2013

Beare Road Park

MASTER PLAN

MMM GROUP

December 2013

Beare Road Park
MASTER PLAN

Final Report

was prepared by:

MMM Group Limited
LANDSCAPE ARCHITECTURE AND URBAN DESIGN
ENVIRONMENTAL SERVICES
LAND USE PLANNING
in collaboration with SWERHUN CONSULTATION

in consultation with:

City of Toronto
PARKS, FORESTRY AND RECREATION
SOLID WASTE MANAGEMENT
CITY PLANNING

Parks Canada
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SECTION 1

BACKGROUND AND PROCESS

1.0 Introduction

The purpose of any design is to manage uncertainty and facilitate change over a defined period of time. The Master Plan needs to be responsive to emerging opportunities and threats in the context of an established vision and objectives.

Change at the scale of landscape is driven by a number of factors that can be broadly understood as internal or external. Drivers of change can be community values and socio-economic conditions, or such things as climate and species composition in a landscape. In order to facilitate resilient landscapes, both slow and fast changing factors need to be considered and a mechanism incorporated into the Master Plan for adapting to change. An adaptive management approach provides a method for monitoring the implementation of designs in order to evaluate and adjust the strategies that inform them.

The Conceptual Design is the first of a series of iterative responses that will continue to be established in an adaptive management strategy. Aspects of the concept will be developed and implemented and the results monitored. This will provide data for evaluating strategies and adjusting the design responses in a flexible and informed manner over time.

MMM Group Limited (MMM), a privately held Canadian multi-disciplinary consulting firm, was hired by the City of Toronto in the Fall of 2012 to prepare a Park Master Plan for the former Beare Road landfill site. The project team included MMM professionals with expertise in the disciplines of landscape architecture, brownfield restoration, land-use planning, ecology, hydrogeology, storm water engineering and project management, working collaboratively with our sub consultant, Swerhun Facilitation - a specialist in public process facilitation.

The proposed Beare Road Park site is situated at a former 75 hectare municipal landfill site within the Rouge River watershed at the eastern boundary of the City of Toronto.

The Master Plan has been developed in four stages, through consultation with stakeholders and with reference to the strategic goals of City of Toronto Urban Forestry and the seven key principles of the City of Toronto Parks Plan cited below. Other parks and successful landfill conversion projects were also reviewed.

SEVEN KEY PRINCIPLES OF THE CITY OF TORONTO PARKS PLAN:

1. Parks and Trails as City Infrastructure
The system of parks and trails is part of a continuous city-wide green space system that also includes the natural heritage system, publicly accessible open spaces and streetscapes.

2. Equitable Access for All Residents
Parks and trails must be accessible to all residents in all parts of the City and must respond to the needs of a diverse population regardless of age, level of ability, income or cultural background.

3. Nature in the City
Natural spaces should be protected, restored and expanded.

4. Place Making
Visual appeal and a high standard of quality must be emphasized in the planning, design and ongoing management of public parks.

5. Supporting a Diversity of Uses
Parks should be able to handle a variety of uses, appropriate to their location and park type, ranging from active use to passive use, as well as balancing natural areas, tree canopy, community events, urban agriculture and cultural expression.

6. Community Engagement and Partnerships
Community involvement, through stewardship and volunteering, should be encouraged to complement existing city resources. Additionally, engaging the community and business partners to complement existing funding should be explored and implemented.

7. Environmental Goals and Practices
Environmentally responsible practices and green initiatives should be incorporated into the daily planning, design, operation and maintenance of City parks and trails.

2.0 Objectives and Process

PURPOSE AND OBJECTIVES OF THE MASTER PLAN

The Master Plan will provide a framework for decision making and make recommendations for a Park at the former Beare Road landfill site. Outlined below are the objectives of the Master Planning Process:

- **In consultation with multiple stakeholder groups and policy makers develop a Vision and Guiding Principles that reflects public needs and aspirations for the Beare Road Park;**
- **Demonstrate that the proposed Vision and Guiding Principles for the proposed Beare Road Park are feasible and compatible;**
- **Provide a framework for implementation and management of the proposed Beare Road Park;**
- **Generate interest, discussion and support at community and leadership levels; and**
- **Provide a foundation for the next steps in the process of developing Beare Road Park.**

MASTER PLANNING PROCESS

The Master Planning process was developed to achieve the outlined objectives, and is described as follows. The Master Planning process took place in four stages over six months between Fall 2012 and Spring 2013.

Existing conditions were analyzed through review of existing documentation and reconnaissance studies. Through consultation with stakeholders a Vision and Guiding Principles for the Master Plan were developed. The team has identified key opportunities and constraints revealed through analysis of existing conditions, and with consideration of public needs and aspirations for the proposed Beare Road Park. With stakeholder input the team has developed a Design Approach, which informed the proposed program and elements in terms of their spatial relationships to each other, and to adjacent land and features. Finally, recommendations regarding strategies for implementation and management were developed.

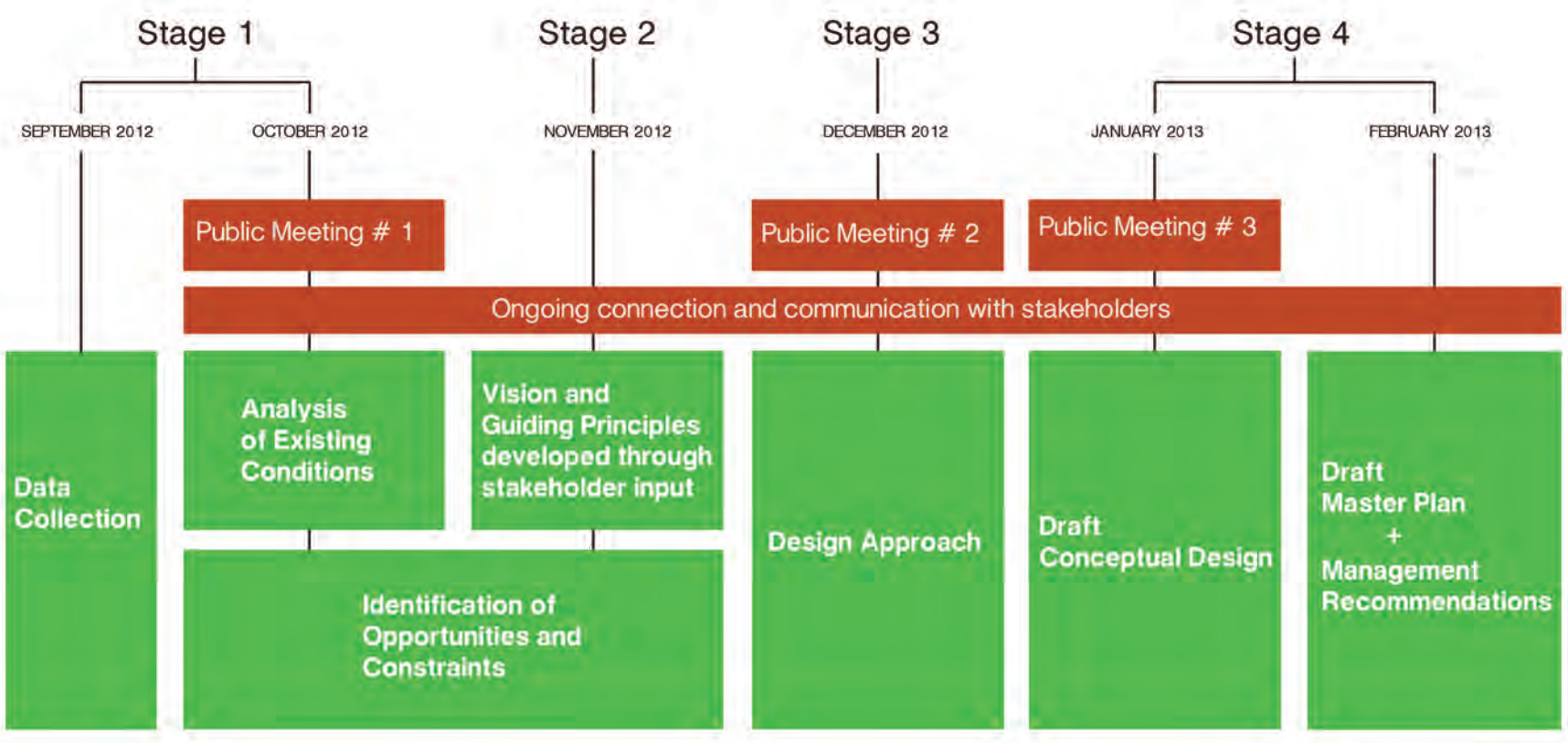


FIGURE 1.1 THE FOUR STAGES OF THE MASTER PLANNING PROCESS.

3.0 Public Consultation

PUBLIC CONSULTATION PLAN OVERVIEW

The development of a Master Plan for Beare Road Park site included consultation with local residents and stakeholders,which was a key component of the Master Planning process. The consultation activities and strategies were used to engage the stakeholders at each critical step in the process and to solicit their comments and feedback throughout the project. The feedback received was connected to the decisions at hand as well as the final result: the Beare Road Park Master Plan.

Specifically, the public consultation approach included the following key components:

- **A preliminary list of affected stakeholders to be engaged and consulted;**
- **Consultation / Engagement Activities and Approaches;**
- **Strategies designed to:**
  - **Identify decisions that are open to influence**
  - **Attract a diverse set of participants**
  - **Create a narrative to consistently describe the process**
  - **Package the process into logical phases**
  - **Build strong relationships with stakeholders; and**
  - **Promote understanding amongst participants regarding their contributions to the process.**

Three public workshops were held over the course of the process, from October 2012 to January 2013. These workshops followed the strategic packaging of the work to reflect the technical progress of the project and were scheduled to focus input on the “open door” elements of each phase (the decisions that are open to influence). The three phases were: i) vision and principles, ii) testing ideas and iii) refining the draft conceptual design. At each phase, a set of focus questions was created to solicit input and feedback on the related decisions being made in the development of the Master Plan.

Each of the public workshops followed the same format: opening with an overview presentation from the project team followed by small-table discussions to allow participants a chance to discuss the focus questions provided and provide input on each of the topic areas. The workshops wrapped up with a full-room plenary, whereby participants reported back to the room regarding their results.

After each public workshop, a draft summary report was created to summarize the results of the meeting. These draft reports were circulated to workshop participants for their review prior to being summarized and included in the project website.

October 2012	November 2012	December 2012	January 2013
Public Meeting #1 Identify issues, opportunities, and vision for the park		**Public Meeting #2** Continue to provide feedback on the draft design approach	**Public Meeting #3** Share the draft conceptual design
Ongoing connection and communication with stakeholders			

FIGURE 1.2 CONSULTATION PROCESS

FIGURE 1.3 STAKEHOLDERS

3.1 KEY MESSAGES FROM THE PUBLIC

KEY MESSAGES FROM THE PUBLIC[1]

The three phases of public consultation engaged participants in imagining a Vision and a discussion of Principles that should guide the Master Planning process for the proposed Beare Road Park as well as provide feedback for the design process.

Participants included: Parks Canada; Scouts Canada; 10,000 Trees for the Rouge; City of Toronto Parks, Forestry and Recreation; Durham Mountain Biking Association; International Mountain Bicycling Association; Ecohesian Inc.; Toronto and Region Conservation Authority; Pickering Naturalists; Highland Creek Community Association; Friends of the Rouge Watershed; City of Toronto Soild Waste Management; Rouge Park Foundation; Toronto Field Naturalists; Toronto Zoo, a teacher, local residents, students, hikers, cyclists, walkers runners and users of the park.

Many participants felt that feedback received throughout the design process was effectively implemented in the draft conceptual design.

The key messages emerged from the discussions throughout the Master Planning process are summarized on the following page.

1 / From the Beare Road Park Master Plan Summary Reports by SWERHUN FACILITATION. See Appendix 1 for full reports.

1. Connectivity to the proposed Rouge National Urban Park and the Toronto Zoo are important elements of design and its implementation.

Several participants thought it was important to integrate the proposed Beare Road Park with the proposed Rouge National Urban Park. Participants said they would like to see access to the site integrated with existing Rouge Valley trails; as well as integration in terms of wildlife habitat, and with nearby and potentially complementary recreation options. Participants felt opportunities for integration must continue to be explored and cooperation with both Parks Canada and Toronto Zoo must be maintained.

2. Preserve Natural Space and Protect Species.

There was a desire among some participants for the proposed Beare Road Park to be in as natural state as possible, conserving its ecological value, and protecting species - particularly those formally designated a species at risk, such as the milksnake and bobolink – and their habitat. While participants were excited by the idea of inclusive usage, an important amount of assessment and trade-off consideration must be taken into account when designing at the next level of detail in order to protect and enhance both wildlife and habitat. The draft design approach of protecting and enhancing habitat is key to its success.

3. Incorporate Opportunities for Recreation and Education.

Participants were happy to see “brownfields” evolve into a place for the enjoyment of nature and recreation. Though this transition comes with the need to balance ecological health and safety concerns, there is excitement about making the site accessible to enjoy the natural environment and creating an educational opportunity around the site’s history. Some participants would like to see the proposed Beare Road Park incorporate recreational uses, including mountain biking, hiking, and winter activities. Some participants were concerned that the proposed Beare Road Park may not be the right place for mountain biking trails due to the prevalence of species at risk, while others felt that mountain biking could be integrated in such a way that species at risk could be protected. The team was advised to consider the inclusion of existing paths in the design. A number of participants thought that the proposed Beare Road Park presented opportunities for education, including environmental, cultural and recreational education.

4. Make Use of the Elevation of the Site.

A number of participants were interested in making use of the elevation of the site. These participants expressed their appreciation for the views and vistas available from the highest point of the site and felt that they should be protected.

5. Challenges for Access and Parking.

There are several challenges related to finding an appropriate location for parking and access. Participants expressed significant concern regarding the impact of a parking lot and any new access points in terms of impact on the environment, local residents and wildlife, as well as in regards to various safety issues. The proposed approach for parking and road access was met with a wide range of opinions and was identified as an important issue by many participants. While some participants were very happy to see a plan with limited vehicular access and no parking, others felt that this was a negative element of the design as it would limit the park’s use and reduce its accessibility, both to non-local users and those with who would need wheelchair access.

6. Safety is of Utmost Importance in the Context of Environment and Access Points.

Safety is a key guiding principle and was raised in several contexts. Safety was frequently referenced regarding site access points that interact with an existing active CN rail corridor and need for emergency vehicle access to the site. Participants also raised questions regarding the impact of the existing gas plant operations on human and environmental health.

4.0 Project background

FIGURE 1.4 BEARE ROAD PARK CONTEXT MAP

407
ONTARIO

407
ONTARIO

STEELES AVE. E

City of Markham

City of Toronto

City of Toronto

City of Pickering

BEARE RD.

MEADOWVALE RD.

Railroad (CPR)

FINCH AVE. E

Hydro Corridor

Beare Road Park

Petticoat Creek

Railroad (CNR)

MORNINGSIDE AVE.

SHEPPARD AVE. W

Little Rouge River

Rouge River

SHEPPARD AVE. E

KINGSTON RD.

401
ONTARIO

401
ONTARIO

LAWRENCE AVE. E

Lake
ONTARIO

MMM GROUP

4.1 SITE HISTORY

The proposed Beare Road Park site is situated at a former municipal landfill site within the south slope region of Rouge River watershed at the eastern boundary of the City of Toronto. The 75-hectare proposed park site is bounded by Finch Avenue East to the north, Toronto and Pickering City Limits to the east, Hydro One Right-of-Way lands to the south, and Beare Road road allowance, and Canadian National Railway track allowance to the west. The main access to the site is from the west, along a paved private road that continues to the top of the landfill. The road is gated at two points to restrict traffic. Outside of the landfill boundary, Beare Road Park is surrounded by the expansive natural and rural environment of the proposed Rouge National Urban Park, and forests and wetlands of the Petticoat Creek watershed. The land uses beyond the site boundary between the natural areas, are suburban and rural.

Over the course of the past two centuries, with the exception of a small remnant woodlot, the majority of the Beare Road site has transitioned from forest, to agriculture, to small-scale gravel extraction and in 1967 to a landfill. Almost from the time of its acquisition by the former municipality of Metropolitan Toronto for use as a landfill however, the site was envisioned to transition at least once more and eventually be revitalized as a public park.

The first ambitions to improve the site for recreational purposes date back as far as 1971 by the former city of Scarborough, as a condition for allowing additional tonnage at the landfill. In 1973 Johnson Sustronk Weinstein and Associates Limited (*JSW*) prepared a feasibility study for a ski facility at the site, which included a proposed conceptual plan for the ski facility. In order to accommodate proposed recreational uses on the site, the new grading plan included additional filling and modification of originally proposed landfill grades, adding to the landfill capacity. Beare Road ski facility was envisioned as an alternative to Caper Valley, a smaller ski facility located nearby on the branch of Rouge River which was subject to annual flood damage. In 1975 JSW prepared a Master Plan, “Beare Road Ski Facility”, for the site as a winter use park equipped with ski facilities, accommodating over 800 skiers at one time. Further studies by JSW in years following re-evaluated the Master Plan, exploring an expanded programme of all-season recreational uses and

FIGURE 1.5 AERIAL PHOTOGRAPHY OF BEARE LANDFILL SITE 1947- 1983 \ *UNKNOWN PHOTOGRAPHER. TORONTO ARCHIVES*

FIGURE 1.6 BEARE ROAD LANDFILL IN OPERATION, 1974 \ *UNKNOWN PHOTOGRAPHER. TORONTO ARCHIVES*

included ideas for an alpine slide, hang gliding, a go cart track, horseback riding and an artificial snow surface.

Over 9 million tonnes of refuse were deposited during the operating life of the landfill, between November 1967 and September 1982. The refuse was predominately municipal, commercial, and industrial solid wastes, but for a time in 1978, liquid industrial wastes were deposited in Cell 12 (the east-central portion of the landfill). Upon landfill closure, an approximately 1.2 to 1.8 M thick layer of clay was installed as landfill cover. The final grading of the cover material was completed in 1985 after the initial landfill settlement, and subsequently vegetated. Today, the top of the landfill stands approximately 60 meters high.

In the decade following the final capping of the landfill, a landfill gas collection system was constructed consisting of a network of wells, distribution pipes and a gas-to-electricity conversion power plant. In 1996 the privately operated plant commenced operating, converting the primarily methane gas collected on-site and supplementary natural gas into electricity for export into the grid.

RECENT ACTIVITY AND CURRENT CONDITIONS

While the landfill remained fenced and closed to the general public, a lockable gate provided access to the power plant and the site in general for operational purposes. In 1994 a vegetation study was performed at the site and first steps toward ecological revitalization were taken. Modifications were made to localized areas of the landfill cover. Shallow depressions were created to detain storm water runoff and provide improvements to micro conditions in order to support vegetation on the site. Planting of small trees, especially on the lower elevations of the landform, were undertaken. In one location on the north-east slope, a shallow excavation was used to retain storm water and used as a source of water for these new plantings. In addition to these localized modifications to the topography and planting programs, logs and brush were placed in various spots to provide habitat alternatives to the meager cultural meadow that was beginning to generate.

The site today remains fenced and gated but increasing public use of the adjacent Hydro corridor and natural areas brings hikers, dog walkers, recreational cyclists and others to the limits of the site, and some individuals enter the site illegally.

FIGURE 1.7 BEARE ROAD LANDFILL RESTORATION WORK \ *IMAGES BY MATT FORSYTHE. CITY OF TORONTO URBAN FORESTRY.*

FIGURE 1.8 (ABOVE) BEARE ROAD SITE 24 YEARS AFTER LANDFILL CLOSURE \ *GOOGLE MAPS 2007*

FIGURE 1.9 (BELOW): BEARE ROAD SITE TODAY \ I*MAGES BY MATT FORSYTHE. CITY OF TORONTO URBAN FORESTRY.*

4.2 OTHER PARKS

Our background research includes a number of local and international examples of other parks comparable in scale or previous use.

The proposed Beare Road Park will be approximately 75 ha in area. That is approximately the same size as the recently created park on the former Downsview Department of Defense lands in Toronto. The facing page illustrates the comparative areas of other local and international parks and public spaces (Figure 1.10) Several of these examples contain landforms with elevations that are comparable to the Beare Road site.

ECOLOGICAL REVITALIZATION PRECEDENTS

The Beare Road Master Plan research and design team has reviewed two local parks and three international parks that undertook programs of ecological revitalization in recent decades.

The Don Valley Brick Works Park, Toronto, is an excellent example of a revitalization and restoration project.

The Tommy Thompson Park located on the Leslie street spit, Toronto, is an example of naturalization.

Byxbee Park, Palo Alto California; Gas Works Park, Seattle, Washington; and Fresh Kills Park, Staten Island, New York, are all successful international examples of revitalization and in some aspects restoration projects.

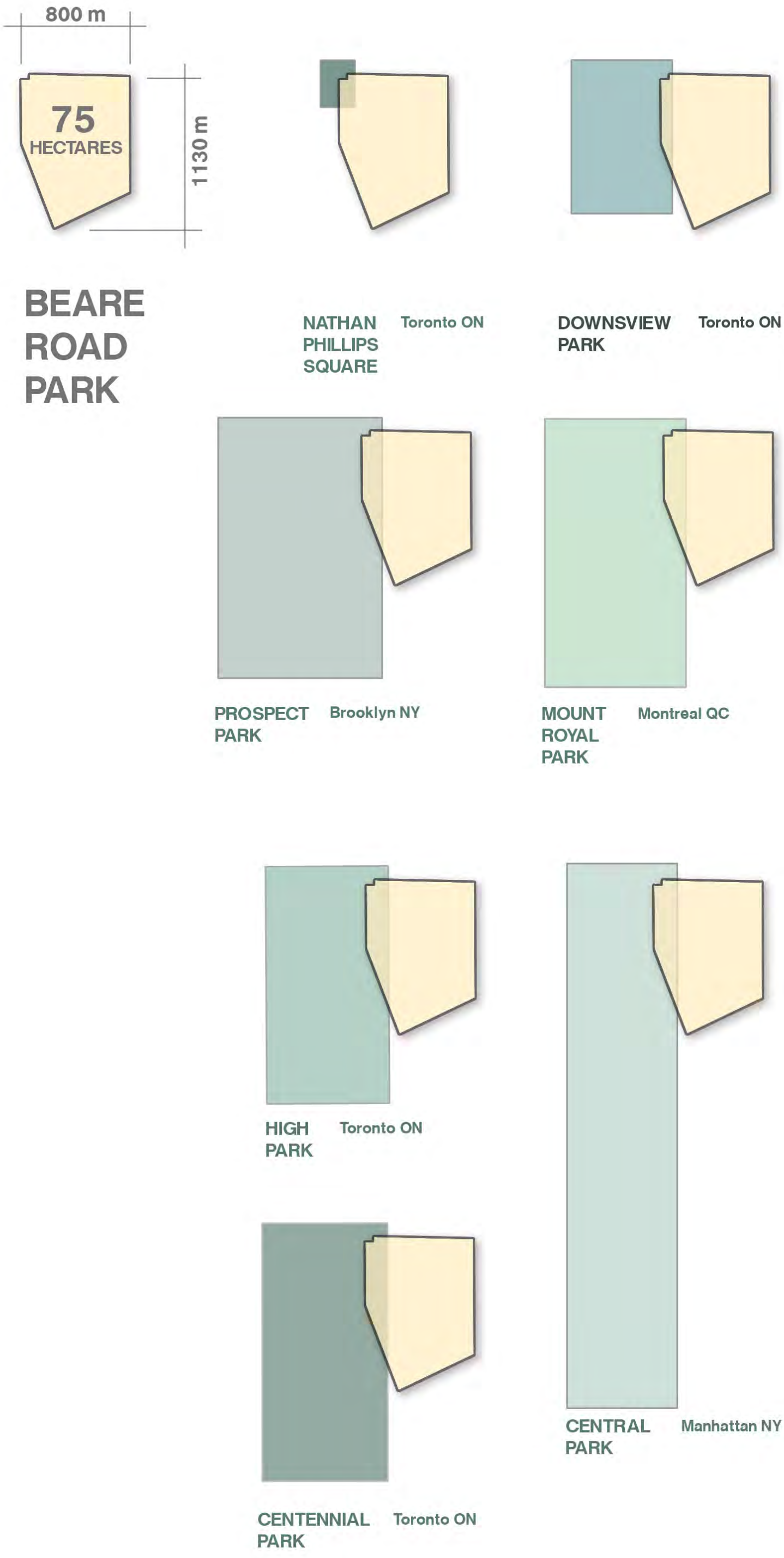


FIGURE 1.10 BEARE ROAD PARK SCALE COMPARISON

4.3 POLICY FRAMEWORK[1]

LAND USE PLANNING CONTEXT

In Ontario, the use and improvement of land is regulated at the Provincial and local levels, through a system of legislation, policies, regulations and guidelines. The Planning Act, R.S.O. 1990 c.P. 13, enables the preparation of Provincial and local policy plans, zoning by-laws and other tools, which are used to manage and regulate the location and nature of development, changes in the use of land, and the conservation of important resources, including natural heritage resources. Section 2 of the Planning Act lists the matters of Provincial interest. Municipalities are to have regard to the matters of Provincial interests in making decisions and carrying out the responsibilities of the Planning Act. These matters include the protection of ecological systems, agricultural resources, energy conservation, water conservation, appropriate and orderly development, and protection of health and safety, among other interests.

There are policy and regulatory documents which should be considered in the development of a Master Plan for the Beare Road Landfill Park Master Plan, as follows:

- The Provincial Policy Statement;
- The Greenbelt Plan;
- The Growth Plan for the Greater Golden Horseshoe;
- The City of Toronto Official Plan;
- The City of Pickering Official Plan; and
- The City of Toronto's Zoning By-law.

TRAILS POLICY

There are a number of policies related to trails in place within the City of Toronto and surrounding municipalities that are considered in this Master Plan. They include:

- Toronto Bike Plan;
- City of Pickering Trails and Bikeway Master Plan;
- City of Durham Cycling Plan
- Natural Environment Trails Strategy

Following is a summary of the key findings from the review of Provincial and local policy and zoning:

The proposed use is consistent with Provincial and local policy and zoning.

The proposed use of this site as a park is consistent with City of Toronto Official Plan and the Zoning By-law for Toronto. As the Zoning By-law's requirements for setbacks are not considered to be very restrictive, it is unlikely that a zoning amendment or variance will be required to permit any proposed buildings and structures. The lot and building requirements and general provisions of the Zoning By-law should be reviewed in detail at the detailed design stage of the project, to confirm that no variances or amendments are required to permit any proposed buildings or structures. The proposed use is consistent with the uses permitted in the Zoning by-law.

The proposal for a park is consistent with the policies of Site and Area specific policy 141 in the Official Plan, which apply broadly to the Upper Rouge area. The policies promote a well-connected trail network, opportunities for recreation, interpretive educational features, tourism and cultural activities and the protection and enhancement of natural heritage features.

Provincial and local planning policy encourages improved connectivity between natural heritage features, as well as restoration and enhancement of natural features.

The Greenbelt Plan supports the connectivity of the Greenbelt's Natural Heritage System and other systems, especially the connection of the Greenbelt to the Great Lakes coastal system, through the river valleys in urban areas.

The City of Toronto Official Plan generally supports the improvement of the natural ecosystem, biodiversity and natural linkages. Site and Area Specific Policy 141 of the Official Plan plans for the Upper Rouge area as an integrated natural heritage area, with the objective of protecting, restoring or enhancing the natural ecosystem.

Where possible, natural features should be connected, restored and enhanced to help achieve the policies for natural heritage

1 / Detailed discussion of policy framework relevant to Beare Road Park is provided in the Appendix 3 to this report.

protection, restoration and enhancement. The issues and opportunities and their mitigation measures indicated for habitat areas, are described in the Management Plan of this report (Section 4).

Provincial and local policy encourages an interconnected network of accessible parks, open space and trails.

The Greenbelt Plan and the Toronto Official Plan promote an interconnected recreational network of trails, parks and open space. The Plans also emphasize universally accessible and safe recreational opportunities, and meeting the recreational needs of current and future populations.

The Greenbelt Plan is supportive of recreational uses in the subject property, provided that there are no negative impacts on key natural heritage and hydrological features, and provided the Park's Master Plan satisfies other policies and criteria. The Greenbelt Plan encourages improved connectivity between key natural heritage features and key hydrologic features.

Impacts to the Provincially Significant Wetland and other natural heritage features identified on the property will need to be considered and addressed during detailed design and implementation.

The Townline Wetland Complex, located at the eastern edge of the site, is a Provincially significant wetland. The Provincial Policy Statement requires that any development or site alteration within 120 metres of a Provincially significant wetland be evaluated to ensure that there are no negative impacts, and further, that no development or site alteration is permitted within Provincially significant wetlands. Additionally, some of these areas may constitute significant wildlife habitat, in which development and site alteration is not permitted unless it is demonstrated there will be no negative impacts.

The Greenbelt Plan permits small-scale structures for recreational uses (such as boardwalks, footbridges, fences, docks and picnic facilities) within key natural heritage features and key hydrologic features, provided the negative impacts are minimized.

The strategies recommended in this report to protect, revitalize and enhance habitat areas will help to satisfy Provincial policies and Official Plan policies for protecting natural heritage features. However, the detailed design and implementation of trails and other structures on the site should be subject to consideration for any potential impacts to the wetland and other natural heritage features. During detailed design, the City of Toronto should consult with the Toronto and Region Conservation Authority to determine whether a permit is required based upon the nature of the proposed works (especially where grading or fill is proposed to construct a trail). To ensure minimal impacts to these natural heritage features, which have been well-documented through the preparation of this Master Plan, trails and structures should generally not be located within the features, and any fill or grading required to construct a trail should be evaluated for potential impacts to adjacent natural heritage and hydrological features.

NEXT STEPS

Prior to commencing construction or finalizing the design details, the Beare Road Park Master Plan should be circulated to various City staff to ensure compliance with the City's Official Plan policies. A site plan application process may be required in accordance with the City's Site Plan Control By-law and the policies of the Official Plan, or the City may circulate the Master Plan to various staff through a more informal, internal review process, depending on the City's accepted procedures. A key issue that needs to be reviewed and addressed is the potential for adverse impacts on the Provincially Significant Wetland. If development, including any site alteration, is proposed within 120 metres of the Provincially Significant Wetland, a Natural Heritage Impact Study may be necessary to ensure the appropriate measures are taken so that there are no adverse impacts on the Wetland. The specific requirements and scope for a Natural Heritage Impact Study should be identified by City staff through the review process.

5.0 Vision

The Beare Road Park will be an inclusive place of nature, recreation and education that recognizes and protects the unique natural and cultural heritage of the site and enhances the experience of the adjacent open space.

6.0 Guiding Principles

1. The design of the Park will acknowledge and celebrate its urban context.

2. The Park will support habitat protection, revitalization and enhancement.

3. The Park will provide opportunities for inclusive use.

4. The views and vistas that have resulted from the site's historic and cultural use will be maintained and enhanced.

The proposed Vision and Guiding Principles for Beare Road Park were developed through stakeholder input and with reference to the strategic goals of City of Toronto Urban Forestry and the seven key principles of the City of Toronto Parks Plan. The Vision and Guiding Principles form a framework which should guide the design of the proposed Beare Road Park.

5. The Park will provide for a range of recreational experiences and encourage engagement with the site and adjacent open space.

6. The Park will recognize the educational opportunities that natural environments provide.

7. The design of the Park will be bold in its approach to integrating cultural and natural heritage.

SECTION 2

SITE OVERVIEW

7.0 Beare Road Site

INTRODUCTION

This section includes a review and analysis of existing conditions, undertaken by MMM Group in the Fall 2012. Data was collected from various City of Toronto departments, the TRCA, a literature and mapping review, background research and reports, field reviews and reconnaisance studies by MMM Group, as well as correspondence and conversation with stakeholders and members of the public. The data collection and analysis process took into account public policy considerations and was undertaken in conjunction with a public consultation process facilitated by Swerhun Facilitation.

Beare Road Park site anatomy is comprised of interconnected systems, which are layered illustratively in the Figure 2.1 (right). They are described in more detail in the following sections, titled Soil and Water, Flora and Fauna, and Cultural Uses. Additional information can be found in the Appendix 2 to this report.

EXISTING SITE ACCESS

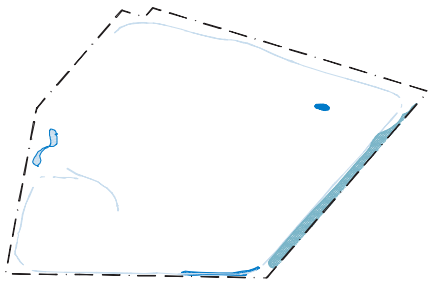
- PUBLIC ROAD
- MAJOR TRAIL
- MINOR TRAIL
- CN RAIL LINE
- E ENTRANCE TO SITE
- A ACCESS ROAD / DEAD END

EXISTING DECIDUOUS TREES

- VEGETATION RESTORATION AREAS
- CULTURAL HABITATION
- FOREST COMMUNITY
- CULTURAL WOODLAND
- CULTURAL THICKET

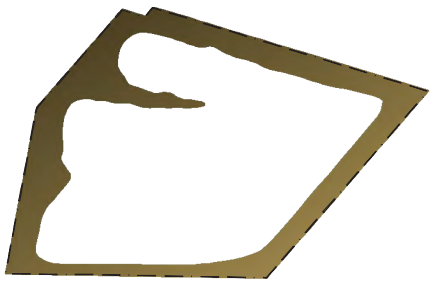
EXISTING MEADOW

- CULTURAL MEADOW HABITAT



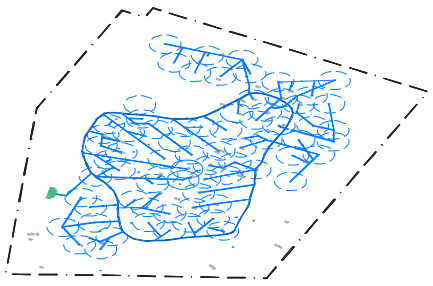
SURFACE WATER

- WETLAND
- DRY POND
- DITCH
- TOWNLINE SWAMP WETLAND COMPLEX



AREA OUTSIDE LIMIT OF COVER

- SOIL

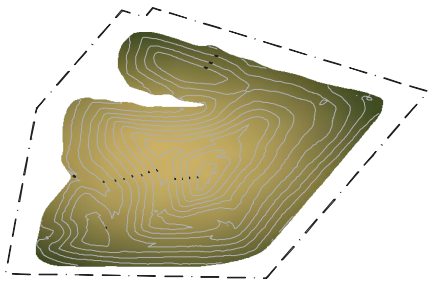


METHANE EXTRACTION SYSTEM

- 38.1m (125ft) RADIUS OF INFLUENCE
- GAS & MONITORING WELL
- COLLECTION PIPE
- GAS CONVERSION FACILITY & POWER PLANT

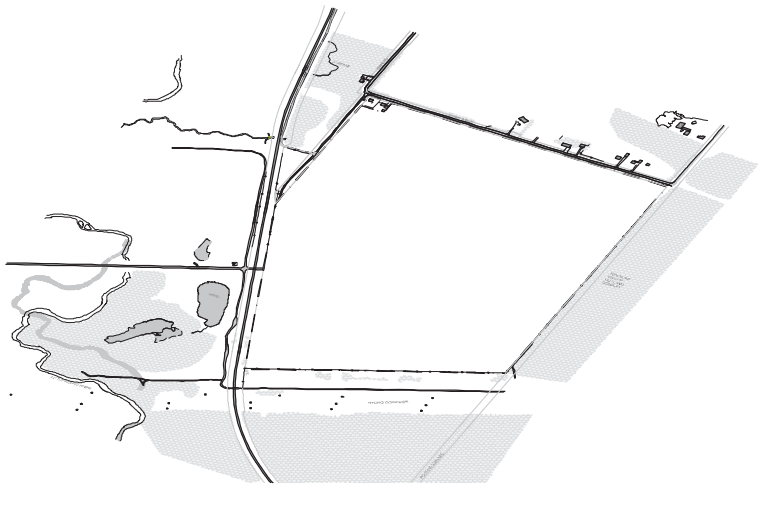
COVER

- COVER (estimated 1.25m)



SOLID WASTE

- DEPTH VARIES, APPROXIMATELY 9,000,000 TONS



ADJACENT AREAS

FIGURE 2.1 BEARE ROAD SITE EXISTING CONDITIONS - LAYER DIAGRAM

7.1 SOIL AND WATER[1]

INTRODUCTION

This section provides information on soil and water conditions at the Beare Road landfill site. The information was gathered from background reports and site reconnaissance conducted by MMM Group Limited in Fall and Summer of 2012.

