



little lake and area master plan

Revealing the Gems in the City of Peterborough
with recommendations for the next 20 years.



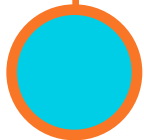
March
2010

little lake and area
background report

little lake and area
master plan

little lake and area
implementation report

City of Peterborough
March 2010



THE MASTER PLAN

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1.0

INTRODUCTION

STUDY AREA

COMMUNITY CONSULTATION





The location of the study area in the City of Peterborough

Study Purpose and Approach

For many years Little Lake has been a priority for the City to ensure an active vibrant focus for a variety of water and land-based recreation activities and events. Many studies have been prepared to guide decision-making on Little Lake. The first master plan was prepared 20 years ago to direct implementation of the trail network and parks. In addition, special studies have been completed for Del Crary Park, boat launches, ramps and wharves and the marina.

Little Lake is a distinct resource in the heart of the city's urban area. Few cities have a resource like Little Lake that supports a wide variety of uses, both on the water and in the parks and open spaces at the water's edge. Little Lake is adjacent to the downtown core, residential neighbourhoods, parks, natural areas, a cemetery and is an important node on the Trent-Severn Waterway.

The City, its partners and key stakeholders have implemented many high quality and well recognized recreational amenities around Little Lake over the past several years. These have included:

- the Otonabee River Trail, landscape enhancements, signage and the Boathouse in Millennium Park;
- children's play grounds, trail and beach in Rogers Cove Park,
- the stage in Del Crary Park;
- Ecology Park, playground and sports fields in Beavermead Park; and,
- sports fields and playground in James Stevenson Park.

There are only a few breaks in the continuous water side trail around Little Lake and the Otonabee River.

With the implementation of significant improvements to amenities around Little Lake and increasing demand for special events and a base for various recreation activities, the Master Plan requires updating. The 2010 Little Lake Master Plan is a comprehensive strategy that will guide the use, decision-making and management of Little Lake by the City and its key stakeholders for the next 20 years. The Master Plan provides direction for:

- parks and recreation amenities;
- trails;
- culture, heritage and arts;
- ramps and wharves;
- economic and tourism development opportunities; and
- environmental management and shoreline restoration.



The Master Plan was developed during the course of a three-phase work program:

Phase 1 **CONTEXT** (April to June 2009):

a common understanding of existing conditions and opportunities for change was established

Phase 2 **OPTIONS** (June to September 2009):

a framework of ideas for improvement in the study area

Phase 3 **MASTER PLAN** (September to December 2009):

preparation of recommendations and the Master Plan Report

Comprised of

3

Documents

1. Background Report

A summary of the consultation program, regional context and existing conditions.

2. The Master Plan Report

A description of the planning and design principles, design framework, overview of the Master Plan and a description of its component parts.

3. Implementation Report

A description of the management structure, priorities for action and a strategy to implement the top priorities with order of magnitude cost estimates.



Little Lake
Study Area

The study area includes the public and private lands surrounding the Otonabee River and Little Lake in the City of Peterborough. It includes the Peterborough Museum and Archives north of Hunter Street, the east edge of the downtown core, and extends south along Lansdowne (including Lock 19) and east along Ashburnham.

The study area includes several key parks and open spaces:

- Beavermead Park
- Johnson Park
- Rogers Cove Park
- Del Crary Park
- James Stevenson Park/Riverside Park
- Millennium Park
- Peterborough Lift Lock



Trent-Severn Waterway



Lansdowne Swing Bridge



Millennium Park Trail



Peterborough Lift Lock



New Waterside trail at Holiday Inn



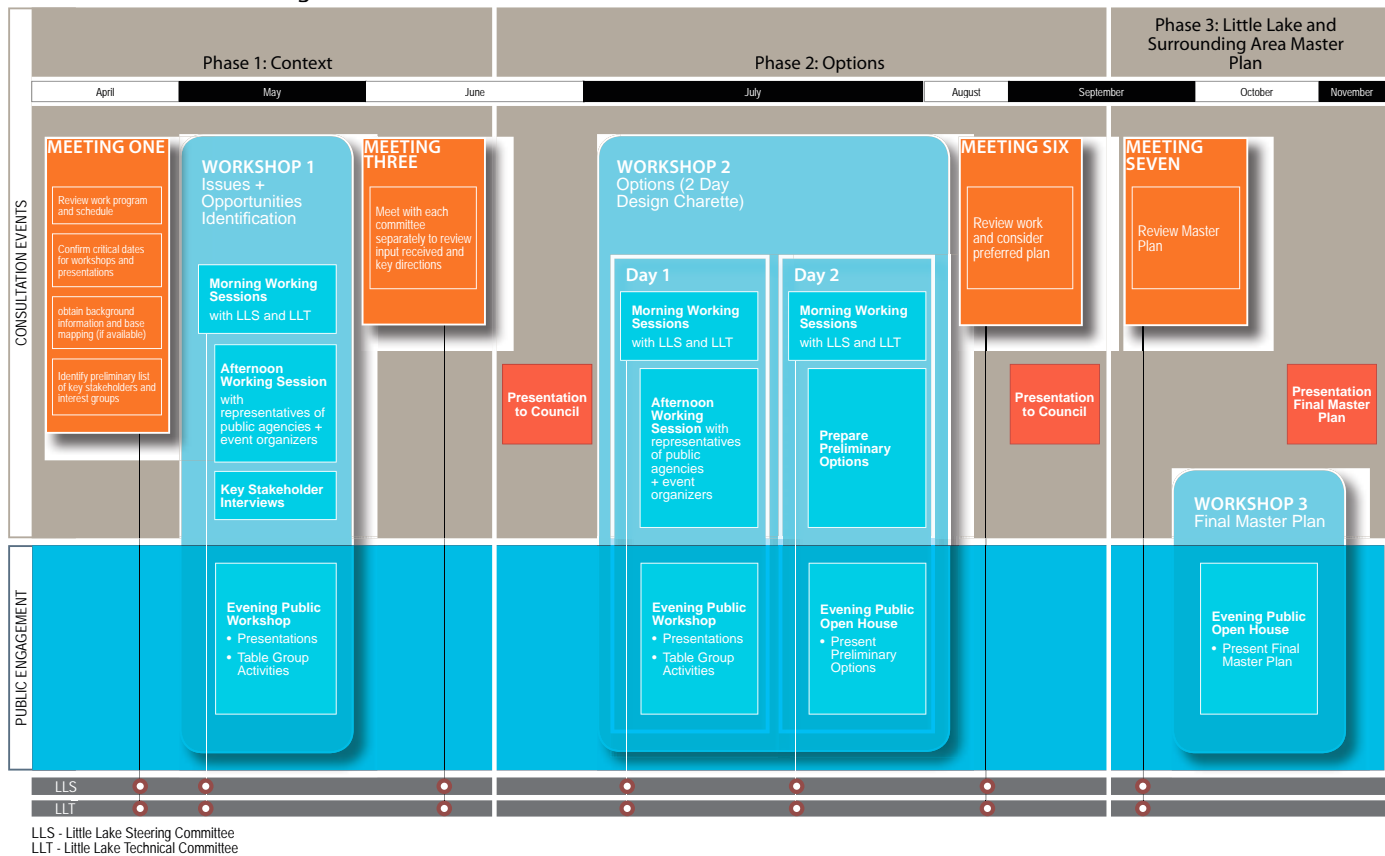
East Shoreline on Engleburn Ave.



Cemetery Shoreline

1.3 COMMUNITY CONSULTATION

Little Lake and Surrounding Area Master Plan - Consultation Events



The Little Lake Master Plan was prepared within the framework of an open and collaborative consultation process where a variety of techniques were used to involve a range of stakeholders in each of the three phases of the work program.

The team had focused working sessions with:

- Little Lake Steering Committee;
- Little Lake Technical Committee; and,
- representatives of waterfront businesses, interest groups and event organizers.

In addition, the team met with the City's Arenas, Parks, and Recreation Advisory Committee and the City's Arts, Culture and Heritage Committee at the project's kick off to understand some of the key issues and opportunities in the study area and in Phase 3 of the Study to present the draft Master Plan.

Members of Council were invited to each one of the workshops. In addition, the team updated Council on the outcomes of Workshop #2 on August 4, 2009.

Little Lake Steering Committee

The Little Lake Steering Committee was comprised of senior staff from the City of Peterborough:

- Ken Doherty, Director of Community Services
- Malcolm Hunt, Director of Planning and Development Services
- Wayne Jackson, Director of Utility Services
- Sandra Clancy, Manager of Financial Services
- Mary Gallop, Manager of Facilities and Special Projects.

The team met with the Little Lake Steering Committee on April 22, May 26, June 29, July 27, September 14 and October 15, 2009.

Little Lake Technical Committee

The Little Lake Technical Committee was comprised of staff from external agencies and staff from various departments of the City of Peterborough:

- Tracy Alison/Jane Tymoshuk, Fisheries and Oceans Canada
- Katie Novacek/Leala Pomfret, Ministry of Natural Resources
- Laura Lauzon, Greater Peterborough and Area Economic Development Corporation
- Jennifer Clinesmith, Otonabee Conservation Authority
- Richard Scott, Parks Canada

In addition, the following staff from the City of Peterborough were on the Little Lake Technical Committee:

- Becky Rogers, Arts, Culture and Heritage Division
- Don Jackson, Peterborough Marina
- Alan Barber, Legal
- Rob Anderson, Recreation
- Peter Southall, Public Works
- Duncan Manser, Public Works
- Ken Hetherington, Planning
- Brian Buchardt, Planning
- Sandra Clancy, Finance
- Mary Gallop, Community Services

The team met with the Little Lake Technical Committee on April 22, May 26, July 7, July 8 and October 15, 2009. The team also met with Parks Canada staff on July 14, 2009 to discuss issues and opportunities as a major stakeholder in the master plan.

Waterfront Businesses, Interest Groups and Event Organizers

Representatives of the following waterfront businesses, interest groups and event organizers were invited to a working session with the team at each one of the workshops.

Youth Groups

- Scouts Canada
- Peterborough Youth Soccer Club
- Royal Canadian Sea Cadets

Arts, Heritage and Culture

- Art Gallery of Peterborough
- Kawartha Heritage Conservancy
- Canadian Canoe Museum

Water-based

- Liftlock and the River Boat Cruises
- Peterborough Naval Association
- Peddle N Paddle
- Dragon Boat Festival
- Canadian Power and Sail Squadrons
- Greenwing Fishing Weekend

Waterside businesses

- Little lake Cemetery
- Holiday Inn
- The Best Western Otonabee Inn
- Dieter and Darcy's No Frills
- Harvey's Restaurant
- Peterborough Square
- Princess Garden

Recreation

- Liftlock Golfland
- The Silver Bean

Business Associations

- Village BIA
- Downtown BIA
- Chamber of Commerce

Environment

- Peterborough Green Up
- Ecology Garden
- Peterborough Field Naturalists

Tourism

- Peterborough and the Kawartha Tourism
- Pathway of Fame

Entertainment

- Festival of Lights/Little Lake Musicfest
- Snofest
- Peterborough Folk Festival
- Kawartha Fest
- Canada Day Celebration

Sports

- Peterborough Baseball Association
- Peterborough Recreational Baseball
- Greater Peterborough Triathlon
- Ontario Federation of Anglers and Hunters

School Boards

Workshops

The work program was organized around three workshops. Workshops are a forum that enables the team to focus on obtaining input on the project at key decision-making milestones while working in the community. The Workshop is not a Town Hall meeting, but rather an opportunity for participants to engage in small group discussions on questions posed by the team. It enables the team to solicit particular input from many participants to assist in advancing the project, as opposed to simply having a question and answer period as the focus of the consultation event.

Each workshop included sequential sessions (two hours in length) with the Little Lake Steering Committee, Little Lake Technical Committee, representatives of waterfront businesses, interest groups and event organizers and the public. Each working session was based on the same presentation and agenda of questions posed by the team to ensure that all groups received the same information.

Workshop #1 May 26, 2009

Workshop #1 was held near the end of Phase 1 of the work program to share information on the team’s understanding of existing conditions and to solicit input with respect to the key attributes of the study area and opportunities for change as perceived by the workshop participants. It was very well attended with approximately 160 residents.

Following a presentation that summarized the team’s understanding of existing conditions and key assets of the area, residents participating in the evening workshop were engaged in two Table Group activities aimed at securing input on:

- the key attributes/qualities and characteristics of the Little Lake study area; and,
- the key opportunities for change in the Little Lake study area.

