vision. Although I have driven by the area, and gone along the bike path I found the tour opened my eyes and gave me new insight into the area.
- The boat tour gave me a live perspective of the scale and size of the canals; the tour further enlightened that perspective.
- To see and hear first hand what is planned and what is being done now.
- The vastness of the area, little visited by the public – also plans that are occurring, also the area view from the water
- Intro lecture and boat tour

6. Do you have any suggestions about OPPORTUNITIES TO IMPROVE the site walk/boat tour?

- Washrooms
- I'd suggest slightly smaller groups so it is easier to hear the presentations
- I'm not sure it's the best use of your resources, even though it's very informative and enjoyable for participants
- It could be done in Spring or Summer time
- Modify start times for different walking groups as schedule was a bit slow on way back from boat tour
- Can you control the weather?
- Walk and boat tour could be held in warmer weather
- I'd suggest slightly smaller groups so it is easier to hear the presentations
- Warmer time of the year
- I find anecdotal and historical data, stories add a lot to a walk like this. More of this could add more interest and knowledge about the area
- The organization in the parkette could have been better

- The fish display was terrific but it was hard to see and hear with the crowd milling around. Putting such demos on a raised bit of scaffolding so that everyone can see would have improved the experience
- Similar displays of both local flora and other fauna would be interesting
- It was hard to hear organizers both at the parkette and on the boat, a better loudspeaker system would have enhanced the experience
- Surprised that when checking in the list of participants was listed alphabetically by first name rather than by the more usual last name
- No it was very well done
- It was difficult to hear the speakers despite the microphone (there was traffic, conversations, background noise)
- One big one – washrooms
- Difficult to hear/see other speakers (other than the intro lecture, i.e. need microphones for all speakers)

Additional Comments?

- I hope some of that material on the industrial history and flora and fauna can be presented at the next public meeting for people new to the project
- Looking forward to seeing more graphic representations of the various redevelopment ideas while hearing some analysis and overview information from the experts, I see several illustrations on the Web from time to time, but a browser view is not the best way to see the true scope of such projects
- I approve of, and appreciate, consultation, but it's more important to get things moving and if running these consultations drains your resources, please do the more important things first
- Very much enjoyed info/work session and Don River walk-boat tour & info. Beautifully organized
- Why has it taken so long to do the environmental studies? Why has there been so little action taken in the past 7 years, I have booklets from 1999 for suggestions of the Ports and none of the projects have started
- Most appreciative to the team for putting on info sessions/walks, good to get public interest and feedback on such a visible waterfront project
- I was very impressed with the tour and feel that whoever organized it did a fantastic job. The boat tour gave a unique perspective to the area and the speakers and timing were well thought out. There were many people who participated that hadn't occurred to me as having a vested interest in the project but who were all relevant players and it was good to hear from them. I very much appreciated getting the packet of information to take home and review what was said. Well done
- Excellent panel of speakers and representatives, spoke at my level ("layman"). Thanks for the tour
- Would like to have similar tours of the other harbourfront projects, and would love to see the new film studio as it develops
- I think the trip was useful as a background for participating in public meetings – you have seen at least part of the area being discussed

Don Mouth Naturalization & Port Lands Flood Protection Project

Site Walk #2 and Boat Cruise

Appendix C
Photos of the Event

October 14, 2006