

EAST DON TRAIL ENVIRONMENTAL ASSESSMENT

Environmental Study Report

November 2016



City of Toronto

and Toronto and Region Conservation Authority



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Prepared by:
Toronto and Region Conservation Authority

November 2016

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Community Liaison Committee Members Representing the Following Groups:

Don Watershed Regeneration Council
Toronto Ornithological Club
Wynford Concorde Residents Group
Toronto Field Naturalists
Ward 29 Resident
Ward 26 Resident
Victoria Village Community Association
Friends of the Don East
Woodbine Gardens Homeowners Association
Cycle Toronto

Flemingdon Health Centre
The Ontario Road Ecology Group
Walk Toronto
Action for Neighbourhood Change/Hub - Victoria Village
Toronto Centre for Active Transportation
Todmorden Mills Wildflower Preserve
Bike 25
Don Mills Residents Inc.

East Don Trail EA Public Event Attendees

East Don Trail Key Stakeholders

Councillors, Ministers, Members of Parliament

EXECUTIVE SUMMARY

ES-1 PURPOSE OF THIS MUNICIPAL CLASS ENVIRONMENTAL ASSESSMENT

The purpose of the East Don Trail Municipal Class Schedule C Environmental Assessment (EA) is to create a key connection in the multi-use trail system: provide safe access to nature and recreational opportunities for the public; and create a safe travel route, through an environmentally sound planning process. The City of Toronto's Bikeway Trails Implementation Plan approved by Toronto City Council in 2012 identified the need for a trail connection in the East Don Corridor, while the East Don Trail Master Plan Update, completed in 2012, determined the trail connection was feasible and recommended that further environmental studies were necessary. The East Don Trail EA has assessed a number of options to facilitate this connection and has identified a preferred trail route and design concept.

ES-2 STUDY AREA

The East Don Trail EA Local and Regional Study Areas are shown in Figure ES2-1. The Local Study Area, also referred to as Study Area, encompasses an area where the proposed trail will be routed and where direct effects of the project may occur. The Regional Study Area a larger area where indirect effects of the project may occur.

ES-3 BACKGROUND

The City of Toronto, working in partnership with the Toronto and Region Conservation Authority (TRCA) has undertaken a Schedule C of the Municipal Class Environmental Assessment (MCEA) process to facilitate the creation of the East Don Trail. The East Don Trail would provide a connection to the City's multi-use trail network between the existing East Don Trail located east of Wynford Heights Crescent, the proposed Gatineau Corridor Trail and the Don Trail Systems located south of where the East Don River and West Don River meet (Forks of the Don). In addition, a section of the East Don Trail would realize one of the strategic connections of the Pan Am Path, a multi-use path connecting Toronto trails and creating an active-living legacy for the TORONTO 2015 Pan Am/Parapan Am Games.

The key planning initiatives that supported the East Don Trail EA included the *Bikeway Trails Implementation Plan* and the East Don Trail Master Plan Update.

Recommendations and resolutions made in planning documents such as the City of Toronto Official Plan, Accessibility Design Guidelines, Multi-Use Trail Design Guidelines, Natural Heritage Study, and Natural Environment Trails Strategy were also used to delineate the EA study area, identify problems and opportunities, develop project objectives, and identify and evaluate alternatives.

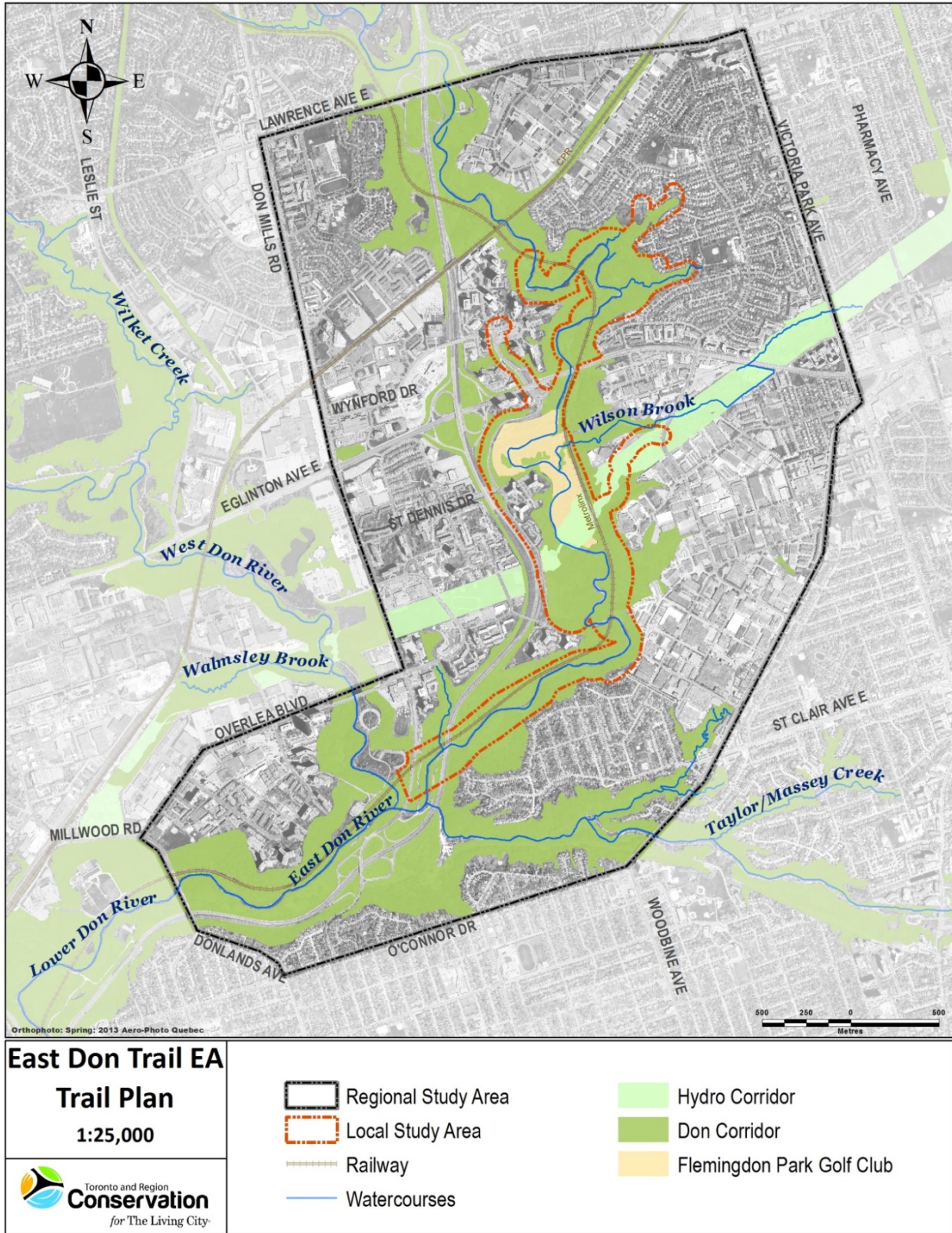


Figure ES2-1: East Don Trail Environmental Assessment Local and Regional Study Areas

ES-4 STUDY PROCESS

The East Don Trail EA was conducted in accordance with the requirements of the MCEA, Schedule C, as amended in 2015. This process consists of five phases with mandatory points of public contact, with the focus being a comprehensive and traceable decision-making process. The five phases include the following:

- Phase 1: Identify the problem (deficiency) or opportunity
- Phase 2: Identify alternative solutions to address the problem or opportunity by taking into consideration the existing environment, and establish the preferred solution taking into account public and Review Agency input. Determine the appropriate Schedule for the undertaking and document decisions
- Phase 3: Examine alternative methods of implementing the preferred solution, based upon the existing environment, public and Review Agency input, anticipated environmental effects, and methods of minimizing negative effects and maximizing positive effects
- Phase 4: Document, in an Environmental Study Report (ESR), a summary of the rationale, and the planning, design and consultation process of the project. The ESR is filed with the Ministry of the Environment and Climate Change and placed on the public record for a 30 day review period
- Phase 5: Complete contract drawings and documents, and proceed to construction and operation, with appropriate monitoring (MCEA, 2015), conditional on the project approval following the ESR submission

As per the MCEA requirements, this ESR has been prepared to document the East Don Trail Schedule C MCEA project activities, correspondence, and decision-making process up to and including Phase 4 of the MCEA process.

ES-5 CONSULTATION

Public consultation was carried out in accordance with the consultation requirements set out in the MCEA document. Stakeholder groups included the public (interested persons and Community Liaison Committee), Indigenous communities, Review Agencies, Technical Advisory Committee, Key Stakeholders (agencies and businesses that own land or utilities within the project Study Area) and local politicians.

Three Public Events and seven meetings of the Community Liaison Committee were held over the course of the Study. Notices were issued in a variety of methods to advise the public of the commencement of the Class EA, Public Events, completion of the Class EA, and key project decision points. Copies of these notices were sent to project stakeholders. In addition to the notification and public event requirements set out by the MCEA, a number of mechanisms were used to provide an opportunity for meaningful engagement throughout the duration of the study, which included a regularly updated

project webpage regular updates of a frequently asked questions document, and an email account providing for one-window communication opportunities between the public and the project team.

ES-6 PROBLEM/OPPORTUNITY STATEMENT AND PROJECT OBJECTIVES (PHASE 1)

The East Don Trail EA problem/opportunity statement and project objectives were developed and refined following review by City of Toronto staff, TRCA staff, and the public, and constitute the following:

Opportunity Statement

A significant gap in the multi-use trail network exists within the East Don Corridor between the existing East Don Trail (east of Wynford Heights Crescent), Gattineau Corridor Trail (at approximately Bermondsey Road), and the Don Trail System (Figure ES6-1). The East Don Trail will fill this existing gap in the trail network, thus creating a continuously connected trail network.

Project Objectives

The successful preferred solution for the East Don Trail will address the following six main objectives:

Connections

- To provide a key connection route linking local and inter-regional trail systems

Public Safety

- To provide a safe way for a broad spectrum of users to access the valley system
- To provide safe off-road options (where possible) for cycling and recreational use
- To investigate options to accommodate emergency response, city and utility maintenance vehicles/activities

Natural Environment

- To assist in the management of informal trails by providing a single focused multi-use trail within the East Don Corridor
- To be respectful of the natural environment through the alignment, design, and construction of the trail by aiming to avoid, prevent, or minimize negative impacts
- To increase access to a range of users to discover and appreciate natural areas within the city

Recreation

- To create trail and outdoor recreational opportunities for a variety of users
- To provide trail and outdoor recreational opportunities for neighbouring communities

Transportation

- To function as a safe travel route to everyday places and amenities

Supports Other Initiatives

- To coordinate with other planning initiatives in the area allowing for future integration of the multi-use trail (e.g., Eglinton Crosstown Light Rail Transit)

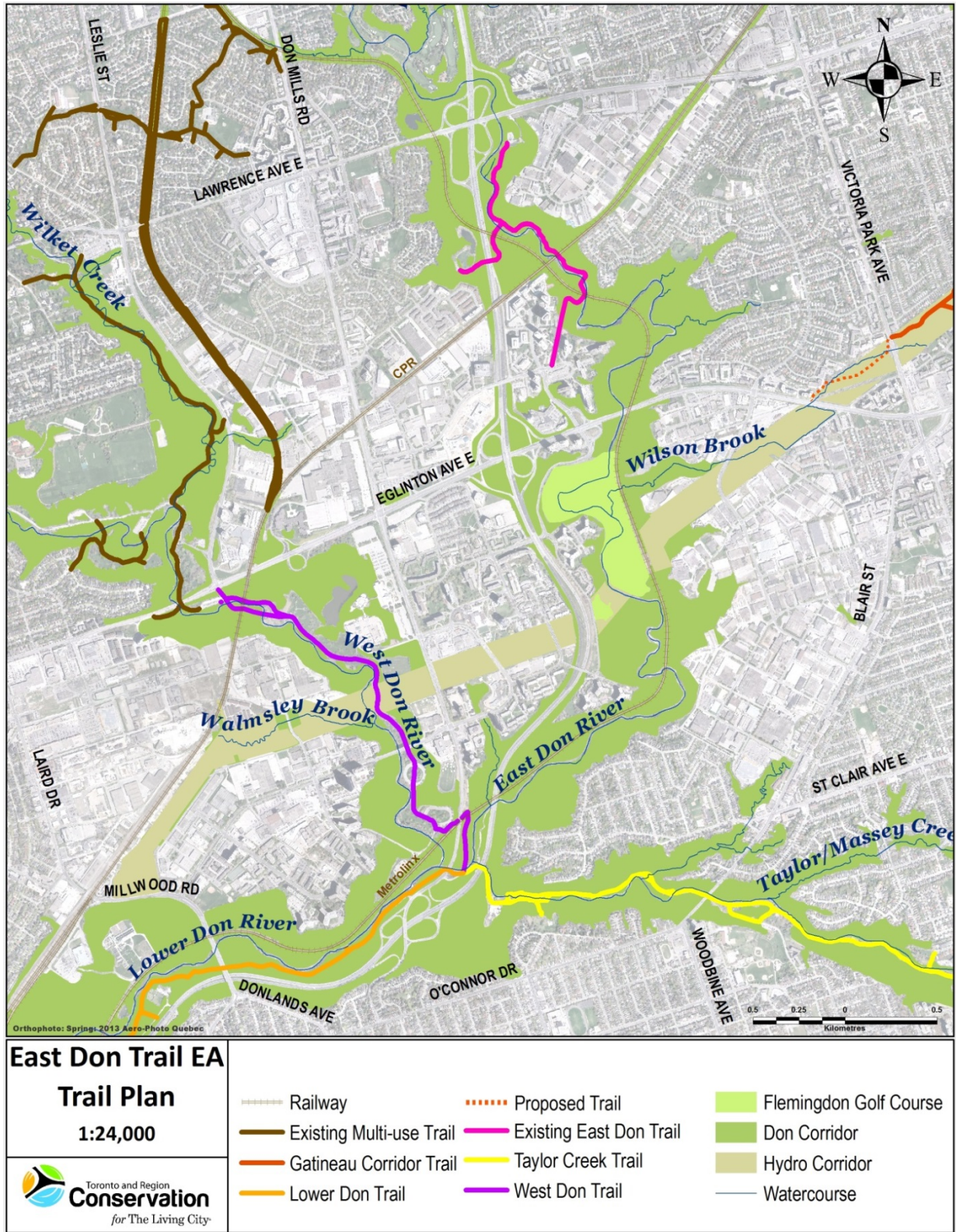


Figure ES6-1: Existing gap in the multi-use trail network within the East Don Corridor

ES-7 EXISTING CONDITIONS AND DETAILED ENVIRONMENTAL INVENTORY

Review of the existing conditions of the East Don Trail EA Study Area provided the necessary information to support the decision-making process. The proposed alternatives were evaluated based on the impact on the existing environment.

The environmental inventory included the examination and documentation of existing site conditions concerning current transportation methods and existing trails, physical environment (particularly East Don River geomorphology, hydraulic parameters, and erosion hazards), biological environment (vegetation, wildlife etc.), cultural environment (archaeology, built heritage etc.), and socio-economic environment (local land uses, infrastructure, etc.). In the Alternative Solutions EA phase (Phase 2), existing conditions information was used to evaluate the alternative trail alignments in terms of their potential impact on the surrounding environment.

During the Alternative Design Concepts EA phase (Phase 3), a detailed environmental inventory was compiled and included; a topography survey, East Don River flood levels, and tree inventory. This information was used to develop, refine and evaluate the trail alternative design concepts.

ES-8 ALTERNATIVE SOLUTIONS (PHASE 2)

Alternative solutions are feasibly different ways of solving the identified problem or addressing the identified opportunity. In Phase 2 of this EA, a number of alternative solutions were developed and evaluated. The preferred solution addresses the EA problem/opportunity statement as well as project objectives.

To identify the preferred solution, a two-step process was undertaken:

Step 1: Alternatives To

Two functionally different ways of addressing the problem/opportunity termed “alternatives to”, were identified. The “alternatives to” included the “Do Nothing” alternative and the “Provide Multi-Use Trail Connection” alternative. To determine the preferred functional approach, the “alternatives to” were evaluated in the context of project objectives and potential impacts.

The “Do Nothing” alternative consisted of no action, and the “Provide Multi-Use Trail Connection” consisted of constructing a multi-use trail from the existing East Don Trail to the Lower Don Trail. A trail connection would also be constructed to facilitate a planned connection to the Gatineau Corridor Trail.

The “Do Nothing” alternative does not meet or provides limited fulfillment of the project objectives while the “Provide Multi-Use trail Connection” alternative meets all project objectives.

The potential impacts associated with the “Do Nothing” and “Provide Multi-Use Trail Connection” “alternatives to” were assessed based on six broad criteria themes which included: Functional Value, Natural and Physical Environment, Social and Cultural Environment, Cost, Technical, and Support of Planning Initiatives.

“Provide Multi-Use Trail Connection” approach was identified as the preferred “alternative to”. This alternative provides access for a variety of users into the East Don Corridor and facilitates connection with existing and planned adjacent trails; provides recreational opportunities, increases public safety (trail use and access); connects adjacent communities and neighbourhoods, and supports a number of current planning initiatives such as the *Bikeway Trails Implementation Plan*.

Step 2: Alternative Trail Alignments

After the “Provide Multi-Use Trail Connection” approach was selected as the preferred “alternative to” (the result of Step 1), a number of trail routes termed “alternative trail alignments” were developed that supported the problem/opportunity statement and project objectives.

For the purposes of developing and evaluating alternative trail alignments, the Study Area was divided into three distinct areas (Area 1, Area 2, and Area 3) based on the overall Study Area size and complexity of existing conditions (highly variable topography, infrastructure, multiple land uses and property requirements). Unique alignments were developed for each Area, and were then evaluated relative to each other (e.g., Area 1 alignments were evaluated relative to each other, separately from Area 2 and 3 alignments). The preferred solution consists of three preferred trail alignments, one in each Area.

Conforming to the “alternatives to” evaluation approach, alternative trail alignments were evaluated in terms of their potential impact on the surrounding environment. In particular, positive and negative impacts were examined according to the following categories: Functional Value, Natural and Physical Environment, Social and Cultural Environment, Cost, and Technical. Based on the results of the evaluation, the preferred alternative trail alignment (i.e., preferred solution) was selected.

The alternative trail alignments and preliminary evaluation results were presented to the public and other project stakeholders. In response to feedback received on the alignments and evaluation, a number of Area 1 and Area 2 alignments were revised and evaluated. Area 3 alignments did not undergo revisions.

For clarification purposes, the original alignments presented to the public prior to revisions were termed *original* alignments, and the alignments revised and evaluated as a result of public and stakeholder feedback were termed *revised* alignments.

The *original* alternative trail alignments and approximate lengths by Area are listed below. Trail alignments and Areas are shown in Figure ES8-1.

Area 1

- Forest Trail A (1.4 km) and Forest Trail B (1.4 km)

Area 2

- Road Link A (2.9 km), Road Link B (3.3 km), and Road Link C (3.4 km)
- River Walk A (2.7 km), River Walk B (2.8 km), and River Walk C (3.4 km)
- Rail Trail A (2.1 km), Rail Trail B (2.2 km), and Rail Trail C (3.4 km)

Area 3

- Access Route A (1.7 km), Access Route B (1.7 km), and Access Route C (2.1 km)

The *revised* alternative trail alignments and approximate lengths by Area are listed below. Trail alignments and Area boundaries are shown in Figure ES8-2.

Area 1

- Forest Trail A (1.4 km) and Forest Trail C (1.0 km)

Area 2

- Hillside Trail (2.1 km), Corridor Trail (2.1 km), and River Walk (2.7 km)

The preferred solution consists of Forest Trail A in Area 1, Hillside Trail in Area 2 and Access Route B in Area 3, and is shown in Figure ES8-3.

In Area 1, Forest Trail A provides improved access to existing city infrastructure and emergency vehicles and is more easily accessible by trail users, including those with limited mobility. This alignment also allows for a future connection to be made to the Victoria Village community. Located in an area characterized by multiple informal trails, Forest Trail A would provide the local community with an opportunity to enjoy the valley lands while minimizing impacts on environmentally sensitive areas and discouraging public access to potentially unsafe areas (e.g., high eroded river banks). Finally, Forest Trail A constitutes an aesthetically pleasing route that travels through a variety of landscapes and offers a diversity of user experiences.

In Area 2, River Walk B scored highest in the evaluation. However, this trail alignment cannot be considered further at this time as the property (Flemington Park Golf Club) that would be required for trail implementation is not currently available. As a result, the second-highest scoring alignment, Hillside Trail, was identified as the preferred alignment and moved forward to Phase 3, with the Hydro Corridor Connection facilitated via the B option. Hillside Trail allows for an easy connection to be made to Eglinton Avenue East, which, in turn, allows for a connection to future proposed Eglinton Avenue

bike lanes and the Eglinton Light Rail Transit, thereby increasing access to and connectivity among transportation modes. Hillside Trail results in a low impact to aquatic habitat, river processes and hydraulics of the East Don River. In addition, this alignment results in the least impact on local business operations while providing an aesthetically pleasing route that will travel through a variety of settings.

In Area 3, the majority of Access Route B is located along an existing Toronto Water maintenance access route, which is to be formalized as a multi-use trail. Access Route B connects to the Don Trails and Taylor Creek Trail via the Taylor Massey Creek bridge. This connection not only allows trail users to access East Don Trail from the Lower Don, West Don, and Taylor Massey Creek trail systems but also provides an optimal access point to existing Toronto Water infrastructure.

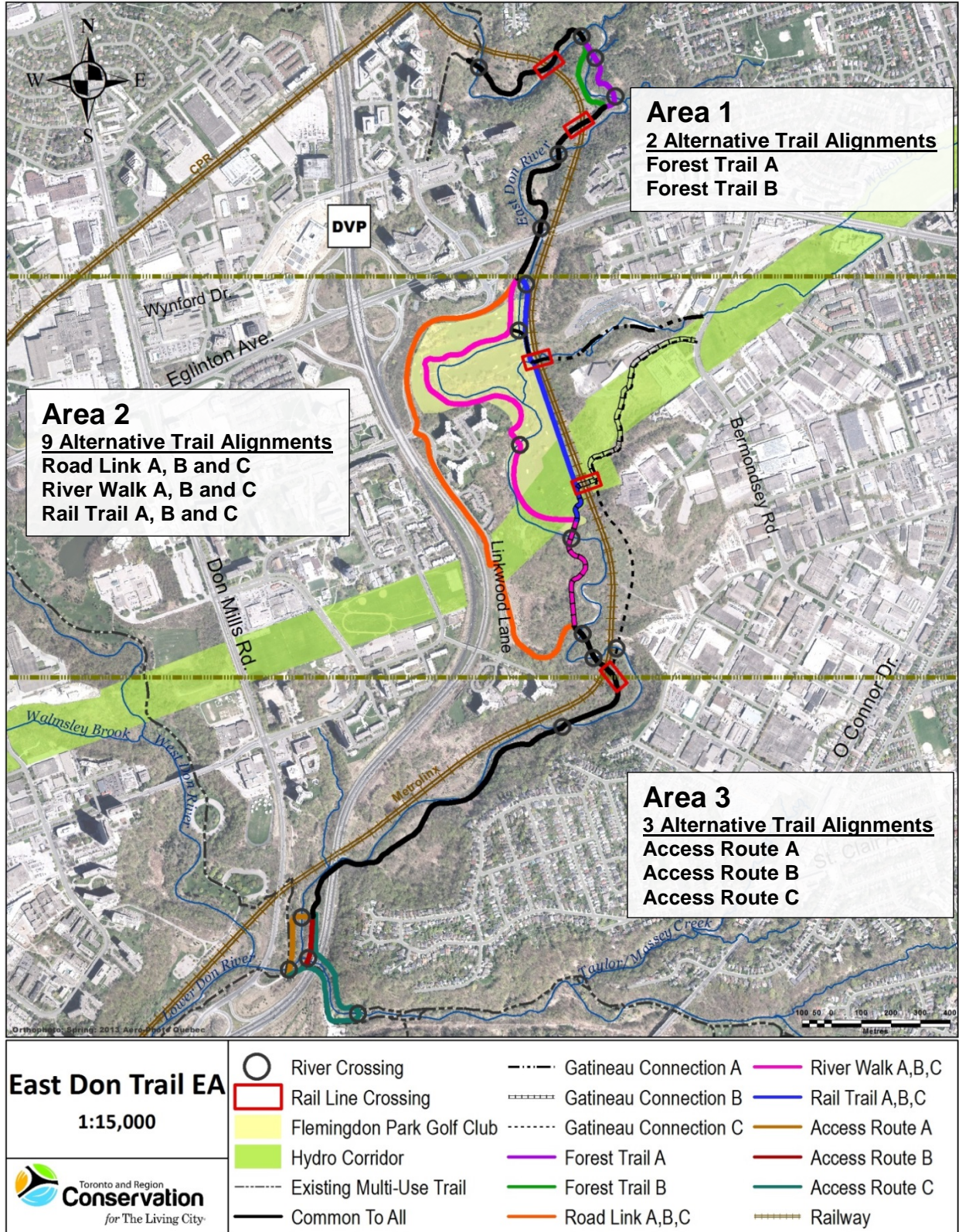


Figure ES8-1: Original Alternative Trail Alignments and Area boundaries

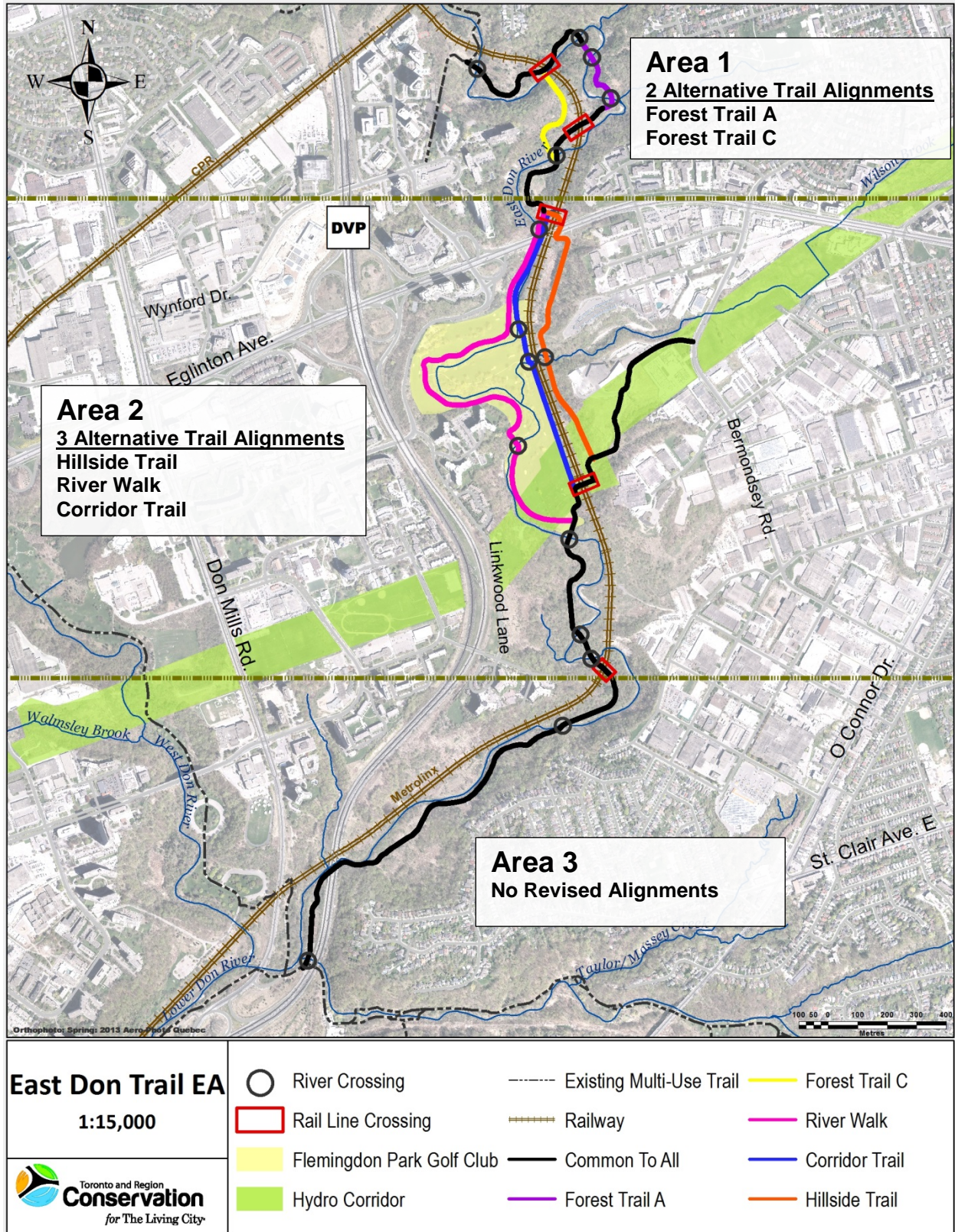


Figure ES8-2: Revised Alternative Trail Alignments and Area Boundaries

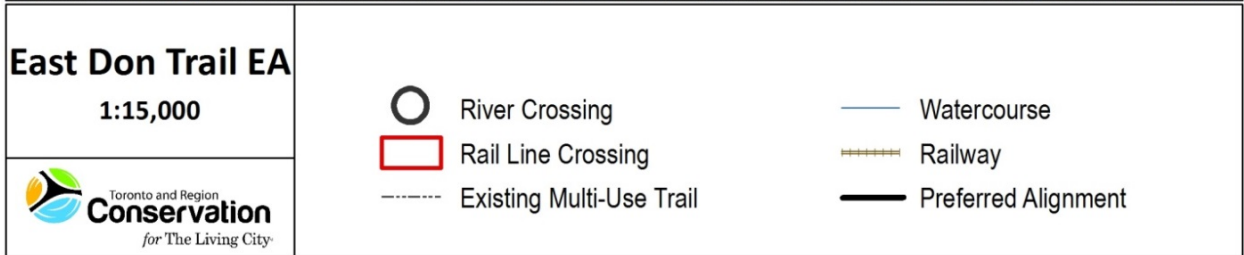
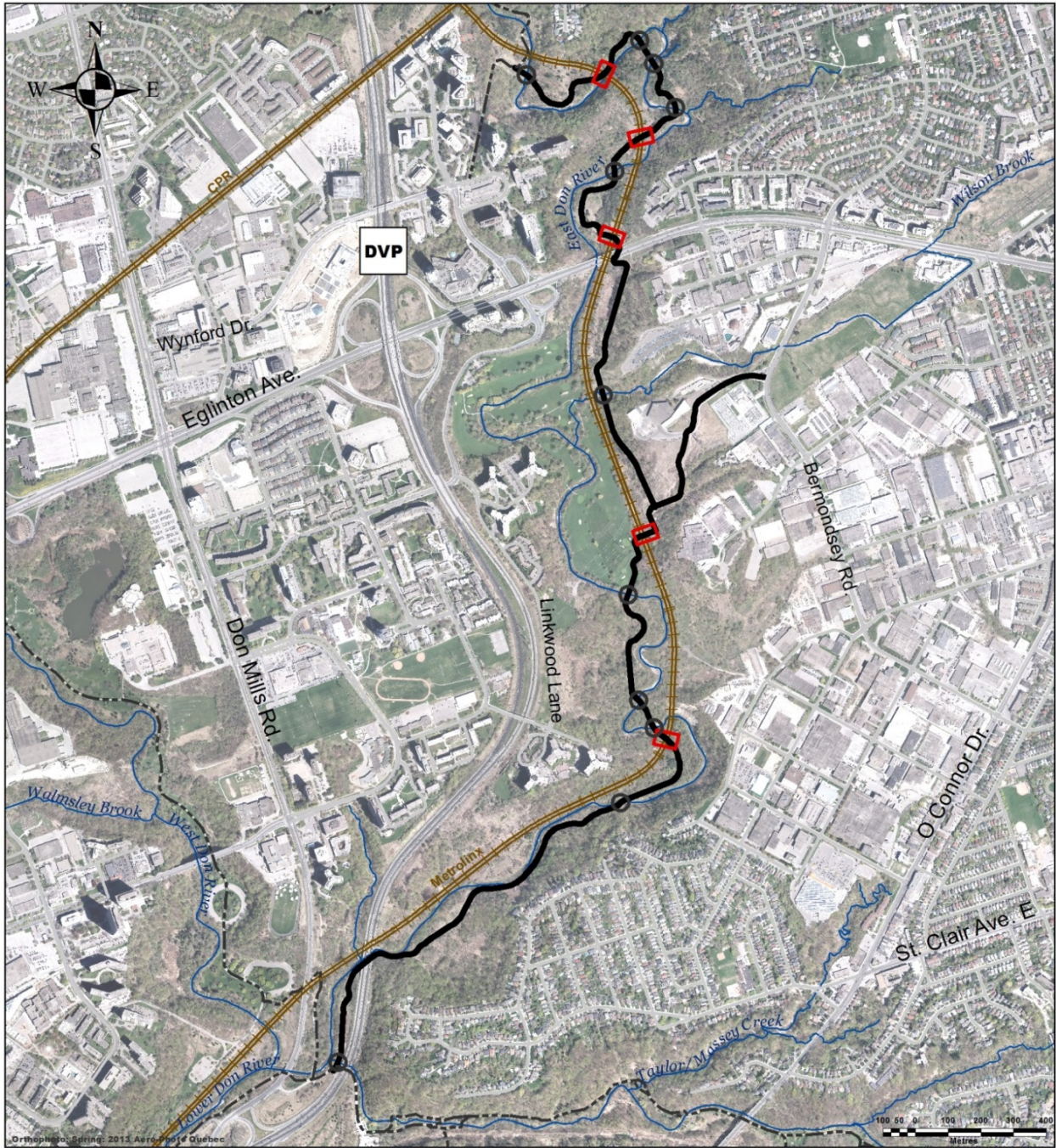


Figure ES8-3: Preferred Alternative Trail Alignment (Preferred Solution)

ES-9 ALTERNATIVE DESIGN CONCEPTS FOR PREFERRED SOLUTION (PHASE 3)

Phase 3 of the Municipal Class EA Schedule C process focuses on the examination of alternative methods of implementing the preferred solution, based upon the existing environment, public and Review Agency input, anticipated environmental effects (or impacts), and methods of minimizing negative effects and maximizing positive effects (MCEA, 2015).

To create the alternative methods of implementing the preferred solution, or design concepts, the preferred trail alignment selected in Phase 2 of this EA was divided into 12 segments delineated by watercourse or rail line crossings.

As shown in Figure ES9-1, two or more design concepts were developed for each segment, which included trail path sections (segments A to D, F, G, I, J, and L) as well as crossings (segments E, H, and K). Developing a range of viable alternative design concepts for some trail portions was impractical or infeasible. These areas were identified as preferred segments and will be included in the trail detailed design. Alternative design concepts were not developed for short sections of the preferred trail alignment, existing access routes, the majority of watercourse crossings, and transition areas (trail portions immediately adjacent to crossings).

Alternative design concept development was informed by the location of existing informal trails and directed by several technical constraints within the area. Concepts were also considered against project guiding principles to ensure that only viable design concepts that met project objectives were brought forward for evaluation.

The three main technical constraints imposed by the area and associated with design concept development included topography, flooding frequency, and extent of existing urban forest. As mentioned in ES-7, a detailed environmental inventory consisting of topography survey results, East Don River flood levels, and tree inventory was compiled to develop, refine, and evaluate the trail alternative design concepts.

The guiding principles in developing alternative design concepts included the following:

- Meet accessibility requirements, where possible
- Maintain grades of less than 5%, where possible
- Meet user needs (e.g., ensure adequate sight lines)
- Route trail outside of the 2 year floodline, where possible
- Minimize impacts to the physical and natural environment
- Meet the needs of emergency and maintenance vehicles, where possible

Evaluation incorporated identification and assessment of the potential environmental impacts of each alternative design concept. Consistent with the evaluation approach used in the EA Phases 1 and 2, the evaluation criteria were grouped according to

categories of impact: Functional Value, Natural and Physical Environment, Social and Cultural Environment, Cost, and Technical.

The preferred alternative design concept for the entire trail consists of the preferred alternative design concepts selected for each segment and is illustrated in Figure ES9-2. The preferred design concept selection was based on the alternative design concepts evaluation results as well as input from the public and other project stakeholders.

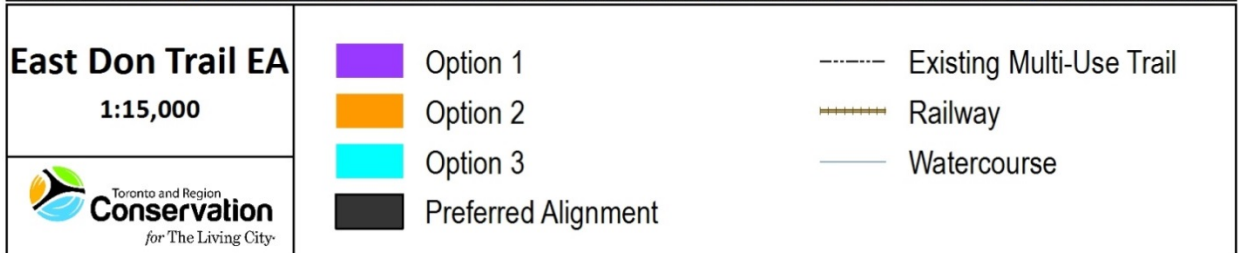
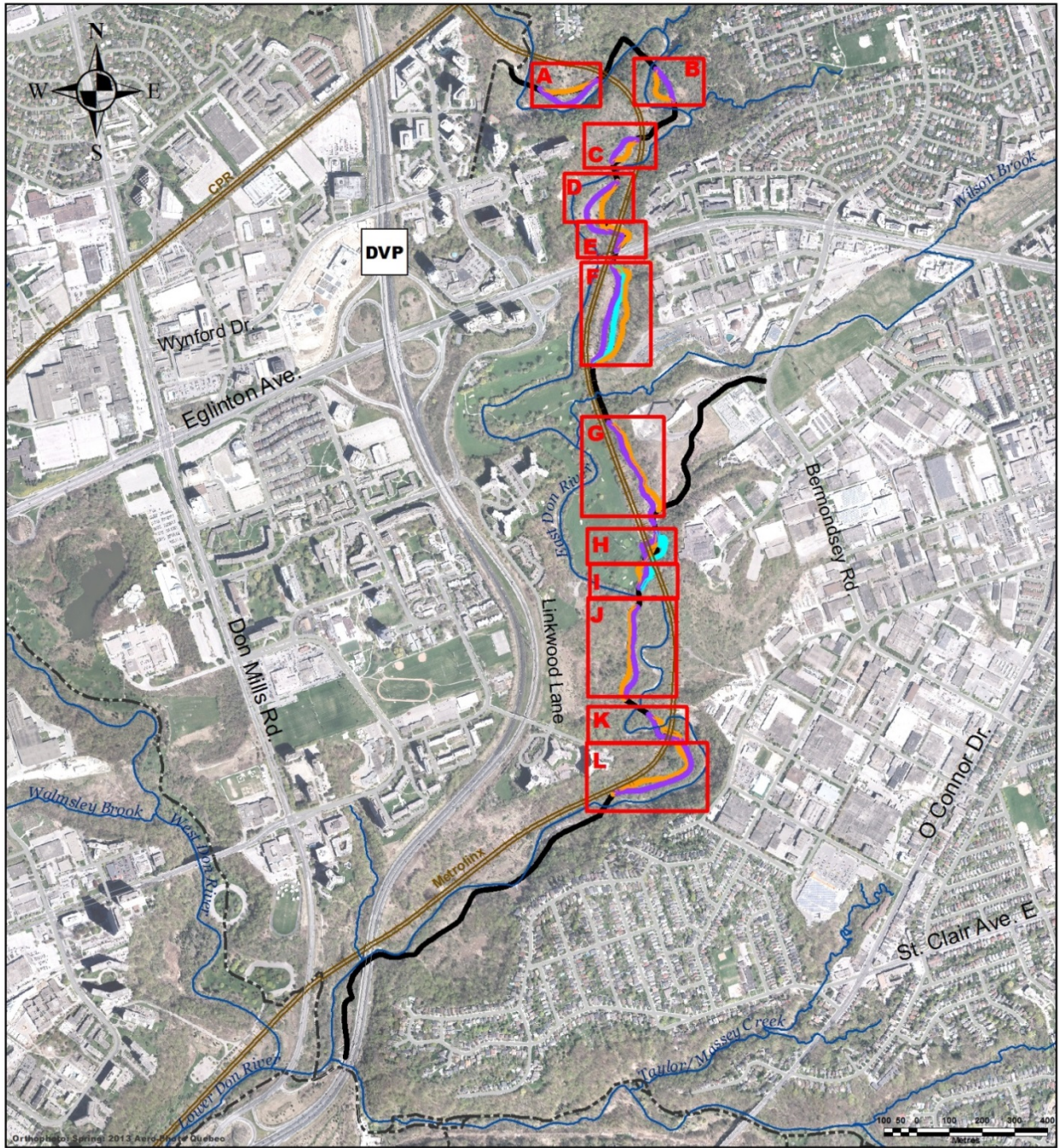


Figure ES9-1: Alternative Design Concepts and segment boundaries

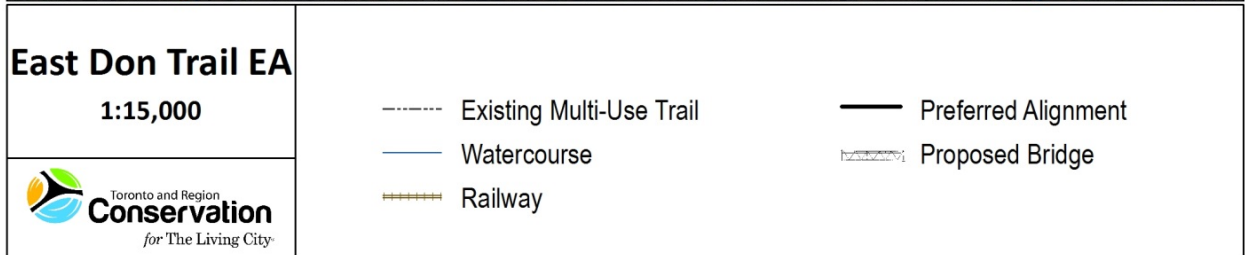
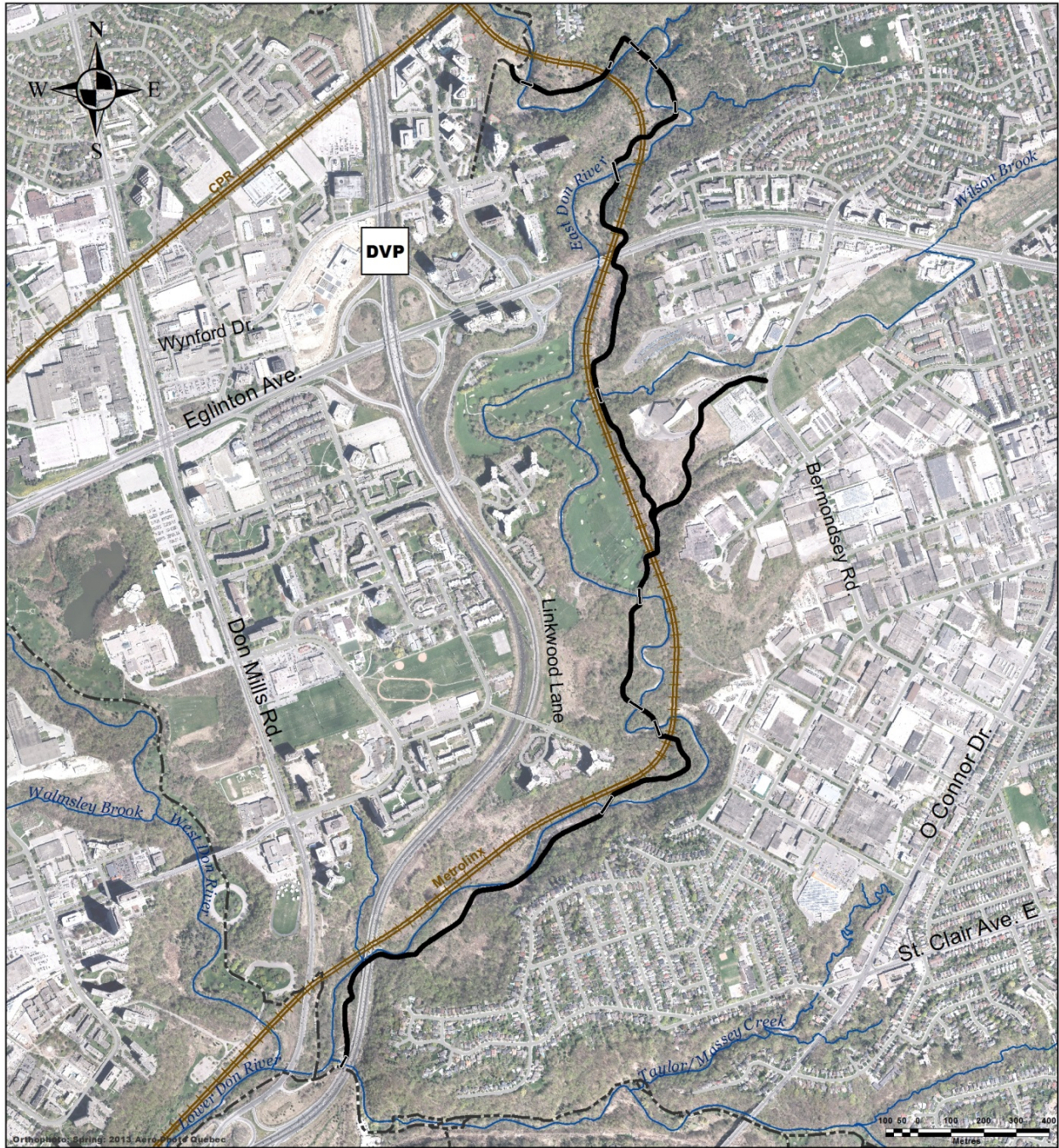


Figure ES9-2: Preferred Trail Alternative Design Concept

ES-10 PREFERRED ALTERNATIVE DESCRIPTION

The preferred alternative is illustrated in Figure ES10-1 and a description of key elements is provided below.

- **General route:** The preferred trail alignment is approximately 4.8 km long, and includes 10 watercourse crossings (bridges) over the East Don River and Taylor Massey Creek, two bridges over tributaries of the East Don River, five crossings of the Metrolinx rail line, and extends through properties owned by the City of Toronto, TRCA, and Hydro One (Infrastructure Ontario).
- **Trail design:** An asphalt multi-use trail, approximately 3.6 to 4 m wide, is recommended by the City to accommodate typical two-way pedestrian and non-motorized uses (bike, rollerblading, etc.) as well as occasional City of Toronto maintenance or Emergency Medical Services vehicle access while maintaining a reduced footprint through the natural environment. The trail design will follow the Toronto Multi-Use Trail Design Guidelines (2014) and City of Toronto Accessibility Design Guidelines (2016, draft) where feasible.
- **Watercourse crossings:** Although multi-use trail crossings do not have the same potential to impact flood levels as major road crossings of a watercourse, to ensure that the required longevity of the crossing structure is not inhibited from a geomorphic process perspective, watercourse crossings would be placed perpendicular to straight and shallow riffle sections along straight and stable sections, where possible. Specific sizing of the crossings will be completed in the detailed design project phase. Typically, a minimal allowance defined as a 25 year erosion threshold is applied to bridge abutments beyond the channel top of bank to allow for natural creek tendencies such as erosion, migration, or enlargement.
- **Rail line crossings:** A total of five crossings of the Metrolinx rail line are required to facilitate the preferred alignment. At two of the rail line crossings - Metrolinx 1 and 4 - constructing a tunnel through an elevated embankment is feasible. Both tunnels will be designed and built based on current conditions (i.e., current rail line right-of-way and embankment dimensions). At the northern most rail line crossing (Metrolinx 5), an existing rail line infrastructure bridge spans the East Don valley with sufficient room for the trail to extend underneath. Here, an underpass will be constructed. At Metrolinx 2 and Metrolinx 3 crossings there is not enough separation in grade between the rail line and adjacent lands to tunnel under the track, therefore level crossings and bridge crossings were explored. Though the level crossings were evaluated the highest, the bridge crossings have been selected as the preferred method following discussions with Metrolinx. All rail line crossings require the approval of Metrolinx prior to implementation.

- **Road Underpasses:** The trail will require crossing (underpasses) of two roads, the Don Valley Parkway and Eglinton Avenue. The Don Valley Parkway underpass exists as part of Toronto Water maintenance access route. To facilitate the trail under Eglinton Avenue an elevated structure will be implemented along the east side of the river.
- **Aesthetics and Design Elements:** Improvements to the landscape within the East Don corridor are proposed as an integral component of the trail implementation. Where possible, landscape improvements will be designed to achieve a number of parallel objectives, including the following:
 - Mitigation of impacts on vegetation communities anticipated to occur as a consequence of trail construction
 - Restoration of existing degraded landscapes within the valley in the vicinity of the alignment of the proposed trail
 - Enhancement of user comfort and experience
 - Enhancement of user safety and security
 - Integration of interpretive narratives
 - Establishment of a unique and recognizable aesthetic signature that binds components of the trail together

The proposed materials to be utilized in the construction of the features and amenities along the trail include naturally weathering steel, concrete, and natural stone. The trail, associated landscape features, and amenities will be designed with the objectives of improving accessibility and enhancing public safety. The design will be guided by the Integrated Accessibility Standards Regulation Guidelines (2014) Part 4.1 Design of Public Spaces Standard and the City of Toronto Accessibility Design Guidelines (2016, draft).

- **Infrastructure/Utilities:** Utilities and infrastructure which may be affected by the trail include, but are not limited to those owned by Metrolinx, Hydro One, Toronto Hydro, Enbridge, Bell, and Toronto Water. Each of these stakeholders has specific standards to be met throughout design and construction. In addition to the utility companies mentioned above, Flemingdon Park Golf Club has been involved in the Study as Key Stakeholder since the trail is routed in close proximity to this golf course. Pending approval of this EA, these stakeholders will continue to be engaged throughout the East Don Trail Project detailed design and implementation phases.
- **Construction:** Construction of the East Don Trail will likely be undertaken in three phases:
 - **Phase 1:** Phase 1 extent and key features are illustrated in Figure ES10-2. This section of trail is approximately 3.1 km in length, including the Hydro Corridor Connection. The key elements include one tunnel crossing of

- Metrolinx rail line (Metrolinx 1), one bridge crossing over the Metrolinx rail line (Metrolinx 2) (pending approval), four bridges over the East Don River (Bridges 2 - 5), and one over Taylor Massey Creek (Bridge 1). The construction of this segment would be initiated in 2017.
- **Phase 2:** The second phase of construction is planned to extend from the existing East Don Trail south to Eglinton Avenue East, as shown in Figure ES10-3. This phase involves extending the trail segments over five bridges (Bridges 6 – 10, as shown in Figure ES10-1), Metrolinx underpass (Metrolinx 5), a tunnel crossing (Metrolinx 4) and a bridge crossing over the rail line c (Metrolinx 3). This section of the trail is approximately 1.4 km long. The construction of Phase 2 would potentially commence in late 2017/early 2018.
 - **Phase 3:** The third phase of construction would connect Phase 1 and Phase 2, extending east of the rail line corridor along the base of the valley slope (Figure ES10-4). While this section is relatively short (approximately 900 m), the trail here traverses the most challenging topography due to significant grade changes and presence of low lying wet areas as well as areas of impingement where the rail line right-of-way extends into the valley slope. Phase 3 construction start date is to be determined.
- **Cost:** The total approximate cost to implement the preferred design concept throughout the entire Study Area is \$26 million (not including applicable taxes). The cost provided should be indexed and adjusted to market conditions at the actual time of construction.