SITE GEOLOGY

The Beare Landfill Site is located in geology of low to moderate relief, whereby the land surface slopes to the west and to the southeast, towards the tributaries of the Little Rouge Creek and Petticoat Creek.

Prior to 1967, the site was covered with a thin veneer of surficial sand, derived from former glacial beach deposits. At that time an aggregate pit was developed at the site. This thin veneer of surficial sand was ultimately extracted, leaving the underlying dense glacial till, consisting of predominately silt and sand, exposed. The glacial till formed the eventual base of the landfill cells.

WASTE

In 1967, the City acquired the site and had it licensed as a waste disposal site the same year. Refuse disposal began on November 1, 1967 and continued until September 1, 1982. During that time period more than 9 million tonnes of primarily municipal and industrial solid waste were disposed of at the site.

LANDFILL SOIL COVER

At the time of the Beare Road landfill closure, cover material used at the site consisted mainly of clay, silty sand till soils, and other materials derived from the surrounding area. A 0.2m thick daily cover was installed for each 1.8 m lift. The final cover consisted of a layer of clay mixture with relatively low permeability. The cover depth varied in areas of the site, in some areas estimated between 1.2 - 1.8m in thickness. Due to a lack of a recent survey, precise conditions of the soil cover on the site are difficult to determine.

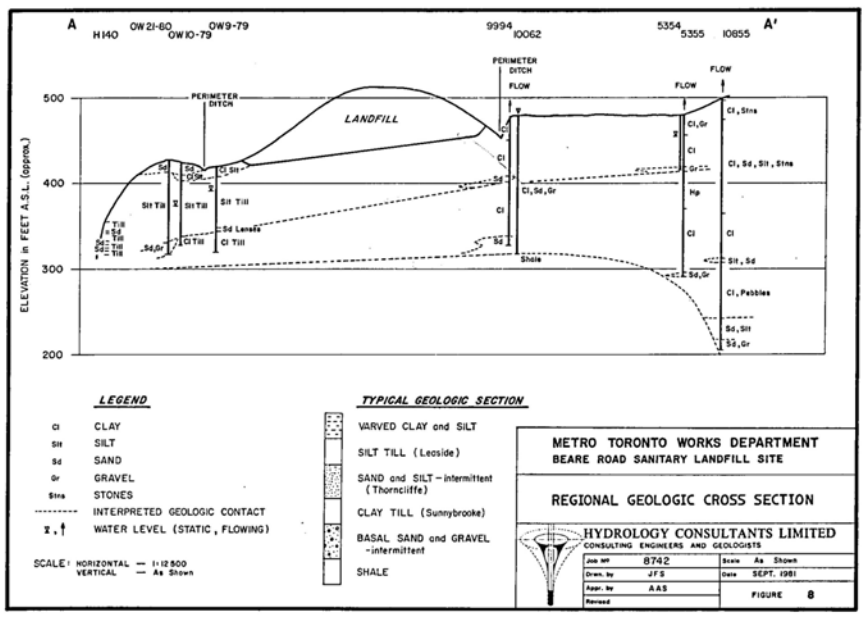


FIGURE 2.2 REGIONAL GEOLOGIC CROSS-SECTION - BEARE ROAD SANITARY LANDFILL SITE \ *HYDROLOGY CONSULTANTS LIMITED. DEEP GROUNDWATER SYSTEM STUDY, 1981*

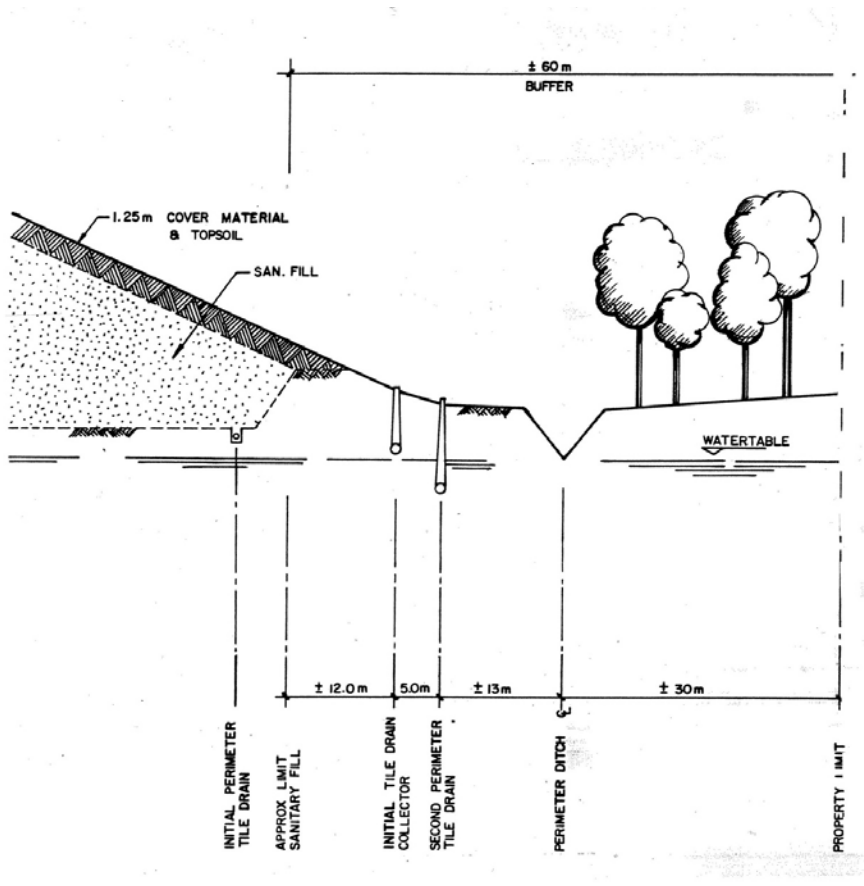


FIGURE 2.3 TYPICAL SECTION THROUGH LANDFILL BUFFER ZONE \ *JOHN SUSTRONK WEINSTEIN + ASSOCIATES LIMITED. BEARE ROAD SKI FACILITY 1987 OVERVIEW (VOLUME II OF BEARE ROAD LANDFILL SITE CLOSURE REPORT)*

1 / Detailed overview of hydrogeological systems within Beare Road Park site are provided in the Appendix 2 to this report.

LEGEND

SOIL OUTSIDE LIMIT OF LANDFILL COVER

LANDFILL SOIL COVER (VARIABLE, ESTIMATED AT 1.2 - 1.8m)

NOTE: This drawing is illustrative and should not be used as a survey of existing conditions. MMM Group Limited is not responsible for the accuracy of any base data.

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CAP + SOIL COVER

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LEACHATE AND METHANE PROCESSING SYSTEMS

A leachate collection system remains in-place within the waste and within the constructed ditch at the landfill perimeter. An underground leachate collection system collects and conveys leachate from the landfill and pumps it to a sanitary sewer located along the access road to the site. The ditch works to control leachate off-site migration via shallow groundwater discharge, and to remove surface water run-off from the landfill cover. The ditch also functions to vent sub-surface combustible landfill gas and prevents the gas from migrating off-site.

The landfill gas collection and utilization system consists of vertical gas wells spread over the entire site, gas transmission piping and a power generating station which harnesses the gas as a fuel source and converts it to electricity. The power generating plant has been operating since 1996, built and operated by a private contractor E.S.Fox Ltd. At this time it is unclear whether the power generating plant will operate for the foreseeable future within the expected implementation time frame of the Beare Road Park Master Plan. The continued operation of the gas collection system, whether by means of gas-to-electricity plant, or by installation of flares throughout the site, significantly reduces the potential for safety hazards both on and off-site related to lateral subsurface gas migration and accumulation in confined spaces.

An ongoing leachate, groundwater, surface water and subsurface combustible gas monitoring program is conducted to monitor impacts of the closed landfill on the surrounding area.

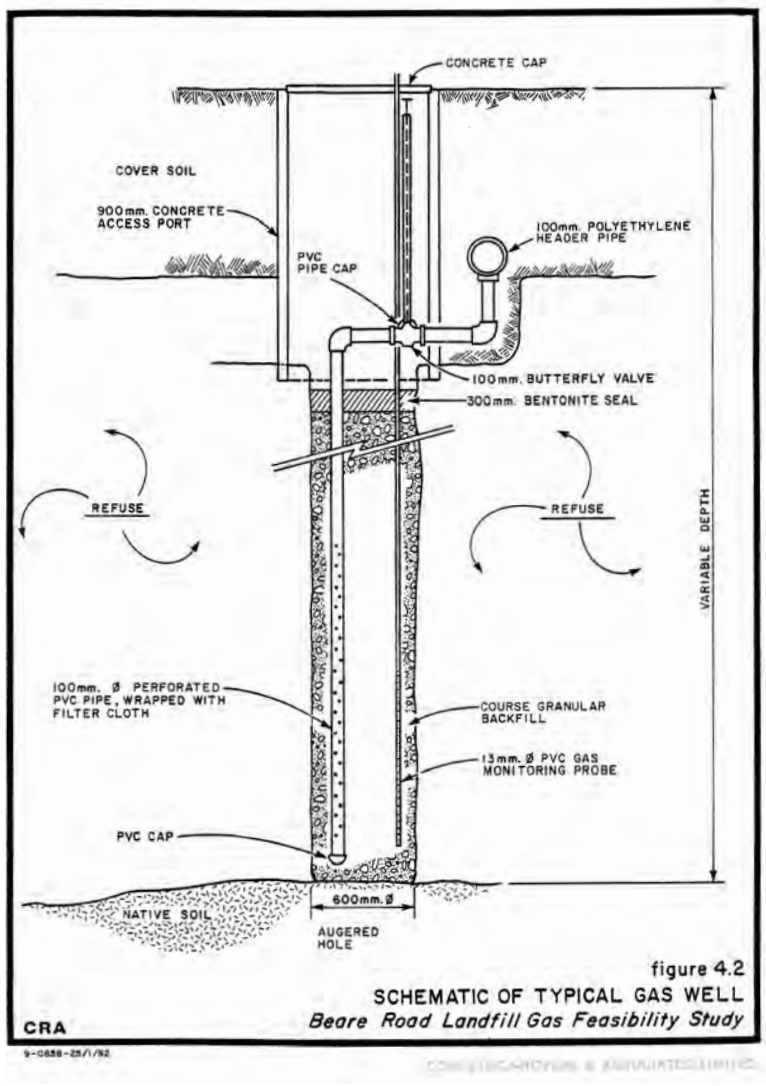

FIGURE 2.4 SCHEMATIC OF TYPICAL GAS WELL \ *CONESTOGA-ROVERS AND ASSOCIATES LIMITED. BEARE ROAD FEASIBILITY STUDY, 1982*

BEARE RD

STREAM

FINCH AVE E

TOWNLINE SWAMP WETLAND COMPLEX

GAS CONVERSION FACILITY & POWER PLANT

POND

HYDRO CORRIDOR

PICKERING TOWN LINE

C.N.R.

LITTLE ROUGE RIVER

LEGEND

COLLECTION PIPES

DRAINAGE DIRECTION

38.1m (125ft) RADIUS OF INFLUENCE

GAS & MONITORING WELL

NOTE: This drawing is illustrative and should not be used as a survey of existing conditions. MMM Group Limited is not responsible for the accuracy of any base data.

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METHANE EXTRACTION SYSTEM

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GROUNDWATER FLOW

The local groundwater flow system consists of two separate flow regimes. The first is the shallow groundwater system found in the surficial sand and upper till. The second is a deep groundwater system found in the shale bedrock and overlying basal sands. Both the current and historical groundwater elevation data have been compiled by the City since 1991.

Shallow groundwater around the perimeter of the site flows laterally in a general southerly to southwesterly direction. The shallow groundwater regime also appears to be locally influenced by the perimeter ditch and the leachate pumping (wet well sump) in the southwest corner of the site, based on the shallow flow that is induced towards this area (Gartner Lee, 1993).

The deep groundwater system (in the basal sands and bedrock) also flows laterally in a southwesterly direction and thus mimics the shallow groundwater flow system. Detailed information is available in the reports by AECOM and Gartner Lee outlined in the References section of this Master Plan.

SURFACE WATER

The Beare landfill site is located within the catchment of the Little Rouge River. The site's cover consists of a layer of clay and silt with relatively low permeability, and vegetated primarily with grasses and a few trees that have been planted since the landfill was closed. The surface is now vegetated and stable.

The slopes of the mound drain to a ditch constructed along the perimeter of the site. The perimeter ditch discharges to a stormwater management wet pond located at the southwest corner of the site west of the railway tracks through a culvert under the tracks. The stormwater pond was originally constructed for erosion and sediment control during the construction of the landfill when the ground was bare, stripped of vegetation and there was a high risk of sediment wash-off during rainstorms. The site is now stable with little risk of sediment wash-off during storms, therefore the stormwater management pond is no longer required for its original purpose.

The pond outlet structure consists of a concrete cutoff wall with a gate valve serving as a low flow outlet, and an emergency or high-flow weir at the top of the wall. The pond outlet discharges to a watercourse that ultimately drains to the Little Rouge River. The pond is now almost filled with sediment, particularly within the area just upstream of its outlet, with a permanent pool with its water surface elevation just below the invert of the outlet weir. The low flow outlet is completely blocked with sediment, resulting in the elevated permanent pool level.The outlet of the culvert that conveys runoff to the pond is completely submerged due to the high permanent pool level.

The surface drainage system at the site is separated from the underground leachate collection system, which means that, under normal circumstances leachate will not discharge downstream via the surface drainage system. However, there are occasional leachate breakouts along the face of the landfill that can potentially discharge to the perimeter drains. The risk of adverse downstream impacts is low because the strength of the leachate is low (the landfill has been closed for 30 years), and it is anticipated that the leachate will normally be absorbed into the soil.

BEARE RD

STREAM

FINCH AVE E

101
24.0

102
50.0

TOWNLINE
SWAMP
WETLAND
COMPLEX

GAS CONVERSION
FACILITY
& POWER PLANT

POND

HYDRO CORRIDOR

PICKERING TOWN LINE

C.N.R.

LITTLE ROUGE RIVER

LEGEND

- SUB - CATCHMENT BOUNDARY
- SUB - CATCMENT No.
- DRAINAGE AREA (ha)
- DRAINAGE DIRECTION

beare road site \water

DRAINAGE PROFILE

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7.2 FLORA AND FAUNA

INTRODUCTION

This section provides information on existing conditions and analysis of ecological functions and values at the Beare Road Landfill. The information was gathered from background reports, observations made by naturalists and site reconnaissance conducted by MMM Group Limited on September 13, 2012.

LANDSCAPE CONTEXT

The Beare Road landfill is located at the eastern boundary of the City of Toronto close to dense urban development and across from the Toronto Zoo. Directly adjacent to the landfill are significant natural areas of the proposed Rouge National Urban Park, bordering the landfill site to the west, north and east. These areas include a provincially significant wetland, the Townline Swamp Wetland Complex. Though wetlands comprise only one percent of the Rouge River Watershed, they are relatively common around the landfill. In addition to Townline Swamp Wetland Complex along the east side and to the north and northeast, there are recently created wetlands beyond the west boundary of the landfill.

VEGETATION

Vegetation at the site is described according to the Ecological Land Classification for Southern Ontario (ELC) (Lee et al. 1998). The landfill is covered predominantly by cultural meadow consisting of grasses with a scattered mixture of forbs, such as goldenrod *(Solidago sp.)* and aster *(Aster sp.).* Within the northwest quarter is an isolated patch of mature forest dominated by sugar maple *(Acer saccharum)* and red oak *(Quercus rubra)* (*FOD 5-3; Dry-Fresh Sugar Maple–Oak Deciduous Forest type*) that is a remnant from the landscape predating the landfill. This forest contains some old tree specimens and the canopy is high, reaching about 25 m. There are signs of cultural habitation within it, including a well and garden plantings. Nearby, extending from the proposed Rouge National Urban Park, is a narrow strip of forest comprised of poplar *(Populus tremuloides)* (*FOD3-1; Dry-*

CULTURAL MEADOW HABITAT

WETLAND /POND HABITAT

SUGAR MAPLE - OAK FOREST HABITAT

LEOPARD FROG FOUND IN POND ONSITE

FIGURE 2.5 BEARE SITE PHOTOGRAPHS - FLORA AND FAUNA

BEARE RD

STREAM

- BLACK LOCUST, BLACK WALNUT, TREMBLING ASPEN
- GOLDENROD

- BLACK LOCUST, DOG-STRANGLING VINE

FINCH AVE E

- POPLAR FOREST (FOD3-1)

- ASH FOREST (FOD7-2)
- SUGAR MAPLE (FOD6-1)

- SUGAR MAPLE / OAK FOREST

- POPLAR FOREST (FOD8-1)

TOWNLINE SWAMP WETLAND COMPLEX

- POPLAR FOREST (FOD7-3)

POND

- WILLOW AND ASPEN

- CATTAIL WETLAND / POND

- WILLOW AND MANITOBA MAPLE

HYDRO CORRIDOR

PICKERING TOWN LINE

C.N.R.

LITTLE ROUGE RIVER

LEGEND

- VEGETATION RESTORATION AREAS
- CULTURAL MEADOW HABITAT
- FOREST COMMUNITY
- CULTURAL WOODLAND
- WETLAND / POND HABITAT
- CULTURAL HABITATION
- CULTURAL THICKET

beare road site \ flora and fauna

ECOLOGICAL CHARACTERIZATION

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Fresh Poplar Deciduous Forest type and, *FOD8-1; Fresh-Moist Poplar Deciduous Forest type*) and willow *(Salix sp.)* (*FOD7-3; Fresh–Moist Willow Lowland Deciduous type*). The forest of the Townline Swamp Wetland Complex encroaches from the east side with an ash *(Fraxinus pennsylvanica)* dominated community at the edge (*FOD7-2; Fresh–Moist Ash Lowland Deciduous Forest type*) and sugar maple in the interior (*FOD6-1; Fresh-Moist Sugar Maple-Lowland Ash Deciduous Forest type*). Exotic species dominate the strips of woodland at the north and south boundaries where the landfill borders onto the rural community and hydro corridor. Black locust *(Robinia pseudo-acacia)* is a common species on the north side and Manitoba maple *(Acer negundo)* on the south side. There is also a small section of cultural thicket dominated by willow and trembling aspen *(Populus tremuloides)* at the southeast corner of the landfill.

Patches of planted woodland in various stages of growth occur on the landfill primarily on the southern half and midway up the slope. A depression constructed to accumulate water to serve as a source for watering restoration plantings has naturalized into a functional wetland. There are also small pockets of wetlands that have formed in ditches at the base of the landfill. Cattails *(Typha sp.)* dominate these wetland habitats. Invasive plants were observed in all habitats on the landfill and they include common reed *(Phragmites australis)*, common buckthorn *(Rhamnus cathartica)*, dog-strangling vine *(Cynanchum rossicum)*, dame's rocket *(Hesperis matronalis)*, garlic mustard *(Alliaria petiolata)* crown vetch *(Coronilla varia),* spotted knapweed *(Centaurea maculosa)* and white sweet clover *(Melilotus alba)*.

RESTORATION

Trees and wildflowers were planted on about a quarter of the landfill between 1997 and 2010 by Friends of the Rouge Watershed. Extreme exposure to wind and sun, drought conditions and a surface of low permeability (landfill capping material) were challenges that led to varying degrees of success. Sites prepared with a layer of permeable soil generated significant improvements in growth. In some areas water bars were created along the slope of the landfill in the revegetation areas to capture and hold moisture to support the growing vegetation (primarily trees and shrubs).

WILDLIFE

Birds

The expansive meadow offers potential for a large population of meadow voles, and though none were seen during field reconnaissance, several predatory birds that feed on small mammals were observed flying over. These include the red-tailed hawk *(Buteo jamaicensis)*, American kestrel *(Falco sparverius)* and cooper's hawk *(Accipiter cooperii)*. A fish-eating raptor, the osprey *(Pandion haliaetus)* also flew by. Meadows typically have abundant food for birds that consume invertebrates and seeds. The American goldfinch *(Carduelis tristis)*, a common seed-eating bird, was spotted in the meadow during the site visit. With forests scarce on the site, the only woodland species recorded was a blue jay *(Cyanocitta cristata).* An exotic species preferring a mix of fields and forest edges, the ring-necked pheasant *(Phasianus colchicus)*, was observed at the northeast corner of the landfill. Though not seen during the site visit, it is anticipated that birds make use of the updrafts that form over the landfill. Other observers have seen bobolink *(Dolichonyx oryzivorus)* and eastern meadowlark[1] *(Sturnella magna)* on the landfill during the breeding period (Robb J. pers. comm. 2012) and a common grackle *(Quiscalus quiscula)* was among the mortalities observed on the landfill access road in 2011 (McKinnon A. pers. comm. 2012).

Mammals

As a very exposed site, the landfill offers wildlife little protection from predators and harsh weather while they move between natural areas to access breeding and foraging grounds. Other than woodchuck *(Marmota monax)*, mammal observations during site reconnaissance were limited to tracks (white-tailed deer *(Odocoileus virginianus)*, raccoon *(Procyon lotor)*, and scat (coyote *(Canis latrans)*). Eastern chipmunk *(Tamias striatus)*, deer mouse *(Peromyscus maniculatus)* and star-nosed mole *(Condylura cristata)* were among the mortalities observed on the landfill access road in 2011 (McKinnon A. pers. comm. 2012).

Herptiles

With almost no wetland on the landfill, the naturalized watering depression has become a refuge for species requiring this type of habitat. During the site visit, northern leopard frogs *(Lithobates pipiens)* and a painted turtle *(Chrysemys picta marginata)* were observed in this pond. Other observers have seen milksnake *(Lampropeltis triangulum)* on the landfill (Robb J. pers. comm. 2012). Herptile mortalities, observed on the landfill access road in 2011, include snapping turtle *(Chelydra serpentina)*, milksnake, Dekay's brownsnake *(Storeria dekayi)*, eastern garter snake *(Thamnophis sirtalis)*, red-bellied snake *(Storeria occipitomaculata)*, red eft *(Notophthalmus viridescens)*, gray tree frog *(Hyla versicolor)*, green frog *(Lithobates clamitans)*, northern leopard frog and American toad *(Anaxyrus americanus)* (McKinnon A. pers. comm. 2012).

Invertebrates

A number of plants were blooming on the landfill the day of the site visit, and several species of butterflies were visiting them. They include monarch *(Danaus plexippus)*, red admiral *(Vanessa atalanta)*, cabbage white *(Pieris rapae)* and buckeye *(Junonia coenia)*. Two dragonfly species, common green darner *(Anax junius)* and black saddlebags *(Tramea lacerate)*, were hunting over the meadows. The monarch and some common green darner are migratory species that may benefit from the landfill updrafts. Invertebrate mortalities are high on the landfill access road, particularly in the area of the ponds. In 2011, mortalities included a cecropia moth caterpillar *(Hyalophora cecropia)* (McKinnon A. pers. comm. 2012).

1 / A survey of the existing bobolink and eastern meadowlark habitat was recently undertaken and published as a separate report. *Beare Road Park Bobolink and Eastern Meadowlark Survey*. December 2013.

ANALYSIS OF ECOLOGICAL CONDITIONS

Meadows are habitats that are naturally maintained by disturbances such as frequent fires or grazing. As a result of fire suppression, and urban and agricultural expansion, meadow is becoming an uncommon feature in the landscape. Only ten percent of the Rouge River watershed is meadow, derived mostly from abandoned farmland (Rouge River Watershed Plan 2007).

The accelerating decline in North American grassland birds is attributable to loss of meadow habitat. The bobolink and eastern meadowlark seen in the landfill meadow are examples of grassland species experiencing rapid decline. They are designated species at risk under the Endangered Species Act, a statute that protects both them and their habitat. Bobolink and eastern meadowlark are also area-sensitive species that may, depending on surrounding land use, need tracts of grassland that are over 50 and 10 ha, respectively (OMNR 2000).

Although in the absence of disturbance the landfill meadow will succeed to forest, extreme conditions at the site may prolong the process.

The landfill presents a barrier to wildlife seeking safe passage between the two forested areas of Rouge River valleyland and the Townline Swamp Wetland Complex. Forest corridors can increase survival by facilitating movement to additional breeding and foraging areas, provided they are between 50 and 100 m in width to offer safe movement. Corridors that are 50 m wide will support only generalist species (Environment Canada 2004) and those that are long may need to be wider to maintain protected passage (OMNR 2000).

All habitats on the landfill are exposed to an influx of invasive plants and this is diminishing their value to wildlife. The landfill has become a significant source of propagules for the spread of invasives to surrounding areas. Wildlife is also impacted by transportation. Despite low traffic volume, the landfill access road causes a considerable number of wildlife mortalities including of species at risk, and any increased use of this route as access to the proposed Beare Road Park would likely increase this number.

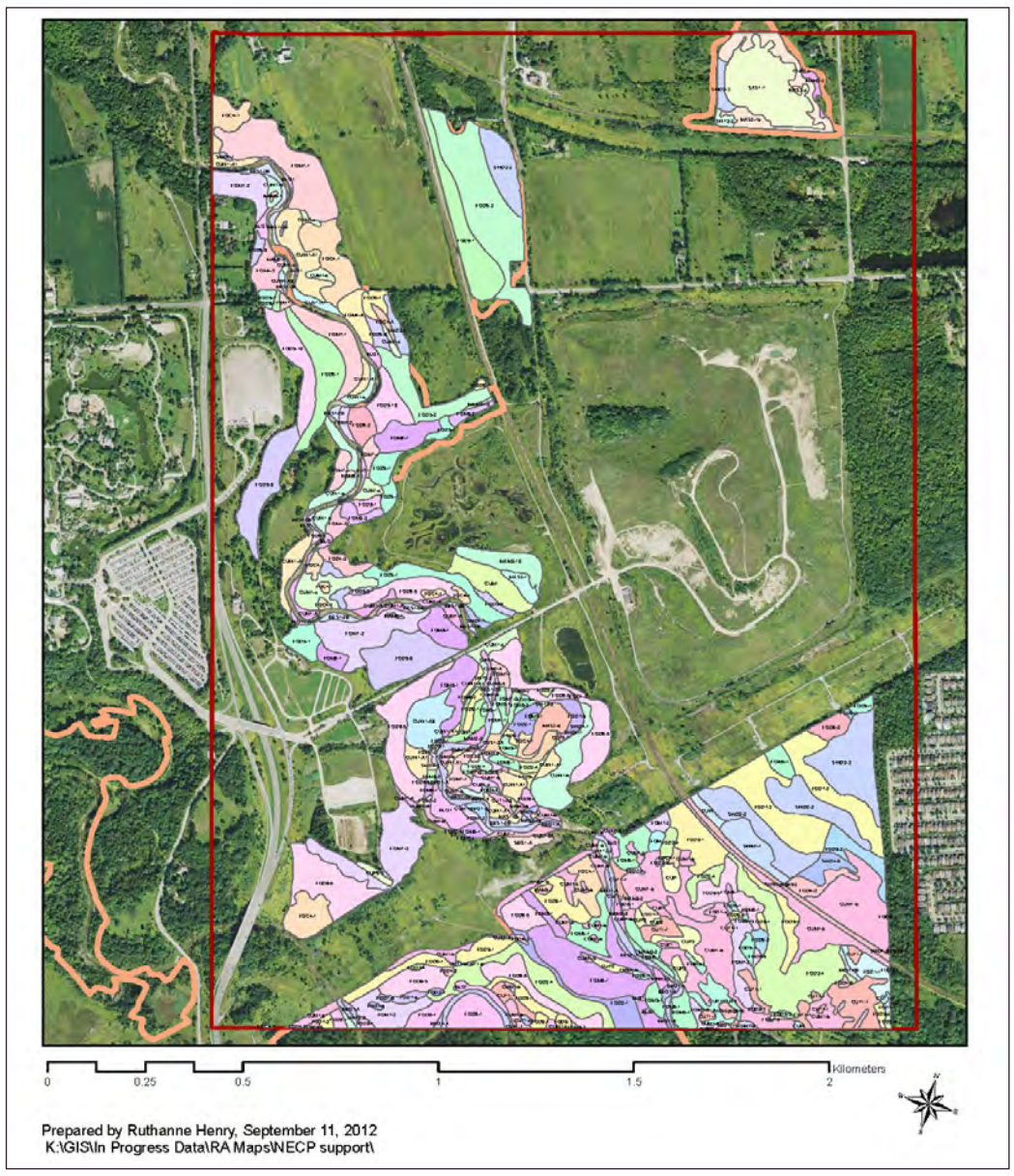

FIGURE 2.6 PROPOSED BEARE ROAD PARK - ECOLOGICAL LAND CLASSIFICATION OF ENVIRONMENTALLY SIGNIFICANT AREAS IN PROXIMITY \ *NORTH-SOUTH ENVIRONMENTAL INC. SUPPLIED BY CITY OF TORONTO URBAN FORESTRY, 2012*

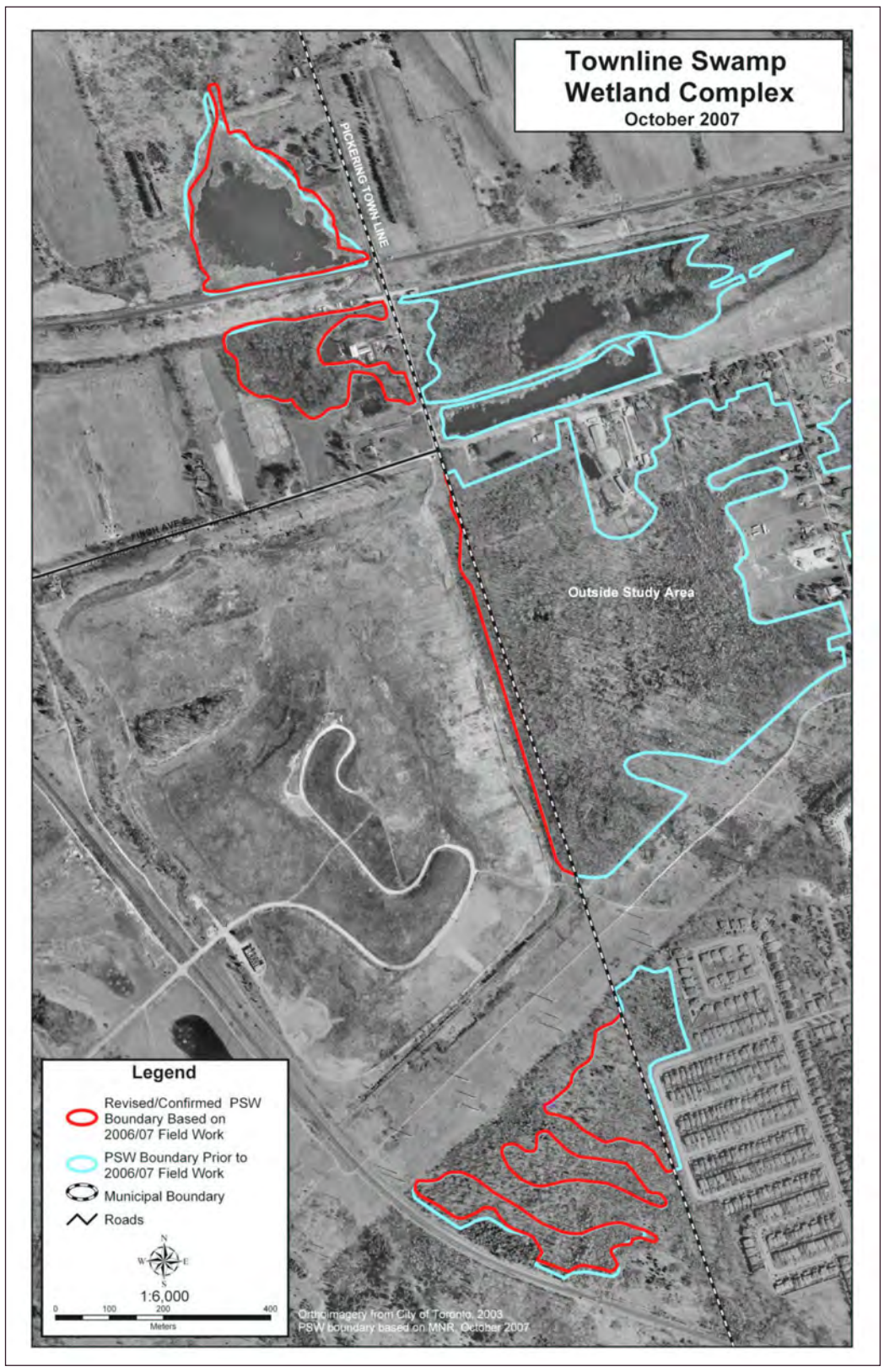

FIGURE 2.7 TOWNLINE SWAMP WETLAND COMPLEX - OCT 2007 \ *NORTH-SOUTH ENVIRONMENTAL INC. REVIEW OF PROVINCIALLY SIGNIFICANT WETLANDS IN THE CITY OF TORONTO, 2009*

7.3 CULTURAL USES

INTRODUCTION

This section provides an inventory of existing site uses on and immediately surrounding the site and an overview of the general surrounding context, the site and immediately adjacent lands. This includes a consolidation of network routes and recommendations contained in Trail Policy documents (see Policy Framework Appendix).

Data gathering was conducted through background reports and site reconnaissance in September and October 2012.

Observations have been grouped under the following themes:

- Site access and access points
- Views and vistas
- Trails and footpaths
- Barriers to access and barriers to safety

For ease of reference observations are numbered and described. Refer to numbered list (right); and Site Use map (facing page).