The following is a summary of the key attributes/ qualities and characteristics of the study area as recorded by the participants in the public workshop:

Environment	Events
<div>1. Protect healthy environments</div> <div>2. Green Spaces to stay green, invasive species destroyed.</div> <div>3. Large percentage of green space along shoreline</div> <div>4. Promotion of natural environment (native).</div> <div>5. Protect<div>a. Water quality</div><div>b. Ambiance of peaceful lake setting</div><div>c. Erosion of shoreline (naturally)</div><div>d. Keep architectural scale to 2 stories max!</div><div>e. Keep the TREES the tallest feature</div><div>f. Green Space</div><div>g. Manage the amount of motorized traffic</div></div>	<div>12. Special events, gathering places, “Dragon Boat Races”, triathlon, etc.</div> <div>13. Much of shoreline is publicly accessible</div> <div>14. Several transportation modes come together</div> <div>15. Competition of use of lakes- motorized vs. non-motorized</div> <div>16. Affordable entertainment (ie. picnics, walking trails, concerts, natural beauty)</div> <div>17. Fountain</div> <div>18. Water use-recreational/swimming (limit motor boats).</div>
Trails	Scale
<div>6. The natural shoreline is very important to maintain!</div> <div>7. Walking, hiking, biking trails important to maintain and develop.</div> <div>8. Lovely walking, hiking, biking trail</div> <div>9. Has connection to downtown</div> <div>10. Accessibility</div> <div>11. Public uses as the main priority (parkland and walking trails- bike paths)</div>	<div>19. No domineering architecture- size of adjacent building is appropriate scale, peaceful- let’s protect it!</div> <div>20. We want the beauty of this gem enhanced but not to the detriment of the tourists that already enjoy the lake</div> <div>21. Continue to be available as part of the urban scene.</div>

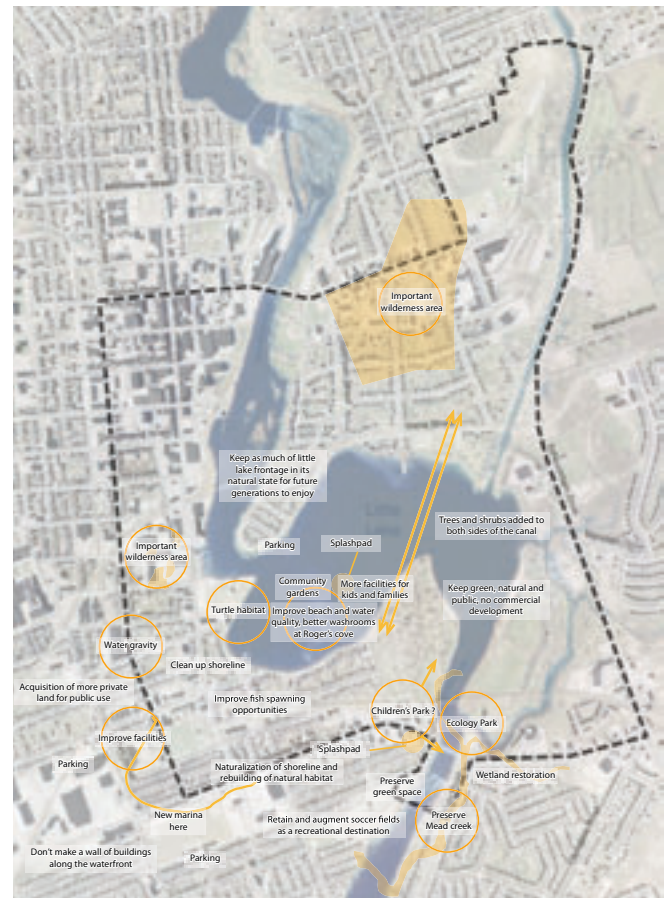


CIRCULATION & LINKAGES

The maps on this page are a summary of the opportunities identified by the participants in the evening public workshop. They consolidate ideas with respect to:

- circulation and links;
- parks and open space; and,
- tourism, culture and heritage.

In addition, all Table Groups were asked to write a list of all questions for the team. During this workshop, one question was asked from each of 12 Table Groups. The team provided brief written answers to all 108 questions received during the workshop and posted this on the project's web site.



PARKS & OPEN SPACE



TOURISM, CULTURE & HERITAGE



Workshop 1: a well attended event

Workshop #2 July 7 and 8, 2009

Workshop #2 was held at the beginning of Phase 2 to develop a preliminary framework for master plan recommendations. The Workshop was conducted over the course of two days and included working sessions for the consulting team, one-on-one interviews, working sessions with the Little Lake Technical Committee and representatives of waterfront businesses, interest groups and event organizers. The public was invited to drop in at any time, as well as attend working sessions with the team in the evenings of July 7th and 8th.

Both evenings began with a presentation of the work in progress, followed by five breakout discussion groups where preliminary ideas of the team were shared. Residents were invited to join any one of the following discussion groups, and were encouraged to sit in on portions of all discussions before the end of the workshop:

- environment/Beavermead;
- downtown Peterborough;
- Del Crary Park/Marina;
- trails/Trent-Severn Waterway; and,
- economic and tourism development.

On the second day of the workshop, ideas were further developed based on input received and again, the outcomes of the design development was shared with all stakeholders.

A summary of the input received at Workshop #2 was posted on the project's web site.

Workshop #3 October 15, 2009

Workshop #3 was held to present the preliminary master plan. Working sessions were held with the Little Lake Technical Committee, and the City's Arenas, Parks, and Recreation Advisory Committee and the City's Arts, Culture and Heritage Committee. The public was invited to an evening session.

Each working session began with a presentation of the draft master plan during which the team described the key recommendations. Following the presentation, the public was invited to join a focused conversation on one of the five topics used at Workshop #2.

2.0

CONNECTED

RESTORED ENVIRONMENT

PUBLIC

BALANCED

MANAGED

TOURISM & ECONOMIC DEVELOPMENT

SHOWCASE FOR ARTS & CULTURE

FOCUS FOR RECREATION



To guide the long term restoration and enhancement of Little Lake, a number of over-arching guiding principles were developed through consultation with the community at the second workshop.

2.1 CONNECTED

Little Lake is a jewel in the City of Peterborough. Visual and physical access to this amenity is essential for its assets to be shared by all. A continuous waterside trail for pedestrians and cyclists should be completed and connected with neighbourhoods, the broader City trails and the Trans Canada Trail. Views through to the water and back to the City should be protected as use along the water's edge evolves.



New Waterfront Connections



East Shore Walk



Views to the Waterfront

2.2 RESTORED ENVIRONMENT

The fundamental underpinning of the Master Plan is a restored environment. A naturalized shoreline, restored savannah and prairie landscapes, removal of invasive plants and improvements to storm sewer outlets and inlets to improve water quality are essential. All of Peterborough's residents have a role to play in protecting the health of this ecosystem. Enhanced public education and awareness is critical for everyone to understand the imperative of this approach.



Lasalle Park, Burlington



Lasalle Park, Burlington



Existing Restoration Efforts

2.3 PUBLIC



Millennium Boathouse

The amenity of Little Lake must be available for everyone to enjoy. Most of the water's edge is already in public ownership. Public access to the water's edge must be protected. Public facilities should be located on or near the water's edge to enshrine the public asset of the lake.

2.4 BALANCED



Accessible Children's Playground in Roger's Cove

The Master Plan attempts to balance the competing demand for water and land resources. In terms of water use there is a need to balance motorized and human-powered uses and a need to ensure the sustainability of the Peterborough Marina and the functionality of the TSW. Signage, enhanced awareness, education, monitoring and enforcement will help to maintain a safe environment for all boating activity. In terms of land based activity, parks and open spaces along the water's edge will continue to provide for a broad range of active and passive recreation activities through organized programs and events and informal use. The Master Plan also attempts to balance the imperative of environmental restoration with a desire for active use. And finally, the Master Plan balances the desire for economic development within the framework of the City's current policies for intensification in the existing centre of Downtown and the Hunter Street business area.

2.5 MANAGED

The Master Plan is based on a commitment to ongoing maintenance of the natural areas, trails, parks and open spaces. Maintenance will be the responsibility of many partners working together to achieve a common goal of a healthy and sustainable system of parks, open spaces, trails and recreation facilities. Maintenance practices may need to be adjusted for new environmental enhancement criteria e.g. grass cutting to shoreline.



2.6 TOURISM AND ECONOMIC DEVELOPMENT

The Master Plan accommodates opportunities for significant economic development to intensify the built up areas of Downtown Peterborough and the Hunter Street business area. Development should be compatible with the built form character of these urban areas.





Art Gallery of Peterborough

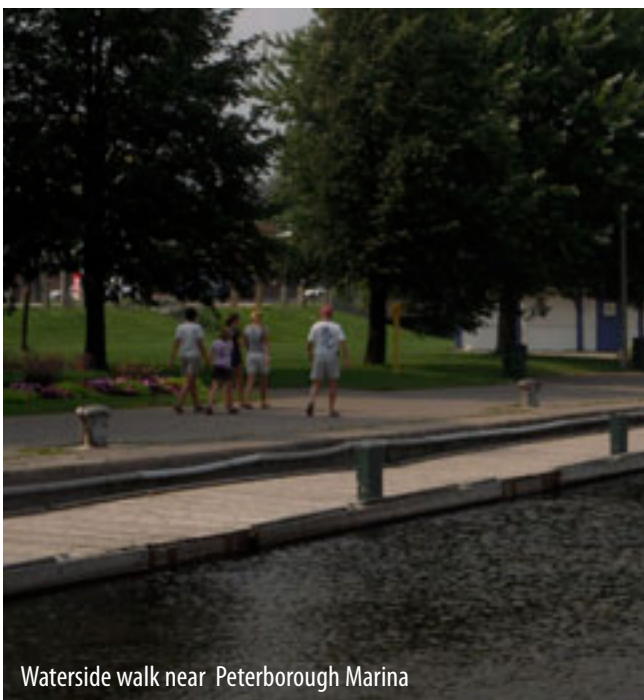
The study area of the Master Plan includes some of Peterborough's most significant arts and cultural facilities including the Art Gallery, Peterborough Museum and Archives, the Festival of Lights/Little Lake Musicfest and theatre. The Canadian Canoe Museum, while located outside the study area, has a long-standing desire to move to a waterfront location. The Little Lake area will be a showcase for arts and culture through the exploration of opportunities for other facilities to augment the appeal to a broad spectrum of residents and visitors.



Millennium Trail



George Street Market



Waterside walk near Peterborough Marina

Little Lake will provide a balance of year round land and water based recreation, active and passive recreation in parks, open spaces, trails and facilities that are dispersed throughout the area.



Dragon Boat Races

3.0

RESTORE THE ENVIRONMENT

NINE PUBLIC PARKS

SIX CULTURAL HUBS

COMPLETE THE 7 KM LOOP TRAIL

CREATE LINKS

THREE GATEWAYS

TWO AREAS OF INTENSIFICATION

DISPERSED FACILITIES & AMENITIES

11 LOCATIONS TO GET INTO THE WATER

FOUR QUADRANTS

VISION STATEMENT

Over the next 20 years, Little Lake will set a new standard for environmental stewardship. The water quality will be improved, the natural features will be healthy functioning ecosystems and significant Prairie and Savannah landscapes will be restored. Little Lake will support a healthy fishery and its natural features will provide important wildlife habitat.

Parks and open spaces around Little Lake will be the focus of recreation with appealing amenities and high quality facilities. A continuous trail around the Lake edge and its connecting links will be the envy of any Ontario city. The Little Lake area will be a focus for arts and cultural facilities and it will tell the rich history of the city.

The Lake will offer a variety of boating experiences from travel along the TSW, to motor boating from the marina, to canoeing and kayaking. It will be focus of year round festivals and events.

Downtown and the business area along Hunter Street will be the focus of intensification and infill, providing new places for people to live in these urban neighbourhoods close to Little Lake and the Otonabee River and new offices, shops and services to augment these thriving business areas. Development will create beautiful streets, lined with interesting uses on the ground floor, and public spaces that link with those along the Little Lake shoreline.

Over the next 20 years, with the GO train service to Peterborough, a new downtown station will spur intensification to support the train service.

The following **NINE STRATEGIES** summarize the most significant and unifying themes of the Master Plan. They embody the principles and present the most important “big moves” to achieve the long term planning and design outcomes envisioned in the Master Plan.