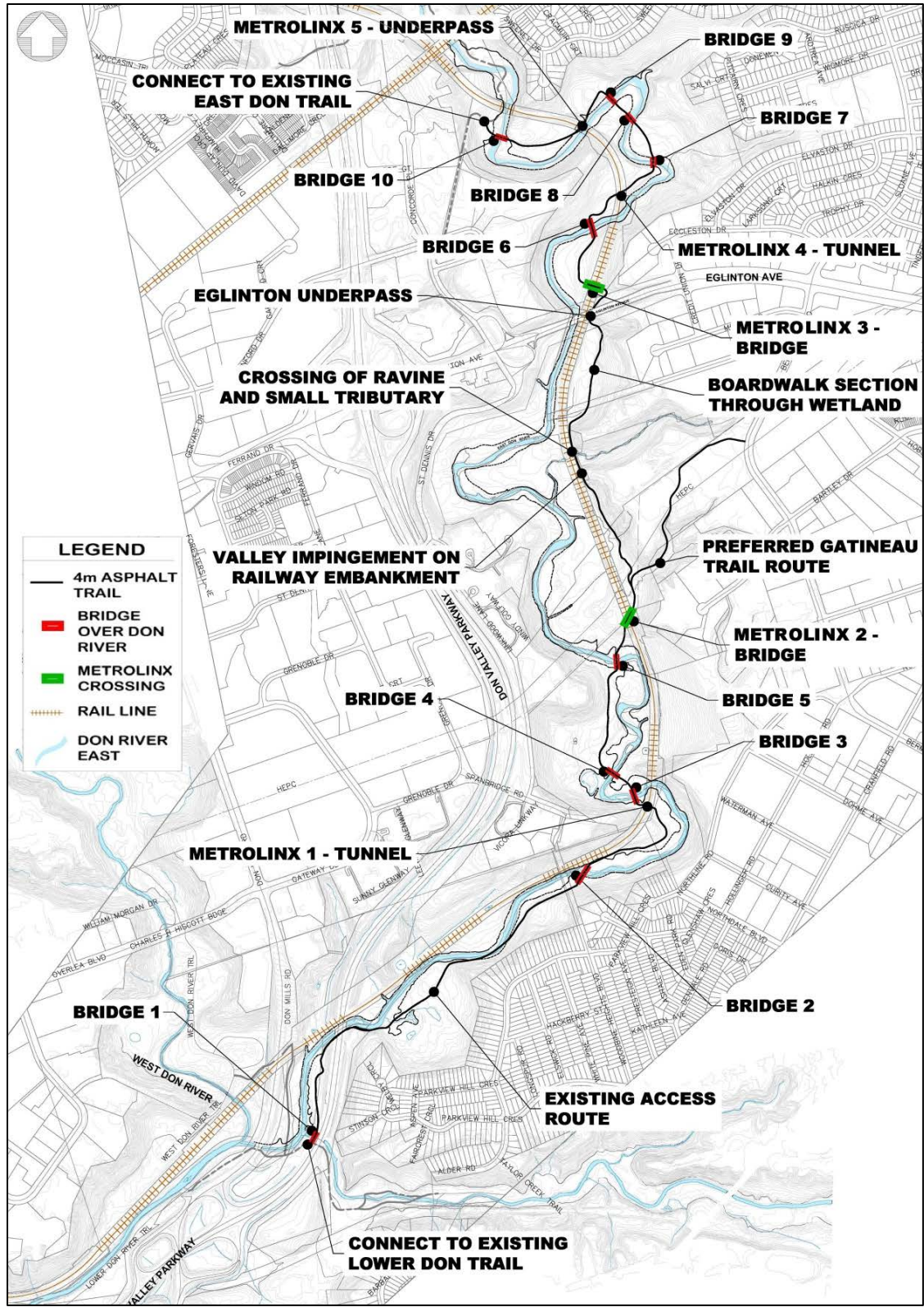


Figure ES10-1: East Don Trail Environmental Assessment Preferred Alternative
 Source: Aquafor Beech Limited 2016

ES-11 ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Minimizing or eliminating environmental impacts was an important aspect considered in the selection of the preferred alternative trail alignment and the preferred design concept. However, due to the location and scale of the project, there are environmental impacts that may require mitigation through the detailed design. Potential impacts associated with routing a trail through a valley system in an urban setting include impacts to vegetation (existing urban forest), species of concern and wildlife habitat, archaeological resources, existing informal natural surface (dirt) trails, safety and accessibility, user conflict, electromagnetic fields, geotechnical conditions, fluvial geomorphology, and surface erosion and overland flow. The trail detailed design phase will include a number of detailed assessments (e.g., geotechnical investigations) to inform the design of the trail so that these impacts can be prevented or minimized.

Furthermore, specific construction techniques (e.g., best practices for sediment source control and pollution protection), set protocols (e.g., spill control plans) and other measures developed in advance as part of the construction, monitoring and restoration plans are intended to mitigate residual impacts and impacts that may arise during trail construction.

ES-12 PERMITS AND APPROVALS

City of Toronto, Toronto and Region Conservation Authority, and/or the party responsible for the trail implementation will secure necessary permits and approvals for the implementation of the proposed East Don Trail in order to comply with the various Acts and Regulations such as the *Railway Safety Act*, *Ontario Heritage Act*, City of Toronto Ravine and Natural Feature Protection By-law etc. As well, approvals from a number of Key Stakeholders and property owners (e.g., Hydro One) whose properties abut or are intersected by the proposed trail will need to be obtained in order to proceed with implementation.

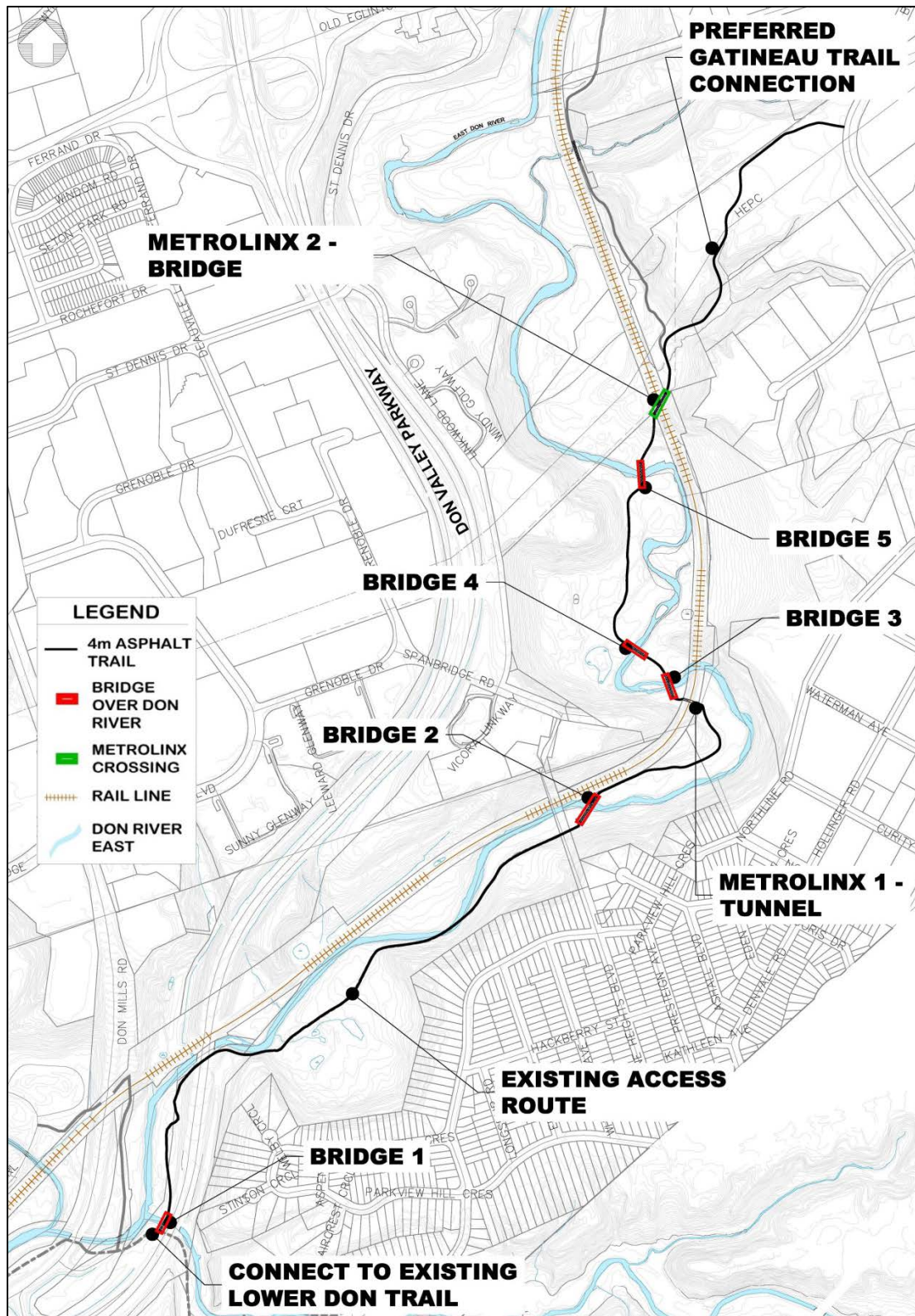


Figure ES10-2: Phase 1 construction extent
 Source: Aquafor Beech Limited 2016

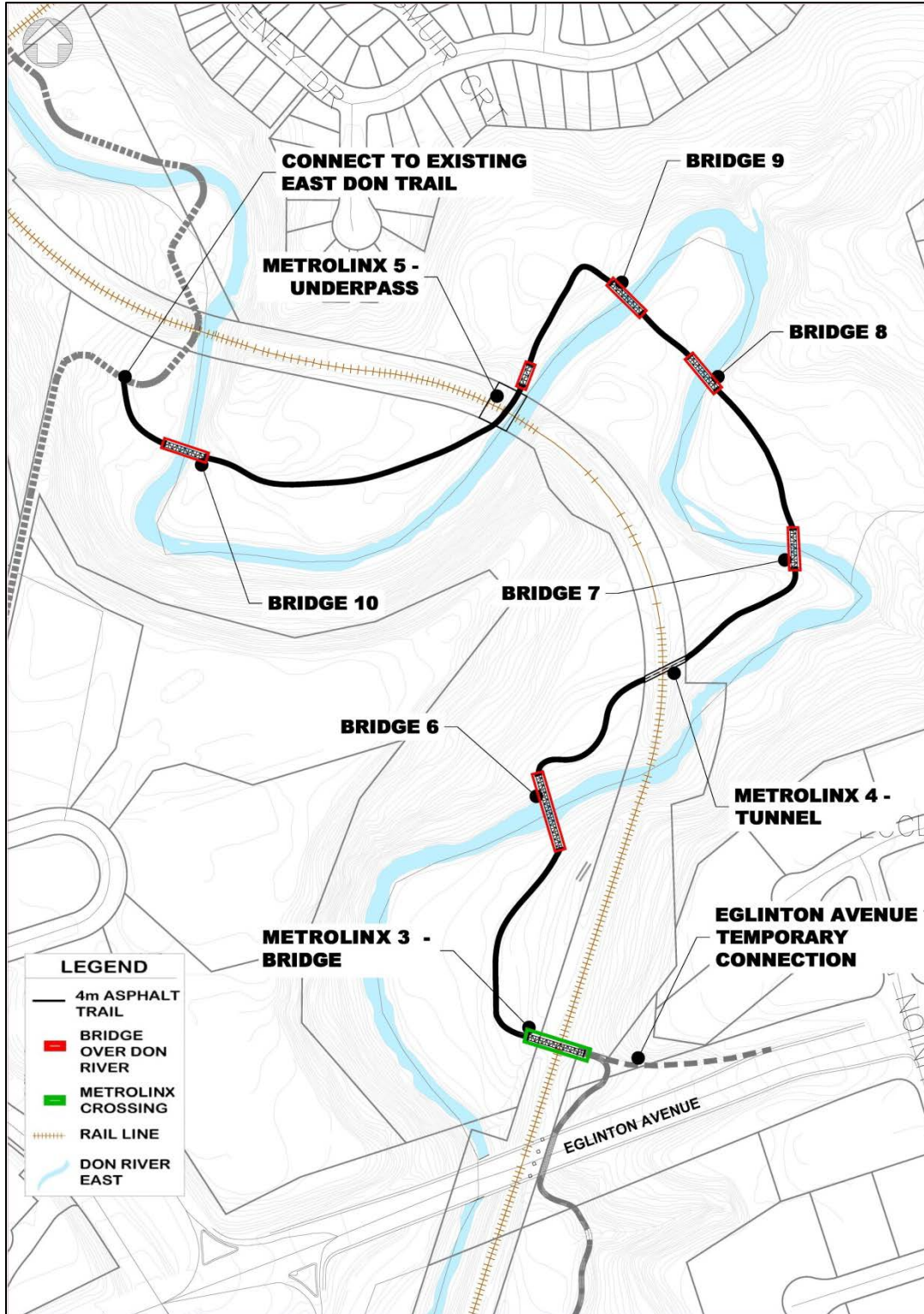


Figure ES10-3: Phase 2 construction extent

Source: Aquafor Beech Limited 2016

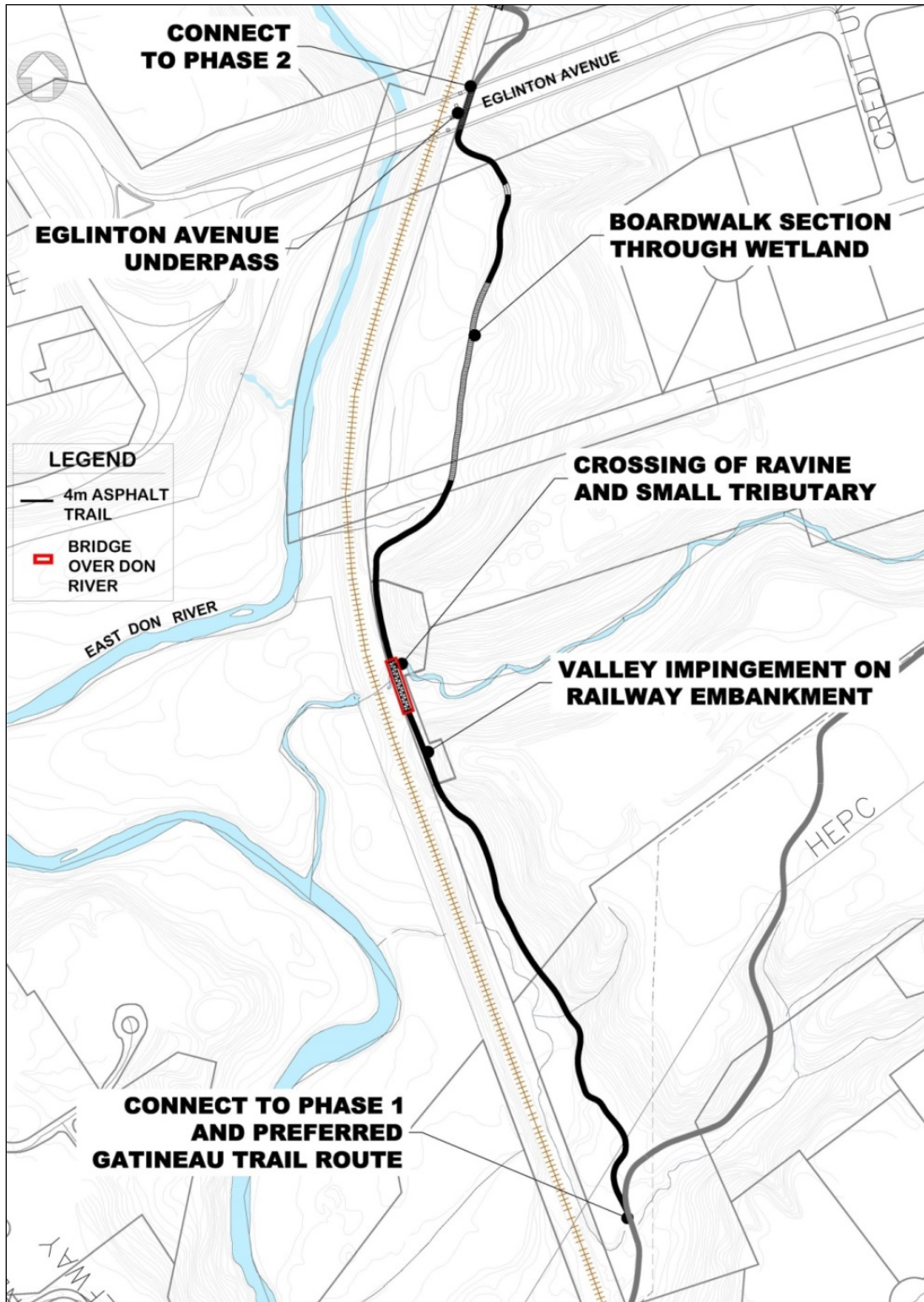


Figure ES10-4: Phase 3 construction extent

Source: Aquafor Beech Limited 2014

ES-13 COMMITMENTS TO FUTURE WORK

East Don Trail EA commitments to future work include the following:

- Finalization of the trail detailed design
- Development of construction management plan, monitoring plan, and restoration plan
- Development of the trail operations and maintenance plan
- Finalize Stage 2 Archaeological Assessment

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ACRONYMS AND ABBREVIATIONS

CEAA	<i>Canadian Environmental Assessment Act</i>
CLC	Community Liaison Committee
CNR	Canadian National Railways
COSEWIC	Committee on the Status of Endangered Wildlife
CP	Canadian Pacific Railways
DVP	Don Valley Parkway expressway
EA	Environmental Assessment
EAA	<i>Ontario Environmental Assessment Act</i>
ELC	Ecological Land Classification System
EMS	Emergency Medical Services
ESA	Environmentally Significant Area
ESR	Environmental Study Report
GTA	Greater Toronto Area
HEC-RAS	Hydrologic Engineering Centers River Analysis System
LRT	Light Rail Transit
MCEA	Municipal Class Environmental Assessment
MNRF	Ontario Ministry of Natural Resources and Forestry
MOECC	Ministry of the Environment and Climate Change
MP	Member of Parliament
MPP	Member of Provincial Parliament
RGA	Rapid Geomorphic Assessment
RDPA	Regulations Designating Physical Activities
TAC	Technical Advisory Committee
TRCA	Toronto and Region Conservation Authority
TTC	Toronto Transit Commission
WWFMP	Wet Weather Flow Management Master Plan

1.0 INTRODUCTION

The City of Toronto, working in partnership with the Toronto and Region Conservation Authority (TRCA) has undertaken a Schedule C Municipal Class Environmental Assessment (Class EA) to facilitate the creation of the East Don Trail. The East Don Trail would provide a connection in the City of Toronto's multi-use trail network between the existing East Don Trail located east of Wynford Heights Crescent, the proposed Gatineau Corridor Trail, and the Don Trail Systems located south of the Forks of the Don (East Don River, West Don River and Taylor-Massey Creek confluence).

1.1 Purpose of the Project

The purpose of the project is to create a key connection in the multi-use trail system, provide safe access to nature and recreational opportunities for the public, and to create a safe travel route, through an environmentally sound planning process. The City of Toronto's *Bikeway Trails Implementation Plan*, approved by Toronto City Council in 2012 identified the need for a trail connection in the East Don Corridor, while the East Don Trail Master Plan Update, completed in 2012, determined the trail connection was feasible and recommended further environmental studies were necessary. The East Don Trail EA has assessed a number of options to facilitate this connection and has identified a preferred trail route and design concept.

1.2 Project Background

Various planning initiatives have been undertaken that support the planning and implementation of the East Don Trail. An overview of these initiatives can be found in Section 1.3. The most comprehensive supporting plan, the *Bikeway Trails Implementation Plan*, was completed in 2012 by the City of Toronto's Transportation Services. This multi-year plan identified specific links and installation priorities of the bikeway trail network. The largest and most complex project identified in the *Bikeway Trails Implementation Plan* was the East Don Trail.

The City of Toronto Parks Forestry and Recreation, Transportation Services and TRCA have been working in partnership on the development of the East Don Trail for several years and constructed a section of trail north of Lawrence Avenue in 2011 (Existing East Don Trail). In addition, City of Toronto and TRCA, with support from R.V. Anderson Associates Limited, completed a feasibility study of the remaining portion of the East Don Trail. The next step in realizing the completion of the East Don Trail is the comprehensive planning and design process facilitated through this *Municipal Class Environmental Assessment (2011)* process for Schedule C projects, as updated in 2015.

1.3 Key Supporting Planning Initiatives

1.3.1 Toronto Bike Plan – 2001

Adopted by City Council in July 2001, *The Toronto Bike Plan* established a vision for cycling in Toronto. The vision of the plan was to create a safe, comfortable and bicycle friendly environment, which would encourage people of all ages to use bicycles for everyday transportation and enjoyment. The plan looked at “shifting gears” towards a more bicycle friendly city and set out principles, objectives, and recommendations. The plan was structured around six key program areas, or six “integral spokes”, which would build on the physical and social infrastructure to support cycling, and included: bicycle friendly streets, a linked bikeway network, safety and education, bicycle parking, promotion, and cycling and transit. Envisioned as a 10-year initiative, but designed to be flexible and evolve over time, the plan recommendations included implementing a 1000 kilometre (km) bikeway network. In the first year of the plan, the bikeway network grew from 166 km to 430 km.

1.3.2 Bikeway Trails Implementation Plan – 2011/2012

In July 2011, Transportation Services was directed by Toronto City Council to report on specific links and installation priorities for a multi-year bikeway trails implementation plan. During the summer of 2011, an audit of the City of Toronto existing major multi-use trail network was conducted to assess the viability of new trail connections. The audit included the review of previous work (*The Toronto Bike Plan*), preliminary assessment of gaps and opportunities, field investigations, mapping and priority evaluation, and consultation with various City of Toronto divisions and agencies. New trail connection opportunities were then evaluated and prioritized based on the following four broad criteria:

- Land ownership and approvals
- Estimated cost to build the trail
- Technical requirements and design challenges
- Network connectivity

As part of the process, Transportation Services undertook public consultation activities to solicit feedback, including newsletter correspondence and a public open house in the winter of 2012. At the open house, the public was asked to rank both the recommended trail connection projects and some general issues affecting trails. A number of trail connection projects were identified as high priority including the connection of the Don Trail System to the Gatineau Hydro Corridor Trail via a new East Don Trail (Figure 4-1). The highest ranking general issue affecting trails was continuity and connectivity of the trail network.

The findings were produced as the *Bikeway Trails Implementation Plan*, which recommended 77 km of new trails be added to the existing trail network (Figure 1-1). The plan was approved by Toronto City Council on June 6, 2012, and will form the basis for moving forward with new trail development over the next 10 years. Within the plan, the East Don Trail was the largest and most complex multi-use trail project identified as a short-term priority.

1.3.3 Cycling Network Ten Year Plan (2016-2025)

On June 9, 2016, Toronto City Council approved a Cycling Network Ten Year Plan to Connect, Grow and Renew infrastructure for Toronto's cycling routes over the next ten years. The Cycling Network Plan will serve as a comprehensive roadmap and work plan, outlining the City's planned investments in cycling infrastructure over 2016-2025.

The plan identifies opportunities for cycling infrastructure investments in every part of Toronto. It includes recommendations for cycle tracks or bike lanes on fast, busy streets and recommendations for traffic-calmed routes with cycling wayfinding on quiet streets.

The trail projects approved as part of the *Bikeway Trails Implementation Plan* have been incorporated into the Cycling Network Plan.



Figure 1-1: City of Toronto 2012 Bikeway Trails Implementation Plan

Source: City of Toronto 2012

1.3.4 East Don Trail Master Plan Update (Feasibility Study) – 2012

In 2011, the City of Toronto and TRCA retained R.V. Anderson Associates Limited (RVA) to prepare a feasibility study to assess the potential for a trail system through the East Don Corridor. The main objective of the Feasibility Study was to consider options for a multi-use trail system that would provide a connection from the north end of Charles Sauriol Conservation Area to the Lower Don Trail System (at Don Mills Road and the Don Valley Parkway (DVP)) (Figure 1-2). As part of the process, initial discussions were held with a number of stakeholders that own land or utilities within the study area, including Hydro One, Canadian National Railways (CNR), Enbridge Gas, and Flemingdon Park Golf Club.

Through the process of reviewing available trail options, a number of potential technical challenges related to constructing a new multi-use trail in the East Don Corridor were identified. The potential challenges identified were as follows:

- Eglinton Crosstown Light Rail Transit (LRT) – conflict in design locations
- CNR Crossings (presently in Metrolinx ownership) – a number of rail line crossings would be necessary
- Flemingdon Park Golf Club – privately owned property
- Other Private Landowner Issues – including CNR right-of-way
- Hydro One Corridor (Hydro Electric Powerline Corridor, or Hydro Corridor) – land owned by Hydro One
- Enbridge Gas – a natural gas main is located within the Hydro Corridor
- Don River Crossings – a number of river crossings would be necessary
- Don River Structures – potential retaining walls or bank stabilization may be required
- Road Crossings
- Road Routes/Bypasses
- Trunk and Sub-Trunk Sanitary and Storm Sewers – a network of sewers is located within the Don Corridor
- Construction Issues – construction access will be critical
- Community Connecting Trails
- Approvals – including an Environmental Assessment
- Utilities

The Feasibility Study was completed in 2012 and concluded that a trail within the East Don Corridor was possible, while also accommodating the natural environment, public needs, and approval requirements. In order to achieve this, a number of general recommendations were made, including:

- Further consultation, dialogue and negotiations with agencies and landowners outside of the City of Toronto and TRCA

- Further investigations, environmental studies, and public consultation through an Environmental Assessment
- Develop conceptual and detailed design
- Review a number of other opportunities within the valley where the implementation of remedial measures to address existing riverbank / slope erosion and stability problems may benefit the East Don Trail by providing alternative routes and reducing costs for the trail construction
- Continued negotiations with Flemington Park Golf Club to reach a mutually beneficial solution

In addition, the Feasibility Study suggested that the trail routes should be selected to address the following issues: constructability and construction access, safety, cost, aesthetic value, access to future connecting trails, protection or enhancement of natural environment, emergency medical services (EMS) access, access to East Don trunk sanitary sewer system, access to local storm sewers and outfalls, crossing of roads and rail lines, crossing or bypassing of privately owned lands, river crossing, utility crossing, existing or erosion prone river banks, and approvals.

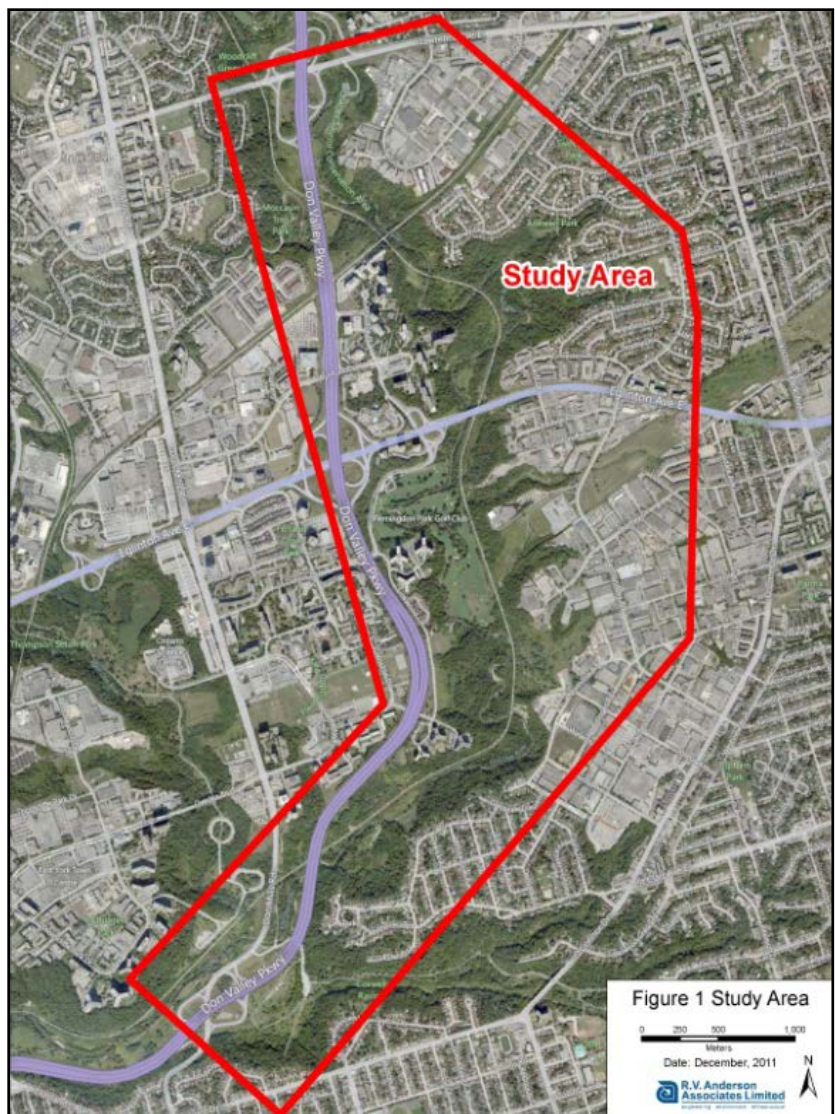


Figure 1-2: East Don Trail Master Plan Update – Study Area
 Source: R. V. Anderson Associates Limited 2012

1.4 Existing Multi-Use Trail System

The City of Toronto has an extensive major multi-use trail network that totals approximately 300 km. The network consists of numerous unique trail routes within city parkland, ravines, along the waterfront, hydro and rail corridors, and boulevards, traversing the city from the north, south, east, and west. For the purpose of this project, a multi-use trail is defined as a facility separated from the roadway, which supports a number of non-motorized uses such as walking, running, cycling, inline skating, wheelchair users, and dog walking, among others. The East Don Trail will connect to a number of multi-use trails, and at times act as the critical link to provide connections between these routes (Figure 1-3). These multi-use trail systems are outlined below.

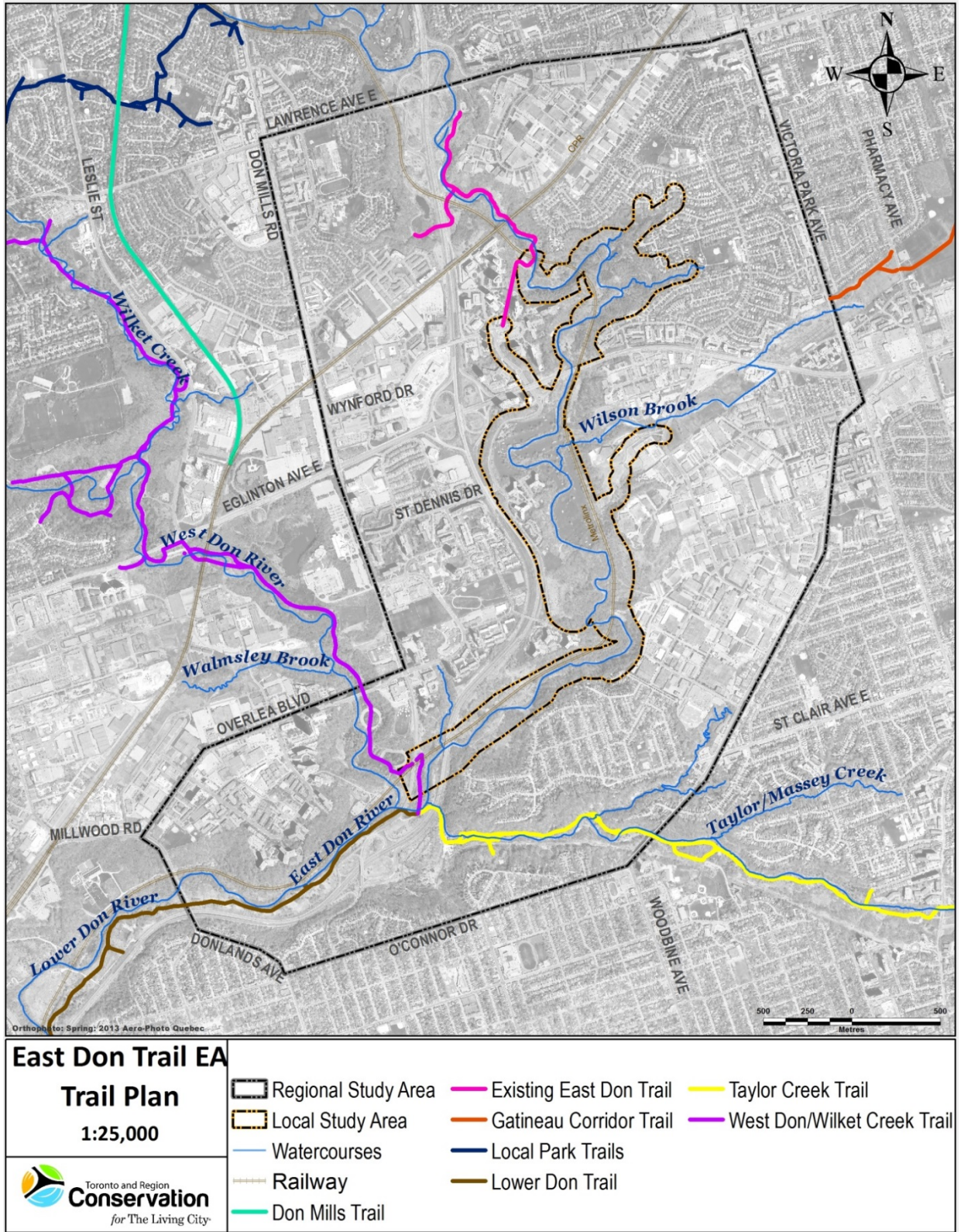


Figure 1-3: City of Toronto multi-Use trails adjacent to East Don Corridor

Source: City of Toronto 2014

Existing East Don Trail

Completed in the Fall of 2012, the existing East Don Trail, built in four phases over the course of two and a half years, is a 2 km long, 3 metre (m) wide paved multi-use trail that runs from Milne Hollow Park to a bridge that connects to the Wynford-Concord community. It includes one canopy under the CNR rail line (now owned by Metrolinx) and one canopy under the Canadian Pacific Railway rail line, two new bridges north of the Wynford access point and over the East Don River, hand rails near the north end of the trail, and a new trail connecting Milne Hollow Park and the East Don Trail with Moccasin Trail Park.

Lower Don Trail

The Lower Don Trail is approximately 8.5 km long and extends from the Toronto waterfront to the Forks of the Don in the Don Mills and DVP area, connecting with the West Don/Wilket Creek Trail and the Taylor Creek Trail. Winding along the Lower Don River, the path provides access to a number of well-known points of interest and destinations such as Riverdale Parks East and West, Riverdale Zoo, Todmorden Mills, Corktown Commons, Crothers Woods and ET Seton Park.

Taylor Creek Trail

The 3.5 km long Taylor Creek Trail runs southeast from the confluence of the East Don River and Taylor-Massey Creek to Victoria Park Avenue. The trail is routed primarily along the Creek, passing through Taylor Creek Park and offering access to forest and marsh communities as well as wildlife viewing opportunities.

Gatineau Corridor Trail

The completed Gatineau Corridor Trail totals approximately 7 km and includes two trail segments routed primarily within the Gatineau Hydro Corridor traveling northeast from Victoria Park Avenue and Orton Park Road, and from Conlins Avenue to Meadowvale Road. Within the Bikeway Trails Implementation Plan, the City of Toronto has identified the extension of the Gatineau Corridor Trail to complete the trail network from the East Don to Rouge Park. Refinements to the alignment of the extension of the Gatineau Corridor Trail, as identified in the Bikeway Trails Implementation Plan, are subject to stakeholder consultation.

West Don Trail

The approximately 3.5 km long West Don/Wilket Creek Trail extends primarily along the West Don River, facilitating access to the river valley from the Forks of the Don to Lawrence Avenue East and the Toronto Botanical Garden. The trail provides access to several parks such as the Wilket Creek Park, well known for its mature forest communities, and Sunnybrook Park which is home to a riding track and several field-

sport pitches (TRCA, 2010). Near the Forks of the Don, the trail connects to the Taylor Creek Trail and the Lower Don Trail.

1.5 Pan Am Path

The Pan Am Path is a multi-use path that will connect Toronto trails and create an active-living legacy for the TORONTO 2015 Pan Am/Parapan Am Games. The Path will connect over 80km of trails across Toronto and bring together residents, local organizations, artists and businesses to create truly vibrant public spaces that are reflections of those communities along the route. The Pan Am Path was adopted by Toronto City Council on July 16, 2013, as a showcase project for the Pan Am/Parapan Am Games.

The Path will start at the Claireville Reservoir in the west, follow the Humber River south to the waterfront, utilize the Martin Goodman Trail to the Don River, continue north on the Lower Don Trail to the Gatineau Hydro Corridor, travel east to Highland Creek, and end at the shores of Lake Ontario south of Rouge Park.

The purpose of the Pan Am Path is to link diverse neighborhoods and communities while offering active recreation and transportation routes to connect various venues during the Pan Am Games in the summer of 2015. The project also aims to create opportunities for art, enriched public spaces, tourism and commerce, including invigorating 14 zones with approximately 30 community inspired and developed art projects. The proposed route of the Pan Am Path also aligns with a number of the trail gaps and projects identified in *the Bikeway Trails Implementation Plan* (see Section 1.3.2 above). Following the Games, the path will continue to provide a wide range of transportation, health, community and cultural benefits.

Currently, much of the route lies on existing trails. A few strategic connections, improvements, and signage are necessary to see the completion of the connected Pan Am Path. One of the strategic connections of the Pan Am Path will be realized through the East Don Trail EA: specifically, the section of the path extending from the Don Trail System to the Gatineau Corridor Trail.

1.6 Policy and Planning Context Initiatives

A number of City of Toronto planning policies, guidelines and initiatives – particularly those related to non-motor vehicular transportation and walking, natural environment protection, and accessibility and design – were key components supporting the rationale for the East Don Trail EA and were used to lay the framework of this EA's policy and planning context. The recommendations and resolutions made in these documents were used to identify the EA Study Area (Section 4.4), problems and opportunities (Section 4.1), develop project objectives (Section 4.3), and identify and evaluate

alternatives (Section 6.0). Highlights from the documents most relevant to this Study, thematically organized, are provided below.

1.6.1 Walking and Non-Motor Vehicular Transportation

City of Toronto Official Plan

The vision of Toronto's *Official Plan* is to create "an attractive and safe city that evokes pride, passion and a sense of belonging – a city where people of all ages and abilities can enjoy a good quality of life" (City of Toronto, 2015). Creating a walkable/bikeable city is an important component of the *Official Plan* vision, with the plan containing a number of policies that support the need to improve conditions for pedestrian and non-motor vehicular movement. In particular, the following policies address this need, supporting the East Don Trail EA:

- Section 2.4, Policy 3-b-i: The City will show leadership within the region in the implementation of Travel Demand Management measures to reduce auto dependence and rush-hour congestion in the road and transit networks by actively pursuing measures which will increase the proportion of trips made by walking, cycling and transit
- Section 2.4, Policy 13: Policies, programs and infrastructure will be introduced to create a safe, comfortable and bicycle friendly environment that encourages people of all ages to cycle for everyday transportation and enjoyment including:
 - a) an expanded bikeway network;
 - b) provision bicycle parking facilities in new developments;
 - c) measures to improve the safety of cyclists through the design and operation of streets and through education and promotion programs
- Section 2.4, Policy 14: An urban environment and infrastructure will be created that encourages and supports pedestrian movement throughout the City, for people of all ages and abilities, by :
 - a) ensuring safe, universally accessible, direct, comfortable, attractive and convenient pedestrian conditions, including walking routes to workplaces, schools, recreation areas, transit, and other important community destinations;
 - b) maximizing connections within the street network, as well as to other public or private pedestrian walkways, such as those found in parks, open spaces, between buildings, or above or below grade;
 - c) prioritizing the inclusion of sidewalks, dedicated crossings where warranted and adequate sidewalk width in the design of all streets;
 - d) reducing barriers by providing grade-separated crossings of controlled access highways and rail lines where warranted;
 - e) focusing on improvements to connections and conditions in areas of high need, including areas with: physical barriers; difficult topography or

substantial changes in grade; areas travelled frequently by vulnerable users, including people with disabilities, youth and seniors, and around mobility hubs, transit stations or other locations with significant pedestrian volume of activity; and

- f) developing policies, plans, and guidelines to implement pedestrian priorities and Complete Streets.

The Toronto Walking Strategy

The Toronto Walking Strategy, adopted by the Toronto City Council in 2009, is an “action plan for pedestrians and provides a long-term, comprehensive set of actions for achieving the Official Plan’s objectives for walking and the public realm” (City of Toronto, 2009) and also includes policy, infrastructure and programming to create a rich culture of walking in Toronto.

The plan was developed as an integrated approach to create more physically accessible and appealing opportunities for walking, as well as helping to encourage a walking culture in Toronto. The three guiding principles of the strategy are universal accessibility, safety, and design excellence. One of the strategy’s focal points is making connections for integration of walking networks. The following key principles of the strategy were considered in this EA, where possible:

- Integrating walking networks improves access to everyday places and amenities
- Universal accessible design principles must apply to the entire walking network

Road to Health: Improving Walking and Cycling in Toronto

The 2012 report *Road to Health: Improving Walking and Cycling in Toronto* synthesized evidence on health benefits and risks associated with walking, cycling, and physical activity related to the use of public transit, as well as economic assessments and specific strategies to increase the use and safety of active transportation in Toronto.

The report concluded that walking and/or cycling on a regular basis reduces the risk of cardiovascular disease, obesity, type 2 diabetes, and certain types of cancer while improving mental health. Other benefits of investing in pedestrian and cycling infrastructure include decreased air pollution and noise and increased neighbourhood safety as well as real estate value.

The report emphasized the importance of pedestrian and cyclist safety and suggested the separation of vehicular and pedestrian/cyclist traffic to help improve it. In particular, the provision of trails through ravines, valleys, and hydro corridors was cited as an effective means of separating the two types of traffic, while having less impact on traffic flow.

1.6.2 Natural Environment Protection

City of Toronto Official Plan

The *City of Toronto Official Plan* (2015) recognizes the importance of the City's green space system and the need to ensure good stewardship of the natural environment. This recognition is reflected in a number of the *Official Plan* policies, including but not limited to the following:

- Section 2.3.2, Policy 1: Actions will be taken to improve, preserve and enhance the Green Space System by:
 - a) improving public access and enjoyment of lands under public ownership;
 - b) maintaining and increasing public access to privately owned lands, where appropriate;
 - c) restoring, creating and protecting a variety of landscapes; and
 - d) establishing co-operative partnerships in the stewardship of lands and water.
- Section 2.3.2, Policy 2: Public agencies and Torontonians will be encouraged to support the protection, enhancement, and restoration of links within and between elements of the Green Space System.
- Section 2.3.2, Policy 3: The Green Space System will be expanded by linking additional parks and open spaces by:
 - a) acquiring such linkages, where feasible; and
 - b) acquiring lands, or easements over lands, associated with private development which can be connected to the System for the extension of recreational trails or which have important natural heritage value.
- Section 2.3.2, Policy 4: The sale or disposal of publicly owned lands in the Green Space System will be discouraged. No City-owned land in the Green Space System will be sold or disposed of. However, City-owned land in the Green Space System may be exchanged for other nearby land of equivalent or larger area and comparable or superior green space utility.
- Section 2.3.2, Policy 5: Within the Green Space System, development will not result in the loss of public space.
- Section 3.1.1, Policy 4: The natural features of the City, such as the Lake Ontario shoreline, the Lake Iroquois escarpment, woodlots, ravines and valley lands, will be connected to the surrounding city by improving physical and visual access from adjacent public space and by designing these into a comprehensive open space network
- Section 3.1.1, Policy 8: Scenic routes with public views of important natural or human-made features should be preserved and, where possible, improved by:
 - a) maintaining views and vistas as new development occurs
 - b) creating new scenic routes or views when an opportunity arises

- c) increasing pedestrian and cycling amenities along the route
- Section 3.4, Policy 1: To support strong communities, a competitive economy and a high quality of life, public and private city-building activities and changes to the built environment, including public works, will be environmentally friendly, based on:
 - a) protecting and improving the health of the natural ecosystem, by:
 - i) minimizing air, soil and water pollution;
 - ii) recognizing rainwater and snowmelt as a resource to improve the health of Toronto's watercourses and the nearshore zones of Lake Ontario;
 - iii) managing the quantity and improving the quality of stormwater and groundwater infiltration and flows;
 - iv) cleaning up contaminated soils, sediment, groundwater, rivers and buildings;
 - v) mitigating the unacceptable effects of noise; and
 - vi) minimizing the release and proliferation of invasive species and mitigating their impacts.
 - b) protecting, restoring and enhancing the health and integrity of the natural ecosystem, supporting biodiversity in the City and targeting ecological improvements, paying particular attention to:
 - i) habitat for native flora and fauna and aquatic species;
 - ii) water and sediment quality;
 - iii) landforms, ravines, watercourses, wetlands and the shoreline and associated biophysical processes; and
 - iv) natural linkages between the natural heritage system and other green spaces
 - c) preserving and enhancing the urban forest by:
 - i) providing suitable growing environments for trees;
 - ii) increasing tree canopy coverage and diversity, especially of long-lived native and large shade trees; and
 - iii) regulating the injury and destruction of trees;
 - d) reducing risks to life, health, safety, property, and ecosystem health that are associated with flooding, unstable slopes and erosion and contaminated lands
 - e) reducing the adverse effects of stormwater and snow melt based on a hierarchy of watershed-based wet weather flow practices which recognize that wet weather flow is most effectively managed where it falls, supplemented by conveyance, then end-of-pipe solutions.

- Section 3.4, Policy 3: A study will be required, when appropriate, to assess a proposed development's impact on the natural environment and propose measures to reduce negative impacts on, and where possible improve, the natural environment
- Section 3.4, Policy 12: All proposed development in or near the natural heritage system will be evaluated to assess the development's impacts on the natural heritage system and identify measures to mitigate negative impact on and/or improve the natural heritage system, taking into account the consequences for:
 - a) terrestrial natural habitat features and functions including wetlands and wildlife habitat;
 - b) known watercourses and hydrologic functions and features;
 - c) significant physical features and land forms;
 - d) riparian zones or buffer areas and functions;
 - e) vegetation communities and species of concern; and
 - f) significant aquatic features and functions including the shoreline of Lake Ontario.

To assist this evaluation, an impact study may be required in accordance with guidelines established for this purpose.

- Section 3.4, Policy 13 Areas of land or water within the natural heritage system with any of the following characteristics are particularly sensitive and require additional protection to preserve their environmentally significant qualities:
 - a) habitats for vulnerable, rare, threatened or endangered plant and/ or animal species and communities that are vulnerable, threatened or endangered within the City or the Greater Toronto Area; or
 - b) rare, high quality or unusual landforms created by geomorphological processes within the City or the Greater Toronto Area; or
 - c) habitats or communities of flora and fauna that are of a large size or have an unusually high diversity of otherwise commonly encountered biological communities and associated plants and animals; or
 - d) areas where an ecological function contributes appreciably to the healthy maintenance of a natural ecosystem beyond its boundaries, such as serving as a wildlife migratory stopover or concentration point or serving as a water storage or recharge area. Development will not occur on lands within the natural heritage system that exhibit any of these characteristics. Activities will be limited to those that are compatible with the preservation of the natural features and ecological functions attributed to the areas. An impact study, as referred to in Policy 12, will be required for any proposed undertaking in those areas not already the subject of an Environmental Assessment under the Environmental Assessment Act.

- Section 3.4, Policy 14: Provincially significant natural heritage features will be protected by:
 - a) prohibiting development or site alteration in provincially significant wetlands or significant portions of the habitat of threatened or endangered species;
 - b) only permitting development in the following locations if it has been demonstrated, through a study, that there will be no negative impacts on the natural features or the ecological functions for which the area is identified:
 - i) lands adjacent to provincially significant wetlands or significant portions of the habitat of threatened or endangered species;
 - ii) in or on lands adjacent to fish habitat; and
 - iii) in or on lands adjacent to provincially significant woodlands, valleylands, wildlife habitat, and areas of natural and scientific interest.
- Section 3.4, Policy 15: Protecting, restoring and enhancing the natural heritage system will recognize the joint role of, and opportunities for, partnerships among public and private landowners, institutions, and organizations.

Toronto's Strategic Forest Management Plan

Toronto's Strategic Forest Management Plan 2012 – 2022 (City of Toronto, 2013), adopted by the Toronto City Council in February 2013, outlines the long-term vision and strategic goals for the Toronto's urban forest management.

An important and pertinent part of this plan as it relates to the East Don Trail is one of the Key Urban Forestry Management Challenges and Solutions: Recreational Pressures on the Urban Forest. One of the Actions highlighted for managing this pressure is "protecting and managing natural areas through the strategic placement of trail systems, design solutions for resource protection, and by-law enforcement" (City of Toronto, 2013).

The following strategic goals outlined in the Plan were considered in the East Don Trail EA Study:

- Increase canopy cover
- Achieve equitable distribution
- Increase biodiversity

This study attempted to integrate these goals by maximizing preservation of canopy cover in the forested areas which would be affected by the project activities.

1.6.3 Accessibility and Design

City of Toronto Accessibility Design Guidelines

The City of Toronto is committed to creating an accessible city in compliance with the *Accessibility for Ontarians with Disabilities Act*. The Accessibility Design Guidelines (2016, draft) include best practices which can be used by all sectors to conduct accessibility audits and to plan for barrier-free development in the physical environment. The Guidelines are also in keeping with the City of Toronto *Official Plan (2010)* which states: "A key city-building principle is that public buildings, parks and open spaces should be open and accessible to all members of the public."

The following practices applicable to trails, waterfront areas, and wilderness/conservation sites were used in this EA:

- Section 1.3.14 Trails and Footbridges: Where pedestrian or bicycle trails are provided, trails should be laid out with accessible pedestrian paths and footbridges that are suitable for persons using various mobility aids
- Section 1.3.16 Waterfront Areas: Waterfront areas (e.g., areas adjacent to lakes, ponds or streams) in public parks, recreation facilities or wilderness locations, should be laid out to accommodate persons using wheelchairs, scooters, and walkers, as well as persons with visual limitations
- Section 1.3.17 Wilderness and Conservation Areas: Wilderness areas open for public enjoyment should include accessible parking areas, entrances, paths, trails, or footbridges that will accommodate persons using various mobility aids (City of Toronto, 2004)

At the time of this report, the City of Toronto was updating the Accessibility Design Guidelines. Once complete, the updated version will be reviewed and utilized for the East Don Trail detailed design. Refer to *Safety and Accessibility* in Section 9.1 Detailed Design Considerations.

Toronto Multi-Use Trail Design Guidelines

The *Toronto Multi-Use Trail Design Guidelines (2014)* will provide direction for future trail planning, design, implementation and ongoing maintenance of multi-use facilities by City staff and their partners. The guidelines are based on current best practices, an extensive literature review, and discussions with stakeholders and all relevant City divisions.

Major design features such as path width, grades and lateral / vertical clearances outlined in the guidelines were used in the development and evaluation of the East Don Trail EA alternative trail alignments. The guidelines will also be used in the East Don Trail detailed design.

1.6.4 Related Planning Initiatives, Studies, and Projects

In addition to the policies and planning initiatives described in Sections 1.6.1 to 1.6.3, the East Don Trail EA considered a number of related undertakings such as projects located in close physical proximity (within the EA Regional Study Area) and those of interest to project stakeholders. These are summarized below.

Natural Environment Trails Strategy

The City of Toronto *Natural Environment Trails Strategy (2013)* identifies opportunities, constraints, planning policies and management strategies required to ensure the protection of the City of Toronto's natural areas while offering safe and enjoyable recreational opportunities for all natural environment/dirt trail users. This strategy is meant to help guide and inform future trail planning initiatives that will assist in the protection of the City of Toronto's natural areas.

There has been considerable public interest in the informal natural (dirt) surface trails that exist within the East Don Trail EA Local and Regional Study Areas, and how they will be affected by the project.