1. Main entrance to site: service access to gas conversion facility and main service road
2. Railway crossing: with signal arms
3. Existing railway: double track, high volume use by freight trains
4. Existing pathway network through created wetlands, part of network of trails along Rouge River
5. Main access road to site: Pedestrian only, with the exception of service vehicles attending Gas Conversion Facility. Viewpoint: Approach to site and vista towards the high point on the site from Zoo Road (Figure 2.15)
6. High Voltage Hydro Corridor and gravel-surfaced service access route on east side of railway is heavily used by hikers, walkers and cyclists
7. Informal pedestrian crossing of railway: Heavily used by hikers, walkers and cyclists. Signed by owner with no trespassing signs (Figures 2.10, 2.11)
8. Pedestrians accessing site by walking around end of south perimeter fence
9. Intermittent fence along portions of east side of site
10. Perimeter Fence: Continuous and intact along the majority of the site perimeter
11. Opening below fence: Appears to be used mainly by wildlife
12. Dirt bike area: Looped dirt bike trails appear to be frequently used by motorbikes and ATVs
13. Main existing connection between informal trail along hydro corridor and footpath beside site perimeter fence
14. Footpath adjacent to site perimeter fence, continuous along south and east side of perimeter fence
15. Gated and Locked Service access: Across from the Scarborough/Pickering Townline intersection
16. Gated and Locked Service access: At the intersection of Finch Ave East and Beare Road, also serves as driveway access to private residence
17. Service access road to high point on site: Approximately 4-4.5m wide, rough, packed granular surface. (Figure 2.8)
18. Gas Conversion Facility
19. Secondary footpaths: Many are natural surfaced worn pathways through meadow areas, some follow granular surfaced site access roads that are no longer in use or infrequently used
20. Viewpoint: First view of Lake Ontario over the tops of trees as one is ascending along the main service access route
21. Viewpoint: 180+ degree view to the north over woodlot remaining on site
22. Viewpoint: 360 degree view from the high point on the site. (Figures 2.12, 2.13)
23. Informal pathway from the high point to the main access road. (Figure 2.9)
24. Pond: Small pond created on north east slope
25. Viewpoint: View to the west framed by the woodlot to the north and slope to the south (Figure 2.14)
26. Woodlot area: Remnant woodlot, predating aggregate extraction and land filling on site

BEARE RD
STREAM
FINCH AVE E
16
15
25
L
24
26
A
21
L
TOWNLINE
SWAMP
WETLAND
COMPLEX
L
22
14
4
3
19
23
20
L
17
A
1
E
2
18
GAS CONVERSION
FACILITY
& POWER PLANT
5
L
POND
13
12
EXISTING DIRT
BIKING TRACK
9
11
10
A
8
HYDRO CORRIDOR
7
6
PICKERING TOWN LINE
LITTLE ROUGE RIVER

LEGEND

- MAJOR TRAIL
- MINOR TRAIL
- E ENTRANCE TO SITE
- L LOOKOUT
- CN RAIL LINE
- A ACCESS ROAD / DEAD END
- PUBLIC ROAD

beare road site\cultural uses

SITE USE

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USER GROUPS

A variety of user groups will have interest in using the site. Field investigations to date revealed that the majority of users are pedestrians. For the purpose of site programming during the next stages of the project the following user groups should be considered.

WALKERS AND HIKERS

Walkers represent a wide range of interests and motives such as leisure, relaxation, socializing, exploring, making contact with nature, meditation, fitness, or dog walking. It may also be important to consider pedestrians who walk for utilitarian or transportation purposes (e.g. making trips from nearby neighbourhoods in Pickering). Trips by this user group tend to be short, generally 2km or less.

Hikers are often considered more of the elite of the recreational walking group and may challenge themselves to cover long distances and be willing to walk on pathways and even road shoulders that may be considered less safe or less interesting by the majority of leisure walkers. Individual hiking trips may be 5 to 30km in length and can be over more challenging terrain. Within this group it is anticipated that a larger number of users may belong to organized hiking or naturalist clubs, and may be interested in using the site for nature interpretation or as part of longer distance outings (e.g. end to end hikes in the Rouge Valley).

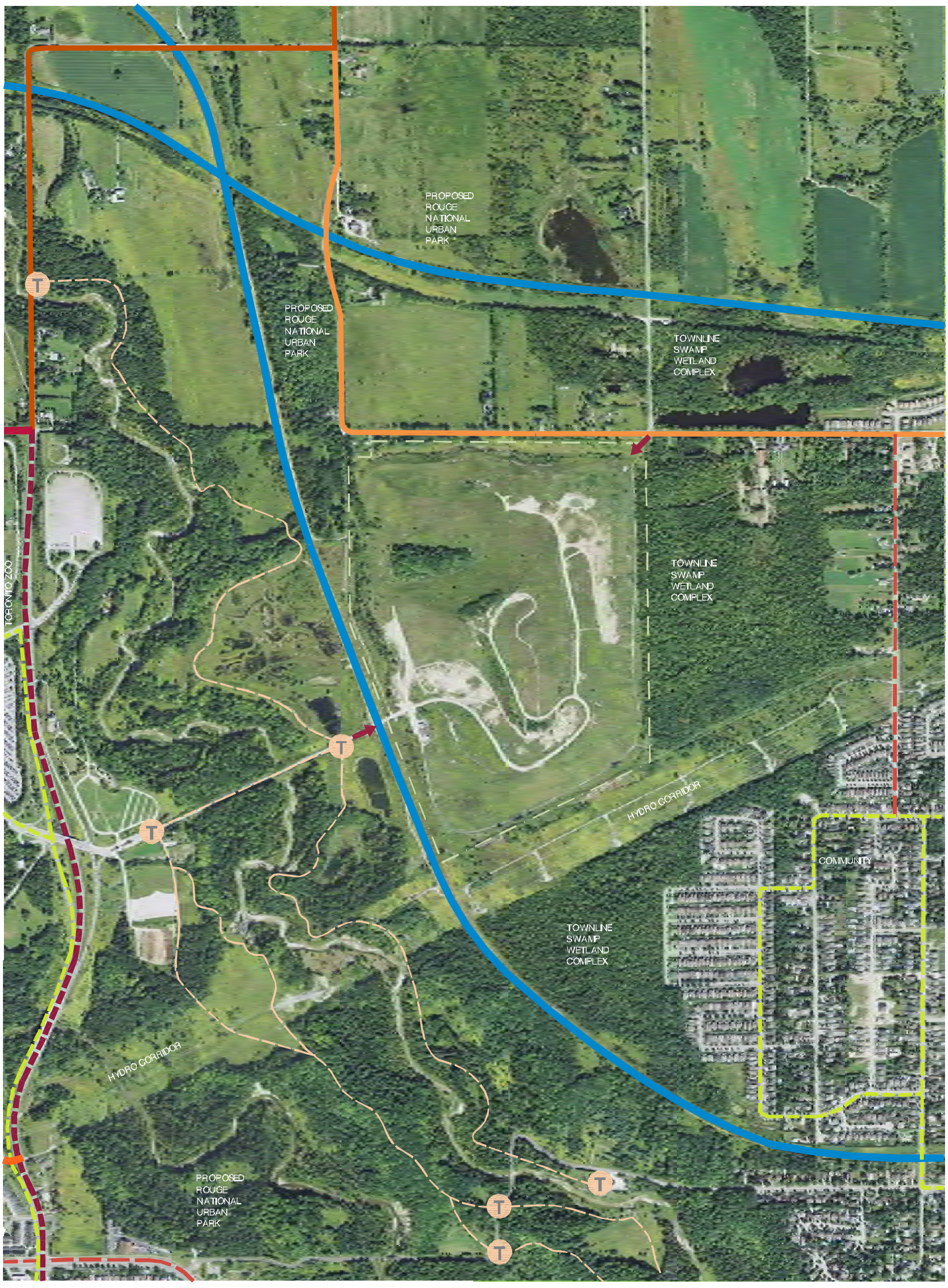
RUNNERS AND JOGGERS

Although the primary motivation of runners and joggers may be fitness, they share more in terms of profile characteristics with distance hikers than they do with leisure walkers. They tend to be accomplishment-oriented and often enjoy the trails at higher speed and over distances between 3 and 15 km or more. They will often avoid hard surfaces such as asphalt and concrete and prefer to run on granular, natural (earth) and turf surfaces as they provide more cushioning effect. This user group may have a distinct interest in using the site for fitness and training purposes because of its challenging topography.

CYCLISTS

The mechanical efficiency of the bicycle allows users of all ages to travel greater distances at a higher rate of speed than any of the pedestrian user groups. Some bicycles, including the “mountain” or “hybrid” can travel easily over stonedust and gravel surfaces, whereas, traditional narrow-tired touring and racing bicycles require very well compacted granular surfaces or hard surface pavements such as asphalt. Distances covered in an individual trip vary widely from a few kilometers to over one hundred depending on the fitness level and motivation of the individual cyclist. Cyclists that travel longer distances are more likely to focus a significant portion of their route on the roadway network, and often seek out quieter, scenic routes over busier roads.

Although the average travel speed for a cyclist on a trail is in the range of 15-20 km/h speeds in excess of 35km/hr can be attained while traveling downhill on hard surface trails with open sight lines. Where excessive speed is a potential issue on trails, speed limits and warnings should be posted to discourage fast riding and aggressive behaviour. Trail design (layout, alignment and surface type) can also be used to encourage appropriate cyclist behaviour. Although a relatively small number of road cyclists might be interested in using the site, some may have a desire to travel to the site using the road network and then park their bicycles to enjoy a walk or hike on the site. The majority of interest in the site from cyclists is expected to be from the mountain cyclists and/or organized mountain cycling groups..



LEGEND

- SUGGESTED ON-STREET ROUTE
- SHARED ROADWAY
- CYCLING CONNECTION
- MINOR MULTIUSE PATHWAY
- MAJOR MULTIUSE PATHWAY
- BIKE LANE
- RAILWAY
- EXISTING TRAIL
- BUS ROUTE
- EXISTING TRAIL HEAD
- CONNECTION TO SITE

beare road site\cultural uses

CONNECTIONS

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MMM GROUP

ACCESS, BARRIERS AND VIEWS

Access

FIGURE 2.8 MAIN ACCESS ROAD ON SITE

FIGURE 2.9 "DIRECT" PATHWAY FROM THE HIGH POINT TO THE MAIN ACCESS ROAD

Barriers

FIGURE 2.10 INFORMAL CROSSING OVER RAILWAY TO THE SOUTH SIDE OF THE SITE

FIGURE 2.11 INFORMAL CROSSING OVER RAILWAY TO THE SOUTH SIDE OF THE SITE

VIEWS

FIGURE 2.12 PORTION OF THE 360 DEGREE PANORAMIC VIEW FROM THE HIGH POINT ON SITE

FIGURE 2.13 PORTION OF THE 360 DEGREE PANORAMIC VIEW FROM THE HIGH POINT ON SITE

FIGURE 2.14 VIEW TO THE WEST THROUGH THE TOPOGRAPHIC GAP

FIGURE 2.15 VIEW EAST TOWARD BEARE ROAD SITE FROM THE ACCESS ROAD

8.0 Key Findings

This next section provides an overview of key findings revealed through data collection and analysis.

HABITAT

The landfill meadow is significant as habitat that supports species at risk (bobolink, eastern meadowlark, milksnake) in a region where existing and planned meadow is scarce. Considering the size of the landfill meadow and the surrounding natural habitat, it is likely that species at risk can be protected while access is enhanced, provided that appropriate constraints are employed. The meadow in the south half of the landfill may more likely sustain species at risk, assuming that the adjacent hydro corridor will require less of a buffer than either forest edges or urban land use. Furthermore, if the hydro corridor is maintained as semi-meadow it can contribute additional habitat to birds using the landfill. A forest corridor facilitating wildlife movement between Rouge National Urban Park and Townline Swamp Wetland Complex may be investigated for the north half of the landfill, however barriers presented by the railway tracks and landfill boundary fencing may preclude a reasonable option. All habitats on the landfill are exposed to an influx of invasive plants and this is diminishing their value to wildlife. Disturbed ground provides opportunistic habitat for the introduction of invasive plants. The landfill has become a significant source of propagules for the spread of invasives to surrounding areas. Enhancement of forest and meadow habitats on the landfill would provide both ecological and educational benefits.

MEADOW HABITAT AND SPECIES AT RISK

The majority of the site is covered by cultural meadow vegetation. Bobolink and eastern meadowlark, both field nesting bird species, designated as “Threatened” under the provincial Endangered Species Act, have been identified to be present at the site and are considered to be breeding. A bobolink and eastern meadowlark survey was carried out by MMM Group in Summer 2013 and published as a separate report[1]. For planning purposes it has been identified that all cultural meadow is available for bobolink and eastern meadowlark nesting. Milksnake, a species designated as “Special Concern”, has also been observed on the site.

STORMWATER MANAGEMENT

The post-development stormwater management requirements of the City of Toronto are applicable to the site. Briefly, the City of Toronto Wet Weather Flow Management Guidelines (WWFMG) stipulate that a proposed development should attempt to maintain the pre-development water balance and the site, and the water quality and quantity of post-development runoff from the site should be controlled so as to mitigate any potential adverse impacts. The stormwater management requirements of the Toronto and Region Conservation Authority are also satisfied by the WWFMG.

It is unlikely that the Master Plan for the Beare landfill will result in any changes to the imperviousness of the site, and therefore there will be no change to the water balance, and to the quality and quantity of post-development runoff. If this is the case, the proposed re-use of the site will have no adverse impacts on runoff, and stormwater management measures will not be necessary. If necessary, at-source stormwater management controls should be provided, if a facility with the potential for adverse impacts on runoff, such as a parking lot, is proposed.

The operation of the Beare landfill ended in 1982. Its surface is now vegetated and stable with little risk of sediment wash-off during storms, therefore the stormwater management pond is no longer required for its original purpose.

The existing stormwater management pond may have the potential to provide spill control if a major break in the leachate forcemain were to occur. In its present condition, the stormwater management pond is filled with sediment and has no active storage. Therefore the pond would have to be cleaned of its accumulated sediment in order to be able to capture a spill. The rehabilitation of the stormwater management pond to provide spill control in the case of a rupture in the leachate forcemain may be considered. Measures to reduce the risk of a future rupture in the forcemain have been implemented, therefore the risk of a future break in the forcemain would have

1 / MMM Group Limited. *Beare Road Park Bobolink and Eastern Meadowlark Survey*. December 2013.

FIGURE 2.16 THE STORMWATER POND ADJACENT TO BEARE ROAD SITE

to be weighed against the cost of cleaning the pond .

The stormwater pond has naturalized over time and can be considered to provide opportunistic aquatic and wetland habitat. This habitat is opportunistic in the sense that the purpose of the pond was to treat stormwater runoff from the landfill while it was in operation but over time as it naturalized wildlife groups have come to use it. This adds to the overall habitat diversity and wetland habitat area in the local landscape. During the Master Plan exercise it has been identified that the stormwater pond is no longer needed to provide catchment and treatment of surface water runoff from the landfill. The leachate collection system that is in place does not appear to rely on the pond for supplemental catchment.

PROTECTION OF SIGNIFICANT NATURAL HERITAGE FEATURES

The Beare Road Landfill Park site is located in the City of Toronto's Natural Heritage System. Toronto's Official Plan requires that development in the City's Natural Heritage System be evaluated to assess impacts to the system, which may necessitate an environmental impact study. Further, where development is proposed adjacent to a Provincially Significant Wetland, an environmental impact study is required to demonstrate there will be no negative impacts. Development or site alteration is not permitted within the boundaries of a Provincially Significant Wetland. The Townline Swamp Wetland Complex is located on and adjacent to the subject site.

Within the designated Parks and Open Space Areas, the Toronto Official Plan requires the protection, enhancement or restoration of trees, vegetation and other natural heritage features.

Recreational uses are subject to the policies of the Greenbelt Plan. These uses must not have negative impacts to key natural heritage features and/or hydrologic features or functions and they must not have negative impacts on the Natural Heritage System (Section 4.1.1).

Small-scale structures for recreational uses, such as pavilions, are permitted within key natural heritage and hydrologic features, provided that negative impacts are minimized (Section 4.1.2 of the Greenbelt Plan). This may include the wildlife habitat area noted in the opportunities/constraints section of this report, and it includes the Provincially Significant Wetland located on the easterly portion of the site.

METHANE AND LEACHATE EXTRACTION SYSTEMS

There are existing collection and processing systems in place that manage leachate and methane at the site. The existing methane and leachate extraction systems will operate for the foreseeable future.

The continued operation of the power plant significantly reduces the potential for safety hazards both on and off-site related to lateral subsurface gas migration and accumulation in confined spaces. The continued operation of the leachate collection system provides mitigation against potential leachate migration from the site.

IMPACTS FROM THE HYDRO CORRIDOR (ELECTROMAGNETIC FIELDS)

In 1993, based on the evidence then available, the former City of Toronto adopted a policy of prudent avoidance to EMFs induced by Hydro Electric Towers, which encouraged limiting exposure to EMF in public spaces where practical, and feasible at little or no cost. In some parts of the City, hydro corridors are the only remaining space suitable for large-scale recreational facilities such as soccer fields, cycling, or walking trails. Toronto Public Health concluded that under such circumstances, the health benefits of recreational space outweigh any potential risk that might result from the increase in exposure to EMF. There have been recent precedents for residential and parkland permissions near hydro towers (within 50 ft) in Toronto, and the proposed design may trigger an EMF plan in city review process. The potential health impacts of EMFs may be viewed as a minor constraint, which may impact the use of the site in close proximity to the hydro towers.

RAILWAY SAFETY, NOISE AND VIBRATION IMPACTS

The railway line represents a risk to user safety, and mitigation measures should be included to address safety concerns and discourage users from entering the railway right-of-way. There are no clear municipal regulations or policies for implementing mitigation measures. However, setbacks from the railway right-of-way, educational/warning signage, fencing and other measures should be considered to reduce these risks.

AMENDMENT TO THE EXISTING CERTIFICATE OF APPROVAL

The existing 1994 Certificate of Approval A280401 is a series of strict requirements that regulate the site. Given the existence of explosive levels of methane at the site, the municipality is required to obtain approval under the Ontario Occupational Health and Safety Act prior to commencement of construction. Prior to construction of any structure containing enclosed spaces, the Municipality shall submit a copy of the approval under the Occupational Health and Safety Act (OHH Act) to the MOE Director. After construction of any structure containing enclosed spaces, the Municipality shall submit to the MOE Director a signed statement from a Qualified Person certifying that the as-built structures are as approved under the OHS Act.

Furthermore, the current Provisional Certificate of Approval No. A.280401 that has been issued outlines the following operations requirements:

1. Continuous monitoring as necessary to ensure that ground and surface waters are not adversely affected.
2. To ensure the orderly and systematic development, operation, and closing of the site in accordance with the requirements of the Environmental Protection Act, 1971, and other related regulations.
3. Consistent with the other responsibilities under the Environmental Protection Act, it is in the public interest to ensure that all necessary steps be taken in these regards so that future use of the site by any other party will not conflict with any necessary controls required to ensure its long term safety. In addition to the conditions set out in the 1994 amendment other conditions regarding development and operation of the site remain in force and are described in the previous Provisional Certificate of Approval as appended to the 1994 amendment.

FIGURE 2.17 VIEW TOWARD THE GAS CONVERSION FACILITY

RECREATION AND USER GROUPS

A variety of user groups have interest in using the site. Beare site has already become an informal venue for leisure walking, hiking, running and cycling. There is a public desire to enhance passive and active recreation at the site. Unique characteristics of the Beare Road Park will render it a city destination for individuals, families and groups.

OPPORTUNITIES FOR EDUCATION

There are opportunities for engaging with Beare Road site's natural and cultural heritage through Interpretation, Education and Public Art. The cultural landscape of the site evolves through dynamic processes of natural and urban systems. Layers of history, methane extraction wells and ecological processes are some of the elements that can be revealed.

OPPORTUNITY FOR ASSOCIATION WITH TORONTO ZOO AND THE PROPOSED ROUGE NATIONAL URBAN PARK

There may be synergies inherent in Beare Road Park's proximity to two culturally significant Toronto sites: the Toronto Zoo and the proposed Rouge National Urban Park. Both these entities cultivate vast ecological, cultural and educational resources.

UNIQUE TOPOGRAPHY AND CONDITIONS CREATED BY THE SITE'S HISTORIC INDUSTRIAL USE

Beare's site's past use as a landfill created unique physical conditions that present both opportunities and constraints for its proposed use as a park. Topography, elevations and vistas are the resulting assets of the site that have been recognized by the public and stakeholders. These conditions create valued experiences of the open space through prospect and refuge and a journey to the top which culminates in 360 degree views of the city and surrounding natural environment. Shallow landfill soil cover created a constraint for the species of vegetation that has survived on the site, contributing to an experience of vast openness.

SITE ACCESS

The Canadian National Railway and the chain link fence have been identified as the main barriers to access.

Fencing around the site is considered to be a barrier to wildlife movement. Although deer and other mammals currently gain access to the site, the fence diminishes the potential for greater movement opportunity. If we are to consider identifying an east-west corridor through the site and the fence remains it will diminish the effectiveness of the corridor. Observations of wildlife mortality associated with the railway crossing are not available. The raised tracks of the railway itself would be considered to be a barrier to movement by reptiles, amphibians and some small mammals but easily navigated by most mammals. In promoting an east-west corridor in concert with greater naturalization of the adjacent lands it may be necessary to consider a formal crossing such as a wildlife culvert for smaller wildlife.

It is noted that there are trails in the Townline Swamp Wetland Provincially Significant Wetland (part of Proposed Rouge National Urban Park) at the east boundary of the site. Pedestrians and off-road vehicles are noted to use the trails.

Future studies into habitat and species at risk on the site may define opportunities and constraints with regard to site access for pedestrians, vehicles and non-motorized devices users.

TRAILS

The proposed Beare Road Park is located adjacent to residential population centres in Pickering and Toronto, and adjacent to an extensive network of trails in the Rouge River Valley. In addition to many kilometres of designated trails as part of the Rouge Valley system there are also numerous informal trails surrounding the site. Examples of these include a footpath around along the perimeter security fence on the east and south side of the site, as well as several trails in the hydro corridor abutting the south boundary of the site. Informal trails in the hydro corridor provide direct access to the residential neighbourhood to the south east of the Beare Road Landfill Park site (Pickering), and given the linear nature of the hydro corridor, it also has the potential to connect a number of other Pickering neighbourhoods to the site. Trails surrounding the site are well-used as evidenced by the width and compaction of the trail bed. Additionally, there is clear evidence of informal trail use on the Beare Road site itself. Based on observations, trail use appears to be primarily walkers/hikers and dog walkers although it is also apparent that the trails are being used by cyclists using hybrid and mountain style bikes.

The City of Toronto Bike Plan network (2001, and updated in 2011), includes routes on several of the public roads that are near to, or abut the Beare Road site. Although cycling facilities have not yet been developed on these roads, the City is open to any opportunities. We are aware of the Bikeways Trails Implementation Plan, and it is anticipated that the level of cycling use will increase substantially in the future, even before facilities have been formalized along these roads.

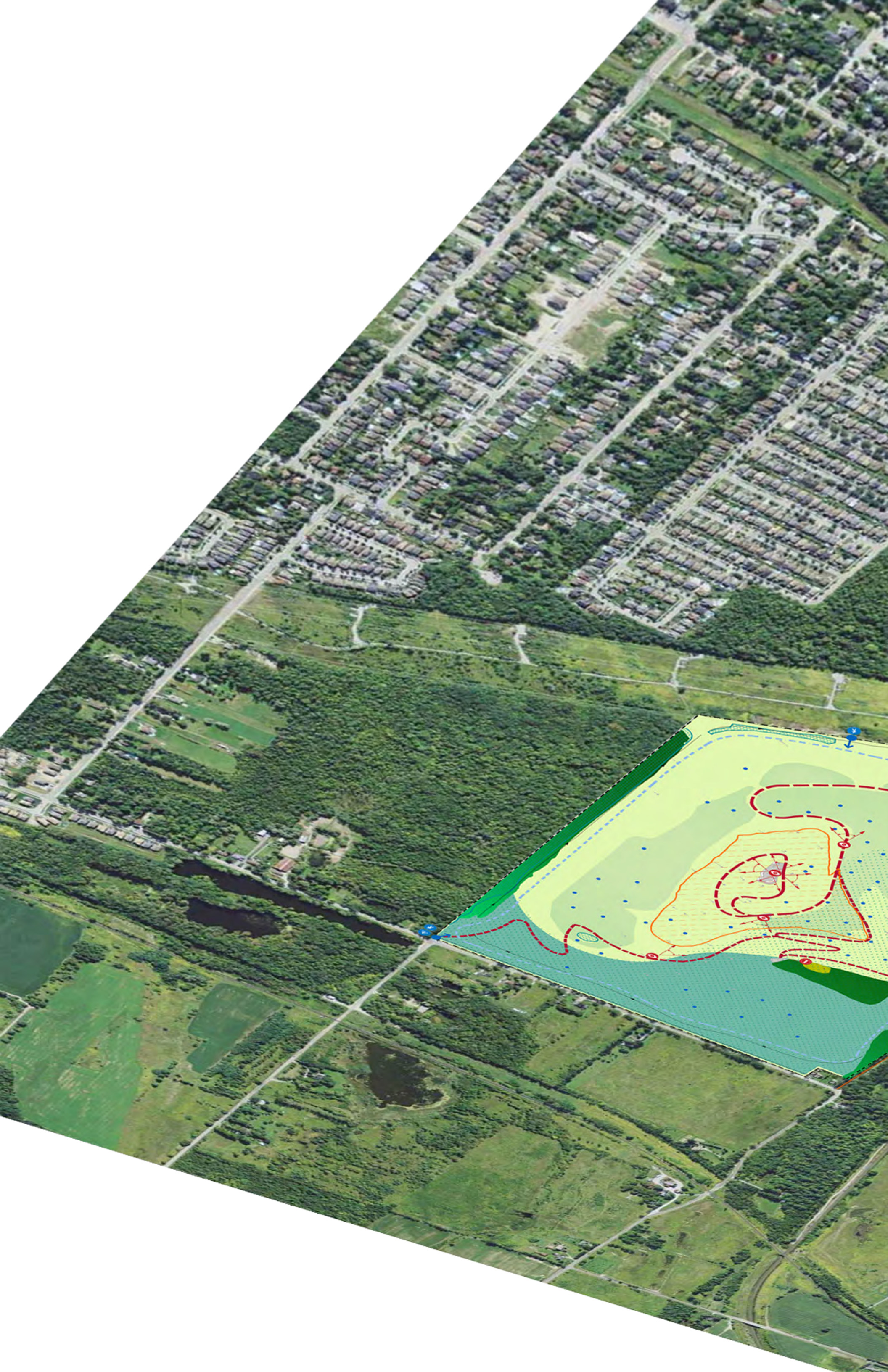
AMENITIES

There is a demand for public facilities, such as washrooms, in Toronto parks to provide for user comfort. This demand is particularly felt in remote locations such as Beare Road site.

FIGURE 2.18 VIEW EAST ACROSS ROUGE VALLEY TOWARD BEARE ROAD SITE

SECTION 3

APPROACH & PROPOSED CONCEPTUAL DESIGN



6.0 Approach

DESIGN APPROACH AND PROPOSED CONCEPTUAL DESIGN

The Beare Road Park Conceptual Design illustrates the proposed landscape framework for Beare Road Park, developed in the Design Approach. The Design Approach was established with consideration of the Vision, Guiding Principles, and existing site conditions, all outlined in the previous chapters of this report. The Design Approach outlines the following goals that should guide the development of the proposed Beare Road Park:

- **Protect Existing Forest And Wetland Habitat**
- **Protect Use By Species At Risk**
- **Enhance Meadow Habitat**
- **Enhance Forest Linkages**
- **Consider Existing Regeneration Plantings**
- **Provide Inclusive Access and Visitor Amenities**
- **Protect Existing Vantage Points and Views**
- **Enhance educational opportunities for engaging with the site's natural and cultural heritage through recreation and interpretation**
- **Consider Opportunities For Off-Road Cycling**

The following sections will describe the proposed Conceptual Design, organized into three major themes: Habitats, Access and Recreation, Education. The intent of the Conceptual Design is to provide a conceptual physical layout that accommodates the Guiding Principles and the Design Approach of the Master Plan.

STREAM
BEARE RD
FINCH AVE E
POWER PLANT
POND
PUMPING STATION
HYDRO CORRIDOR
C.N.R.
PICKERING TOWN LINE
LITTLE ROUGE RIVER

LEGEND

- EXISTING VEGETATION RESTORATION
- EXISTING CULTURAL HABITATION
- EXISTING FOREST COMMUNITY
- EXISTING WETLAND
- EXISTING MEADOW
- EXISTING GAS & MONITORING WELL
- EXISTING DITCH
- POTENTIAL FOREST ENHANCEMENT
- PROTECTED VISTA: ZONE A
- EXISTING VANTAGE POINT
- PROPOSED ENTRANCE
- PROPOSED INTERPRETIVE OPPORTUNITY
- OFF ROAD CYCLING OPPORTUNITY
- PROPOSED VISITOR SHELTER
- PROPOSED FENCE
- PROPERTY LINE
- PROPOSED SHARED USE TRAIL
- RESTRICTED ACCESS ROAD
- PROPOSED RESTRICTED ACCESS ROAD
- PROPOSED SERVICE USE
- PROPOSED CYCLING USE
- POTENTIAL PEDESTRIAN USE
- PROPOSED CROSS COUNTRY SKI TRAIL

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10.0 Habitats

FIGURE 3.1 LEOPARD FROG AT BEARE ROAD SITE

FIGURE 3.2 EXISTING POND AT BEARE ROAD SITE

FIGURE 3.3 CULTURAL MEADOW HABITAT AT BEARE ROAD SITE

PROTECT EXISTING FOREST AND WETLAND HABITAT

The Beare Road Landfill site contains existing habitat which should be protected, such as a remnant mature patch of forest and existing pond, and a portion of adjacent Townline Swamp Wetland Complex which is located on the site.

PROTECT USE BY SPECIES AT RISK

The landfill meadow supports species at risk (bobolink, eastern meadowlark, milksnake) in a region where existing and planned meadow is scarce. Considering the size of the landfill meadow and the surrounding natural habitat, it is likely that species at risk can be protected while access is enhanced, provided that appropriate constraints are employed. How much habitat should be set aside for use by species at risk is unknown. A survey of the existing bobolink and eastern meadowlark habitat was recently undertaken and published as a separate report *"Beare Road Park Bobolink and Eastern Meadowlark Survey"* by MMM Group.

ENHANCE MEADOW HABITAT

The landfill plays an important role in supporting meadow species. Grassland species are declining and restoration efforts typically focus on forest. Specific areas of existing landfill meadow were identified as important habitat that supports species at risk[1]. Methods, targets and outcomes for habitat enhancement should be identified in the preparation of a Revitalization Management Plan.

ENHANCE FOREST LINKAGES

A forest linkage can be created on the landfill such that it provides safe passage for wildlife between Rouge Park and Townline Swamp Wetland Complex. The forest connection needs to be an appropriate size to serve as shelter and as a safe corridor to search out other feeding and breeding areas. Habitat surrounding the landfill is under stress and these stresses may continue to grow. To improve the chances for survival of species in these adjacent habitats, consideration should be given to building a functional corridor at the landfill and/or increasing the size of an adjacent forest patch. The location and alignment of a forest corridor should be identified through detailed design and take into consideration findings regarding areas of habitat used by species at risk on the landfill.

CONSIDER EXISTING REGENERATION PLANTINGS

Even though the landfill site was severely altered, its capacity to re-vitalize is evident. Existing regeneration plantings on the landfill are used by various wildlife, and regeneration plantings on the site include examples of woodland grown with and without soil enhancement. A variety of species have been planted, including white pine *(Pinus strobus),* red ash *(Fraxinus pennsylvanica)*, cottonwood *(Populus deltoides)* and common juniper *(Juniperus communis)*. White pine, is 'wind-hardy' and due to its shallow root system is suitable to occupy the shallow landfill cap; however, with a shallow root system a mature specimen under conditions of severe exposure could be prone to uprooting. Red ash, well suited to the poor soil conditions of the landfill cap, will become impacted by the emerald ash borer, resulting in the loss of planted trees. Where losses of planted trees occur within the red ash unit, they could be replaced with other suitable species[2]. Strategies for enhancement of meadow habitats and forest linkages should consider existing regeneration plantings on the site and take into careful consideration the appropriate matching of existing soils to proposed plantings. The option of altering the landfill form with additional soil or modifying the soils with amendments in order to support forest habitat needs to be evaluated through the preparation of a Management Plan. In addition, consideration should be given to the site water balance and the long term ability of the site to support forest biomass.

1 / MMM Group Limited. *Beare Road Park Bobolink and Eastern Meadowlark Survey.* December 2013.

2 / Specific recommendations should be provided by a Species at Risk Management Plan.

LEGEND

- EXISTING VEGETATION RESTORATION
- EXISTING CULTURAL HABITATION
- EXISTING FOREST COMMUNITY
- EXISTING WETLAND
- EXISTING MEADOW
- PROPERTY LINE
- EXISTING GAS & MONITORING WELL
- EXISTING DITCH
- POTENTIAL FOREST ENHANCEMENT

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3.0 Access and Recreation

PROVIDE INCLUSIVE ACCESS

To facilitate the conversion of the Beare Road site into a public park, consideration needs to be given to providing opportunities for inclusive use for park users and staff. This includes access for pedestrians, cyclists, maintenance vehicles, emergency vehicles, and access by the private methane facility operator. Inclusive use encompasses needs of people of all ages and abilities.

The conceptual design identifies proposed access points and routes. It is proposed that the existing road west of the site be managed as restricted access. See illustrative layout and legend.

The plan proposes limited vehicular access, with public parking located off-site in mutually advantageous areas of the proposed Rouge National Urban Park. The intent is to help mitigate the impact on the environment, local residents and wildlife caused by increased public access to the site. In addition, it takes into account issues posed by the existing CN rail corridor and methane conversion facility. Vehicular site access is proposed to be limited to emergency and maintenance vehicles and to the private methane facility operator.

To enhance safety of park users, access control mechanisms, such as fencing, should be employed to minimize visitor interaction with CN rail corridor and methane conversion facility.

PROVIDE VISITOR AMENITIES

There is a demand for public facilities, such as washrooms, in Toronto parks to provide for user comfort. This demand is particularly felt in remote locations such as the Beare Road site. Development of site infrastructure and architecture should be mutually advantageous with the proposed Rouge National Urban Park, as there is an opportunity to share uses and facilities. A visitor shelter and a low-impact washroom facility is proposed at the Beare Road Park's main entrance. See illustrative conceptual plan and legend.

FIGURE 3.4 RAILROAD CROSSING AT BEARE ROAD SITE

FIGURE 3.5 RESTRICTED ACCESS ROAD

CONSIDER OPPORTUNITIES FOR OFF-ROAD CYCLING

A variety of user groups have interest in the site. The area has already become an informal venue for leisure walking, hiking, running and cycling. There is a public desire to enhance access and passive and active recreation at the site. Consideration for specific active uses, such as off-road cycling, may help to alleviate some of the pressure on more sensitive Rouge River valley land areas where off-road cycling is currently taking place. This Master Plan includes provisions for cycling, such as bicycle parking facilities and a variety of trail types. The demands for access and recreation on the site need to be balanced with the ecological function of adjacent habitats and of the proposed forest corridor. Maintaining ecological and educational benefits will necessitate constraints on the type and location of proposed recreational activities. Further studies may help to determine the appropriate degree of access, and locations of recreational uses.

An area that may provide opportunities for off-road cycling has been indicated on the map (off-road cycling opportunity). The feasibility to accommodate off-road cycling in portions of this zone can only be given further consideration once a Management Plan has been prepared.