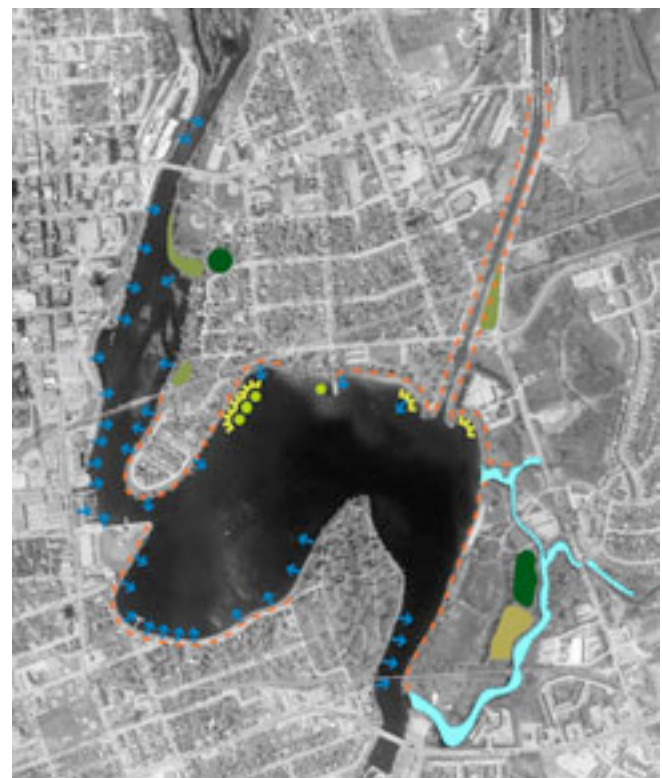
3.1 RESTORE THE ENVIRONMENT

Native, intact plant communities in the study area are mainly confined to narrow bands of riparian vegetation associated with Whitlaw Creek in Beavermead Park and primarily on the east edge of Little Lake shoreline and the Otonabee River. Little Lake supports a warmwater fishery that compares well with the fishing in the rest of the area. The Lake is subject to elevated levels of E. Coli and fecal coliform related to urban stormwater runoff, shallow summer water levels and circulation of water. The study area supports a wildlife community with species that are tolerant of or have adapted to an urban environment. The remnant vegetation features associated with Beavermead Park and the shoreline also provide important stop-over habitat for a diverse assemblage of migrating birds.

The City, Parks Canada and other partners have implemented many habitat enhancement initiatives including:

- Shoreline stabilization with native shrubs;
- Shoreline plantings with prairie affinity species;
- Osprey nesting platforms; and,
- Swallow nesting boxes.

The foundation of the Master Plan is a strategy to enhance the natural environment within the Little Lake study area. Restoration and enhancement initiatives geared towards removing non-native, invasive plants, planting native species, naturalizing the shoreline and polishing stormwater are imperative. This is not simply the responsibility of the City or Parks Canada. Every resident should be inspired and compelled to become stewards of the landscape.



- Shoreline and Habitat Restoration
- Mead Creek Shoreline Restoration
- Forest Restoration Opportunity
- Prairie Restoration Opportunity
- Savanna Restoration Opportunity
- Stormwater Outfalls - Bioswale Opportunity
- Habitat Islands Opportunity
- Anchored Wetland Restoration Opportunity



The City already owns almost 90 ha of public park in the study area. Together with lands owned by Parks Canada and lands for the City's key cultural facilities, most of the water's edge is publicly accessible. A key strategy is to use the parks as the context to focus recreation facilities, programming and amenities to service residents and visitors with a broad range of year round activity.

- 1 James Stevenson/Riverside Park
- 2 Edgewater Park
- 3 Rogers Cove
- 4 Johnson Park
- 5 Beavermead Park
- 6 Del Crary Park
- 7 Millennium Park
- 8 Parks Canada
- 9 Ashburnham Memorial Park

- 1 Little Lake Cemetery
- 2 Art Gallery of Peterborough
- 3 Trent-Severn Waterway Cultural Hub
- 4 Peterborough Lift Lock Visitor Centre
- 5 Peterborough Museum & Archives
- 6 Cultural Precinct



The City has recently adopted new Official Plan policies to reflect the recently completed Central Area Master Plan. The policies reflect a "Downtown First" philosophy for public investment in municipal cultural and entertainment facilities. The City's long term strategy is to encourage central Downtown locations for the Peterborough Museum and Archives, the Art Gallery and the Canadian Canoe Museum. In the immediate future, the cultural facilities provide hubs of interest around Little Lake. The Peterborough Museum and Archives provides an anchor for the north edge of the area, while the Art Gallery of Peterborough is more centrally located at the south end of Downtown right on the Lake. A key strategy is to work with all of the stakeholders to develop an integrated approach to interpretation of the natural and cultural heritage of the area. Intensification of the south end of Downtown provides a particular opportunity to establish a cultural precinct. The Canadian Canoe Museum is interested in relocating Downtown to a site that ideally has a primary façade on a main street and a back yard on the water. The cultural precinct is also the ideal to encourage more central locations for the Museum and Art Gallery in the long term.

3.4

COMPLETE THE 7 KM LOOP MULTIUSE TRAIL

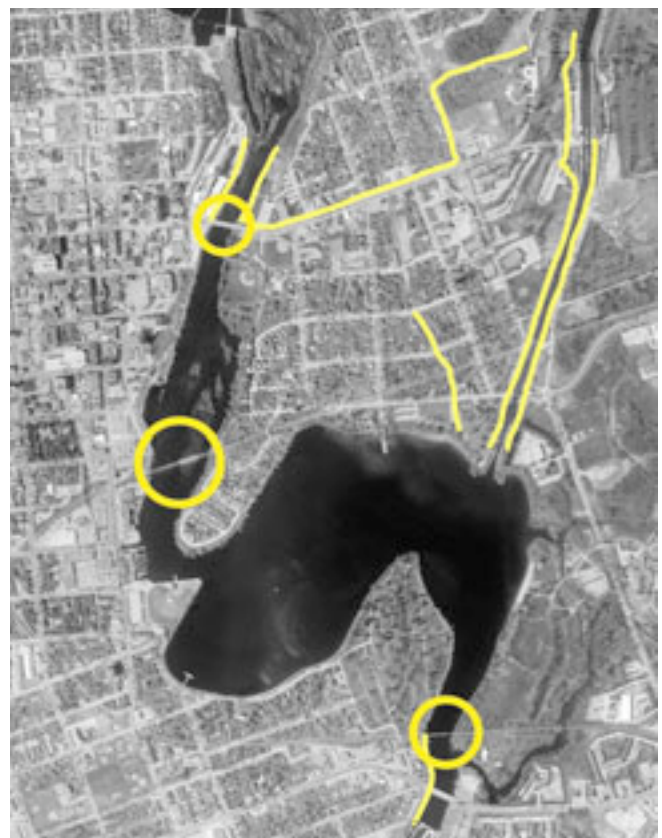
About 80% of the primary loop trail around Little Lake is in public ownership. The Little Lake Cemetery, Naval Association, and two pockets of single detached residential uses are the only locations where access along the water's edge is not possible at this time. In some locations, the loop trail is not well defined, marked or signed. A key strategy of the Master Plan is to complete the multi use trail around Little Lake with a beautiful promenade that is well marked and rich with pedestrian/cycling amenities.



3.5

CREATE LINKS

There are only a few missing links in a trail system that connects the Little Lake trails to those in the City and beyond to the Trans Canada Trail. An enhanced trail link along both sides of the canal would help to integrate the Peterborough Museum and Archives and the Peterborough Lift Lock and Visitor Centre with Little Lake. A trail exists along an old rail spur line that connects Trent University, along the Otonabee River, south to Sophia Street, just two blocks from Little Lake. The extension of this trail is a key initiative to complete the link. Pedestrian crossing of the Otonabee River is essential to enhance the appeal of the route. In addition, some portions of the trail will be through residential neighbourhoods.



3.6 THREE GATEWAYS



A key strategy is to enhance three gateways to define the recognition of the Little Lake area. One prominent gateway is (1) the Hunter Street underpass of the hydraulic Lift Lock. Hunter Street is reduced to a single lane, which while affecting traffic capacity, makes for a dramatic gateway condition to the Little Lake area. A second gateway is (2) the intersection of Maria Street and Ashburnham Drive. This gateway combines views north along the canal and south to Little Lake. The third gateway is (3) located on George Street at the south of Del Crary Park. Here there are views east to the Art Gallery of Peterborough, the Park and Little Lake. Gateways will use existing features as natural entries into Little Lake area. A forth gateway (4) is located at the historic Hunter Street Bridge. This gateway's importance could be acknowledged through an enhancement of views, and the animation of the structure through thematic lighting and performances beneath its arches.

3.7 TWO AREAS OF INTENSIFICATION



Economic development is an important consideration in the Master Plan. In the longer term, there are significant opportunities to intensify development Downtown and along Hunter Street. This supports the Official Plan direction and helps to continue to create thriving urban neighbourhoods.

3.8

DISPERSED FACILITIES AND AMENITIES

An ambition of the Master Plan is to disperse a range of recreation facilities and amenities throughout the study area. The area provides opportunities for a full range of sports, play and cultural attractions. Public washrooms are located around Little Lake in existing facilities or in new buildings recommended in the Master Plan.

Swimming & Water Play

- 1 Rogers Cove
- 2 Beavermead



Playground

- 3 Rogers Cove
- 4 Beavermead
- 5 Downtown



Sports Fields

- 6 James Stevenson
- 7 Westclox
- 8 Ashburnham
- 9 Beavermead



Washrooms

- 10 Trent-Severn Waterway Visitor Centre
- 11 Rogers Cove
- 12 Beavermead
- 13 Del Cray Park
- 14 Boathouse



3.9

11 LOCATIONS TO GET INTO THE WATER

Balanced boating use in the study area is imperative. The Otonabee River and lake are ideal locations for canoes and kayaks. However, the appeal for motorized boats is necessary to ensure the continued success of the Trent-Severn Waterway and the Peterborough Marina. The Lake has also been the location for many special boating events. A key strategy identifies several locations to moor boats, two boat launches and four lookouts/wharfs for viewing and fishing.

1 Mark St Wharf

2 Mark St Boat Launch

3 Beavermead Boat Launch

4 Haggart St Lookout

5 T-Wharf

6 Boat Launch (Emergency Personnel)

7 New Boat Slips

8 Existing Boat Slips

9 James Stevenson Park Lookout

10 Jackson Creek Lookout

11 Mooring at the Lock 21 on the canal



4.0

THE PARK/TRENT-SEVERN WATERWAY

THE EAST CITY

THE DOWNTOWN

THE SOUTH SHORE



Four quadrants, in addition to the Lake, comprise the organizing structure for the Master Plan. These quadrants are distinct character areas that shape the opportunities for change. The direction for each quadrant is summarized as follows:

4.1 THE PARK/ TRENT-SEVERN WATERWAY ECOLOGY FIRST

The lands of Beavermead Park, Johnson Park, Little Lake Cemetery, Peterborough Museum and Archives and lands along the TSW comprise this quadrant where the fundamental underpinning of change in the area is to enhance the ecology of the open spaces, parks and natural areas. The focus in this area is to:

- Restore the landscape of the water's edge;
- Restore savannah and prairie habitats;
- Extend trails;
- Enhance opportunities for interpretation/education;
- Preserve the heritage resources;
- Expand water-based children's play;
- Consider phasing out the campground in the long term;
- Change maintenance practices; and,
- Introduce green storm water management practices.



4.2 THE EAST CITY COMMUNITY FIRST

Lands along the east side of the Otonabee River and the north side of the Lake comprise the East City where key directions are focused on enhancing the neighbourhood and connections to the larger community including:

- Recognize heritage resources;
- Enhance streetscape on key streets and trails connecting with Hunter Street;
- Restore the landscape of the water's edge;
- Expand water-based children's play in Rogers Cove Park;
- Consider Rogers Cove as a focus for youth boating; and,
- Creation of interpretive neighbourhood walks.



4.3 THE DOWNTOWN PEOPLE FIRST



The Downtown area located along the west side of the Otonabee River and including Del Crary Park comprise this quadrant where the focus of the initiatives are on enhancing the quality of the environment for residents, visitors and business operators. Key direction in this area is to:

- Encourage intensification and infill development, particularly for new residential uses;
- Extend the urban streetscape character south along George Street;
- Develop a cultural precinct that would be an ideal location for arts and cultural facilities;
- Improve Del Crary Park; and,
- Rediscover Jackson Creek through re-establishing a visible water channel.