As the scope of the East Don Trail EA is limited to a multi-use paved trail, management or enhancement of existing informal trails in the area were not considered as part of this project. However, parts of the EA Regional Study Area are located within a priority management area identified in the Strategy. The priority management areas will be the focus of natural environment trail planning according to the process outlined in the strategy.

It should be noted that, in some cases, alternative trail alignments evaluated as part of this EA are routed along the existing informal natural trails. It is expected that, in the project detailed design phase, the integration of the natural trail system and the proposed multi-use trail will be explored further.

City of Toronto Parks Plan 2013 - 2017

The City of Toronto *Parks Plan 2013 – 2017 (2013e)* guides the development, management and operation of the system of public parkland in the City of Toronto over a five-year period. For the purposes of the Parks Plan, the term “parkland” refers to land and land covered by water, facilities, vegetation, buildings and structures that are managed by Parks, Forestry and Recreation and used as public open space or a golf course. The vast majority of the green/open space within the EA Study Area is therefore considered parkland.

The Parks Plan aims to connect people and communities with parkland, advance greening, and environmental sustainability, improve the quality of parks, and strengthen the parks system as a legacy for Toronto. The Plan affirms that parks and trails are essential to making Toronto an attractive place to live, work, and visit. Toronto's parks

and trails offer a broad range of recreation opportunities, transportation routes, and places for residents to interact with nature, and with one another. Parks also provide important economic benefits, attracting tourists and businesses, and helping to build a healthy workforce.

The Plan recognizes and addresses a number of trends, some of which are also addressed in this EA. These include the following:

- A growing and increasingly diverse population means more users and competition for use of limited park space
- High demand for community involvement in park programming, design and decision-making
- Need to protect environmentally sensitive areas, and to preserve parks for future generations
- The requirement to adapt facilities and services to comply with the Accessibility for Ontarians with a Disability Act

The Plan identifies 12 directions, organized by four key themes, where each direction is associated with one or more recommended actions. Directions and recommended actions that are particularly relevant to this EA are as follows:

- Advance the quality and consistency of parkland and trails
 - Continue to design high quality, sustainable parks that provide a sense of place for residents and communities
- Continue to increase accessibility
 - Engage disability stakeholder groups in developing requirements to improve the universal accessibility of park amenities and features
 - Ensure that parks and trails meet or exceed provincial accessibility requirements

City of Toronto Natural Heritage Study

The *City of Toronto Natural Heritage Study* completed by the City of Toronto and TRCA in 2001 identified the natural heritage system for the City's *Official Plan* and advanced TRCA's Living City vision (City of Toronto, 2006). The study defined natural heritage features and their status within the City of Toronto and outlined key directions for natural heritage protection and restoration. The purpose of the study was to produce an inventory of ecological information and "a tool to identify a natural heritage system within a functional framework that is designed to address biodiversity and ecosystem needs while recognizing urban context and multiple-use values" (City of Toronto and TRCA, 2001).

The East Don Trail EA utilized the original ecological inventory data produced by the Natural Heritage Study as well as the most recent data collected by the TRCA. This

information was used to describe the existing conditions in the EA Study Areas as well as develop and evaluate the alternatives.

Don River and Central Waterfront Project, Municipal Class EA

The Don River and Central Waterfront project consists of end-of-pipe controls and monitoring programs and is intended to control discharges to the Don River and the Inner Harbour using a comprehensive systems approach (MMM Group, 2012). The Don River and Central Waterfront Project was identified in the City of Toronto's Wet Weather Flow Management Master Plan (WWFMMP) 25-Year Implementation Plan (City of Toronto, 2003). The WWFMMP is a long-term plan which provides direction on the management of wet weather flow in Toronto's watersheds to help protect and maintain ecological health and function of Toronto's rivers and natural environment.

Specifically related to the East Don Trail EA, two underground offline storage tanks are proposed to provide temporary storage of peak sanitary flows and will include above ground structures to provide access for maintenance are located within the EA Regional Study Area. The East Don Trail EA has ensured that the trail route does not interfere with the construction of these tanks. The opportunity for Toronto Water to use the trail as access to service these structures was also considered in the planning process.

Lower Don Trail Access, Environment + Art Master Plan

The Lower Don Trail Access, Environment + Art Master Plan (2013) developed by the City of Toronto, TRCA and DTAH examined potential improvements to a 6 km stretch of valley land (which includes an existing multi-use trail) from Pottery Road to Parliament Street. The goals of the plan are to:

- Recommend strategies to improve environmental protection and access, and consider possibilities for public art in the lower Don River valley lands
- Provide a long-term strategy to establish a theme, create positive user experience and improve access
- To incorporate all existing studies, plans and initiatives in the study area

The strategies and themes developed in the Master Plan will help inform the detailed design stage of the East Don Trail EA to ensure continuity in trail network design and aesthetics. In addition, the knowledge gained concerning multi-use trails in the Don River watershed and user needs and concerns have been utilized to inform the planning stage.

Detailed design had been completed for a number of priority projects located between Pottery Road and Lakeshore Road as identified in the Master Plan, with construction planned for 2015/2016.

Crosstown Light Rail Transit Project

The Toronto Transit Commission (TTC) and City of Toronto undertook a Transit Project Assessment for the 33 km long Eglinton Crosstown LRT corridor that would link Pearson International Airport with Kennedy Station (TTC, 2010, amended 2013). The Eglinton Crosstown LRT will connect with a number of existing and planned transportation routes. The study recommended that bus services along Eglinton Avenue be replaced by LRT with electrically powered light rail vehicles operating in a designated right-of-way located primarily in the centre of the street. In relation to the East Don Trail EA Regional Study Area, surface stops are planned at Wynford Drive and Bermondsey Road with the closest station offering indoor bike parking at Don Mills Road.

Eglinton Crosstown LRT will be considered in the following ways:

- Ensure the East Don Trail does not interfere with the built infrastructure associated with Eglinton Crosstown LRT
- Explore options to create a connection between the East Don Trail and the Eglinton Crosstown LRT

The Don Watershed Plan: Beyond 40 Steps

The *Don River Watershed Plan: Beyond 40 Steps* (2009) was prepared by the TRCA as a means of informing and guiding private landowners, non-government organizations and every level of government and government agency concerned with the ecological health and function of the Don River Watershed. The three guiding principles the report lays out are to protect and sustain what is healthy, regenerate what is degraded, and take responsibility for the Don.

The following *Don Watershed Plan* objectives are particularly relevant to and will be direct or indirect considerations in this Study:

- Eliminate or minimize risks to human life and property due to flooding
- Protect, regenerate and enhance the health and diversity of native aquatic habitats, communities, and species
- Protect and expand the Terrestrial Natural Heritage System and improve connectivity among the watershed's forest, meadow, and wetland communities
- Manage the impact of human activities and neighbouring land uses in the watershed
- Connect people and places in the Don River watershed
- Protect and regenerate natural areas and greenspace for nature-based experiences
- Identify, document, protect and celebrate the cultural and heritage resources of the watershed

2.0 STUDY PROCESS – MUNICIPAL CLASS ENVIRONMENTAL ASSESSMENT PROCESS

The *Ontario Environmental Assessment Act* (EAA) outlines a planning and decision-making process to identify a project's potential environmental effects through an EA. The EAA applies to government ministries and agencies, conservation authorities and municipalities. Under an EA the environment includes the natural, social, cultural, built and economic environments. An EA must be completed before decisions are made to proceed on a project subject to the requirements of an EA and include, evaluating and selecting a preferred solution to best meet the project objectives while minimizing environmental effects.

Two types of EA planning and approval processes are set out by the EAA: the Individual EA and the Class EA. Individual EA's are carried out for large-scale, complex undertakings with the potential for significant environmental effects and major public interest. Class EA's are a self-assessed streamlined EA processes that apply to routine projects that have predictable and manageable environmental effects. The Municipal Class EA (MCEA) is an approved Class EA under the EAA.

2.1 Municipal Class Environmental Assessment Process

MCEA outlines a process by which municipal infrastructure projects such as roads, water, and wastewater are planned according to the EAA.

The East Don Trail Study is being undertaken as a Class EA in accordance with the MCEA process.

As the projects undertaken by municipalities vary in their environmental impact, they are classified by the following schedules:

- Schedule A projects: have minimal adverse effects and include a number of municipal maintenance and operational activities. These projects are pre-approved and may proceed to implementation without following the full Class EA planning process.
- Schedule A+ projects: are pre-approved, but the public is to be advised prior to project implementation.
- Schedule B projects: have the potential for some adverse environmental effects. The proponent is required to undertake a screening process, involving mandatory contact with directly affected public and relevant Review Agencies. If there are no outstanding concerns, the proponent may proceed to implementation.
- Schedule C projects: have the potential for significant environmental effects and must proceed under full planning and documentation procedures specified in the Class EA document. Schedule C projects require that an Environmental Study

Report (ESR) be prepared and filed for review by the public and Review Agencies. Schedule C projects generally include the construction of new facilities and major expansions to existing facilities (MCEA, 2015).

The East Don Trail Study considered *construction or removal of sidewalks, multi-purpose paths or cycling facilities including water crossings outside existing right-of-way* project as defined in the MCEA (MCEA, 2015). The Study was therefore conducted in accordance with the requirements of the MCEA, Schedule C, as amended in 2015 (MOECC, 2015). This process consists of five phases with mandatory points of public contact, with the focus being a comprehensive and traceable decision-making process. The MCEA framework is illustrated in Figure 2-1.

The five phases of the MCEA planning process are as follows:

- Phase 1: Identify the problem (deficiency) or opportunity
- Phase 2: Identify alternative solutions to address the problem or opportunity by taking into consideration the existing environment, and establish the preferred solution taking into account public and Review Agency input. Determine the appropriate Schedule for the undertaking and document decisions
- Phase 3: Examine alternative methods of implementing the preferred solution, based upon the existing environment, public and Review Agency input, anticipated environmental effects, and methods of minimizing negative effects and maximizing positive effects
- Phase 4: Document, in an ESR, a summary of the rationale, and the planning, design and consultation process of the project. The ESR is filed with the Ministry of the Environment and Climate Change (MOECC) and placed on the public record for a 30 day review period
- Phase 5: Complete contract drawings and documents, and proceed to construction and operation, with appropriate monitoring (MCEA, 2015), conditional on the project approval following the ESR submission

EXHIBIT A.2

MUNICIPAL CLASS EA PLANNING AND DESIGN PROCESS

NOTE: This flow chart is to be read in conjunction with Part A of the Municipal Class EA

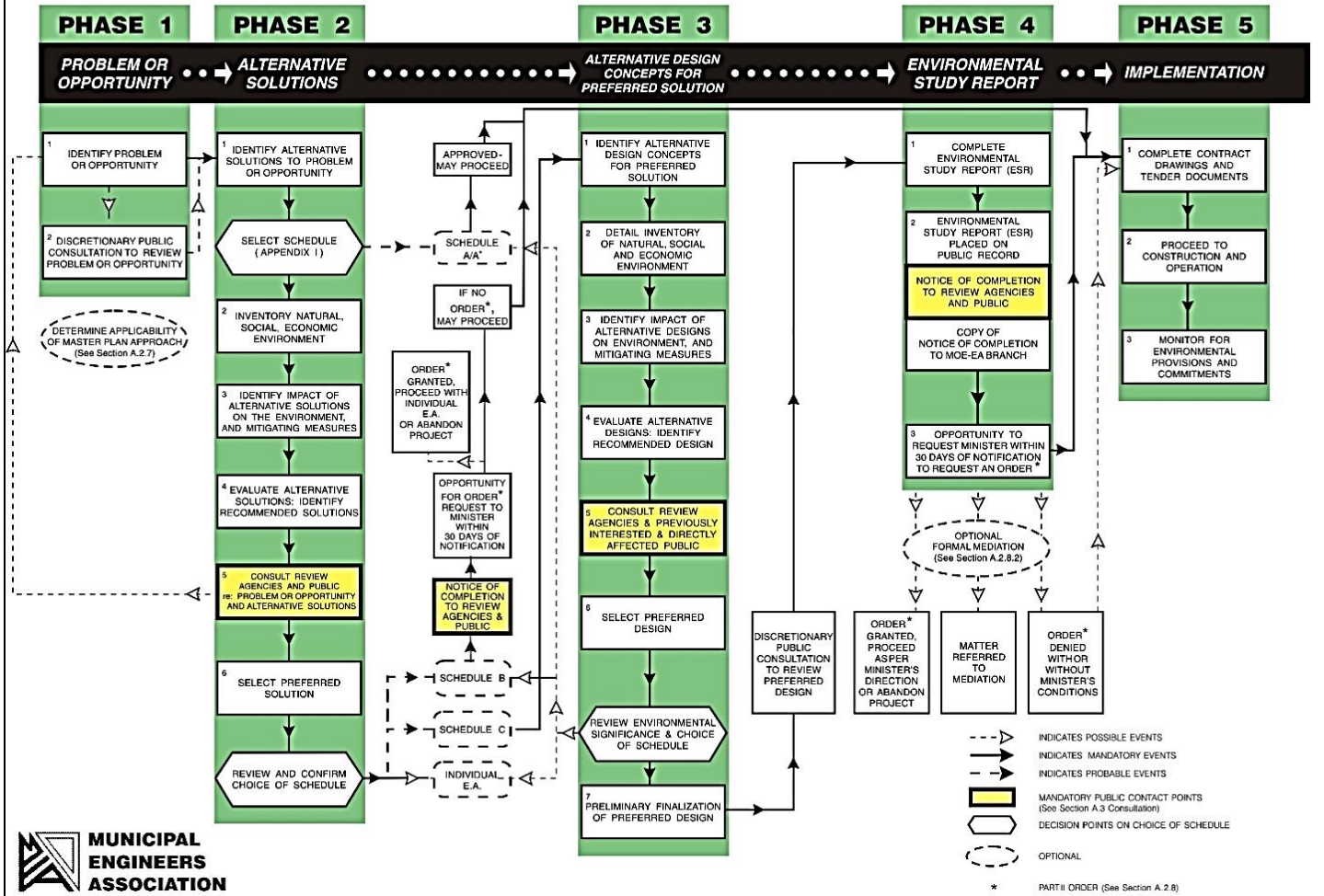


Figure 2-1: Municipal Class Environmental Assessment planning and design process

Source: Municipal Engineers Association 2015

2.2 Ministry of Infrastructure Public Work Class Environmental Assessment Process

The proposed undertaking may directly or indirectly affect lands or facilities owned by Her Majesty the Queen in Right of Ontario as represented by the Minister of Economic Development, Employment and Infrastructure that are managed by Infrastructure Ontario. Infrastructure Ontario managed land includes the land occupied/used by Hydro One. Infrastructure Ontario is required, by the Ministry of the Environment and Climate Change and the *Environmental Assessment Act (EAA)*, to follow the Ministry of Economic Development, Employment and Infrastructure Public Works (PW) Class EA process prior to any activities on Infrastructure Ontario-managed lands. The PW Class EA sets out how *EAA* requirements are met and have been approved by the Minister of the Environment in accordance with Section 9(1) of the *EAA* (Ministry of Infrastructure 2012).

If the preferred alternative design concept selected in this study requires an easement and/or any other associated realty undertaking than this undertaking will be required to be granted by the Ministry of Economic Development, Employment and Infrastructure.

Under the PW Class EA, the proponent of a project that is potentially impacting IO-managed lands is required to ensure that IO's minimum EA requirements are met. If the proponent is undertaking their EA under another Class EA process, in this case, Municipal Class EA, it is possible to streamline the process and undertake both EA processes at the same time, provided the PW Class EA requirements are met.

The Ministry of Economic development, Employment and Infrastructure will be assessing easement and any other related realty activity through this streamlined Class EA process. In addition, this will be articulated in the consultation with certain stakeholders and within the notice of completion.

The PW Class EA describes a seven-point analysis which requires the collection and analysis of information from various sources. The analysis examines municipal official plan and zoning designations, contaminants, Environmentally Significant Areas (ESAs), cultural heritage, servicing capacity, environmental features and socio-economic effects. A record of consultation activities is to be kept, issues identified and resolved, environmental effects and any mitigation measures documented. This Class EA document includes information that is consistent with the PW Class EA seven-point analysis. Details are provided in Section 8.8.2.

2.3 Canadian Environmental Assessment Act

Municipal projects may be subject to the requirements of the *Canadian Environmental Assessment Act (2012)* (CEAA). A federal assessment may be required if a municipal

project is described in the Regulations Designating Physical Activities (RDPA) and/or if a project constitutes a 'designated project' by the Federal Minister of the Environment and Climate Change.

If a proposed undertaking requires an EA in accordance with the CEAA, this EA Study should be conducted to adequately meet the requirements of both the CEAA and the MCEA processes.

As no aspect of this project was described in the RDPA, no federal assessment is required according to the RDPA. At the same time, however, CEAA may potentially be triggered should the project require an authorization under the Federal *Fisheries Act* or other federal permit(s).

Obtaining permits and approvals to proceed with project implementation falls under Phase 5 (detailed design and implementation, conditional upon project approval under the Class EA) of the MCEA process. If necessary, the various requirements of the CEAA will be incorporated into Phase 5 of the project when the necessary approvals will be obtained as required.

2.4 Environmental Study Report and Part II Orders

Environmental Study Report is defined as the documentation for a specific project planned in accordance with the procedures for Schedule C projects, setting out the planning and decision-making process, including consultation practices, which has been followed to arrive at the preferred solution. The ESR also sets out the mitigating measures proposed to avoid or minimize environmental effects (MCEA, 2015).

As per the MCEA 2015 requirements, this ESR has been prepared to document the East Don Trail Schedule C MCEA project activities, correspondence and decision-making process up to and including Phase 4 of the MCEA process. The ESR will be made available to the public, review agencies, and other stakeholders to review for a 30 calendar day period. A public notice, termed the Notice of Completion, will be published to announce this review period. Interested persons may provide written comments to the City of Toronto within the 30 calendar day period, please address them to the City staff listed below. Subject to comments received as a result of this study and the receipt of necessary approvals and funding, the City intends to proceed with the implementation of the East Don Trail

Maogosha Pyjor Public Consultation Unit, City of Toronto Metro Hall, 19 th Fl., 55 John St. Toronto, ON M5V 3C6	Tel: 416-338-2850 Fax: 416-392-2974 TTY: 416-338-0889 E-mail: mpyjor@toronto.ca
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If concerns regarding this project remain unresolved after consulting with City Staff a person or party can request that the project is subject to a Part II Order by the Minister of the Environment and Climate Change. A Part II Order is an appeal provision for elevating the status of the project to an Individual EA process. Part II Order requests must be written and received by the Minister at the address below within 30 calendar days following the date of the Notice of Completion, and a copy must also be sent to the City contact. If no requests are received, the City may proceed with this project as outlined in the ESR.

Minister of the Environment and Climate Change
 77 Wellesley Street West, Ferguson Block, 11th Fl.
 Toronto, ON M7A 2T5

AND

Ministry of the Environment and Climate Change
 Environmental Approvals Branch
 135 St. Clair Ave. W., 1st Fl.
 Toronto, ON M4V 1L5

The City of Toronto, TRCA, and their consultants remain available to meet with interested parties and agencies to review the details of the proposed project. Any party wishing to provide additional comments on or requiring additional information regarding the project is encouraged to contact the City of Toronto at the address above.

2.5 Work Plan and Schedule

The Study was initiated on January 31, 2013; a project milestones schedule is available in Table 2-1.

Table 2-1: East Don Trail Environmental Assessment Study milestone schedule

Deliverable	Milestone Dates
Project Start Up	
TRCA Authority Approval	June 22, 2012
Communication to councillors	July 25, 2012
Meeting with Ministry of Environment and Climate Change	October 17, 2012
Phase I: Problem or Opportunity <i>January to June 2013</i>	
Notice of Environmental Assessment Commencement and Public Event	January 31, 2013
Public Event # 1 - project purpose, issues identification, EA process	February 13, 2013
Indigenous Engagement Notification #1 – intro, notice of commencement, project brief, schedule	February 20, 2013
TAC Meeting #1 – introduction, roles, refine project objectives, issues identification, feasibility study	March 27, 2013

Deliverable	Milestone Dates
CLC Meeting #1 – introduction, roles, refine project objectives, issue identification, feasibility study	April 22, 2013
Draft Existing Conditions Report	October 2012 to December 2013
Circulate Draft Existing Conditions Report for comments to CLC	November 1, 2013
Indigenous Engagement Meeting #1 – introduction, refine project purpose, issues identification	May 6, 2013
TAC Meeting #2 - draft existing conditions, further studies, problem/opportunity statement, <i>alternatives to</i> and evaluation	May 14, 2013
CLC site walk of key areas within the Study Area	May 30, 2013
CLC Meeting #2 - draft Existing Conditions, further studies, problem/opportunity statement, “alternatives to” and evaluation	June 4, 2013
Phase II: Alternative Solutions <i>June 2013 to May 2014</i>	
TAC Meeting #3 - draft alternative trail alignments and evaluation criteria	June 20, 2013
CLC Meeting #3 – draft alternative trail alignments and evaluation criteria	July 15, 2013
TAC Meeting #4 - discuss evaluation of alternative trail alignments	July 31, 2013
CLC Meeting #4- discuss evaluation of alternative trail alignments	August 12, 2013
Indigenous Engagement Notification #2 (Project Update #1) – existing conditions, “alternatives to” and evaluation, alternative trail alignments	September 3, 2013
Public Event #2 – existing conditions, “alternative to”, alternative trail alignments and evaluation	September 12, 2013
Indigenous Engagement Notification #3 (Project Update #2) -Stage 1 Archaeological Assessment, draft Existing Conditions Report, evaluation of alternative trail alignments	December 17, 2013
TAC Meeting #5 - revised alternative trail alignments	February 3, 2014
CLC Meeting #5 – revised alternative trail alignments, draft Existing Conditions Report questions	March 6, 2014
Indigenous Engagement Notification #4 (Project Update #3) – revised alternative trail alignments, selection of preferred alternative	May 5, 2014
Phase III: Alternative Design Concepts for the Preferred Solution <i>April 2014 to August 2016</i>	
TAC Meeting #6 – preferred alternative trail alignment, constraints, alternative design concepts and evaluation – Areas 1 and 3	April 29, 2014
CLC Meeting #6 - preferred alternative trail alignment, constraints, alternative design concepts, and evaluation – all Areas	June 10, 2014
City of Toronto: Parks, Forestry and Recreation – Community Disability Steering Committee Meeting	June 12, 2014
TAC correspondence – alternative design concepts and evaluation Area 2	June 18, 2014
Indigenous Engagement Notification #5 (Project Update #4) – preferred alternative trail alignment, design concepts and evaluation	September 8, 2014
Public Event #3 – preferred alternative trail alignment, alternative design concepts and evaluation, preferred design concept	June 24, 2014
TAC Meeting #7 - preferred design concept, description of preferred design	September 15, 2014

Deliverable	Milestone Dates
concept, detailed design and construction considerations, next steps	
CLC Meeting #7 - preferred design concept, description of preferred design concept, detailed design and construction considerations, next steps	September 10, 2014
Indigenous Engagement Notification #6 (Project Update #5- additional studies including Heritage Assessment and Stage 2 Archeological Assessment)	January 20, 2016
Public Correspondence (Update) – refinement of the preferred design concept	September 7, 2016
TAC correspondence – refinement of the preferred design concept	September 7, 2016
CLC correspondence – refinement of the preferred design concept	September 7, 2016
Indigenous Engagement Notification #7 (Project Update #6) – refinement of the preferred design concept	September 7, 2016
Phase IV: Prepare Environmental Study Report (ESR)	
<i>December 2014 to November 2015</i>	
Draft ESR circulated to TAC	December 9, 2014
Draft ESR circulated to CLC	December 9, 2014
Draft ESR circulated to Key Stakeholders	December 11, 2014
Revisions to ESR and updated with additional studies	February 2015 to October 2016
Notice of filing ESR / Notice of Completion	November 10, 2016
Indigenous Notification #8- Notice of Completion	November 10, 2016
File ESR with the Ministry of the Environment and Climate Change (30day review)	November 10, 2016
Anticipated Approval	December 9, 2016

Note: TAC represents Technical Advisory Committee and CLC represents Community Liaison Committee

2.6 Project Organization

The East Don Trail EA Study team consists of staff from the City of Toronto (Proponent) and TRCA (Project Lead) as outlined in Table 2-2 and Table 2-3. The Study team had formal meetings at key stages of the project to review project data, alternative solutions, alternative design concepts, recommendation, public consultation, public event presentation material, and other technical and logistical issues.

Table 2-2: City of Toronto Study Team

Name	Position/Department	Role
Garth Armour/Scott Laver	Supervisor, Natural Environment and Community Programs, Parks, Forestry & Recreation	Governing Group
Daniel Egan	Manager, Cycling Infrastructure & Programs	Project Sponsor, Governing Group
Jacquelyn Hayward Gulati	Acting Director, Cycling Infrastructure & Programs, Transportation Services	Governing Group
Ruthanne Henry	Sr. Project Coordinator, Capital Projects, Parks, Forestry & Recreation	Governing Group
Jennifer Hyland	Acting Manager, Cycling Infrastructure & Programs	City Project Manager, Governing Group
Maogosha Pyjor	Sr. Public Consultation Coordinator, Public Consultation Unit	Public Consultation

Wendy Strickland	Natural Environment Specialist, Natural Environment and Community Programs, Parks, Forestry & Recreation	Governing Group
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Table 2-3: TRCA Study Team

Name	Position/Department	Role
Adele Freeman	Director, Watershed Management	Project Advisor
Amanda Parks/Eric Beales	Technical Assistant, Indigenous Engagement, Archaeological Resource Management Services	Indigenous Engagement and Archaeological Expert
Caitlin Rochon	Project Coordinator, Project Management Office	Project Coordinator
Natalie Seniuk	Project Manager, Project Management Office	Public Consultation Coordinator
Laura Stephenson	Manager, Project Management Office	Project Advisor
Violetta Tkaczuk	Project Manager, Project Management Office	Lead Project Manager
Lisa Turnbull	Senior Project Manager, Project Management Office	Senior Project Manager
Amy Winterhalt	Analyst, Water Resource Engineering	Water Resource Engineer
Maria Zintchenko	Project Coordinator, Project Management Office	Technical Team and Project Coordinator

Engineering Services Consultant – Aquafor Beech Limited

The consultant team for the East Don Trail EA was led by Aquafor Beech Limited (Aquafor Beech Ltd.) and included: Terraprobe Inc., Schollen & Company Inc., and Parsons. The purpose of the consultant engineering services was to provide fluvial geomorphologic and geotechnical evaluation of the Regional Study Area to assist in the selection of the preferred trail alignment. In addition, the consultant team will provide landscape architecture and civil engineering support through to Phase 5 (Detailed Design) of the project (pending EA approval).

A summary of specific areas of expertise by company are provided below:

- Aquafor Beech Ltd. – lead consultant, water resource engineering, geomorphology, civil engineering, and EA process
- Terraprobe Inc. – geotechnical services
- Schollen & Company Inc. – landscape architecture services
- Parsons Corporation - civil and structural engineering service

3.0 CONSULTATION STRATEGY

Public and agency consultation is a key feature of the MCEA planning process and provides avenues through which the public, local interest groups, non-government organizations, and federal and provincial agencies can participate. While the formal meetings are mandated under the MCEA, this Study aimed to go above and beyond the minimum requirements and did so through the additional mechanisms outlined in Section 3.1 below.

The sections below provide a summary of the consultation undertaken as part of the East Don Trail EA. Key groups included: the public (stakeholders and Community Liaison Committee), Indigenous communities, Review Agencies, Technical Advisory Committee, Key Stakeholders and local politicians. Detailed information concerning consultation mechanisms, input and results can be found in the report sections specific to each Study phase.

3.1 Public Consultation

Public consultation was carried out in alignment with the consultation requirements set out in the MCEA document. Figure 3-1 provides a summary of the MCEA required public consultation meetings that were completed for each Phase of the EA process and includes a general time frame for each Phase. A summary of key consultation activities undertaken during each Phase of the EA (including public consultation meetings) can be found in Table 3-1.

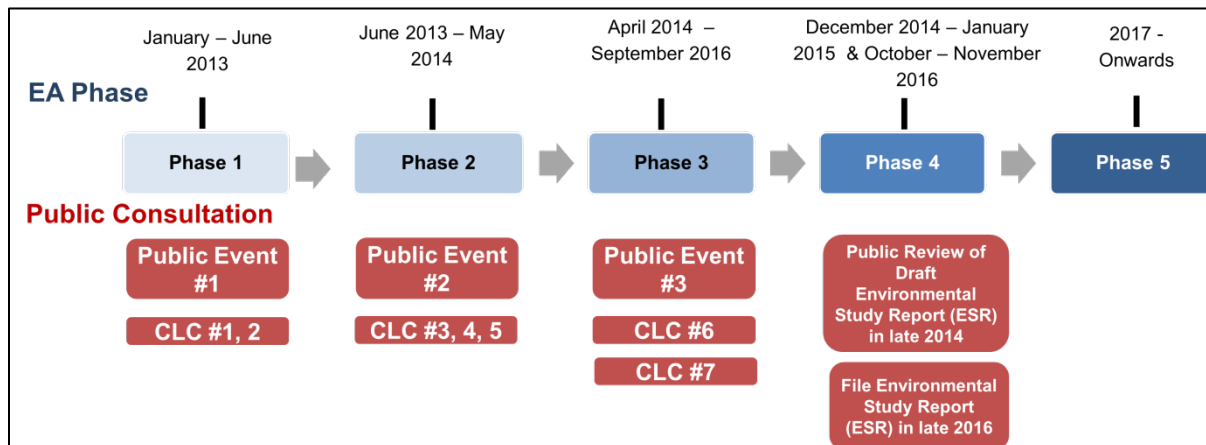


Figure 3-1: Public consultation

Source: TRCA 2016

Table 3-1: Public consultation phases

Phase	Mechanisms Used
Phase 1 January to June 2013	<ul style="list-style-type: none"> • Public Notice of Study Commencement • Public Event #1 • CLC Meetings #1 and #2, Site Walk #1 • Frequently Asked Questions Created
Phase 2 June 2013 to May 2014	<ul style="list-style-type: none"> • Public Event #2 • CLC Meetings #3 to #5 • Project Listserv – Update #1 and #2 • Frequently Asked Questions – Update #1
Phase 3 April to December 2014 and August to September 2016	<ul style="list-style-type: none"> • Public Event #3 • CLC Meetings #6 and #7 • Project Listserv – Update #3 • Frequently Asked Questions – Update #2 • Project Listserv – Update # 6
Phase 3 – Additional Consultation December 2014 to August 2016	<ul style="list-style-type: none"> • Frequently Asked Questions – Update #3 • Project Listserv – Update #4 • Project Listserv – Update #5
Phase 4 December 2014 to January 2015 and October to November 2016	<ul style="list-style-type: none"> • CLC review of draft ESR • Notice of Completion • Public Notice of Study Completion and 30 day review period

3.1.1 Summary of all Mechanisms Used

In addition to the notification and public event requirements set out by the MCEA, a number of mechanisms were used to provide an opportunity for meaningful engagement throughout the duration of the study (see Table 3-2 below).

Table 3-2: Summary of all mechanisms used

Activity	Description
Community Liaison Committee (CLC)	<p>Seven CLC meetings were held throughout the study. Each meeting included:</p> <ul style="list-style-type: none"> • Presentation by project team • Discussion period • Handout materials • Comment sheets • Direct interaction between CLC Members and the Project Team
Public Events	<p>Three public events were held throughout the study. Each public event included:</p> <ul style="list-style-type: none"> • Display panels • Presentation and discussion (at Public Events #2 and #3) • Handout materials • Registration table • Comment sheets • Direct interaction between the public and the Project Team

Activity	Description
Project Webpages	<p>A webpage for the Study was created at the commencement of the project and was maintained on the City of Toronto website: www.toronto.ca/eastdontrail. The webpage included:</p> <ul style="list-style-type: none"> • Notices • Public Event documents • Frequently Asked Questions • Reports • Additional information to assist with understanding the project <p>A webpage for the Study was also created on the TRCA website: www.trca.on.ca/eastdontrail. The webpage was used to guide visitors to the City of Toronto study webpage.</p> <p>A CLC webpage was created and maintained on the City of Toronto website: www.toronto.ca/eastdontrailclc. The CLC webpage included CLC Meeting materials (e.g., presentations, comment forms, and meeting notes).</p>
Frequently Asked Questions Document	<p>A Frequently Asked Questions document was created during Phase 1 in response to common questions heard up to and including Public Event #1. This document was made available on the Study webpage and was revised as required to incorporate new and updated information.</p>
Notifications	<p>Notifications are formal notices used to inform members of the public, stakeholders, Review Agencies, and Indigenous communities at key stages of the project. Notifications were provided through different mechanisms as requested by the specific stakeholders, mandated by the Environmental Assessment process, or determined by the project team and included:</p> <ul style="list-style-type: none"> • Advertisements in the North York Mirror and East York Mirror • Flyer distribution through Canada Post • Mailed letters • E-mails • Listserv <p>This mechanism was used to advertise the Notice of Commencement, Public Events, and Notice of Completion.</p>
Project Updates (Listserv)	<p>The City of Toronto Listserv (e-update list) was used to send study notifications and updates to members of the stakeholder register¹ throughout the duration of the Study.</p>
One Window Contact	<p>An e-mail account was created for the Study (eastdontrail@toronto.ca) to provide for one-window communication opportunities for members of the public.</p>

¹ A stakeholder register was created at the outset of the study as a mechanism for providing notifications and updates to interested members of the public. The stakeholder register was populated through voluntary sign-up at public events and on the project webpage. This list was updated throughout the Study.

3.2 Community Liaison Committee

To facilitate ongoing stakeholder involvement at the planning level of the Study, a Community Liaison Committee (CLC) made up of stakeholder representatives was formed. The purpose of the CLC was to assist TRCA and the City of Toronto in obtaining additional public input concerning the planning and design process of the Study while staying consistent with the project's purpose.

To ensure that the CLC included representatives from local community organizations and users of the East Don Valley Corridor, TRCA and the City of Toronto worked together with local municipal councillors from the affected Wards to identify potential members. In addition, an invitation to participate was extended to members of the public during Public Event #1. The invitation list represented a balanced and broad spectrum of opinions and geographies within the Regional Study Area. For a list of CLC members see **Appendix A**.

New CLC members were considered for inclusion in the committee throughout the duration of the Study. No community members or organizations that were interested in participating in the CLC were denied participation.

It was anticipated that the CLC would meet approximately four times during the study. However, due to member interest and the level of input required the CLC met seven times during the MCEA process.

- Meetings were scheduled to ensure that the majority of the CLC members were available to attend.
- Materials from each CLC meeting were posted on the CLC webpage and distributed via Dropbox. These materials included: presentations, handouts, and a summary of meeting discussions and comments received from both members in attendance and those unable to attend.
- Affected ward councillors were invited to observe each CLC meeting.

Invitation to Participate

- Letter of Invitation and Information Package - An invitation was sent to potential CLC members on March 19, 2013. The invitation included a cover letter, proposed date for CLC Meeting #1, contact information for the Project Team, and an Information Package that contained a brief overview of the Study, EA process, and the roles and responsibilities of a CLC member. Invitees were asked to R.S.V.P. their interest to participate by phone or e-mail on or before March 22, 2013.
- Terms of Reference - A Terms of Reference document and Member Agreement were sent on March 27, 2013, to all individuals who expressed an interest in

participating in the CLC. The Terms of Reference further detailed the roles and responsibilities, meeting format, and agreement to participate in the CLC.

CLC Information Package and Terms of Reference can be found in **Appendix A**.

3.3 Indigenous Communities

Prior to the delivery of any notifications, Indigenous and Northern Affairs Canada and the Ministry of Indigenous Relations and Reconciliation were contacted for advice and information on the Indigenous communities that should be contacted during the Indigenous Engagement process. Additional Indigenous community contact lists were also considered, including the lists held by the City of Toronto and TRCA. Communities that were contacted had established or asserted rights and interests in the Regional Study Area, and are listed below.

- Beausoleil First Nation
- Chippewas of Georgina Island First Nation
- Chippewas of Rama-Mnjikaning First Nation
- Conseil de la Nation Huronne-Wendat
- Coordinator of the Williams Treaty First Nations
- Curve Lake First Nation
- Haudenosaunee Confederacy Chiefs Council via Haudenosaunee Development Institute
- Hiawatha First Nation
- Kawartha Nishnawbe First Nation
- Metis Nation of Ontario
- Mississaugas of Alderville First Nation
- Mississaugas of the New Credit First Nation
- Mississaugas of Scugog Island First Nation
- Moose Deer Point First nation
- Six Nations of the Grand River

Documentation of Indigenous Engagement is provided in **Appendix A**.

3.4 Review Agencies

As part of the consultation process, a number of Review Agencies were engaged to ensure that the interests of these agencies were met by the Study. Review Agencies are government agencies, ministries or public authorities or bodies whose mandates require them to have jurisdiction over matters affected or potentially affected by projects planned under the Class EA. A draft agency list was developed by TRCA in cooperation with the City of Toronto and the MOECC. The agency list is attached in **Appendix A**.

Review Agencies were engaged at key points throughout the Study. The following engagement mechanisms were used:

- Formal letters
- Conference calls
- In person meetings

An overview of the correspondence at key points throughout the Study with all Review Agencies can be found in Table 3-3.

Table 3-3: Overview of Correspondence with Review Agencies

Phase	Correspondence
Phase 1 January to June 2013	<ul style="list-style-type: none"> • Notice of Commencement • Notice of Public Event #1 • Project Background and Study Area
Phase 2 August 2013 to May 2014	<ul style="list-style-type: none"> • Notice of Public Event #2 • Phase 2 Results Update
Phase 3 April 2014 to September 2016	<ul style="list-style-type: none"> • Notice of Public Event #3 • Phase 3 results update – preferred design concept • Phase 3 results update – refined preferred design concept
Phase 4 October 2016 – November 2016	<ul style="list-style-type: none"> • Notice of Completion

3.5 Technical Advisory Committee

A Technical Advisory Committee (TAC) was formed to include representatives from a variety of technical backgrounds comprised of TRCA and City of Toronto employees. For a full list of TAC members, see **Appendix A**. The purpose of the TAC was to ensure that all technical aspects of the project were addressed in the planning stages by providing review, comment, and direction throughout the EA process. All efforts have been made to ensure that the East Don Trail Class EA considered other project and planning initiatives (e.g., Toronto Water infrastructure works) in the area to ensure coordination and potential cost efficiencies.

The TAC met regularly at key stages of the EA process and served as checkpoints prior to CLC meetings and the three public events. In total, seven TAC meetings were held throughout the Study. Each meeting included:

- Presentation by project team
- Discussion period
- Handout materials

Two meetings were held during Phase 1, three meetings were held during Phase 2, and two meetings were held during Phase 3.

The TAC also provided valuable input to the documentation of this Study. All representatives of the TAC were provided the opportunity to review and comment on this ESR prior to filing.

East Don Trail TAC: see **Appendix A**.

3.6 Key Stakeholders

A subset of the stakeholders was defined as Key Stakeholders for this project. They included agencies and businesses that own land or utilities within the Local Study Area.

The East Don Trail Key Stakeholders are:

- Flemington Park Golf Club
- GO Transit/Metrolinx (Metrolinx)
- Enbridge Gas Distribution Inc. (Enbridge)
- Hydro One Networks Inc. (Hydro One)

These Key Stakeholders were requested to participate in the Study in the early stages. They were engaged on a regular basis to discuss technical aspects of the project as they relate to the groups; and, to ensure that insight and approval were gained from each group where necessary.

The following engagement mechanisms were used for Key Stakeholders:

- Formal letters
- Project Update emails
- Conference calls
- In person meetings

An overview of the correspondence at key points throughout the Study that occurred with all Key Stakeholders can be found in Table 3-4. Relevant correspondence with Key Stakeholders can be found in **Appendix A**.

Table 3-4: Overview of correspondence with Key Stakeholders

Phase	Correspondence
Phase 1 January to June 2013	<ul style="list-style-type: none"> • Notice of Commencement • Notice of Public Event #1 • Project Background and Study Area
Phase 2 June 2013 to May 2014	<ul style="list-style-type: none"> • Project Update and Next Steps – alternative trail alignments • Notice of Public Event #2 • Project Update – refined alternative trail alignments
Phase 3 April 2014 to September 2016	<ul style="list-style-type: none"> • Notice of Public Event #3 • Project Update – preferred design concept • Notice of Field Work within Study Area • Project Update – status of EA and next steps • Project Update – refined preferred design concept

Phase	Correspondence
Phase 4 December 2014 to January 2015 and October to November 2016	<ul style="list-style-type: none"> • Draft ESR sent for review • Notice of Completion

3.7 Local Politicians

Members of Parliament and Members of Provincial Parliament

All affected current Members of Parliament (MPs) and Members of Provincial Parliament (MPPs) were issued a Notice of Commencement, project brief and an invitation to the first Public Event at the beginning of the project, and a Notice of Completion prior to filing of this ESR. No formal responses were received by the Project Team. MPs and MPPs that were issued communications are listed below:

- Hon. Michael Coteau (MPP), Don Valley East
- Hon. Kathleen O. Wynne (MPP), Don Valley West
- Peter Tabuns (MPP), Toronto-Danforth
- Michael Prue (MPP), Beaches-East York (January 2013 – May 2014)
- Arthur Potts (MPP), Beaches-East York (June 2014 – present)
- Joe Daniel (MP), Don Valley East (January 2013 – October 2015)
- Yasmin Ratansi (MP), Don Valley East (November 2015 to present)
- John Carmichael (MP), Don Valley West (January 2013 – October 2015)
- Rob Oliphant (MP), Don Valley West (November 2015 to present)
- Matthew Kellway (MP), Beaches-East York (January 2013 – October 2015)
- Nathaniel Erskine-Smith (MP), Beaches – East York (November 2015 to present)
- Craig Scott (MP), Toronto-Danforth (January 2013 – October 2015)
- Julie Dabrusin (MP), Toronto-Danforth (November 2015 to present)

Councillors

All affected and interested councillors were kept informed of the project status and progress throughout the duration of the project. At the onset of the Study, the Project Team met with each of the councillors to present the Study scope and background and gained insight into the needs and wants of their constituents. In addition, each councillor provided recommendations for members of the CLC. The councillors whose wards are located within the Regional Study Area boundary were engaged and included:

- Janet Davis, Ward 31 Beaches-East York
- John Parker, Ward 26 Don Valley West (January 2013– December 2014)
- Jon Burnside, Ward 26 Don Valley West (December 2014 – present)
- Denzil Minnan-Wong, Ward 34 Don Valley East
- Mary Fragedakis, Ward 29 Toronto-Danforth

Councillors were engaged at key points throughout the Study. The following engagement mechanisms were used:

- Formal letters
- Project update e-mails
- Email correspondence
- Invitations to all Public Events
- In person meetings

An overview of the correspondence with councillors at key points throughout the Study can be found in Table 3-5. Relevant correspondence with councillors can be found in **Appendix A**.

Table 3-5: Overview of correspondence with Councillors

Phase	Correspondence
Phase 1 July 2012 – June 2013	<ul style="list-style-type: none"> • Notice of Commencement • Notice of Public Event #1 • Project Background and Study Area • Project Update – Environmental Assessment process • Public Event #1 Summary Report
Phase 2 June 2013 - May 2014	<ul style="list-style-type: none"> • Project Update – project objectives and alternative solutions • Notice of Public Event #2 • Project Update – alternative trail alignments • Public Event #2 Summary Report • Project Update – revised alternative trail alignments
Phase 3 April 2014 – October 2016	<ul style="list-style-type: none"> • Notice of Public Event #3 • Project Update – design concepts • Public Event #3 Summary Report • Notice of Field Work within Study Area • Project Update – preferred design concept • Project Update – additional studies • Project Update – refined preferred design concept
Phase 4 October to November 2016	<ul style="list-style-type: none"> • Notice of Completion

3.8 Additional Meetings and Groups

The East Don Trail EA project conducted additional consultation activities with members of the public and community groups throughout the process on an as requested basis. The following is a list of meetings attended in which the Project Team provided information in the form of a presentation and engaged in discussion with the public to gain further input and feedback on the Study:

- Wynford Concorde Residents Group Meeting (September 9, 2013)
- City of Toronto Ward 31 Ravine Meeting (November 4, 2013)
- Don Watershed Regeneration Council Meeting (November 21, 2013)
- City of Toronto: Parks, Forestry and Recreation – Community Disability Steering Committee Meeting (June 12, 2014)

4.0 PROBLEM/OPPORTUNITY STATEMENT (PHASE 1)

The first phase of the EA process identifies and defines the existing issues that are to be studied and results in a clear defined statement of the problem or opportunity that will be addressed through the EA process.

4.1 Problems and Opportunities Assessment

The Greater Toronto Area (GTA) is anticipated to be the fastest growing region of the province, with its population increasing by approximately 40% from 2012 to 2036 (Ministry of Finance, 2013). This intensification will place a strain on current infrastructure and increase pressures on the City's natural areas. As the City's population grows, there is a greater need to provide multiple modes of transportation as well as cost effective recreational opportunities when providing access to the City's greenspace and ravine systems. A growing and increasingly diverse population means that there are more users, and more competition for the use of limited park space, with damage to parks and trails as resulting from excessive and unsustainable use. As the City's population increases, it is necessary to expand and improve the parks and trails systems to meet resident needs and to protect the ecological integrity of the City's natural areas. The implementation of a formal trail system is one component in the management of the negative impacts on natural areas caused by overuse.

The following existing problems and opportunities have been identified for the East Don Trail EA Regional Study Area.

Identified Existing Problems

- Multi-use trail infrastructure connecting existing trails and communities is lacking within the East Don Corridor
- Several trail systems meet and/or terminate within the Study Area at different points (including the existing East Don Trail, Don Trails, and the Gattineau Corridor Trail). The Regional Study Area lacks continuity and connectivity with the rest of the City of Toronto's major multi-use trail network
- Safe trail and outdoor recreational opportunities that can accommodate a broad spectrum of users are deficient in the Regional Study Area
- Safe access and use of the valley lands is currently limited or not available to a variety of users, including those with limited mobility, people with baby strollers, cyclists, and inline skaters
- Unmanaged and unauthorized current use of the valley lands poses safety risks to users and concerns to land and utility owners
- Unmanaged use of areas can lead to impacts on environmentally and culturally sensitive areas

- Access to the valley lands is currently limited or inaccessible for emergency, utility or city maintenance vehicles/activities
- Busy arterial roads within the area limit safe active transportation routes

Identified Opportunities of the East Don Trail EA

- Provide a key connection route linking local and inter-regional trails and communities, thus providing a continuous multi-use trail network for residents and visitors
- Create trail and outdoor recreation opportunities, and improve access to valley lands for a variety of users including people with limited mobility, people with baby strollers, in-line skaters, hikers, walkers, joggers, dog walkers, and cyclists
- Increase access for people to discover and appreciate natural areas within the city.
- Guide human use of the East Don Corridor to lessen impact on more environmentally and culturally sensitive areas
- Improve access and wayfinding for emergency, utility, and park maintenance vehicles/activities
- Provide infrastructure for safe travel routes to everyday places and amenities
- Increase connections for multi-modal transportation, including connecting a multi-use trail system to the future Eglinton Crosstown LRT
- Build on existing City of Toronto, TRCA, and the Province of Ontario planning initiatives related to trail-building
- Increase connections

4.2 Problem/Opportunity Statement

The East Don Trail EA problem/opportunity statement and project objectives were developed and refined following review by City of Toronto staff, TRCA staff, and the public during the following meetings:

- Public Event #1 on February 13, 2013
- Technical Advisory Committee Meeting #1 on March 27, 2013
- Community Liaison Committee Meeting #1 on April 22, 2013

Opportunity Statement

A significant gap in the multi-use trail network exists within the East Don Corridor between the existing East Don Trail (East of Wynford Heights Crescent), Gattineau Corridor Trail (at approximately Bermondsey Road), and the Don Trail System (Figure 4-1). The East Don Trail will fill this existing gap in the trail network, thus creating a continuously connected trail network.



Figure 4-1: Existing gap in the multi-use trail network within the East Don Corridor

Source: City of Toronto 2014

4.3 Project Objectives

The problem/opportunity statement outlined the need and justification for the East Don Trail EA. Project objectives were developed to ensure the identified problems and opportunities will be addressed through the EA by guiding the creation of solutions. The successful preferred solution for the East Don Trail will address the following six main objectives:

Connections

- To provide a key connection route linking local and inter-regional trail systems

Public Safety

- To provide a safe way for a broad spectrum of users to access the valley system
- To provide safe off-road options (where possible) for cycling and recreational use
- To investigate options to accommodate emergency response, city and utility maintenance vehicles/activities

Natural Environment

- To assist in the management of informal trails by providing a single focused multi-use trail within the East Don Corridor
- To be respectful of the natural environment through the alignment, design, and construction of the trail by aiming to avoid, prevent, or minimize negative impacts
- To increase access for a range of users to discover and appreciate natural areas within the City

Recreation

- To create trail and outdoor recreational opportunities for a variety of users
- To provide trail and outdoor recreational opportunities for neighbouring communities

Transportation

- To function as a safe travel route to everyday places and amenities

Supports Other Initiatives

- To coordinate with other planning initiatives in the area allowing for future integration of the multi-use trail (e.g., Eglinton Crosstown LRT)

4.4 Defined Study Area

For the East Don Trail EA, two distinct study areas were defined: a Local Study Area and a Regional Study Area.

Local Study Area

The Local Study Area, also referred to as the Study Area, generally encompasses an area where the proposed trail will be routed to meet the project objectives and where direct effects of the project may occur. The Local Study Area is located within the East Don Valley Corridor from the south end of the existing East Don Trail to the Forks of the Don (Figure 4-2).

As the East Don Trail EA evolved, it became necessary to develop alternative trail alignments that were located outside of the originally defined Local Study Area due to private property constraints. The existing conditions of these areas were defined in the Regional Study Area, and the direct environmental impacts for these areas were addressed on a case-specific basis and were included in the detailed environmental inventory completed for Phase 3 of the Study.

Regional Study Area

As the proposed trail will stretch across a number of wards and provide a key connection to multiple communities and landscapes, it is important to consider the larger landscape area where indirect effects of the project may occur. The boundaries of the Regional Study Area are Lawrence Avenue in the north, O'Connor Drive in the south, Victoria Park Avenue in the east, and Don Mills and Laird Drive in the west (Figure 4-2).

The Regional Study Area contains multiple throughways: DVP, Don Mills Road and Victoria Park Avenue running north/south; and Lawrence Avenue and Eglinton Avenue running east/west.