STREAM
BEARE RD
FINCH AVE E
POWER PLANT
POND
PUMPING STATION
HYDRO CORRIDOR
PICKERING TOWN LINE
C.N.R.
LITTLE ROUGE RIVER

LEGEND

- EXISTING VEGETATION RESTORATION
- EXISTING CULTURAL HABITATION
- EXISTING FOREST COMMUNITY
- EXISTING WETLAND
- EXISTING MEADOW
- EXISTING GAS & MONITORING WELL
- EXISTING DITCH
- POTENTIAL FOREST ENHANCEMENT
- PROTECTED VISTA: ZONE A
- EXISTING VANTAGE POINT
- PROPOSED ENTRANCE
- PROPOSED INTERPRETIVE OPPORTUNITY
- OFF ROAD CYCLING OPPORTUNITY
- PROPOSED VISITOR SHELTER
- PROPOSED FENCE
- PROPERTY LINE
- PROPOSED SHARED USE TRAIL
- RESTRICTED ACCESS ROAD
- PROPOSED RESTRICTED ACCESS ROAD
- PROPOSED SERVICE USE
- PROPOSED CYCLING USE
- POTENTIAL PEDESTRIAN USE
- PROPOSED CROSS COUNTRY SKI TRAIL

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Education

12.0

FIGURE 3.6 ANIMAL TRACKS ON A TRAIL

FIGURE 3.7 REMNANT FOREST WEDGE AND FORMER LAKE IROQUOIS SHORELINE

FIGURE 3.8 EXISTING WELL IN REMNANT FOREST

PROTECT EXISTING VANTAGE POINTS AND VIEWS

Topography, elevations and vistas are the resulting assets of the site that have been recognized by the public and stakeholders, and should be protected. These conditions have enabled experiences that are unique to the site, including a journey to the hill top which culminates in 360 degree views of the surrounding natural environment and the city. This provides an opportunity for education about natural and cultural landscapes. The top of the landfill provides an opportunity for a lookout with interpretive signage for both the long and short view, with the long view pointing out the function of various habitats at a landscape level in the context of a natural heritage system and the broad hydrological system, and the short view looking at individual habitats on the landfill, the wildlife that use them, restoration efforts and landfill issues.

ENHANCE EDUCATIONAL OPPORTUNITIES FOR ENGAGING WITH THE SITE'S NATURAL AND CULTURAL HERITAGE THROUGH RECREATION AND INTERPRETATION

There are opportunities for engaging with the natural and cultural heritage of the site through interpretation, education and public art. The cultural landscape of the site evolves through dynamic processes of natural and urban systems. Site history, infrastructure and ecological processes can be revealed through interpretive elements and active education processes.

There are synergies inherent in Beare Road Park's proximity to two culturally significant Toronto sites: the Toronto Zoo and the proposed Rouge National Urban Park. Both these entities cultivate vast ecological, cultural and educational resources. Opportunities to overlap in areas of tourism, education, research and recreation should be explored. Mutually advantageous trailheads and trail connections with Rouge National Urban Park will enhance the connectivity of Beare Road Park with adjacent land and features.

STREAM
BEARE RD
FINCH AVE E
POWER PLANT
POND
PUMPING STATION
HYDRO CORRIDOR
PICKERING TOWN LINE
C.N.R.
LITTLE ROUGE RIVER

LEGEND

- EXISTING VEGETATION RESTORATION
- EXISTING CULTURAL HABITATION
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SECTION 4

IMPLEMENTATION & MANAGEMENT PLAN

13.0 Focus Areas

There are three key areas of the site where a prioritized investment in improvement of structures and facilities is recommended for advancing (fast-tracking) the objectives of the Master Plan. The three key areas are outlined below.

MAIN ENTRANCE AREA

The proposed Main Entrance Area is located at the east end of the Access Road between the CNR tracks and the methane conversion facility. The proposed entry area will integrate a visitor shelter, a bike parking area, and a trailhead with orientation and information components. Tool storage and orientation facility for education should be incorporated into the visitor center. Hierarchy of use and access, ranging from public pedestrian use to access by methane facility staff, needs to be clearly established through both intuitive wayfinding, and unobtrusive signage integrated into the design. The design of all facilities should meet or exceed the City of Toronto guidelines.

Proposed bicycle parking allows for a mode of transport to the site other than vehicular. Additionally, it accomodates those that want to switch from cycling to walking when they arrive at the site.

While the existing power plant will continue to operate for the forseeable future and reduce the potential for safety hazards related to landfill gas, consideration should be given to exploring opportunities of the eventual adaptive reuse of the powerplant building, for educational purposes or as a park facility.

OFF ROAD
CYCLING
STORAGE LOT

ENTRY
PLAZA

C. N. R.

SERVICE
AREA

LEGEND

- EXISTING RESTORATION PLANTINGS
- EXISTING FOREST COMMUNITY
- EXISTING MEADOW
- EXISTING GAS & MONITORING WELL
- PROPERTY LINE
- PROPOSED FENCE
- PROPOSED SHARED USE TRAIL
- PROPOSED ACCESS ROAD
- PROPOSED RESTRICTED ACCESS ROAD
- PROPOSED CROSS COUNTRY SKI TRAIL
- OFF ROAD CYCLING OPPORTUNITY
- PROPOSED GATEWAY SIGNAGE
- PROPOSED SEATING
- PROPOSED PLANTING
- PROPOSED INTERPRETIVE ELEMENT

beare road site

DRAFT ENTRY PLAN

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INTERPRETIVE AREA

The second focus area is located adjacent to the remnant forest wedge, and within a small cultural habitation area with a man-made well. This area offers multiple opportunities for education and interpretation. In addition to ecological educational opportunities inherent in meadow and forest habitats on the site, there is a potential to investigate and interpret Beare site's multi-layered geological history, and previous and current cultural uses that have contributed to the Beare Road site's landscape today, and that will shape its ongoing evolution.

Interpretive walks, boardwalks and lookouts are some examples of features which can provide interpretive experiences at the site.

LOOKOUT
PLATFORM

FOREST
COMMUNITY

MW41

LEGEND

- EXISTING RESTORATION PLANTINGS
- EXISTING CULTURAL HABITATION
- EXISTING FOREST COMMUNITY
- EXISTING MEADOW
- POTENTIAL FOREST ENHANCEMENT
- EXISTING GAS & MONITORING WELL
- EXISTING WELL
- PROTECTED VISTA: ZONE A
- OFF ROAD CYCLING OPPORTUNITY
- PROPOSED SHARED USE TRAIL
- PROPOSED BOARDWALK
- PROPOSED INTERPRETIVE ELEMENT

beare road site

DRAFT INTERPRETIVE AREA PLAN

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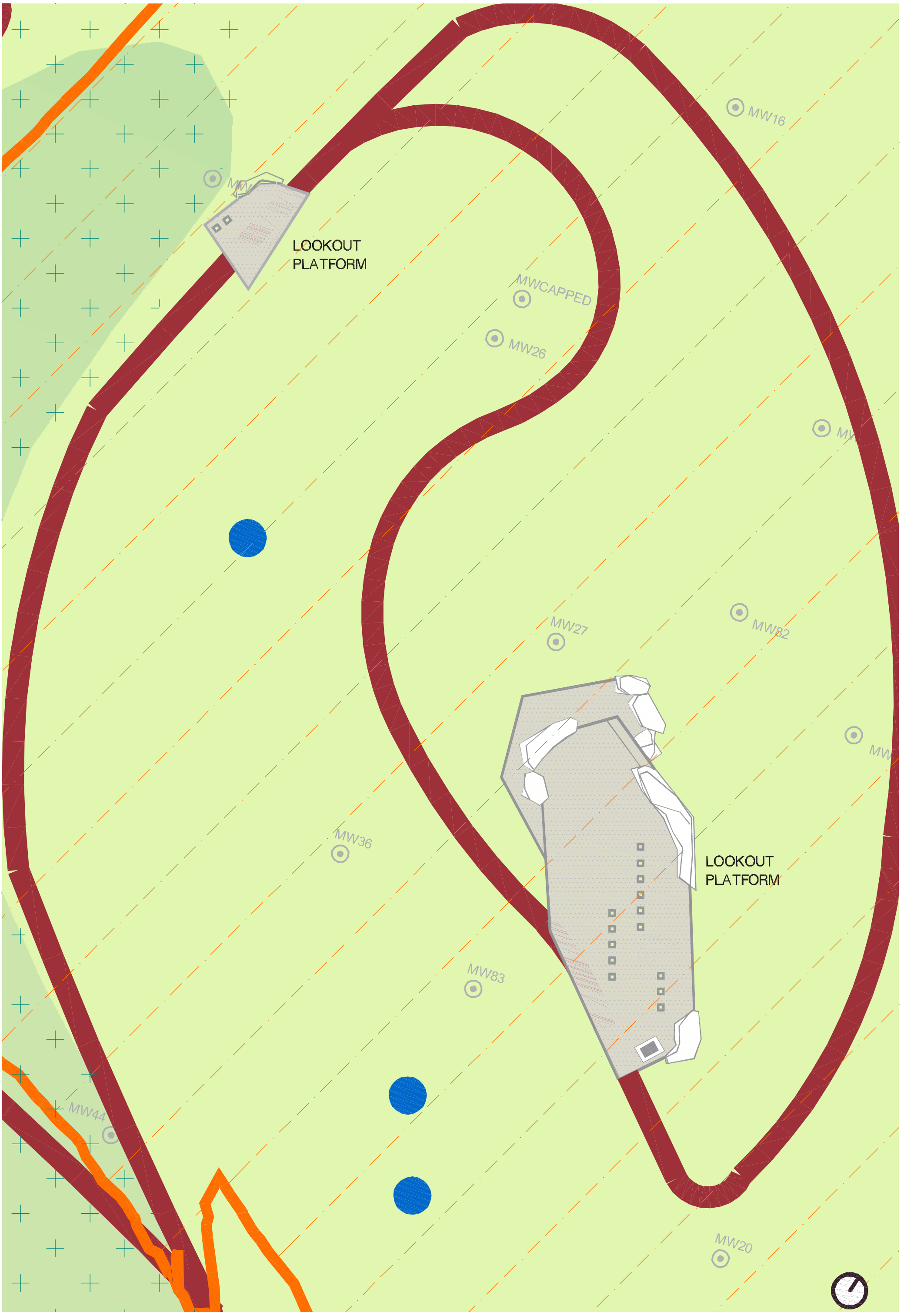
LOOKOUT AREA

The third focus area is located within the protected vista zone of the site, with lookouts proposed at the peak and along a lower elevation. These lookouts should incorporate opportunities for gathering, rest and interpretive features.



LEGEND

- EXISTING RESTORATION PLANTINGS
- EXISTING MEADOW
- EXISTING FOREST COMMUNITY
- EXISTING GAS & MONITORING WELL
- PROTECTED VISTA: ZONE A
- OFF ROAD CYCLING OPPORTUNITY
- PROPOSED SHARED USE TRAIL
- PROPOSED INTERPRETIVE ELEMENT
- PROPOSED FEATURE

beare road site

DRAFT LOOKOUT PLAN

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14.0 Trails

FIGURE 3.9 MOORE PARK RAVINE TRAIL, TORONTO, ON

The site offers excellent potential to add to the trail network in the area and this could include trails that cater to a number of different uses such as walking, hiking and nature interpretation. It also provides an opportunity to cater to more active uses such as trail running and off-road cycling. Given the size of the site (75 ha.), the varied topography, and outstanding views of the surrounding landscape it may be possible to accommodate both the more passive type of trail use (i.e. walking) with a more active use (i.e off-road cycling and trail running). It may be possible to use separate areas of the site for more passive types of trail use and other areas for more active trail uses, although a model that interlaces these two types of trails would likely be more successful, provided that the site is actively managed by the city with support and stewardship by user groups.

FIGURE 3.10 MILL RUN TRAIL, CAMBRIDGE, ON

The City of Toronto has extensive experience managing natural surface trails and has recently released the Natural Environment Trails Strategy. This document aligns with TRCA trail standards and should be referred to in future detailed design documents.

There are numerous examples throughout the province where cooperative use and management of trail systems has taken place. The Guelph Off-Road Bicycling Association (GORBA) trail network near Guelph Lake- approximately 20km of mountain biking trail has been interlaced with a multi-use spine trail. The land area occupied by the trail network is approximately 150ha and it is cooperatively managed by GORBA and the Grand River Conservation Authority. Trails cater to a variety of skill levels, and are available to GORBA members.

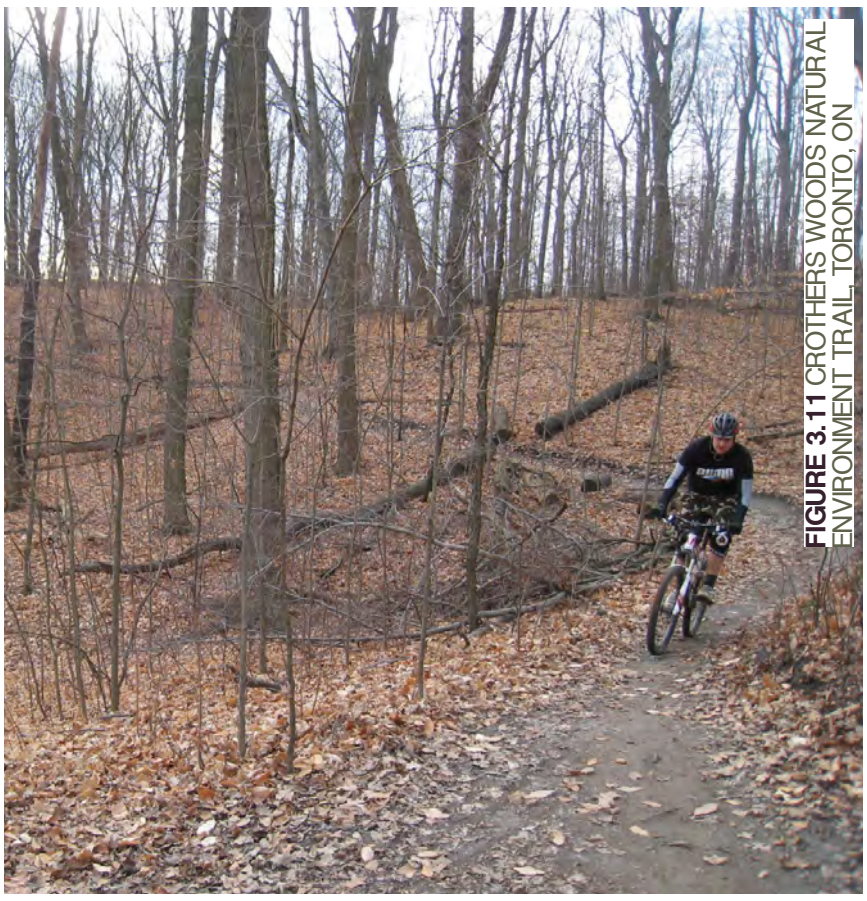

FIGURE 3.11 CROTHERS WOODS NATURAL ENVIRONMENT TRAIL, TORONTO, ON

FIGURE 3.12 BEARE ROAD PARK EXISTING TRAIL

TABLE 15.5 PROPOSED TRAIL TYPES AT BEARE ROAD PARK

TRAIL TYPE	DESIGN CHARACTERISTICS	UNIT PRICE ($/linear m)
TYPE 1 MULTI-USE	• 3.5 to 4.0m wide • Granular surface (Granular A or B base with compacted stonedust or limestone screening top course) • 10% max. longitudinal slope (<5% preferred wherever possible • Wide radii on curves • Minimum 0.6m horizontal clear zone on both sides of the trail • Minimum 3.0m vertical clearing height • Can support occasional service vehicle access • Level of Difficulty: easy (gently rolling) • No obstacles in trail bed • Constructed with material imported onto the site. Note: existing granular materials may be used for trail base provided that materials meet testing requirements	$200.00
TYPE 2 MULTI-USE	• 1.5 to 2.5m wide • Granular surface (Granular A or B base with compacted stonedust or limestone screening top course • 15% max. longitudinal slope (<10% preferred wherever possible • Wide to moderate radii on curves • Minimum 0.6m horizontal clear zone on both sides of the trail • Minimum 3.0m vertical clearing height • Level of Difficulty: moderate (gently rolling with short steeper pitches) • No obstacles in trail bed, however structures (e.g. stairs) may be used on slopes approaching the 15% range • Constructed with material imported onto the site. Note: existing granular materials may be used for trail base provided that materials meet testing requirements	$120.00
OFF-ROAD CYCLING TRAIL	• 0.75 to 1.5m wide • Natural earth surface wherever possible, some trail hardening with compacted granulars may be used in specific locations • Longitudinal slope <15% where possible, up to 35% for short sections • Tight radii on curves • 0m to 0.3m clear zone on both sides of the trail • Minimum 2.5m vertical clearing height • Level of difficulty: hard (includes a range of pitches from gently rolling to long, steep climbs) • Obstacles deliberately placed in trail bed • Generally constructed with material found on site, some small quantities of materials may be imported for specific locations • Where required use logs and rocks to assist with slope retention on the outslope side of the trail. Use materials salvaged on site where available or import materials from nearby donor sites where tree removals have taken place	$40.00
OFF-ROAD PEDESTRIAN AND CROSS-COUNTRY SKI TRAIL (eg. DIAGONAL STRIDE)	• 0.5 to 1.2m wide • Mown surface in open areas (i.e. mow 3 to 4 times per season) • Woodchip surface in wooded areas • Longitudinal slope <15% where possible, up to 35% for short sections • Moderate to tight radii on curves • 0 to 0.3m clear zone on both sides • Minimum 2.5m vertical clearing height • Structures (e.g. stairs) may be used on steep slopes • Level of difficulty: moderate to hard (includes a range of pitches from gently rolling to long, steep climbs) • Obstacles may be present in trail bed • Constructed with material found on site, some small quantities of materials may be imported for specific locations. Construction is minimal, generally limited to clearing the trail bed, minor regarding to reduce high and low points, creating a bench for the trail bed on side slopes, reseeding where required	$20.00

15.0 Management

ADAPTIVE MANAGEMENT

An adaptive management approach will help the Beare Road site transition to the educational, recreational and ecological purposes that are proposed in this park Master Plan. This will need to occur in a time frame that is in keeping with civic expectations of the site becoming a public park.

As has been previously outlined, the site cannot be “restored” in the traditional sense of the word, due to the massive changes to the soils and topography that have taken place over the course of the site’s history of gravel extraction and landfill.

Rather, there is an opportunity to revitalize it. The revitalization approach embraces deliberate enhancement of habitat and provides opportunities for further adaptive evolution to take place. The actions taken will need to be both deliberate and sensitive, iterative and slow.

Effective linkages have been initiated with numerous stakeholders. For example the Approach developed in the Master Plan process for the Beare road site is consistent with and shares many of the goals established by the proposed Rouge National Urban Park.

To fulfill habitat protection, enhancement and education goals established by the Approach, a revitalization management plan is recommended to be developed prior to the detailed design phase. The revitalization management plan will develop measurable outcomes for the enhancement and protection of the habitat.

The revitalization management plan should establish measurable outcomes for:

- Biodiversity, including species richness and trophic structure habitat fragmentation, including:
    - Meadow and forest patch size and edged patch ratios
    - Biomass growth and decomposition rates
    - Nutrient composition
- The soils, vegetation and fauna should be inventoried and investigated in order to compile a reasonable data baseline:
    - soils inventory
    - vegetation inventory
    - and species at risk inventory

Once data and management exercises have been completed targets should be set for invasive species removal and soils, vegetation and faunal habitat enhancement, among others.

Soil and plant community enhancement strategies will need to be adaptive as further site reconnaissance is undertaken; and the precise locations of interventions will evolve as more data is acquired.

The landfill cover, consisting of relatively impervious fill and soil and non-pervious clay, provides opportunities for variances in Meadow and Forest habitat enhancement and revitalization. Minor adjustments to the existing soil cover are required in order to provide enhanced opportunities for ecological adaptation to occur. Habitat patch size and edge to patch ratios are important factors that will influence the modification of topsoil, fill and plant cover.

The typologies of the Forest and Meadow species are influencing factors that need to be taken into consideration as further field studies are undertaken . Inventories of existing native meadow plants and soils on the site will form a baseline from which strategies for preservation and enhancement of Meadow and Forest Communities can be developed.

A protocol for addressing invasive plants is a critical part

of habitat enhancement and management. City of Toronto's protocol for addressing invasive plants should be incorporated into the management plan of the Park and will help protect the native habitats and reduce the landfill's impact on lands beyond its boundaries.

The health of the Beare site and of the Little Route River river are entwined, since the nutrient systems of both the meadow and forest communities are tied to those of the river. The river is both the source and sink for nitrogen, phosphorus and carbon cycle systems. This means that the relationship of the ecology of the Beare site to the Little Rouge River needs to be kept in mind in any future plans. The time-scales and outcomes for the adaptive evolution of both river and site revitalization are inextricably connected.

Design modifications to the existing access road should be considered to minimize species mortality and to provide a mix of mobility options for cyclists, pedestrians, service and emergency vehicles. Consideration should be given to snow and storm water runoff management in the design implementation phase.

Cycling routes and zones proposed on the site need to be designed with a capacity to adapt to future site inventories and the evolution of ecologically significant communities and relationships.

This revitalization process will be challenging but it also provides a unique educational and social learning opportunity. *"Social learning is defined as a collaborative process among multiple stakeholders aimed at addressing management issues in complex systems."* (Krasny, M; Tidball, K. Community Gardens as Contexts for Science, Stewardship and Civic Action Learning. Cities and Environment, 2009)

KEY CONSIDERATIONS

1. HABITAT

Maintaining ecological and educational benefits will necessitate constraints on the type and location of recreational activities.

Maintaining these benefits will also require a protocol for addressing invasive plants. City of Toronto's protocol for addressing invasive plants will be incorporated into the management plan of the Park. A management plan will help protect the landfill's native habitats and reduce the landfill's impact on lands beyond its boundaries.

Considerations for mitigating road mortality on the landfill access road in the absence of concentrated zones of wildlife crossing include restrictions on road activities and vehicle use particularly during wildlife migration periods, and conspicuous signage.

2. SPECIES AT RISK

During the course of the Master Plan process we have recommended that a survey of ground nesting bird species at risk be undertaken. The survey has been carried out in Summer 2013 and accompanying report has been published. Consideration should be given to the survey and preferred outcomes established for species at risk and other aspects of work, as detailed in Chapter 16 of this Master Plan.

Discussion with the Ministry of Natural Resources should be initiated prior to undertaking preliminary design in order to receive any comments they may have on preferred outcomes that are incorporated into an adaptive management plan.

3. STORMWATER MANAGEMENT

It is unlikely that the Master Plan for the Beare landfill will result in any changes to the imperviousness of the site, and therefore there will be no change to the water balance, and to the quality and quantity of post-development runoff. If this is the case, the proposed re-use of the site will have no adverse impacts on runoff and therefore stormwater management measures will not be necessary.

If a parking lot is required at the site, then stormwater management best management practices will be designed to address the water balance and quality and quantity control requirements of the WWFMG on site at the parking lot.

KEY CONSIDERATIONS

4. STORMWATER POND AS STORAGE

The rehabilitation of the stormwater management pond to provide spill control in the case of a rupture in the leachate forcemain may be considered. The pond would have to be cleaned of its accumulated sediment in order to be able to capture a spill. Measures to reduce the risk of a future rupture in the forcemain have been implemented, therefore the risk of a future break in the forcemain would have to be weighed against the cost of cleaning the pond .

5. STORMWATER POND AS HABITAT

If the original intent of the stormwater pond is no longer required and the pond does not provide some function in leachate management, then consideration can be given to formally recognize it as pond and wetland habitat.

6. PROTECTION OF SIGNIFICANT NATURAL HERITAGE FEATURES

An environmental/natural heritage impact study is typically required in support of development applications. However, in this case, where a formal site plan application is not anticipated to be required, mitigation of impacts to natural heritage features should be contemplated through the detailed design of proposed trails and structures. The mitigation strategies recommended above for the habitat areas are recommended to help satisfy the policies of the Greenbelt Plan and the Provincial Policy Statement. During detailed design, the City should consult with the Toronto and Region Conservation Authority to help ensure that there will be no negative impacts on Provincially significant natural heritage features. Impacts of any small-scale structures proposed within or adjacent to these habitat areas or the Provincially Significant Wetland should be evaluated during detailed design.

7. METHANE AND LEACHATE EXTRACTION SYSTEMS

KEY CONSIDERATIONS

The City of Toronto and Ministry of Environment do not have explicit regulations or guidance on operating methane extraction systems in public open spaces. It will be critical that the implementation of proposed landscape design and land use strategies deploy best practice measures to ensure public health and safety as well as the integrity of both the methane and the leachate collection and processing systems.

The City will remain responsible to manage health and safety hazards that may result from the gas migration both on and off-site. Results of continued monitoring can contribute to the evaluation of the City's options. After the gas collection for the gas-to-electricity generation is no longer effective, some form of gas collection and venting may continue to be necessary.

Future City maintenance staff should still undertake appropriate safety precautions before entering confined spaces including culverts, catch basins, and manholes located on-site or immediately adjacent to the property.

8. IMPACTS FROM THE HYDRO CORRIDOR

Proposed structures and recreational uses may be set back from the hydro corridor to help reduce risk from EMFs. The size of the setback will depend on the proposed use. A larger setback should be provided for more active uses, where users will spend a considerable time, and therefore be exposed to the EMFs for a longer period of time. Additional mitigation strategies may be identified by the City of Toronto. Toronto Public Health should be consulted as part of this review, to help assess the risks of EMFs on park users. They may identify that an EMF Management Plan be prepared where recreational facilities are proposed near hydro towers (with 50 feet). Appropriate mitigation strategies may be identified from the EMF Management Plan, which are based on the proposed use of the site and the risk of health impacts from the hydro towers..

9. RAILWAY SAFETY, NOISE AND VIBRATION IMPACTS

Normally, through a development application process, studies may be prepared to assess issues such as noise, vibration, safety and other impacts. In this case, where a development application is not anticipated, consideration should be given in consultation with the City of Toronto staff to mitigation strategies. Consultation with CN Rail is recommended to help design mitigation measures prior to the implementation of the Master Plan.

	KEY CONSIDERATIONS
10. AMENDMENT TO THE EXISTING CERTIFICATE OF APPROVAL	At the moment of implementation, the City of Toronto will need to see if an amendment to the existing Certificate of Approval is required to permit the anticipated changes in uses and operations in support of this Master Plan.
11. RECREATION OPPORTUNITIES	Develop programmatic relationships available in the recreational opportunities identified.
12. EDUCATION OPPORTUNITIES	Develop programmatic relationships available in the educational opportunities identified.
13. ASSOCIATION WITH TORONTO ZOO AND PROPOSED ROUGE NATIONAL URBAN PARK	The Beare Road Park site is a large enclave of City-owned land that will abut or be completely surrounded by the proposed Rouge National Urban Park (*RNUP*), depending on the yet to be decided boundaries of the park. It is also in close proximity to the Toronto Zoo. The proximity of the three facilities provides a unique opportunity for collaboration, to meet the needs of a large range of visitors to the area, protect the natural environment, and share resources. This Master Plan positions Beare Road Park as a strategic destination with unique features (e.g., highest point of land; view of Toronto skyline, active recreation trails) in its own right. By providing facilities and programming to park users which may not be addressed elsewhere within the Rouge National Urban Park and contributing to other synergies among the three facilities, Beare Road Park also has the potential to enhance the Rouge National Urban Park and Toronto Zoo visiting experiences. Opportunities for collaboration among the three facilities are several-fold and include trail connections between Beare Road Park and RNUP (e.g., walking and offroad cycling); natural habitat connections, programming, research opportunities (e.g., species at risk, habitat restoration,) shared facilities (e.g., parking, washroom, shelters), and the opportunity to share “gateway” functions.

KEY CONSIDERATIONS

14. VIEWS AND VISTAS

Develop programmatic relationships that protect and enhance views, vistas and experiences of the open space.

15. INCLUSIVE ACCESS

To facilitate the conversion of the Beare site into a public park, consideration needs to be given to providing inclusive access for park users and staff. These considerations may include site access requirements for the city Solid Waste Management Vehicles, site access by the private methane facility operator and maintenance vehicles and requirements for emergency access. Inclusive access encompasses needs of people of all ages and abilities.

Compliance with Accessibilities for Ontarians with Disabilities Act (*AODA*) requirements for public spaces may be required in some areas. Specific requirements for accessibility of recreational facilities, trails, paths of travel, natural areas and signage should be evaluated during detailed design. For a more detailed discussion of AODA regulations see Appendix 3 - Policy Framework.

Removal of the fence will provide a more direct access to the wetland for users.

Removal of the fence will need to consider trail management in the Provincially Significant Wetland *(PSW)*.

16. TRAILS

KEY CONSIDERATIONS

The site offers excellent potential to add to the trail network in the area and this could include trails that cater to a number of different uses such as walking and hiking, and nature interpretation. It also provides an opportunity to cater to more active uses such as trail running and off-road cycling. Given the size of the site (75 ha), the varied topography, and outstanding views of the surrounding landscape it may be possible to accommodate both the more passive type of trail use (i.e. walking etc.) with a more active use such (i.e. off-road cycling and trail running). Consideration for the latter may help to alleviate some of the pressure on more sensitive valley land areas where mountain cycling is currently taking place, indicating a significant demand for this type of use proximate to city neighbourhoods. It may be possible to use separate areas of the site for more passive types of trail use and other areas for more active trail uses, although a model that interlaces these two types of trails would likely be more successful, provided that the site is actively managed by the city with support and stewardship by user groups.

There are numerous examples throughout the province where cooperative use and management of these kind of trail systems has taken place. The Guelph Off-Road Bicycling Association (GORBA) trail network near Guelph Lake- approximately 20km of off-road cycling trail has been interlaced with a multi-use spine trail. The land area occupied by the trail network is approximately 150ha and it is cooperatively managed by the Grand River. Trails cater to a variety of skill levels, and are available to GORBA members.

Locations of trailheads and trail connections should recognize seasonal trail closure practices within the proposed Rouge National Urban Park.

17. AMENITIES

Consideration should be given to provide a washroom facility in Beare Road Park. At the implementation stage of the Master Plan, the design of any enclosed facilities should take into account the presence of explosive gases at the site.

16.0 Next Steps

1. REVITALIZATION MANAGEMENT PLAN

• continue to build data repository

•• survey and inventory soils, vegetation, infrastructure, including gas wellheads and buried utilities, topography and fencing.

• set targets and measurable outcomes

• develop feedback mechanisms

2. PRELIMINARY DESIGN

• confirm the functional requirements of the site

• refine the architectural landscape architectural elements

• refine the educational program

• develop interpretive program

3. DETAILED DESIGN

• develop construction drawings and specifications

• develop traditional and nontraditional methods of implementing the detailed design ,including tendering and public participa•tion models

4. CONFIRM SCHEDULE

5. FIRM BUDGETS

next steps

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LIST OF MAPS AND FIGURES

APPENDIX 1

PUBLIC CONSULTATION SUMMARY REPORTS

1. SWERHUN FACILITATION. BEARE ROAD PARK MASTER PLAN PUBLIC MEETING. OCTOBER 11th 2013. DRAFT SUMMARY REPORT FOR PARTICIPANT REVIEW

2. SWERHUN FACILITATION. BEARE ROAD PARK MASTER PLAN PUBLIC MEETING. DECEMBER 6th 2013. DRAFT SUMMARY REPORT FOR PARTICIPANT REVIEW

3. SWERHUN FACILITATION. BEARE ROAD PARK MASTER PLAN PUBLIC MEETING. JANUARY 24th 2013 DRAFT SUMMARY REPORT FOR PARTICIPANT REVIEW

Beare Road Park Master Plan

PUBLIC MEETING

Thursday, October 11th, 2012
6.30-8.30 pm
Blessed Mother Teresa Catholic Secondary School
Toronto, ON, M4R 1B9 Canada

SUMMARY REPORT

On October 11th, 2012, 33 people participated in the Public Meeting for the Beare Road Park Master Plan. The purpose of the meeting was to introduce the project, to discuss participants' vision for the Park and the design principles that should guide the process for the Beare Road Park Master Plan.

This summary report was written by Bianca Wylie of Swerhun Facilitation & Decision Support and was circulated to participants in draft form for edits and comments prior to being finalized. It summarizes the feedback received at the meeting and includes feedback received in the worksheets, emails and phone calls received prior to and following the meeting. It is intended to summarize the key themes discussed and is not intended to be a verbatim transcript. Also, please note the following attachments: A. Meeting Agenda B. Questions of Clarification

KEY MESSAGES FROM FEEDBACK RECEIVED

The following five key messages emerged from the discussion. Detailed feedback follows.

1. **Integrate the proposed Beare Road Park with the proposed Rouge National Urban Park** – Several participants thought that it is important to integrate the proposed Beare Road Park with the proposed Rouge National Urban Park. These participants said they would like to see access to the site integrated with existing Rouge Valley trails, integration in terms of wildlife habitat, and integration with nearby and potentially complementary recreation options.

2. **Preserve Natural Space and Protect Species** – There was a desire among some participants for the proposed Beare Road Park to be in as natural a state as possible, conserving its ecological value, and protecting species – particularly those formally designated a species at risk, such as the milksnake and bobolink – and their habitat. One participant felt that "It's important to keep in mind that people's connection to nature is individualistic and can vary from quiet introspection to more active forms of recreation. If recreation can be integrated into the park's management plan, ecological integrity and health must be paramount."

3. **Incorporate Recreational Uses** – Some participants would like to see the proposed Beare Road Park incorporate low-impact non-vehicular recreational uses, including mountain biking, hiking, and winter activities. Some participants were concerned that the proposed Beare Road Park may not be the right place for mountain biking trails due to the prevalence of species at risk, while others felt that mountain biking could be integrated in such a way that species at risk could be protected.

4. **Make Use of the Elevation of the Site** – A number of participants were interested in making use of the elevation of the site. These participants expressed their appreciation for the views and vistas available from the highest point of the site and felt that they should be protected.

5. **Explore Opportunities for Education** – A number of participants thought that the proposed Beare Road Park presented opportunities for education, including environmental (e.g. ecology onsite), cultural and recreational (e.g. orienteering, geocaching) education.

DETAILED FEEDBACK

Detailed feedback is organized into four parts.

- What is your vision for the proposed park?
- What are the principles that should guide the development of the Beare Road Park Master Plan?
- Other advice for the project team
- Additional stakeholders to engage

A. Participants' Vision for the Proposed Park

- A park for conservation, placing nature first
- A place for both active and passive recreation
- A quiet place where users can relax and take in nature
- A place for the local community to enjoy and for kids to play
- A park that meets society's collective needs and is inclusive of as many uses as possible

B. Principles to guide the development of the Master Plan

- **Ecology.** Design with the natural environment as a principle. Protect endangered/sensitive species, wildlife and habitat and keep migration patterns and behaviours in mind. Reduce the nature deficit in the lives of Torontonians. Facilitate a healthy ecosystem.
- **Multi-use.** Acknowledge that the connection with nature is different for all individuals and that a range of uses could be integrated, so long as ecological integrity is put first. Multi-use design would satisfy the greatest number of users. Some want active use, others want passive use; examples of both include bird-watching, biking, hiking, viewing the city. Create recreation for all seasons and complement the nearby recreation options.
- **Access**. Integrate seamlessly with the proposed Rouge National Urban Park and increase the number of access points for all types of users. Complement use of the proposed Rouge National Urban Park. Create a mobility network that takes cars, bikes, pedestrians and hikers all into consideration.
- **The top of the site.** The views should be maintained and enhanced.
- **Education**. Recognize opportunities for issues related to the site, including: ecology, culture, history, brownfield remediation, landscape remediation, native and invasive species, urban forestry, community forestry and management issues. Integrate the education programs with existing City of Toronto programs. Support a shared understanding of how and why this site came to be, and how to make fewer sites like it.
- **Process.** Engage the local community, residents, recreational users and those with specialized knowledge in the design of trails. Engage the region's diverse multi-stakeholders to help ensure sustainability. Value diverse voices. Be future-oriented, recognize that the urban population is growing and so is pressure on open space. Be bold and creative with the design.