4.4 THE SOUTH SHORE COMMUNITY FIRST



Lands along the south shore of Little Lake, excluding the Cemetery, comprise the fourth quadrant. Similar to East City, initiatives are intended to enhance the neighbourhood and connections to the larger community through:

- Recognition of the heritage resources;
- Enhanced connections along and to the water's edge;
- Restoration of the water's edge landscape;
- Enhanced streetscape; and,
- Encouraging more Bed and Breakfast and niche retail uses.

The Lake is the fifth component of the organizing structure for the Master Plan. The underpinning of the approach to the Lake is one of balance. The intent is to balance activities and uses, to improve the habitat for fish and wildlife, improve water quality and to minimize disturbance to the lake bed. Fundamental to the success of these initiatives is enhanced environmental awareness and education so that all residents in Peterborough and visitors understand the imperative of restoring the environment and, more importantly, their role in achieving that goal.

5.0

THE PARK/TRENT-SEVERN WATERWAY

THE EAST CITY

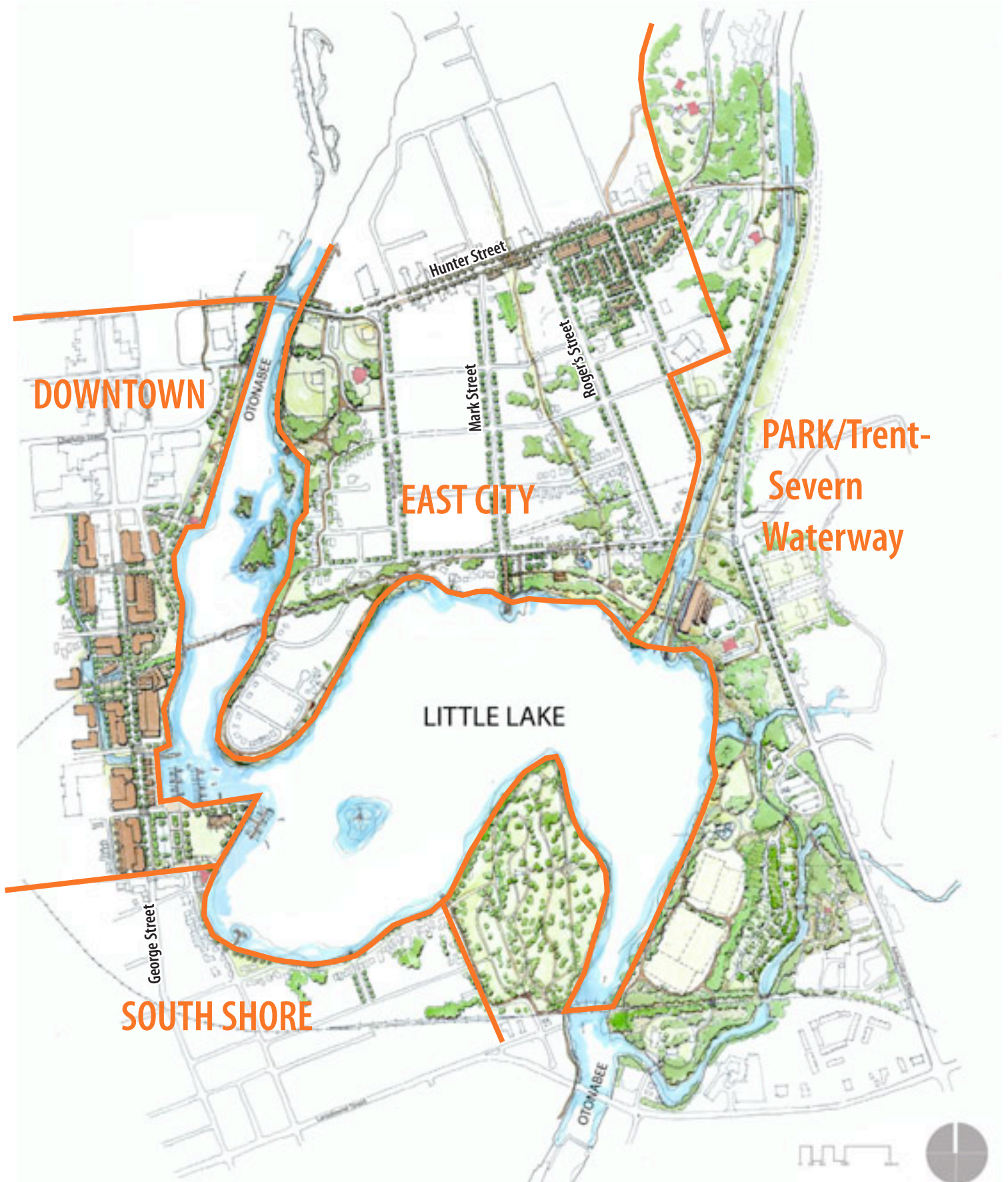
THE DOWNTOWN

THE SOUTH SHORE

ENVIRONMENTAL DIRECTIVES







5.1 THE PARK/TRENT-SEVERN WATERWAY

The Master Plan illustrates a number of recommendations for trails, key facilities, parks, and environmental restoration in the area on the east side of the Little Lake and along the canal of the TSW.

Trails

The existing trails in this area include enhanced links north along the west and east sides of the Canal to connect with the TSW's Visitor Centre and beyond to the Peterborough Museum and Archives where there are panoramic views of the city in Ashburnham Memorial Park. The trails are envisioned to accommodate both pedestrians and cyclists.

There are many opportunities for interpretation of the construction of the canal and the lift lock through panels and the display of machinery artifacts along the trail. Parks Canada would be an important partner in the development of an integrated approach to story telling of the natural and cultural heritage, and the role of both the local and federal government.

In order to provide an enhanced link to the trail east of the Otonabee River, there is a need for a pedestrian river crossing. With the Navy lands not presently open for public access, the connection between the west and east sides of the river must be made at the railway bridge.

“ WALKWAYS THROUGH NATURALIZED LANDSCAPES ”



Lynde Shores, Whitby





Corridor of Activities

1. Peterborough Museum and Archives

The Museum and Archives are located in the Ashburnham Memorial Park. The Park has parking and an incredible panoramic view of the City. A well marked trail would enhance cycling and pedestrian access to this site. The trail should extend through to Armour and Hunter Street to connect with the Rotary Green Trail north to Trent University.

The City of Peterborough recently adopted a “Downtown First” policy in their Official Plan to encourage relocation of the cultural facilities to a more central Downtown location. This Master Plan has identified a cultural precinct that is an ideal area to consolidate cultural facilities in the long term. In the short term, the Peterborough Museum and Archives will most likely remain in its present location. The current location offers advantages for the continued operation of the facility in the short and medium term:

- the present location provides free and available parking, ample grounds for future facility expansion, a park setting that works very well for certain activities (for example, the summer camp program), and a stunning scenic view; and,
- there is no sense that its current location in any way detracts significantly from its potential audience development or attendance levels – residents and visitors who are interested in visiting the museum will seek it out and, with good signage and road access, should have no difficulty in finding the facility.

The long term ambition to consolidate all of the cultural facilities downtown is not obviated by the continued operation of the Museum at its current site over the short to medium term. Public input expressed during the community consultation process identified the current site as the preferred location. Members of the Museum audience expressed many of these opinions. However, in terms of the best interests of the community and in order to foster a strong and vibrant downtown, the City should continue to investigate opportunities for the eventual relocation of the Museum to the downtown. This should not delay continued investment in the Museum. The present facility, which is over 40 years, requires rehabilitation. Additionally, the archives storage space is fully utilized and options for additional archival space must be investigated immediately.

2. Peterborough Lift Lock Visitor Centre

The Lift Lock Visitor Centre is located on a 12.6 hectare site that includes the hydraulic lift lock, upper and lower canal reaches, lock control and administration buildings and the 5500 sq. ft building for the Visitor Centre. The lift lock was designated as a National Historic Site in 1979 because it is the highest hydraulic lift lock in the world. The surviving physical attributes of the lock structure, the canal cuts and embankments and the integrity of the original documents associated with the design and construction of the lift lock contribute to the significance of this site.

Currently, the Visitor Centre includes information about Parks Canada and interpretive information about the Lift Lock and the TSW system. Programs for school groups are delivered by Parks Canada staff. The site has some interpretive panels and is used for picnicking, fishing and viewing of boating activity in the canal. The canal is a terrific winter attraction when it is used for skating.

The Master Plan builds upon several opportunities identified in past Parks Canada studies of the Lift Lock site. Recommendations concerning the site are to:

- Develop an interpretive strategy for the site that enhances the information delivered about the national significances of this site (through displays, animation and living history programming, improved guided tours, rides on the lift lock and tours within the lock structure);
- Improve access and washroom facilities;
- Consider adding new retail and food service in the Visitor Centre building;
- Add new play areas for children (could include water play/splash pad); and,
- Create and enhance walking and cycling rails to connect to the trail loop around Little Lake and to the Peterborough Museum and Archives building.

The Master Plan also conceptually illustrates Ashburnham Drive realigned to the east to ensure a green buffer to the edge of the canal, a feature of studies of lands to the east of the Lift Lock area prepared for the City of Peterborough.

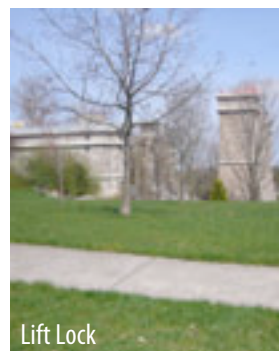
A key recommendation is the need to allow for boat mooring along the canal. Adjustments in the lock machinery to better regulate water levels, and modifications to the current gabion basket walls of the canal would be required to enable mooring. With the ability to briefly moor in this location, boaters would be able to obtain information on the full range of services and facilities available in Peterborough, including the proximity of the Peterborough Marina for mooring and visiting downtown Peterborough. The 2005 report suggested that a new

building to service boaters would be required to include washrooms, showers and food services. In the short term, these facilities and services could likely be provided in the existing Visitor Centre.

There may be an opportunity to provide bicycle rentals to encourage boaters to cycle the trails, visit downtown Peterborough and the Peterborough Museum and Archives across the street. Many communities have recently implemented bicycle rentals with stations throughout the urban area.



Lift Lock



Lift Lock



Lift Lock Visitor Centre



Lift Lock Visitor Centre

3. Trent-Severn Waterway (TSW) Headquarters/maintenance yard

This site is the nexus between a more culturally-oriented landscape corridor to the north along the canal up to the Peterborough Museum and Archives, and the natural features and open space associated with Beavermead and Johnson Parks to the south. The Headquarters currently houses office space and does not function as a public building. The maintenance building is an active shop used to repair machinery associated with the canal operation. The building also houses a very extensive collection of archival records and artifacts associated with the building and maintenance of the canal.

The Master Plan illustrates a notion of an interpretive centre on the grounds to enable a more comprehensive cultural heritage interpretation of the TSW. Given that this could be accommodated in the Lift Lock Visitor Centre, it is likely not realistic to develop another public facility on this site. Parks Canada supports the intent to improve the public face and animation of the buildings through interpretive media on the grounds, artifacts related to the shops and perhaps the interpretation of working machinery in the shops themselves. Parks Canada has already installed some interpretive panels and nesting boxes along the shoreline. With upgraded public washrooms in Rogers Cove Park and Beavermead Park, this area of the waterfront will be well served by these public amenities.

The landscape on the grounds of the Headquarters should be naturalized to reduce the area of mowed lawn and to support the intent to enhance the ecology of the area, particularly in this quadrant of the Master Plan.

TSW's Lock 19 is located south of Lansdowne Street. It is the oldest extant lock station and retains the masonry block chamber walls of the original construction completed in 1844. It is an important gateway to the lake and the City and complements other significant waterway technology located at the Peterborough Lift Lock. Parks Canada recently purchased a house abutting the dam on Lock 19 for access to the dam associated with the lock. The Master Plan illustrates a trail connection south to Lock 19. The trail experience would be augmented with interpretative signage to describe the lock construction and relation to the other locks on the system.



Trent-Severn Waterway



Canal near Little Lake



4. Beavermead and Johnson Parks

Beavermead Park and Johnson Parks together comprise almost 57 acres of well used public lands. Beavermead Park includes six soccer fields, a children's playground, public washrooms, a beach, a boat launch and a campground with 95 sites. Johnson Park is used primarily as overflow parking for major events in Beavermead Park.