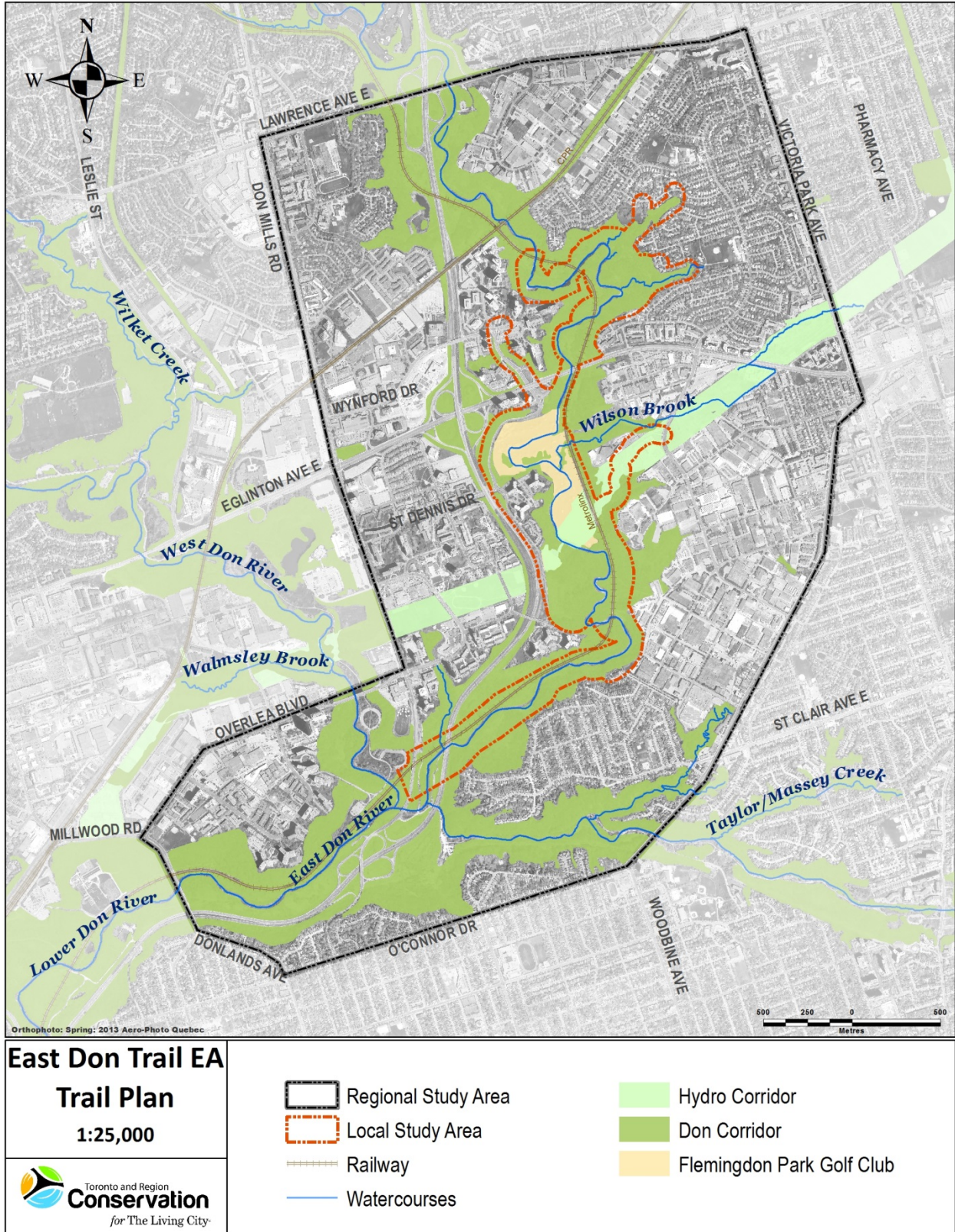


Figure 4-2: East Don Trail EA Regional and Local Study Areas

Source: TRCA 2014

4.5 Phase 1 Public Consultation

Consultation in Phase 1 included a number of activities and points of contact (see Table 4-1). Outside of communications related to the Community Liaison Committee and Key Stakeholders, the following communications were received by the Project Team between January 31, 2013, and June 18, 2013 (see **Appendix A**).

- 12 email messages
- 9 phone messages
- 41 comment forms submitted from Public Event #1 (25 at the event, 16 after the event during the comment period)

Table 4-1: Summary of consultation during Phase 1

Date	Consultation
January 31, 2013	Notice of Commencement
February 13, 2013	Public Event #1
March 19, 2013	CLC Invitation and Information Package mailed and emailed
March 27, 2013	CLC Terms of Reference mailed and emailed
April 22, 2013	CLC Meeting #1
May 30, 2013	CLC Site walk #1
June 4, 2013	CLC Meeting #2
January 31, 2013	Project webpage available
April 9, 2013	CLC webpage available
February 15, 2013	Links to Public Event #1 materials posted on project web page and link to sign up for e-updates (listserv)
June 14, 2013	Frequently Asked Questions posted on project web page

Note: CLC represents Community Liaison Committee

4.5.1 Public Events

Public Event #1

On February 13, 2013, the City of Toronto and TRCA hosted a Public Event at Blessed John 23rd Catholic School (175 Grenoble Dr., Toronto) from 6:00 p.m. to 8:30 p.m. The purpose of Public Event #1 was to introduce and gather feedback for the Study. Local residents and interested individuals were invited to learn about the project through panels and conversations with City of Toronto and TRCA staff. Participants were also encouraged to fill out comment forms and participate in an interactive mapping exercise to identify where they access the East Don Corridor, how they use the area and what they notice while visiting.

Overall, the event was well attended (77 participants signed in at the Public Event) and solicited a range of feedback about the project. While the majority of public responses supported a proposed multi-use trail, there was also some opposition. Support for the project was mainly attributed to the benefit of: increasing opportunities for recreation, making larger cycling network connections, providing safe routes for cyclists, and

providing better access for a wider demographic. Opposition to the project was mainly attributed to: the potential environmental impacts, concern over impacts on personal enjoyment of the trails with increased use, and peoples' experiences on other existing multi-use trails with a lack of trail etiquette.

The following sources of information were incorporated into the public feedback shared with the Project Team:

- Comment forms received during the comment period
- Comments provided on maps during the Public Event
- Conversation topics between the City of Toronto and TRCA staff with Public Event participants
- E-mail and phone correspondence received during the public comment period from February 13, 2013, to February 28, 2013

Table 4-2 below is a summary of the key ideas and opinions expressed by stakeholders through the various communications methods outlined above. Points were amalgamated, summarized, and organized by topic for referencing convenience and do not represent the priority of importance.

Table 4-2: Public Event #1 – Key Ideas Heard

Topic	Key Ideas
New Design Concerns/Ideas	<ul style="list-style-type: none"> • Support for the connection, but many people believe there should be a broader opportunity for connections and access to other areas. • Support for the provision of stairs and hand rails in areas with steep grades. • Some residents requested the installation of an asphalt (or similar) surface due to accessibility issues with granular surfaces and uneven surfaces for elderly users. • Some residents are opposed to concrete or pavement in the valley, they feel it will damage the natural environment and ruin the natural feel of the area.
Community & Recreation	<ul style="list-style-type: none"> • Concern with the potential conflict of users - specifically between cyclists and walkers. Each group does not want the other to disturb their enjoyment and use of the space. • Mountain bikers are concerned about the impact the trail may have on their sport. The concern is that a new trail would restrict mountain biking opportunities within the area through increased enforcement and demolition of existing trails. • Concern about the trail connection bringing more people to the area, causing overcrowding and decreasing the enjoyment for current users.

Topic	Key Ideas
Safety	<ul style="list-style-type: none"> • Concern about water levels and the trail becoming flooded. • Slope and grades are one of the most prevalent concerns raised by the public. People are concerned that the steep grades may compromise the safety of the trail when wet, icy or snowy and prevent some residents from enjoying the use of the trail, such as the elderly, who may have a difficulty climbing up and down the slopes. • The safety and stability of the hills and other slopes that are highly eroded. • Railroad tracks are a safety concern for some residents; currently the informal trails follow the tracks in some areas.
Maintenance	<ul style="list-style-type: none"> • The majority of the public would like to see a high-quality paved trail implemented with proper maintenance for year-round enjoyment. • Proper maintenance of trail amenities was noted (i.e., regular clearing of snow and ice; cleaning garbage cans and washrooms etc.).
Access/Connections	<ul style="list-style-type: none"> • Wheelchair accessibility and provision of stairs in areas with steep grades. • Access through Flemington Park Golf Club is important to many residents. • Provision of more and improved access points. Multiple access points have been requested from various spots across the trail network. • People are supportive of the connection, especially to the downtown. Excellent alternative to the major roads for people who commute by bicycle.
Environmental Impacts/Aesthetics	<ul style="list-style-type: none"> • Many residents are concerned about the impact of the trail on the natural environment including: negative effects on wildlife, such as deer, turtles etc.; and, further habitat fragmentation. • Participants would like to see the current high-quality forests and wetlands preserved; do not put the trail through these areas, or any other areas of habitat that may be negatively affected. • Some residents see the project as an opportunity to remediate areas of erosion, improve current habitat and remove invasive species. • Other residents are concerned that invasive species may become more of a problem with the implementation of the trail network. • Residents are concerned that the trail will increase the amount of litter in the area, pollute the river and degrade the quality of the current natural areas. • Maintain natural ambiance in the area; avoid having the trail exposed to the Don Valley Parkway.
Amenities	<ul style="list-style-type: none"> • Important to provide adequate signage and way finding.
Specific Suggestions/Concerns	<ul style="list-style-type: none"> • Some residents are frustrated that the trail network has not already been implemented. • Most of those in support of the project would like to see the trail be constructed very soon.
Out of Scope Interests	<ul style="list-style-type: none"> • Creation of new recreational areas. • Provide access to other areas including a connection to The Brickworks. • Provide an access point at Don Mills and Overlea Blvd. • Implementation of off-leash dog parks in the trail network. • Provide an adequate number of garbage cans, washrooms and drinking fountains along the trail.

A summary of key comments received by the project team during Phase 1, and their impact on the EA process, is presented in Section 4.6.

4.5.2 Community Liaison Committee

Meeting #1

CLC Meeting #1 was held on April 22, 2013, at the Flemingdon Health Centre, located at 10 Gateway Boulevard, Toronto and was attended by three City of Toronto staff, three TRCA staff, 11 CLC Members, and one observer. The meeting took place from 6:30 p.m. to 8:30 p.m. and included a presentation by the Project Team.

During and after the presentation, a facilitated question and answer session allowed for two-way communication between CLC members and the Project Team during which numerous questions, responses, and comments were provided.

The following topics were discussed during the meeting:

- Purpose and objectives of the CLC, including a review of the CLC Terms of Reference
- Introduction to the East Don Trail Project
- Background of the East Don Trail Study
- Environmental Assessment process
- Opportunity statement and objectives for the EA
- Proposed timeline for the Project
- Public consultation plan
- Next steps

It should be noted that meeting notes, including summarized comments and questions, were circulated to CLC members following this meeting to ensure that comments were accurately recorded and appropriately addressed. CLC members were also given the opportunity to submit written comments directly to the Project Team to help facilitate an open dialogue between Project Team members and the CLC members. Two written submissions were received and were responded to by the Project Team.

Documentation of CLC Meeting #1 is provided in **Appendix A**.

A summary of key comments received by the Project Team during Phase 1 and their impact on the EA process is presented in Section 4.6.

Site Walk #1

The Project Team held a site walk for members of the CLC on May 30, 2013. The group visited three sites within the Local Study Area to view and discuss some of the existing conditions that would be considered in the evaluation of the alternative solutions. Seven CLC members and six Project Team members attended the walk.

Documentation of CLC Site Walk #1 is provided in **Appendix A**.

Meeting #2

CLC Meeting #2 was held on June 4, 2013, in the 2nd floor meeting room of Flemingdon Park Library, located at 29 St. Dennis Drive, Toronto and was attended by two City of Toronto staff, three TRCA staff, two Aquafor Beech Ltd. staff, and 11 CLC Members. The meeting took place from 6:30 p.m. to 8:30 p.m. and included a presentation by the Project Team.

During and after the presentation, a facilitated question and answer session allowed for two-way communication between CLC members and the project team during which numerous questions, responses, and comments were provided.

The following topics were discussed during the meeting:

- Introduction to technical consultants
- Relevant planning initiatives in and near the Study Area
- Summary of CLC Site Walk
- Existing conditions (including physical, natural, social and cultural environment, and technical/engineering considerations)
- Updated opportunity statement and objectives
- Description of alternatives to the problem/opportunity
- Next Steps

A handout was distributed to the CLC members to provide feedback on the evaluation criteria used to evaluate the alternatives to the problem/opportunity and the evaluation of the alternatives to. Project Team received completed handouts from five CLC members. In addition, one written submission was received by a CLC member and was responded to by the Project Team.

Meeting notes were taken during the meeting and included summarized comments. Meeting Notes were circulated to CLC members following the meeting to ensure that comments were accurately recorded and appropriately addressed.

Documentation of CLC Meeting #2 is provided in **Appendix A**.

A summary of key comments received by the Project Team during Phase 1 and their impact on the EA process is presented in Section 4.6.

4.6 Public Input and Impact on Class EA Process

Table 4-3 below represents key public comments received during Phase 1 of the MCEA process, along with the response provided, and/or the impact on the East Don Trail EA Study. To view the correspondence log and comment tracking table for Phase 1 see **Appendix A**.

Table 4-3: Representative comments received during Phase 1 public consultation

Comment	Response/Impact
<p><u>Opportunity Statement (preliminary draft):</u></p> <ul style="list-style-type: none"> a) Address some of the naming issues for the trail connection. b) The current naming of the most northerly connection area will cause confusion with the existing trail name. 	<p><u>Opportunity Statement (preliminary draft):</u></p> <ul style="list-style-type: none"> a) The statement was changed to address the changes requested by the CLC. b) The statement was changed to address the changes requested by the CLC.
<p><u>Project Objectives:</u></p> <ul style="list-style-type: none"> a) The wording around “commuter route” should be reviewed and possibly be replaced with “multi-use”. b) A point should be added under Transportation for multi-modal transportation, including access to transit (including the planned Eglinton Crosstown Light Rail Transit). c) A point should be added regarding accessibility and accommodating a variety of trail users of different abilities. 	<p><u>Project Objectives:</u></p> <ul style="list-style-type: none"> a) The term “commuter route” was removed from the Project Objectives and replaced with the following statement: "To function as a safe travel route to everyday places and amenities". b) A new project objective, “Supports Other Initiatives”, was added. The following statement was added under this objective: "To coordinate with other planning initiatives in the area allowing for future integration of the multi-use trail. (e.g., Eglinton Crosstown Light Rail Transit)". c) Under the “Public Safety” objective, the statement was revised to read: “To provide a safe way for a broad spectrum of users to access the valley system”.
<p><u>CLC process:</u></p> <ul style="list-style-type: none"> a) Request for a Site Walk to assist in understanding the Study Area. b) Sharing of member e-mail addresses so they are able to connect with each other outside of meetings. c) Provide options for potential meeting dates going forward. d) Provide CLC materials in a central storage location for reference. 	<p><u>CLC process:</u></p> <ul style="list-style-type: none"> a) A Site Walk was undertaken with the CLC and Project Team on May 30, 2013, to visit key areas within the Study Area. b) Permission requests were sent out to CLC members and a list of e-mail addresses was provided. c) Options for future meeting dates were sent to CLC members using the Doodle website to assist in determining meeting dates. d) A project Dropbox folder was established and shared with CLC members. Materials provided by the team and shared by the CLC were provided here.
<p><u>Natural and Physical Environment:</u></p> <ul style="list-style-type: none"> a) Concerns about the impact on existing trees adjacent to the proposed trail due to the potential widening and asphaltting of existing informal trails. b) The impact to the local wildlife should be considered as the volume of users using the trail will increase. c) Potential negative effects on wildlife, such as deer and turtles etc. and concerns about habitat fragmentation. 	<p><u>Natural and Physical Environment:</u></p> <ul style="list-style-type: none"> a) Once the preferred alignment was selected, a detailed tree inventory was undertaken to determine the type, health, and age of trees that may be impacted. b) The impact to local wildlife was considered during evaluation of alternative solutions (Phase 2). c) The potential impacts to wildlife and habitat (including habitat fragmentation) were considered throughout the project. Specific evaluation criteria were created to evaluate the impact the alternative trail alignments and alternative design concepts would have on wildlife and habitat. This evaluation was used to aid in the selection of the preferred

Comment	Response/Impact
<p><u>Evaluation of “alternatives to”:</u></p> <p><u>Natural Environment</u></p> <p>a) Impacts to the natural environment should be minimized.</p> <p><u>Social and Cultural Environment</u></p> <p>a) Impacts to public health missing. b) Impacts to property values missing. c) Under “impacts to public safety,” a trail will make women more comfortable going into the valley.</p> <p><u>Technical/Engineering</u></p> <p>a) Should technical feasibility really be part of the evaluation? Shouldn't the question be how and where the trail can be implemented? To say that it is the most preferred just adds a category that builds an argument against the flora/fauna in the area. In theory, the trail will be technically feasible because it is just a matter of engineering.</p>	<p>alternative.</p> <p><u>Natural Environment</u></p> <p>a) The evaluation outlined the potential impacts to the natural environment. Efforts to minimize the natural environmental impacts were outlined in the project objectives.</p> <p><u>Social and Cultural Environment</u></p> <p>a) A new sub-criterion was added “Impact on public health”. b) Provide a Multi-Use Connection was re-evaluated as the preferred under “impact on surrounding neighborhoods and communities” with the addition of increase to adjacent property values. c) Under evaluation for provide a Multi-Use Connection for “impacts to public safety,” the following was added: “a more consistent usership can help enhance security and safety”.</p> <p><u>Technical Engineering</u></p> <p>a) The Technical feasibility must be looked at to ensure the trail can be implemented. How and where the trail can be implemented was the focus of the alternative trail alignments. Technical feasibility was still considered as some areas are less feasible than others.</p>
<p><u>Evaluation Criteria:</u></p> <p><u>Functional Value</u></p> <p>a) Consider adding “improves accessibility” to the East Don area.</p> <p><u>Natural and Physical Environment</u></p> <p>a) Consider adding a sub-criterion for "Impact on Regional Environment" and including: “By providing additional active transportation options and multi-modal transportation connections, the trail reduces dependence on automobile use”.</p> <p><u>Social and Cultural Environment</u></p> <p>a) Consider sub-criteria for "Impact on Transportation Network" as the trail would also improve multimodal transportation options.</p>	<p><u>Functional Value</u></p> <p>a) Improving accessibility to the East Don area was already captured under project objectives and the criteria “Provides access for a variety of users into the East Don corridor”.</p> <p><u>Natural and Physical Environment</u></p> <p>a) The sub-criteria “Impact on regional environment” was not included as the evaluation focused on direct impacts to the Study Area and area users. This point was explored at the earlier stages of the project, for further information refer to Section 1.6.</p> <p><u>Social and Cultural Environment</u></p> <p>a) The suggestion for the trail improving multimodal transportation options was added to the evaluation for Multi-Use Trail Connection under Function Value criteria: “Provides connection with existing and planned adjacent trail and uses”.</p>

Comment	Response/Impact
<u>Additional Sub-Evaluation Criteria Requested</u> a) Effects of potential future impacts and identification of those impacts (such as increased train frequencies, double tracking, roads, and parking). b) Add impacts related to drainage, flooding and erosion under the “Technical” Criterion.	<u>Additional Sub-evaluation Criteria Requested</u> a) Effects of potential future impacts were addressed for alternative trail alignments and design concepts and included flooding and rail line frequency. b) Drainage, flooding, and erosion were considered in the evaluation of alternative trail alignments and alternative design concepts.
<u>Trail Location/Design:</u> a) Minimize exposure to bridges and potential flooding by choosing a high route wherever possible. Maintenance issues are important.	<u>Trail Location/Design:</u> a) Potential future flooding, bridge locations, maintenance considerations and general location of trail routes were considered in alternative trail alignments and alternative design concepts.
<u>Safety:</u> a) The impact of steep grades on the safety of the trail and users who may have a difficulty climbing up and down the slopes. b) High quality paved trail implemented with proper maintenance for year-round enjoyment.	<u>Safety:</u> a) One of the objectives of the East Don Trail is to provide a safe way for a broad spectrum of users to access the trail. As part of this, the level of grades has been considered during each phase of the project, aiming to maintain grades of 5% or less (where possible). b) The trail will be paved, in addition, maintenance requirements and costs were considered in the alternative trail alignments and alternative design concepts. Year-round maintenance is not being considered at this time.

4.7 Indigenous Communities

A notification letter was sent on February 20, 2013, to the First Nations and Métis communities identified in Section 3.3 to inform them of the initiation of the East Don Trail EA. Any interested communities were invited to contact Margie Kenedy, Archaeologist at TRCA. Enclosed with the notification letter was: a Study Areas map, the project brief, a public information sheet, and the EA milestone schedule.

Few responses were received, so TRCA conducted follow-up phone calls or e-mails on March 13, 2013, to ensure each community received the notification package, and to answer any questions that could help evaluate interest in the project. A number of communities were reached who indicated their communities had no current concerns with the project and requested regular updates. Responses are described in Table 4-4.

One meeting was conducted during this initial phase of the project with the Conseil de la Nation Huronne-Wendat, during which an update to the community was provided by the Project Manager.

Additional notifications to the identified Indigenous communities are scheduled throughout the remainder of the East Don Trail EA.

Table 4-4: Summary of correspondence with Indigenous Communities in Phase 1

Indigenous Community	Engagement
Beausoleil First Nation	Notification #1: <i>February 20, 2013:</i> Mailed and e-mailed notification package. <i>March 13, 2013:</i> Follow-up phone call; Spoke with a Resource Management Officer, who indicated the community received the notification package, had no current concerns and requested regular updates about the project.
Chippewas of Georgina Island First Nation	Notification #1: <i>February 20, 2013:</i> Mailed and e-mailed notification package. <i>March 13, 2013:</i> Follow-up phone call; Left voice mail, no response.
Chippewas of Rama-Mnjikaning First Nation	Notification #1: <i>February 20, 2013:</i> Mailed and e-mailed notification package. <i>February 25, 2013:</i> E-mail response from Nicole Gray, Executive Assistant to Chief Sharon Stinson Henry; Requested that TRCA and City of Toronto correspond with the Williams Treaty Coordinator and copy them on correspondence.
Curve Lake First Nation	Notification #1: <i>February 20, 2013:</i> Mailed and e-mailed notification package <i>March 13, 2013:</i> Follow-up phone call; Spoke with an Engagement and Consultation Specialist who indicated the community received the notification package, had no current concerns and requested regular updates about the project.
Conseil de la Nation Huronne-Wendat	Notification #1: <i>February 20, 2013:</i> Mailed and e-mailed notification package. <i>March 13, 2013:</i> Follow-up e-mail; Ms. Vincent, Project Manager confirmed receipt and indicated their consultation team would meet to review the notification package, after which they would contact TRCA. <i>March 22, 2013:</i> Huron-Wendat requested meeting with TRCA/City staff to discuss the project. <i>May 6, 2013:</i> Meeting with Huron-Wendat, City of Toronto, and TRCA staff. Agenda was discussed prior to the meeting; Meeting notes and follow up documents were sent to the Huron-Wendat for confirmation of accuracy. <i>June 3, 2013:</i> Additional documents were e-mailed to the Huron-Wendat, related to May 6, 2013, meeting discussions.
Coordinator Williams Treaty First Nations	Notification #1: <i>February 20, 2013:</i> Mailed and e-mailed notification package. <i>March 13, 2013:</i> Follow-up phone call; Left voice mail, no response.
Haudenosaunee Confederacy Chiefs Council via Haudenosaunee Development Institute	Notification #1: <i>February 20, 2013:</i> Mailed and e-mailed notification package. <i>March 13, 2013:</i> Follow-up phone call; Left voice mail, no response.
Hiawatha First Nation	Notification #1: <i>February 20, 2013:</i> Mailed and e-mailed notification package. <i>March 13, 2013:</i> Follow-up phone call; Spoke with a Lands Resource Worker/Consultation who indicated the community received the notification package, had no current concerns and requested regular updates about the project.
Kawartha Nishnawbe First Nation	Notification #1: <i>February 20, 2013:</i> Mailed and e-mailed notification package. <i>March 13, 2013:</i> Follow-up phone call; Left voice mail, no response.

Indigenous Community	Engagement
Metis Nation of Ontario	Notification #1: <i>February 20, 2013:</i> Mailed and e-mailed notification package. <i>March 13, 2013:</i> Follow-up phone call with Mark Boler; Left voice mail, no response. <i>June 5, 2013:</i> Follow-up phone call with James Wagar, re-sent notification package.
Mississaugas of Alderville First Nation	Notification #1: <i>February 20, 2013:</i> Mailed and e-mailed notification package. <i>March 13, 2013:</i> Follow-up phone call; Spoke with the Lands and Resources Communications Office who indicated the community received the notification package, had no current concerns, requested regular updates about the project, and requested an Indigenous monitor be present during the Stage 2 Archaeological Assessment.
Mississaugas of the New Credit First Nation	Notification #1: <i>February 20, 2013:</i> Mailed and e-mailed notification package. <i>March 13, 2013:</i> Follow-up phone call; Left voice mail, no response.
Mississaugas of Scugog Island First Nation	Notification #1: <i>February 20, 2013:</i> Mailed and e-mailed notification package. <i>March 13, 2013:</i> Follow-up phone call; Spoke with the Community Consultation Specialist who indicated the community received the notification package, intended to review it and then contact TRCA staff. <i>April 28, 2013:</i> Community Consultation Specialist e-mailed TRCA staff, had no current concerns, requested regular updates about the project, and suggested this project include a commemorative plaque related to the history of First Nations in the region as part of the trail piece. <i>April 9, 2013:</i> TRCA responded to April 28, 2013 e-mail.
Moose Deer Point First Nation	Notification #1: <i>February 20, 2013:</i> Mailed and e-mailed notification package. <i>March 13, 2013:</i> Follow-up phone call; Left voice mail, no response.
Six Nations of the Grand River	Notification #1: <i>February 20, 2013:</i> Mailed and e-mailed notification package. <i>March 13, 2013:</i> Follow-up phone call; Spoke with Lands and Resources Director who indicated he had not received the package; New notification package was emailed; Lands and Resources Director indicated he would contact TRCA staff within two weeks.

4.8 Review Agencies

All identified Review Agencies that could be potentially affected by the project or held an interest in the project were emailed and mailed a Notice of Commencement, notice of Public Event #1, and a project background with associated Study Areas on February 1, 2013. Comments were received from five agencies, four of which were in regards to procedures and acts that the Study may need to follow; Table 4-5 provides a list of agencies and summary of comments.

Table 4-5: Summary of Correspondence with Review Agencies in Phase 1

Stakeholder	Correspondence Received	Impact on Project
Canadian Environmental Assessment Agency	Information concerning <i>Canadian Environmental Assessment Act</i> (CEAA) to determine if it applies to the Study.	CEAA does not apply to the Study at this time (refer to Section 2.2).
Transport Canada	Information concerning <i>Navigation Protection Act</i> and <i>Railway Safety Act</i> to determine if either applies to the Study.	East Don Trail may need to comply with the <i>Navigation Protection Act</i> , which will be addressed in the project Phase 5 (detailed design stage).
Ministry of Natural Resources and Forestry (MNRF)	Information concerning Endangered Species Act 2007, in regards to the potential for species at risk to occur within or adjacent to the Study Area.	A detailed tree inventory to identify Butternut was completed for the preferred trail alignment in Phase 2. No Butternut trees were found. Engagement continued with MNRF throughout Study concerning other protected species (Section 7.6)
Infrastructure Ontario (IO)	Information concerning IO managed lands and potential impacts as a result of project design and construction. If IO managed lands are directly affected and an EA is taking place, request a draft copy of the EA for review.	East Don Trail potentially to affect IO lands, Hydro One. A draft copy of the EA was sent to IO. Continued engagement with Hydro One as a Key Stakeholder throughout Study
Canadian National Railways	The rail line located in the Local Study Area is now owned by Metrolinx.	Continued engagement with Metrolinx as a Key Stakeholder throughout Study

4.9 Key Stakeholders

During Phase 1 all Key Stakeholders were emailed and mailed a Notice of Commencement, notice of Public Event #1, and a project background with associated Study Areas on January 30, 2013. In addition, meetings were held with representatives from each group. Meeting topics included; project overview, EA process and timeline, the location of infrastructure, and discussions of potential concerns. Table 4-6 summarizes the discussions held during Phase 1, focusing on the interaction of the Study with infrastructure. Key correspondences are available in **Appendix A**.

Table 4-6: Summary of consultation with Key Stakeholders in Phase 1

Stakeholder	Summary Discussions
Metrolinx	<p><i>Meeting March 20, 2013</i></p> <ul style="list-style-type: none"> • Rail line runs through Study Area, discussed frequency of trains • The East Don Trail will need to cross the rail line at multiple locations, crossing types will vary • Process to access land discussed
Enbridge	<p><i>Meeting March 8, 2013</i></p> <ul style="list-style-type: none"> • Gas line located within Study Area • Procedure and restrictions for working around the gas line and routing of trail over gas line

Stakeholder	Summary Discussions
Hydro One	<p><i>Meeting April 23, 2013</i></p> <ul style="list-style-type: none"> <li>• Hydro One land and transmission facilities located within Study Area <li>• Procedure and agreements necessary for routing trail within Hydro Corridor
Flemingdon Park Golf Club	<p><i>Meeting March 21, 2013</i></p> <ul style="list-style-type: none"> <li>• Privately owned property located within Study Area <p><i>Meeting April 15, 2013</i></p> <ul style="list-style-type: none"> <li>• Site visit held to discuss East Don River survey works that would be held on private property

4.10 Technical Advisory Committee

Meeting #1

TAC Meeting #1 was held on March 27, 2013, at the North York Civic Centre, located at 5100 Yonge Street, Toronto and was attended by nine TRCA staff and 11 City of Toronto Staff. The meeting took place from 2:00 p.m. to 4:00 p.m. and included a presentation by the Project Team and a breakout session. Questions and discussion were held throughout the duration of the presentation.

The following topics were discussed during the presentation:

- Role of the TAC
- East Don Trail Project background
- Opportunity statement and Project objectives
- EA Process and schedule
- Public consultation plan
- Summary of Public Event #1

The break out session was a group exercise undertaken to identify all issues and opportunities in regards to the Study Area. Utilizing area mapping the group identified existing conditions focusing on the following environmental aspects: physical, natural, social and economic.

Meeting #2

TAC Meeting #2 was held on May 14, 2013, at Toronto City Hall, located at 100 Queens Street West, Toronto and was attended by seven TRCA staff, 14 City of Toronto Staff and two staff from Aquafor Beech Ltd. The meeting took place from 2:00 p.m. to 4:00 p.m. and included a presentation by the Project Team and a breakout session. Questions and discussion were held throughout the duration of the presentation.

The following topics were discussed during the presentation:

- Relevant planning initiatives
- Study Areas existing conditions

- Identified problems and opportunities
- “Alternatives to” (moving into Phase 2)
- Evaluation of “alternatives to” (moving into Phase 2)

The breakout session focused on providing input into the “alternatives to” and the evaluation of the “alternatives to” (see Section 6.1).

4.11 Local Politicians

The four affected ward councillors (as identified in Section 3.7) were engaged throughout Phase 1 mainly through email and meetings. All affected councillors were issued a Notice of Commencement, notice of Public Event #1, and project background, as well as regular updates on the progress of Phase 1. Councillors were also engaged during the planning of the Public Event #1 for input on dates, location, and interested stakeholders. A meeting was held with each councillor prior to the Public Event to discuss project overview, EA process and timeline, public consultation approach, and identified stakeholder groups. See **Appendix A** for key correspondence with local Politicians.

5.0 EXISTING CONDITIONS

The existing conditions of the East Don Trail EA Local and Regional Study Areas provide the necessary information to identify those components of the existing environment that may be impacted (either positively or negatively) by the various proposed alternatives.

Local Study Area refers to the smaller geographic area where direct effects of the project may occur. Regional Study Area refers to the larger geographical area where indirect effects of the project may occur, and where the project may contribute to the cumulative effects of multiple projects (Figure 4-2). By defining what is currently located in the area (the baseline conditions), we are able to evaluate and compare how the various proposed alternatives will influence those environmental parameters individually and collectively.

The following environmental information has been collected to establish the baseline conditions that will support the decision-making in determining the preferred trail alternative and preferred trail design concept. The environmental inventory, collected for the Regional and Local Study Areas, contains the examination and documentation of existing site conditions, including:

- Transportation and existing trails
- Physical environment
- Biological environment
- Cultural environment
- Socio-economic environment

5.1 Transportation and Existing Trails

5.1.1 Existing Trails

The Regional Study Area contains a network of multi-use trails and informal trails that support a variety of users. Multi-use trails are designed to accommodate a broad spectrum of users such as walkers, runners, cyclists, inline skaters, wheelchair users, people with baby strollers, and people walking dogs, while informal natural-surface trails and pathways are typically utilized by a smaller number of user types which may include hikers, dog-walkers, and mountain bikers.

Multi-use trails are present in the northern and southern sections of the Regional Study Area and are part of the Don Trail System which extends from Steeles Avenue to Lakeshore Boulevard, connecting the City's downtown and the northeast communities as well as providing continuity to the Waterfront Trail (Figure 5-1).

The natural environment trails are located primarily within the green space of the local valley lands. As informal trails, these paths do not constitute a City-approved use of the

area and are thus not maintained. The City developed a Natural Environment Trails Strategy (2013) to manage natural environment trails. The Strategy identifies the opportunities, constraints, planning, policies and management strategies required to ensure the protection of the City of Toronto's natural areas while offering safe and enjoyable recreational opportunities for all natural environment trail users (See Section 1.6.4 for more information about the Natural Environment Trails Strategy).

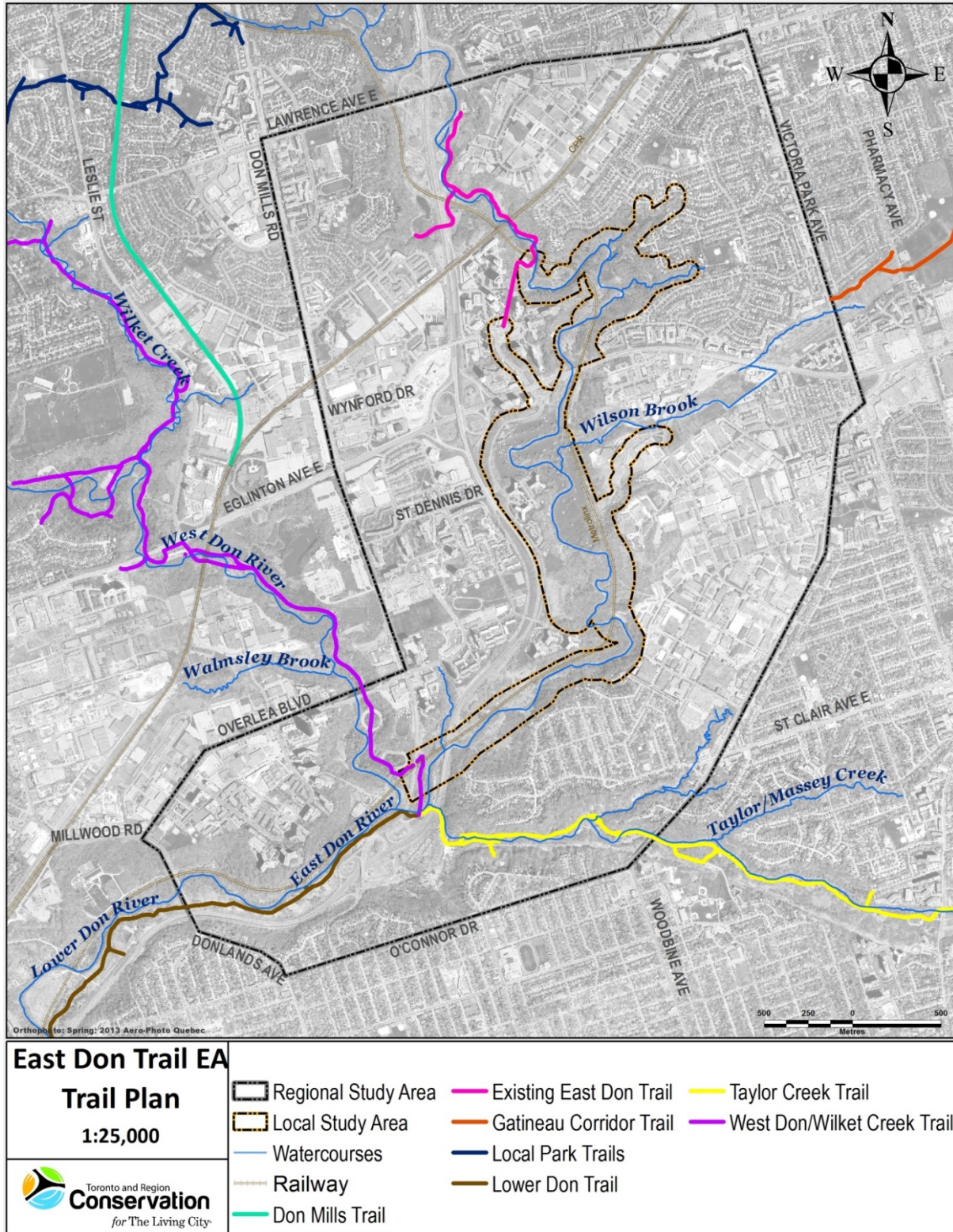


Figure 5-1: Existing multi-use trails in the Regional Study Area

Source: City of Toronto 2013

5.1.2 Cycling Routes

The Regional Study Area contains no current on-street dedicated cycling infrastructure. However, sections of the Regional Study Area contain multi-use trails which provide routes for cyclists. Figure 5-2 shows dedicated cycling routes (e.g., on-street bike lanes) as well as multi-use trails.

Existing Routes

There are existing multi-use trails within the Regional Study Area, they include: the Existing East Don Trail in the north end and the Don Trail System in the south, which is made up of the Lower Don Trail, West Don Trail, and Taylor Creek Trail. In addition, the Gatineau Corridor Trail is located just east of the Regional Study Area (Figure 5-2). For further information on each of the trails refer to Section 1.4.

The Don Trail System extends from Steeles Avenue to Lakeshore Boulevard, connecting the northeast and downtown sections of the City. At its southern end, the Lower Don Trail intersects with the Waterfront Trail which runs mainly along the shoreline of Lake Ontario and connects eastern and western sections of the City.

Proposed Routes

Connecting the Don Trail System to the Gatineau Corridor Trail was identified as one of the priorities for the multi-year City of Toronto Bikeway Trails Implementation Plan. Together, the proposed East Don Trail and other proposed undertakings would add 77 km of bikeway trails to the existing 286 km network, expanding it and improving connectivity (City of Toronto, 2012c).

Additional cycling infrastructure improvements have been proposed within the Regional Study Area. Following the identification of St. Dennis Drive and Deauville Lane intersection as one of the 10 most dangerous intersections in the City, The City of Toronto Public Works and Infrastructure Committee adopted PW31.4 to convert traffic lanes to on-street parking and bicycle lanes on both sides of St. Dennis Drive between Don Mills Road and Linkwood Lane. In addition to improving cyclist safety, improving wayfinding, and improving street-trail connections, proposed bike lanes would connect people to the Flemington Park Library, Dennis R Timbrell Recreation Centre, the Ontario Science Centre, and to future bicycle lanes on Eglinton Avenue (City of Toronto, 2013d).

Bike lanes along Eglinton Avenue, from Jane Street to Kennedy Road, have been approved as per the 2010 Eglinton Crosstown LRT Environmental Assessment. Specific to the Study Area, on-road lanes will be included along Eglinton Avenue East, east of Brentcliffe Road, where the LRT is at the surface (TTC/City of Toronto, 2010).

For further information on proposed routes within the Regional Study Area refer to Section 1.3.3.

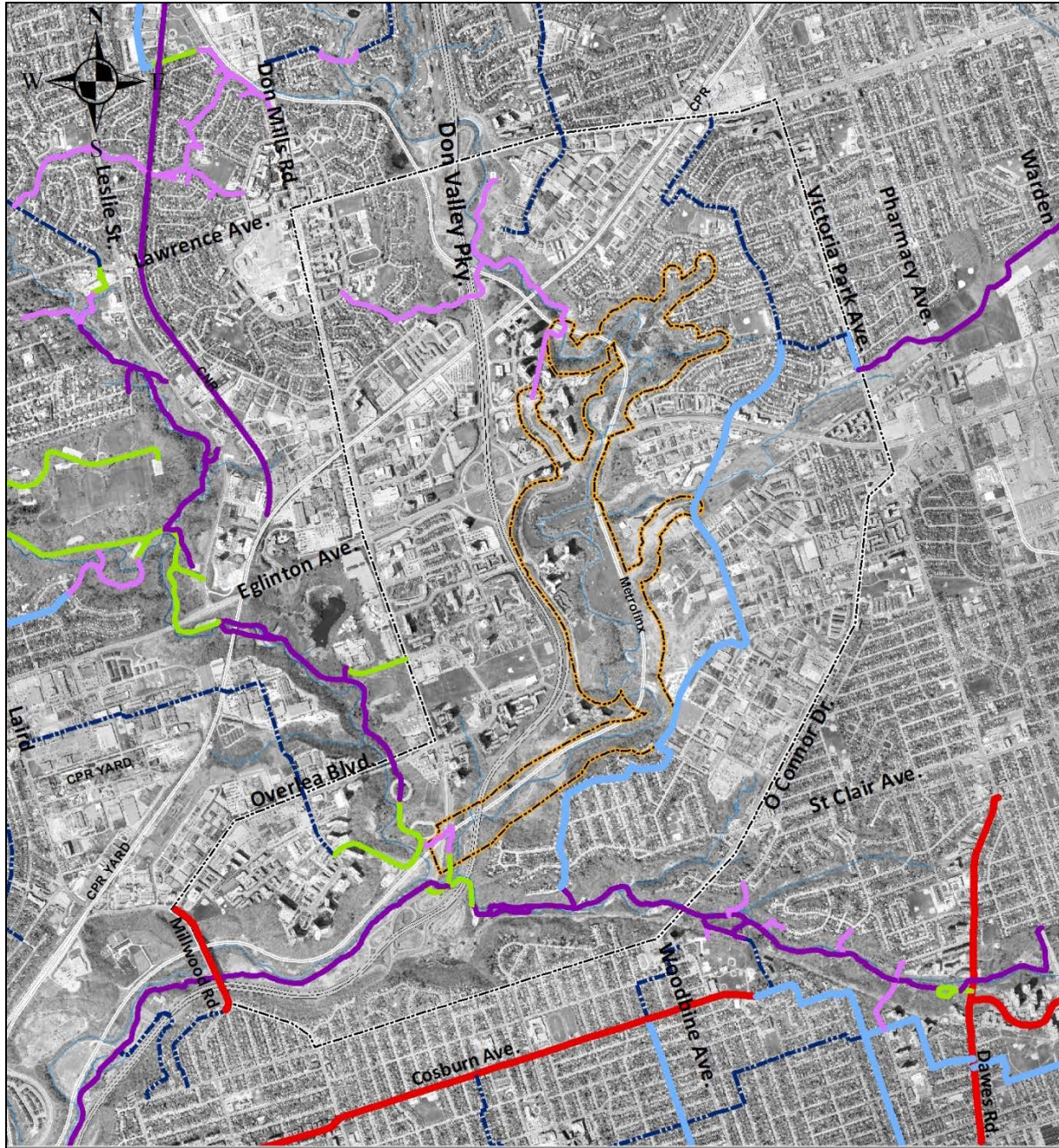


Figure 5-2: Cycling routes in the Regional Study Area and adjacent areas

Source: City of Toronto 2016

5.1.3 Pedestrian Traffic Routes

Pedestrian traffic within the Regional Study Area is associated with sidewalks along the local road network, at shopping centres, and at recreation and community centres as well as existing multi-use and informal trails.

Efforts to improve the walking environment within the City and the Regional Study Area are ongoing. As a result of the Toronto Walking Strategy implementation, St. Dennis Drive and Deauville Lane intersection within the Regional Study Area was identified as one of the ten most dangerous intersections for pedestrians in Toronto. Improvements to St. Dennis Drive include: re-purposing one lane of traffic in each direction to facilitate the addition of on-street parking and bike lanes. These changes create a safer environment for pedestrians, cyclists, and motorists. The alterations are expected to make it easier and safer for pedestrians to cross St. Dennis Drive due to fewer traffic lanes and lower speeds (City of Toronto, 2013d).

5.1.4 Public Transit

Public transit within the Regional Study Area is provided by TTC. Though the Study Area is not serviced by subway, there are a number of bus service routes along the major roads.

One of the existing rail lines within the Regional Study Area also serves as a public transit route. The Metrolinx/GO Richmond Hill, or Bala Subdivision, line (Figure 5-26) runs north-south in proximity to the East Don River and the DVP. Currently a single track through the Study Area, this line is to provide an expanded two-way, all-day service as part of the Next Wave projects under the Big Move Regional Transportation Plan adopted in 2008 (Metrolinx, ND).

Additionally, Eglinton Avenue will serve as a corridor for the Eglinton Crosstown LRT line scheduled to be complete by 2021 as part of the Toronto-wide light rail transit expansion project (Metrolinx, 2013). Running from Mount Dennis station to Kennedy station, Eglinton Crosstown LRT will link 54 local bus routes, three (3) TTC interchange subway stations and GO Transit (at the new Kitchener line “Mount Dennis” GO station located near Weston Road and Eglinton Avenue West). Five (5) LRT stations – Don Mills, Ferrand, Wynford, Bermondsey and Victoria Park – will be located within the Regional Study Area.

5.1.5 Vehicular and Rail Transportation

Located in a highly urbanized environment, the Regional Study Area includes an extensive road network, from local roads with less than 2,500 vehicles per day to arterial roads (minor with 8,000 to 20,000 vehicles per day and speed limits of 40-60 km/hr, and major with over 20,000 vehicles per day and speed limits of 50-60 km/hr) and an expressway (speed limits of 80-100 km/hr). The major arterial roads include Don

Mills Road and Victoria Park Avenue, both of which run north-south, as well as Lawrence Avenue and Eglinton Avenue which run east-west and intersect with the DVP. The DVP is a major transportation route connecting to other expressways and linking Toronto's downtown with the northern portions of the City and beyond.

The Regional Study Area contains two rail lines providing transport of passengers and goods: Metrolinx/GO and Canadian Pacific Railway (CP) rail lines (Figure 5-26). Metrolinx/GO rail line, discussed in Section 5.1.4, is currently dedicated to providing mostly public transit. CP rail line running in the east-west direction within the northern portion of the Regional Study Area is used mainly for goods transportation.

5.2 Biological Environment

5.2.1 Environmentally Significant Areas

The natural area within the Regional Study Area forms part of the City of Toronto's natural heritage system, which, according to the Provincial Policy Statement (MAH, 2005), shall be protected for the long-term. Conforming to the Provincial Policy Statement, City of Toronto Official Plan (2015) mandates careful assessment of the new development impacts in areas near the natural heritage system. Development or site alteration is not permitted within the natural heritage system, with the exception of trails, conservation, flood, and erosion control projects where appropriate. Further, activities will be limited to those that are compatible with the preservation of the natural features and ecological functions attributed to the areas (Amendment No. 262, 2015).

Environmentally Significant Areas (ESAs) are natural areas within the City of Toronto's natural heritage system which are particularly significant or sensitive and require protection to preserve their qualities and significance (North-South Environmental Inc., 2012). ESAs are protected under the City of Toronto Official Plan policy 3.4.13 (City of Toronto, 2015) which states that activities taking place on lands under ESA designation will be limited to those compatible with the preservation of the natural features and ecological functions attributed to the areas.

The following criteria are used by the City of Toronto to designate a natural area as an ESA (City of Toronto, 2015):

- a) habitats for vulnerable, rare or threatened plant and/or animal species and communities that are vulnerable, threatened or endangered within the City or the GTA; or
- b) rare, high quality or unusual landforms created by geomorphological processes within the City or the GTA; or
- c) habitats or communities of flora and fauna that are of a large size or have an unusually high diversity of otherwise commonly encountered biological communities and associated plants and animals; or

- d) areas where an ecological function contributes appreciably to the healthy maintenance of a natural ecosystem beyond its boundaries, such as serving as a wildlife migratory stopover or concentration point or serving as a water storage or recharge area.

Wigmore Park Ravine ESA (i.e., a natural area that met one or more ESA criteria listed above) overlaps with the Local Study Area (Figure 5-3)(North-South Environmental Inc., 2012). A natural area 46.0 ha in size, Wigmore Park Ravine is characterized by deciduous and mixed slope forests surrounding the Don River Valley and several small tributaries. Within this area, 19 significant flora species, six significant vegetation communities, and one significant fauna species have been identified. The local river section contains significant landforms considered great examples of meandering in the Don River watershed. Finally, the Area contains 76 L1 to L4 species (see Section 5.2.2 for L Rank descriptions) and 61 vegetation communities and can, therefore, be considered to possess a fairly high level of diversity (North-South Environmental Inc., 2012).

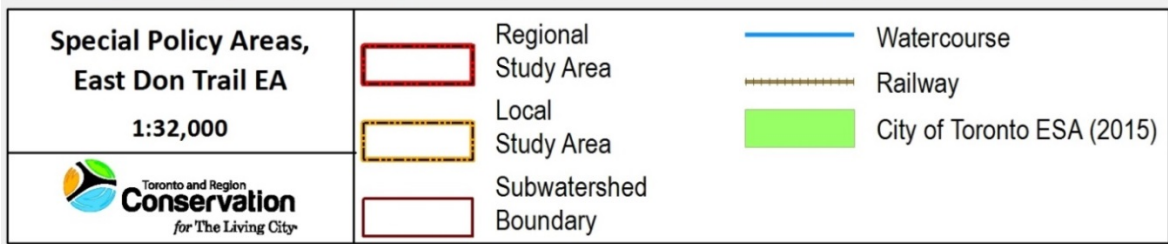
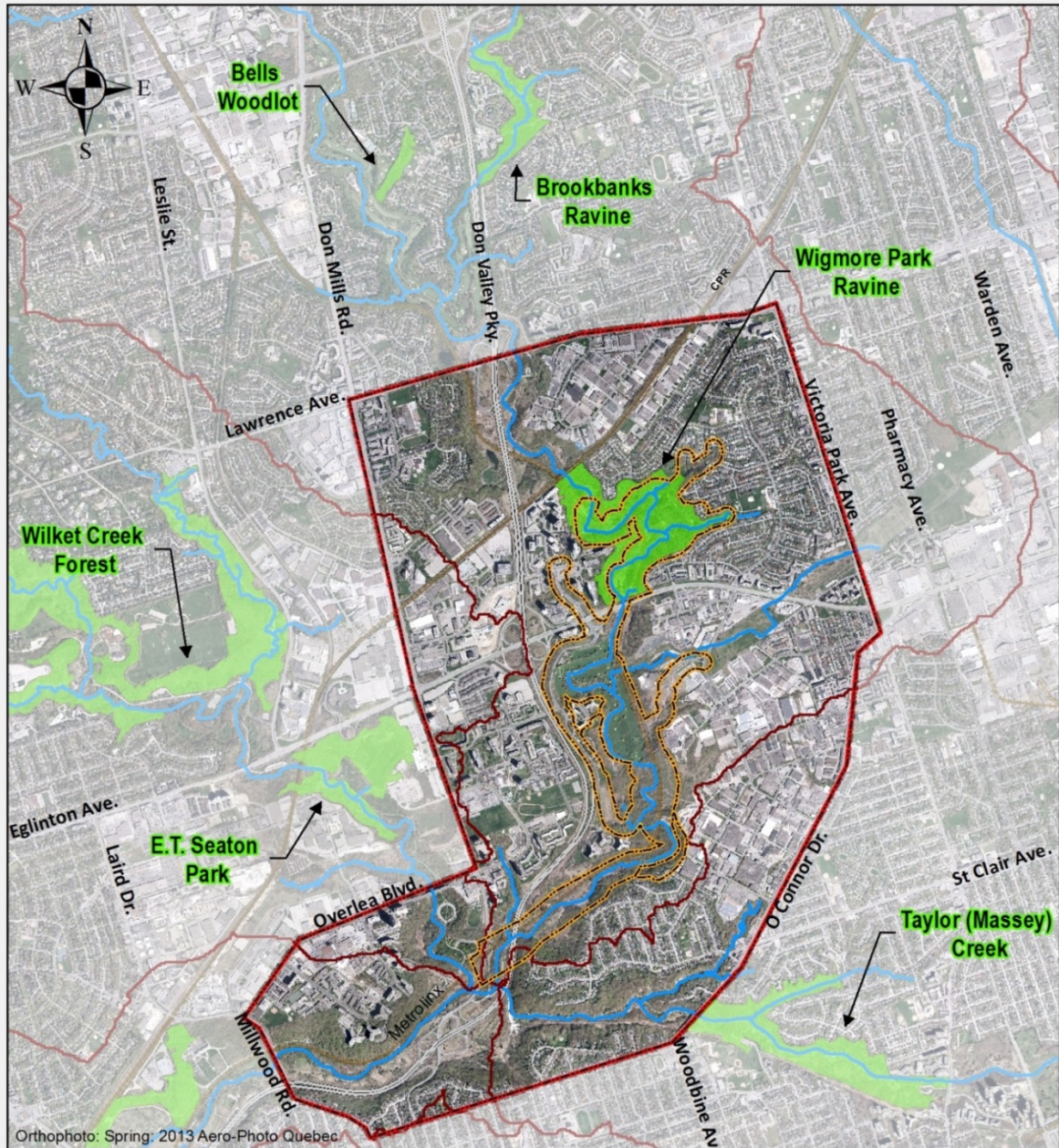


Figure 5-3: Areas of Natural and Scientific Interest and Potential Environmentally Significant Areas within and in proximity to the Regional Study Area

Source: TRCA 2016

5.2.2 Vegetation

The Regional Study Area vegetation communities identified as natural cover (Figure 5-4) were delineated using the Ecological Land Classification (ELC) System of the Ontario Ministry of Natural Resources and Forestry (MNR) (Lee et al., 1998). As well, vegetation communities were ranked by the L Ranking System in order to facilitate an understanding of human activity effects on the vegetation community, interpret the state of the natural system, and facilitate the development of natural heritage management strategies (TRCA, 2007).