C. Other Advice for the Project Team

Ecology

- Reduce threat of invasive species and fragmentation of surrounding area by creating a mixed forest woodland in the lower half.
- Use grassland and intervention to protect the view and ensure it doesn't become a tree-covered hill.

- Minimize impact on environment by barring motorized recreation.
- Support the existing meadow/grassland and woodland environments.
- Keep the water clean, especially the stormwater management pond.
- Monitor and test air quality (for things such as chloride).
- Manage drainage.
- Avoid habitat and migration corridor fragmentation and any other activity that may threaten ecologically sensitive areas and species at risk.
- Give back to nature.
- Consider that as the site was a landfill and does have a cap on it, it may not be suitable for tree-planting. Also ensure there are no built forms cutting into the landfill cap.
- Protect the Bobolink, Milksnakes, Eastern Meadowlark and other birds of prey that require protection. Also protect: Trumpeter swans, Blanding's turtles, Snapping turtles, Midland Painted Turtles, Killdeer, Gray Treefrogs and the Eastern Newt.
- Educate the public that the environment is dynamic and evolving.
- Use enforcement to protect the area and surrounding wildlife.
- Remove fencing where possible or provide wildlife access.
- Protect the north mound and woodlot as a no-go area.
- Preserve the meadow, it is almost non-existent in Toronto.
- Consider urban tree canopy in the process.

Access

- Partner with Parks Canada to ensure successful integration of the parks.
- Create safe access points and limit the number of access points.
- Be aware of the impact of changing the road from private to public use – the change would increase the amount of road kill and vertebrate mortality, at current usage there are already up to 16 vehicles a day. Some participants don't want the access road made into a public access road.
- Large vehicles need regular access to power plant.
- The removal of fences that surround the Beare Landfill site will increase the amount of illegal ATV, motorbike and snowmobile use, in an area where minimal enforcement is already an issue.

Recreation

- Make uses between adjacent parks complementary.
- Mountain bike users want to protect the species at risk and the conservational aspects of the park and would like to work in partnership with the community and the environmental groups in the design process.
- Develop mountain bike riding experiences that include: built structures, pump tracks, flow lines and jump lines.
- Investigate progressive bike parks and the Flow Country trail concepts, including McLennan Park, Georgina ROC Bike Park and Joyride150.
- If recreational activity will be permitted, ensure that it is sustainable, low-impact and non-motorized, while restricting/banning it in ecologically sensitive areas and those know to have species at risk.
- Create opportunities for quiet reflection.
- Consider the park an area suitable for large groups of public users since it is not a pristine environment.
- Consider creating a meditative and contemplative space with the top of the site.
- Consider conservation principles and carrying capacity when deciding on land use and recreational activities.
- Consider turning this landfill site into a golf course, like the BraeBen golf course in Mississauga. This use of the land allows public access and preserves the essential wildness and plant diversity.

- For mountain bike riding, all suggestions should be built according to best principles, including; sustainable trail design and construction, shared use wherever possible, risk management features and options for riders of all levels.

Safety

- Keep gas wells and power plants safe and inaccessible to the public.
- Prevent the leakage of gas wells.
- Assess air quality, biological inventory and landfill cap erosion and leaching into waterways and the environment – define the current status and explain how threats will be avoided and mitigated. Address how land use and recreational activities will affect these issues.

Facilities/Amenities

- If parking is provided it should be in the periphery only.
- Consider an observation post, deck or lookout.
- Consider an area for sky-watching and night-time viewing.
- Avoid the creation of built structures.
- Leachate and gases need to be controlled, but make an effort to do so with minimal infrastructure.
- Do not add lighting to the park.
- Include facilities for people such as benches, shade and washrooms.

Other

- Look at the nearby Toronto and Region Conservation Authority Greenwood Conservation Lands Pickering Community Park and other precedents as successful examples of park design.
- Use low-impact design.
- Develop a comprehensive ecosystem-based management approach that allows participatory governance and multi-stakeholder collaboration, yet places ecological health, integrity and nature first.
- Conduct environmental assessments on whether a viewing platform can be sustained at the park's highest peak.
- Consider how conflicting perceptions of landscapes may affect how people will interact with the park.
- Identify how public access will be checked with monitoring and enforcement, who will be responsible and in what capacity?
- Identify how crossover from biking and other recreational activities (if allowed) that aren't allowed in Rouge Park will be mitigated.
- Consider the opportunity to divert low-impact non-motorized biking from Rouge Park (where some visitors disregard the no-biking rule) to the Beare Road Park.

The project team would like to note receipt of vertebrate mortality documentation from a participant, which can be made available upon request.

D. Additional Stakeholders to Include

Participants suggested the project team put notices up near the site to engage existing users. Participants also suggested additional stakeholders to invite to the next meeting, including:

Residents

- East of Beare Road, Finch Avenue
- Local residents (ward 41, 42, 44)

Ecology

- Representatives of deer and wildlife
- Amos family of Amos Pond property

- Toronto Entomologists' Association
- Friends of the Rouge Watershed
- Rouge Watch
- Toronto Birding Groups
- Herpetologists
- Ornithologists
- Durham Naturalists
- Altona Forest Stewardship Committee
- The Pickering Naturalists
- Hillside Community Association
- Ecohesian Inc.
- David Suzuki Foundation
- Rouge Valley Conservation Centre
- Rouge Valley Foundation
- CPAWs
- Ontario Nature
- WWF-Canada
- Rouge Park Staff and Volunteers
- Hike Ontario
- Ontario Trails
- Scouts and Girl Guides
- Islamic Institute of Toronto
- Islamic Foundation of Toronto
- Pickering Islamic Centre
- Masjid Zakariya,
- Congregation Darchei Noam

Recreation Groups

- International Mountain Bike Association
- Durham Mountain Biking Association
- Toronto Off-Road Bicycling Association
- Geo-caching groups
- Trail running groups
- Equestrians

Other

- Ontario Hydro corridor (Hydro One)
- The historical local community
- Landfill experts
- Private Investors
- E.S. Fox Contractors

NEXT STEPS

Garth Armour thanked everyone for attending, and reminded participants of the second meeting, to be held in November (*Please note: the updated meeting date for public meeting #2 is now December 6th).* Alex Heath let participants know that a draft of the notes from the workshop would be distributed to them for review prior to being finalized, and to send any additional feedback via email or phone by October 18, 2012 for consideration in the draft summary report.

Beare Road Park Master Plan - Public Meeting #1
Blessed Mother Teresa Catholic Secondary School
40 Sewells Road
Toronto, ON M1B 3G5
Thursday October 11th, 2012
6:30 – 8:30 pm

PROPOSED AGENDA

Meeting Purpose: To begin the process of developing a Master Plan for the proposed Beare Road Park, to provide background information on the project, and to gather input on your vision for the park, the guiding principles that should influence the design process, and the consultation approach.

6:30 pm **Welcome**
Garth Armour, Supervisor of Natural Environment & Community Programs, City of Toronto & Pamela L. Veinotte, Field Unit Superintendent – Rouge National Urban Park, Parks Canada

6:35 **Introductions & Agenda Review**
Alex Heath, Facilitator, SWERHUN Facilitation & Decision Support

6:45 **Presentation/Participant Briefing**
Project History, Consultation Process Overview, Site Background and Existing Conditions *Ian Gray, Senior Landscape Architect, MMM Group Limited*

Questions of clarification – Facilitated by Alex Heath

7:00 **Discussion**

Discussion Questions:

1. What is your vision for the proposed Beare Road Park?
2. What are the principles that should guide the design process of the proposed Beare Road Park Master Plan?
3. Are there any additional stakeholders that we should include in the process?

   Do you have any other advice?

8:25 **Wrap up and Next Steps**

8:30 **Adjournment**

Attachment B. Questions of Clarification

Questions asked at the meeting are listed below. Answers from the City and their consultant team, where provided, are noted in *italics*. In some cases the team agreed to supply answers after the meeting – those are also included here. The questions are listed chronologically.

Has there been air quality sampling and has it picked up things like chloride? *Within the scope of the master plan, we would look for a pre-existing study or recommend doing a study as part of the implementation stage.*

Where is the power going from the site? *The power is sold by the owner/operator of the generation facility to Ontario Hydro – similar to the Keele Valley, we have three 5 megawatt plants. All three have power purchase agreements with Ontario Hydro*

Are you going to do a biological inventory before disrupting anything? It is already a naturalized space and there is a variety of sensitive species. *One of our sub-teams deals with ecology and has visited the site and gathered information and will do background studies in terms of habitat.* **Additional comments from the project team added after the meeting:** *Existing conditions have been inventoried from a combination of background data provided by local naturalists, background reports and observations made during field visits by ecologists for this project. There is enough data collected to assist with developing a master plan. Requirements for detailed inventories prior to implementation of the plan will be identified before the completion of this study. In addition, we are following up with the TRCA for any additional information related to this question.*

You mentioned the Brickworks – there used to be a lot of turtles and other wildlife there and now there are lots of fences and gold fish. *This is your opportunity to let us know your values and the principles we should use in the development of the Master Plan.*

The site is not fully decommissioned. *We have another sub-team that is looking at the Certificate of Approval. Our land use planners and environmental planners and brownfield experts will work together, they have an understanding of how landfills are set up and this will help us understand this landfill. There is an approval process.* **Additional comments from the project team added after the meeting:** *Decommissioning is a general term for a process to remove something from active status. By this definition, Beare Road landfill closed operations in 1983. Another definition involves a process at an end point wherein a facility, previously used for a particular purpose, is dismantled and the lands are restored to the conditions existing before construction or it is put to some other use. The former does not apply to Beare Road because there is no intention of excavating the landfill site to remove the waste mound. We are undertaking the latter, exploring the conversion to a park.*

What is the relationship between the landfill and the park? How will wetlands and drainage be affected? How connected is it? *We have team members that will look at drainage and possible leachate and will make recommendations and comments. We will look into the constraints. Most of us will look at these things as constraints. The landfill has been closed for 30 years and we have extensive groundwater monitoring in place and also a third party consultant in accordance with the Certificate of Approval. The consultant's annual reports are available to anyone to find out the water conditions on the site.*

There is a pipe around the site, what is the extent of the leachate plume? These issues are important. *Facilitator noted this would be included as advice for the master planning process – take leachate into account.*

Beare Road Park Master Plan
City of Toronto

PUBLIC MEETING

Thursday, January 24th, 2013
6.30-8.30 pm
Malvern Recreation Centre
Toronto, ON, M1B 3G5 Canada

SUMMARY REPORT

On January 24th, 2013, over 60 people participated in the third Public Meeting for the Beare Road Park Master Plan. The purpose of the meeting was to present selected aspects of the project team's work done to date, and to present and seek feedback on the draft conceptual design. Participants included: local residents, Parks Canada, 10,000 Trees for the Rouge, City of Toronto Parks, Forestry & Recreation, Rouge Park, Durham Mountain Biking Association, International Mountain Bicycling Association, Ecohesian Inc., Toronto and Region Conservation Authority, Pickering Naturalists, Friends of the Rouge Watershed, City of Toronto Landfill Management Staff, Rouge Park Foundation, Toronto Field Naturalists, University of Toronto students, Toronto Zoo, a teacher from the TDSB, and a number of participants who identified themselves as hikers, cyclists, walkers, runners and users of the park. The meeting began with a welcome from Garth Armour, Supervisor of Natural Environment & Community Programs, Parks, Forestry and Recreation, City of Toronto and Pamela L. Veinotte, Field Unit Superintendent, Rouge National Urban Park. Councillor Raymond Cho was in attendance and provided words of welcome as well. Next, Jeff Warren, Ecologist, MMM Group Limited presented an update on species and habitat at risk, followed by Ian Gray, Senior Landscape Architect, MMM Group Limited, who presented the draft conceptual design. After the presentation there was a round of facilitated questions and answers, followed by a small-table workshop session and a full-room plenary to share workshop results.

This summary report was written by Bianca Wylie of Swerhun Facilitation & Decision Support and was circulated to participants in draft form for edits and comments prior to being finalized. It summarizes the feedback received at the meeting and includes feedback received in the worksheets, emails and phone calls received prior to and following the meeting. It is intended to summarize the key themes discussed and is not intended to be a verbatim transcript. Also, please note the following attachments: A. Meeting Agenda B. Questions of Clarification.

KEY MESSAGES FROM FEEDBACK RECEIVED

The following five key messages emerged from the discussion. Detailed feedback follows.

1. **Many participants felt that feedback received throughout the process was effectively implemented in the draft conceptual design**. A few participants said they could not comment on how effectively feedback was implemented, as it was their first meeting.
2. **The proposed approach for parking and road access was met with a wide range of opinions and was identified as an important issue by many participants.** While some participants were very happy to see a plan with limited vehicular access and no parking, others felt that this was a negative element of the design as it would limit the park's use and reduce its accessibility, both to non-local users and those with who would need wheelchair access.
3. **Lack of detail about the trails raised a number of questions.** While many participants were happy to learn of multi-use trails, some felt more detailed information on trail location and material was required. The team was advised to reconsider the exclusion of existing paths in the design, as people use the trails in a certain way and are likely do to so regardless of design, and it's better to work with that knowledge than against it.
4. **Connectivity to the Rouge National Urban Park and the Toronto Zoo are important elements of the future design and its implementation.** Participants felt opportunities to integrate must continue to be explored and cooperation with both Parks Canada and the Toronto Zoo must be maintained.
5. **Safety is a key guiding principle and was raised in several contexts**. Safety was frequently referenced regarding the active rail corridor and the need for emergency vehicle access to the site.

DETAILED FEEDBACK

Detailed feedback is organized into four parts.

- What participants like about the draft conceptual design
- What participants don't like about the draft conceptual design and why
- Other advice regarding the draft conceptual design
- Other advice for the project team

A. What Participants Like about the Draft Conceptual Design and Why

Please note that this feedback is not unanimous, and that some of these same points are raised as things that participants did not like, which are captured and detailed in section B.

- **Limited access roads, lack of additional new roads and no parking lots.** Some participants highlighted the "low-traffic" approach of the draft design as a positive feature, and felt it respected and encouraged the amount of traffic that this small site could handle without becoming overused and without humans becoming too dominant on the site and creating road kill issues. The use of current roads and trails was well received and several participants identified the northeast entrance as a positive aspect of the design.
- **Careful consideration of the ecology of the site.** Some participants commented that they were happy that there weren't "too many trails", and that some of the existing un-manicured elements of the site will be left "as-is". The protection of the meadow habitat and the identification of the southeast part of the site as the key area for this (to connect to the meadow in the hydro corridor) were identified as a positive feature of the design. Some participants felt the identification of the northern forest area for a connection to the surrounding forests and to Rouge National Urban Park was a good idea; others challenged this decision and felt it should be meadow, as detailed below. Various other elements that people liked about the ecological elements of the design included: interpretation opportunities, habitat protection for field-nesting birds, milksnakes and woodcocks and low-impact non-motorized recreational opportunities.
- **Consideration for the environmental diversity on the site.** Participants liked that uses were matched and mapped to the most appropriate sections of the park. This opinion was not unanimous, and concerns with usage in terms of impact on the environment are captured in section B - a few participants noted that additional time for studies on the site would be prudent and were happy to hear that they were part of the near-term plans.
- **Effective implementation of feedback.** Many participants felt the plan captured the input of the public throughout the process; examples included areas of protection for species at risk and location of access points, such as the removal of the northwest access option. Several participants noted they were keen to stay involved on an ongoing basis as the project moved into its next stage.
- **Trails that support a range of users**. Some participants were very happy to see that multi-use (pedestrian, hiking, cycling, skiing) trails will be included; others were very excited for the inclusion of off-road cycling trails, as there are so few in Toronto. Many participants were happy to see a proposal that enhances the larger trails system in the area.
- **A park that will be a unique public resource**. Several participants commented on the strength of the site as a unique destination, different from the Toronto Zoo and the Rouge National Urban Park. Others felt that is was vital to include the educational element of the history of the site, as this part of its story as a unique success in remediating land makes it a great resource for students. Several participants also liked how it connects the city, from the Zoo to Finch.

- **Protection of sight lines from existing vantage points.**
- **Development of additional amenities for users.** One participant liked the plans to develop the entrance area and noted that as the Rouge National Urban Park doesn't have facilities there is potential to share them.

B. What Participants Don't Like about the Draft Conceptual Design and Why

- **Lack of Parking.** Many participants felt that the lack of parking was a major weakness in the design, that this should be reconsidered, and that parking for persons with disabilities is essential. Some participants said that people will drive there regardless of their parking options, so there has to be some idea of where they can park, given that it's very far for most people in Toronto and fairly transit inaccessible. One participant did not feel the northeast corner had been adequately considered and that there could be a small parking area there.
- **Lack of detail about the trails.** Some of the details that participants wanted more insight on included:
    - How long would the trails be.
    - What percentage of the site would be used for trails.
    - Whether the off-road biking trail would be a dedicated trail.
    - How user-conflict would be addressed.
    - How unofficial trails on the site would be addressed.
    - How to manage the people that will go into the forest if the trails are too close to the forest (i.e.; where the cultural heritage/lookout area is proposed).
    - Elevation gradients.
    - Species-at-risk habitat protection.
    - Where hiking trails cycling rails, ski trails and off-road cycling trails will intersect.
    - Details on the bike storage facility.
    - If the cross-country trails will become hiking trails in the summer.
    - If the existing perimeter road could be used as a multi-use trail.
    - How to manage the impact of the use of the switchback trail on the adjacent cedars that should be encouraged to spread throughout the site.
- **Some participants felt the off-road cycling trails were unnecessary and did not need to be included, that they were in conflict with a site that had species at risk in it, or that they could be included in different ways than those proposed.** In addition, some participants were concerned about the potential for the bike trails to erode the cap of the landfill and require repair as well as encourage overuse of the site. Other participants suggested moving the mountain bike trails to the northern side because of the steepness of the southern side and the erosion risk.

C. Additional Ideas for the Draft Conceptual Design

Ecology

- **Consider that any soil or air quality issues that are being raised now in terms of testing would also apply to residents who have lived near the site for years.** If there are issues in this realm they should be addressed for existing residents, not just through this process for a new park.
- **Do not pave the top-most platform on the hill, the area erodes and sinks every year and should remain natural.** Consider design with gravel bordered by rocks or logs, or consider just leaving it as grass, as it is now.
- **Do not increase salting of any road as this run-off will go into the Rouge.**
- **Consider and design for the impact of increased human traffic on the wetlands.**

- **Add forest regeneration to the east side to protect the wetland complex.**
- **Ensure proper drainage solutions are developed and implemented.**
- **Consider additional areas that could be defined as areas for species protection.**
- **Protect the existing meadow in the north half of the site rather than planting more trees.** It's hard for meadow to stay meadow because if left alone, a meadow would naturally undergo succession to a forest. As this is natural meadow it should be protected. There are very few suitable nesting sites for species-at-risk and this is one of them.
- **Consider allowing Beare Road Park to continue be a place for species-at-risk to be safe as first priority** and remove consideration of any uses that are in conflict with this approach from the design.
- **Consider wildlife crossings for the limited access roads.**

Access

- **Consider that the main parking area could be by the Pearse House,** with the opportunity for overflow parking to go to the Zoo.
- **Add a TTC stop before the bus turns across the bridge on to Meadowvale Road.** Some participants stated that there already is a stop beside the park.
- **Incorporate more of the existing secondary trails and roads into the design.**
- **Connect with existing trails inside the Rouge National Urban Park, and consider bicycle access to the Rouge National Urban Park.** Some participants would prefer for Beare Road Park's trails not be connected to the Rouge National Urban Park's trail system, as it could spread invasive plant species, cause land degradation and cause user-conflict issues.
- **Consider how enforcement and education can be operationalized to facilitate safe biking within Beare Road Park while diverting it away from the Rouge National Urban Park.** Coordinate with the Rouge National Urban Park in assisting with a solution for integration.
- **Consider a second access point from the north.**
- **Develop ideas to maximize safety when crossing the rail line.** A safe pedestrian crossing solution needs to be implemented. Several users suggested a crossing under or over the tracks, for both humans and wildlife.
- **Clarify who would have access to the proposed access road.** Limit access to CN Rail, Toronto Hydro, City of Toronto and E.S. Fox.
- **Be aware that there is an access point liability from the Hydro area access zone.** Once this is made an official City of Toronto trail there will be a liability issue there.
- **Train traffic has a significant impact on user access.** If trains stop**,** there is no alternate route, which can cause a serious access problem. Long trains can also cause significant delay. Consider the development of an alternate access point for emergency vehicles.
- **Design access from the east of the site for people in Pickering.**
- **Create access for those with mobility challenges;** keep accessibility as an important principle to guide design. This includes creating a trail system, visitor shelter and interpretive sites that can be made accessible to persons with disabilities. Additional areas for consideration include wheelchair accessible trails; accommodations for wheelchair accessible parking for pick up and drop-off and fire alarms that are both visual and sound-based.

Recreation

- **Consider revising the trails to include more circuit or loop routes,** these are popular with all trail users.
- **Recognize that users will go where they want to go and it may be safer and more effective to accommodate them than to try and change their behaviour.** If steep trails are prohibitive, consider options such as switchbacks or trails closer to contour lines.

- **Consider designating the steep grade portion of the hill a "walking only" trail,** or alternatively add way finding signage to the steep grade portion of the hill that warns use "at own risk" to warn of children running up the hill.
- **Support good trail manners and habits for all trail users to reduce user conflict.**
- **Allow the site's natural contours to define the new trails.**
- **Consider making the ski trail on the perimeter road rather than in the center of the site.**
- **Consider confining trails to the North and East sections of the site.**
- **Clarify how the cross-country ski trail will be used in the summer;** ideally it will become a hiking trail.
- **Consider separate trials for hiking, biking and skiing.** Having separate trails rather than multi-use trails would eliminate user conflict, safety issues and congestion.

Amenities & Education

- **Consider changing the location of the bathrooms to the entrance of the park**, rather than locating them at the information center for cultural habitation.
- **Increase the amount of interpretive education elements.** One is not enough for a site with the amount of history of this site, consider one on top of the site and a few along the main trail explaining different parts of the history, including one near the power station explaining management of the landfill (water, power etc.).
- **Develop interpretative sings, information displays and educational information about the regional's natural and cultural history and ensure they are accessible to persons with disabilities.**

D. Other Advice for the Project Team

Operations

- **Develop ideas to ensure Torontonians know about the site and will come from across the City to use it for recreations and physical activity.**
- **Create solutions for parking, even if they are not on the site.**
- **Consider enforcement options for unauthorized vehicles that are found on the access road.**
- **Develop cost estimates related to mitigating problems around the site if the proposed access road is opened.**

Process

- **Include opportunities for public consultation after the submission of the Master Plan in the next phase of design**.
- **Don't duplicate efforts and amenities**; there is an existing washroom on the other side of the park approximately 400 meters away.
- **Consult with any or all of the following groups: IMBA, DMBA and TORBA, if additional details regarding the off-road cycling trail will be included in the design**.
- **Take more time to study the site**, a full understanding of the site cannot have been established based on the duration of this project.
- **Be cautious about balancing the input of organized stakeholders with less-organized but just as important stakeholders.**
- **Consider creating guidelines for special interest groups and implement them from the start of future processes** so they are unable to unfairly influence a process and to address any potential conflicts of interest.
- **Consult with local residents regarding heritage and history of the area and consider its inclusion in the next phase of detailed design.**

NEXT STEPS

Bianca Wylie thanked everyone for attending and confirmed that the project team would notify participants once the Master Plan was available for review. Bianca also let participants know that a draft of the notes from the workshop would be distributed to them for review prior to being finalized and to send any additional feedback via email or phone by January 31st, 2013.

Attachment A. Meeting Agenda

Beare Road Park - Public Meeting #3
Malvern Recreation Centre
30 Sewells Road
Toronto, ON M1B 3G5
Thursday January 24th, 2013
6:30 – 8:30 pm
PROPOSED AGENDA

Meeting Purpose: To present the intent of the Master Plan, to present select aspects of work done to date and how it was included in the draft conceptual design, and to present and gather feedback on the draft conceptual design.

6:30 pm **Welcome**
Garth Armour, Supervisor of Natural Environment & Community Programs, City of Toronto & Pamela L. Veinotte, Field Unit Superintendent, Rouge National Urban Park, Parks Canada

6:35 **Introductions & Agenda Review**
Bianca Wylie, Facilitator, SWERHUN Facilitation & Decision Support

6:45 **Presentation/Participant Briefing**
Species at Risk and habitat overview
Jeff Warren, Ecologist, MMM Group Limited.
Project update and presentation of the draft conceptual design
Ian Gray, Senior Landscape Architect, MMM Group Limited.

Questions of clarification – Facilitated by Bianca Wylie

7:30 **Discussion**

Focus Questions:
1. What do you like about the proposed conceptual design? How effectively does it reflect the feedback received to date?
2. Do you have any additional advice for the team as they move forward with finalizing the draft conceptual design?

8:25 **Wrap up and Next Steps**

8:30 **Adjournment**

Attachment B. Questions of Clarification

Questions asked at the meeting are listed below. Answers from the City and their consultant team, where provided, are noted in *italics*. In some cases the team agreed to supply answers after the meeting – those are also included here. The questions are listed chronologically.

At the previous meeting, there were suggestions about access coming from Finch and parking there. This is not evident in this particular concept. Access in this concept is through private road, across the rail line. I have concerns about vehicular traffic on this road. *We're not saying this is what will be. We are creating an envelope saying this is what the possibilities can be. We've recognized that there are concerns about that access road, and so we have recommended that it remain but that it has restricted access. This likely means its use will be restricted to emergency vehicles and vehicles for servicing the site and the plant. We are not yet able to say if restricted access means a narrower road with wildlife corridors across it. We're going to make that recommendation to Parks Canada, but that road is not part of the site. It does remain the most logical place for pedestrian access. There are methods for dealing with railroad crossings – will have recommendations for an appropriate type of crossing depending on the level of pedestrian/vehicle use. We have looked at access points throughout the site, some initially looked good but have winded up further down on the list because of other considerations. There is also potential for vehicular access from the northwest. This doesn't mean that there can't be vehicular access from the northeast; just that it's not at the top of the list.*

Will this be the final meeting? Is there an opportunity for this group to see the site before finalizing the master plan? *As consultants, we don't have any plans to open up the site prior to the end of this Master Plan project, that doesn't mean that the City won't open up the site now or later.*

So your role is just to create the master plan, not to include safety details based on how many people will visit? *While safety recommendations are part of the master plan, estimating the number of visitors to the site is not part of our scope.*

There are existing roads on site. This appears to put in new paths, but not use existing ones. *Existing roads and paths have been taken into account. In many cases we have used them for multi-use trails. There are some secondary trails on the site that we're not recommending for heavier multi-use trails so they aren't indicated on the map as such.*

One of the concerns about paths is possible erosion of steeper paths. The CN line is presented here for the first time tonight, and the CN line is a challenge for connecting to Rouge Park, for both wildlife and visitors as well. *The CN line is outside of the site, but we recognize it as a constraint and ask how would you access the site given that constraint. To bring people into the site from the west, you have to cross the rail. We have people at MMM that only deal with rails, only deal with trails, they both say that this is the best access point and that we can make recommendations on how this crossing would work best for all.*

Is there a requirement to bring vehicles into the site (other than servicing and emergency vehicles) – can we say pedestrians only other than these vehicles? *That's exactly what we're recommending. Our job is to get people on the site, not cars. We explored parking on site, to at least discuss how it could be done but at this stage we are not proposing parking on the site. In addition to emergency vehicles, sometimes CN signals staff and sometimes City staff (environmental compliance, maintenance) will have to enter the site as well, these are not frequent visits, probably once a month in a pick-up truck.*

Two questions - will you recommend putting platforms on the northern lookout and is there a precedent for that on restored landfill that shows if it is possible to create the foundation for it. Also there's an existing

trail that goes up to top (runs directly north/south), will that be recommended as a footpath? I have a feeling that people will want to use that trail anyway. *That's not a trail that we're recommending be used as a multi-use trail because of its grade. We're thinking that this trail would fall within the enhanced meadow*. *The design development stage will take desire lines into consideration to encourage/discourage walking where we want it and don't want it. For the look-out point, will have to assess carrying capacity, it is likely a part of the site that will have the most traffic, we will have to prepare the ground for this. I'm intentionally not saying what type of material we will use. My sense is that boardwalk rather than pavement is good, but that would be developed at design development stage. One Precedent for building on landfill is Freshkills Park – they will be building platforms there.*

What is the little box on the map? It looks like an off-road cycling storage area. While I am happy that bringing cars in isn't a priority that looks like it's something that people would drive to. *The factor that drives vehicular use is parking; with no parking there will be lower vehicular use in park. The site has opportunities for off-road cycling; they've been shifted to northern portion of site. We anticipate that people would want to store bikes temporarily if they want to walk around.*

You have declared half the park for off-road cycling opportunities; I hope that doesn't mean that whole area will be filled with trails. *It means if you're going to build trails, this is the area to do them, in other areas you can't. This design would not be interpreted as providing direction to put trails everywhere in that space.*

It seems like this park is limited to use by hikers, skiers and off-road bikers. If you come by car, it seems like you have to park at the Zoo, is that the case? If so, it is not accessible to whole city. *We're saying that we won't provide parking on this site, not that parking will be at the Zoo. If someone travels by car, we are not convinced that they have to park on site.*

How often does the train come by? *I'm not sure how often. Anecdotally, it is used more often than you would think. Part of the recommendation for crossing here is that you can take advantage of existing crossing infrastructure.*

At earlier meetings there was talk of access for people with limited accessibility, which would imply that you would need to have parking for people with disabilities. Did you consider this? *We thought about this a lot, and in the end we don't believe that there is a need for it. We can instead provide access that is suitable to the site.*

What is the plan for dogs in the park? *Dogs are allowed in all City of Toronto parks, so long as they are on-leash.*

What happens from here? What is the timeline? *The next immediate step is the summary report of tonight's meeting. The next big step is the completion of the Master Plan in February/March this year. We will also take the Master Plan to the Parks & Environment Committee and this committee may allocate funds to move the implementation of the park forward. For any actual improvements we would make to site, we would undergo a similar process to this, and we would consult with you. At this time, there aren't funds allocated for improvements. We will notify you via email when the master plan is complete and available.*

When do you anticipate something happening, e.g. a pathway to walk on? *We will have better idea once Master Plan has been taken to Parks and Environment Committee.*

Beare Road Park Master Plan
City of Toronto

PUBLIC MEETING

Thursday, December 6th, 2012
6.30-8.30 pm
Malvern Recreation Centre
Toronto, ON, M1B 3G5 Canada

SUMMARY REPORT

On December 6th, 2012, over 50 people participated in the second Public Meeting for the Beare Road Park Master Plan. The purpose of the meeting was to present the vision and guiding principles, to present selected aspects of the project team's work done to date, and to present and seek feedback on the draft design approach. Participants included: local residents, Scouts Canada, Parks Canada, International Mountain Bicycling Association, Durham Mountain Biking Association, Toronto and Region Conservation Authority, Friends of the Rouge Watershed, Rouge Park Foundation, Highland Creek Community Association, Ecohesian Inc., staff from City of Toronto Parks, Forestry and Recreation Division and a number of participants who identified themselves as hikers, cyclists, walkers, runners and users of the park. The meeting began with a welcome from Garth Armour, Supervisor of Natural Environment & Community Programs, Parks, Forestry and Recreation, City of Toronto. Councillor Raymond Cho was in attendance and provided words of welcome as well. Next, Ian Gray, Senior Landscape Architect, MMM Group Limited, gave a presentation. After the presentation there was a round of facilitated questions and answers, followed by a small-table workshop session and a full-room plenary to share workshop results.

This summary report was written by Bianca Wylie of Swerhun Facilitation & Decision Support and was circulated to participants in draft form for edits and comments prior to being finalized. It summarizes the feedback received at the meeting and includes feedback received in the worksheets, emails and phone calls received prior to and following the meeting. It is intended to summarize the key themes discussed and is not intended to be a verbatim transcript. Also, please note the following attachments: A. Meeting Agenda B. Questions of Clarification

KEY MESSAGES FROM FEEDBACK RECEIVED

The following five key messages emerged from the discussion. Detailed feedback follows.

1. **The draft design approach of protecting and enhancing habitat is key to its success.** While participants are excited by the ideas for inclusive usage, there is an important amount of assessment and trade-off consideration that must be taken into account when designing at the next level of detail in order to protect and enhance both wildlife and habitat.
2. **There are several challenges related to finding an appropriate location for parking and access.** Participants expressed significant concern regarding the impact of a parking lot and any new access points in terms of impact on the environment, local residents and wildlife, as well as in regards to various safety issues.
3. **The connection and relationship with the proposed Rouge National Urban Park is important and requires additional definition**. Some participants identified the opportunity to balance and divert uses between the sites.
4. **Safety is of the utmost importance and is relevant in the context of both the environment and access points.** The impact of the existing gas plant operations should be studied for effects on human and environmental health, as should any access point that requires interaction with the existing active CN Rail corridor.
5. **Participants were happy to see "brownfields" evolve into a place for the enjoyment of nature and recreation**. Though this transition comes with the need to balance ecological health and safety concerns, there is excitement about making the site accessible to enjoy the natural environment and creating an educational opportunity around the site's history.

DETAILED FEEDBACK

Detailed feedback is organized into four parts.

- What participants like about the proposed draft design approach and why
- What participants don't like about the proposed draft design approach and why
- Other ideas for the draft design approach
- Other advice for the project team

A. What Participants Like about the Draft Design Approach and Why

- **Respect for ecology and wildlife.** Participants like that the draft approach presents an integrated approach that puts nature first but enables both active and passive use, as so often these are characterized as mutually exclusive activities. Specific elements that some participants liked included:
    - the attention displayed to the protection of species via the use of forest and buffer zone.
    - the mapping concepts that showed how Bobolink habitat would be protected.
    - the identification and protection of wetlands, forested areas and meadows.
    - maintaining and using the existing trail and road system, as it is already disturbed habitat used currently for cycling and hiking.

  It is important to note that some participants expressed concerns about the draft approach in terms of ecology and wildlife; these concerns are documented in further detail in sections B, C and D.
- **Broad recreational opportunities.** Participants like that the proposed approach is inclusive of many uses and users, including walkers, cyclists and hikers of all ages. Some participants specifically mentioned that they liked the area for off-road cycling and that a large portion of the area has been designated for this use. Some participants said that though they were happy for the opportunity to use the area for cycling activities, species at risk and habitat protection must be considered when designing this section of the park. One participant suggested that the trails be paved to facilitate inline skating for the summer and cross-country skiing in the winter, while others suggested that the surface of the trail should be granular to stay in theme with the natural environment. One participant noted and liked that cross-country skiing would not interfere with bobolinks because of the time of year this activity would take place.
- **Accessibility as a key theme**. Specific elements of the design approach that participants liked included: easy access for emergency services to get into the site, low traffic within the site, access for vehicles that need to get to the gas plant, the suggestion for restricted traffic access and the idea of teaming up with the Toronto Zoo on parking.
- **Complementary use to the proposed Rouge Urban National Park.**
- **Opportunities for education**. Participants like the idea of incorporating education opportunities on the site.