This area provides an important focus for active and passive recreation. The Master Plan recommends that the sports fields be restored to ensure optimal use. This could include installation of subdrainage, high performance soils and turf with irrigation. An expanded children's playground and a splash pad would augment the activities available in the Park. Overflow parking should be removed from Johnson Park and relocated to the former snow dump site along Ashburnham Drive. As a principle, waterfront property is too valuable to be used for parking. The landscape of this significant extent of public land should be restored to augment the health of the natural features. There are two washrooms in Beavermead Park: one near the sports fields and one in the campground. The facility in the campground will need to be upgraded if the campground continues to operate in the long term.

The boat launch is currently used for small craft. With the addition of curbs along the steep edge of the ramp and rehabilitation or replacement of the floating dock, the boat launch would be improved for use.

The City currently provides camping in Beavermead Park with the intent of offering an affordable camping experience and to generate a positive economic impact. There is a sense that many campers are Peterborough residents who do not necessarily generate an additional economic benefit for the City. In addition, the campground competes with those offered by the private sector. The campground should be maintained in the short to medium term. The campground may, however, not be the best use of this valuable public space over the long term. It is recommended that a Cost/Benefit analysis be prepared to ensure there is adequate consideration of the options for the greenspace. With the results of that Study, the City can reassess the merits of the campground operation.

- | | |
|------------------|--------------------------|
| 1. Sports Fields | 4. Johnson Park |
| 2. Boat Launch | 5. Children's Splash Pad |
| 3. Campground | 6. Washrooms |

5. Ecology Park

Ecology Park is located in Beavermead Park. It is a plant nursery, research centre and education centre that is open to the public year round. It is managed by Peterborough Green-Up, a community based, non profit environmental organization. It houses a number of displays that demonstrate, for example, approaches to stewardship, composting, vegetable gardens, wildlife gardens, herb gardens and children's gardens. It also has a shoreline garden to demonstrate the importance of plant diversity along the shoreline and it is restoring a meadow prairie landscape. Ecology Park sells composts, mulches, organic fertilizers, pest controls, organic produce, cut flowers, native trees, shrubs, vines, flowers, grasses and ferns, as well as exotic plants. Ecology Park also hosts a number of workshops and special events such as workshop for backyard composting, growing and finding local grown food, caring for trees, restoring healthy shorelines and bird and butterfly gardens.

Ecology Park is the perfect hub to focus interpretation of natural features and education on environmental stewardship. Since its inception in the early nineties, it has provided an invaluable resource for residents. Its location and current infrastructure make it an ideal location to focus initiatives related to the imperative of restoring the landscape and habitats of the Little Lake area.

“ INCORPORATE MORE SIGNAGE TO TELL THE STORY AND TO ENHANCE AWARENESS OF A NEW APPROACH TO LANDSCAPE MANAGEMENT ”



The Entry Sign Into The Ecology Park





- Shoreline and Habitat Restoration
- Mead Creek Shoreline Restoration
- Forest Restoration Opportunity
- Prairie Restoration Opportunity
- Savanna Restoration Opportunity
- Stormwater Outfalls - Bioswale Opportunity
- Habitat Islands
- Anchored Wetland Restoration Opportunity

Environmental Restoration

A number of initiatives are suggested to enhance the natural features :

- Create and restore prairie and oak savanna plant communities along the shorelines of the Otonabee River, Little Lake, TSW (Maria Street), and Meade Creek;
- Build on existing themes/exhibits (i.e. TSW Headquarters shoreline naturalization with interpretative signage, Ecology Garden Tall Grass Prairie display) for restoration and revitalization of the waterfront greenspace areas;
- Establish anchored shoreline habitat islands along Little Lake, near the TSW confluence. Habitat islands are low-lying islands designed to provide habitat for specific target species, constructed from dumped rock fill, and covered with stone to stabilize the fill; soil substrate is added to the outer layer to support the growth of appropriate vegetation (if desired). Ideal target habitat for Little Lake includes loafing/basking area for turtles and other aquatic reptiles, and nesting for waterfowl. Submerged habitat may include gravel with anchored woody debris, and should be targeted to high-value game fish such as bass and walleye. Their location and design should be consistent with navigation requirements and resilient to water level fluctuations;
- Protect the riparian buffer naturalization through provision of a 5 to 15 m vegetated “no touch” setback along the edges of the shoreline;
- Limited to no use of herbicides, pesticides and fertilizer for parks;
- Phased replacement of planted non-native trees and shrubs with native species indicative of the surrounding area and in keeping with the restoration themes (e.g. oak savanna) and objectives (e.g. improved wildlife habitat);
- Create bio-swales (wetlands) at storm sewer outlets as a means of filtering and polishing urban runoff before it enters the Lake;
- Implement use of interpretative signs and information handouts that describe the unique and sensitive character of Little Lake and appropriate environmental stewardship behaviour;
- Remove aggressive invasive plants such as European buckthorn and garlic mustard from existing natural areas. Replant restored areas with native species; and,
- Create basking/loafing areas for turtles along the river and lake shorelines.

It is recommended that the City, in cooperation with Parks Canada and Fisheries and Oceans Canada, integrate the federal fisheries permitting process between various in-water elements of the Master Plan to allow specific elements with a fish habitat gain to compensate for other elements that do not have a fish habitat gain.



Walk Within Beavermead Park

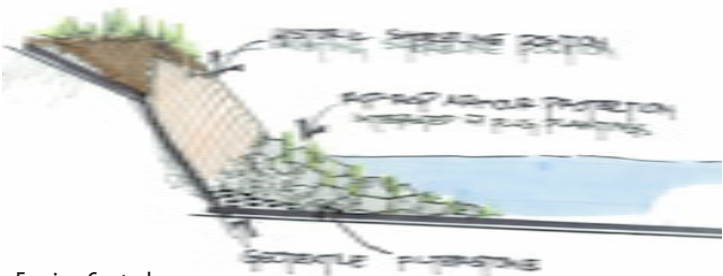


Ecology Park



Lynde Shores, Whitby

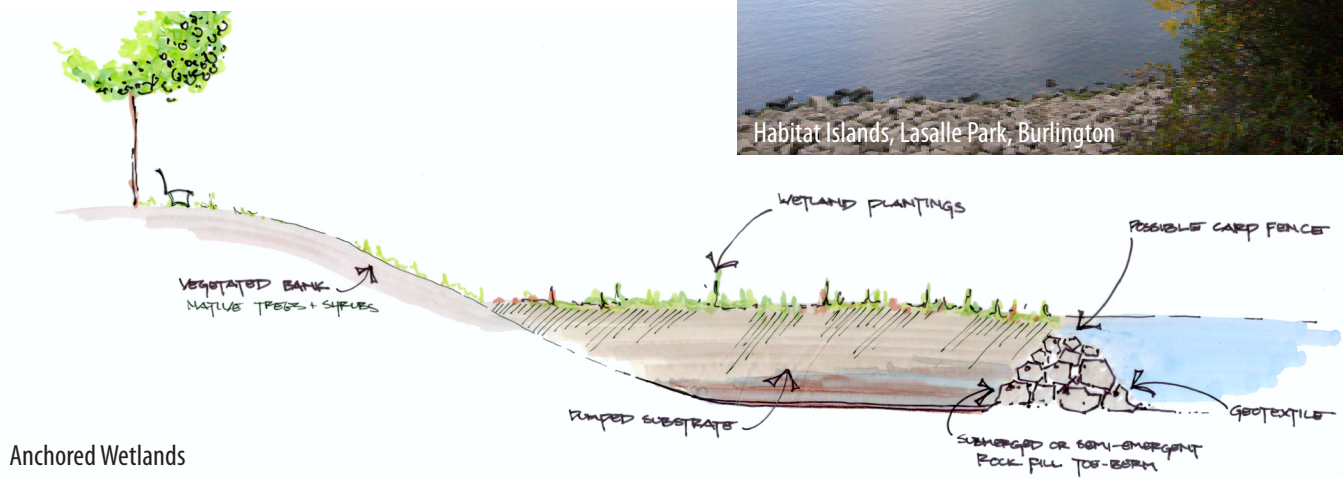
“ ESTABLISH ANCHORED WETLANDS ”



Erosion Control



Habitat Islands, Lasalle Park, Burlington



Anchored Wetlands



Little Lake Cemetery

In 1850 the Little Lake Cemetery Company was the first private, non-profit cemetery company in Upper Canada. Numerous historic figures of local and provincial importance are placed in the Cemetery. The City has recognized the architectural, historical and environmental value of the Cemetery by identifying it as a Category "A" heritage property.

The Little Lake Cemetery Conservation Plan was recently adopted by City Council and the Board of Directors of the Little Lake Cemetery Company. The Plan outlines the best practices for ensuring the historic landscape of the cemetery is maintained and its meaning, importance and cultural heritage value are preserved. The Plan sets out recommendations with respect to, for example, the site and landscape, lawns, paths and roads. Some of the recommendations include preparation of a vegetation management plan, monitoring of the impact of roots on monuments, careful removal of weeds and careful lawn maintenance.

Little Lake Cemetery is a very significant heritage, cultural and landscape feature in the study area. The Company has implemented many initiatives to restore the natural features of the shoreline. Public access to the Cemetery is not limited; the gates remain open at all times.

The Master Plan supports the continued conservation of the heritage, cultural and landscape quality of the site. In order to protect the character of the site, the waterfront trail follows Haggart Street to a possible new pedestrian crossing over the Otonabee River.



Little Lake Cemetery



Little Lake Cemetery



Shoreline Within Cemetery

5.2 THE EAST CITY

The Master Plan illustrates a number of recommendations for trails, parks, intensification, and environmental restoration in the area on the north side of Little Lake, and the east side of the Otonabee River.

Trails

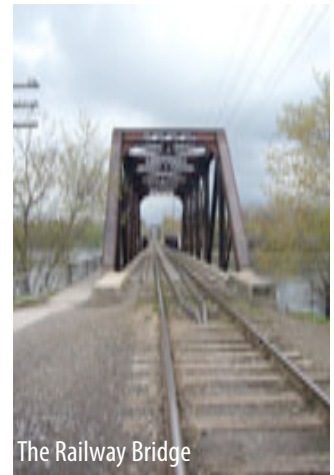
The waterfront trail extends along the shoreline of Rogers Cove Park to Mark Street where waterside access is limited by private residential properties on the west side of Mark Street. The Master Plan identifies the trail connection along Maria Street, to the railway to the location of the existing informal trail along the shoreline of Cedar Point. Although a trail route along the railway to the bridge is considered ideal, it cannot be implemented in the short term because the train is still operational. There is a pedestrian route that has been constructed on the north side of the railway bridge over the Otonabee River. It should be further widened to enhance the safety of this route.

The trail follows the public easement along the rear of residential properties and then along Edgewater Boulevard. Enhanced signage and public amenities such as seating and waste receptacles would clarify that this is a public trail accessible to all. The trail then passes through Burnham Point Park to follow Engleburn Avenue as waterside access is not possible due to private residential properties that back onto the Otonabee River. This a beautiful neighbourhood and it is an opportunity for trail users to experience an urban walk. The trail then passes through James Stevenson Park to Hunter Street.

A new trail link between Maria and Sophia Streets is illustrated to connect Lille Lake to the Rotary Trail. The multi use trail exists north of Sophia Street and extends north all the way along the east side of the Otonabee River to Trent University. There is a small piece of public property on the north side of Maria Street. There are three private lots in the area up to Sophia Street. This is a priority for property acquisition in order to secure a connected trail link from Trent University through to Little Lake and the Trans Canada Trail.



Signage at the Trail to Hunter



The Railway Bridge



Looking South Down the Trail From Hunter Street



Cluster of Activities

1. Rogers Cove Park

Rogers Cove is another well used park with 7.6 acres of public space. The Park has a children's playground, including an accessible playground, temporary washrooms, parking and a beach.

A wharf and informal boat launch are located at the foot of Mark Street. An Environmental Assessment Study is underway to assess options to rehabilitate or remove the wharf. The boat launch is very small and does not have adequate bedding material for the ramp.

The Master Plan recommends that Rogers Cove Park be enhanced with a children's splash pad to complement the playground facilities. A beautifully designed permanent washroom building would enhance pedestrian amenities on the north side of the Lake. The building could be designed to include a small space for recreation programming. The two houses, currently owned by the City, on the east side of Mark Street, south of Maria Street, could be assessed to determine their suitability to be renovated for public washrooms and amenity space for the Park. The youth boating activities currently operating out of the Brownsea Base at the Peterborough Marina could be relocated to Rogers Cove Park where there is space available for recreation and play. Boating could be accommodated with replacement of the Mark Street wharf and construction of a new boat launch.