The L Ranking system consists of five ranks (L1 to L5), where each rank reflects a level of conservation concern and status for a given vegetation community, flora or fauna species in TRCA's jurisdiction. For vegetation communities, L Ranks are assigned on the basis of the following criteria: local occurrence (local distribution and relative quantity) and geophysical requirements (habitat dependence). L Ranks and levels of conservation concern they represent are summarized in Table 5-1. L rankings of some species were revised in 2016 and are reflected in this report.

Table 5-1: Vegetation Communities L ranks and corresponding levels of conservation concern

Source: TRCA 2008

L Rank	Level of Conservation Concern in TRCA Region
L1	Of regional concern in TRCA's jurisdiction due to rarity, stringent habitat needs, and/or threat to habitat.
L2	Of regional concern; typically occurs in high-quality natural areas and under highly specific site conditions; probably at risk in the Toronto area.
L3	Of regional concern; restricted in occurrence and/or requires specific site conditions; generally occurs on natural rather than cultural areas.
L4	Generally secure in rural matrix; of conservation concern in the urban matrix.
L5	Generally secure; may be of conservation concern in a few specific situations. Contributes to natural cover.
L+	Community defined by alien species (e.g., Scots pine plantation, buckthorn thicket). Contributes to natural cover at least to some extent.

The Regional Study Area contains a complex mosaic of vegetation communities, as shown in Figure 5-5. Broad vegetation communities within the Regional Study Area consist of forests, including plantations, successional habitats (thickets, savannahs, and woodlands), meadows, wetlands, and bluff communities.

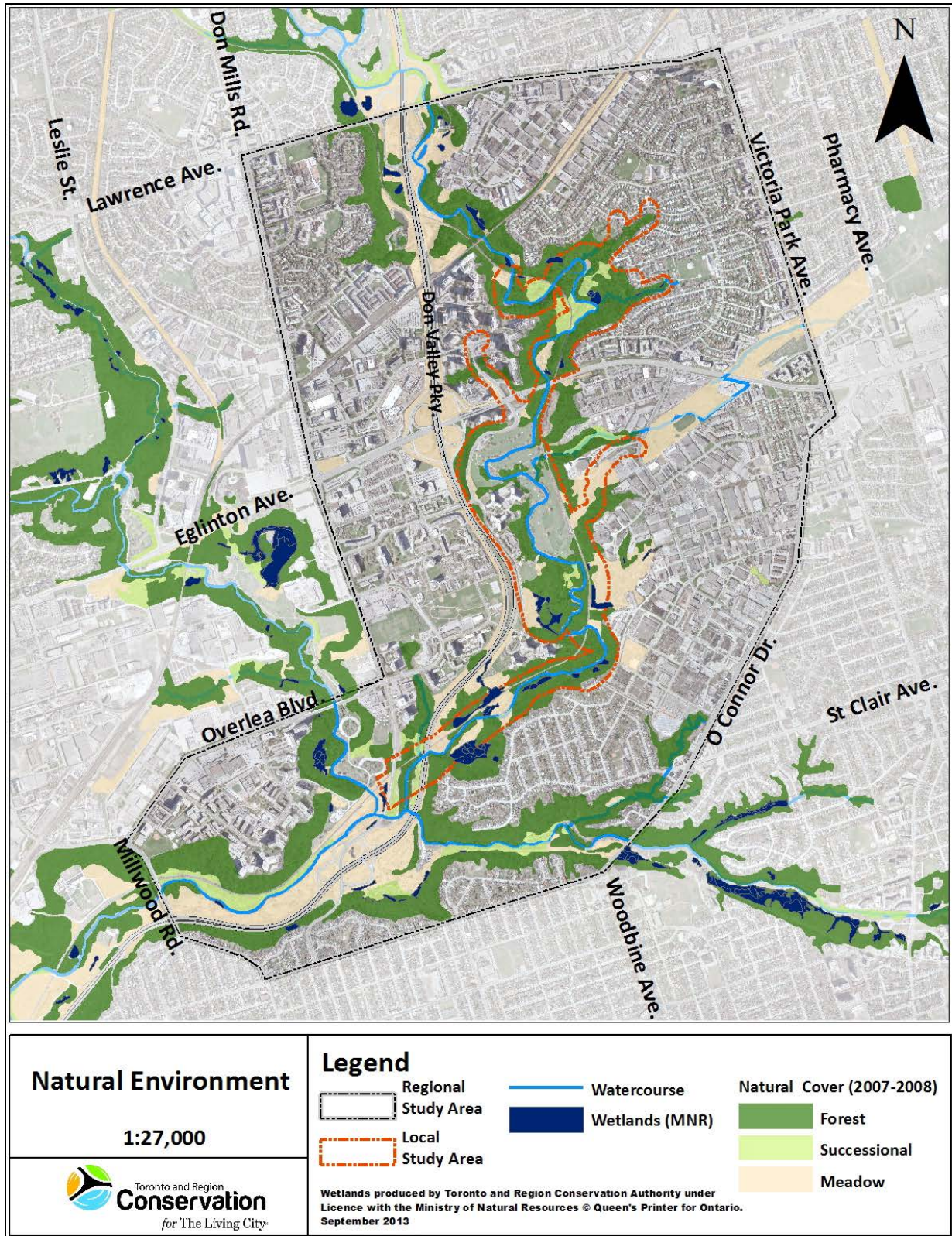


Figure 5-4: Natural cover within the Regional Study Area

Source: TRCA 2013

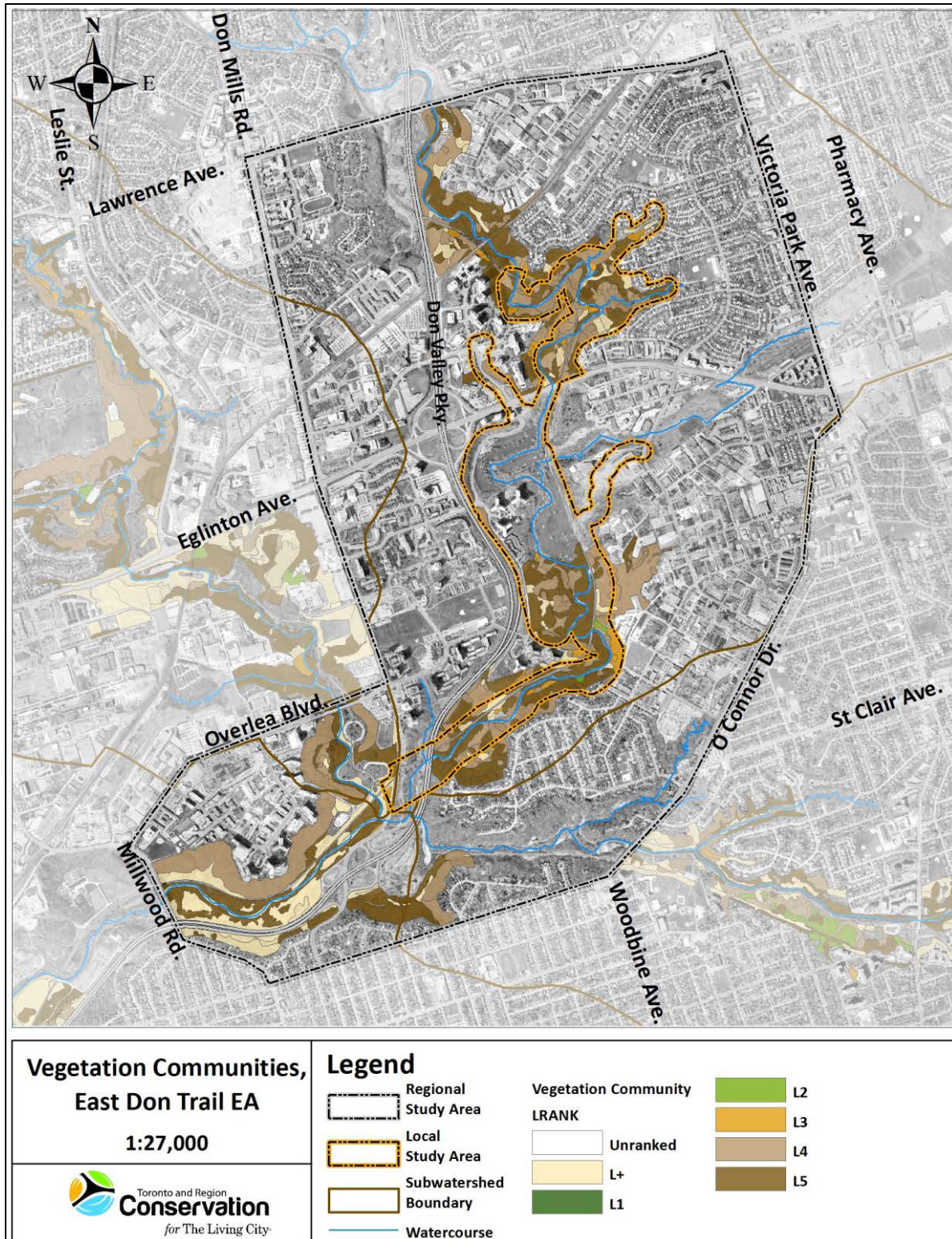


Figure 5-5: Distinct vegetation communities within the surveyed portions of the Regional Study Area

Source: TRCA 2013

The same broad vegetation communities are also found in the Local Study Area. With respect to distinct vegetation communities, a total of 75 have been observed in the surveyed portions of the Local Study Area. The majority of the communities observed are generally L4 and L5 communities (Table 5-2).

Table 5-2: Ecological Land Classification and L ranking of the vegetation communities observed within the surveyed portions of the Local Study Area

Source: TRCA 2013

Ecological Land Classification Name	L Rank	Area Occupied (ha)
Serviceberry - Buffaloberry Shrub Bluff	L2	0.25
Mountain Maple Mineral Thicket Swamp	L2	0.11
White Cedar Treed Bluff	L2	0.01
Deciduous Treed Bluff	L3	1.7
Fresh-Moist Hemlock - Hardwood Mixed Forest	L3	0.35
White Elm Mineral Deciduous Swamp	L3	0.32
Dry-Fresh White Cedar - Paper Birch Mixed Forest	L3	0.26
Sumac - Willow - Cherry Shrub Bluff	L3	0.2
Rush Mineral Meadow Marsh	L3	0.1
Horsetail Mineral Meadow Marsh	L3	0.09
Dry-Fresh Hardwood - Hemlock Mixed Forest	L3	0.08
Dry-Fresh Oak - Hickory Deciduous Forest	L3	0.08
Round-leaved Dogwood Deciduous Thicket	L3	0.05
Broad-leaved Sedge Mineral Shallow Marsh	L3	0.03
Mineral Cultural Meadow	L4	5.78
Fresh-Moist Sugar Maple - Hemlock Mixed Forest	L4	3.48
Fresh-Moist White Cedar - Hardwood Mixed Forest	L4	2.39
Native Cultural Savannah	L4	2.19
Dry-Fresh Sugar Maple Deciduous Forest	L4	2.05
Dry-Fresh Sugar Maple - Oak Deciduous Forest	L4	1.81
Dry-Fresh Sugar Maple - Paper Birch - Poplar Deciduous Forest	L4	1.21
Dry-Fresh White Pine - Sugar Maple Mixed Forest	L4	1.16
Fresh-Moist Ash Deciduous Forest	L4	0.99
Mineral Open Bluff	L4	0.87
Fresh-Moist White Elm Lowland Deciduous Forest	L4	0.87
Fresh-Moist Hemlock Coniferous Forest	L4	0.84
Paper Birch - Poplar Mineral Deciduous Swamp	L4	0.79
Manitoba Maple Mineral Deciduous Swamp	L4	0.78
Dry-Fresh White Cedar Coniferous Forest	L4	0.75
Fresh-Moist Paper Birch Deciduous Forest	L4	0.73
Miscellaneous Native Cultural Thicket	L4	0.68
Dry-Fresh Hemlock - Sugar Maple Mixed Forest	L4	0.52
Dry-Fresh Poplar Deciduous Forest	L4	0.49
Willow Mineral Deciduous Swamp	L4	0.3
Chokecherry Deciduous Thicket	L4	0.28
Dry-Fresh Oak - Hardwood Deciduous Forest	L4	0.2

Ecological Land Classification Name	L Rank	Area Occupied (ha)
Dry-Fresh Paper Birch Deciduous Forest	L4	0.17
Forb Mineral Meadow Marsh	L4	0.12
Dry-Fresh White Cedar - Hardwood Mixed Forest	L4	0.11
Dry-Fresh Black Cherry Deciduous Forest	L4	0.1
Jewelweed Mineral Meadow Marsh	L4	0.06
Fresh-Moist Manitoba Maple Lowland Deciduous Forest	L5	10.51
Dry-Fresh Sugar Maple Deciduous Forest	L5	3.82
Sumac Deciduous Thicket	L5	3.56
Fresh-Moist Sugar Maple - Hardwood Deciduous Forest	L5	3.31
Dry-Fresh White Ash Deciduous Forest	L5	2.38
Fresh-Moist Sugar Maple - Ash Deciduous Forest	L5	1.81
Apple - Conifer Mixed Plantation	L5	1.69
Restoration Mixed Plantation	L5	1.46
Fresh-Moist Willow Lowland Deciduous Forest	L5	1.21
Fresh-Moist Poplar Deciduous Forest	L5	1.21
Dry-Fresh Sugar Maple - Beech Deciduous Forest	L5	1.17
Hawthorn Successional Savannah	L5	0.77
White Pine Coniferous Plantation	L5	0.54
Dry-Fresh Sugar Maple - Black Cherry Deciduous Forest	L5	0.53
Dry-Fresh Sugar Maple - White Ash Deciduous Forest	L5	0.48
Restoration Coniferous Plantation	L5	0.46
Red Pine Coniferous Plantation	L5	0.15
Norway Maple - Conifer Mixed Plantation	L5	0.12
Narrow-leaved Cattail Mineral Shallow Marsh	L+	1.1
Exotic Deciduous Thicket	L+	0.89
Dry-Fresh Exotic Deciduous Forest	L+	0.75
Dry-Fresh Exotic Deciduous Forest	L+	0.75
Dry-Fresh Norway Maple Deciduous Forest	L+	0.72
Purple Loosestrife Mineral Meadow Marsh	L+	0.65
Scotch Pine Coniferous Plantation	L+	0.62
Exotic Successional Woodland	L+	0.49
Exotic Successional Savannah	L+	0.47
Common Reed Mineral Shallow Marsh	L+	0.42
Black Locust - Conifer Mixed Plantation	L+	0.41
Exotic Shrub Bluff	L+	0.18
Common Reed Mineral Meadow Marsh	L+	0.14
Exotic Treed Bluff	L+	0.1
Reed Canary Grass Mineral Meadow Marsh	L+	0.08
Manicured	-	3.44

The following analysis includes vegetation communities up to an L Rank of L4 since these are considered of conservation concern within TRCA's jurisdiction.

Within the surveyed portions of the Regional Study Area, 49 vegetation communities of either regional concern (L2 and L3) or of concern in an urban matrix (L4) are present. No L1 communities (those of regional concern in TRCA's jurisdiction due to rarity,

stringent habitat needs, and/or threat to habitat) were identified within the Regional Study Area. Of the 49 L2 to L4 communities, 40 are found within the Local Study Area (Table 5-3). Communities found in the Regional Study and not in the Local Study Area include: Mineral Fen Meadow Marsh, Treed Sand Barren, Fresh-Moist Sugar Maple-Yellow Birch Deciduous Forest, Broad-leaved Sedge Mineral Meadow Marsh, Fresh-Moist Black Maple Lowland Deciduous Forest, Fresh-Moist White Cedar - Sugar Maple Mixed Forest, Cattail Mineral Shallow Marsh, Broad-leaved Cattail Mineral Shallow Marsh and Willow Mineral Thicket Swamp.

Notable L2 and L3 communities include Broad-leaved Sedge Mineral Meadow Marsh, Treed Sand Barren, Mountain Maple Mineral Thicket Swamp, and Mineral Fen Meadow Marsh that may support a number of flora species of concern (TRCA, 2009b).

Table 5-3: Ecological Land Classification and L ranking of the individual vegetation communities of regional concern (L2-L3) and of conservation concern in urban matrix (L4) found within the surveyed portions of the Regional Study Area

Source: TRCA 2013

Ecological Land Classification Name	L Rank	Area Occupied (ha)
Serviceberry – Buffalo berry Shrub Bluff	L2	0.25
White Cedar Treed Bluff	L2	0.05
Mineral Fen Meadow Marsh	L2	0.04
Treed Sand Barren	L2	0.07
Mountain Maple Mineral Thicket Swamp	L2	0.11
Sumac - Willow - Cherry Shrub Bluff	L3	0.28
Deciduous Treed Bluff	L3	2.34
Round-leaved Dogwood Deciduous Thicket	L3	0.30
Dry-Fresh Oak - Hickory Deciduous Forest	L3	0.08
Fresh-Moist Sugar Maple - Yellow Birch Deciduous Forest	L3	0.25
Dry-Fresh Hardwood - Hemlock Mixed Forest	L3	0.08
Dry-Fresh White Cedar - Paper Birch Mixed Forest	L3	0.41
Fresh-Moist Hemlock - Hardwood Mixed Forest	L3	0.35
Broad-leaved Sedge Mineral Meadow Marsh	L3	0.13
Horsetail Mineral Meadow Marsh	L3	0.09
Rush Mineral Meadow Marsh	L3	0.31
Broad-leaved Sedge Mineral Shallow Marsh	L3	0.03
White Elm Mineral Deciduous Swamp	L3	0.32
Mineral Open Bluff	L4	1.07
Mineral Cultural Meadow	L4	19.33
Native Cultural Savannah	L4	3.35
Chokecherry Deciduous Thicket	L4	0.28
Miscellaneous Native Cultural Thicket	L4	2.91
Dry-Fresh White Cedar Coniferous Forest	L4	0.88
Fresh-Moist Hemlock Coniferous Forest	L4	0.84
Dry-Fresh Oak - Hardwood Deciduous Forest	L4	0.24
Dry-Fresh Poplar Deciduous Forest	L4	0.99

Ecological Land Classification Name	L Rank	Area Occupied (ha)
Dry-Fresh Paper Birch Deciduous Forest	L4	0.56
Dry-Fresh Black Cherry Deciduous Forest	L4	0.10
Dry-Fresh Sugar Maple Deciduous Forest	L4	3.76
Dry-Fresh Sugar Maple - Paper Birch - Poplar Deciduous Forest	L4	1.56
Dry-Fresh Sugar Maple - Oak Deciduous Forest	L4	30.74
Fresh-Moist White Elm Lowland Deciduous Forest	L4	1.69
Fresh-Moist Ash Deciduous Forest	L4	0.99
Fresh-Moist Black Maple Lowland Deciduous Forest	L4	0.14
Fresh-Moist Paper Birch Deciduous Forest	L4	0.73
Dry-Fresh White Pine - Sugar Maple Mixed Forest	L4	1.46
Dry-Fresh Hemlock - Sugar Maple Mixed Forest	L4	0.62
Dry-Fresh White Cedar - Hardwood Mixed Forest	L4	0.11
Fresh-Moist Sugar Maple - Hemlock Mixed Forest	L4	3.50
Fresh-Moist White Cedar - Sugar Maple Mixed Forest	L4	2.70
Forb Mineral Meadow Marsh	L4	0.90
Jewelweed Mineral Meadow Marsh	L4	0.10
Cattail Mineral Shallow Marsh (type of cattail not specified)	L4	0.05
Broad-leaved Cattail Mineral Shallow Marsh	L4	0.45
Manitoba Maple Mineral Deciduous Swamp	L4	0.92
Willow Mineral Deciduous Swamp	L4	0.91
Paper Birch - Poplar Mineral Deciduous Swamp	L4	1.33
Willow Mineral Thicket Swamp	L4	0.23

Not present within the Local Study Area

5.2.3 Wetlands

The Regional Study Area contains no Provincially Significant Wetlands. However, several wetlands within the Regional Study Area are considered to be locally significant due to the presence of L2 to L4 ranked wetland community types, refer to Figure 5-6 (see Section 5.2.2 for an overview of TRCA's L ranking system for vegetation communities). A total of 22 wetland community types were found. Of these 22, 15 are present in the Local Study Area, with the majority being defined by non-native species. The complete list of wetland communities and L rank assignment details can be found in Table 5-4.

Table 5-4: Ecological Land Classification of wetland communities by L rank within the surveyed portions of the Local Study Area

Source: TRCA 2013

Ecological Land Classification Name	L Rank	Area Occupied (ha)
Mountain Maple Mineral Thicket Swamp	L2	0.11
White Elm Mineral Deciduous Swamp	L3	0.32
Rush Mineral Meadow Marsh	L3	0.10
Horsetail Mineral Meadow Marsh	L3	0.09
Broad-leaved Sedge Mineral Shallow Marsh	L3	0.031
Paper Birch - Poplar Mineral Deciduous Swamp	L4	0.79

Ecological Land Classification Name	L Rank	Area Occupied (ha)
Manitoba Maple Mineral Deciduous Swamp	L4	0.78
Willow Mineral Deciduous Swamp	L4	0.30
Forb Mineral Meadow Marsh	L4	0.12
Jewelweed Mineral Meadow Marsh	L4	0.061
Narrow-leaved Cattail Mineral Shallow Marsh	L+	1.10
Purple Loosestrife Mineral Meadow Marsh	L+	0.65
Common Reed Mineral Shallow Marsh	L+	0.42
Common Reed Mineral Meadow Marsh	L+	0.14
Reed Canary Grass Mineral Meadow Marsh	L+	0.08

In addition to wetlands formally recorded in the Regional Study Area, there are a number of seasonally wet areas that may not have been included in the formal surveys. These are typically located in low-lying areas and may experience seasonal flooding. Plant species such as cattail (*Typha* spp.) and common reed (*Phragmites australis*), which require wet soil, are often found in such areas.

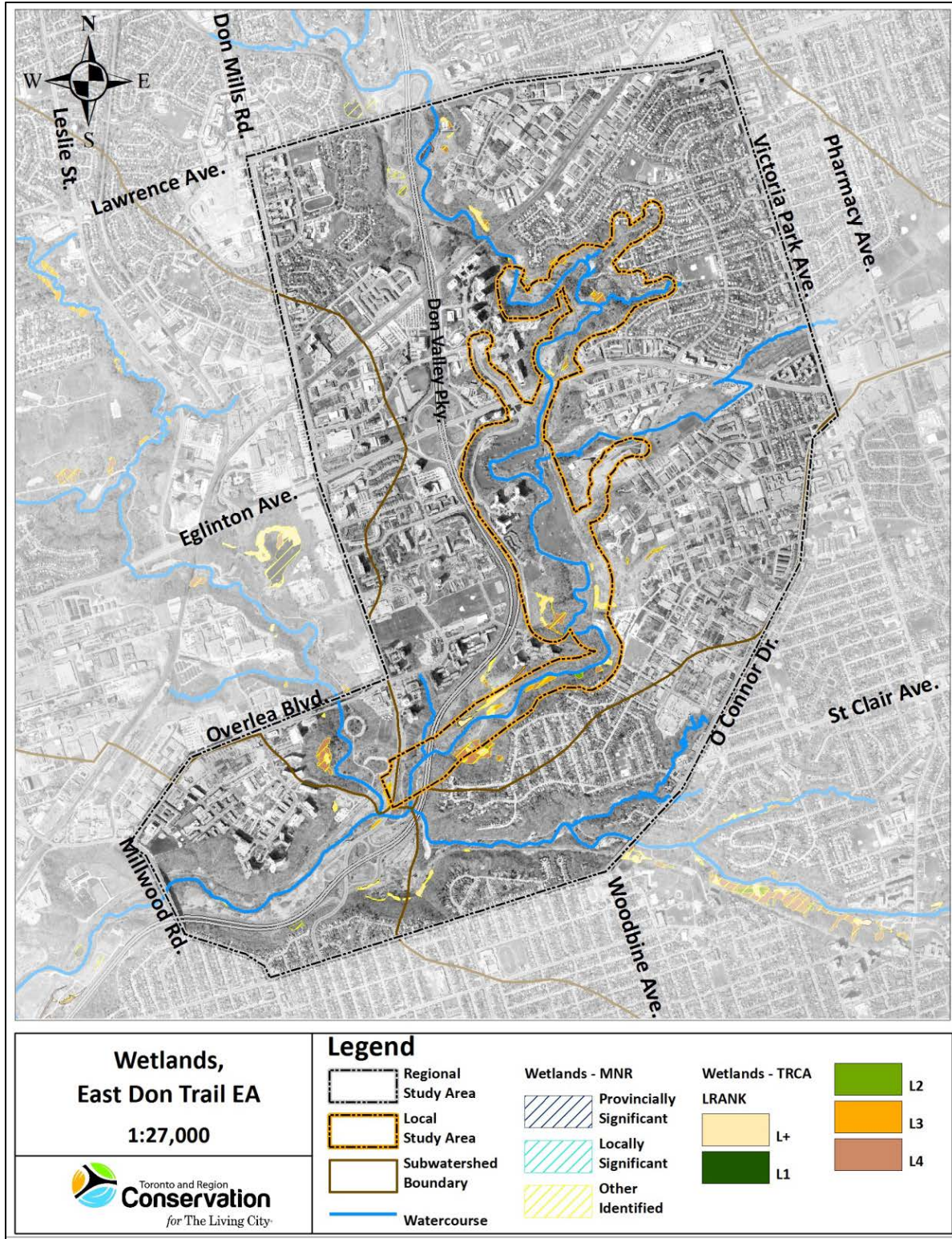


Figure 5-6: Wetlands within the surveyed portions of the Regional Study Area
Source: TRCA 2013

5.2.4 Wildlife and Wildlife Habitat

Wildlife

The wildlife species records summary presented below includes data collected as part of TRCA's annual terrestrial field inventories as well as incidental observations. The TRCA L ranking system is applied to plant and animal species (such as birds, mammals, and amphibians discussed here) in a similar way it is used to rank vegetation communities (see Section 5.2.2 for information on vegetation communities ranking). The TRCA L ranking system for fauna species is currently applied to native species that breed within TRCA's jurisdiction. The fauna ranking criteria are in line with the goal of identifying species and species associations which indicate ecosystem quality or are sensitive to ecosystem deterioration as well as ensuring continued presence of indigenous species (TRCA, 2007). The five L ranks reflect the level of conservation concern in TRCA's jurisdiction and range from L1 (species of high conservation concern) to L5 (generally secure species).

The locations of wildlife observations within the Regional Study Area are shown in Figure 5-7. In total, 60 vertebrate species have been formally observed and recorded: 50 breeding bird species (Table 5-5), two amphibian species, one reptile species, and seven mammal species (Table 5-6).

Breeding bird species formally observed within the Regional Study Area are presented in Table 5-5. Of the 50 breeding bird species recorded, five – American redstart, eastern meadowlark, eastern screech-owl, least flycatcher, and wood thrush – are L3 species (regional species of conservation concern) while 26 are L4 (of concern in urban environment) and the rest are L5 or L+ (non-native or of least or no concern). Of all bird species documented, blue-grey gnatcatcher, barn swallow, hairy woodpecker, grey catbird, great crested flycatcher, pine warbler, L4, and Baltimore oriole, L5 – have a “confirmed” breeding status (highest certainty of breeding activity). Eight have a “probable” breeding status (medium certainty of breeding activity), spotted sandpiper, red-eyed vireo, northern rough-winged swallow, indigo bunting, house sparrow, eastern wood-pewee, eastern kingbird, and cooper's hawk, L4, while the rest have a “possible” breeding status (lowest certainty of breeding activity). Breeding bird surveys are undertaken during the last week of May and the first week of July to coincide with the breeding season. Surveys require two site visits to eliminate late migrants from the survey.

Two amphibians have been recorded within the Regional Study Area – American toad (*Bufo americanus*), L4 and eastern red-backed salamander (*Plethodon cinereus*), L3 – which are both probable breeders within the Regional Study Area. As well one reptile, milksnake (*Lampropeltis triangulum*), L3 has been observed. Another amphibian species likely to be found is green frog (*Rana clamitans*), while reptile species likely

present are common snapping turtle (*Chelydra serpentina*), eastern garter snake (*Thamnophis* spp.), and Dekay's brownsnake (*Storeria dekayi*).

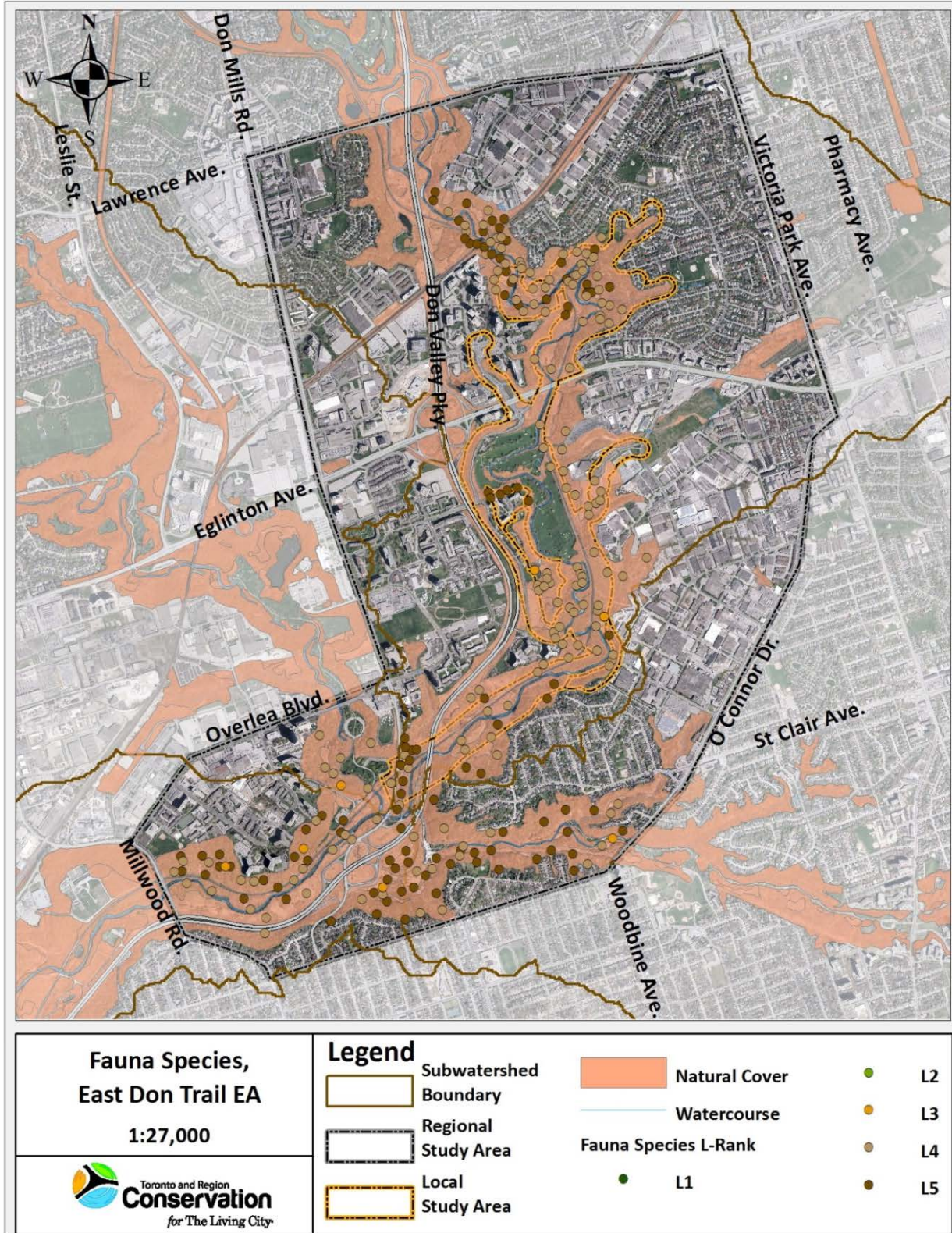


Figure 5-7: Fauna species records within the Regional Study Area

Source: TRCA 2016

Table 5-5: Breeding birds within the Regional Study Area

Source: TRCA 2016

Common Name	Scientific Name	Breeding Status	L Rank
European starling	<i>Sturnus vulgaris</i>	Possible	L+
House finch	<i>Carpodacus mexicanus</i>	Possible	L+
American redstart	<i>Setophaga ruticilla</i>	Possible	L3
Eastern meadowlark	<i>Sturnella magna</i>	Possible	L3
Eastern screech-owl	<i>Otus asio</i>	Possible	L3
Least flycatcher	<i>Empidonax minimus</i>	Possible	L3
Wood thrush	<i>Hylocichla mustelina</i>	Possible	L3
Barn swallow	<i>Hirundo rustica</i>	Confirmed	L4
Blue-grey gnatcatcher	<i>Poliophtila caerulea</i>	Confirmed	L4
Chimney swift	<i>Chaetura pelagica</i>	Possible	L4
Common yellowthroat	<i>Geothlypis trichas</i>	Possible	L4
Cooper's hawk	<i>Accipiter cooperii</i>	Probable	L4
Eastern kingbird	<i>Tyrannus tyrannus</i>	Probable	L4
Eastern wood-pewee	<i>Contopus virens</i>	Probable	L4
Great crested flycatcher	<i>Myiarchus crinitus</i>	Confirmed	L4
Great horned owl	<i>Bubo virginianus</i>	Possible	L4
Green heron	<i>Butorides virescens</i>	Possible	L4
Grey catbird	<i>Dumetella carolinensis</i>	Confirmed	L4
Hairy woodpecker	<i>Picoides villosus</i>	Confirmed	L4
House sparrow	<i>Passer domesticus</i>	Probable	L4
Indigo bunting	<i>Passerina cyanea</i>	Probable	L4
Northern flicker	<i>Colaptes auratus</i>	Possible	L4
Northern rough-winged swallow	<i>Stelgidoptery x serripennis</i>	Probable	L4
Pine warbler	<i>Setophaga pinus</i>	Confirmed	L4
Red-breasted nuthatch	<i>Sitta canadensis</i>	Possible	L4
Red-eyed vireo	<i>Vireo olivaceus</i>	Probable	L4
Rose-breasted grosbeak	<i>Pheucticus ludovicianus</i>	Possible	L4
Savannah sparrow	<i>Passerculus sandwichensis</i>	Possible	L4
Spotted sandpiper	<i>Actitis macularia</i>	Probable	L4
Swamp sparrow	<i>Melospiza georgiana</i>	Possible	L4
Tree swallow	<i>Tachycineta bicolor</i>	Possible	L4
White-breasted nuthatch	<i>Sitta carolinensis</i>	Possible	L4
Wood duck	<i>Aix sponsa</i>	Possible	L4
American crow	<i>Corvus brachyrhynchos</i>	Possible	L5
American goldfinch	<i>Carduelis tristis</i>	Possible	L5
American robin	<i>Turdus migratorius</i>	Possible	L5
Baltimore oriole	<i>Icterus galbula</i>	Confirmed	L5
Belted kingfisher	<i>Ceryle alcyon</i>	Probable	L5
Black-capped chickadee	<i>Parus atricapillus</i>	Possible	L5
Brown-headed cowbird	<i>Molothrus ater</i>	Possible	L5
Cedar waxwing	<i>Bombycilla cedrorum</i>	Possible	L5
Common grackle	<i>Quiscalus quiscula</i>	Possible	L5
Downy woodpecker	<i>Picoides pubescens</i>	Possible	L5
House wren	<i>Troglodytes aedon</i>	Possible	L5
Mourning dove	<i>Zenaida macroura</i>	Possible	L5

Common Name	Scientific Name	Breeding Status	L Rank
Northern cardinal	<i>Cardinalis cardinalis</i>	Possible	L5
Northern mockingbird	<i>Mimus polyglottos</i>	Possible	L5
Red-winged blackbird	<i>Agelaius phoeniceus</i>	Possible	L5
Song sparrow	<i>Melospiza melodia</i>	Possible	L5
Warbling vireo	<i>Vireo gilvus</i>	Possible	L5

Seven mammal species have been formally documented by TRCA, all of which are considered to be probable breeders within the Regional Study Area (Table 5-6). Mammal species observed incidentally include common raccoon (*Procyon lotor*), L5, white-tailed deer (*Odocoileus virginianus*), L4, red fox (*Vulpes vulpes*), L4, and eastern coyote (*Canis latrans* var.), L5. In addition, likely to be present are Virginia opossum (*Didelphis virginiana*), striped skunk (*Mephitis mephitis*), meadow vole (*Microtus pennsylvanicus*), American mink (*Neovison vison*), deer mouse (*Peromyscus* spp.), hairy-tailed mole (*Parascalops breweri*), and non-native brown rat (*Rattus norvegicus*).

Table 5-6: Mammal species formally observed within the Regional Study Area

Source: TRCA 2016

Common Name	Scientific Name	L Rank
Beaver	<i>Castor canadensis</i>	L4
Big Brown Bat	<i>Eptesicus fuscus</i>	L4
Eastern chipmunk	<i>Tamias striatus</i>	L4
Eastern cottontail	<i>Sylvilagus floridanus</i>	L4
Muskrat	<i>Ondatra zibethicus</i>	L4
Woodchuck	<i>Marmota monax</i>	L4
Red squirrel	<i>Tamiasciurus hudsonicus</i>	L4

Wildlife Habitat

Generally, the amount and quality of wildlife habitat is linked to the amount and quality of natural cover within a given area. Areas that may provide wildlife habitat within the Regional Study Area are shown in Figure 5-8.

Overall, the Don River Watershed contains only 16% natural cover, compared to 25% natural cover across TRCA's entire jurisdiction. Natural cover within the Local Study Area is based on the cover within the Lower East Don River and Taylor/Massey Creek subwatersheds. Using remote sensing and landscape analysis modelling, the land area of the Lower East Don River is estimated to contain 12% natural cover and the Taylor/Massey Creek subwatershed just 9% natural cover (TRCA, 2009b).

Habitat quality within subwatersheds is quantified using the habitat patch size, shape and matrix influence. Based on these criteria both of the Regional Study Area subwatersheds have a rating of L4 or "poor", based on small and narrow patches of remaining natural cover combined with negative impacts of urbanization (TRCA, 2009b). Nevertheless, the small extent of natural cover compared to the surrounding urban area increases the relative importance of existing habitat. Ravine, park, and

urban forest cover continue to provide habitat essential to a variety of resident and migrant species. In particular, wildlife habitat within the Regional Study Area is expected to provide habitat for invertebrates, birds, urban tolerant mammals, and herptiles.

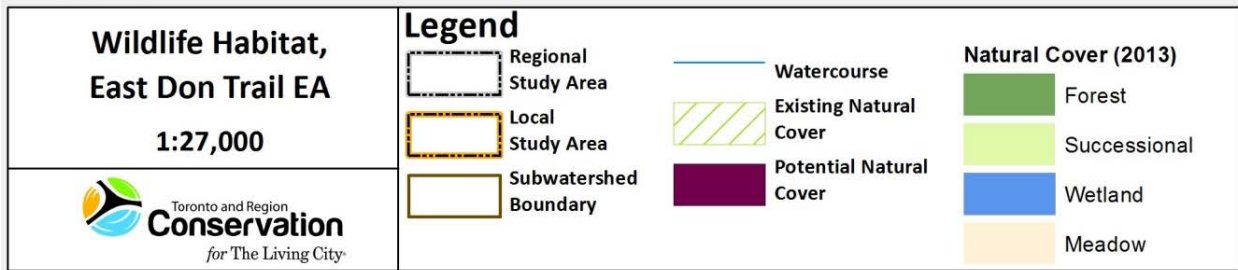


Figure 5-8: Wildlife habitat areas within the Regional Study Area

Source: TRCA 2016

5.2.5 Fish and Aquatic Habitat

Within the TRCA's jurisdiction, broad scale fish and fish habitat management and assessment is done on a watershed basis. The Regional Study Area streams (portions of East Don River, West Don River and Taylor/Massey Creek) are located within the Don River watershed. On a provincial level, fisheries management is carried out by the MNRF, where management units are represented by Fisheries Management Zones, aquatic management units based on hydrological, geological and thermal similarities. The Regional Study Area overlaps Fisheries Management Zones 5 and 6.

Fisheries Management Zone 5 covers the entire Don River watershed south of Highway 401, excluding Taylor/Massey Creek (Figure 5-9). The thermal regime south of Lawrence Avenue East is unstable and the zone exhibits poor biodiversity scores throughout the reach. The dominant fish community is warm-water pollution-tolerant (TRCA, 2009e).

Fisheries Management Zone 6 covers the Taylor/Massey Creek subwatershed (Figure 5-9) and exhibits poor biodiversity throughout. Low biodiversity scores may be attributed to poor stream water quality. Potential sources of contamination include sewer cross-connections and overflows. At the same time, this zone's cool water thermal regime indicates that some of these water quality issues may be offset by groundwater discharges (TRCA, 2009e).

TRCA monitoring program results indicate that the Don River watershed fish habitat is generally described as fragmented and degraded, mainly due to the River's uncontrolled flows, in-stream barriers to fish passage, poor water quality and limited riparian and wetland habitat. The fish community throughout the watershed, including the Regional Study Area, is comprised of primarily pollution-tolerant native fish species. In addition, non-native species (e.g., Common Carp) have been detected throughout the West Don River and in reaches of the East Don River including the Regional Study Area (TRCA, 2009e).

The most recent assessment of the watershed fish community indicated that the native species richness ratio was low, which typically indicates low species diversity and may be attributed to a high degree of watershed urbanization. Likewise, the Index of Biotic Integrity (IBI) score was generally low, particularly for sites within the lower reaches of the river. A low IBI score indicates that a given fish community is composed mainly of the environmental pollution-tolerant species. This is supported by the fish species richness data summary provided in Table 5-7 which shows that degradation-tolerant species such as White Sucker and Longnose Dace are consistently detected within the Regional Study Area. In addition, it was demonstrated that the Don River fish community is almost exclusively composed of generalist species which typically inhabit a wide variety of habitats and are particularly abundant in degraded systems. As well,

the overall Don River mean catch per unit of effort, an indirect measure of fish abundance, was significantly lower than the jurisdictional average (TRCA, 2011).

On the whole, the current Don River aquatic ecosystem function is considered to be impaired. The natural riparian cover, including wetlands, is far below regional or local targets (TRCA, 2009e). As well, there is an impassable barrier to fish movement present near the southern end of the Regional Study Area, immediately upstream of the confluence with Taylor Massey Creek (Figure 5-9). This barrier (a weir) prevents fish species from migrating between Lake Ontario and the majority of the Regional Study Area as well as the entire Local Study Area.

In addition to the fisheries assessment conclusions discussed above, recent benthic macroinvertebrate analysis results suggest that the Don River watershed is less healthy than TRCA's jurisdictional average. In particular, benthic macroinvertebrate communities were reported to have low diversity and consist almost entirely of highly pollution-tolerant families. These and other bio-assessment parameters were found to be below the average jurisdictional values, indicating that the health of the Don River watershed is decreasing over time or at best, remaining constant. A reflection of this may be an absence of significant upward or downward trends in the native fish species richness values (TRCA, 2011).

Table 5-7: Fish species captured within the Regional Study Area from 1991 to 2014

Source: TRCA 2016

Common Name	Scientific Name	1991	1992	1998	2000	2002	2005	2008	2011	2014
Blacknose Dace	<i>Rhinichthys atratulus</i>	X	X	X	X	X	X	X	X	X
Bluntnose Minnow	<i>Pimephales notatus</i>	X								
Common Shiner	<i>Luxilus cornutus</i>	X		X				X	X	X
Creek Chub	<i>Semotilus atromaculatus</i>	X	X	X	X	X	X	X	X	X
Fathead Minnow	<i>Pimephales promelas</i>	X				X		X	X	
Johnny Darter	<i>Etheostoma nigrum</i>	X		X	X	X		X	X	
Longnose Dace	<i>Rhinichthys cataractae</i>	X	X	X	X	X	X	X	X	X
Pumpkinseed	<i>Lepomis gibbosus</i>	X								
White Sucker	<i>Catostomus commersoni</i>	X	X	X	X	X	X	X	X	X
Yellow Perch	<i>Perca flavescens</i>	X								
Common Carp	<i>Cyprinus carpio</i>								X	

In addition to the fish captured through the TRCA monitoring program (Table 5-7), Chinook salmon have been sighted within the Regional Study Area. Since the 1990s MNRF has been annually stocking the Don River with Chinook salmon, a large fish native to British Columbia, for sport fishing. Chinook salmon fry are released into the East Don River and remain there until they mature prior to migrating to Lake Ontario. In the fall adult Chinook return to the East Don in an attempt to spawn, however, they are not able to spawn successfully due to pollution and sedimentation levels.

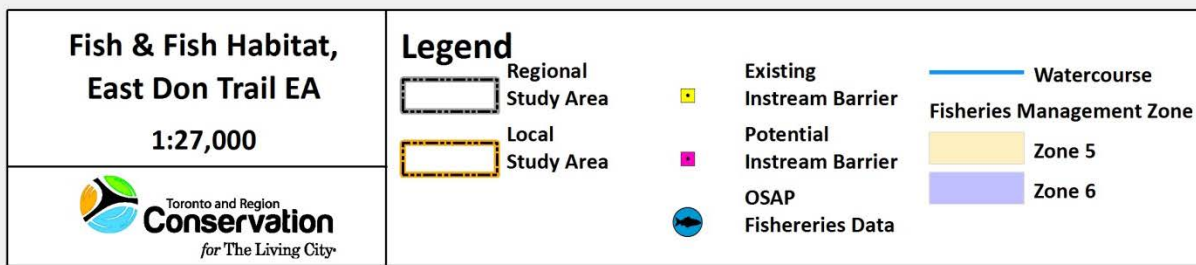
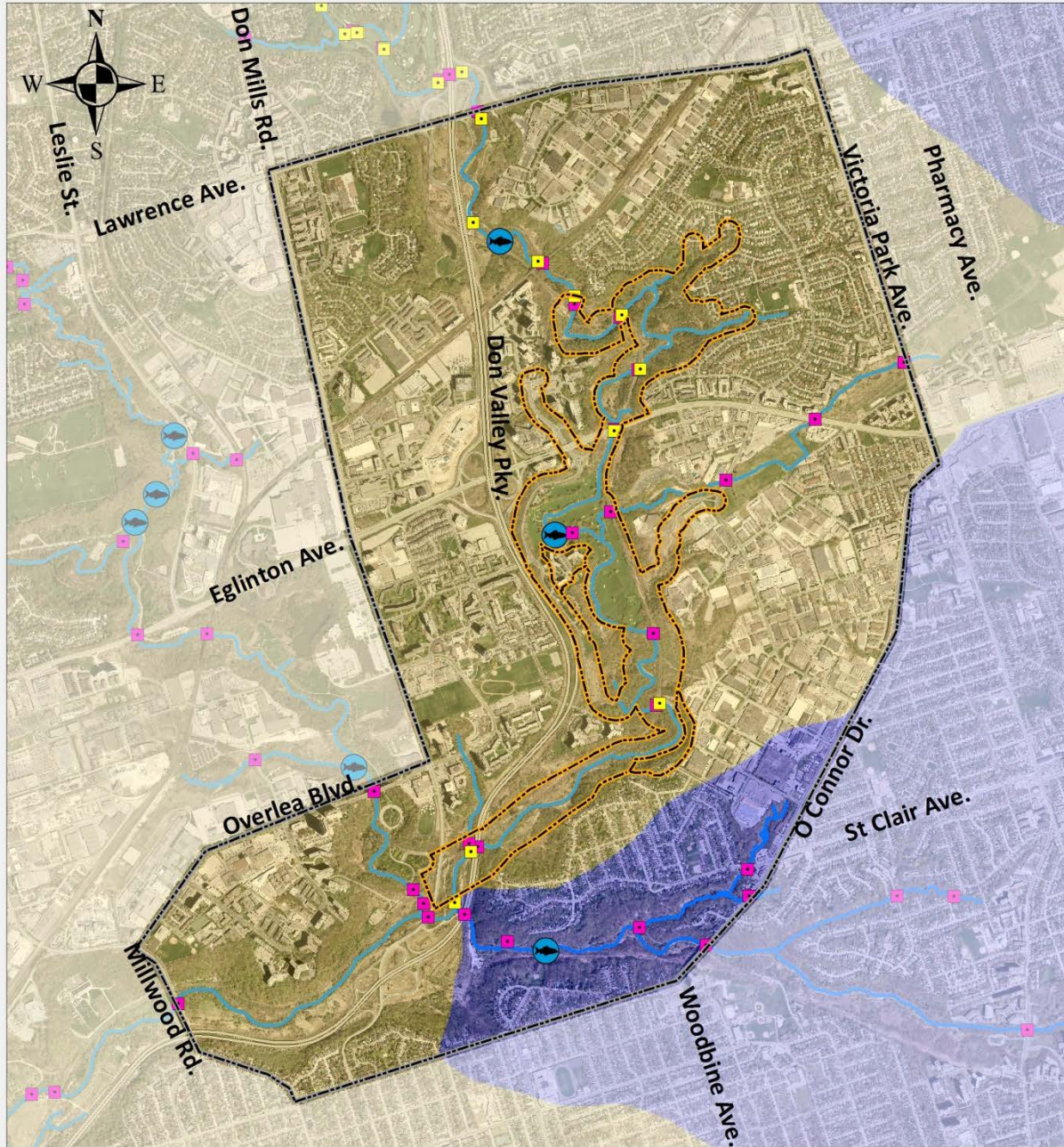


Figure 5-9: Fish and fish habitat within the Regional Study Area
 Source: TRCA 2016

5.2.6 Species of Concern

This section focuses on flora and fauna species of concern found within the Regional Study Area. There are four levels of species of conservation concern recognitions and protection, based on organization, level of government, and jurisdictional boundaries. Each level is identified and described in Table 5-8 below:

Table 5-8: Species of Concern legislation, recognition and protection

Sources: *Committee on the Status of Endangered Wildlife in Canada 2013, Government of Canada 2016, Government of Ontario 2016, TRCA 2008*

Authority	Details
Committee on the Status of Endangered Wildlife in Canada (COSEWIC)	<ul style="list-style-type: none"> • COSEWIC is the nation-wide authority for assessing the conservation status of wildlife species that may be at risk of extinction in Canada. • COSEWIC assessment informs SARA and is considered to be the first step in wildlife protection.
<i>Federal Species at Risk Act (SARA), enforced by Environment Canada</i>	<ul style="list-style-type: none"> • This is a federal law that is designed to prevent wildlife species from becoming extinct and to help facilitate the recovery of these species. • The federal list of species at risk is determined by the federal government and is based on the recommendations made by the COSEWIC. Not all species status recommended by COSEWIC is listed under SARA. • Species status list includes: Extirpated, Endangered, Threatened, Special Concern and No Status. • Extirpated, Endangered or Threatened species² on the SARA list receive protection (i.e., illegal to kill, harass, capture or harm in any way) and recovery planning under SARA. Recovery planning results in the development of recovery strategies and action plans. Special Concern species benefit from management planning.
<i>Endangered Species Act, enforced by Ministry of Natural Resources and Forestry</i>	<ul style="list-style-type: none"> • This act aims to identify, protect and facilitate the recovery of Ontario species at risk. • Species added to the Species at Risk in Ontario list as Endangered, Threatened or Extirpated are protected from being harmed or harassed. Special Concern species are not included in this protection. • Recovery strategies are completed for Endangered, Threatened, and Extirpated species, while management plans are completed for species listed as Special Concern. • If a species is already listed under SARA then the MNRF will consider the federal strategy and may adopt it as the provincial recovery strategy.
TRCA L ranking system	<ul style="list-style-type: none"> • Used to describe a given species' conservation concern, or status, within TRCA's jurisdiction. • There are 5 L ranks which range from L1 (species of high/regional conservation concern within TRCA's jurisdiction) to L5 (species generally secure in TRCA's jurisdiction).