B. What Participants Don't Like about the Draft Design Approach and Why

- **Minimal detail regarding recreation opportunities.** Some participants wanted additional details on the types of recreation that would be permitted in the park, including the quantitative and qualitative aspects of the off-road cycling areas. Other participants wanted to know which human activities would be permitted in the proposed buffer areas. Some participants said that cycling should be restricted in wetland areas; others said they would like the cycling areas to extend to the peak. Some participants did not like the inclusion of any cycling or non-motorized vehicles in the

park and did not want any multi-use supported except for hiking and walking. One participant noted that they had heard ideas for both a ski hill and a golf course and said that they did not want to see either option considered.

- **Minimal detail regarding endangered species, species at risk and biodiversity**. Some participants wanted to see more detail regarding tradeoffs in terms of impacts on species and biodiversity due to an increase in human activity on the site. Some participants listed other species that they would have liked to hear more detail on in terms of impact and existing status of species on the site, these included: Bobolink, Milksnake, Meadowlark, Barn Swallow, Snapping turtle, Blanding's turtle, hawks and deer. For hawks and deer in particular, the proximity of the off-road cycling trail may be an issue as hawks nest in the area and deer rest there as well. One participant stated that the identification of the north side of the landfill as the most beneficial and connected Bobolink habitat was incorrect, and that the correct connection is to other meadow habitats along the property's southern boundary, along the hydro lines. Another participant said that there would be little to no Bobolink habitat left, based on the plan.
- **Impacts of having parking on the site.** Some of the issues raised included:
    - People live adjacent and nearby to the northwest corner of the site, thus this option would have an impact on these residents.
    - The northwest corner is a dead end for both Beare Road and Finch, which creates poor general visibility due to the L-turn, but could provide an option for maintenance access.
    - The recognition of the zoo's existing excess parking lot was not made with due attention to the expected amount of visitors to the zoo in the next five years nor is this suggestion in line with advocating for closure of the main road, with the exception of maintenance vehicles.
    - Any parking option will require additional consultation with property owners as well as basic assessments regarding usage and impacts, in addition to biological surveys to confirm feasibility and impacts. One participant suggested that at least one season of study is required.
    - The northwest corner provides cover to the Milksnake and use of that corner for vehicles would pose a risk to the species.
- **Safety issues require additional detail, particularly in regards to the existing gas plant and the CN rail corridor**. Participants noted that the rail line is very busy, and public movement across the rail line might not be safe. One participant noted that the roadway exists for CN rail service, which seems to be a dangerous location for children to play and explore. A safety issue raised in regards to the gas plant was the potential for erosion from the bike trail to cut into the landfill cap.
- **Minimal detail on impact of new park boundaries**. Changes to the boundaries could alter the flow of both people and wildlife into the site and affect the site's management.

C. Additional Ideas for the Draft Design Approach

Ecology

- **Explain how winter activities would be supported, how they would impact the ecosystem and how they would affect species at risk**. Some participants suggested that ATV access should be restricted.
- **Lock the gates on roads that are known to have high invertebrate mortality.**
- **Consider permeable trails** as there is a need to allow for water to be absorbed in the Rouge River watershed.

Access

- **Provide details regarding potential TTC service**. Though the topic was mentioned in passing, specific details regarding TTC service in the area are desired.

- **Several participants suggested that the northeast corner would be a good location for a second parking lot and washroom area**. The northeast land is flatter, would not require habitat disruption and tree removal and there are no residents that would be disturbed. One participant said that the area is good for a second or even a primary parking area as it has a gravel road leading in to a large flat area.
- **Reduce the number of access points.** One participant felt that having one access point should be sufficient while another participant felt that the property is too large to only have one access point.

Recreation

- **Use Beare Road Park as the recreational centre of the Rouge Park area.** Consider the benefits of diverting recreational uses to this site for activities that may not be appropriate in the proposed Rouge National Urban Park site.
- **Include winter activities in the recreation options in the draft conceptual design.** Recreation activities suggested included skating, cross-country skiing and snowshoeing.
- **Use other trails in the Don Valley as templates for trail construction techniques.** Some participants suggested adding narrow and meandering trails in addition to wide flat multi-use trails.
- **Create a bike park within the area that has been designated for the "off-road cycling opportunity".** Include features such as pump tracks, jump lines and "Flow Trails" or "Flow Country".
- **Consider leaving the site as it is today.** One participant said that people would still enjoy and use the site and reap educational benefits from simply being in nature. Minimize the amount of new built form or paving.
- **In addition to restricting road access, ecopasssages may be warranted** as another option to consider when managing road mortality issues.

Amenities & Education

- **Include washrooms, water fountains, and barbecues at strategic locations.** If barbecues aren't an option due to site restrictions consider food outlets throughout the park.
- **Include signage to identify wildlife in certain areas as an educational opportunity.**
- **Include signage to recognize the Beare family and their history in relation to the site.**

D. Other Advice for the Project Team

Ecology

- **Perform detailed biological surveys before there is any level of detailed planning beyond what was presented at the meeting.** Define the functional characteristics of the property in order to protect the endangered species on the property once open to the public.
- **Species at risk and other species are using the site because there is low human activity; these species will likely abandon the habitat if human traffic to the site dramatically increases.** If this ecosystem is disturbed to an extensive degree it will also lower the ecological value of the surrounding habitats.
- **Some participants suggested that the site restoration should be complete prior to opening the trail system up.** Provide ongoing monitoring to see if there are areas where the Milksnake is crossing the trail.
- **In the absence of new ecological surveys, consider ecological modeling to help inform the constraint mapping exercise.** One example provided is the proposed entry route. The newly proposed route should be studied, as should the impact on the wetlands of closing the existing road but increasing traffic on a new route.

Safety

- **Test air quality.** Some participants said that this should be done at the site to confirm contaminant levels and to understand the impacts on human health and safety as well as the impacts on habitat and wildlife.
- **Confirm the impact of gas build-up** and what will happen to vegetation if the gas plant is not operational. Clarify what will happen with off-gassing and what will happen to air quality due to the off-gassing. Consider the solution to pump gas into the site until the gas is used up. Map the leachate and gas collection system on the property to avoid disturbance to these systems. Provide insight into the status of old infrastructure on the surface of the property. Test the soil for contamination and identify the amount of remediation that may be required. Confirm the types of restoration for construction activity that can occur without contaminant risk.
- **Include safe crossings in the draft conceptual design**. One participant noted that the CN access roads that lead down the hill at the northwest corner will require widening and grading to be safely accessible.

Process

- **Consider all stakeholders in the development of the design.** Some participants noted an uncertainty on Aboriginal connections to this site, and suggested consulting Aboriginal communities for their confirmation and concerns. Other participants said that those with disabilities should be consulted regarding accessibility to the park. Some participants requested additional details about the involvement of both the Toronto Zoo and Parks Canada in the design process. In the case of Parks Canada, some specific details requested were how the park entrances would be managed and by whom.
- **Don't overdesign the park.** Some participants said that the least amount of intrusion and upkeep for infrastructure is best, including permeable trails, as these are low-cost and sustainable solutions.
- **Be aware of interrelationships of existing acts, plans and legislation that will influence the draft conceptual design.** This includes the legal obligations required under the Provincial Endangered Species Act and the Federal Species at Risk Act. Illustrate how the overlap of habitat ranges with the proposed Rouge National Urban Park will affect design options. Also, connect the proposed plan to the Provincial Greenbelt Plan and explain how it will conform to this plan.
- **Present the cost for the various design options** and put them into context with long-term maintenance and operational costs.
- **Make all data presentations, comments and mapping (minus endangered species) on the Toronto open web portal.** Also, increase the size of the font on the presentation, including the legend, to make it easier for participants to review and comment. Include contours on the maps that are legible in the print version, as the lack of contour and indication of height may contribute to a sense that the site is larger than it is, and that it can support a wider range of uses than is realistic.
- **Increase the amount of time for comments.** Some participants felt the window for comments was too short, especially given the season.

NEXT STEPS

Bianca Wylie thanked everyone for attending, and reminded participants of the third and final meeting to be held in January. Bianca also let participants know that a draft of the notes from the workshop would be distributed to them for review prior to being finalized and to send any additional feedback via email or phone by December 11th, 2012.

Beare Road Park - Public Meeting #2
Malvern Recreation Centre
30 Sewells Road
Toronto, ON M1B 3G5
Thursday December 6th, 2012
6:30 – 8:30 pm

PROPOSED AGENDA & WORKSHEET

Meeting Purpose: To present the vision and guiding principles, to present project team work done to date, to present draft design approaches and to gather feedback on the draft design approaches.

6:30 pm **Welcome**
Garth Armour, Supervisor of Natural Environment & Community Programs, City of Toronto

6:35 **Introductions & Agenda Review**
Bianca Wylie, Facilitator, SWERHUN Facilitation & Decision Support

6:45 **Presentation/Participant Briefing**
Project update, an overview of the opportunities and constraints, and the suggestions for design approaches that have come out of recent work. *Ian Gray, Senior Landscape Architect, MMM Group Limited.*

Questions of clarification – Facilitated by Bianca Wylie

7:30 **Discussion**

Discussion Questions:
1. Identify ideas and aspects of the draft design approaches that you like? Why?
2. Identify ideas and aspects of the draft design approaches that you don't like? Why?
3. Are there any additional ideas that you would like to see considered?
Do you have any other advice?

8:25 **Wrap up and Next Steps**

8:30 **Adjournment**

Attachment B. Questions of Clarification

Questions asked at the meeting are listed below. Answers from the City and their consultant team, where provided, are noted in *italics*. In some cases the team agreed to supply answers after the meeting – those are also included here. The questions are listed chronologically.

Is there any leachate pumping being done? *Yes, there is a leachate collection system and methane collection system. The leachate goes to a pump station on site. From there it goes through a buried pipe to the sanitary sewer system outside of the site.*

How stable is the situation given that there's garbage below that is compacting? During the f*irst 10-15 years the majority of the settlement took place, about 1m per year. It won't be that significant now, it will never be a flat surface, but we still can't build permanent structures in some places on the site.*

What is projected life of the gas plant? *The power plant started to operate in 1996, there was a 15 year term with a private company to utilize the gas. The contract expired in 2011, but the company exercised the extension for the next 10 years. If at any time the volume of gas drops so that it's not economically viable, they have the option to leave. As it stands now, they can stay there until 2021.*

I'm interested in recreation facilities, the idea of skating looks great, is there any consideration given to summer activities for children, such as a pond or a barbecue with picnic tables? We are *trying to show the approach tonight, and if a barbecue facility is consistent with the draft approach then yes, but it but might not be consistent with the methane conditions. One of the things that we need to do is to carefully consider the options. If you have ideas that you think fit within guidelines and principles, this is exactly the place to bring them up*

Is there any indication or possibility of a native burial site on property? *The site commenced receiving waste in 1967, we are not aware of any studies about whether burial sites existed.*

To what extent is the human use of the site detrimental to the preservation of the bobolink and other species? *What we are constantly trying to do is look at the existing conditions on the site and recognize that it's an urban site that has and will continue to have human use. It's a very large grassland area, bobolink like large areas of habitat, so we try to keep large areas open. As an ecologist the approach is to try to work around the edges rather than put stuff through the middle. We don't want to introduce a lot of activity because they are ground nesting birds. Trails though the buffers help protect core habitat for birds.* **Additional comments from the project team added after the meeting:** *It is preferable to be proactive and manage for human use and impacts as opposed to reacting to undesirable impacts after they have occurred.*

Could temporary closure of the place to certain activities be the answer? *Every year different birds come to the site. The only time you would want to do that is during the migratory bird period, from April to July, but I don't think that's the approach we would take in this case.* **Additional comments from the project team added after the meeting:** *This subject of the migratory bird period is being taken into consideration during the development of the draft conceptual design.*

Milksnakes are frequent visitors to the south slope where the mountain bike area is located in the design approach, and are also a species as risk that come into human disturbed sites. Milksnake would be a better key indicator of what can be done on this site. Many other factors have led to bobolink being threatened, not just at lack of traditional grass areas. I didn't see the habitat needs of the Milksnake included and I'd like to. We *need to do more study, as the southern slope is planted, habitat develops. These are dynamic systems, as the zone of planting grows, this will have an effect on the Milksnake as well. We need to look into this.*

Is the entire park former landfill, or are there areas that were not a landfill? *The park is larger than the portion that was used for the landfill.*

APPENDIX 2

BEARE ROAD SITE HYDROGEOLOGY AND STORMWATER

SITE GEOLOGY

The Beare Landfill Site is located in geology of low to moderate relief, whereby the land surface slopes to the west and to the southeast, towards the tributaries of the Little Rouge Creek and Petticoat Creek. The general stratigraphy beneath and around the landfill consists of the following main geologic units:

a) Surficial sands derive from former glacial beach deposits. Most of these sands deposits however, were excavated within the footprint of the former landfill during construction of the facility;

b) A thick sequence of dense glacial till deposits up to about 45 m in thickness. These deposits consist predominantly of silt and sand, which generally become more finely textured with depth;

c) A thin irregular layer of mostly silts and sands. This stratum varies in thickness from about 1 to 3 m and was generally found within the till deposits at a depth of about 27 m. These deposits that are known as the Thorncliffe Formation, are believed to represent the interface between the two major till units (the upper, predominantly sandy Leaside Till and the underlying, more fine-grained Sunnybrook Till);

d) A thin sandy stratum immediately above the bedrock referred to as the basal sands. These granular deposits are discontinuous across the site, lie immediately above the bedrock, but show a variable thickness from less than 1 m to several metres; and

e) A shale bedrock substrate that is slightly weathered and fractured within the upper 2 m.

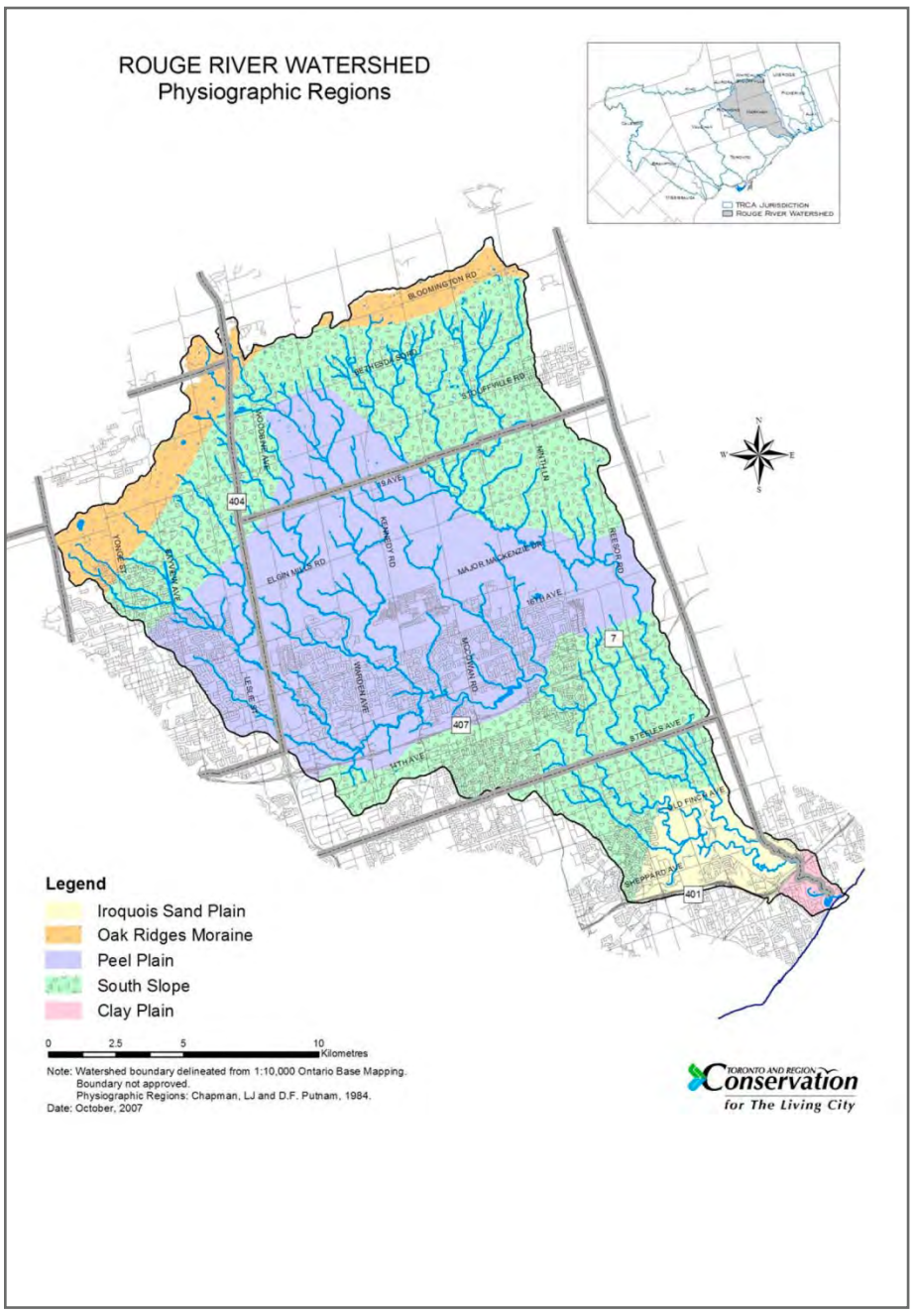

FIGURE A2.1 ROUGE RIVER WATERSHED PHYSIOGRAPHIC REGIONS \ *TORONTO REGION AND CONSERVATION AUTHORITY. ROUGE RIVER WATERSHED SCENARIO MODELLING AND ANALYSIS REPORT, 2007*

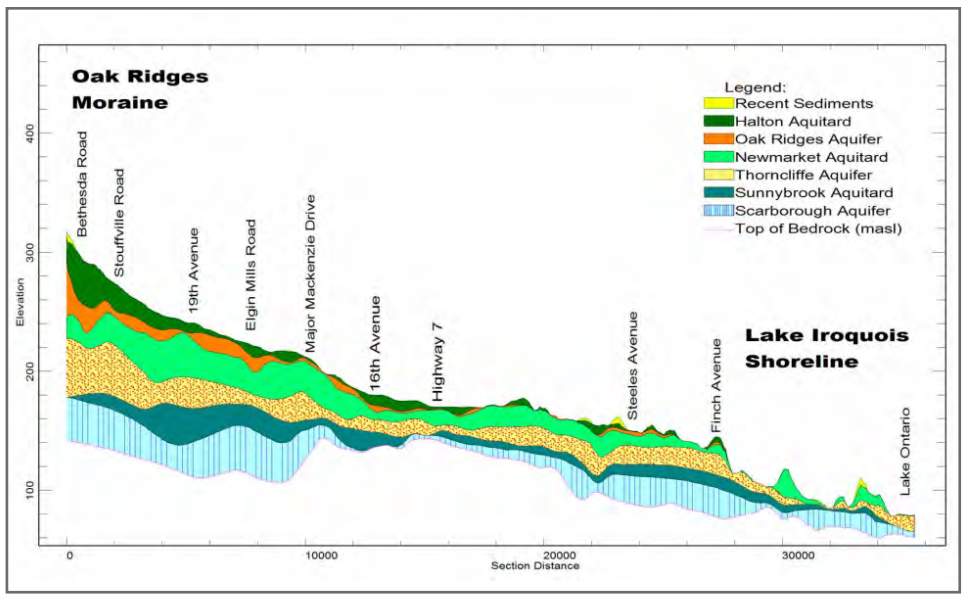

FIGURE A2.3 GEOLOGIC CROSS-SECTION - MAIN ROUGE RIVER \ *TORONTO REGION AND CONSERVATION AUTHORITY. ROUGE RIVER WATERSHED SCENARIO MODELLING AND ANALYSIS REPORT, 2007*

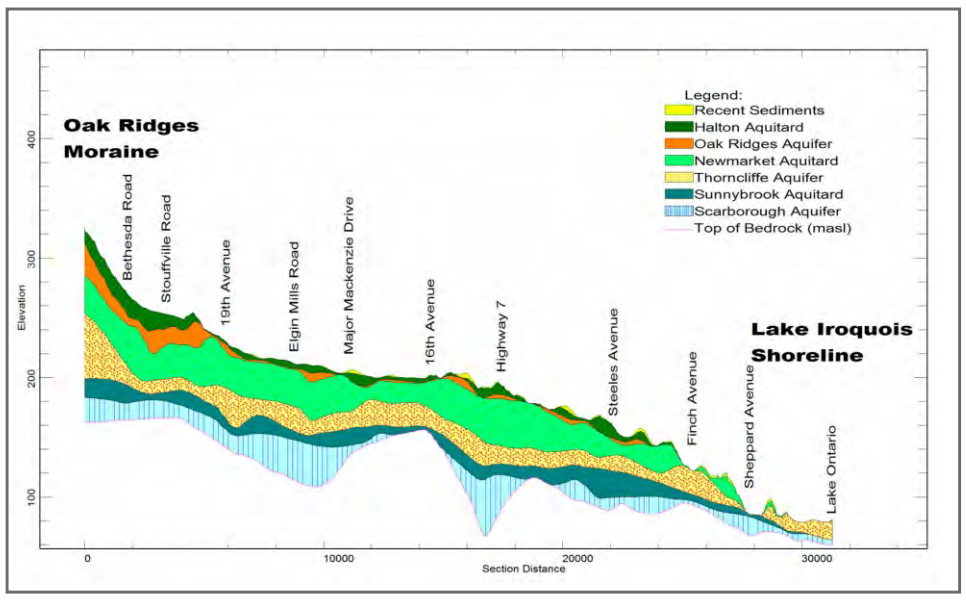

FIGURE A2.4 GEOLOGIC CROSS-SECTION - LITTLE ROUGE RIVER \ *TORONTO REGION AND CONSERVATION AUTHORITY. ROUGE RIVER WATERSHED SCENARIO MODELLING AND ANALYSIS REPORT, 2007*

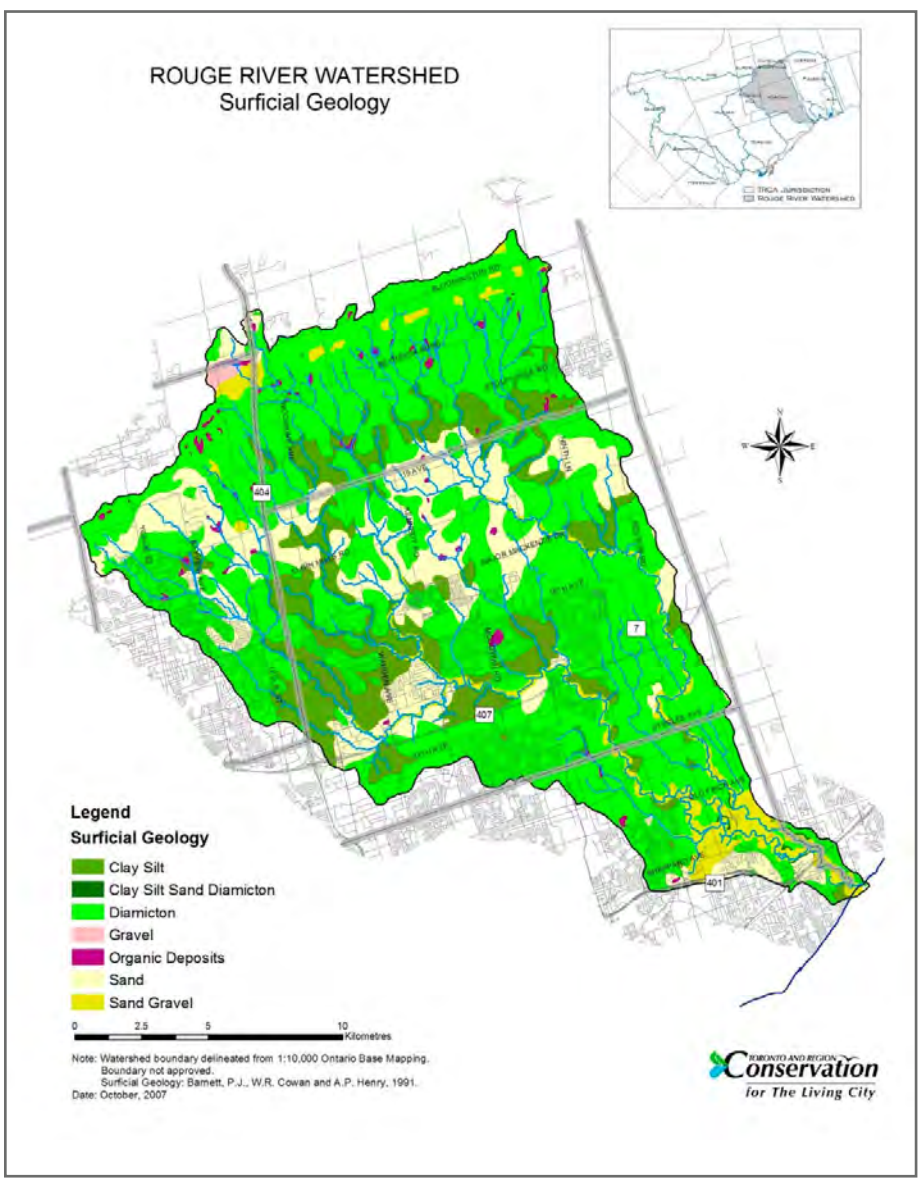

FIGURE A2.2 ROUGE RIVER WATERSHED SURFICIAL GEOLOGY \ *TORONTO REGION AND CONSERVATION AUTHORITY. ROUGE RIVER WATERSHED SCENARIO MODELLING AND ANALYSIS REPORT, 2007*

LANDFILL SOIL COVER

At the time of the Beare Road landfill closure, cover material used at the site consisted mainly of clay, silty sand till soils, and other materials derived from the surrounding area. A 0.2 m thick daily cover was installed for each 1.8 m lift. The final cover consisted of a layer of clay mixture with relatively low permeability. The cover depth varied in areas of the site, in some areas estimated between 1.2 - 1.8m in thickness. Due to a lack of a recent survey, precise conditions of the soil cover on the site are difficult to determine.

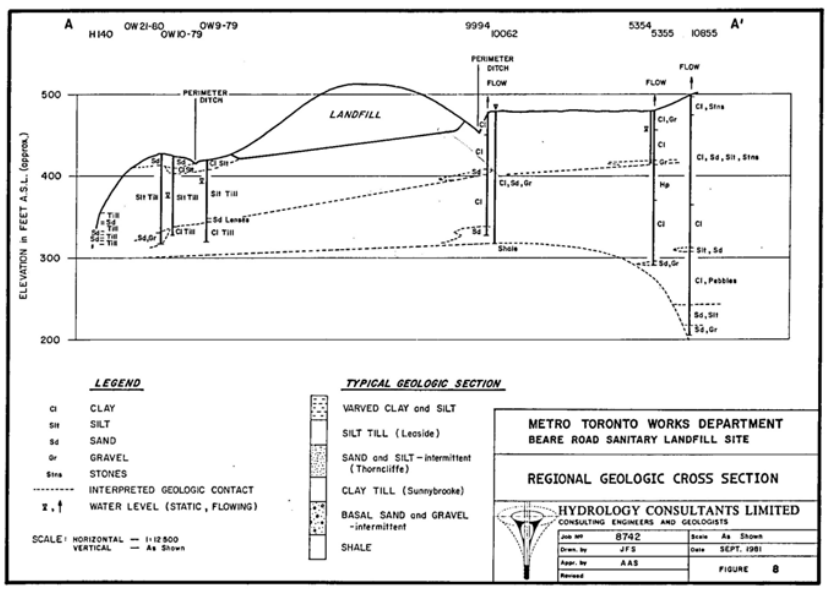

FIGURE A2.5 REGIONAL GEOLOGIC CROSS-SECTION - BEARE ROAD SANITARY LANDFILL SITE \ *HYDROLOGY CONSULTANTS LIMITED. DEEP GROUNDWATER SYSTEM STUDY, 1981*

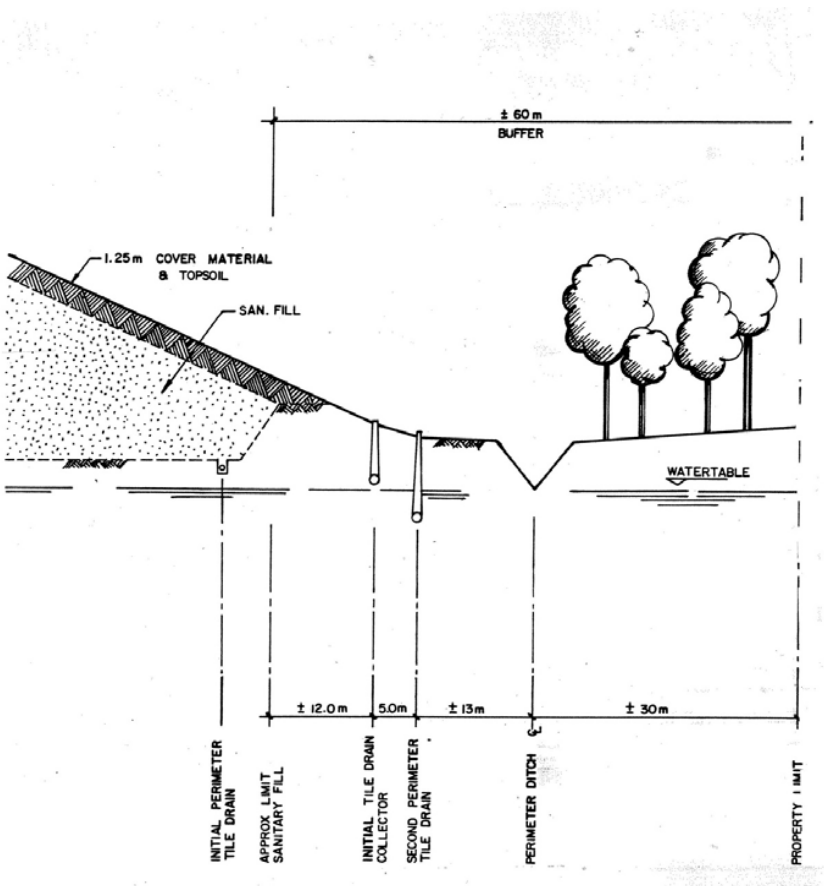

FIGURE A2.6 TYPICAL SECTION THROUGH LANDFILL BUFFER ZONE \ *JOHN SUSTRONK WEINSTEIN + ASSOCIATES LIMITED. BEARE ROAD SKI FACILITY 1987 OVERVIEW (VOLUME II OF BEARE ROAD LANDFILL SITE CLOSURE REPORT)*

LEGEND

SOIL OUTSIDE LIMIT OF COVER
COVER (VARIABLE, ESTIMATED AT 1.2 - 1.8m)

NOTE: This drawing is illustrative and should not be used as a survey of existing conditions. MMM Group Limited is not responsible for the accuracy of any base data.

beare road site \hydrogeology

CAP + SOIL COVER

version 1 \ 1:4000 \ November 2012

MMM GROUP

BEARE RD

STREAM

FINCH AVE E

TOWNLINE SWAMP WETLAND COMPLEX

POND

HYDRO CORRIDOR

PICKERING TOWN LINE

C.N.R.

LITTLE ROUGE RIVER

LEGEND

Elevation (masl)

- 190 - 200
- 180 - 190
- 170 - 180
- 160 - 170
- 150 - 160
- 140 - 150
- 130 - 140
- 120 - 130
- 110 - 120
- 100 - 110
- 90 - 100
- 80 - 90

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ELEVATION

version 1 \ 1:4000 \ November 2012

MMM GROUP

BEARE RD

STREAM

FINCH AVE E

TOWNLINE SWAMP WETLAND COMPLEX

POND

HYDRO CORRIDOR

PICKERING TOWN LINE

C.N.R.

LITTLE ROUGE RIVER

LEGEND

Slope (%)

- 0 - 2
- 2 - 5
- 5 - 10
- 10 - 15
- 15 - 30
- > 30

beare road site \hydrogeology

SLOPE CONDITIONS

version 1 \ 1:4000 \ November 2012

MMM GROUP

LEACHATE COLLECTION AND PROCESSING SYSTEM

From 1967 to 1982, the Beare Road Landfill accepted mainly municipal and industrial solid wastes. Prior to 1967, the site was covered with a thin veneer of surficial sand in which an aggregate pit was developed. This thin veneer of surficial sand was ultimately extracted, leaving the underlying glacial till exposed. The glacial till formed the eventual base of the landfill cells. In 1967, the City acquired the site and had it licensed as a waste disposal site the same year. Refuse disposal began on November 1, 1967 and continued until September 1, 1982.

During that time more than 9 million tonnes of refuse were disposed of at the site. The landfill accepted mainly municipal and industrial solid waste, however for a time during 1978, it received liquid industrial wastes in Cell 12 located in the east-central portion of the landfill.

Initially, a leachate tile collector system was installed within the waste with a perimeter ditch surrounding the site.

Leachate eventually entered the ditch, so collection tiles were installed in the existing ditch. A deeper new perimeter tile collector ditch was then excavated around the landfill except in the northwest corner of the site. The current perimeter ditch extends below the water table in most areas and serves several purposes including:

a) collection and removal of surface water runoff from the landfill cover;
b) interception of any leachate migration via shallow groundwater discharge; and
c) venting of subsurface combustible landfill gas which minimizes the potential for gas migration off site.

A leachate collection system remains in-place to control off-site migration of landfill impacted groundwater. An ongoing leachate, groundwater, surface water and subsurface combustible gas monitoring program is conducted to monitor impacts of the closed landfill on the surrounding area.