2. James Stevenson Park

James Stevenson Park is 13.3 acres used primarily for active sports. It includes two baseball diamonds and a basketball court, as well as a children's playground. The Lion's Club has a clubhouse on the east edge of the Park. The Master Plan recommends that a trail link follow the shoreline as well as Burnham Street for access to Hunter Street.

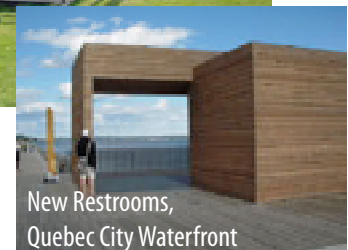
The Hunter Street bridge is a beautiful, historically significant structure. With special lighting, the bridge could be celebrated and its features accentuated. The City's maintenance function under the bridge should be relocated so that it does not impede and detract from access and river side use. This bridge has an important role to play in a gateway to the business area and the River. Plans for rehabilitation should protect for the long term public benefit of the structure.



1. Mark St. Wharf
2. New Boat Launch
3. Parking
4. Washroom, Storage, Clubhouse
5. Children's Splash Pad
6. Existing Playground



Existing Restroom Facilities



New Restrooms,
Quebec City Waterfront



1. Lion's Club Community Centre
2. Lookout



3. Hunter Street

Hunter Street is the commercial spine of the East City. It is the location of a broad range of shops and services. A Business Improvement Area was formed in the late eighties to oversee beautification, maintenance and management of the area. The Master Plan illustrates opportunities to infill this business area with additional shops, services and residential uses in mixed use buildings. This will support the area's tourism potential and the residential neighbourhood of Ashurnham. New development should be compatible in character and form with existing buildings. Ideally buildings would have ground floor retail uses with residential or office uses above.

There is a special opportunity to explore redevelopment options for the hospital site. The Master Plan demonstrates a large mixed use development on the site, while protecting the character of the adjacent residential neighbourhood. This area is ideal for new tourist accommodation.

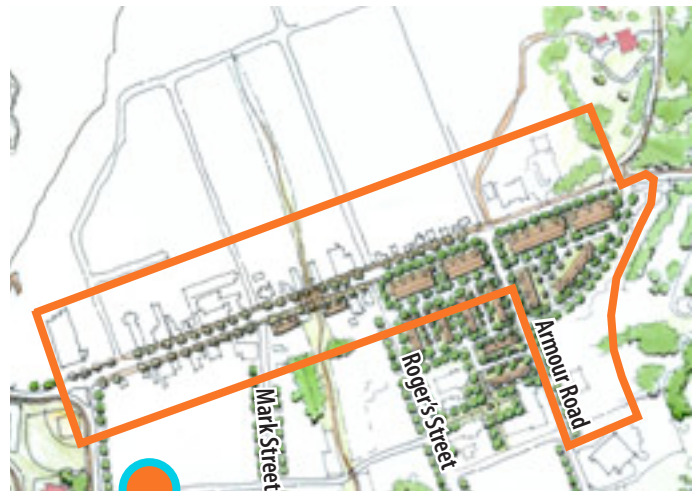
The Master Plan also illustrated special streetscape treatment on Burnham, Mark, Rogers and Armour Street as key connections to the Hunter Street Business Area.

“ THE OFFICIAL PLAN ENCOURAGES THE DEVELOPMENT OF A COMMERCIAL BASE ”

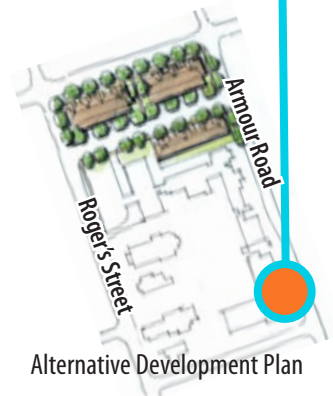
Environmental Restoration

The Master Plan recommends the following initiatives to enhance natural features in this area:

- Establishment of anchored shoreline wetlands near the Mark Street wharf and towards the TSW;
- Riparian buffer naturalization through provision of a 5 m to 15 m “no touch” setback along the edges of the shoreline. Buffer/setback areas to be planted with native species;
- Prepare and distribute Homeowners Manual to private landowners with shoreline frontage advising them of the unique and sensitive character of Little Lake and good environmental stewardship actions;
- Encourage East City residents to participate in the Peterborough Green Up Program and consider low maintenance, native gardening options;
- Create fish habitat in conjunction with restored Mark Street wharf;
- Restore remnant woodlots and bottomland woodlands in the vicinity of James Stevenson Park; and,
- Create bio-swales at storm sewer outlets to polish/filter urban runoff before it enters Little Lake and the aquatic ecosystem.



Potential for Intensification & Infill



Alternative Development Plan

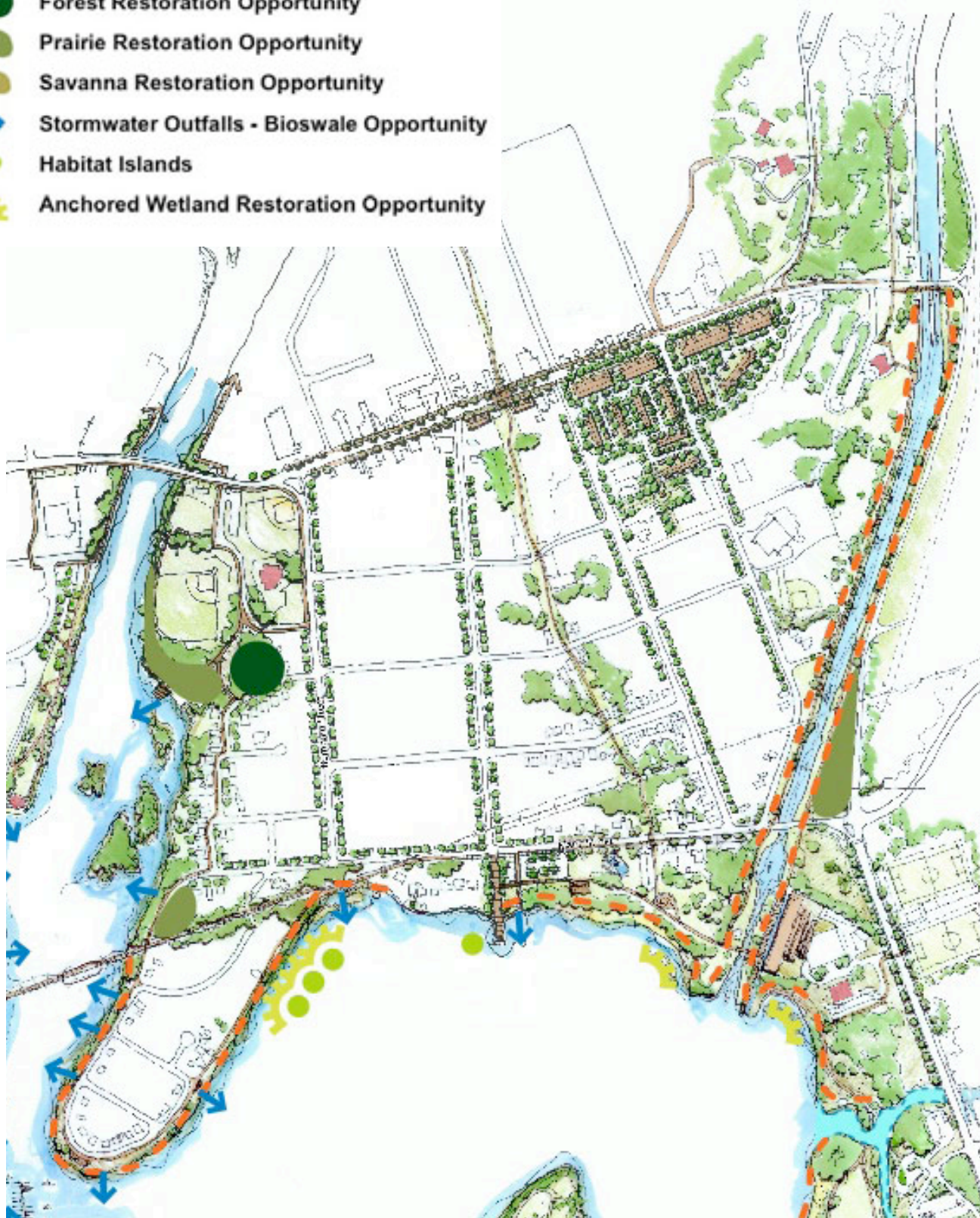


Informal East Shore Walk



Riverside Park Islands

- - - Shoreline and Habitat Restoration
- ~ Mead Creek Shoreline Restoration
- Forest Restoration Opportunity
- Prairie Restoration Opportunity
- Savanna Restoration Opportunity
- ➔ Stormwater Outfalls - Bioswale Opportunity
- Habitat Islands
- ~ Anchored Wetland Restoration Opportunity



5.3 THE DOWNTOWN

The Downtown area encompasses all of the lands on the west side of the Otonabee River and includes the Peterborough Marina and Del Cray Park. This area has tremendous opportunities for intensification and infill and can accommodate significant economic development.

Intensification and Infill

The Official Plan already encourages the largest and most diverse concentration of commercial uses downtown. This includes specialty shopping, business and professional offices, entertainment, hospitality and tourist facilities and the full range of food, drug and convenience shopping to reinforce the attractiveness of Downtown as a residential neighbourhood. Residential uses of varying forms and densities are also permitted in the Official Plan. Policies already encourage that the Main Street setting is reinforced with at-grade retail, existing buildings and/or facades preserved, continuity of street front buildings, compatible building heights and pedestrian links.

The Official Plan identifies the area at the south end of Downtown as the Waterfront Commercial Area. In this location, development is to reinforce the gateway condition and relationship to the water by adhering to high standards of design, maintaining views to the water and providing enhanced landscape and streetscape links to the water.

The Master Plan demonstrates one scenario for intensification of sites that are underused, typically strip plazas or large format retail uses surrounded by parking. The south end of George Street lacks the character and quality of the beautiful buildings and comfortable pedestrian areas north of Sherbrooke Street. The Master Plan illustrates an ambition to extend the character and qualities of the best parts of Downtown Peterborough to this area. New buildings are envisioned for a mix of commercial, residential, office and cultural uses. Building sizes as illustrated could accommodate a full range of possibilities from special civic buildings and cultural attractions to mixed use buildings and higher density residential developments.

To be very clear, the Master Plan demonstrates the possibilities for intensification and infill based on the premise that flood plain constraints can be resolved.





Official Plan Jackson Creek floodplain



Intensification within the floodplain

The map on this page indicates the extent of the Jackson Creek floodplain at George Street. Otonabee Conservation has identified this area as constrained for future redevelopment. The lands lie within a spill, which is where water exits the Jackson Creek system and flows overland until it reaches the Otonabee River. The Official Plan states that development and site alteration may be permitted provided that it is demonstrated that development can be carried out to the satisfaction of the Conservation Authority. Development is not to include schools, essential emergency services or storage or handling of hazardous substances.

The Official Plan states that development and redevelopment of commercial and residential structures is permitted provided:

- the minimum lowest opening elevation is the Regulatory Flood elevation;
- where this is not feasible, flood proofed doors or shields or other solutions acceptable to the City or Conservation Authority may be used;
- new mechanical, electrical, heating and air conditioning equipment will be located above the Flood level or flood proofed to the Flood level; and,
- for residential uses, the habitable floor space elevation of any residential dwelling unit is to be located above the Flood level and safe access and parking are to be provided.

In addition, any development/redevelopment must not adversely affect the existing properties upstream or downstream from either increased flood levels or velocities. Given the importance to development of the core area, a demonstration plan for the area has been prepared to illustrate buildings that are raised to allow for safe access at critical times. It would be expected that any such development would only proceed after consultation with Otonabee Conservation.

1. No Frills site

The site of the No Frills grocery store presents particular opportunity for intensification through redevelopment of mixed-use buildings that frame the street, with ground floor shops and upper floors of residential uses. As a result of the flood plain, parking is located above grade in structures internal to the block that do not detract from creating a beautiful street. The block is divided by extending Dalhousie St. through the site to better integrate this area within the urban fabric of downtown. This new street provides direct access to an extension of Water Street. The rear of the development could include urban row houses that face onto Water Street and the Otonabee River. A grocery store could easily be accommodated on the ground floor of the new development, reinforcing the attractiveness of the area as a place to live.

The south portion of the site is shown as the possible location of a civic building or cultural institution or museum. The plan depicts one suggestion for a building that faces onto Main Street with active uses at its street edge and potential links to the Otonabee River to the east. This building helps frame the new urban square adjacent to the historic railway station.