² Automatic protection of species applies to migratory birds, aquatic species, and species on federal lands. In many cases protection of terrestrial species on non-federal lands is the responsibility of the provinces/territories where they are found.

Flora Species of Concern

The surveyed portions of the Regional Study Area contain 112 L1 to L4 ranked flora species. Of these, 40 are considered of regional concern (L1, L2, and L3) and 72 are of concern in urban environments (L4) (Figure 5-10, Table 5-9). Based on local occurrence and local population, three plant species are relatively rare in TRCA's jurisdiction: Northern bedstraw, Pale-leaved sunflower, and Wire-stemmed muhly grass.

Butternut is the single plant species at risk that has been observed within the Regional Study Area classified as "Endangered" under Committee on the Status of Endangered Wildlife in Canada (COSEWIC), *Species at Risk Act*, and the Ontario *Endangered Species Act* (COSEWIC, 2013; Government of Canada, 2016; MNRF, 2016). Naturally occurring Butternut are protected under the *Endangered Species Act*. The detailed tree inventory collected for the potentially impacted areas identified no Butternut trees within the affected Local Study Area. Additional tree inventories will be undertaken as required prior to construction.

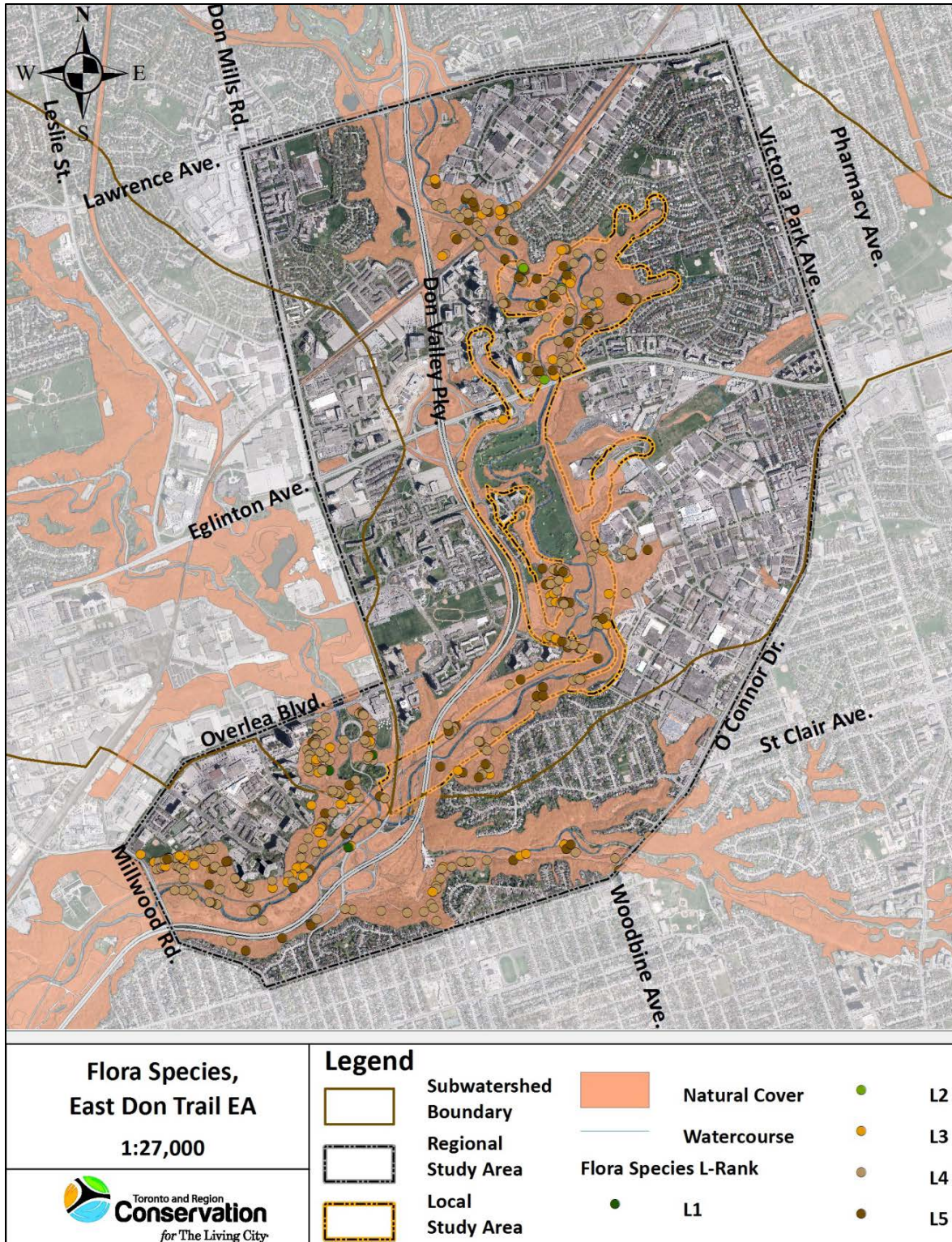


Figure 5-10: Distribution of flora species records within the surveyed portions of the Regional Study Area

Source: TRCA 2016

Table 5-9: L1, L2, L3 and L4 ranked flora species within the surveyed portions of the Regional Study Area

Source: TRCA 2016

Common Name	Scientific Name	L Rank
red pine	<i>Pinus resinosa</i>	L1
black choke-berry	<i>Aronia melanocarpa</i>	L2
poke milkweed	<i>Asclepias exaltata</i>	L2
russet buffalo-berry	<i>Shepherdia canadensis</i>	L2
American bittersweet	<i>Celastrus scandens</i>	L3
black-fruited mountain-rice	<i>Oryzopsis racemosa</i>	L3
bladdernut	<i>Staphylea trifolia</i>	L3
blue cohosh	<i>Caulophyllum thalictroides</i>	L3
bristle-stalked sedge	<i>Carex leptalea</i> ssp. <i>leptalea</i>	L3
broad-leaved sedge	<i>Carex platyphylla</i>	L3
butternut	<i>Juglans cinerea</i>	L3
Canada violet	<i>Viola canadensis</i>	L3
Canada waterleaf	<i>Hydrophyllum canadense</i>	L3
Canada yew	<i>Taxus canadensis</i>	L3
cut-leaved toothwort	<i>Cardamine concatenata</i>	L3
drooping bulrush	<i>Scirpus pendulus</i>	L3
eastern snowberry	<i>Symphoricarpos albus</i> var. <i>albus</i>	L3
flat-topped aster	<i>Aster umbellatus</i> var. <i>umbellatus</i>	L3
large-flowered bellwort	<i>Uvularia grandiflora</i>	L3
maple-leaved viburnum	<i>Viburnum acerifolium</i>	L3
moonseed	<i>Menispermum canadense</i>	L3
narrow-leaved spring beauty	<i>Claytonia virginica</i>	L3
ninebark	<i>Physocarpus opulifolius</i>	L3
northern bedstraw	<i>Galium boreale</i>	L3
northern dewberry	<i>Rubus flagellaris</i>	L3
northern maidenhair fern	<i>Adiantum pedatum</i>	L3
oak fern	<i>Gymnocarpium dryopteris</i>	L3
piresap	<i>Monotropa hypopithys</i>	L3
pointed-leaved tick-trefoil	<i>Desmodium glutinosum</i>	L3
rattlesnake fern	<i>Botrychium virginianum</i>	L3
running strawberry-bush	<i>Euonymus obovata</i>	L3
sand dropseed	<i>Sporobolus cryptandrus</i>	L3
shagbark hickory	<i>Carya ovata</i>	L3
troublesome sedge	<i>Carex molesta</i>	L3
turtlehead	<i>Chelone glabra</i>	L3
water horsetail	<i>Equisetum fluviatile</i>	L3
white oak	<i>Quercus alba</i>	L3
white spruce	<i>Picea glauca</i>	L3
wild honeysuckle	<i>Lonicera dioica</i>	L3
witch-hazel	<i>Hamamelis virginiana</i>	L3
American beech	<i>Fagus grandifolia</i>	L4
arrow-leaved aster	<i>Aster urophyllus</i>	L4
beaked hazel	<i>Corylus cornuta</i>	L4
beech-drops	<i>Epifagus virginiana</i>	L4

Common Name	Scientific Name	L Rank
bitternut hickory	<i>Carya cordiformis</i>	L4
black ash	<i>Fraxinus nigra</i>	L4
black maple	<i>Acer saccharum</i> ssp. <i>nigrum</i>	L4
blue-eyed grass	<i>Sisyrinchium montanum</i>	L4
boneset	<i>Eupatorium perfoliatum</i>	L4
bottle-brush grass	<i>Elymus hystrix</i>	L4
bristly greenbrier	<i>Smilax hispida</i>	L4
broad-leaved cattail	<i>Typha latifolia</i>	L4
broad-leaved toothwort	<i>Cardamine diphylla</i>	L4
bulblet fern	<i>Cystopteris bulbifera</i>	L4
bulblet-bearing water-hemlock	<i>Cicuta bulbifera</i>	L4
bur oak	<i>Quercus macrocarpa</i>	L4
bur-reed sedge	<i>Carex sparganioides</i>	L4
Canada blue joint	<i>Calamagrostis canadensis</i>	L4
Canada May-flower	<i>Maianthemum canadense</i>	L4
Christmas fern	<i>Polystichum acrostichoides</i>	L4
crested wood fern	<i>Dryopteris cristata</i>	L4
downy Solomon's seal	<i>Polygonatum pubescens</i>	L4
eared brome	<i>Bromus latiglumis</i>	L4
early goldenrod	<i>Solidago juncea</i>	L4
eastern bracken	<i>Pteridium aquilinum</i> var. <i>latiusculum</i>	L4
eastern hemlock	<i>Tsuga canadensis</i>	L4
evergreen wood fern	<i>Dryopteris intermedia</i>	L4
fibrous-rooted sedge	<i>Carex communis</i>	L4
foam-flower	<i>Tiarella cordifolia</i>	L4
hairy panic grass	<i>Panicum acuminatum</i> var. <i>acuminatum</i>	L4
knotted rush	<i>Juncus nodosus</i>	L4
lake-bank sedge	<i>Carex lacustris</i>	L4
large-toothed aspen	<i>Populus grandidentata</i>	L4
long-spined hawthorn	<i>Crataegus macracantha</i>	L4
long-styled blue cohosh	<i>Caulophyllum giganteum</i>	L4
loose-flowered sedge	<i>Carex laxiflora</i>	L4
marginal wood fern	<i>Dryopteris marginalis</i>	L4
Michigan lily	<i>Lilium michiganense</i>	L4
mountain maple	<i>Acer spicatum</i>	L4
nodding fescue	<i>Festuca subverticillata</i>	L4
pale-leaved sunflower	<i>Helianthus strumosus</i>	L4
paper birch	<i>Betula papyrifera</i>	L4
peach-leaved willow	<i>Salix amygdaloides</i>	L4
Pennsylvania sedge	<i>Carex pensylvanica</i>	L4
pin cherry	<i>Prunus pensylvanica</i>	L4
poverty oat grass	<i>Danthonia spicata</i>	L4
pseudocyperus sedge	<i>Carex pseudo-cyperus</i>	L4
purple melic grass	<i>Schizachne purpurascens</i> ssp. <i>purpurascens</i>	L4
red cedar	<i>Juniperus virginiana</i>	L4
red oak	<i>Quercus rubra</i>	L4
retorse sedge	<i>Carex retrorsa</i>	L4
riverbank wild rye	<i>Elymus riparius</i>	L4

Common Name	Scientific Name	L Rank
round-leaved dogwood	Cornus rugosa	L4
silver maple	Acer saccharinum	L4
sky-blue aster	Aster oolentangiensis	L4
smooth wild rose	Rosa blanda	L4
soft-stemmed bulrush	Scirpus validus	L4
swamp milkweed	Asclepias incarnata ssp. incarnata	L4
Torrey's rush	Juncus torreyi	L4
white baneberry	Actaea pachypoda	L4
white cedar	Thuja occidentalis	L4
white grass	Leersia virginica	L4
white pine	Pinus strobus	L4
white trillium	Trillium grandiflorum	L4
white-fruited mountain-rice	Oryzopsis asperifolia	L4
wild columbine	Aquilegia canadensis	L4
wild geranium	Geranium maculatum	L4
wild ginger	Asarum canadense	L4
wild leek	Allium tricoccum	L4
wire-stemmed muhly grass	Muhlenbergia frondosa	L4
yellow birch	Betula alleghaniensis	L4
yellow touch-me-not	Impatiens pallida	L4

Fauna Species of Concern

Of the 50 breeding bird species observed within the Regional Study Area, 318 are L3 and L4 ranked and thus considered of regional concern (L3) and of concern in urban environments (L4) in TRCA's jurisdiction (Table 5-10). Further, bank swallow, eastern meadowlark, and barn swallow are listed as "Threatened" by COSEWIC and Ontario *Endangered Species Act*. Wood Thrush is listed as "Threatened" by COSEWIC and "Special Concern" by Ontario *Endangered Species Act*, and chimney swift is listed as "Threatened" by COSEWIC, Ontario *Endangered Species Act*, and the *Species at Risk Act* (COSEWIC, 2013; Government of Canada, 2016; MNRF, 2016).

All seven mammal species, as well as the two amphibian species formally observed within the Regional Study Area, are L3 or L4 ranked and thus considered of concern in urban environments (Table 5-10). The sole reptile species incidentally observed – milksnake - is ranked L3 and listed as "Special Concern" by COSEWIC, and *Species at Risk Act* (COSEWIC, 2013; Government of Canada, 2016; MNRF, 2016).

Table 5-10: Fauna species of concern within the Regional Study Area (formal observations)

Source: TRCA 2016

Common Name	Scientific Name	L Rank	COSEWIC* Status	Endangered Species Act Status	Species at Risk Act Status
American redstart	<i>Setophaga ruticilla</i>	L3	Not Assessed	-	-
Bank Swallow	<i>Riparia riparia</i>	L3	Threatened	Threatened	-
Eastern meadowlark	<i>Sturnella magna</i>	L3	Threatened	Threatened	-
Eastern red-backed salamander	<i>Plethodon cinereus</i>	L3	Not Assessed	-	-
Eastern screech-owl	<i>Otus asio</i>	L3	Not Assessed	-	-
Least flycatcher	<i>Empidonax minimus</i>	L3	Not Assessed	-	-
Wood Thrush	<i>Hylocichla mustelina</i>	L3	Threatened	Special Concern	-
American toad	<i>Bufo americanus</i>	L4	Not Assessed	-	-
Barn swallow	<i>Hirundo rustica</i>	L4	Threatened	Threatened	-
Big Brown Bat	<i>Eptesicus fuscus</i>	L4	Not Assessed	-	-
Blue-grey gnatcatcher	<i>Polioptila caerulea</i>	L4	Not Assessed	-	-
Chimney swift	<i>Chaetura pelagica</i>	L4	Threatened	Threatened	Threatened
Common Yellowthroat	<i>Geothlypis trichas</i>	L4	Not Assessed	-	-
Cooper's hawk	<i>Accipiter cooperii</i>	L4	Not at Risk	-	-
Eastern chipmunk	<i>Tamias striatus</i>	L4	Not Assessed	-	-
Eastern cottontail	<i>Sylvilagus floridanus</i>	L4	Not Assessed	-	-
Eastern Kingbird	<i>Tyrannus tyrannus</i>	L4	Not Assessed	-	-
Eastern Wood-Pewee	<i>Contopus virens</i>	L4	Special Concern	-	-
Great Crested Flycatcher	<i>Myiarchus crinitus</i>	L4	Not Assessed	-	-
Great horned owl	<i>Bubo virginianus</i>	L4	Not Assessed	-	-
Green heron	<i>Butorides virescens</i>	L4	Not Assessed	-	-
Grey Catbird	<i>Dumetella carolinensis</i>	L4	Not Assessed	-	-
Hairy woodpecker	<i>Picoides villosus</i>	L4	Not Assessed	-	-
House sparrow	<i>Passer domesticus</i>	L4	Not Assessed	-	-
Indigo Bunting	<i>Passerina cyanea</i>	L4	Not Assessed	-	-
muskrat	<i>Ondatra zibethicus</i>	L4	Not Assessed	-	-
North American Beaver	<i>Castor canadensis</i>	L4	Not Assessed	-	-
Northern Flicker	<i>Colaptes auratus</i>	L4	Not Assessed	-	-
Northern rough-winged swallow	<i>Stelgidopteryx serripennis</i>	L4	Not Assessed	-	-
Pine warbler	<i>Setophaga pinus</i>	L4	Not Assessed	-	-
Red squirrel	<i>Tamiasciurus hudsonicus</i>	L4	Not Assessed	-	-

Common Name	Scientific Name	L Rank	COSEWIC* Status	Endangered Species Act Status	Species at Risk Act Status
Red-breasted nuthatch	<i>Sitta canadensis</i>	L4	Not Assessed	-	-
Red-eyed Vireo	<i>Vireo olivaceus</i>	L4	Not Assessed	-	-
Rose-breasted grosbeak	<i>Pheucticus ludovicianus</i>	L4	Not Assessed	-	-
Savannah Sparrow	<i>Passerculus sandwichensis</i>	L4	Not Assessed	-	-
Spotted Sandpiper	<i>Actitis macularia</i>	L4	Not Assessed	-	-
Swamp sparrow	<i>Melospiza georgiana</i>	L4			
Tree Swallow	<i>Tachycineta bicolor</i>	L4	Not Assessed	-	-
White-breasted nuthatch	<i>Sitta carolinensis</i>	L4	Not Assessed	-	-
White-tailed deer	<i>Odocoileus virginianus</i>	L4	Not Assessed	-	-
Wood Duck	<i>Aix sponsa</i>	L4	Not Assessed	-	-
woodchuck	<i>Marmota monax</i>	L4	Not Assessed	-	-

*Committee on the Status of Endangered Wildlife in Canada

Table 5-11: Fauna species of concern within the Regional Study Area (incidental observations)

TRCA 2014

Common Name	Scientific Name	L Rank	COSEWIC* Status	Endangered Species Act Status	Species at Risk Act Status
Milksnake	<i>Lampropeltis triangulum</i>	L3	Special Concern	Special Concern	Special Concern

*Committee on the Status of Endangered Wildlife in Canada

5.2.7 Non-native Species

“Non-native”, “exotic”, or “alien” refers to species that do not naturally occur in an ecosystem. “Invasive” species are native or non-native plants or animals that aggressively establish themselves in an ecosystem at the expense of native species and natural functions.

Approximately 60% of the Don River watershed vascular plant species are native and 40% are non-native, many of which are invasive (TRCA, 2009b). Habitat disturbances associated with agriculture and urbanization are generally followed by an increase in invasive species establishment, as is the case with urbanized areas within the Don River watershed. As a result, native species are less able to compete. Therefore, succession in such areas is dominated by invasive species (TRCA, 2009b).

Generally, non-native flora species are present in all vegetation communities within the Regional Study Area, frequently dominating a given community. Examples include Common Reed Mineral Shallow Marsh, Exotic Deciduous Thicket and a number of Dry-Fresh Exotic Deciduous Forest communities (Section 5.2.2).

Invasive species (many of which are exotic) found within the Regional Study Area include garlic mustard, dog-strangling vine, European buckthorn, Manitoba maple, tree-of-heaven, autumn olive, multi-flora rose and common reed. Invasive species tend to dominate sites indefinitely, readily outcompeting native species in all types of habitat (TRCA, 2009b). Many of the invasive species found within the Regional Study Area are also non-native.

Exotic fauna species documented within the Regional Study Area include European Starling and House Sparrow (Section 5.2.4). Finally, non-native Red-eared slider turtles, though not reported, may be present within the wetland areas of the Regional Study Area.

5.3 Physical Environment

5.3.1 History and Physiography of the East Don River Valley System

The East Don Trail EA Regional Study Area is located mainly in the Lower East Don River subwatershed and includes small portions of the Taylor-Massey Creek, Lower West Don and Lower Don River subwatersheds, all located within the Don River Watershed. Existing Georgian Bay Bedrock throughout the area was laid down 450 million years ago as depositional sediments, and later covered by waves of glaciation which buried the bedrock beneath thick glacial till. The Don River formed approximately 13,000 years ago as glacial lobes within the Oak Ridges Moraine retreated and the two streams comprising the East and West Don Rivers began flowing, cutting through the glacial till. Specific to the Regional Study Area, the East Don River converged with the Lake Iroquois shoreline which extended into the upper portion of the Study Area (Figure 5-11), and was much larger than the existing Lake Ontario footprint. When the shores of Lake Iroquois began to shrink approximately 9,000 years ago, sand, silt, and clay deposits were left behind, covering the till and bedrock, and the East and West Don Rivers extended downstream, cutting through the sandy deposits. As the East Don cut its way through the sandy shoreline deposits, it converged with the West Don River and Taylor Massey Creek at the area known today as the *Forks of the Don*.

The current physiographic conditions of the East Don within the study extent are illustrated in Figure 5-12. The Regional Study Area is located in the South Slope and the Iroquois Sand Plain physiographic regions (Chapman and Putnam, 1984).

Over the past 200 years, the Don River watershed has been subject to external pressures from human settlement, changing from a natural ecosystem to a highly urbanized watershed. Now home to approximately 1.2 million residents, the majority of the watershed is devoted to impervious land uses with very little undeveloped land remaining. At present time, the predominant land use within the Regional Study Area is medium to high-density residential development. Industrial, institutional, and commercial development is also found within the tablelands adjacent to the Lower East Don River

valley, while the valley itself contains parkland, natural areas and a golf course (Flemingdon Park Golf Club). The current land uses within the Regional Study Area are discussed in more detail in Section 5.5.2.

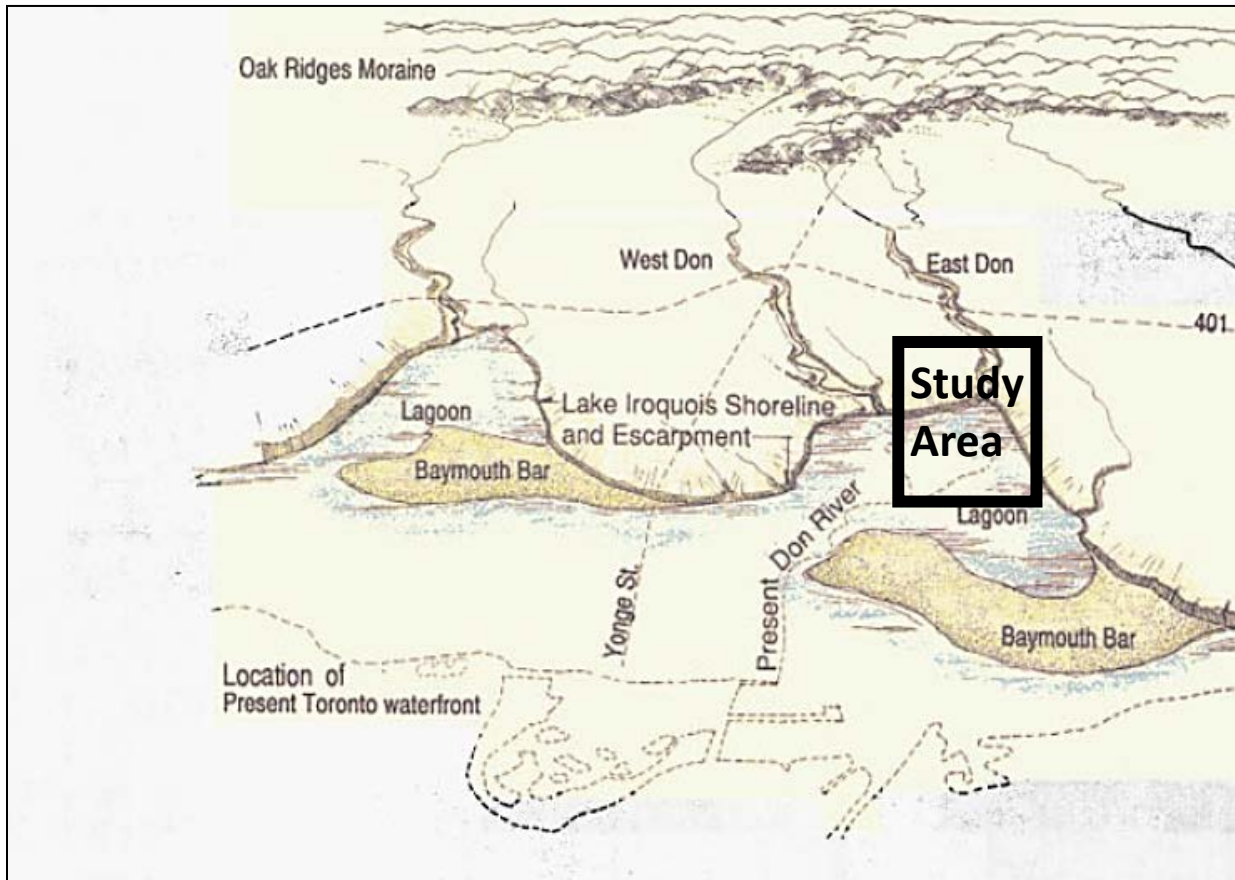


Figure 5-11: Lake Iroquois shoreline extending through the East Don Trail Environmental Assessment Study Area

Source: Royal Commission on the Future of Toronto Waterfront 1992

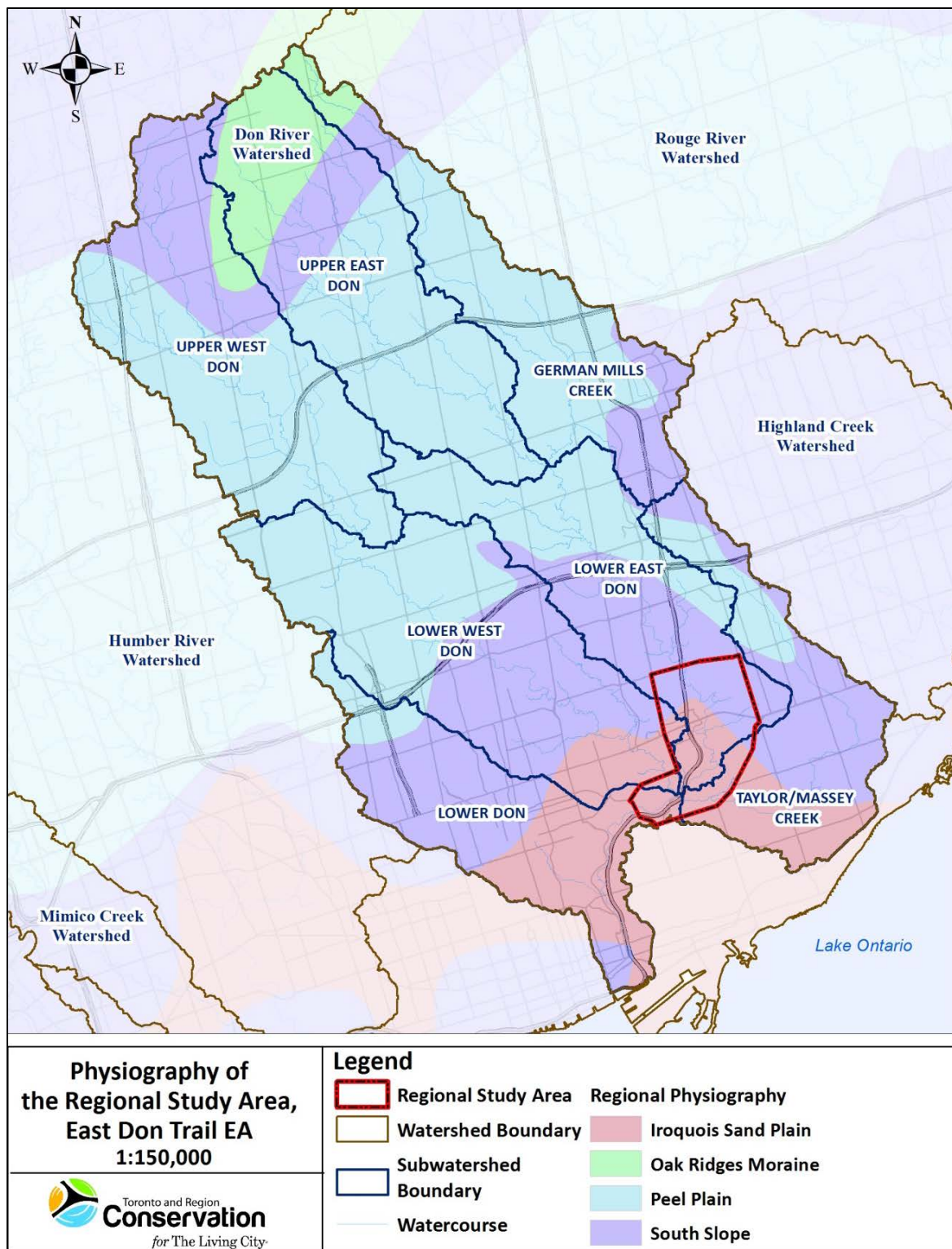


Figure 5-12: Physiography of the East Don Trail EA Regional Study Area

Source: TRCA 2013

5.3.2 Surface Water

Water Levels – High/Storm

Stream flow conditions are divided into high/storm flow periods and baseflow periods. During high/storm flow periods water from precipitation and/or snowmelt result in increased stream flow.

Don River storm flows are known to be flashy as the water level rises quickly in response to rainfall. As a result, a number of flood vulnerable areas are present throughout the watershed. For example, the DVP south of Lawrence Avenue East and a section of the Metrolinx/GO rail line, south of the Hydro Corridor, are known to flood under the regional storm conditions. Hydraulic modelling (MacViro Consultants Inc., and CH2M HILL Canada Ltd., 2003) indicates that the regional flood elevation at the Don Valley Parkway is 113.19 m, which results in approximately 3.4 m of flooding. Similarly, the regional flood elevation at the Metrolinx/GO rail line is 95.22 m, which results in approximately 2.3 m of flooding. Site-level hydraulic assessment results are provided in Section 5.3.3.

In 2004, TRCA updated the hydrologic modelling of the Don River Watershed and reported increased peak flows in the Don River Hydrology Update (Marshall Macklin Monaghan, 2004). Table 5-12 lists the peak flows through the Regional Study Area during various storm events.

Table 5-12: Storm flows for the East Don River from Lawrence Avenue East to the confluence with Taylor/Massey Creek

Source: Marshall Macklin Monaghan 2004

Storm Event	2 Year	5 Year	10 Year	25 Year	50 Year	100 Year	Regional
Peak Flow (m³/s)	79.62	122.3	155.55	204.22	241.22	283.32	861.86

Existing Surface Drainage

The Don River watershed has changed from a natural system to an almost completely urbanized watershed where the majority of land surface within urban areas is highly impervious. Accordingly, the urban portion of the Regional Study Area is primarily drained by a network of storm sewers while the natural areas within the valley lands are drained by surface swales (Figure 5-13). It was not until the 1980s that development planning and stormwater management began to mitigate water quantity and quality impacts, and address alterations to river morphology, groundwater contributions, and aquatic and terrestrial habitats. As the majority of development within the Regional Study Area occurred prior to the 1970s, it lacks modern stormwater controls.

Additionally, some storm sewers and sanitary sewers in the southernmost portion of the Regional Study Area were constructed as combined sewers which carry both sanitary

flows (during dry conditions) and stormwater flows (during wet conditions). Here, storm runoff is fully or partially intercepted by the local combined sewer network and carried to the Ashbridges Bay Treatment Plant via the Don Trunk Sanitary Sewer System (see Section 5.5.3 for further information on the local sanitary sewer system).

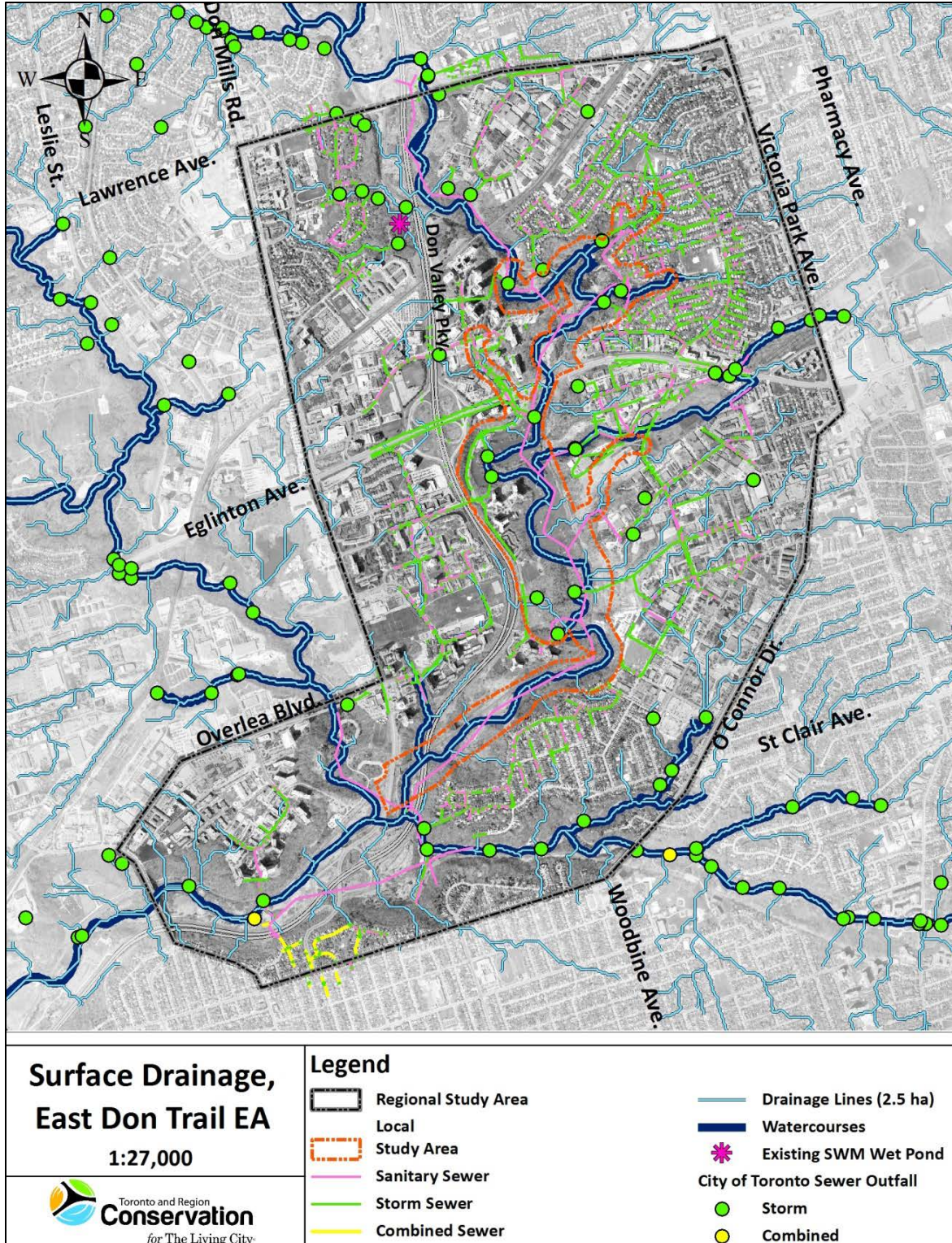


Figure 5-13: Existing surface drainage in the Regional Study Area

Source: TRCA 2013, City of Toronto 2011

In 2004, the City of Toronto WWFMMP (City of Toronto, 2003) recommended a number of stormwater control retrofits, including end-of-pipe, conveyance and lot level controls, and stream restoration sites. Most recently, the 2009 Don River watershed plan endorsed the recommendations of the WWFMMP and recommended various natural heritage restoration activities.

Specifically, within the Regional Study Area, a stormwater management pond located in the Moccasin Trail Park was recently retrofitted. In addition, an area between Lawrence Avenue and Eglinton Avenue west of Victoria Park is currently undergoing an Environmental Assessment to address chronic basement and surface flooding as well as improve stormwater runoff quality.

Surface Water Quality

Surface water quality within TRCA's jurisdiction is monitored via TRCA's Regional Watershed Monitoring Program as well as the Provincial Water Quality Monitoring Network.

Monitoring results indicated that a number of water quality parameters exceeded guideline values. In particular, Provincial Water Quality Objectives were not met for Phosphorus (possibly indicative of sanitary sewage inputs into water), *Escherichia coli* (indicative of sewage contamination), and Copper, Zinc and Iron levels (associated with urban sources). As well, Nitrates and Chloride exceeded the Canadian Water Quality Guidelines. Further, examination of local benthic macroinvertebrate communities showed that they are largely composed of pollution-tolerant organisms, which, in turn, signifies potentially re-occurring organic pollutant inputs into the streams. Details can be found in **Appendix B**.

Overall, the monitoring results indicate that the low water quality is linked to the high amount of urbanization within the Regional Study Area and surrounding land and that the non-point sources of contamination such as urban runoff continue to be the largest contaminant contributor to stream water (TRCA, 2011b). These results are consistent with the general state of surface water quality within the entire Don River watershed, which is considered to be "Very Poor" (TRCA, 2013b). This has been attributed to the fact that approximately 96% of the watershed is urbanized, largely built up or paved over, as well as the lack of stormwater management controls in the majority of urban neighbourhoods.

5.3.3 Geomorphology, Hydraulic Parameters, and Erosion Hazards

Urbanization throughout the Don River watershed has resulted in increased rates of stream form change and erosion. In general, development has caused widening and down cutting of channels, increased downstream sediment loads, destabilization of vegetation, and loss of habitat for terrestrial and aquatic species.

This section provides a summary of the existing geomorphic, geotechnical and hydraulic conditions of the Lower East Don River and its integration within the valley setting specific to the Regional and Local Study Areas. The data included in these sections were obtained through the detailed geomorphic assessment conducted for the Study Area in 2013. The detailed report is found in **Appendix B**.

5.3.3.1 Fluvial Geomorphology Evaluation of Study Area

For the purposes of conducting the geomorphic assessment, the Lower East Don River watercourse within the Local Study Area has been divided into sections of similar channel form, floodplain access, adjacent land use and valley setting, referred to as reaches. Reaches were initially segmented based upon a review of base mapping and aerial imagery analysis, and adjusted for accuracy in the field. In total, five reaches were defined within the Regional Study Area, as illustrated in Figure 5-14. Rapid Geomorphic Assessments (RGAs) were carried out on each of the reaches to determine channel-stability conditions, changes, and mode of adjustments.

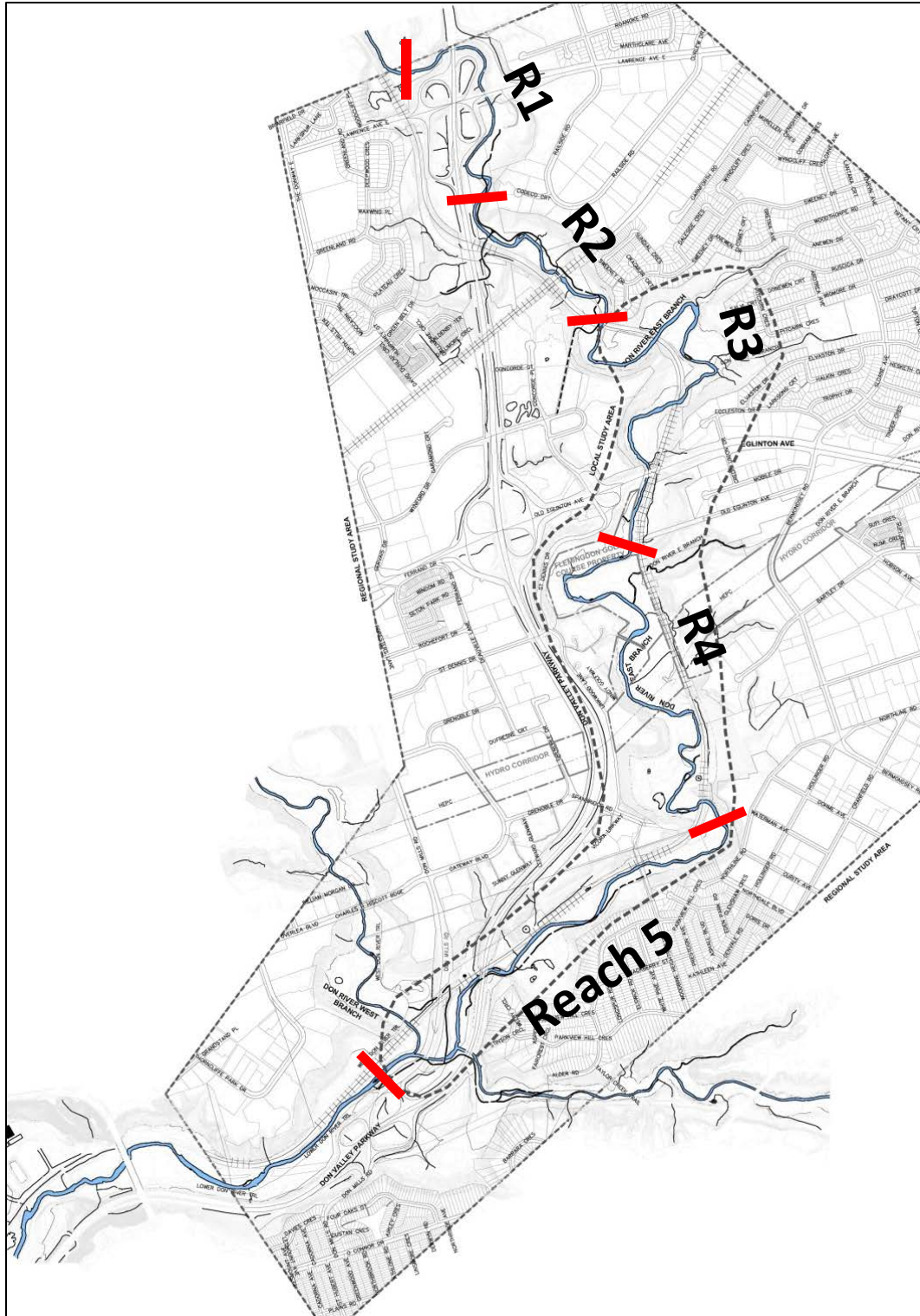


Figure 5-14: Five Lower East Don River reaches defined within the Regional Study Area extent. Reach breaks in red
 Source: Aquafor Beech Limited 2013

5.3.3.2 Geomorphic Conditions

Summaries of the geomorphic conditions specific to each of the five reaches are outlined below.

Reach 1 – Upstream DVP Crossing to Concrete Weir

The upstream and downstream extents of Reach 1 are delineated by concrete weirs used for grade control and slope reduction of the channel and convey flow through a confined corridor aligned around Lawrence Avenue access ramps of the DVP. This reach contains a significant amount of hard lining and manipulation to accommodate urbanization and development within and adjacent to the valley.

An RGA was conducted and the stability index showed evidence of stability largely attributed to the engineered sections, and areas of local instability where the channel is unlined. A summary of key geomorphic features along with representative photos and representative channel morphometrics can be found in the detailed report provided in **Appendix B**.

Reach 2 – Concrete Weir to Milne Hollow Trail Head

Reach 2 is segmented or differentiated from Reach 1 as it is primarily composed of natural bed and banks with only intermittent areas of hard lining and manipulation. The valley setting extends away from the infringement of the DVP, with a rail line along the top of the westerly valley slope and residential developments atop the east. The existing East Don Trail extends along the right (east) overbank within the floodplain, with two bridge crossings near the upstream and downstream extents of the reach. Reach 2 key geomorphic aspects, channel morphometrics and photos can be found in the detailed report (**Appendix B**).

The reach is defined through RGA as moderately stable with the primary modes of adjustment indicative of widening and planform alteration. There have been some minor alterations to the form of the channel; however, they are more recent than those observed within Reach 1 and in turn more consistent with ‘softer’ methods of shaping the channel than applying concrete and armourstone linings.

Reach 3 – Existing East Don Trail to Flemingdon Park Golf Club Property

The most distinctive characteristic change in Reach 3 from the two upstream reaches is the increase in valley width and meander amplitude. Reach 3 is largely characterized as a natural channel segment where long, swooping valley wall contacts exposed steep erosion scars composed of sands and silts deposited along the lake Iroquois Shoreline. Adjacent to and downstream of the scars, coarse riffle material is embedded in sand deposits from the active valley scars. These sands are also observed deposited throughout the active floodplain areas. The direct impacts on the channel throughout the reach are minimal and include two rail line crossings and the Eglinton Avenue bridge;

however, indirect impacts from urbanization and associated changes in hydrologic regime have likely led to increasing channel activity and overall capacity.

Reach 3 RGA is overall unstable. Key geomorphic aspects, representative channel morphometrics and photos of this Reach can be found in the detailed report (**Appendix B**).

Reach 4 – Flemington Park Golf Property to Easterly Bend in Valley Direction

Reach 4 has a similar valley formation and meander planform as Reach 3. However, conditions within both the channel and floodplain setting differ greatly, as land use includes a golf course with narrow riparian corridors, a number of bridge crossings, short grass floodplain, and intermittent areas of channel hardening. In addition to alterations to facilitate the golf course, stacked armourstone has been applied along the base of the westerly valley toe within the Hydro One lands and rip rap and armourstone have been applied along the easterly valley toe to protect the rail line which runs longitudinally along the base of the east valley slope.

The channel appears to be largely unstable (as defined by the RGA), with dominant modes of transition including widening and planform adjustment. Reach 4 key geomorphic aspects, representative channel morphometrics and photos are provided in the detailed report (**Appendix B**).

Reach 5 – Easterly Bend in Valley to Confluence with West Don River and Taylor Massey Creek

The valley setting of Reach 5 differs greatly from the upstream Reaches 3 and 4. Within Reach 5 the setting is much narrower, confined on the northerly side by the rail line and southerly side by the natural valley slope. This section of channel maintains short meanders and a low sinuosity similar to Reaches 1 and 2. Recently, an access route to facilitate City of Toronto infrastructure maintenance was built along the south valley toe which involved significant channel realignment and areas of bank stabilization to be fixed in place.

Within this section, the channel narrows and deepens in comparison to the upstream Reaches 3 and 4. The meander amplitude is short due to the confinement within the valley; however, the slope of the channel remains generally consistent with upstream.

Reach 5 RGA was found to be overall moderately stable. Reach 5 key geomorphic aspects, channel morphometrics and photos are provided in the detailed report (**Appendix B**).

Reaches 3, 4 and 5 Longitudinal Profile

In addition to the synoptic survey completed to define the existing conditions, thalweg points spaced at key areas throughout Reaches 3, 4 and 5 were surveyed. A general

longitudinal profile from the survey is presented in Figure 5-15 and is consistent with slope estimates taken from base mapping and hydraulic model outputs (i.e., slope of 0.26%).

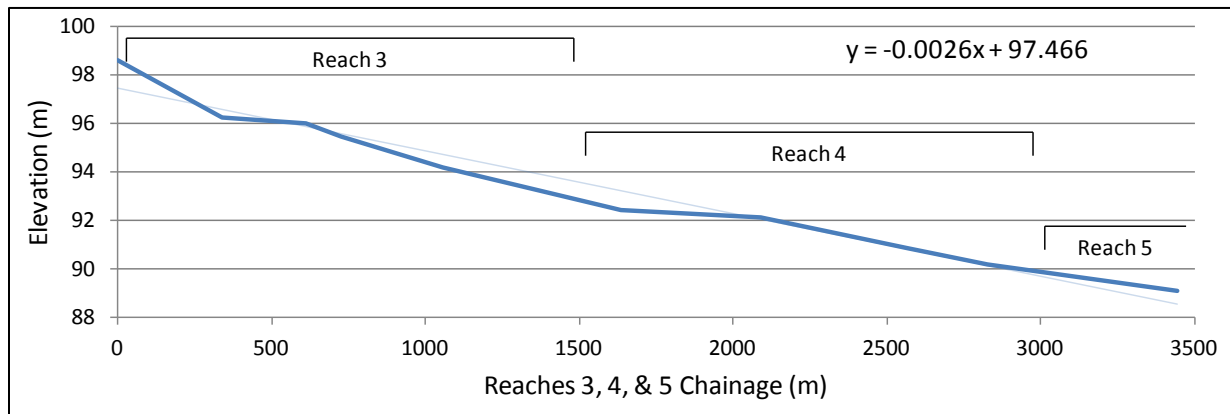


Figure 5-15: Longitudinal profile from survey of Reaches 3, 4 and 5

Source: Aquafor Beech Limited 2013

5.3.3.3 Erosion Assessment

A detailed erosion assessment has been undertaken through the review of historical and contemporary photographs to understand the morphology of the channel and enable predictions of future channel changes and modifications.

Channel meander migration brought on through bank erosion processes can significantly alter channel planform over time. Understanding the rate at which the channel migrates will aid in trail design, enabling appropriate buffers or erosion allowances between the trail and edge of the bank, ensuring bridge spans and abutments are appropriately sized and placed to maximize the longevity of the infrastructure without the need for mechanical manipulation.

The assessments focused on Reaches 3, 4 and 5 as these are the extents where the trail is proposed. Reaches 1 and 2 have the existing East Don Trail alongside the channel.

From 1941 to 2011, land use within the table lands changed from agricultural to industrial and residential, bringing about road and infrastructure crossings of the river. Channel hardening occurred in some areas, with valley wall erosion scars becoming more predominant in non-protected areas of contact. Based on 2011 conditions, the average erosion rate for Reach 3 was determined to be 0.11 m/year, 0.31 m/year for Reach 4 and 0.14 m/year for Reach 5.

The detailed description of the local development progression and channel morphology change, and individual stream bend erosion rate estimates and modes of migration are provided in the detailed geomorphic conditions report (**Appendix B**).

5.3.3.4 Hydraulic Assessment of Geomorphic Indices

The hydraulic (Hydrologic Engineering Centers River Analysis System or HEC-RAS) model was used to provide insight into hydraulic conditions within the channel under low and high flood flow conditions. When designing a trail system, in addition to applying appropriate erosion allowances to ensure that migration of the channel does not inhibit long-term stability, it is also paramount to understand where areas of frequent flooding occur, and alternatively where areas beyond flood levels exist. In an effort to understand these hydraulic conditions, the flood level extents have been plotted for the 2 year, 5 year and Regional flood flows, illustrated in Figure 5-16. The quantity of flow for each return period (i.e., the flow expected to occur once every 2 years – 2 year return, 5 years – 5 year return, etc.) is defined in Table 5-13.

Table 5-13: East Don River flood flow estimates

Source: TRCA 2013

Return	2 year	5 year	10 year	25 year	50 year	100 year	Regional
Flow (m ³ /s)	79.6	122.3	155.6	204.22	241.22	283.32	861.9

Further review of the hydraulic conditions within each reach (e.g., competence to transport bed material) is provided in the detailed report (**Appendix B**).

Notably, Reach 1, which is largely hard lined and does not have the same level of floodplain access as the other reaches, averages the highest shearing and velocities within the channel of all the reaches under all flood flow conditions. Within Reaches 2 through 5, where the channel is well connected to more natural floodplains, extreme hydraulic conditions within the channel are lessened through access to the floodplain as well as more natural bed and bank form which provide increased levels of roughness. Further examination of Figure 5-16, which focuses on Reaches 3 – 5 illustrates the following key points:

Reach 3

- Both the 2 and 5 year return periods intermittently overtop banks, spilling partially across the valley floor.
- The Regional flood extends across the entire valley bottom, with significant backwater effects at both rail crossings.
- Minimal backwater conditions occur from the rail line crossings or Eglinton bridge for the 2 and 5 year.
- At the Eglinton crossing, the Regional flows are significantly constricted, from a top width of 150 m upstream to less than 50 m under the crossing. *This information will be important in the evaluation of alternative trail alignments and types of materials selected for the trail.*

Reach 4

- Throughout the Reach the 2 and 5 year floods extend over the banks generally 3-4 times the channel width, wider than observed in Reach 3.
- Similar to Reach 3, the Regional flood extends across the valley floor.
- The Regional flood overtops the downstream rail line crossing. The 2 and 5 year floods do backwater behind the crossing, however, do not overtop.