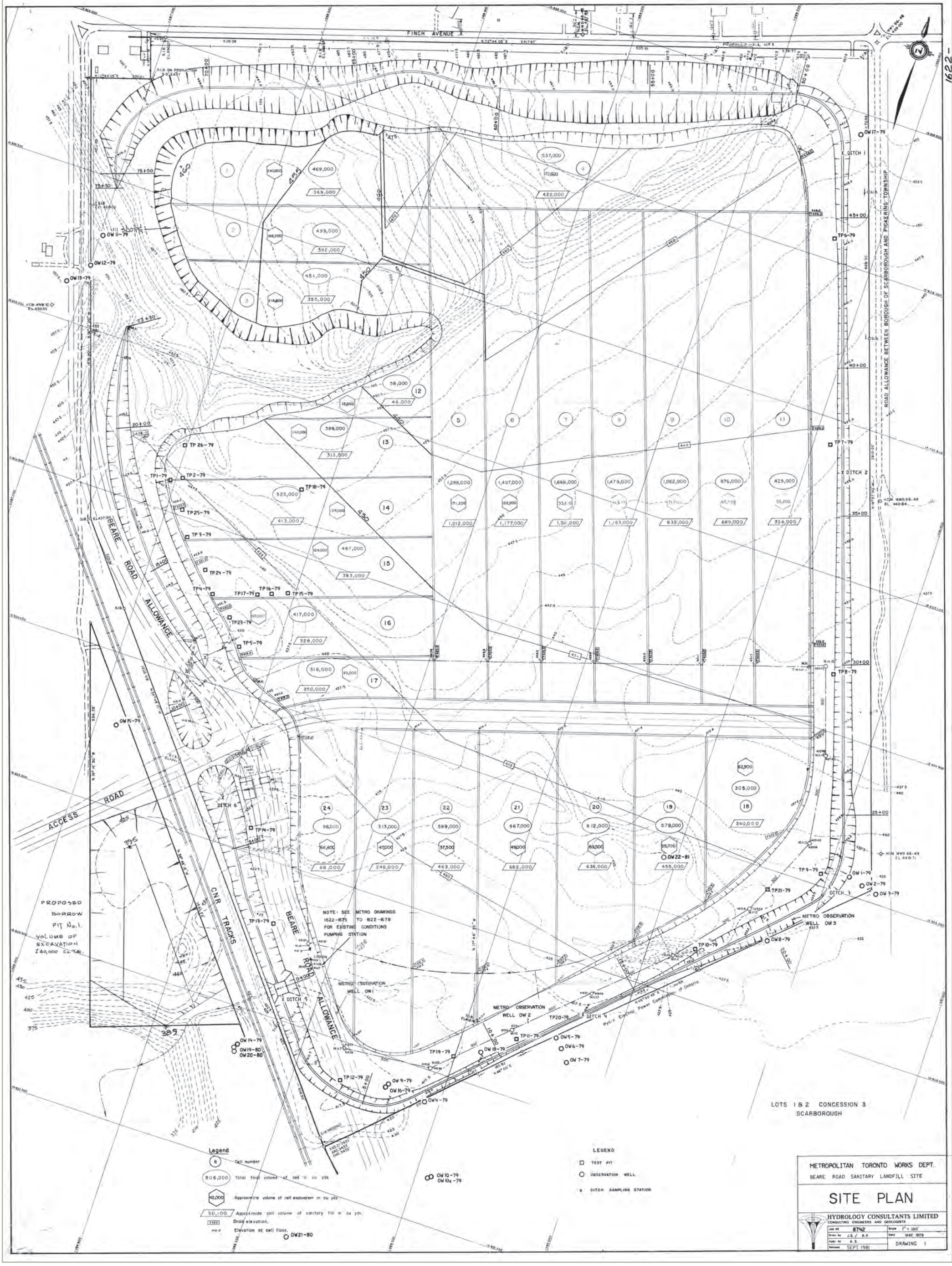

FIGURE A2.7 BEARE ROAD SANITARY LANDFILL SITE PLAN \ *HYDROLOGY CONSULTANTS LIMITED. DEEP GROUNDWATER FLOW SYSTEM STUDY, 1981*

METHANE COLLECTION AND PROCESSING SYSTEM

In October 1991, Aldworth Engineering Inc. prepared a report on the potential development of a landfill gas (LFG) power project (Aldworth Engineering Inc. 1991). Based on Aldworth's findings and a previous feasibility study (ConestogaRovers & Associates 1982), the City of Toronto decided to proceed with construction of a cogeneration plant that would harness the landfill gas as a fuel source.

The facility, which began operation in February 1996, was built and is wholly operated by a private contractor - E.S. Fox. Ltd. The Developer / Owner / Operational responsibilities remain with E.S. Fox. Ltd., based in Niagara Falls. In January 1996, construction and generation of electricity from LFG power plant was initiated through E.S. Fox Limited, the general contractor for construction of the gas collection and utilization facility, which acquired the project from Enercogen. E.S. Fox was subsequently contracted to install a full landfill gas collection system after the opening of the facility in 1996, and to continue to design, build and operate a facility to convert the gas to electricity. The current power developers negotiated contracts with Ontario Hydro (now Ontario Power Generation) for the sale of electricity produced on site.

In addition to ownership of the project, E.S. Fox also assumed primary responsibility for operation and maintenance of the LFG to energy project. E.S. Fox continues to operate the power plant and also constantly works to maximize gas recovery through routine well-field adjustments and periodic expansions of the gas collection system.

The Beare Road LFG collection and utilization system includes the following primary elements:

- LFG collection field
- Gas transmission piping
- Electric generating station

The total design of a 5.6 MW non-utility generation (NUG) plant, the project involved seven LFG reciprocating engine- generator sets, exporting electrical energy to Scarborough PUC and Ontario Hydro. The design included a 4160 volt switchgear lineup and a 27.6 kV switchyard nearby, together with related protection and control for both generation and distribution systems.

A cost-effective landfill gas extraction and collection system was designed, with 50 new vertical gas wells spread over the entire 66 hectare site, containing 9.6 million tonnes of refuse, to maximize gas collection efficiency.

The landfill gas monitoring program was designed to monitor subsurface landfill gas concentrations around the perimeter of the landfill, particularly along the north boundary of the site that is in proximity to residential homes on Finch Avenue. Routine gas measurements up until 1994 were recorded at seven perimeter gas monitors. The gas monitoring program was expanded in 1994 to include three additional locations. These monitors were installed in May 1994 in an area to the south of the landfill within the Hydro One (formerly Ontario Hydro) corridor. Their purpose was to assess the potential for subsurface landfill gas migration beyond the south boundary of the landfill property. This issue had become a potential concern due to a proposed residential development to the south and east of the landfill, at that time.

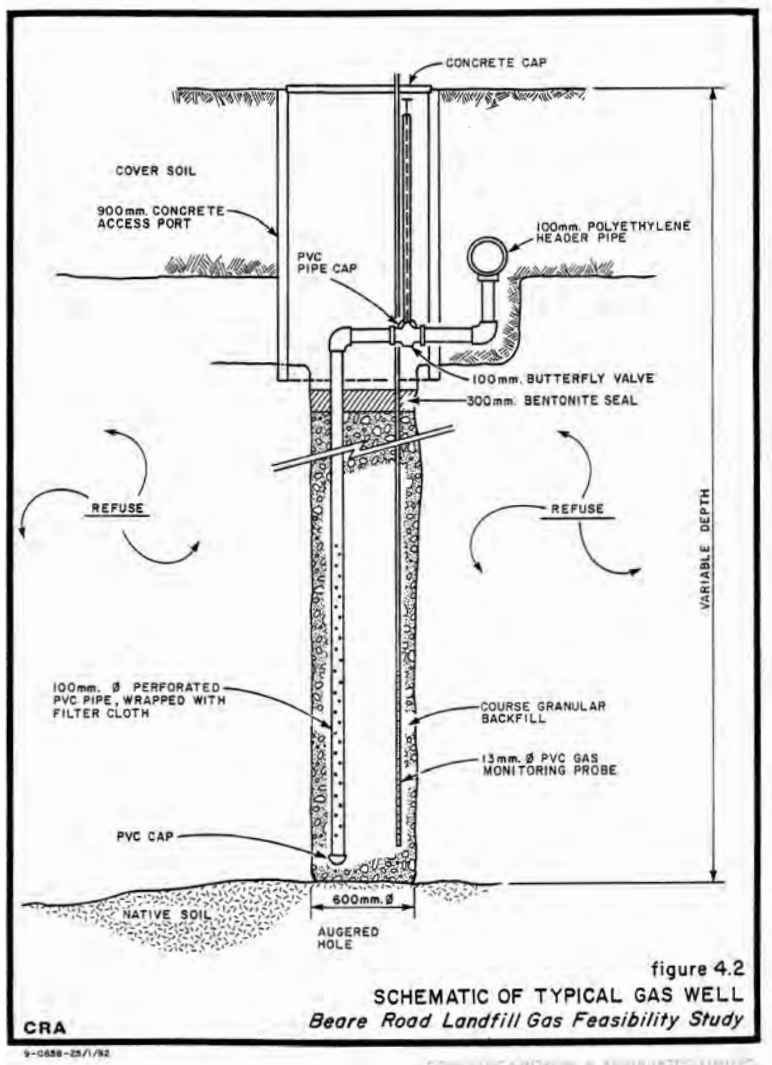

FIGURE A2.8 *SCHEMATIC OF TYPICAL GAS WELL \ CONESTOGA-ROVERS AND ASSOCIATES LIMITED. BEARE ROAD FEASIBILITY STUDY, 1982*

Combustible gas readings and water level measurements were collected from the existing gas monitors on five occasions from January to April and in October 2011. No measurable combustible gas concentrations were detected during the 2011 gas monitoring events. The measured total volume of leachate collected in 2011 and conveyed to the sanitary sewer was 215,698 m3. This is reasonably comparable (within percent error) to the 302,390 m3 calculated volume based on the water balance suggesting that the leachate collection system is performing effectively.

MITIGATION STRATEGY

The City of Toronto and Ministry of Environment does not have explicit regulations or guidance on operating methane extraction systems in public open spaces.

The existing methane extraction system operated by a private entity will operate for the foreseeable future within the expected implementation time frame of the Beare Road Park Master Plan. It will be critical that any landscape design and land use strategy deploy best practice measures to ensure public health and safety.

Future City maintenance staff should still undertake appropriate safety precautions before entering confined spaces including culverts, catch basins, and manholes located on-site or immediately adjacent to the property.

BEARE RD

STREAM

FINCH AVE E

TOWNLINE SWAMP WETLAND COMPLEX

GAS CONVERSION FACILITY & POWER PLANT

POND

HYDRO CORRIDOR

PICKERING TOWN LINE

C.N.R.

LITTLE ROUGE RIVER

LEGEND

COLLECTION PIPES

DRAINAGE DIRECTION

38.1m (125ft) RADIUS OF INFLUENCE

GAS & MONITORING WELL

NOTE: This drawing is illustrative and should not be used as a survey of existing conditions. MMM Group Limited is not responsible for the accuracy of any base data.

beare road site \hydrogeology

METHANE EXTRACTION SYSTEM

version 1 \ 1:4000 \ November 2012

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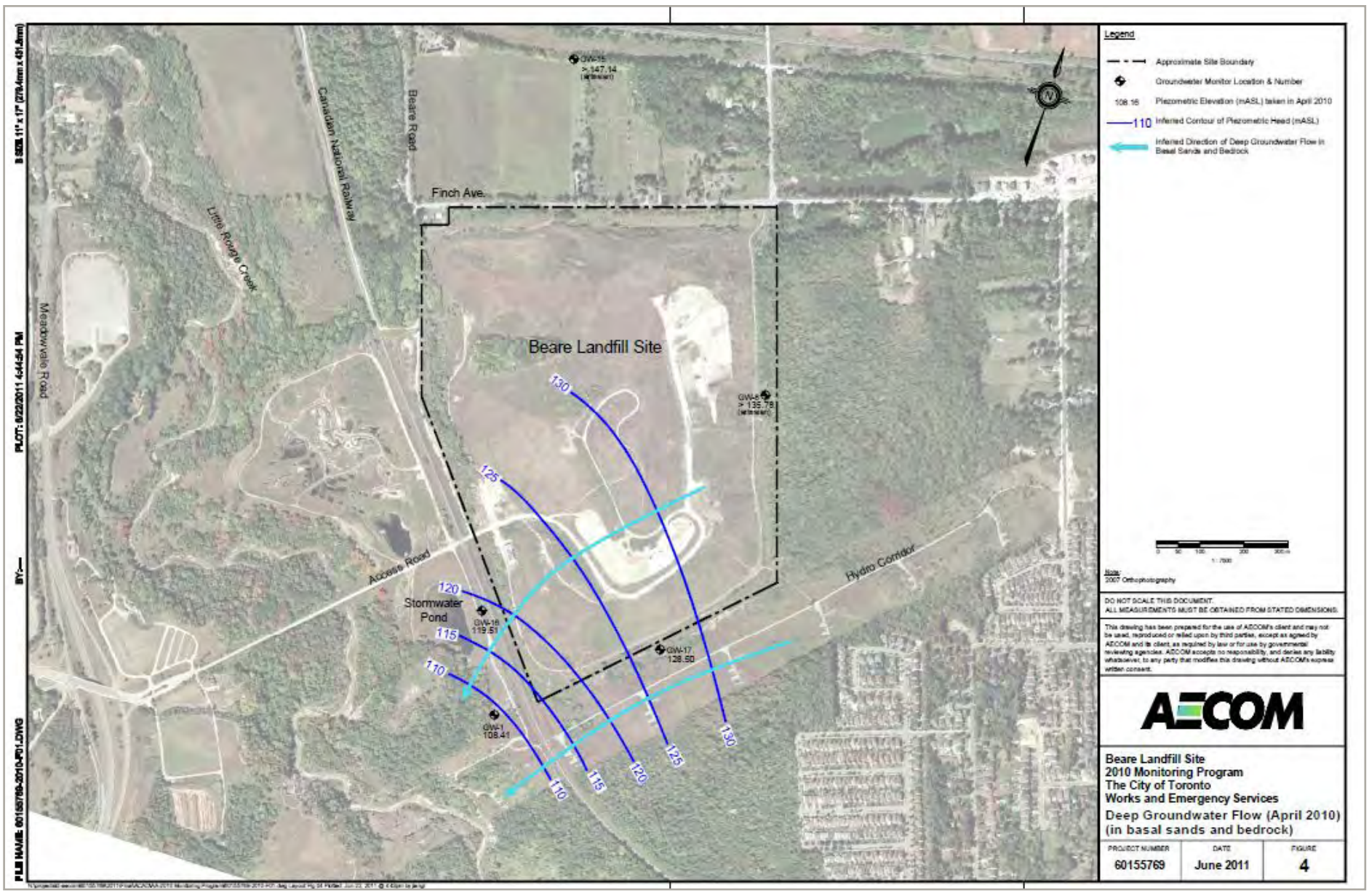

FIGURE A2.9 DEEP GROUNDWATER FLOW \ *AECOM. 2011 MONITORING REPORT FOR THE BEARE LANDFILL, 2012.*

SURFACE WATER DRAINAGE

Surface water drainage from the landfill is mainly controlled by a deep, constructed ditch that surrounds the landfill perimeter, except in the northwest corner of the site. Landfill runoff exits from this ditch near the southwest corner of the property and drains into a stormwater retention pond located immediately to the west of the landfill, via an underground culvert. The water then flows over a weir at the outlet of the pond and into an intermittent stream that eventually drains into Little Rouge Creek to the southwest.

SHALLOW AND DEEP GROUNDWATER FLOW

The local groundwater flow system consists of two separate flow regimes. The first is the shallow groundwater system found in the surficial sand and upper till. The second is a deep groundwater system found in the shale bedrock and overlying basal sands. Both the current and historical groundwater elevation data have been compiled by the City since 1991.

The shallow water table in the perimeter area around the landfill generally intersects the surficial sands and upper till. Based on the 2011 data, the depth of the local water table below grade is quite variable ranging from about 0.9 m in the spring to 5.9 m in the fall of 2011.

The water levels were generally higher in the spring at most shallow monitors due to the wet conditions that prevailed at the time measurements were recorded. Shallow groundwater around the perimeter of the site flows laterally in a general southerly to southwesterly direction. The shallow groundwater regime also appears to be locally influenced by the perimeter ditch and the leachate pumping (wet well sump) in the southwest corner of the site, based on the shallow flow that is induced towards this area (Gartner Lee, 1993).

The deep groundwater system (in the basal sands and bedrock) also flows laterally in a southwesterly direction and thus mimics the shallow groundwater flow system.

Groundwater moves vertically downward through the upper glacial deposits under relatively high hydraulic gradients. An upward component of flow associated with the basal sands and shale bedrock was observed at most of the deep monitor locations during 2011, a pattern that is consistent with previous years.

The downward flow in the till and upward flow from the bedrock at the above locations are believed to converge within a transitional zone between the two major till units. This stratum, known as the “Thorncliffe Formation”, consists of a thin layer of sand and silt deposits. It was identified from previous drilling investigations conducted between 1988 and 1991 and was described in the initial monitoring report that was prepared by Gartner Lee for the Beare Landfill in 1993 (Gartner Lee, 1993).

FIGURE A2.10 SHALLOW GROUNDWATER FLOW \ *AECOM. 2011 MONITORING REPORT FOR THE BEARE LANDFILL, 2012.*

FIGURE A2.11 SURFACE WATER AND GROUNDWATER MONITORING LOCATIONS \ *AECOM. 2011 MONITORING REPORT FOR THE BEARE LANDFILL, 2012.*

STORMWATER - EXISTING CONDITIONS

The Beare landfill site is located within the catchment of the Little Rouge River. The site was covered with a layer of clay and silt with relatively low permeability. The landfill mound is vegetated primarily with grasses and a few trees that have been planted since the landfill was closed.

No erosion was observed at the slopes of the landfill. The slopes of the mound drain to a ditch constructed along the perimeter of the site. The perimeter ditch discharges to a stormwater management wet pond located at the southwest corner of the site west of the railway tracks through a culvert under the tracks. No erosion was observed along the perimeter ditch.

The stormwater pond was originally constructed for erosion and sediment control during the construction of the landfill when the ground was bare, stripped of vegetation and there was a high risk of sediment wash-off during rainstorms. The pond outlet structure consists of a concrete cutoff wall with a gate valve serving as a low flow outlet, and an emergency or high-flow weir at the top of the wall. The pond outlet discharges to a watercourse that ultimately drains to the Little Rouge River. The pond is now almost filled with sediment, particularly within the area just upstream of its outlet, with a permanent pool with its water surface elevation just below the invert of the outlet weir. The low flow outlet is completely blocked with sediment, resulting in the elevated permanent pool level. The outlet of the culvert that conveys runoff to the pond is completely submerged due to the high permanent pool level. An underground leachate collection system collects and conveys leachate from the landfill and pumps it to a sanitary sewer located along the access road to the site. Under normal operation, the leachate system is completely separated from the surface drainage system. There is however the potential for leachate to drain to the pond if there is a surface breakout of leachate at the face of the landfill or a break in the forcemain.

STORMWATER MANAGEMENT

The operation of the Beare landfill ended in 1982 and its surface is now vegetated and stable. As mentioned above, the stormwater management pond, located downstream of the landfill, was originally designed to capture sediment wash-off from the landfill site when it was under construction, and the ground surface was bare and susceptible to erosion during rainstorms. The site is now stable with little risk of sediment wash-off during storms, therefore the stormwater management pond is no longer required for its original purpose.

The post-development stormwater management requirements of the City of Toronto are applicable to the site. Briefly, the City of Toronto Wet Weather Flow Management Guidelines (WWFMG) stipulate that a proposed development should attempt to maintain the pre-development water balance at the site, and the water quality and quantity of post-development runoff from the site should be controlled so as to mitigate any potential adverse impacts. The stormwater management requirements of the Toronto and Region Conservation Authority are also satisfied by the WWFMG.

It is unlikely that the Master Plan for the Beare landfill will result in any changes to the imperviousness of the site, and therefore there will be no change to the water balance, and to the quality and quantity of post-development runoff. Consequently, if this is the case, and the proposed re-use of the site will have no adverse impacts on runoff, stormwater management measures will not be necessary.

The surface drainage system at the site is separated from the underground leachate collection system, which means that, under normal circumstances leachate will not discharge downstream via the surface drainage system. However, there are occasional leachate breakouts along the face of the landfill that can potentially discharge to the perimeter drains. The risk of adverse downstream impacts is low because the strength of the leachate is low (the landfill has been closed for 30 years), and it is anticipated that the leachate will normally be absorbed into the soil since there is flow in the drains only during rainstorms. If the leachate breakout were to occur when there is flow in the drain, then the already weak leachate would be further diluted by the flow, with additional dilution occurring in the stormwater management pond. Leachate breakouts are normally promptly repaired, therefore the risk of contamination being transported off-site by surface flows is very low.

The existing stormwater management pond has the potential to provide spill control if a major break in the leachate forcemain were to occur. In its present condition, the stormwater management pond is filled with sediment and has no active storage. Therefore the pond would have to be cleaned of its accumulated sediment in order to be able to capture a spill. A break in the forcemain reportedly has occurred and the pond has provided spill control which limited the downstream impact. The rehabilitation of the stormwater management pond to provide spill control in the case of a rupture in the leachate forcemain may be considered. Measures to reduce the risk of a future rupture in the forcemain have been implemented, therefore the risk of a future break in the forcemain would have to be weighed against the cost of cleaning the pond .

If a parking lot is required at the site, then stormwater management best management practices will need to be designed to address the water balance and quality and quantity control requirements of the WWFMG on site at the parking lot. For example, bio-retention areas and swales may be feasible along the periphery of the parking lot to promote infiltration and evapotranspiration of post-development runoff. Alternatively, constructing the parking area lot with gravel or permeable pavement to promote infiltration of runoff could be an option.

In summary, it is unlikely that significant stormwater management will required when the landfill is redeveloped since the imperviousness of the site will probably not increase in the post-development condition. If necessary, at-source stormwater management controls should be provided, if a facility with the potential for adverse impacts on runoff, such as a parking lot, is proposed.

BEARE RD

STREAM

FINCH AVE E

101
24.0

102
50.0

TOWNLINE
SWAMP
WETLAND
COMPLEX

GAS CONVERSION
FACILITY
& POWER PLANT

POND

HYDRO CORRIDOR

PICKERING TOWN LINE

C.N.R.

LITTLE ROUGE RIVER

LEGEND

- SUB - CATCHMENT BOUNDARY
- SUB - CATCMENT No.
- DRAINAGE AREA (ha)
- DRAINAGE DIRECTION

beare road site \water

DRAINAGE PROFILE

version 1 \ 1:4000 \ November 2012

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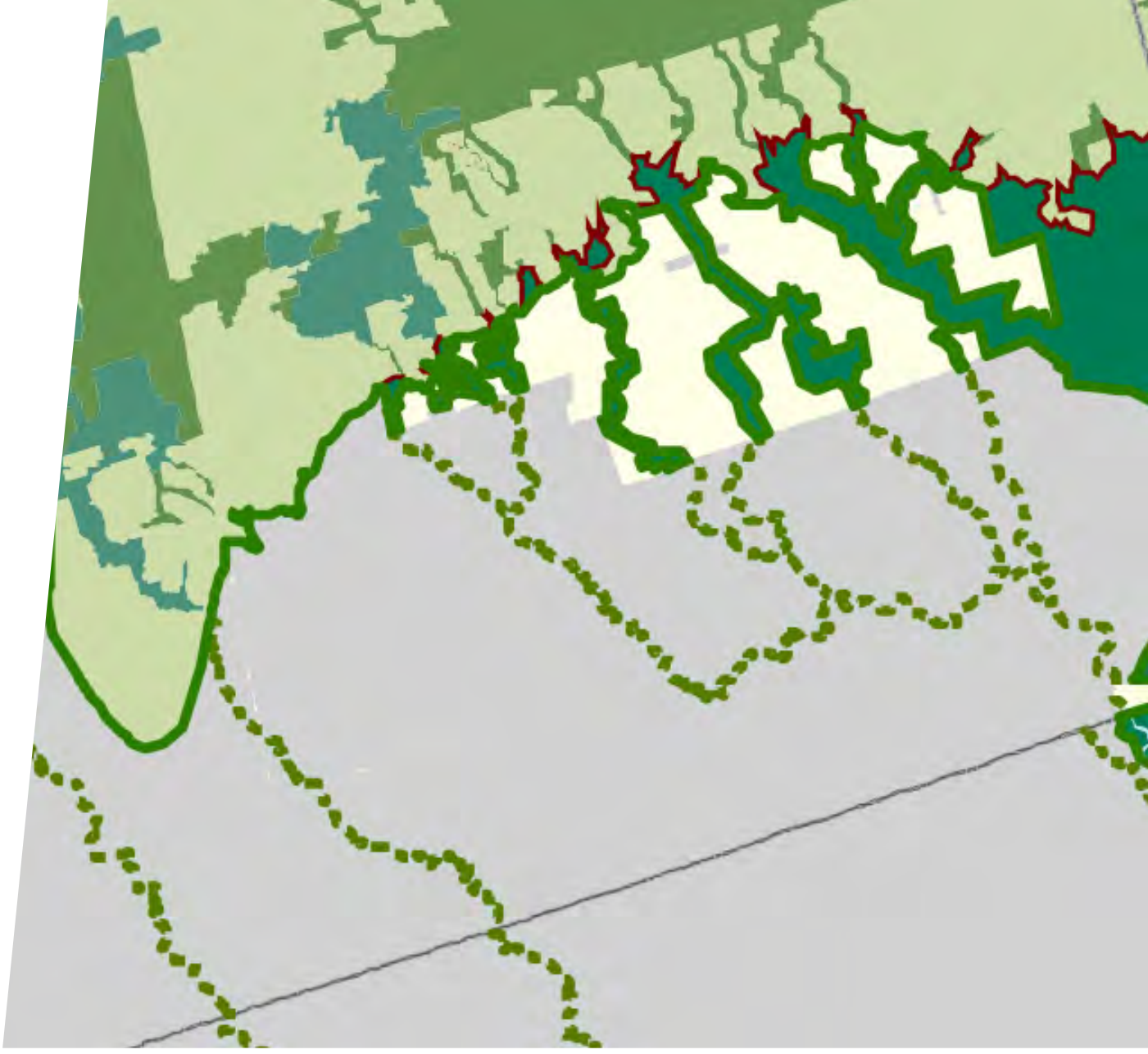
APPENDIX 3

POLICY FRAMEWORK



LAND USE PLANNING CONTEXT

In Ontario, the use and improvement of land is regulated at the Provincial and local levels, through a system of legislation, policies, regulations and guidelines.
The Planning Act, R.S.O. 1990 c.P. 13, enables the preparation of Provincial and local policy plans, zoning by-laws and other tools, which are used to manage and regulate the location and nature of development, changes in the use of land, and the conservation of important resources, including natural heritage resources. Section 2 of the Planning Act lists the matters of Provincial interest. Municipalities are to have regard to the matters of Provincial interests in making decisions and carrying out the responsibilities of the Planning Act.
These matters include the protection of ecological systems, agricultural resources, energy conservation, water conservation, appropriate and orderly development, and protection of health and safety, among other interests.

There are policy and regulatory documents which should be considered in the development of a Master Plan for the Beare Road Landfill Park Master Plan, as follows:

- The Provincial Policy Statement;
- The Greenbelt Plan;
- The Growth Plan for the Greater Golden Horseshoe;
- The City of Toronto Official Plan;
- The City of Pickering Official Plan; and
- The City of Toronto's Zoning By-law.

PROVINCIAL POLICY STATEMENT

The 2005 Provincial Policy Statement (PPS) is issued under Section 3 of the Planning Act. Municipal decisions are to be consistent with Provincial Policy Statements, in accordance with clause (a) of subsection 3(5) of the Planning Act. The PPS provides high-level guidance to decision-makers, and is largely implemented through local and regional Official Plans.
The PPS provides policy direction to municipalities on matters of Provincial interest, and therefore forms the basis for the regulation of the use and improvement of land in Ontario's communities. The overall themes of the PPS relate to the matters of Provincial interest, with more detail and direction.
Part IV of the PPS describes a vision for land use planning in Ontario, including efficient development patterns as a key provincial interest. The sustainable use and management of natural resources, agricultural resources, cultural heritage resources and other resources are key to Ontario's long-term economic, social and environmental health. The PPS provides a preventative approach to protecting health and safety, by directing development away from natural and human-made hazards.

Section 1.0 of the PPS provides policies to manage development and land use to achieve efficient development patterns. Section 1.5 of the PPS provides policies regarding public spaces, parks and open space. The PPS promotes healthy, active communities by promoting alternative modes of transportation, providing for accessible recreation, and considering the impacts of planning decisions on parks and conservation areas. The PPS is supportive of parks and open spaces which promote healthy and active lifestyles.

The policies of Section 2.1 are relevant where natural features and areas are located on or adjacent to the Beare Road Landfill Park property. The PPS does not permit development and site alteration in significant habitat, significant wetlands, significant coastal wetlands, significant woodlands, significant valleylands, significant wildlife habitat and significant areas of natural and scientific interest, unless it is determined that there will be no negative impacts on natural features or their ecological

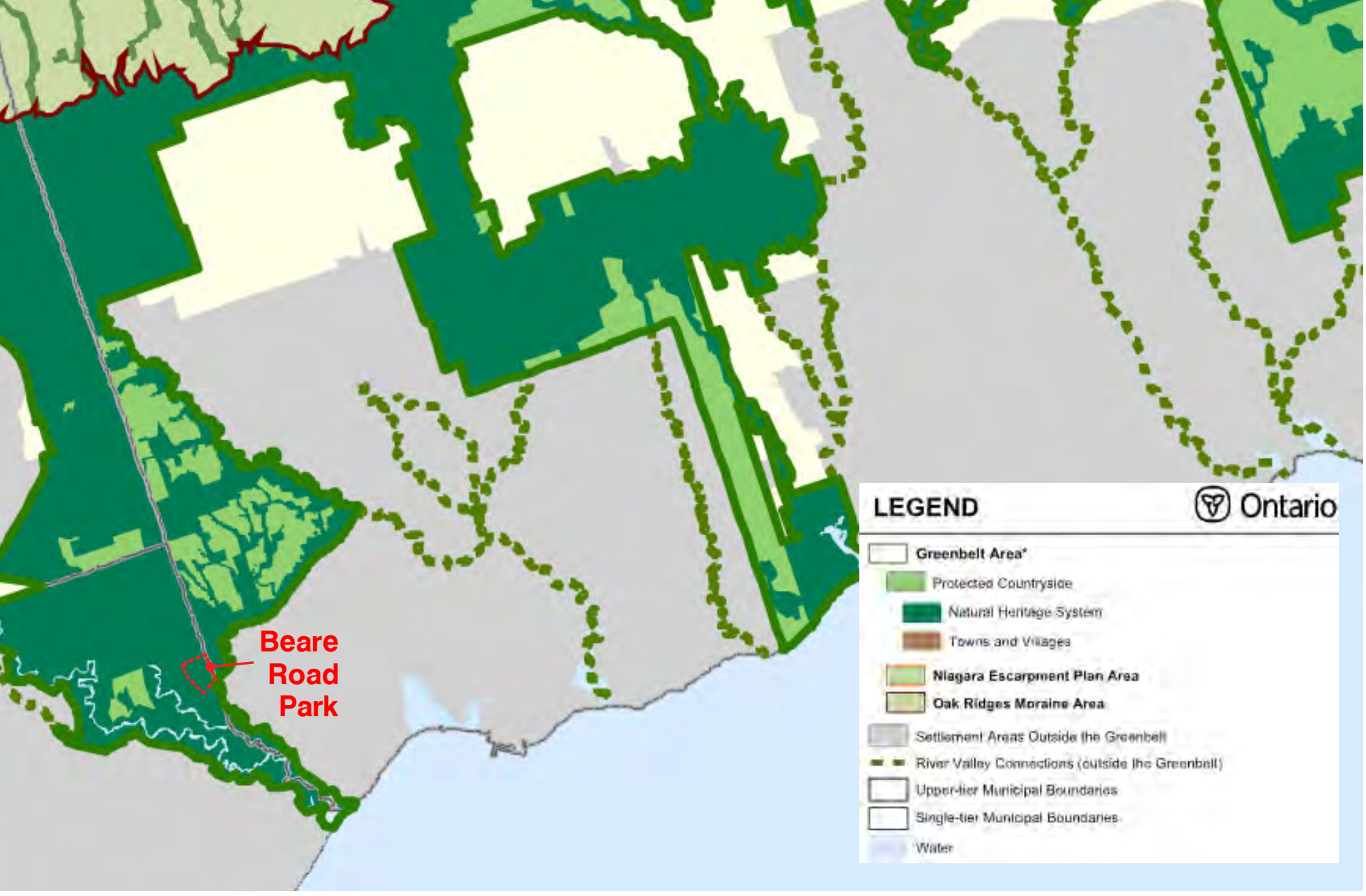


FIGURE A3.1 NATURAL HERITAGE SYSTEM IN THE GREENBELT PLAN \ *ONTARIO MINISTRY OF MUNICIPAL AFFAIRS AND HOUSING. SCHEDULE 4 OF THE GREENBELT PLAN. 2005*

functions (Sections 2.1.3 and 2.1.4). Additionally, development is not permitted on lands adjacent to the natural heritage features noted above, unless it is demonstrated that there will be no negative impacts on the natural features or on their ecological functions (Section 2.1.6).

It is noted that Section 3.2.2 of the PPS requires that contaminated sites are to be remediated prior to any activity taking place in association with a proposed use, to ensure there are no adverse effects on humans, property or the environment.

THE GREENBELT PLAN

The Greenbelt Plan is implemented under the Greenbelt Act, S.O., 2005, c.1. Municipal decisions are to conform to the provisions of the Greenbelt Plan, in accordance with clause (b) of subsection 3(5) of the Planning Act. Within the designated greenbelt, the Plan protects agricultural lands and natural heritage systems from urbanization, and promotes appropriate social and economic activities in the greenbelt, such as tourism and recreation.

The Beare Road Landfill Park is located within the Protected Countryside designation of the Greenbelt Plan (Figure A3.1). Additionally, it is identified in the Natural Heritage System of the Greenbelt Plan (Figure A3.3). The Natural Heritage System is intended to represent the largest concentration of significant or sensitive natural heritage features and functions, which should be managed with the goal of having an integrated and connected natural heritage system.

Recreational uses are permitted in the Protected Countryside of the Greenbelt Plan. Trails are encouraged by the Greenbelt Plan.

Policy 3.1.1.4 c) is relevant to the preparation of a Master Plan recommending the development of trails. It requires that sensitive key natural heritage features and key hydrologic features and functions of the landscape be protected. Policy 4.1.2 c) similarly requires that there be no negative impacts on key natural heritage features and key hydrologic features and functions where non-agricultural uses are proposed in the Protected Countryside.

Policy 4.1.2 includes policies respecting recreational uses. In particular, it is noted that small-scale structures for recreational uses, such as boardwalks, footbridges, fences, docks and picnic facilities, are permitted within key natural heritage features and key hydrologic features, provided that the negative impacts are minimized.

CITY OF TORONTO OFFICIAL PLAN

The City of Toronto's Official Plan (July 2011 Office Consolidation) designates all lands within the City, and provides policies respecting each designation, as well as general policies respecting the use of land, protection of natural heritage resources, and the use of planning tools to implement the policies of the Official Plan. The Official Plan is intended to guide long-term land use planning in the City, with a wide range of policies addressing growth management, infrastructure, health and safety, natural heritage protection, heritage conservation, economic development, and so on. Decisions by Council must conform to the policies of the Official Plan.

The Beare Road Landfill site is identified as forming a component of the City's Green Space System, as shown on Figure A3.4. The proposal to transition this former landfill into a park use is consistent with the Green Space System Policies (Section 2.3.2). It is the role of the Green Space System to provide habitat for flora and fauna, to help clean the air and water and limit damage from erosiion and flooding, to provide beauty and to provide opportunities for recreation and attract visitors. Policy 2.3.2.1 encourages public agencies and residents to support the improvement of links between elements of the Green Space System. Policy 2.3.2.10 encourages year-round use of regional resources including Rouge Park.

The site is subject to Site and Area Specific Policy 141 of the Official Plan, which applies broadly to the Upper Rouge area. The policies of this section envisions the Upper Rouge area as an integrated natural heritage area, with emphasis placed on protecting, restoring and enhancing natural heritage features. Regional recreational, interpretive educational, tourism and cultural activities are permitted provided they are consistent

with natural heritage protection goals. Trails should be linked and co-ordinated. Scenic views should be protected. Major active recreational uses are not permitted, such as illuminated sports fields or golf courses. In general, the reuse of the site into a park is consistent with Site and Area Specific Policy 141.

The Beare Road Landfill site is located within the natural heritage system designated by the Official Plan (Figure A3.2). Policy 3.4.13 identifies the types of features which may require additional protection, recognizing their significant role, including habitat for vulnerable, rare, threatened or endangered species, rare or high quality landforms, habitats with unusually high biodiversity, and areas which contribute to the healthy function of an ecosystem beyond the boundaries of the feature.