1. Mixed Use Street Related Buildings
2. Parking Structure
3. Row Houses
4. Water Street Extended

2. GO Train Station

There is a possibility that GO Train service could be extended to Peterborough providing an exciting opportunity to generate additional activity in this area of the downtown. The historic train station located on George Street is an ideal location for a new GO Train stop. With a stop in this downtown location, significant intensification near the station could support transit use. The Master Plan demonstrates redevelopment in the area of a possible station with higher density residential uses in street related buildings. A public urban square is created at the entrance to the station and to establish a new green space on George Street. This site has the potential to be an important mid-block entrance into the historic downtown.

The City's public works yard is located on Townsend Street between George and Alymer Streets. Consideration should be given to relocating this function from such a prime downtown location close to Little Lake to a site in an industrial area. This location is ideal for intensification of a mix of uses to support Downtown Peterborough and to benefit from the proximity to the amenity of Little Lake.



1. GO Train Station
2. Public Urban Square
3. Redevelopment of City's Public Works Yard



3. Holiday Inn

The Holiday Inn recently partnered with the City to build a connection in the waterside trail along the Otonabee River. The Hotel's restaurant offers outdoor patio service in the area next to the River providing an appealing destination for residents and tourists. This is a key waterside site – the only one where a private commercial use abuts the water's edge. The Master Plan illustrates a scenario for the redevelopment of this site that results in hotel uses that address the main street with the possibility of a higher element at the north end of the site facing the new public plaza in front of the GO Station.



4. Jackson Creek

Jackson Creek runs parallel to George Street and provides another opportunity to generate open space adjacent to the downtown. Re-opening the creek will reconnect the City with its historic beginnings while offering a naturalized pedestrian walkway to the west of George Street. The Master Plan indicates one potential approach to opening ('daylighting') the creek and reintegrating into the downtown. The Plan illustrates the effect of new residential uses in the form of townhouses as well as new apartments facing onto the open space of the Creek. The Creek is shown as widening out in the flood plain to frame the west side of the new urban square at the GO station. In addition, the plan indicates the impact of using hazard lands to produce a symbolic connection back to Little Lake at Del Crary Park.



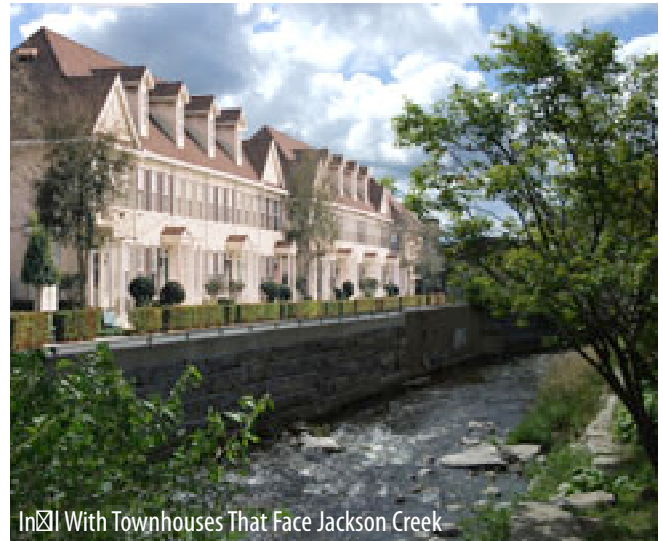
Looking North on George Street



Infill with a four storey mixed use building



Jackson Creek



Infill With Townhouses That Face Jackson Creek

“ ENHANCE THE RELATIONSHIP OF THE SITE TO THE CREEK ”



Denver, Colorado



Port Credit



Jackson Creek



Port Credit



Pedestrian Scale Development



View looking north west side of George Street at Rink Street



View looking north on George Street along waterfront park



Urban Square



European Transit Shelter



Seasonal Use Facility



Pedestrian Shelter



Urban Square

5. South George Street

The strip plazas on the west side of George Street south of Townsend Street are ideal sites for intensification. This area, adjacent to Del Crary Park, would be suitable for mixed-use development with ground floor retail uses and upper floors of residential or office use. Beautifully designed buildings lining the street would create a well-defined edge for the Little Lake area. Parking is located in a structure in the interior of the development block.

The waterfront park is adjacent to the east of George Street. The Brownsea Base is located in a small building along Jackson Creek where the Boy Scouts currently run boating programs. With the relocation of the Boy Scouts to Roger's Cove, this building could be used for seasonal retail or food services. There is an opportunity to create an appealing interface with kiosks/shops located along the street edge. The kiosks should be located to maintain wide openings between buildings for views through to the water. With the topography, the kiosks could have one storey with direct access off the sidewalk along George Street, with two stories and direct access and sweeping views on the waterside.

“ MAIN STREET SETTING IS REINFORCED ”



Environmental Restoration

There are 16 storm sewer outfalls that empty directly into the Otonabee River and the lake in this quadrant of the study area. Little Lake is subject to elevated levels of E. Coli and fecal coliform related to urban stormwater runoff, shallow summer water levels and circulation of water. The Master Plan recommends that urban runoff be treated through retrofitting techniques such as stormceptors, holding tanks, and oil/grit separator catch basins.

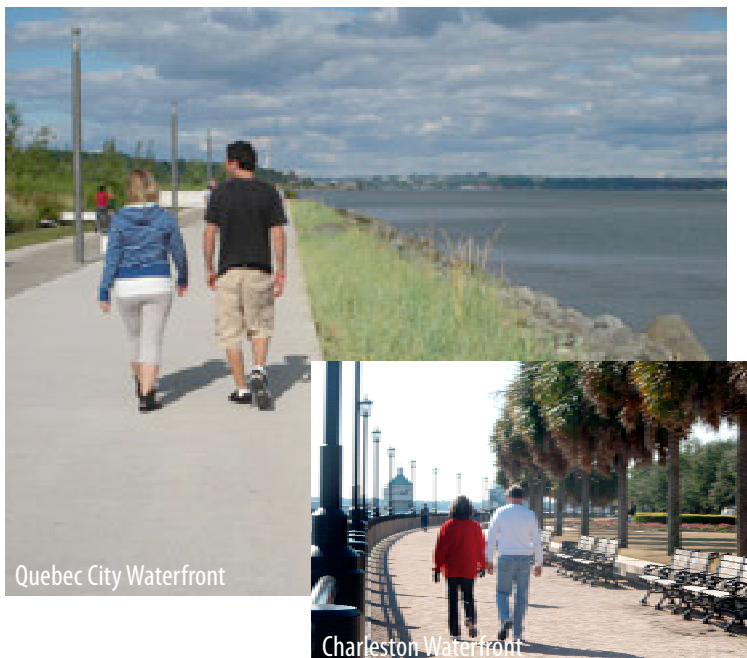
As described in the demonstration of redevelopment scenarios for Jackson Creek, there may be an opportunity to rediscover Jackson Creek by “daylighting” – or removing the pipe and restoring a natural creek channel south of Dalhousie to Little Lake.

There is also an opportunity to naturalize the shoreline of Del Crary Park in association with development of a waterfront promenade to extend from the boardwalk past the Holiday Inn and the paved walk around the marina.

Trails

The Otonabee River Trail exists as part of the Trans Canada Trail through Millennium Park. This Park provides a beautiful context for the hard surface multiuse trail. The Boathouse includes the popular Silver Bean Cafe, a small meeting room, washrooms and the Peddle and Paddle, offering kayak and canoe rentals.

The trail was recently extended in partnership with the Holiday Inn on a boardwalk. The Master Plan illustrates extending the trail from the Peterborough Marina along the lake edge of Del Crary Park. The trail should be build in association with naturalization of the shoreline edge.



- Shoreline and Habitat Restoration
- Mead Creek Shoreline Restoration
- Forest Restoration Opportunity
- Prairie Restoration Opportunity
- Savanna Restoration Opportunity
- Stormwater Outfalls - Bioswale Opportunity
- Habitat Islands
- ~ Anchored Wetland Restoration Opportunity



Peterborough Marina

The Peterborough Marina is ideally located close to the Downtown shops and services. The marina has approximately 90 slips of varying lengths and offers daily, weekly and seasonal mooring. The marina has fully serviced slips, sells gas, and has washrooms, showers and laundry in the nearby building.

The existing marina has exhausted its functional space. Expansion is necessary to provide growth opportunities and attract more transient boater tourism to Peterborough. The most viable location for expansion of the marina is on the east side of Del Cray Park. Alternative locations such as moving the marina down to the existing T-Wharf were reviewed and it was determined that the T-Wharf location is not viable due to a lack of space for landside features such as parking, washrooms and fuel storage. Existing docks would remain in their present location — only docks related to the marina expansion would be installed on the east portions of Del Cray Park. Due to the water depths east of Del Cray Park, it is assumed that a floating dock system will be more affordable. The wind-wave climate was evaluated, and it was determined that the most significant waves on the lake during the recreational boating season are generated by passing vessels. On small lakes such as Little Lake, marinas are routinely established without additional wave protection. Nevertheless, the Peterborough Marina may wish to establish speed restrictions in the immediate vicinity of the docking facilities to help reduce vessel wake.



Peterborough Marina

Security of the existing docks is an ongoing issue. The D docks in particular are difficult to secure due to their open nature along the edge of George St. It is recommended that the E docks be converted for day-use or ad-hoc docking only. The configuration of the new docking facility should be done with as few access-points from the landside as possible to reduce the security requirements.

Part of the works recommended for Jackson Creek should include the development of a sediment and debris management plan. At present, the debris flushes into the marina basin and is the most significant regular maintenance activity undertaken at the marina. A sediment and debris management plan should be developed to provide guidance on dredging and debris removal.



View of Existing Docks

Del Crary Park

Del Crary Park is a special event venue and location of the high profile Summer Festival of Lights/Little Lake Musicfest concert series. It is also home to the Art Gallery of Peterborough, the Pathway of Fame and its annual induction ceremonies and the Peterborough marina. A report was prepared in 2007 – A Functional Review of Del Crary Park – to identify the key issues and challenges that need to be addressed for the park to continue as a prominent waterfront asset and venue for special events. That study identified the following key issues:

- inability of the park to accommodate the largest crowds of the Festival of Lights/Little Lake Musicfest;
- quality of the public washrooms;
- inadequacies of the stage and support facilities for performers;
- aging marina and inadequate facilities;
- need to extend the waterside trail; and,
- need for shoreline and landscape enhancement.

The Festival of Lights/Little Lake Musicfest is clearly a successful venture (especially with a popular act on a warm summer night). The Del Crary Park location with the backdrop of Little Lake provides an ideal setting for the concert series. There is a need to improve the stage for the event: there is not adequate storage, internal space required to prepare for the events, office space or washrooms. With a possible relocation / expansion of the marina operation, there is an opportunity to share a new building. This should be done while retaining the lakeside location. The lakeside setting should be retained as this is one of the elements that adds uniqueness and ambience to the concert series. This presents an opportunity to encourage greater integration with the downtown such as through a shuttle service between the park and the downtown, dinner packages offered by local restaurants, accommodation packages, special sales on the day of concerts, etc.

A new building to house both the performance space for the Festival of Lights/Little Lake Musicfest and a new marina building is suggested for the north east corner of the Park. This location is ideal for both the marina and the Festival. The building could accommodate the services required for the marina such as an office and washrooms and an improved stage, storage and support facilities for performers. This location is within the regional floodline of Otonabee Conservation. The policies of the Conservation Authorities Act and the Planning Act must be addressed during detailed design. Del Crary Park is an ideal location for an expanded focus on year round events and celebrations such as a Winterlude, Harvest Festival and Spring Garden Show.

The Art Gallery is in need of expansion and renovation, and intends to undertake a feasibility and planning study in the near future to determine the exact parameters

of this expansion. Their clear and stated preference is to remain on their current site if possible. The feasibility and planning study should consider the existing location and other central Downtown locations. This is consistent with the recently adopted Official Plan policies of a “Downtown First” philosophy that encourages central Downtown locations for public investment in municipal cultural and entertainment facilities.

Throughout Del Crary Park shoreline protection should be upgraded. Evidence of ice damage illustrates that existing protection measures should be replaced with more flexible and repairable solutions. A sloped rip rap revetment is recommended along with planting. The removal of the existing paving stones and grouted bricks is recommended prior to rip rap installation. Beneath the rip rap, the installation of a non-woven geotextile on top of the native soil would be strongly recommended to prevent sinkholes and voids occurring behind the shore protection. The sloped rip rap will provide interspatial fish habitat at the shoreline that does not exist in this portion of the lake, while also providing improved wave energy dissipation. While the wave climate is not severe, ice may dislodge rip rap elements. Shifted rip rap can be re-positioned by manual labour. The use of material heavy enough to resist ice loads would necessitate heavy machinery for repairs and would be significantly over-designed for the wave loads present on the lake.