Reach 5

- The 2 and 5 year floods are contained to the south of the rail line. The Regional extends across both the north and south sides of the rail line across the valley.
- The existing trail / access route is primarily out of the 2 and 5 year flood levels, with intermittent areas expected to be wetted.
- South of the confluence with Taylor Massey Creek the Regional water level floods over the DVP.
- Given that within Reach 5, infrastructure (including the DVP and CNR rail line) is at risk during the Regional flood, *alternative trail alignments will need to be carefully assessed and evaluated to ensure that flood risk is not increased.*

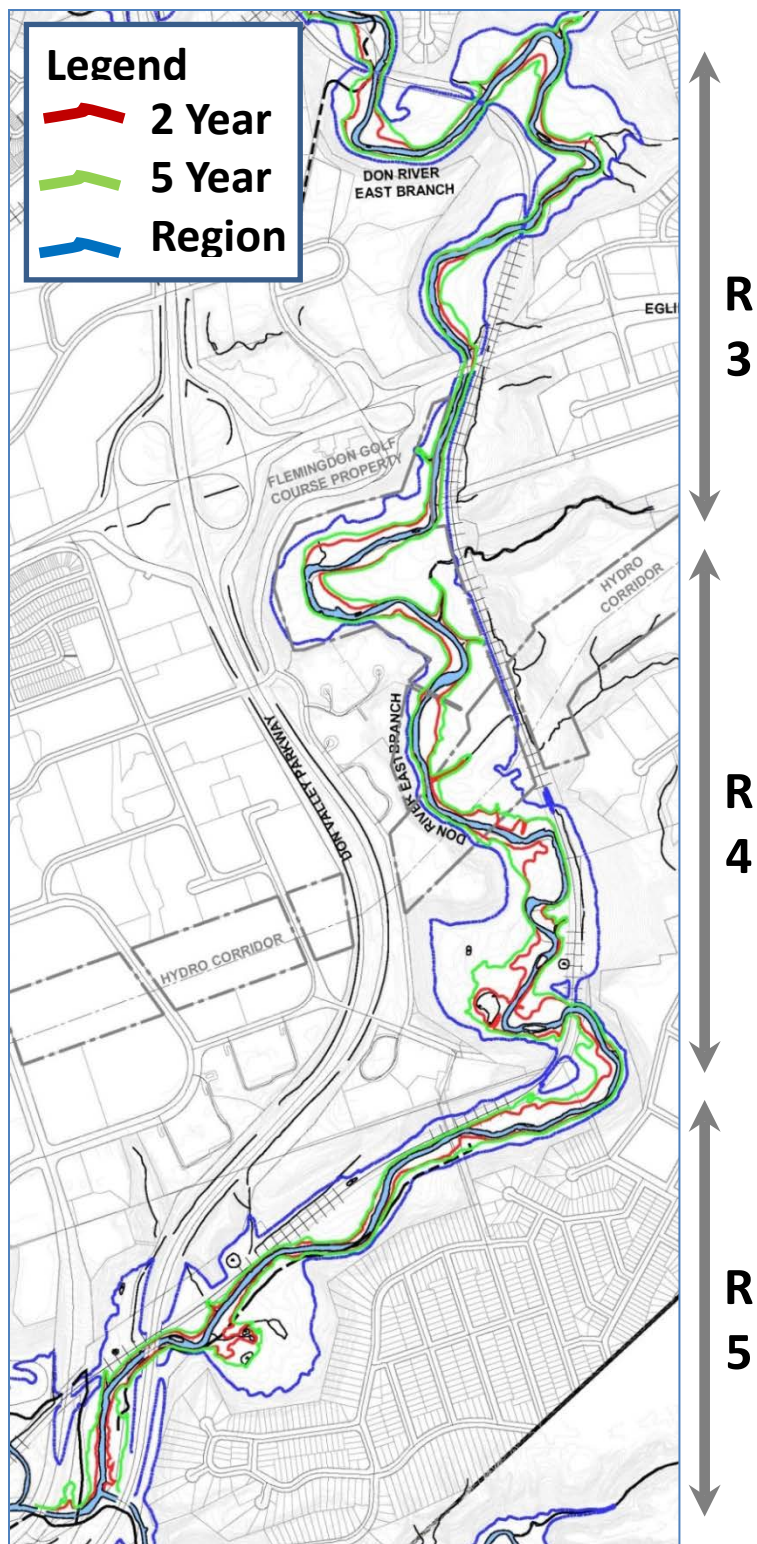


Figure 5-16: Hydraulic assessment of 2 year, 5 year, and Regional Flooding Extents

Source: Aquafor Beech Limited 2013

5.3.3.5 Sizing of River Crossings for Reaches 3, 4 and 5

In order to maintain the trail within the valley setting, crossing structures will be required at select locations. Generally, crossings are placed perpendicular to riffle sections, and not around the outside of bends as bends generally experience higher rates of migration and in turn would necessitate longer spans. Also, it is generally preferred to have the bridge perpendicular to flows, not only under low conditions but also during higher conditions for overall stability of the structure. With regard to the specific sizing of the crossings, this will be completed during detailed design. However, high-level estimates of the crossings sizes required were determined for Reaches 3, 4, and 5.

Table 5-14 provides crossing size estimates based on the maximum and minimum channel widths, and on whether the bridge will be designed to a 25, 50, or 100 year erosion limits. In order to apply the offset in the expected direction of the channel migration, we have also included an allowance for a 2:1 horizontal to vertical (H:V) slope offset from the opposing bank in which the erosion allowance is applied. This reduces the requirement to harden the bank around the abutments. Conservative values were used for representative channel widths, and there may be an opportunity during the detailed design phase to reduce the span (and, in turn, cost) through specific stable riffle sections where the channel is well defined and banks do not show signs of active stress and erosion.

Table 5-14: Approximate bridge spans based on maximum and minimum channel widths and erosion allowances

Source: Aquafor Beech Limited 2013

Reach	Channel Width (m)	Average Erosion Rate (m/yr)	25 year offset (m)	50 year offset (m)	100 year offset (m)	Stable Opposing Bank (2:1 offset) (m)	25 Year Span	50 Year Span	100 Year Span
3	20 – 36	0.11	2.75	5.5	11	3	25.8–41.8	28.5-44.5	34.0-50.0
4	28 – 36	0.31	7.75	15.5	31	3	38.8-46.8	46.5-54.5	62.0-70.0
5	24 – 32	0.14	3.5	7	14	3.5	31.0-39.0	34.5-42.5	41.5-49.5

5.3.3.6 Geotechnical Slope Hazards within the Study Area

A synoptic level assessment of the Regional Study Area was performed to document potential areas of geotechnical hazards within the confined valley system. During the investigation, numerous areas where the Don channel was coincident with the valley toe were observed, some of which were actively eroding the valley toe and steepening the inclination of the slope. These areas were mapped, photographed, and surficial characteristics assessed for further discussion of slope stability. The location and extents of the sloped areas are illustrated in Figure 5-17, with representative photographs compiled in Figure 5-18 and Figure 5-19. However, only erosion sites that pose a threat to the construction and maintenance of the trail will be addressed with geotechnical work. Reach 3 contains the most number of valley wall scarps with five distinct areas, Reach 4 has three areas of valley wall contact, and Reach 5 has no significant slope risks. However, previous remediation works have occurred along Reach 5 to stabilize a scarp area where private residences were at risk. This slope segment is identified in green (No. 10) in Figure 5-17.

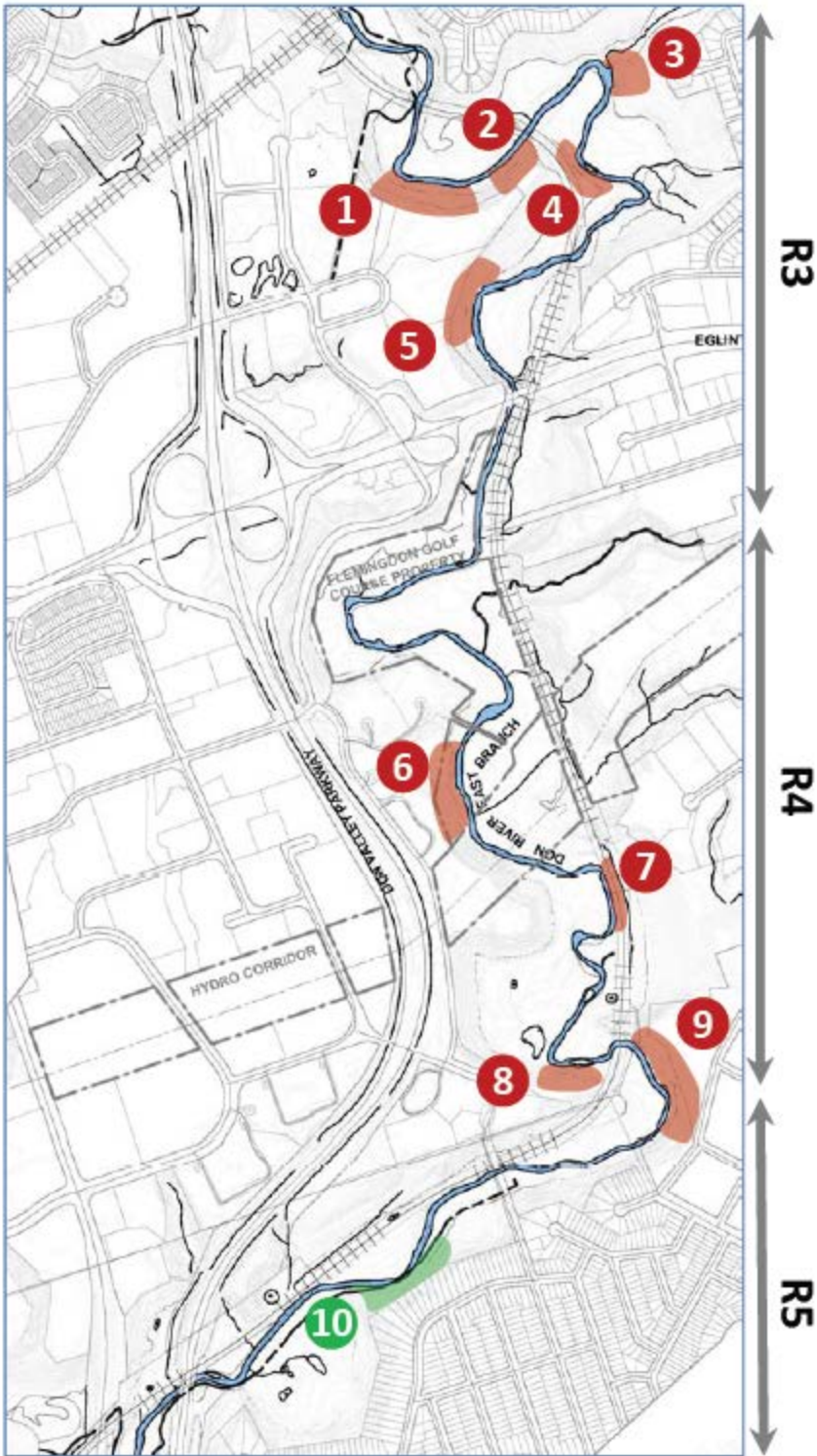


Figure 5-17: Areas of potential risks due to slope stability caused by East Don River toe erosion

Source: Aquafor Beech Limited 2013



1. West Slope at Concord Place.



2. West Slope upstream Rail Crossing #1.



3. East Slope at Victoria Village.



4. West Slope at base of CN Rail.



5. East Slope at Wynford Heights.



6. West Slope Linkwood Lane.

Figure 5-18: Photo compilation of valley slope contacts – Sites 1 to 6

Source: Aquafor Beech Limited 2013



7. East Slope along CN rail.



8. West Slope valley wall contact.



9. East Slope along City Northline property.

Figure 5-19: Photo compilation of valley slope contacts – Sites 7 to 9
Source: Aquafor Beech Limited 2013

Detailed site descriptions and slope stability analysis results are provided in the technical report (**Appendix B**).

Key Findings and Considerations

Key findings and considerations with respect to slope conditions and potential trail alternatives are as follows:

Site 1 – West Slope

- Consideration should be given to trail alternatives within the valley along the opposing floodplain as opposed to above/beyond the top of the slope at this site.
- Consideration should be given to trail proximity should slope remediation be required in the future to minimize risks to the Concord Place residences. Remediation could involve toe protection, slope re-grading, and minor realignment of the channel.

Site 2 – West Slope

- Consistent with Site 1, consideration should be given to trail alternatives in the floodplain of the opposing bank.
- Similar consideration should be given to ensure trail is not routed too close to the opposing bank.

Site 3 – East Slope

- Consideration should be given to trail alternatives remaining in the valley system and crossing the channel to the opposing floodplain from the Site 3 scar.
- Existing, unmaintained trails were identified along the top of the scar. These unmaintained trails extend within highly unstable areas and in some areas are undercut and at risk of mass failure.
- If considered, a connection to the trail from the Victoria Village neighborhood may require further geotechnical investigation and potential slope stabilization measures, or fencing measures to limit the use of the unmaintained trails along the at risk areas.

Site 4 – West Slope

- The long-term stable slope estimate for this site extends into the terrace to the base of the Metrolinx rail line.
- If the chosen (preferred) trail alternative extends between the top of the scar and the rail line in this area, further subsurface investigation and analysis would be required along with slope stabilization measures to protect the long term lifespan of the trail and rail line.

- If the chosen (preferred) trail alternative is routed within the opposing floodplain, stabilization and channel realignment may be required to ensure long-term stability.

Site 5 – West Slope

- This is the least active of the scars within Reach 3 as the valley toe has been lined with rip rap protection.
- Consideration should be given to trail alignment alternatives within the opposing floodplain which are readily accessible to flood relief.

Site 6 – West Slope

- Slope protection works have occurred within the downstream portion of the valley wall contact; however, the upstream section is actively slumping.
- Similar to Site 3, unmaintained trails extend along the top of the scars, and if a connection is to be considered to the Linkwood residential area, potential stabilization or mitigation should be considered.
- The slope is not likely to impact trail alternatives or the Hydro Corridor Connection.

Site 7 – East Slope

- Slope protection works have minimized risks to the Metrolinx rail line.
- Trail alternatives within this segment should consider routes within the valley in the floodplain opposing this slope.

Site 8 – West Slope

- The bend of the River is in direct contact with the valley slope with an oversteepened scar in this location ranging from 2 to 4 m in height. Above this, the slope maintains characteristics of stability including a densely vegetated buffer between the channel and the apartment complexes.
- The trail alternatives within this segment should be located upstream of the valley wall contact or on the opposing floodplain.

Site 9- East Slope

- The most significant scar within the Study Area, slope stabilization may be required to protect the City's Northline Road property.
- The trail alternative(s) within this area should be located within the valley on the opposing floodplain.
- Should a connection be proposed east of the rail line over the slope to gain access to the valley setting, significant restoration of the slope would be required.

- Consideration should be given to trail proximity as well as tunnel placement of the rail line should slope remediation be required in the future. Remediation may involve toe protection, slope regrading, and minor realignment of the channel.

5.3.3.7 TRCA Erosion Monitoring

The widening and down cutting of channels can result in damage to and/or failure of many of the present bank protection works that have been installed over the past century. These erosion control structures are engineered structures and are monitored by TRCA on an annual basis to assess their condition, stability, and maintenance needs. Each structure is assigned a conditions ranking and a maintenance priority ranking.

TRCA also collects information on areas affected by erosion where public safety may be at risk. Erosion hazard sites are inventoried, assessed, and monitored on an annual basis by staff to identify the highest priority sites. Each year TRCA determines the sites that rank the highest to determine which sites should receive further studies and erosion control works.

Within the Regional Study Area, TRCA monitors 15 erosion control structures and three erosion hazard sites (Figure 5-20). Erosion control structures monitored include revetments (rip rap, armourstone, gabion basket, fieldstone, and brush layer), slope treatments (earth fill, French drains, and vegetated rip rap), retaining walls (gabion basket), drainage channel (fieldstone), and buttress (vegetated rip rap). The structures are evaluated in terms of their function as intended (stability) as well as maintenance priority based on risk to property and/or public safety. At present time, none of the erosion control structures are in need of urgent maintenance or present a significant risk to property integrity or public safety.

Likewise, the erosion hazard sites do not currently present a great hazard risk to the existing structures. Erosion assessment at 30 Northline Road as part of the July 8, 2013, storm damage assessment indicated that the risk to existing structures is low in the short term and moderate in the long term.

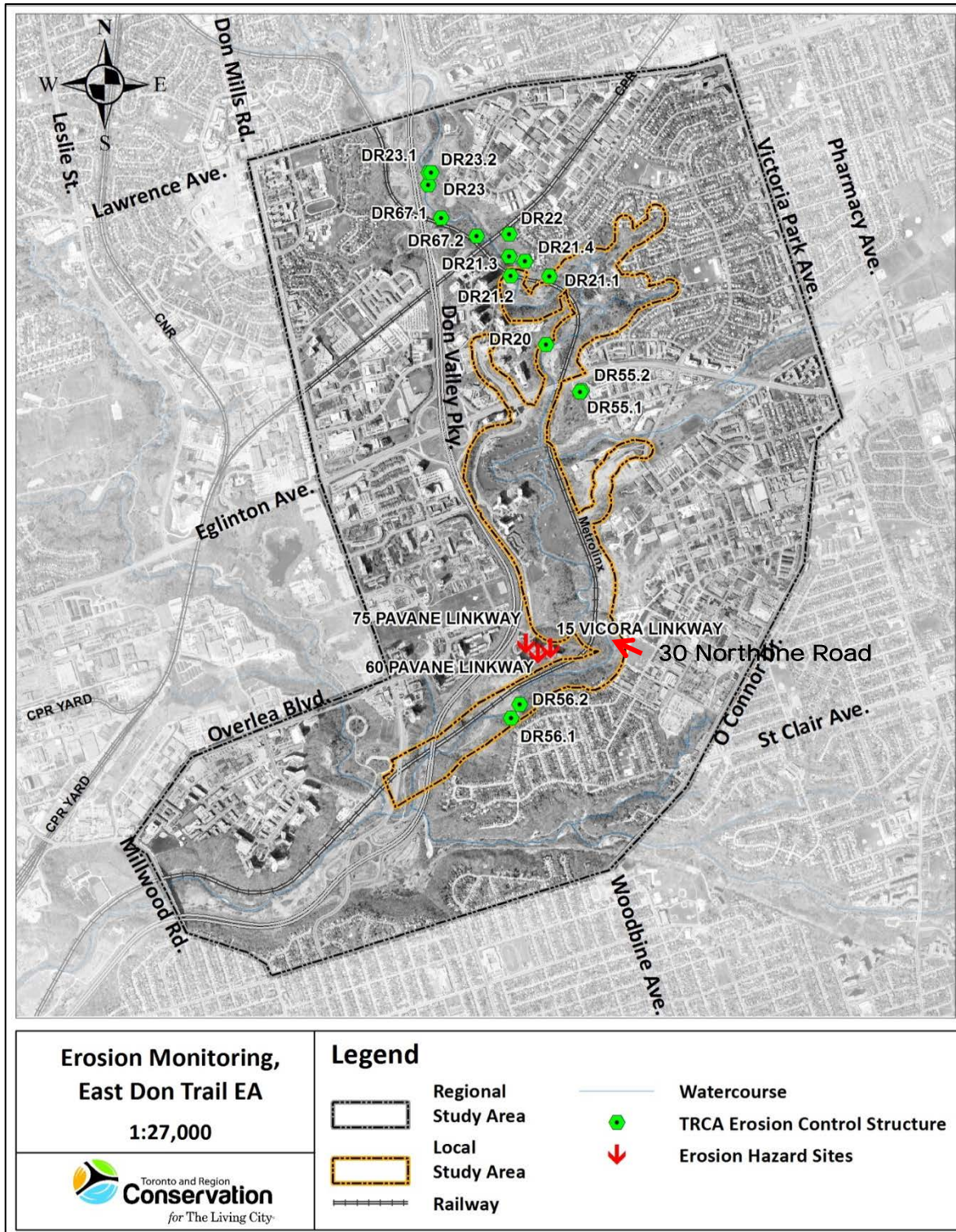


Figure 5-20: Erosion control structures and erosion hazard monitoring sites within the Regional Study Area

Source: TRCA 2013

5.3.4 Soil and Groundwater

The project activities are not expected to have a major impact on the local subsurface conditions, including groundwater and soil. As a result, a detailed investigation will not be carried out, with the exception of geotechnical analysis at the proposed river and rail line crossing locations to inform detailed design (see Section 1.1.1.1).

5.3.5 Noise

The main sources contributing to the environmental noise climate (i.e., background sound) within the Regional Study Area include the local road traffic, Don Valley Parkway traffic and the train traffic along the Metrolinx and Canadian Pacific rail lines.

Additionally, there are contributions from maintenance activities at local public parks as well as other existing industrial or commercial activities.

As the Regional Study Area is located within the City of Toronto, local municipal by-laws are in effect with respect to noise (i.e., unwanted sound) regulation. The City of Toronto By-law 476-2002 restricts the time and place of construction and other activities that produce unwanted sound if it is clearly audible at a point of reception located within a given regulated area (City of Toronto, 2002).

5.3.6 Electromagnetic Fields

Electromagnetic Fields (EMFs) are physical fields produced by electrically charged materials and can be viewed as a combination of electric fields and magnetic fields. Electric fields are created by differences in voltage while magnetic fields are created when an electric current flows. Typically electric fields can be blocked by trees, fences, and other materials; however magnetic fields can pass through most objects.

Electromagnetic fields can be a result of natural sources and human-made sources. EMF emitted from man-made sources can include home appliances, computers, and electric power facilities. Electric power facilities include both the substations and transmission and distribution power lines.

The Gatineau Hydro Corridor runs in the east-west direction through the Regional Study Area and contains a transmission station along with distribution power lines which transmit EMFs as a result of the alternating current flowing through the lines. An EMF Management Plan was undertaken in Phase 3 of the EA that determines the potential impact of the EMFs within the Hydro Corridor. Details can be found in Section 9.1.2.

5.3.7 Climate and Climate Change

The Don River watershed, where the Regional Study Area is located, experiences a continental climate moderated by the Great Lakes. The watershed is influenced by warm, moist air masses from the south and cold, dry masses from the north, resulting in a wide range of weather conditions. Summer is characterized by temperatures ranging between the mid-20s and high 30s (°C). During the winter, daytime highs normally fall a

few degrees below 0 °C, but can fluctuate between approximately -30 and +10 °C. The watershed receives an average of 821 mm of precipitation per year (TRCA, 2009f).

Since the industrial revolution, significantly greater volumes and concentrations of carbon dioxide, methane, nitrous oxide, ozone, and chlorofluorocarbons have been released into the Earth's atmosphere. These gases not only impact air quality but also trap outgoing radiation and raise the temperature of the lower atmosphere by creating a "greenhouse effect", which could result in dramatic changes to climate. There is reputable evidence to suggest that climate change is already occurring, resulting in shorter winters, warmer annual average temperatures, shorter duration of lake ice cover, and more frequent heavy rainstorms in the Great Lakes basin. Global climate change would undoubtedly affect the Don River watershed, along with all the other watersheds and ecosystems in the region (TRCA, 2009g).

Although specific changes cannot be accurately predicted, climate change models show that, overall, the average temperature in southern Ontario could increase by 5 – 10 °C by 2080. The impact that such a warming trend would have on weather patterns is unclear; some experts extrapolate that precipitation could increase by up to 10%, while others expect a decrease in rain and snowfall. Despite the differing interpretations of climate model outputs, climatologists generally agree that the weather in southern Ontario and the GTA would become more unpredictable, with an increasing incidence of temperature extremes, severe storms and periods of drought.

In turn, the changes in regional climate and local weather would affect the hydrological cycle in the Don River watershed, resulting in a cascade of changes throughout the ecosystem. Changes in the mean and seasonal distribution of precipitation would alter the current water balance, groundwater levels, and stream flow patterns. In addition, channel and stream bank stability may be affected. Terrestrial and aquatic habitats may change as a result of warmer temperatures and shifting weather patterns. Non-native species may occupy the watershed while some native species may decline and disappear.

5.4 Cultural Environment

5.4.1 Indigenous Communities

Traditional Land Uses

Land use and settlement in and around the Local Study Area was mainly influenced by the Don River as well as the topography of the area which determined road placement and settlement patterns. The Don River watershed has provided sustenance for humans for over 12,000 years and today flows through heavily urbanized areas. Archaeological evidence highlights how watershed resources were traditionally used and impacted in the past by both First Nations and Euro-Canadian populations,

revealing environmental reasons for settlement. These human-environment relationships include proximity to water (for human consumption, food procurement, transportation, and during the historic period milling) soil characteristics (for agriculture), slope conditions (for settlement), local biotic communities (for food, shelter, and clothing) and landscapes (that may have spiritual significance).

Indigenous Reserve or Community

While there are no reserve lands near or adjacent to the Local Study Area, the project is located within lands for which there are Indigenous interests and treaty rights, including traditional uses. In particular, the project is located within the treaty area of the Williams Treaty First Nations. In consultation with Indigenous and Northern Affairs Canada and the Ontario Ministry of Indigenous Relations and Reconciliation, the following communities are known to have an interest in the Regional Study Area: Williams Treaty First Nations, Mississaugas of the New Credit First Nation, the Huronne-Wendat, Six Nations of the Grand River Territory, Kawartha Nishnawbe First Nation, and the Metis Nation of Ontario.

Outstanding Native Land Claims

At present, there are no outstanding native land claims to the Regional Study Area.

5.4.2 Aesthetics and Scenery

The Don River Valley is arguably the City's most distinctive physical feature. Having played an important role in City's development via providing water, power, sustenance, building materials and transportation, the Valley retained its perception as that of a pocket of wilderness in the City (TRCA, 2009b).

With respect to scenery, particularly notable is the Don River's deep wide valley in the lower reaches. Overall, river valleys and ravines constitute valuable urban green spaces, offering a multitude of opportunities for discovery and appreciation of natural areas within the City. A reflection of this is the existence of a fairly extensive informal trail network within the Regional Study Area, in addition to existing multi-use trails within the local public parks.

5.4.3 Archaeology, Built Heritage, and Cultural Heritage

A Stage 1 Archaeological Assessment (TRCA, 2013) was conducted for the East Don Trail Local Study Area and concluded that there exists a potential for the presence of significant Indigenous and Euro-Canadian archaeological resources. Potential was determined based on several avenues of research, including available archaeological potential modeling, proximity to known archaeological sites, potential for encountering Euro-Canadian structures based on a nineteenth-century map review, and proximity to known built heritage resources and cultural heritage landscapes. These data were tempered with an analysis of aerial photographs, not only to determine additional

archaeological potential but also to identify land alterations which may have impacted both Indigenous and Euro-Canadian sites within the Local Study Area. See **Appendix C** for the Stage 1 Archaeological Assessment.

Archaeological Potential Modeling

The likelihood of finding archaeological sites within a defined area is known as “archaeological potential” and can be defined as high, medium or low. An integral component of TRCA’s Archaeological Master Plan (Burgar, 1990) was the development of an Archaeological Site Predictive Model (ASPM). This model presents a generalized view of the current understanding of PreContact Indigenous settlement patterns in the watershed and applies this knowledge to lands owned by TRCA. An application of TRCA’s ASPM indicates that the entirety of the Local Study Area can be considered an area of high potential for the presence of archaeological resources, with the exception of steep slopes which are considered medium potential (Figure 5-21). This is based on distance to water, drainage, and slope, and does not take into consideration disturbance to the land. The City of Toronto model also indicates that the Local Study Area has archaeological potential and this model takes into consideration previous development (Figure 5-22).

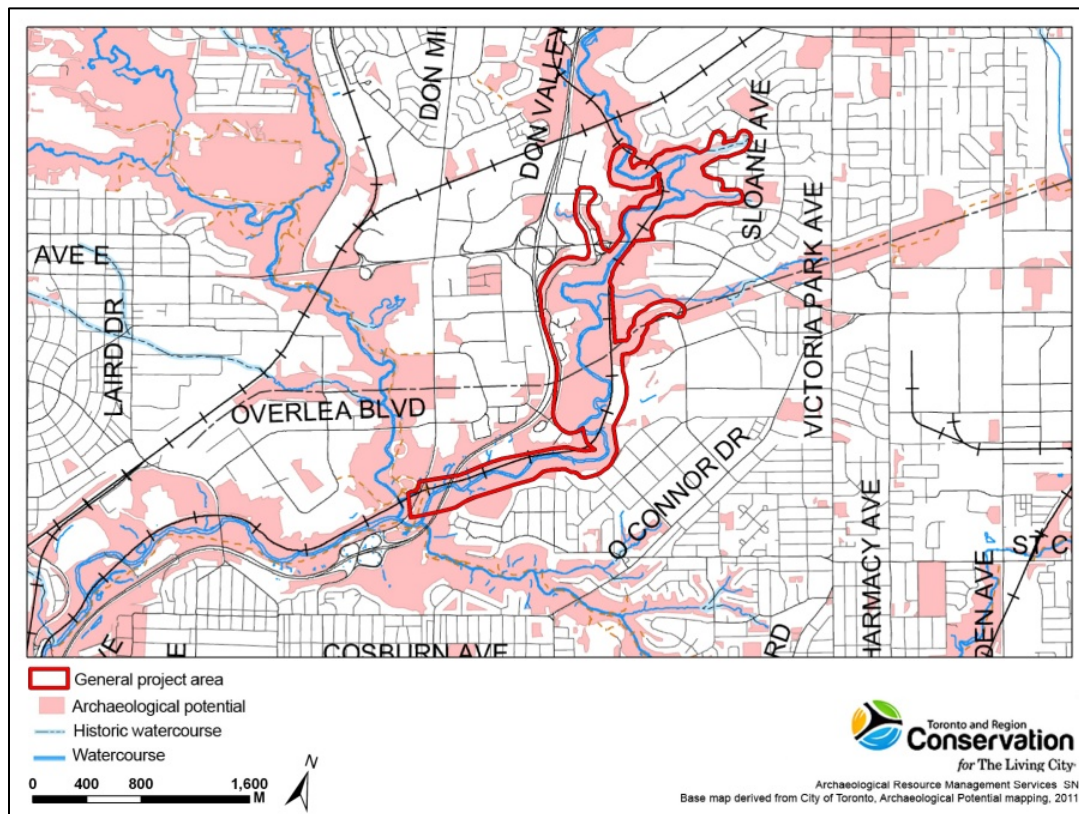


Figure 5-21: TRCA Archaeological Potential Model

Source: TRCA 2013

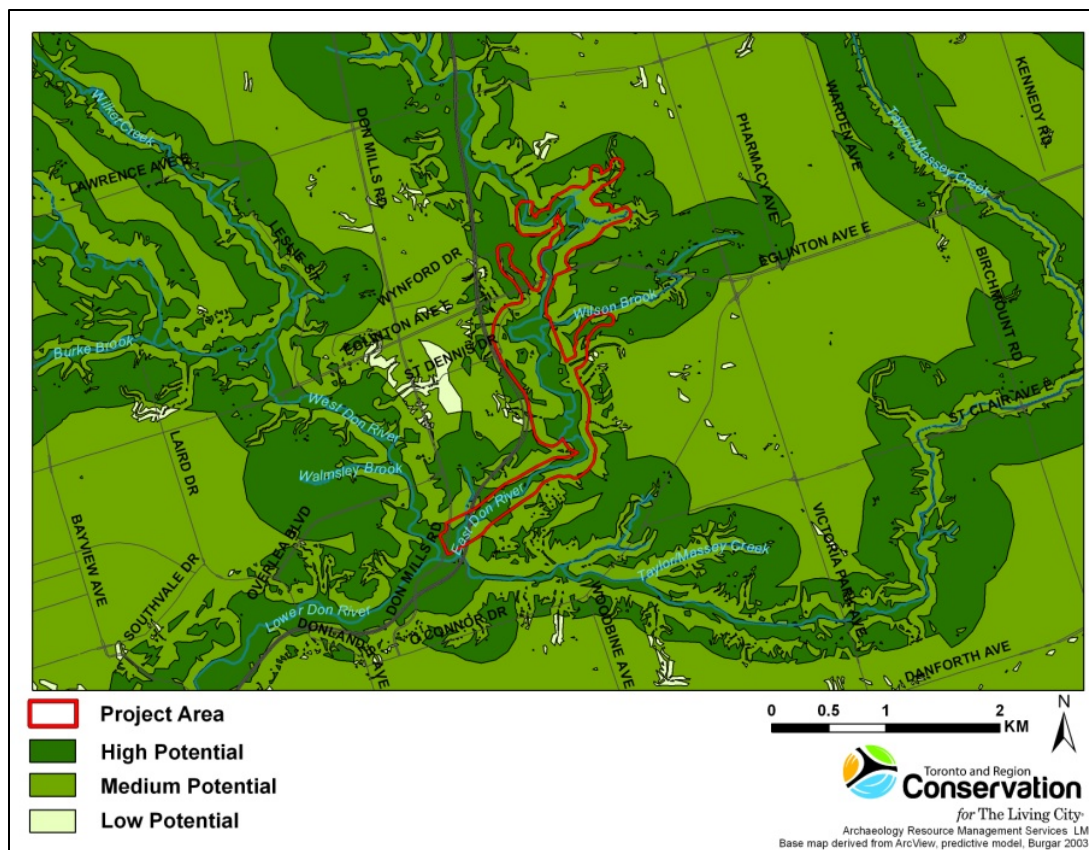


Figure 5-22: City of Toronto Archaeological Potential Model

Source: City of Toronto 2013

Proximity to Known Archaeological Sites

A review of the Ministry of Tourism, Culture, and Sport’s Ontario Archaeological Sites Database revealed that one archaeological site – the Sauriol site (AkGt-052) – has been previously registered within the boundaries of the East Don Trail Local Study Area. The Sauriol site is a mid-nineteenth century Euro-Canadian site that was identified in 1999 by the TRCA. The site is located north of Taylor Creek-East Don River junction. In total, 207 artifacts were collected from an area measuring approximately 175 square metres. Of these items, the majority were brick fragments, though nails, ceramics, and faunal items were also recovered. An analysis of the assemblage indicated they were typical of a mid-nineteenth century homestead of low to middle socioeconomic status. Further assessment was not recommended. No additional archaeological sites have been registered within one kilometre of the Local Study Area.

Proximity to Known Built Heritage Resources

Recent maps and literature about the local area were reviewed in order to determine if the Local Study Area contained any identified built features. Built features are described as landscapes altered by man such as parks and rail lines, which might not have a

historical context. Built features were included in this section as their construction often has an impact on the landscape, and they can also act as gateways for historical interpretation to the public. They are thus important to examine in more detail for plaques and interpretive signage. Several built features were recorded within the project area, including Charles Sauriol Conservation Reserve, Ernest Thomson Seton Park, Flemington Park Golf Club, Linkwood Lane Park, and the Metrolinx rail line (former Canadian National Rail line). During this review, and after preliminary archival research, it was determined that the rail line had the potential to contain cultural heritage value, and thus had the potential to be considered a built heritage resource.

The City of Toronto's Heritage Preservation Services provided a review of the City's Inventory of Heritage Properties in order to determine if the Local Study Area contained any known built heritage resources. Built heritage resources are defined as buildings, structures, or remains built by people that reveal some of the broad architectural, cultural, social, political, economic or military patterns of Ontario's Euro-Canadian history or are associated with specific events or people that have shaped Euro-Canadian history. Built heritage resources include municipally designated and listed structures, as well as cemeteries, plaques, bridges, and cultural heritage landscapes. No designated or listed built heritage resources were identified within the Local Study Area. However, as noted above, the Metrolinx rail line (former Canadian National Rail line) was identified as a built feature of potential heritage value and has the potential to be considered built heritage resource. The built heritage resources search was expanded to account for built heritage resources located within one kilometre of the Local Study Area. This expanded survey identified one (1) designated structure, eight (8) listed structures, two (2) cemeteries, two (2) plaques, one (1) bridge, and no known cultural heritage landscapes. These heritage resources are considered outside the Local Study Area, and will not be affected by the East Don Trail Project. The Metrolinx rail line (former Canadian National Rail line) is considered to have potential heritage value based on the research conducted to date. A Heritage Impact Assessment of the rail line was undertaken in Phase 3 of the EA that examined the rail line right of way in the Study Area as well as the potential impacts of the EA preferred alternative on the cultural heritage resources. Details can be found in Section 9.1.1.

Twenty and Twenty-First Century Alterations to the Land

The urbanization of the Don Valley and its surroundings are illustrated through aerial photography dating between 1949 and 1989 as well as through topographic maps dating between 1895 and 1949 (**Appendix C**). A review of these maps indicates the majority of the Local Study Area has not been heavily disturbed by twentieth-century construction. A few exceptions include construction activities near the Forks of the Don and the construction of the Don Valley Parkway, which may have impacted the western edge of the Local Study Area. Additional disturbances have likely resulted from the

realignment of Don Mills Road, construction of the hydro corridor, and the construction of the Canadian National Railway (presently in Metrolinx ownership) which has heavily impacted the tract of land upon which it is located. Another known source of disturbance could be seasonal flooding, with several severe floods occurring in the nineteenth century and culminating with the highly destructive flood of 1954, associated with Hurricane Hazel. Without doubt, the mid-twentieth century urban sprawl rapidly changed the environment along the margins of the Study Area and led to a significantly different looking landscape than that dating to before 1900.

Potential for Encountering PreContact Sites

While no PreContact archaeological sites have been discovered within 1 km of the Local Study Area, the lack of sites is likely due to the lack of archaeological assessments within the Local Study Area rather than the nature of the area itself. The Don River and surrounding valley lands would have offered rich resources such as fish, waterfowl, and game which would have been exploited as part of a people's seasonal round. As a result, there is potential for encountering PreContact sites within the Local Study Area.

Potential for Encountering Euro-Canadian Structures

An extensive review of nineteenth and early twentieth-century cartographic documents, including historic and topographic maps as well as twentieth-century aerial photographs, was conducted to determine if there was potential for encountering Euro-Canadian structures within the Local Study Area. The review included Browne's 1851 map, Tremaine's 1860 map, Miles and Co. 1878 map, Goad's 1890 map, and Goad's 1903 map. In total, 17 houses and two paper mills have been identified within or adjacent to the Area, and are related to the residential and milling activities that occurred on the land throughout the nineteenth and early twentieth centuries. Mills were the impetus behind growth and decline during early settlement and while many of the early structures are no longer standing, the potential exists for the recovery of their remains. It should be noted that not every aspect of potential interest today would have been illustrated on these historic maps. It is possible that outbuildings, such as shanties were located on some of the properties that are not illustrated on nineteenth-century maps. Consequently, the possibility remains that farm middens, outbuildings or tenant structures may still exist within the property limits.

5.5 Socio-Economic Environment

5.5.1 Surrounding Neighborhoods and Communities

The Regional Study Area spans four City of Toronto Wards as well as six Neighbourhoods and four Neighbourhood Sections (Figure 5-23).

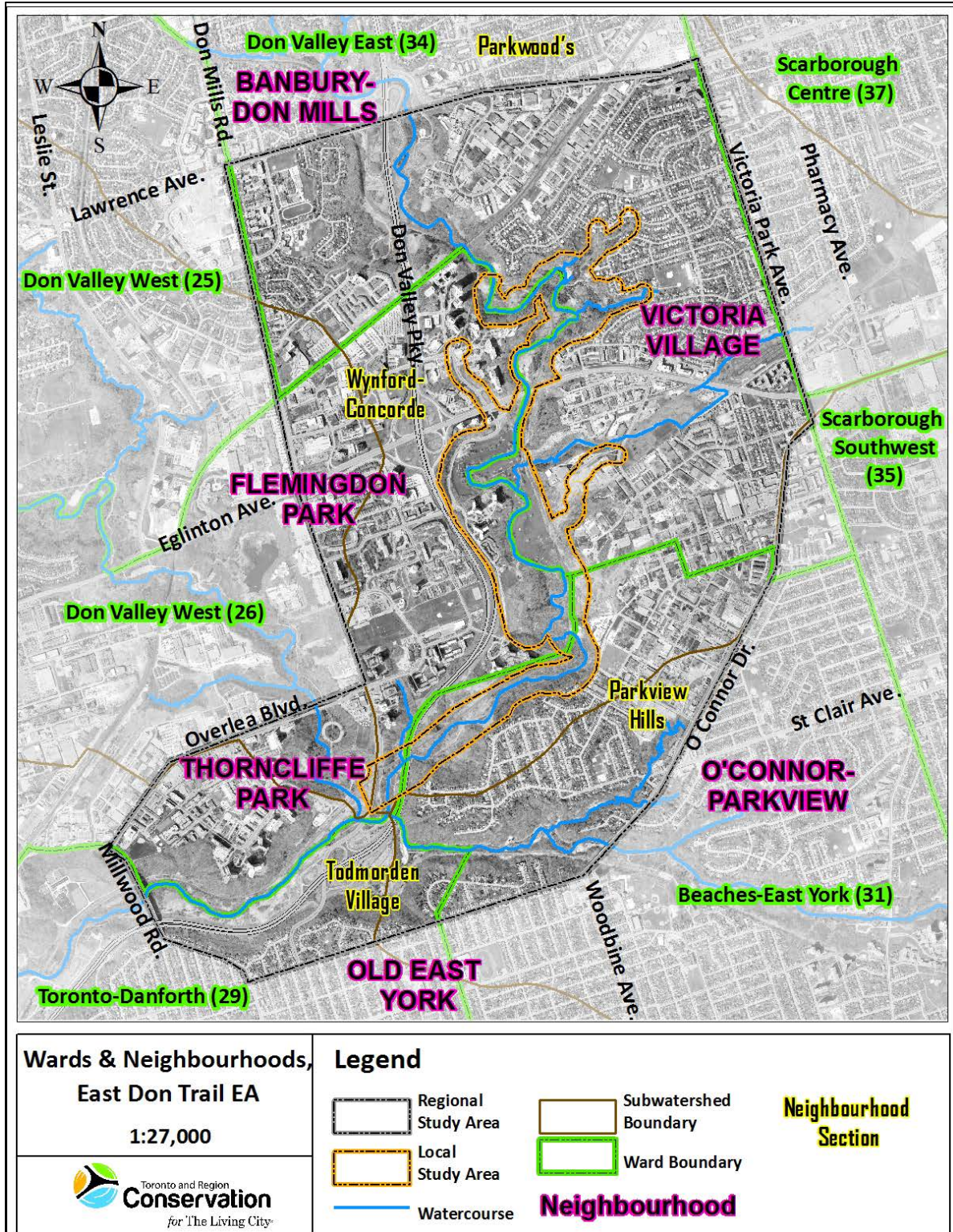


Figure 5-23: City of Toronto Wards, neighbourhoods, and neighbourhood sections within the Regional Study Area

Source: TRCA 2013

Table 5-15: Wards, neighbourhoods, and neighbourhood sections within the Regional Study Area

Sources: *City of Toronto 2014, Dunkelman 2011*

Ward (Councillor)	Neighbourhood	Neighbourhood Section (if applicable)
34 - Don Valley East (Denzil Minnan-Wong)	42 - Banbury-Don Mills	Parkwood's
	43 - Victoria Village	N/A*
31 - Beaches-East York (Janet Davis)	54 - O'Connor-Parkview	Parkview Hills
29 - Toronto-Danforth (Mary Fragedakis)	58 - Old East York	Todmorden Village
26 - Don Valley West (John Parker to December 2014; Jon Burnside December 2014 - on)	42 - Banbury-Don Mills	Wynford-Concorde (Don Mills)
	44 - Flemingdon Park	N/A
	55 - Thorncliffe Park	N/A

*N/A – Not Applicable

The wards, neighbourhoods, and neighbourhood sections are summarized in *Source: TRCA 2013*

Table 5-15. The northern portion of the Regional Study Area overlaps with Ward 34 and includes Victoria Village Neighbourhood. Parkwood's Neighbourhood Section of the Banbury-Don Mills Neighbourhood is directly adjacent to the Regional Study Area, lying immediately north of Lawrence Avenue East. Both Parkwood's and Victoria Village could be described as quiet, mostly middle-income neighbourhoods of which the latter is currently experiencing an influx of young families from multiple cultural backgrounds (Dunkelman, 2011).

The south-eastern portion of the Regional Study Area overlaps with Ward 31 and includes Parkview Hills Neighbourhood Section of the O'Connor-Parkview Neighbourhood. Parkview Hills is a fairly small and secluded neighbourhood consisting of almost exclusively detached homes within a natural area setting. Quite stable, Parkview Hills is described as a place where "families put down roots and stay for a long period of time" (Dunkelman, 2011).

The south-western bottom portion of the Regional Study Area overlaps with Ward 29 and includes Todmorden Village Neighbourhood Section of the Old East York Neighbourhood. Todmorden Village is considered to be an established community consisting of detached homes and several apartment buildings (Dunkelman, 2011).

Most of the Regional Study Area's western portion overlaps with Ward 26 and includes Wynford-Concorde Neighbourhood Section of the Banbury-Don Mills Neighbourhood as well as Flemingdon Park and Thorncliffe Park Neighbourhoods. Wynford-Concorde Neighbourhood Section is located within the southern-most portion of the Don Mills Neighbourhood. Considered a family-oriented community with a "city-suburb feel", Don

Mills is a popular choice for commuters due to the convenient transit and highway access it offers (Dunkelman, 2011).

Both Thorncliffe Park and Flemingdon Park are highly multicultural communities which have been serving as a starting point for many new Canadians. Thorncliffe Park residents have their own neighbourhood resource centre which offers multilingual social and recreational programs and services. With over 30 rental apartment buildings, this neighbourhood has been one of the largest rental districts in Toronto. A number of new condominium apartment buildings and townhouses are present as well, located on Overlea Boulevard (Dunkelman, 2011).

Similarly to Thorncliffe Park residents, Flemingdon Park residents have access to their own information centre, a non-profit legal services clinic and a number of support programs. Flemingdon Park's housing west of the Don Valley Parkway consists mainly of high-rise rental apartment buildings and blocks of row house apartments with most buildings also having subsidized and seniors housing. The neighbourhood's portion east of the DVP contains condominium apartment buildings (Dunkelman, 2011).

Notably, Victoria Village and Flemingdon Park have been designated a Priority Area (PA) through the Neighborhood Action Plan. Generally, PAs show growing numbers of children and seniors, along with high concentrations of new immigrants and visible minorities. In addition, these communities exhibit high rates of low-income and unemployment compared to the City's average. Overall, PAs are likely to be most affected by negative changes in the economy (City of Toronto, 2008e). Flemingdon Park-Victoria Village is characterized by lower than average household income, higher numbers of children and seniors, lower rates of post-secondary education obtained inside Canada and higher rates of post-secondary education obtained outside of Canada (City of Toronto, 2008f).

5.5.2 Surrounding Land Uses and Growth Pressure

The Regional Study Area is located within the City of Toronto which had 2,615,060 residents in 2011, according to the 2011 Census. The City's population grew by 4.5% (111,779 residents) between 2006 and 2011 (City of Toronto, 2012). The City's estimated actual population (i.e., population adjusted for undercoverage) for 2011 was 2,751,000. This number is reported to be on track with the population forecast in the Growth Plan which anticipated a 2011 population including undercoverage for the City of Toronto of 2,760,000. According to the Ministry of Public Infrastructure Renewal (2006), the City's population is expected to reach 2,930,000 by 2021 and 3,080,000 by 2031. Employment is anticipated to increase to 1,600,000 in 2012 and 1,640,000 in 2031.

Table 5-16 presents a summary of the population data for the four wards during the 2006-2011 period. All wards experienced positive growth from 2006 to 2011. Ward 26 –

Don Valley West experienced the most growth (+6.7%), followed by Ward 34 (+3.4%), Ward 31 (+1.5%) and Ward 29 (+0.2%).

Table 5-16: City of Toronto Ward 26, 29, 31, and 34 population data summary for the 2006-2011 period

Source: City of Toronto 2014

Ward	Population	Population Density (thousand people per km ²)	Growth Rate (%)
29 - Toronto-Danforth	44,935	5.69	+ 0.2
31 - Beaches-East York	53,570	6.03	+ 1.5
34 - Don Valley East	59,430	3.74	+ 3.4
26 - Don Valley West	64,910	5.95	+ 6.7

The Regional Study Area occupies approximately 782 ha with the major land uses being residential (36% of land use total), green space (25%) and industrial (24%). Commercial, institutional and transportation land uses as well as the Hydro One utility corridor and privately owned Flemington Park Golf Club account for the remaining 28% (Table 5-17, Figure 5-24)

Table 5-17: Major land uses within the Regional Study Area

Source: TRCA 2010

Major Regional Study Area Land Uses	Area (ha)	Percent (%) of Total Land Use
Residential	369.66	36
Green/Open Space (includes Conservation Lands, Park Space, Recreational Areas, Cemetery)	254.16	25
Industrial	184.78	18
Commercial	90.68	9
Institutional	49.90	5
Transportation	37.62	4
Hydro One Utility Corridor	34.17	3
Flemington Park Golf Club	15.62	<2
Total	1036.58	100

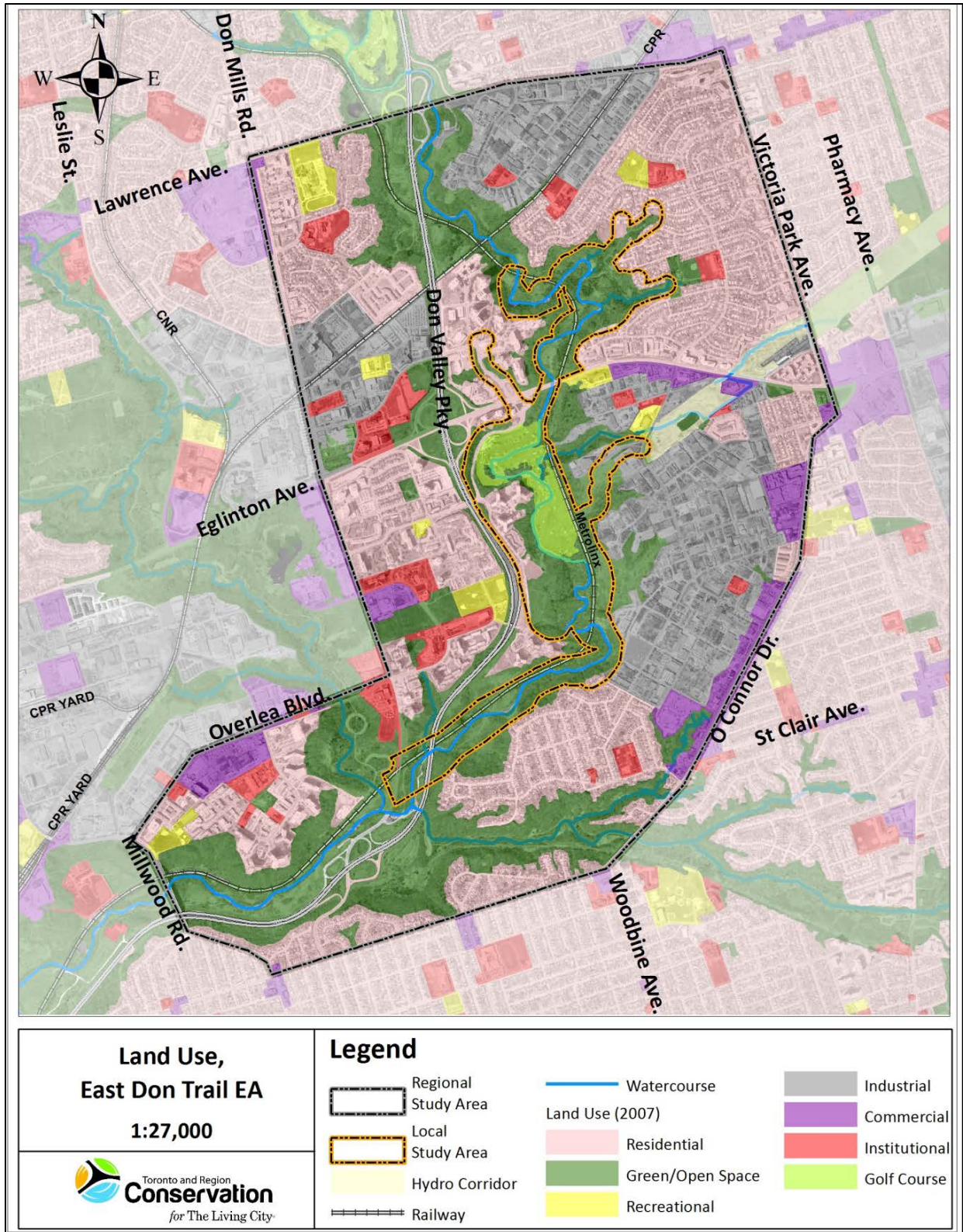


Figure 5-24: Major Land Uses within the Regional Study Area

Source: TRCA 2007

5.5.3 Infrastructure, Support Services and Facilities

Existing Municipal Infrastructure, Support Services, and Facilities

Existing infrastructure within the Regional Study Area includes the Hydro One utility corridor and associated facilities, Enbridge natural gas pipeline, Toronto Water infrastructure and access routes, Solid Waste Management Services and City of Toronto operational facilities, as well as Parks, Forestry and Recreation-operated recreational centres.