Additionally, Policy 3.4.14 provides policies to protect provincially significant natural heritage features. A Provincially Significant Wetland is located partially on the Beare Road Landfill Park site. The majority of the Wetland is located just to the east of the site. Where development is proposed, Policy 3.4.14 requires that a study be prepared to ensure that there are no negative impacts on Provincially significant features or their functions.

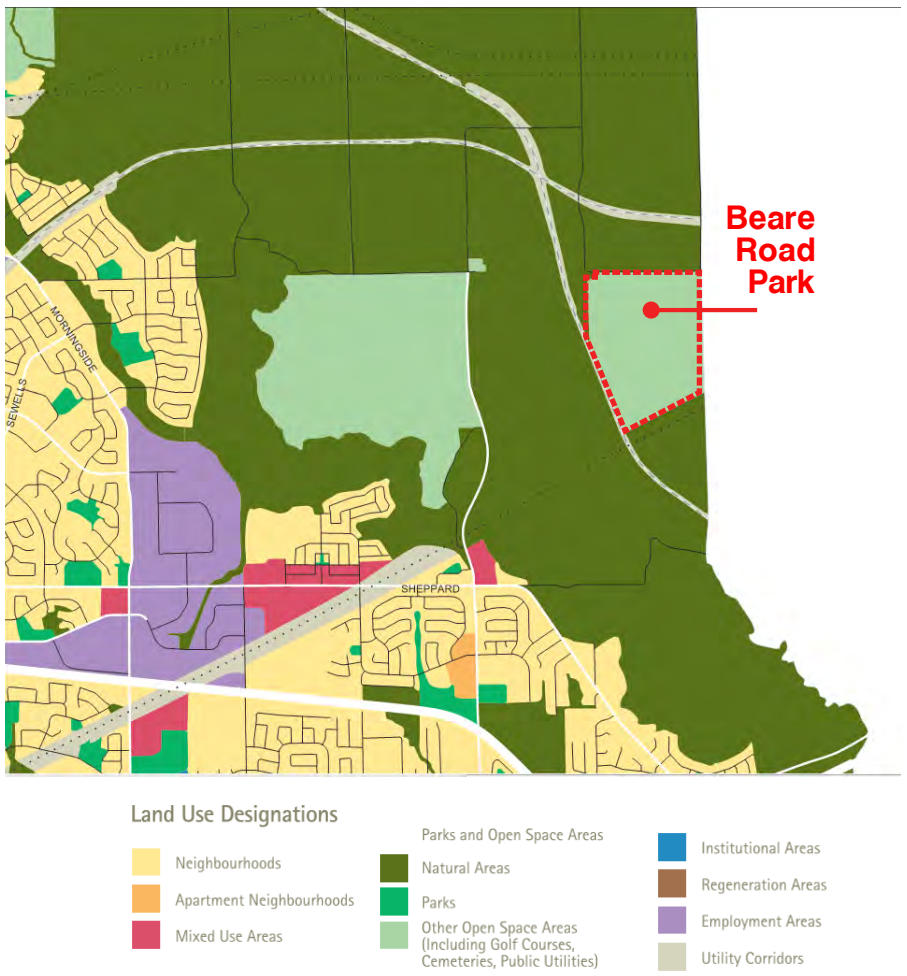


FIGURE A3.2 TORONTO OFFICIAL PLAN LAND USE DESIGNATIONS \ *CITY OF TORONTO. CITY OF TORONTO OFFICIAL PLAN, MAP 22 - LAND USE PLAN. 2010*

CITY OF TORONTO ZONING BY-LAW

Municipalities may pass Zoning By-laws in accordance with Section 34 of the Planning Act, to regulate the use of land, and the location, height and size of buildings and structures. The City's Zoning By-law No. 569-2013 is adopted and effective for the Beare Road Landfill site.

The proposed use is consistent with the Zoning By-law, and no amendments or variances are anticipated to be required. The site is zoned a site-specific exception, ON 4. The exception permits existing dwelling units. Otherwise, the site is subject to the provisions of the ON zone, which permit park uses. Table 200.5.10.10 sets out the parking space requirements for parks. Other lot requirements apply to the ON zone, including maximum building height of 15.0 metres, and a minimum building and structure setback of 3.0 metres from all lot lines. These specific requirements should be reviewed in detail during the detailed design stage to confirm whether a variance is required to permit a building or structure should it not be in accordance with the provisions.

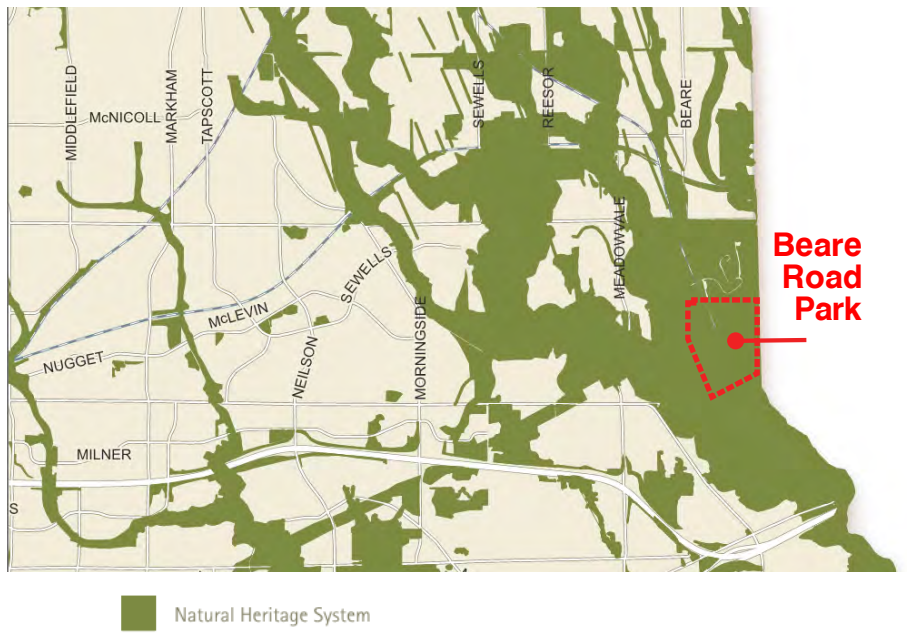


FIGURE A3.3 TORONTO OFFICIAL PLAN - NATURAL HERITAGE SYSTEM \ *CITY OF TORONTO. CITY OF TORONTO OFFICIAL PLAN, MAP 9 - NATURAL HERITAGE. 2010*

CITY OF PICKERING OFFICIAL PLAN

It is important to look at the City of Pickering's Official Plan, to determine the types of land uses in proximity to the site, since the Beare Road Landfill Park site abuts Pickering's boundary. The current and in-effect Official Plan for the City of Pickering is the February 2010 Office Consolidation. Immediately to the east of the subject property is a designated natural area, which extends as a series of corridors across the City of Pickering. Lands to the southeast are urban, low density residential neighbourhoods. Agriculture areas are designated to the northeast, north of the natural area, and there are some small rural clusters and hamlets, including Cherrywood. The current Official Plan does not intend for the development of this agricultural area. Rather, the City's urban structure consists of lands located south of the C.P. Rail (the South Pickering Urban Area) and the Seaton Urban Study Area, which is planned as a future community further to the northeast.

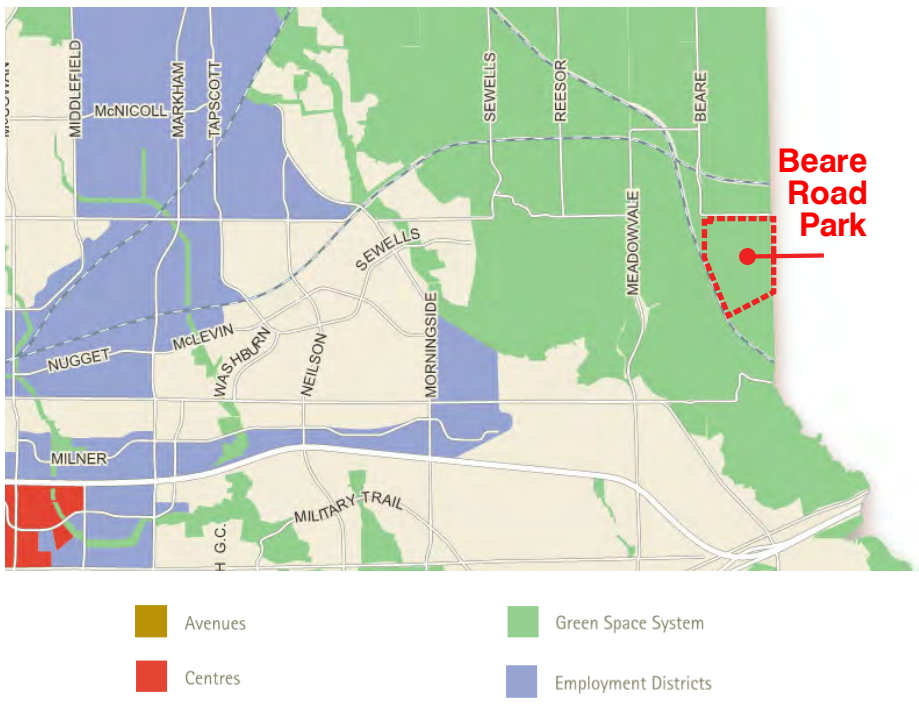


FIGURE A3.4 (ABOVE): TORONTO OFFICIAL PLAN - GREEN SPACE SYSTEM \ *CITY OF TORONTO. CITY OF TORONTO OFFICIAL PLAN, MAP 2 - URBAN STRUCTURE. 2010*

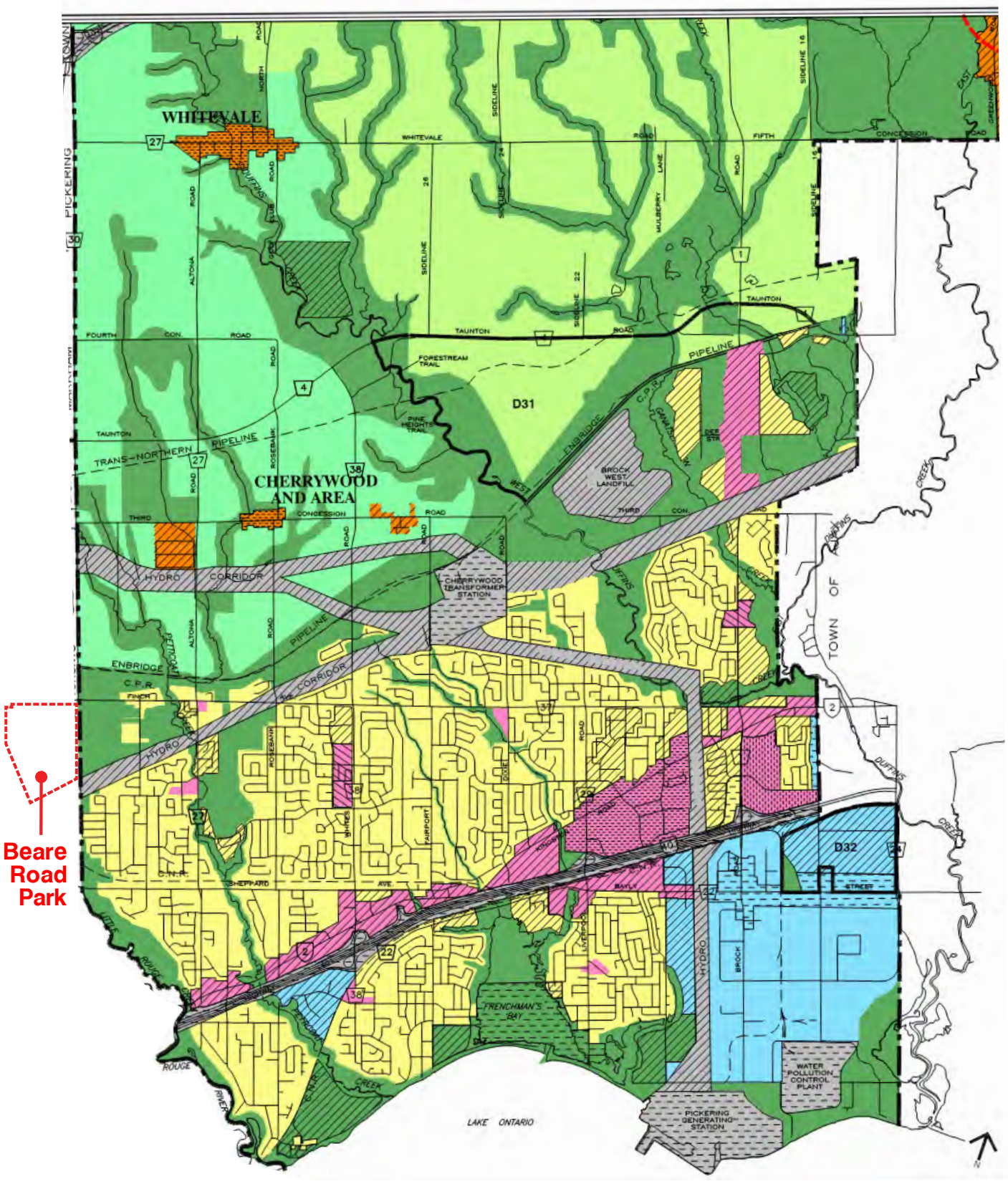


FIGURE A3.5 CITY OF PICKERING OFFICIAL PLAN - LAND USE STRUCTURE \ *CITY OF PICKERING. CITY OF PICKERING OFFICIAL PLAN - SCHEDULE 1 (EDITION 6). DECEMBER 2009.*

CN RAIL LINE

A CN rail line runs immediately to the west of the Beare Road Landfill Park site. The Draft City of Toronto Zoning By-law does not regulate setbacks from railways, buffering or other requirements. Normally, CN Rail would be circulated on development applications where a rail line is located within 300 metres of a development proposal, in accordance with Ontario Regulations 545/06 and 543/06, issued under the Planning Act. CN Rail should be consulted during the detailed design phase of this project with regard to rail safety, noise and vibration mitigation, and other potential issues, recognizing that the lands will be publicly accessed.

The City's Official Plan contains policies regarding noise and vibration. Policy 3.4.21 states that studies may be required to identify noise, vibration, odour and other contaminant issues, and to evaluate mitigation measures, where development is proposed in proximity to transportation and rail infrastructure. The City, as the proponent of the park, may deem it necessary to complete such a study, to inform specific measures that can be taken to ensure safety and reduce noise and vibration. However, it is not recommended that these studies need to be completed since the use is an outdoor passive recreational park, and not a sensitive residential use.

SUMMARY

Following is a summary of the key findings from the review of Provincial and local policy and zoning:

The proposed use is consistent with Provincial and local policy and zoning.

The proposed use of this site as a park is consistent with City of Toronto Official Plan and the Zoning By-law for Toronto. As the Zoning By-law's requirements for setbacks are not considered to be very restrictive, it is unlikely that a zoning amendment or variance will be required to permit any proposed buildings and structures. The lot and building requirements and general provisions of the Zoning By-law should be reviewed in detail at the detailed design stage of the project, to confirm that no variances or amendments are required to permit any proposed buildings or structures. The proposed use is consistent with the uses permitted in the Zoning by-law.

The proposal for a park is consistent with the policies of Site and Area specific policy 141 in the Official Plan, which apply broadly to the Upper Rouge area. The policies promote a well-connected trail network, opportunities for recreation, interpretive educational features, tourism and cultural activities and the protection and enhancement of natural heritage features.

Provincial and local planning policy encourages improved connectivity between natural heritage features, as well as restoration and enhancement of natural features.

The Greenbelt Plan supports the connectivity of the Greenbelt's Natural Heritage System and other systems, especially the connection of the Greenbelt to the Great Lakes coastal system, through the river valleys in urban areas.

The City of Toronto Official Plan generally supports the improvement of the natural ecosystem, biodiversity and natural linkages. Site and Area Specific Policy 141 of the Official Plan plans for the Upper Rouge area as an integrated natural heritage area, with the objective of protecting, restoring or enhancing the natural ecosystem.

Where possible, natural features should be connected, restored and enhanced to help achieve the policies for natural heritage protection, restoration and enhancement. The issues and opportunities and their mitigation measures indicated for habitat areas are described in the Management Plan of Beare Road Park Master Plan.

Provincial and local policy encourages an interconnected network of accessible parks, open space and trails.

The Greenbelt Plan and the Toronto Official Plan promote an interconnected recreational network of trails, parks and open space. The Plans also emphasize universally accessible and safe recreational opportunities, and meeting the recreational needs of current and future populations.

The Greenbelt Plan is supportive of recreational uses in the subject property, provided that there are no negative impacts on key natural heritage and hydrological features, and provided the Park's Master Plan satisfies other policies and criteria. The Greenbelt Plan encourages improved connectivity between key natural heritage features and key hydrologic features.

Impacts to the Provincially Significant Wetland and other natural heritage features identified on the property will need to be considered and addressed during detailed design and implementation.

The Townline Wetland Complex, located at the eastern edge of the site, is a Provincially significant wetland. The Provincial Policy Statement requires that any development or site alteration within 120 metres of a Provincially significant wetland be evaluated to ensure that there are no negative impacts, and further, that no development or site alteration is permitted within Provincially significant wetlands. Additionally, some of these areas may constitute significant wildlife habitat, in which development and site alteration is not permitted unless it is demonstrated there will be no negative impacts.

The Greenbelt Plan permits small-scale structures for recreational uses (such as boardwalks, footbridges, fences, docks and picnic facilities) within key natural heritage features and key hydrologic features, provided the negative impacts are minimized.

FIGURE A3.6 VIEW FROM SITE ENTRANCE TO THE EXISTING MAIN PATH TO THE TOP OF THE SITE

There are a number of policies related to trails in place within the City of Toronto and surrounding municipalities that influence the development of the Master Plan for the Beare Road Landfill.

TORONTO BIKE PLAN (2001)

The Toronto Bike Plan, although dated and currently being re-evaluated, establishes a vision for cycling in Toronto to “shift gears” towards a more bicycle friendly city. The Plan sets out a vision, principles, objectives and recommendations regarding a number of key themes including infrastructure, a comprehensive network, safety, education and promotional programs.

The vision of the Plan is to “create a safe, comfortable and bicycle friendly environment in Toronto, which encourages people of all ages to use bicycles for everyday transportation and enjoyment”. To achieve this vision the Plan sets out two primary goals:

- *to double the number of bicycle trips made in the City of Toronto, as a percentage of total trips 2011; and*
- *to reduce the number of bicycle collisions and injuries.*

In all, the Plan includes 48 recommendations under the key themes identified above, and 3 of these recommendations relate directly to the Beare Road site. Specifically:

- *that the City of Toronto implement a 1,000 km bikeway network;*
- *that the City work with neighbouring municipalities to create seamless bikeway connections across municipal boundaries; and*
- *that the City work with Tourism Toronto to explore opportunities with other interest groups, agencies and governments to promote bicycle tourism in Toronto.*

Figure A3.7 illustrates the cycling network in the eastern part of the city as envisioned in the Toronto Bike Plan. In the vicinity of the study area Old Finch, Plug Hat, Finch East, Meadowvale and Twin Rivers are designated routes in the cycling network. These routes provide direct access to the Beare Road site and Finch East and Twin Rivers provide a direct connection to Toronto’s municipal neighbour in Pickering.

PROPOSED ROUGE NATIONAL URBAN PARK TRAILS

The Proposed Rouge National Urban Park area covers an extensive land mass from the shoreline of Lake Ontario to the Oak Ridges Moraine in the north and east part of the City of Markham and the northwest corner of the City of Pickering. Trails in this area have been under development for several years and shaped by a significant amount of input by key stakeholders and the public.

This trail network provides residents and visitors with the opportunity to access the Rouge Valley and adjacent lands to enjoy, understand and appreciate the natural and cultural heritage resource.

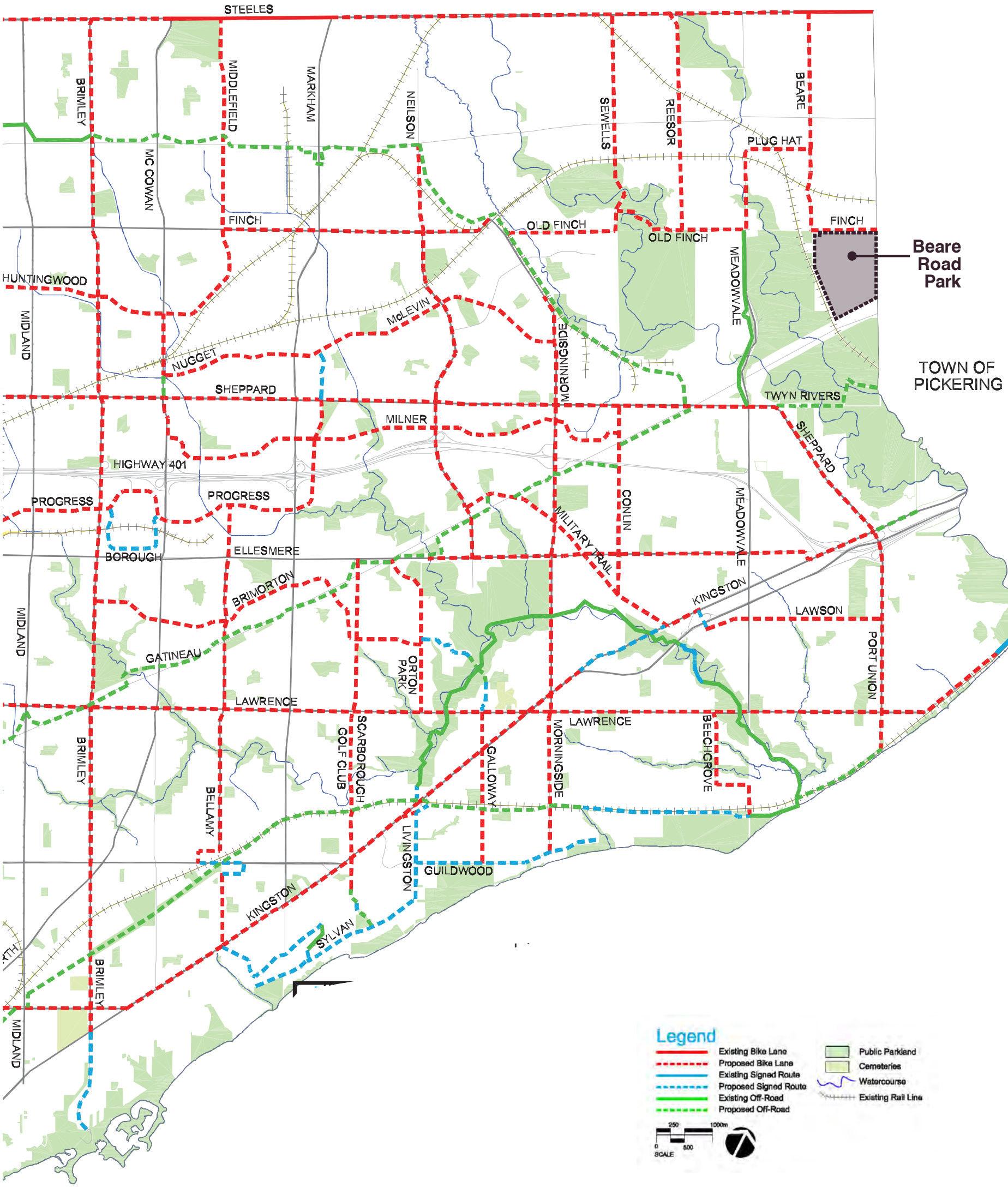


FIGURE A3.7 DISTRICT 4 BIKEWAY NETWORK MAP \ *CITY OF TORONTO. TORONTO BIKE PLAN. 2001*

CITY OF PICKERING TRAILS AND BIKEWAY MASTER PLAN

The City of Pickering developed a Trails and Bikeway Master Plan in 1996, and is currently proposing to update their plan in 2013. Although research to date has not been able to uncover a trail and cycling network map associated with the 1996 plan, the City does publish a Parks / Trails and Open Space map on their website (refer to Figure A3.8). Of particular note are two public parks nearby the site, which are physically connected to an extensive hydro corridor which abuts the Beare Road Landfill site.

CITY OF DURHAM CYCLING PLAN (WORKING CONSOLIDATION OCTOBER 2008)

Approximately 5 years ago the Region of Durham embarked on a Regional Cycling Master Plan project which included a network study, guidelines for the design of facilities and recommendations regarding programs and education. Although the Plan was not officially endorsed by Council, staff developed a working consolidation of the plan. Figure A3.9 illustrates the spine cycling network. Although the plan does not envision any regional routes on roads that are adjacent to or connect directly to the Beare Road site, there are several routes proposed on roads in the surrounding area, namely Kingston Road, Steeles Avenue / Taunton Road and Whites Road. The routes on Kingston Road and Steeles Avenue connect directly to cycling routes in the Toronto Bike Plan network.

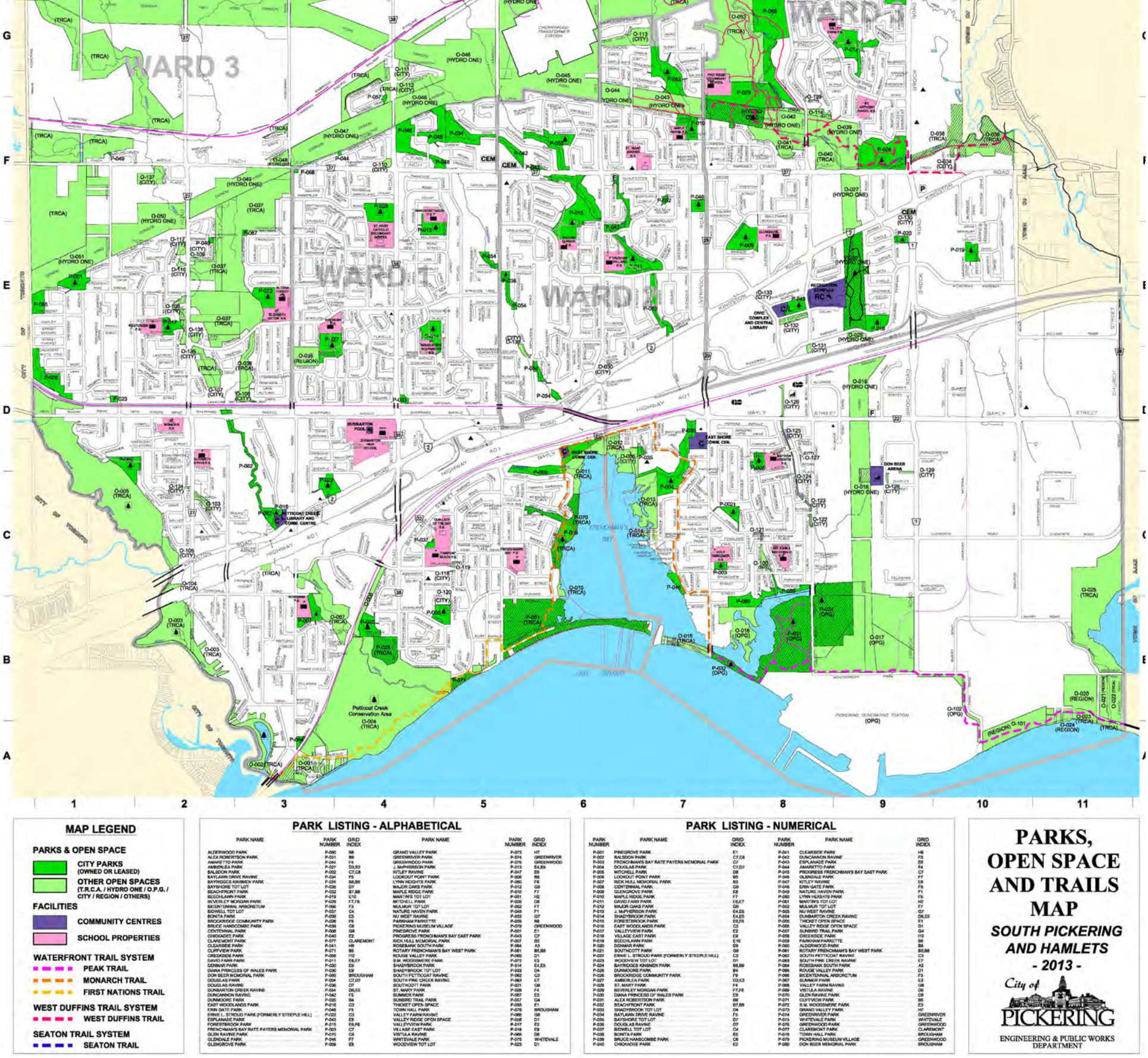


FIGURE A3.8 PARKS, OPEN SPACE AND TRAILS MAP \ *CITY OF PICKERING, ENGINEERING AND PUBLIC WORKS DEPARTMENT. 2009*

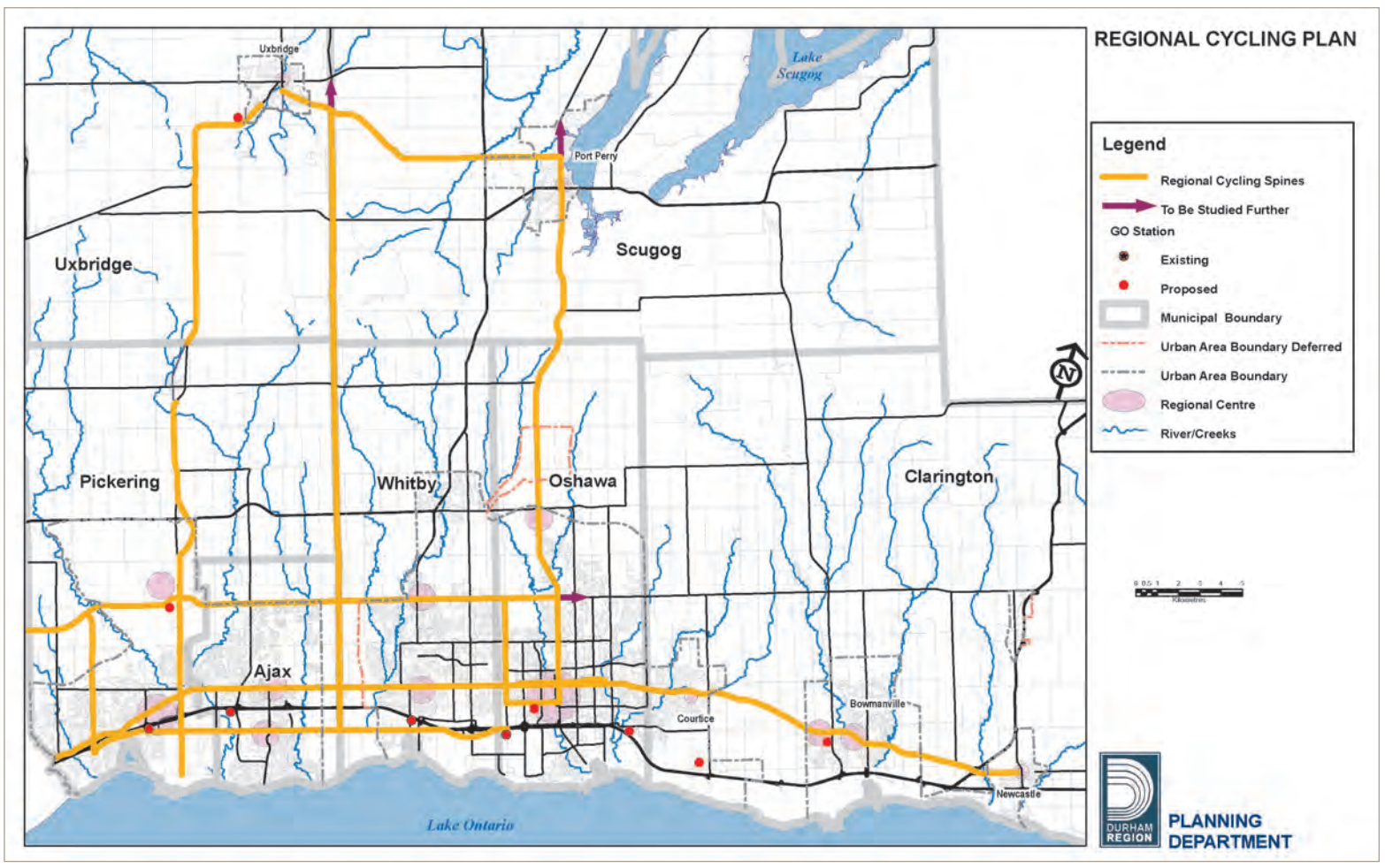


FIGURE A3.9 REGION OF DURHAM CYCLING NETWORK \ *DURHAM REGION PLANNING DEPARTMENT. REGION CYCLING PLAN, WORKING CONSOLIDATION. 2008*

AODA

Ontario Regulation 413/12 (under the Accessibility for Ontarians with Disabilities Act – "AODA", 2005) was published in December 2012, and came into effect in January 2013. It applies to new construction and redeveloped sites where significant alterations are being planned. It does not apply to maintenance upgrades of existing facilities, environmental mitigation or environmental restoration. It is the result of a number of years' consultations and refinement of the "Built Environment Standard", now referred to in the Regulation as "Design of Public Spaces Standards (Accessibility Standards for the Built Environment).

Sections 80.6 to 80.31 outline requirements for:
- Recreational Trails and Beach Access Routes
- Outdoor Public Use Eating Areas
- Outdoor Play Spaces
- Exterior Paths of Travel

Also included are sections related to Accessible Parking, Obtaining Services (e.g. service counters, queuing lines, waiting areas), and Maintenance of Accessible Elements.

The following discussion relates to Recreational Trails and Beach Access Routes as well as Exterior Paths of Travel Recreation Trails are defined as public pedestrian trails that are intended for recreation and leisure purposes; and Exterior Paths of Travel are defined as outdoor sidewalks or walkways that are intended to serve a functional purpose and not a recreational experience. The Regulation provides technical requirements for both of these types of routes, and these requirements address characteristics including but not limited to longitudinal and cross slope, horizontal and vertical clear width, surface, the size and orientation of openings in the surface, edge protection, trail entrances and signage.

It is important to note that the Regulation does not apply to certain types of trails, specifically:
- "Trails solely intended for cross-country skiing, mountain biking of the use of motorized snow vehicles or off-road vehicles" and
- "Wilderness Trails, back country trails and portage routes"

In addition, Section 80.14 and 80.15 describe exceptions and limitations where the technical requirements do not apply. In general these exceptions and limitations apply to locations such as designated heritage sites, national historic sites, sensitive natural or cultural heritage sites, where it can be demonstrated by the owner/proponent that implementing a trail to meet the technical requirements will result in adverse effects on the natural or cultural heritage resource. In addition, Section 80.15.1.6 notes that the technical requirements do not need to be met in locations where "It is not practicable to comply with the requirements, or some of them, because existing physical or site constraints prohibit modification or addition of elements, spaces or features, such as where surrounding rocks bordering the recreational trail or beach access route impede achieving the required clear width."

One important element is signage and communication. In particular trail head signage and signage at access points should clearly indicate the key characteristics of the trail (i.e. average and minimum width, length, surface type and average and maximum slope) so that users can make an informed decision about their use of the trail prior to embarking on the trail.

FIGURE A3.10 BEARE ROAD SITE - VIEWSOUTHWEST FROM THE TOP \ *IMAGE BY MATT FORSYTHE. CITY OF TORONTO URBAN FORESTRY.*