The shoreline boardwalk as proposed may be positioned at the top of the bank, or alternatively supported out over the sloped rip rap on piles. In configurations that have the boardwalk supported ovetop of the shoreline protection, the boardwalk decking should be removable to allow shoreline protection repair.



The Art Gallery boat launch



Del Crary Park shoreline restoration - Option 1



Del Crary Park shoreline restoration - Option 2

5.4 THE SOUTH SHORE

The South Shore quadrant extends from the Art Gallery to the Little Lake Cemetery. The focus of improvements in this area is to establish a water's edge promenade. Currently, the trail extends along the water's edge along a dirt path worn by pedestrians. Space between Crescent Street and the water's edge is consumed by pockets of paved perpendicular parking. As a fundamental principle, pedestrian use should be the priority for waterfront lands.

Several options were prepared to illustrate choices for accommodating vehicle travel and parking. The Master Plan illustrates the elimination of Crescent Street between Romaine Street and Westcott to create a widened public space at the water's edge and entrance to the Crescent Street promenade. By providing parallel parking as exists on Crescent Street south of Lake Street, additional space can be converted for development of the waterside promenade. The Master Plan illustrates parallel parking located in the pockets that currently have perpendicular parking. The promenade should be developed in concert with shoreline protection and naturalization. Similar to Del Crary Park a sloped rip-rap revetment is suggested along with shoreline naturalization planting. The rip rap provides fish habitat and helps to dissipate waves.

A new lookout pier is suggested for the foot of Haggart Street. The T-Wharf requires minor structural rehabilitation through the replacement of shims under water. Lighting and railings could be added to the wharf.

The Official Plan recognizes this area as a Special Policy Area where there is a potential to support the growing tourism industry through bed and breakfast/inn accommodation, cafes/tea rooms and boutique retail. Prior to permitting these uses, a detailed planning analysis will confirm the need, urban design standards and public infrastructure improvements necessary.



South Shore Neighbourhood



South Shore Neighbourhood Character



The T-Wharf





Environmental Restoration

The Master Plan recommends the following initiatives to enhance natural features in this area:

- Extend naturalization of shoreline through cemetery;
- Establish anchored shoreline wetlands in conjunction with walkway;
- Encourage South Shore residents to participate in the Peterborough Green Up Program and consider low maintenance, native gardening options;
- Limit the extent of manicured grass areas to reduce the number of geese along the shoreline; and,
- Protect and restore water quality in Little Lake for both the aquatic ecosystem and recreational users, by filtering the urban runoff entering the river system to remove contaminants. Efforts should be taken to remove contaminated sediment from the existing storm sewer system. Measures should also be taken to apply water quality control measures at all stormwater outlets to the Otonabee River and Little Lake. These measures could include the creation of bio-swales (wetlands) between the outlet pipe and the receiving water body or the installation of Stormceptors within the storm sewer system. The long term recovery of the Little Lake system is ultimately dependent upon the removal or containment of PCB contaminated sediments.

- Shoreline and Habitat Restoration
- Meand Creek Shoreline Restoration
- Forest Restoration Opportunity
- Prairie Restoration Opportunity
- Savanna Restoration Opportunity
- Stormwater Outfalls - Bioswale Opportunity
- Habitat Islands
- Anchored Wetland Restoration Opportunity





Crescent Walk and restored shoreline - Option 1



Crescent Walk and restored shoreline - Option 2



Vegetation

Cultural woodland and meadow habitat occurs within the study area mainly in association with active and abandoned railway lines, and sloping topography (drumlin) north of the Trent-Severn Waterway (Peterborough Lift Lock). These communities are dominated by a mix of regenerating Manitoba maple, green ash, buckthorn and tartarian honeysuckle, with old field cultural meadow forbs and perennial forage grasses.

Whitlaw Creek, east of Beavermead Park, supports a large wetland and floodplain area that is comprised of a mosaic of deciduous swamp, thicket swamp and marsh communities. Typical species present include green ash, silver maple, Manitoba maple, red-osier dogwood, white cedar, speckled alder and cattail.

Native, intact plant communities in the study area are mainly confined to variable width bands of riparian vegetation associated with Whitlaw Creek in Beavermead Park. Natural vegetation features are also associated with selective portions of the Little Lake shoreline (mainly the eastern edge) and the Otonabee River. For the most part, the remnant vegetation features are confined to a narrow zone along the edge of the shoreline.

The riparian and shoreline vegetation communities are dominated by a mix of willow, Manitoba maple, green ash, eastern cottonwood, silver maple, speckled alder and brambles. Non-native and invasive species such as Norway maple, common/glossy buckthorn, tartarian honeysuckle, garlic mustard and urban avens are widespread within the riparian and shoreline vegetation communities, and in numerous locations form the dominant vegetative cover in the understory and groundcover layers.

The manicured and landscaped grounds associated with the open space/park features consist mainly of non-native deciduous/coniferous trees and shrubs, although some native species are present. Typical species present include willow, Norway and crimson king maple, Marshall seedless ash, basswood, white spruce, Scots pine, white pine, white cedar, black locust, and ornamental fruit trees.

The Trent-Severn Waterway between Little Lake and the Peterborough Lift Lock is mainly comprised of manicured grass with planted ornamental trees (Norway maple), as well as naturalized shoreline areas.

Aquatic System

Little Lake is a relatively shallow body of water with depths ranging from a mean of 2.8 m to a maximum of 9.75 m (TSH 1988). The lake supports a warmwater fishery. The majority of the open space and parkland associated with Little Lake and the Otonabee River is located within the Regional floodline (development control line) and is regulated by ORCA. River bars at the north end of the study area support a mixture of willow, Manitoba maple and shrub willow/dogwood.

The fishery in Little Lake (warmwater species) compares well with the fishing in the rest of the area. Carp fishing is common and attracts tourists. More traditional sport fish species including largemouth bass, smallmouth bass, walleye and especially muskellunge are present and accessible to anglers.

Due to the presence of PCB contaminated sediment in Little Lake, appropriate environmental studies and mitigation measures are required for any shoreline or in-water works such as dredging, marina construction and shoreline alterations that have the potential to release contaminants into the aquatic system.

Little Lake is also subject to elevated levels of E. Coli and fecal coliform related to urban stormwater runoff, shallow summer water levels and circulation of water.

Wildlife

The study area supports a wildlife community with species that are tolerant of or have adapted to an urban environment. The bird community is comprised of common edge and habitat generalist species and a variety of waterfowl and shorebirds. Little Lake and the Otonabee River provide a linkage function to natural areas upstream and downstream of the study area, however this function is constrained by the narrow width of vegetation cover associated with the riparian zone. The remnant vegetation features associated with Beavermead Park and the shoreline also provide important stop-over habitat for a diverse assemblage of migrating birds. Osprey nests occur on poles and bridges along the Otonabee River and within the general area of Little Lake.

Species at Risk

Map Turtle, a species of special concern may be found in the study area and within portions of the Otonabee River. Although no other species at risk or habitat has been documented within the study area these features may be present. Species at risk in this area listed federally by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) are protected by the federal Species at Risk Act. Species listed as threatened, endangered and extirpated on the Ontario Species at Risk List are protected under the Endangered Species Act (ESA) 2007. Although species listed as special concern are not afforded any protection under the ESA they may still be relevant to planning through significant wildlife habitat under the Provincial Policy Statement (2005).

Habitat Enhancement

Habitat enhancement initiatives present within the study area (Parks Canada) include:

- Shoreline stabilization with native shrubs (dogwood, willow);
- Shoreline plantings with prairie affinity species;
- Osprey nesting platform;
- Chimney Swift tower; and,
- Swallow nesting box.

Interpretative signage explaining the purpose of the shoreline plantings and stabilization is located next to the pathway (Trans-Canada Trail) in these areas.

Nature Interpretation, Arboretum and Environmental Stewardship and Education – Ecology Park

Ecology Park, located within Beavermead Park, represents a key centre of biodiversity within the study area. In addition to several public educational programs and interpretative displays and gardens (e.g. pollinator garden, low water demand garden, tall grass prairie), the Ecology Park contains a nursery of native trees, shrubs, herbaceous groundcovers, ferns and grasses that are available to the public. Nature trails in and around the Ecology Park have been restored, in part, with species from the nursery.

The educational programs and interpretative displays offered at the Ecology Park provide increased public awareness and guidelines for the wise use and stewardship of the natural environment.

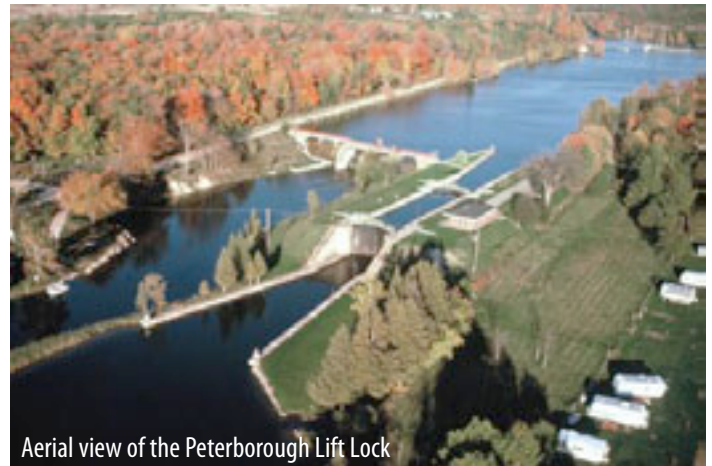
Tall Grass Prairie

Prairie grass species have been observed in the vicinity of the Maria Street bridge and as a result this area has been identified as a habitat restoration opportunity in association with passive park uses. Historically, prairie habitat was quite widespread in Southern Ontario. Some of the best examples of remnant prairie in the province occur in the vicinity of Rice Lake. The soil conditions in and around the Little Lake area are conducive to supporting prairie affinity species. Species such as beardtongue and bergamot, among others, have been planted along the shoreline near the Parks Canada Trent-Severn Waterway headquarters.

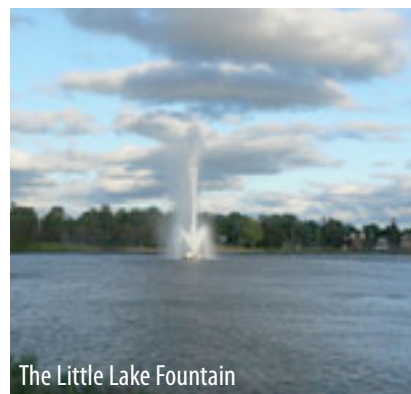
Environmental Enhancement Opportunities

The natural environment features within the Little Lake study area would greatly benefit from restoration and enhancement initiatives geared towards the following:

- removal of non-native, invasive plants;
- native plantings utilizing species grown in the Ecology Garden nursery;
- phased replacement of non-native landscape plantings with native species;
- naturalized buffer strips along the shoreline and riparian edge;
- creation of bio-swales (wetland) at stormwater outlets and/or use of stormceptors;
- prohibit the use of commercial fertilizers, herbicides and pesticides within manicured park areas;
- additional shoreline stabilization incorporating bio-engineering measures such as native tree/shrub plantings;
- creation and restoration of specific habitat types such as prairie/savanna;
- native plantings with species with high wildlife value to provide food, shelter and cover;
- plant and wildlife linkage enhancement through habitat creation and vegetated buffer strips along the shoreline.



Aerial view of the Peterborough Lift Lock



The Little Lake Fountain



Beardtongue



Fishing on the TSW



View of Crescent Street



Ecology Park

- naturalized buffer strips along the shorelines and riparian edge to create fish and wildlife habitat and improve water quality; and,
- promotion of environmental stewardship through public education/awareness (e.g. yellow fish road program, Homeowner's manual, interpretative signage, Ecology Garden and Peterborough Green-Up Initiatives and Programs).

In addition to the above, we recommend that homeowners who own property along the shoreline should be informed about the significance and sensitivity of the Little Lake ecosystem and appropriate environmental conduct. A Homeowners Manual should be prepared and made available to the public that provides an outline of various environmental stewardship measures that landowners can follow and implement to assist with habitat protection and enhancement. The Manual should build on the various themes on display in the Ecology Garden, the City of Peterborough Green-Up Program, and the interpretative signage along the Trans-Canada Trail.