The Hydro One utility corridor is located mainly south of Eglinton Avenue and extends in the east-west direction, crossing the East Don River and DVP (Figure 5-25). Hydro One facilities include a transformer station located in the eastern-most portion of the corridor. As well, an access route (B, Figure 5-25) is located within the corridor. This access route is used by both Hydro One and Toronto Water.

The Enbridge pipeline runs within the Hydro corridor zone, also in the east-west direction (Figure 5-25).

An extensive network of sanitary and stormwater sewers within the Regional Study Area are maintained by Toronto Water. In addition to the access route shared with Hydro One, Toronto Water has one route within the southern portion of the Regional Study Area (route C, Figure 5-25) and one north of the hydro corridor (route A, Figure 5-25).

A number of City of Toronto operational facilities are located within the Regional Study Area, including a Solid Waste Management Services facility, the Bermondsey Transfer Station, the Bermondsey Yard, and the Northline Works Yard.

City-operated recreational facilities include Victoria Village Arena (southwest of Eglinton Avenue and Bermondsey Road), Dennis R. Timbrell Recreation Centre (east of Don Mills Road and St. Dennis Drive), Don Mills Collegiate Institute (southeast of The Donway East and Lawrence Avenue) and Jenner Jean-Marie Community Centre (east of Overlea Boulevard and Millwood Road).

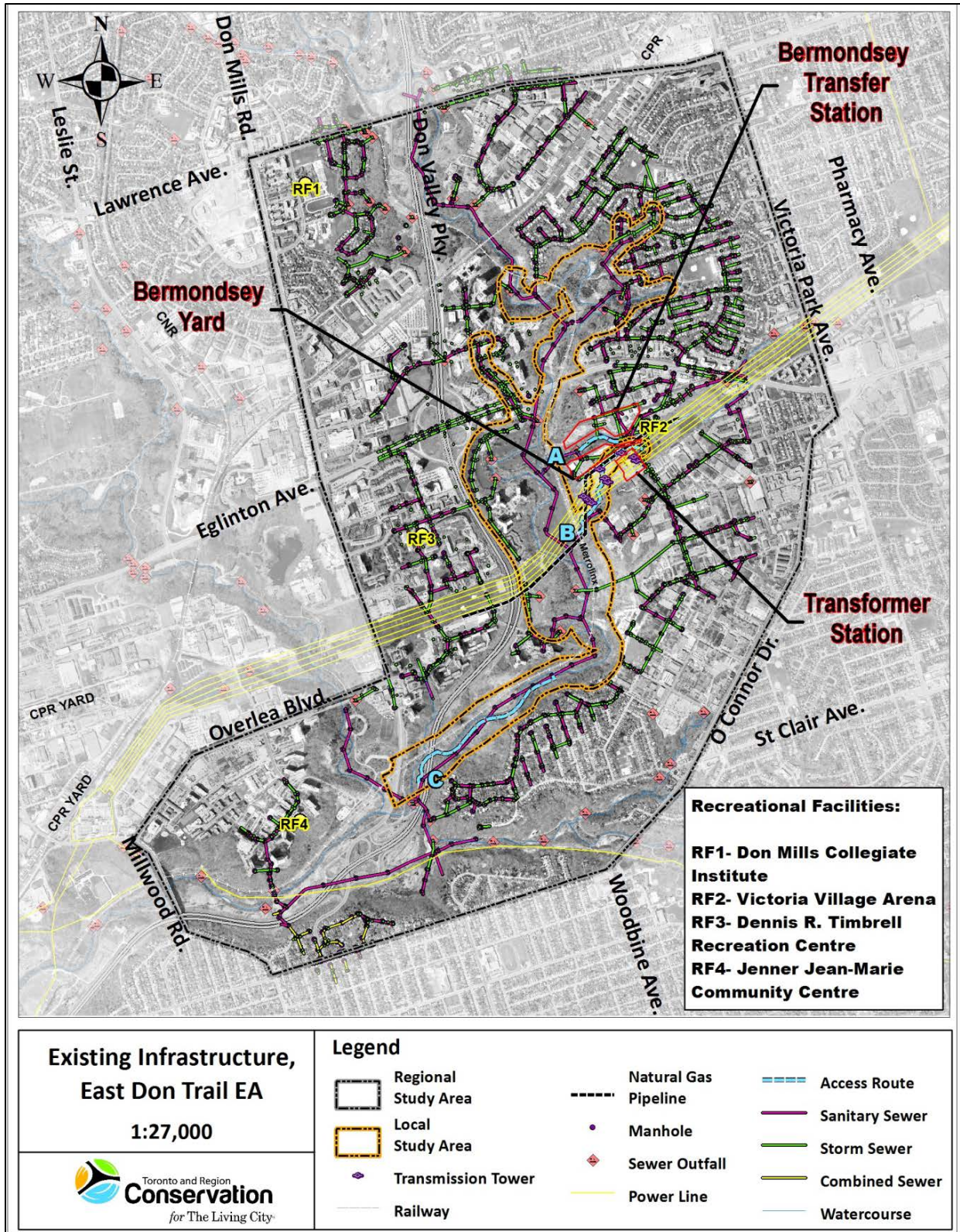


Figure 5-25: Infrastructure within the Regional Study Area

Source: City of Toronto 2011

Future Municipal Infrastructure

Currently, the Don watershed is serviced by the Don Trunk Sewer which generally follows the valley lands of the Don River and its tributaries, heading towards Lake Ontario. Within the Regional Study Area, the East Don Sanitary Trunk Sewer carries sewage to the Coxwell Sanitary Trunk Sewer which conveys the flow to the Ashbridges Bay Treatment Plant. As mentioned in Section 1.6.4, the majority of the Regional Study Area is serviced by sanitary and stormwater sewers which operate as two separate systems, one carrying sanitary flows and another carrying surface stormwater runoff (MMM Group, 2012). However, a small portion of the Regional Study Area located near O'Connor Drive and Don Mills Road is serviced by combined sewers (Figure 5-25).

To address combined sewer overflow issues, the 2012 Don River and Central Waterfront Environmental Assessment EA looked at improvements to the Don Trunk Sanitary Trunk Sewer system, specifically the Coxwell Sanitary Trunk Sewer. The EA built upon the WWFMMP to assess the most preferred method of capturing and treating the combined sewer overflows. One of this study's recommendations included offline storage tanks to provide temporary storage of during peak sanitary flows; two storage tanks will be located within the East Don Trail EA Regional Study Area.

5.5.4 Land Ownership

The majority of the valley property within the Local Study Area is owned by the City of Toronto and TRCA (Figure 5-26). Flemingdon Park Golf Club lands, located south of Eglinton Avenue, are privately owned. Other privately owned lands that may be impacted as a result of construction will be identified on a site-specific basis. Other Local Study Area property owners include Metrolinx (former CNR; rail line and easement), Enbridge (pipeline and associated right-of-way) and Hydro One (hydro line, facilities and easement).

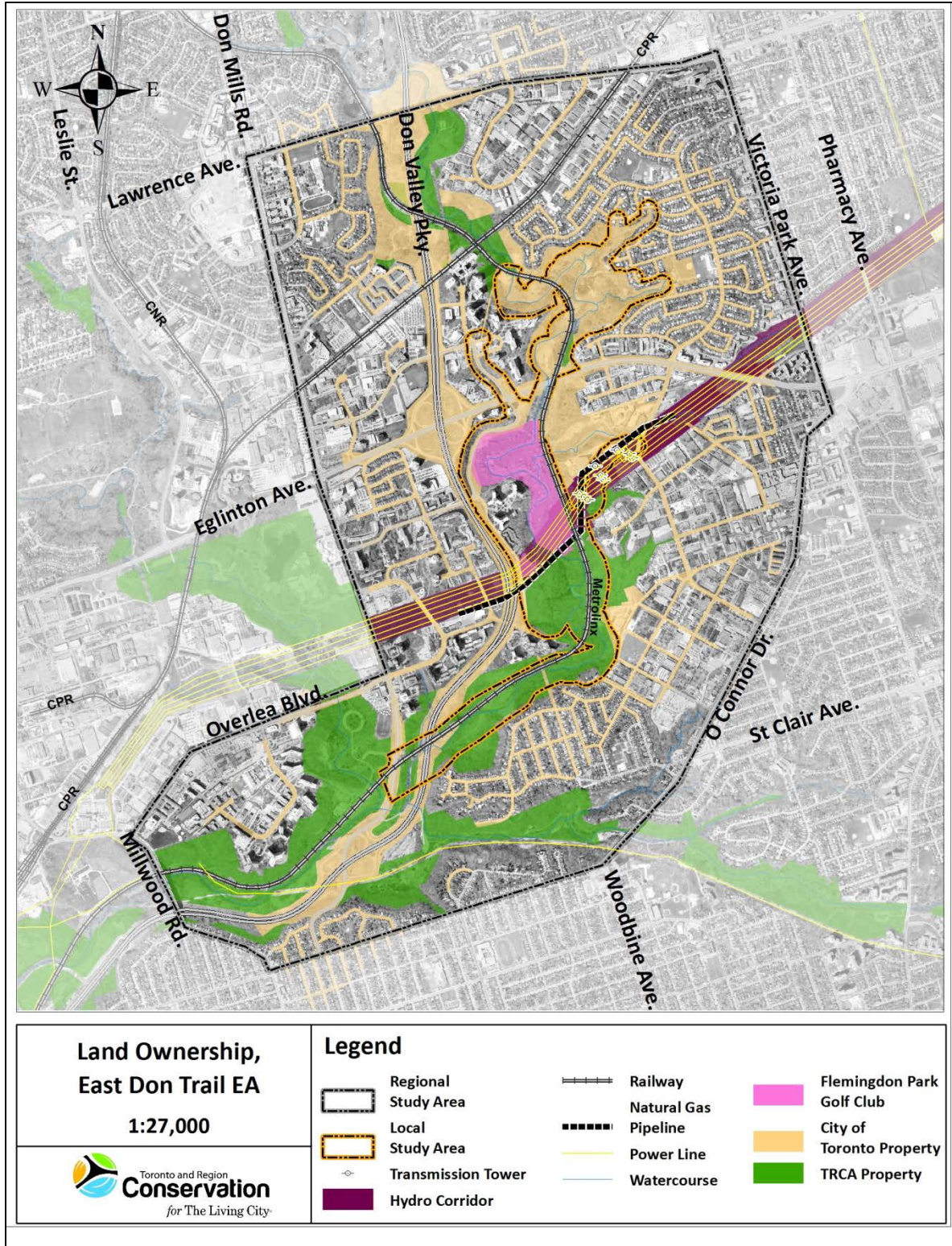


Figure 5-26: Land Ownership within the Local Study Area

Source: City of Toronto 2011, TRCA 2013

5.5.5 Economy

The Regional Study Area is located within the City of Toronto. The City's economy comprises 11% of Canada's GDP, with Toronto's GDP exceeding \$144 billion in 2011. Toronto-based businesses export over \$70 billion in goods and services worldwide with retail sales of \$62 billion annually (City of Toronto, 2012b). Currently, Toronto hosts over 84,500 businesses which employ approximately 1.4 million people – one-sixth of the country's workforce.

Toronto's economy is comprised of 11 key sectors: Business and Professional Services, Design, Education Services, Fashion/Apparel, Film and Television, Financial Services, Food and Beverage, Green, Life Sciences, Technology, and Tourism. The key driver of the local, provincial and national economy is the financial services sector. Presently employing over 223,000 individuals, Toronto's financial sector makes the City of Toronto the financial services capital of Canada and the fastest growing financial centre in North America (City of Toronto, 2013).

The most recent employment data published by the City of Toronto indicated that the four wards within the Regional Study Area closely followed the trends exhibited by the City in terms of the common Occupations and Industries, although Ward 29 had more manufacturing than the City average. Wards 26 and 34 had slightly higher unemployment rates than the City average of 7.6%, whereas Ward 31 unemployment rate was equal to the City's and Ward 29 was below average (City of Toronto, 2008; City of Toronto, 2008b; City of Toronto, 2008c; City of Toronto, 2008d).

With respect to the effect that multi-use trails have on the value of properties in the vicinity of such paths, literature review suggests that the presence of a bike path/trail either increases property values and ease of sale slightly or has no effect (Racca and Dhanju, 2006). According to a number of studies, there is a sizeable proportion of the population that considers multi-use paths as an amenity. In regards to the level of crime associated with trails, its magnitude is correlated with the level of crime in the surrounding area. Generally, the crime on bike paths and multi-use trails appears to be minimal and must be considered in perspective with risks associated with other activities. Facility design and management may minimize crime levels and thus contribute to the overall success of a multi-use trail project (Racca and Dhanju, 2006).

5.5.6 Points of Interest and Recreational Destinations

The Regional Study Area is located within the City of Toronto, which receives over 21 million visitors annually (City of Toronto, 2013b). The City hosts a number of theatre and performing arts organizations and is home to seven professional sports teams as well as over 50 major attractions that include art museums, heritage sites, and cultural centres. Multiple special events such as music festivals, regattas, and sports competitions take place throughout the year (City of Toronto, 2013c). Parks, gardens,

trails and beaches are also promoted within the context of a wide variety of recreational programs, discovery walks, and outdoor activities.

The Regional Study Area contains a number of potential business and leisure travel destinations, attractions and points of interest. The Area features a hotel (Toronto Don Valley Hotel and Suites), a number of conference and cultural centres (e.g., Japanese Canadian Cultural Centre), a Conservation Area (Charles Sauriol Conservation Area), as well as several sites of historical interest within the Don River Valley (e.g., Taylor's Upper Mill). In addition, the Aga Khan Museum and Ismaili Centre, opened in September 2014, provides a cultural destination including a museum of Islamic art and heritage and gathering spaces.

Nearby attractions and destinations include the Ontario Science Centre, Shops at Don Mills retail centre, Riverdale Farm, the Don Valley Brick Works and the Toronto Botanical Gardens.

In addition, part of the proposed East Don Trail south of Eglinton Avenue will form a part of the city-wide Pan Am Path, the legacy for the Toronto 2015 Pan Am/Parapan Am Games. A multi-use path connecting many of Toronto's trails, the Path is thought to provide the ability to create opportunities for micro-tourism in the Regional Study Area (Friends of the Pan Am Path, 2013). Refer to Section 1.5 for further information on the Pan Am Path.

The network of existing multi-use trails and informal trails provide further recreational opportunities. The multi-use trails generally follow the river course and are utilized by a variety of users, including walkers, runners, cyclists, inline skaters, wheelchair users, people with baby strollers and people walking dogs. Informal trails are being used by local residents for observing wildlife, cycling, photography, walking/hiking and mountain biking. Section 5.1.1 provides further information on existing trails.

In addition to the natural space within the valley lands, the Regional Study Area features a number of public parks (Figure 5-27) which serve as recreational destinations for a variety of users. Notably, the Regional Study Area partially overlaps with and contains access points to Ernest Thompson Seton Park and Taylor Creek Park, both large parks with multi-use trails and a range of user facilities such as shelters, fire pits, and restrooms. Smaller parks include three located between Lawrence Avenue East and Eglinton Avenue: Sweeney Park, Anewen Greenbelt and Wigmore Park; and five located south of Eglinton Avenue: Warner Park, Linkwood Lane Park, Parma Park, Flemington Park and Coxwell Ravine Park. As well, Charles Sauriol Conservation Area is located in the northern portion of the Regional Study Area, southeast of Lawrence Avenue and the Don Valley Parkway. It is part of the East Don River Trail system and features an extensive forested area that offers wildlife observation opportunities.

Finally, Flemington Park Golf Club golf course is located within the valley lands of the Regional Study Area at 155 St. Dennis Drive, just south of Eglinton. Established in the early 1960's, the golf course is a privately owned facility featuring a 9-hole course (Flemington, 2012) that offers recreational golf opportunities to the local and surrounding neighbourhoods.

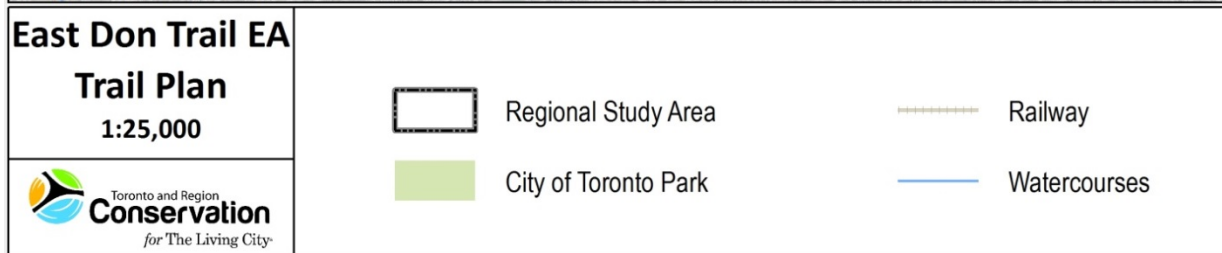
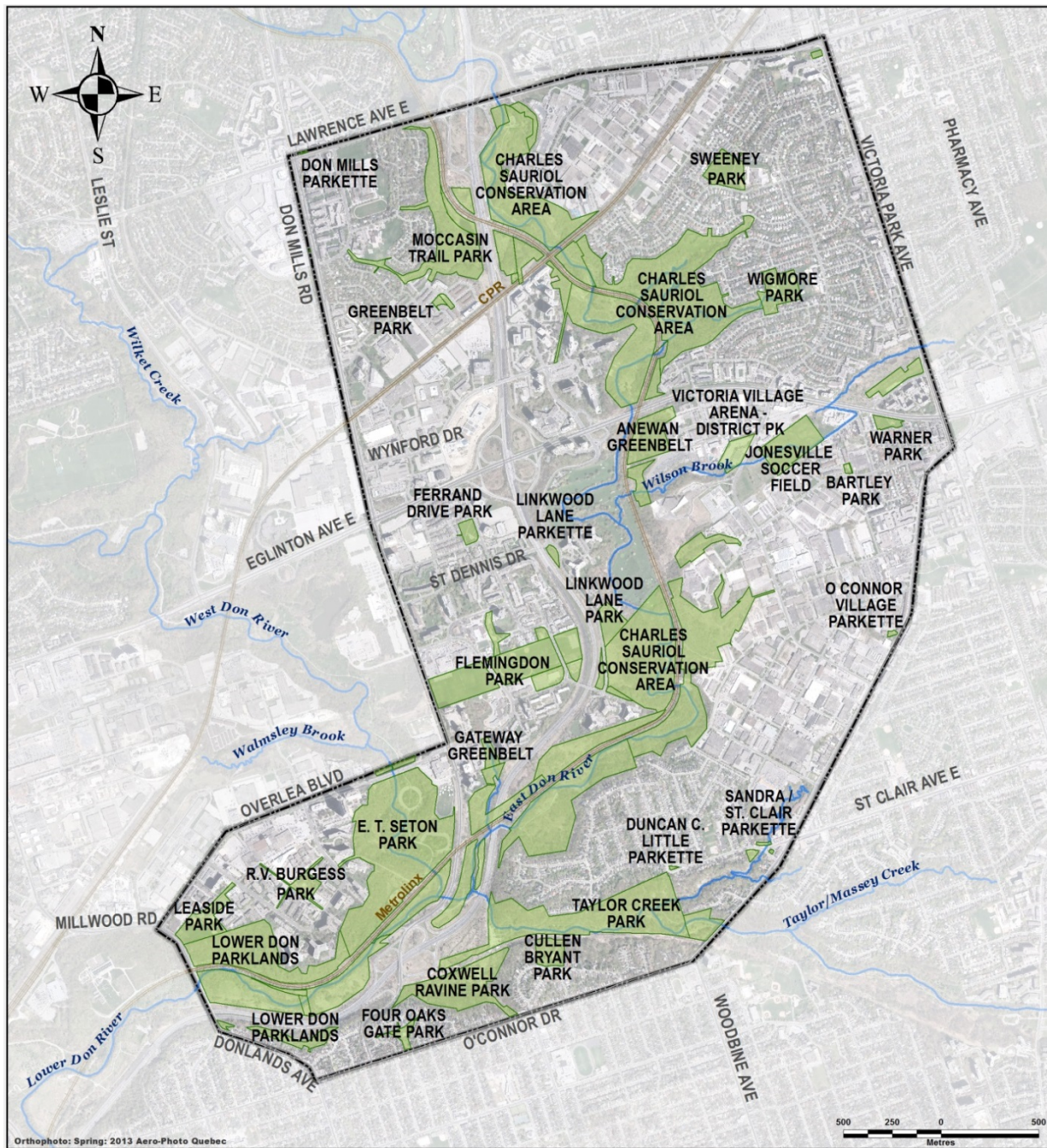


Figure 5-27: Parks within the Regional Study Area

Source: City of Toronto 2008

6.0 ALTERNATIVE SOLUTIONS (PHASE 2)

Alternative solutions are different ways of feasibly solving the identified problem or addressing the identified opportunity. In Phase 2 of this EA, a number of alternative solutions were developed and evaluated to select the preferred solution that addresses the EA problem/opportunity statement as well as project objectives (see Sections 4.2 and 4.3).

To identify the preferred solution, a two-step process was undertaken:

Step 1: Alternatives To

Two functionally different ways of addressing the problem/opportunity termed “alternatives to”, were identified. The “alternatives to” reflected findings and recommendations of the extensive studies and planning initiatives undertaken by TRCA and City of Toronto outside of the EA process (*The Bikeway Trails Implementation Plan* and the *East Don Trail Master Plan Update*). The “alternatives to” included the “Do Nothing” alternative and the “Provide Multi-Use Trail Connection” alternative. To determine the preferred functional approach, the “alternatives to” were evaluated on two levels; in the context of project objectives (to ensure they are met) and potential impacts.

Step 2: Alternative Trail Alignments

The “Provide Multi-Use Trail Connection” approach was selected as the preferred “alternative to” (the result of Step 1) and a number of trail routes termed “alternative trail alignments” were developed that supported the problem/opportunity statement and project objectives. The development of the alternative trail alignments was supported by previous work (the *East Don Trail Master Plan Update*). Alternative trail alignments were evaluated in terms of their potential impact on the surrounding environment. In particular, positive and negative impacts on the physical, biological, cultural and socio-economic environment as well as feasibility, cost, and technical considerations were examined. Based on the results of the evaluation, the preferred alternative trail alignment (i.e., preferred solution) was selected.

6.1 Alternatives To

6.1.1 Description

As stated above, the two “alternatives to” identified and evaluated included “Do Nothing” and “Provide Multi-Use Trail Connection”. Descriptions of both are provided below.

“Do Nothing”

The “Do Nothing” alternative consists of no action: no trail infrastructure would be constructed and improved access to the valley lands would not be created. No

improvements or changes would be made directly to solve the problems identified (see Section 4.0).

“Provide Multi-Use Trail Connection”

The “Provide Multi-use Trail Connection” alternative consists of constructing a multi-use trail from the existing East Don Trail to the Lower Don Trail. A trail connection would also be constructed to facilitate a planned connection to the Gatineau Corridor Trail.

6.1.2 Evaluation Approach and Results

The “alternatives to” were assessed on two levels:

- 1) **Project Objectives:** Ability of each “alternative to” to meet the project objectives
- 2) **Potential Impacts:** Evaluation of the potential impacts each “alternative to” has on the existing conditions

The first assessment was undertaken at a high level and the second assessment included a more detailed evaluation of the existing conditions of the Study Area, while still taking into consideration the overarching project objectives.

Ability to Meet Project Objectives

The results of the assessment of alternatives’ ability to meet project objectives are summarized in Table 6-1. The “Do Nothing” alternative does not meet or provides limited fulfillment of the project objectives while the “Provide Multi-Use trail Connection” alternative meets all project objectives.

Table 6-1: “Alternatives to” evaluation: the ability of each alternative to meet project objectives

Project Objectives		Alternative To	
		Do Nothing	Provide Multi-Use Trail Connection
Connections	To provide a key connection route linking local and inter-regional trail systems.	No	Yes
Public Safety	To provide a safe way for a broad spectrum of users to access the valley system.	No	Yes
	To provide safe off-road options (where possible) for cycling and recreational use.	Limited	Yes
	To investigate options to accommodate emergency response, City and utility maintenance vehicles/activities.	No	Yes
Natural Environment	To assist in the management of informal trails by providing a single focused multi-use trail within the East Don Corridor.	No	Yes
	To be respectful of the natural environment through the alignment, design, and construction of the trail by aiming to avoid, prevent, or minimize negative impacts.	No	Yes

Project Objectives		Alternative To	
		Do Nothing	Provide Multi-Use Trail Connection
	To increase access for a range of users to discover and appreciate natural areas within the City.	No	Yes
Recreation	To create trail and outdoor recreational opportunities for a variety of users.	Limited	Yes
	To provide trail and outdoor recreational opportunities for neighboring communities.	Limited	Yes
Transportation	To function as a safe travel route to everyday places and amenities.	No	Yes
Supports Other Initiatives	To coordinate with other planning initiatives in the area allowing for future integration of the multi-use trail (e.g., Eglinton Crosstown Light Rail Transit).	No	Yes

Potential Impact Evaluation

The potential impacts associated with the “Do Nothing” and “Provide Multi-Use Trail Connection” “alternatives to” were assessed based on six broad criteria themes which included: Functional Value, Natural and Physical Environment, Social and Cultural Environment, Cost, Technical, and Support of Planning Initiatives. For each criteria theme, the level of impact of the “alternatives to” was evaluated and assessed as either *Most Preferred* or *Least Preferred*. The *Most Preferred* rank was assigned to an “alternative to” that had a positive, or least negative impact, while the *Least Preferred* rank was assigned to an “alternative to” that had the most negative or least positive impact. Sub-evaluation criteria were created for each of the criteria themes to guide the evaluation and assessment process (Table 6-2).

A summary of the results of evaluation of the “alternatives to” based on the criteria themes are presented in Table 6-3. For a detailed evaluation of the sub-evaluation criteria refer to **Appendix D**. “Provide Multi-Use Trail Connection” approach was identified as the preferred “alternative to”. This alternative meets the majority of the Functional Value criteria; provides recreational opportunities, increases public safety (trail use and access); connects adjacent communities and neighborhoods; and supports a number of current planning initiatives such as the *Bikeway Trails Implementation Plan*.

Table 6-2: “Alternatives To” evaluation: impact assessment evaluation criteria

Broad Criteria	Sub Evaluation Criteria
Functional Value	Provides trail infrastructure for a variety of users within the East Don corridor.
	Provides connection with existing and planned adjacent trails and uses.
	Provides access for a variety of users into the East Don Corridor.
Natural and Physical Environment	Impact on terrestrial species, communities and/or habitats.
	Impact on aquatic species, communities and/or habitats (including wetlands, riparian, and river course).

Broad Criteria	Sub Evaluation Criteria
	Impact to East Don River geomorphic processes (e.g., flooding, baseflows, slope stability).
	Impact on identified Species at Risk (SAR), species of concern, and/or potential ESA.
Social and Cultural Environment	Impact to current valley land users.
	Impact to surrounding neighbourhoods and communities.
	Impact to public safety.
	Impact to overall aesthetic of Study Area.
	Impact on opportunities to access and enjoy natural areas within the City.
	Impact to cultural heritage resources, including archaeological resources.
	Impact on public health.
Cost	Capital Cost.
	Operation and Maintenance Cost.
Technical	Geotechnical considerations/feasibility.
	Utility and infrastructure impacts.
	Constructability.
Supports Planning Initiatives	Bikeway Trails Implementation Plan.
	A Healthy Toronto by Design Report: Road to Health: Improving Walking and Cycling in the Toronto.
	City of Toronto Walking Strategy.
	City of Toronto Parks Plan 2013-2017.
	Eglinton Crosstown LRT EA Study.
	Terrestrial Natural Heritage System Strategy.
	The City of Toronto Official Plan.

Table 6-3: “Alternatives To” evaluation summary

Evaluation Criteria	Do Nothing	Multi-Use Trail Connection	Do Nothing	Multi-Use Trail Connection
Functional Value		Meets the majority of criteria for functional value.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Natural and Physical Environment	The Multi-Use Trail Connection option is slightly preferred as impacts may occur, however this option provides a mechanism for managing current human use of the valley corridor and an opportunity for mitigation, restoration and enhancement to improve the system.	The Multi-Use Trail Connection option is slightly preferred as impacts may occur, however this option provides a mechanism for managing current human use of the valley corridor and an opportunity for mitigation, restoration and enhancement to improve the system.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Social and Cultural Environment		Will provide recreational opportunities, increase public safety (trail use and access), connect adjacent communities and neighborhoods, and increase opportunities to enjoy and appreciate nature.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Cost	The Multi-Use Trail Connection option will include cost; however funding has already been allocated. The “Do Nothing” option currently has costs associated that are above and beyond the current budget.	The Multi-Use Trail Connection option will include cost; however funding has already been allocated. The “Do Nothing” option currently has costs associated that are above and beyond the current budget.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Technical		Is technically feasible, and will support access for utility and mark maintenance activities.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Supports Planning Initiatives		Supports a number of current planning initiatives.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Preferred Solution:	2 of 6	6 of 6	<input type="checkbox"/>	<input checked="" type="checkbox"/>



Most Preferred



Least Preferred

6.2 Alternative Trail Alignments

Following the selection of the “Provide Multi-Use Trail Connection” approach as the preferred “alternative to”, a number of trail routes termed alternative trail alignments were developed that supported the problem/opportunity statement and project objectives.

For the purposes of developing and evaluating alternative trail alignments, the Study Area was divided into three distinct areas (Area 1, Area 2 and Area 3) based on the overall Study Area size and complexity of existing conditions (highly variable topography, infrastructure, multiple land uses and property requirements).

- Area 1 extends from the south end of the existing East Don Trail to Eglinton Avenue East
- Area 2 extends from Eglinton Avenue East to approximately Pavane Linkway
- Area 3 extends from approximately Pavane Linkway to the trail heads of the Lower Don Trail, West Don Trail and Taylor Creek Trail at the Forks of the Don (Figure 6-1)

Unique alignments were developed for each Area, and were then evaluated relative to each other (e.g., Area 1 alignments were evaluated relative to each other, separately from Area 2 and 3 alignments). The preferred solution consists of three preferred trail alignments, one in each Area.

The alternative trail alignments and preliminary evaluation results were presented to the public and other project stakeholders. In response to feedback received on the alignments and evaluation, a number of Area 1 and Area 2 alignments were revised and evaluated. Area 3 alignments did not undergo revisions.

For clarification purposes, the original alignments presented to the public prior to revisions were termed *original* alignments, and the alignments revised and evaluated as a result of public and stakeholder feedback were termed *revised* alignments. The *original* alternative trail alignments and Area boundaries are shown in Figure 6-1. The *revised* alternative trail alignments and Area boundaries are shown in Figure 6-2.

The preferred solution consisted of the highest-scoring revised alignments in Area 1 and 2, and the highest-scoring original alignment in Area 3.

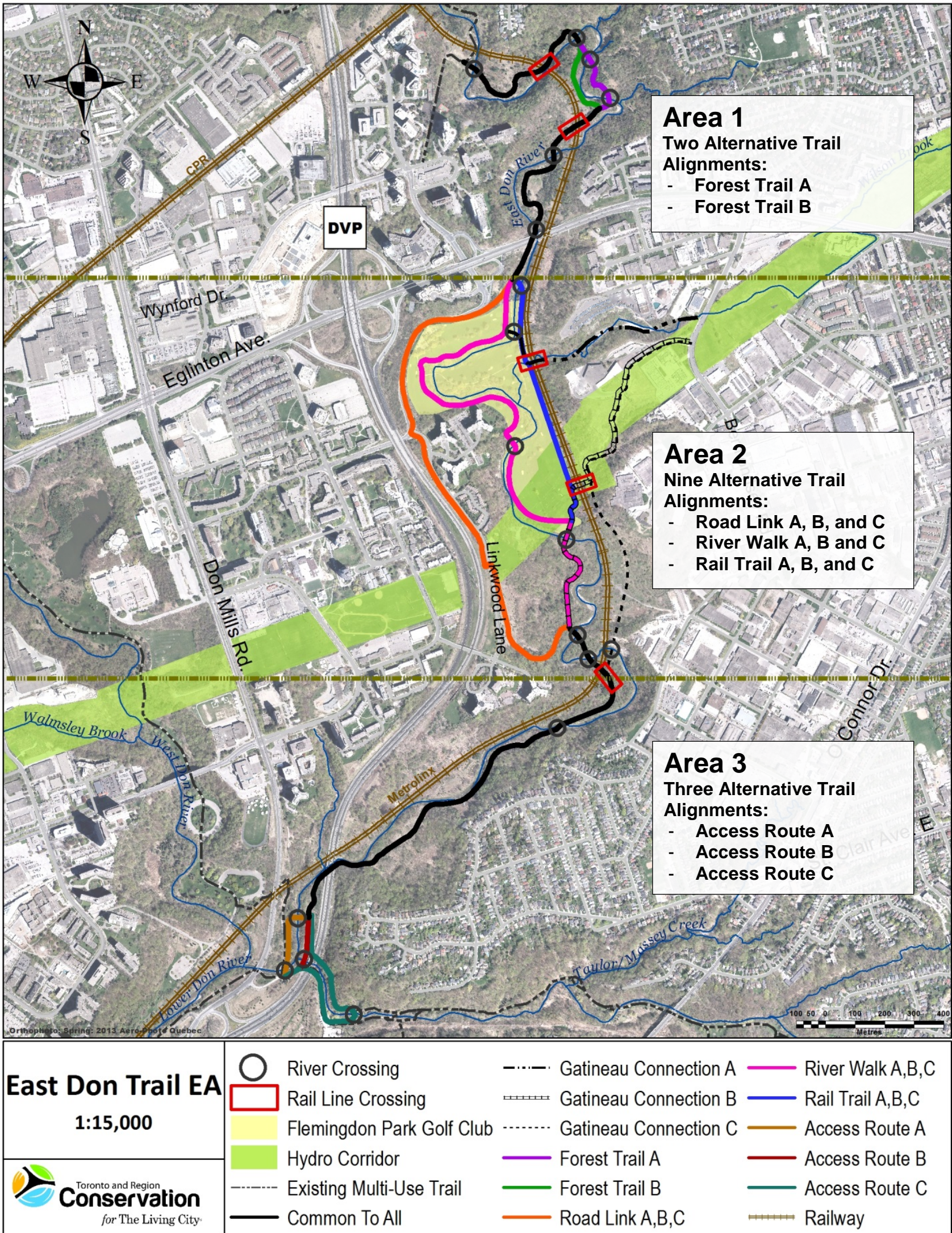


Figure 6-1: Phase 2 *Original* Alternative Trail Alignments
Source: TRCA 2014

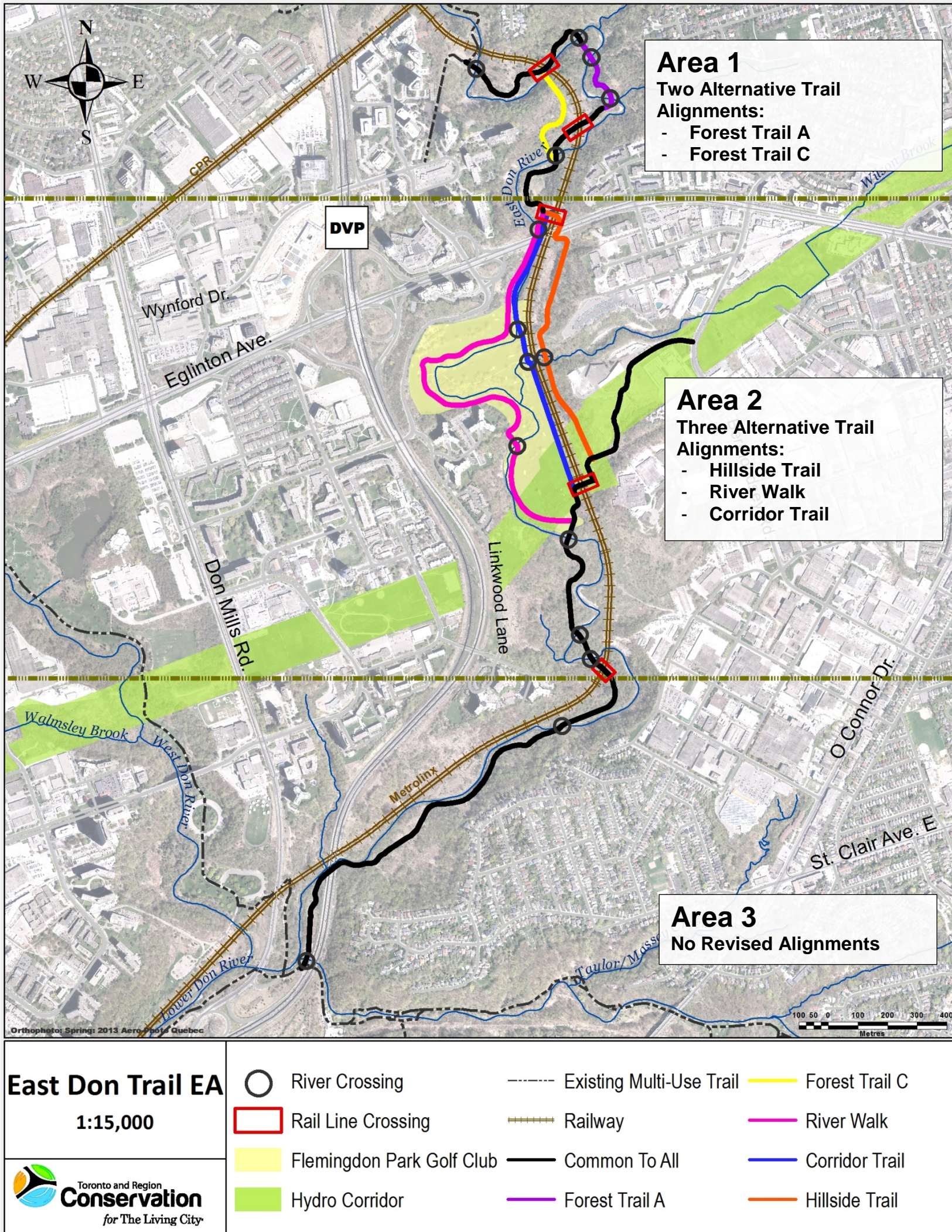


Figure 6-2: Phase 2 revised alternative trail alignments (Area 1 and Area 2) and highest scoring original alignment (Area 3)

Source: TRCA 2014

6.2.1 Evaluation Approach

The impact of each alternative trail alignment on the surrounding environment was assessed in order to select the preferred alignment. To ensure that the proposed alignment best meets project objectives, TRCA, City of Toronto, Aquafor Beech Limited, the CLC and other project stakeholders held several discussions to determine evaluation criteria in relation to the physical, biological, cultural, social, cost and technical elements.

As a result of those discussions, five broad criteria themes were developed with specific criteria for each as follows: Functional Value (six criteria), Natural and Physical Environment (six criteria), Social and Cultural Environment (six criteria), Cost (two criteria), and Technical (two criteria). To facilitate the evaluation process, criteria indicators, or specific parameters considered under each criterion, were developed as well.

As mentioned above, the Study Area was divided into three distinct areas with unique alignments developed for each. While all alternative trail alignments were evaluated using the same criteria, each Area was assessed separately, with the alternative trail alignments specific to an Area being evaluated relative to each other. Within the three Areas, the impact of the alternative trail alignments was determined by assigning a score between (-2) and (+2) (including 0) for each of the criteria as guided by the indicators. Highest positive score, or (+2), was assigned to an alternative that had a positive, or least negative impact, as compared to other alternatives. Highest negative score, or (-2), was assigned to an alternative that had the most negative or least positive impact. Scores of (+1), (0) and (-1) indicated intermediate degrees of potential impact. In cases where no or little difference in the degree of impact between the alternatives occurred, more than one alternative was assigned the same score. The alignment with the highest total score was considered the preliminary preferred alternative trail alignment. Table 6-4 provides an example of key terms and how the evaluation was set up. Evaluation criteria, criteria indicators, and measures for assigning scores are found in **Appendix E**.

Table 6-4: Criteria, indicators and score explained

Criterion	Indicators	Score
The main specification/measure by which each alternative is evaluated, classified by broader themes.	Specific parameters of what is accounted for when evaluating that criterion.	Each alternative is assigned a score from +2 to -2 based on the evaluation of indicators.

The *revised* alternative trail alignments were evaluated using the same criteria and methods as the ones used for the evaluation of the *original* alternative trail alignments.

One additional criterion - “Land acquisition cost/additional non-construction related costs” - was added under the Cost criteria theme to evaluate the *revised* alternative trail alignments. This criterion was added following consultation with the project TAC and CLC to capture additional potential expenses outside of the construction and maintenance costs addressed by the other Cost criteria and replaced the yes/no for land acquisition cost criterion that was used in the *original* alternative trail alignments evaluation.

Further, the *revised* alternative trail alignments evaluation approach included evaluating only the areas where the revised and highest scoring *original* trail alignments diverged. Trail sections common to both *original* and *revised* alignments were not considered since the common sections were evaluated and selected as preliminary preferred following the *original* alignments evaluation.

6.2.2 Area 1

6.2.2.1 Original Alignments Description

The northern-most portion of the Study Area, Area 1, is located between Lawrence Avenue East and Eglinton Avenue East and will make the connection to the existing East Don Trail. Area 1 is adjacent to the Victoria Village and Wynford-Concorde communities (Figure 6-3).

Originally, two alignments were identified in Area 1: Forest Trail A and Forest Trail B (Figure 6-3). The alignments share upper and lower segments (black line, or “common to all”, in Figure 6-3), where only one trail alignment option is feasible due to landscape limiting factors (e.g., topography, residential communities, vegetation communities, etc.). Key characteristics of both alignments are summarized in Table 6-5. A detailed description can be found in **Appendix A** Section A3 under Meeting #4.

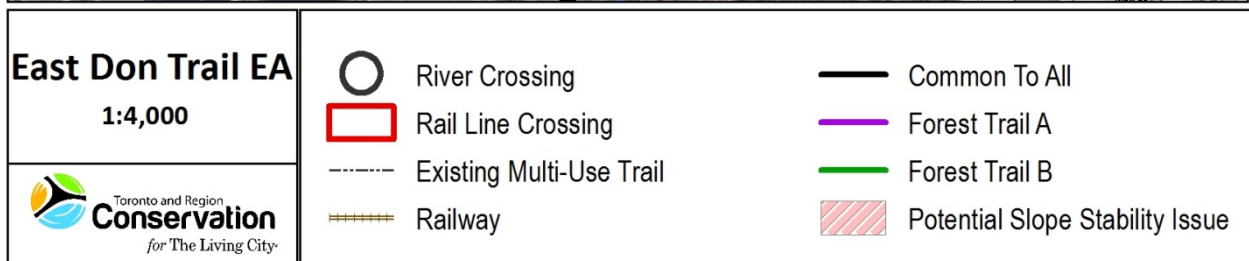
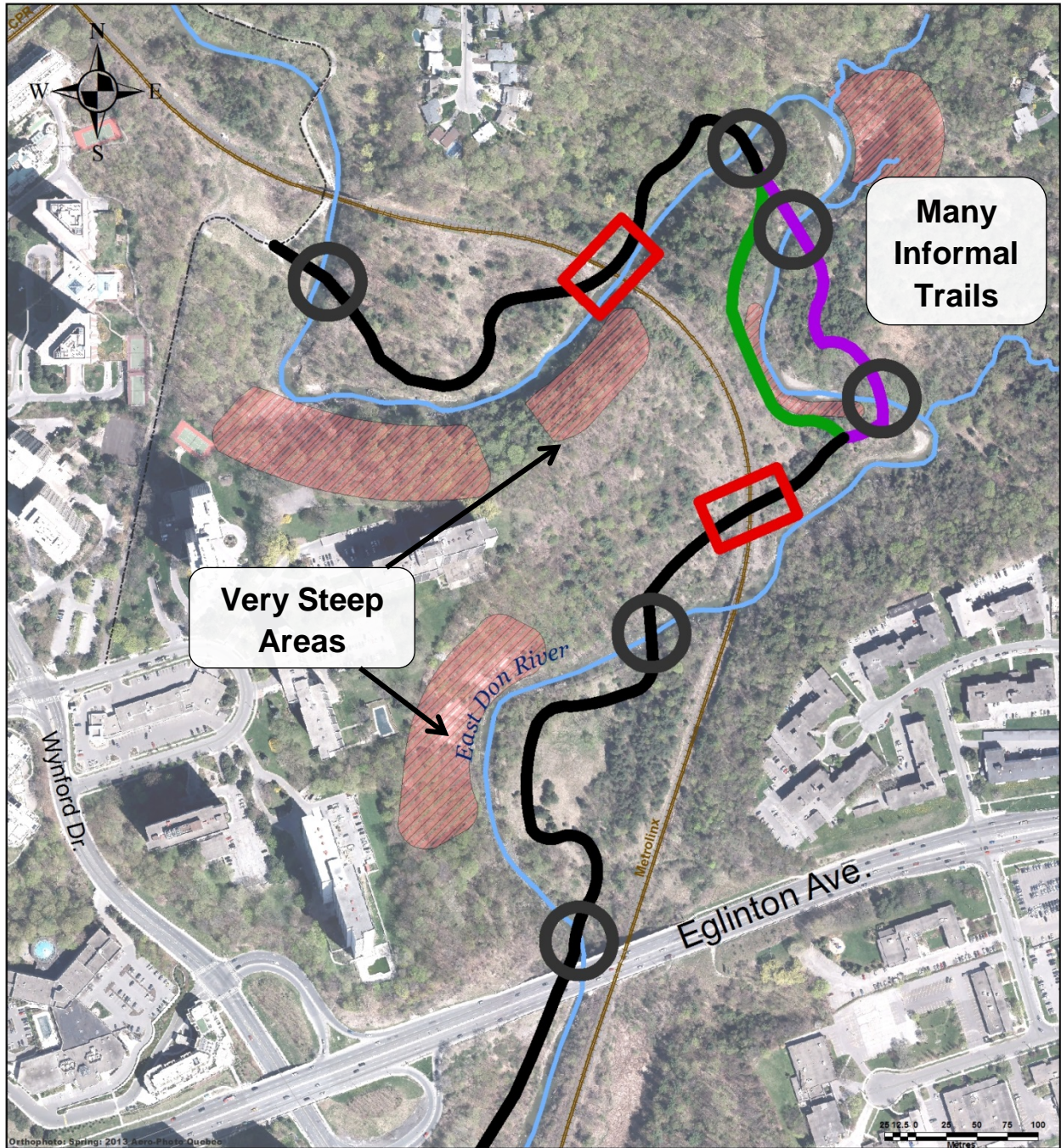



Figure 6-3: Area 1 alternative trail alignments

Source: TRCA 2014

Table 6-5: Area 1 *original* alternative trail alignments key characteristics summary

	Forest Trail A	Forest Trail B
Functional Value		
Common to All	<ul style="list-style-type: none"> • Located within the valley lands • Improved access to some infrastructure and for emergency vehicles 	
Key Differences	<ul style="list-style-type: none"> • Easy future connection to Victoria Village community 	<ul style="list-style-type: none"> • Complex future connection to Victoria Village Community • Some steeper areas
Natural and Physical Environment		
Common to All	<ul style="list-style-type: none"> • High amount of vegetation removed, majority native common species, some invasive species • Impact to wetland and aquatic habitat • Minor impacts to groundwater and surface drainage 	
Key Differences	<ul style="list-style-type: none"> • Minor impacts to river processes and hydraulics 	<ul style="list-style-type: none"> • Moderate impacts on river processes and hydraulics • Provides opportunity to remediate erosion
Social and Cultural Environment		
Common to All	<ul style="list-style-type: none"> • Trail adjacent to river course and poses some safety concerns • Varying natural landscapes • No sight barriers • More suitable for fitness users • Potential to contain archaeological sites 	
Key Differences	<ul style="list-style-type: none"> • Minimal noise level disruptions 	<ul style="list-style-type: none"> • Proximity to rail line could increase noise levels and disruptions
Cost		
Common to All	<ul style="list-style-type: none"> • Moderate operational and maintenance costs 	
Key Differences	<ul style="list-style-type: none"> • Highest capital cost 	<ul style="list-style-type: none"> • High capital cost
Technical		
Common to All	N/A	
Key Differences	<ul style="list-style-type: none"> • Moderately technically feasible and easier/quicker to implement 	<ul style="list-style-type: none"> • Least technically feasible and longer time to implement

 Shading indicates highest ranking alignment in a given criteria category

6.2.2.2 Original Alignments Evaluation Results

The detailed evaluation of the Area 1 alternative trail alignments can be found in Table 6-6. The total score represents the sum of each broad criterion’s subtotals. The highest scoring alternative in this summary indicates the preliminary preferred alternative.

Forest Trail A was selected as the Area 1 preliminary preferred alternative trail alignment based on the evaluation results.

Table 6-6: Area 1 *original* alternative trail alignments evaluation results

Criteria	Forest Trail A Score	Forest Trail B Score
Functional Value		
Meets project high-level goal #1: Trail is located within the valley lands	2	2
Meets project high -level goal #2: Trail supports multi-users	0	-1
Meets access requirements for infrastructure maintenance vehicles and for police and emergency medical services vehicles	0	0
Promotes future opportunities to create local community connections	2	-1
Meets objectives for additional planning initiatives (not related to EA objectives)	0	0
Functional value as a travel route	1	1
Functional Value Sub-Total	5	1
Natural and Physical Environment		
Potential impact to terrestrial vegetation and communities	-1	-1
Potential impact to wildlife habitat and connectivity	-2	-2
Potential impact to aquatic habitat	-2	-2
Potential impacts on surface drainage and groundwater	0	0
Potential impact to East Don River processes	-1	-2
Potential to provide additional benefits to the natural and physical environment	0	1
Natural and Physical Environment Sub-Total	-6	-6
Social and Cultural Environment		
Impact to public safety objectives	0	0
Disruption to Local Study Area business operations and services	2	2
Aesthetics	2	2
User experience	2	2
Noise Level	2	1
Potential to impact known or potential archaeological sites, built heritage sites, and cultural heritage landscapes	-2	-2
Social and Cultural Environment Sub-Total	6	5
Cost		
Capital Cost	-2	-1
Operational and Maintenance Cost	0	0
Cost Sub-Total	-2	-1
Technical		
Technical Feasibility	0	-1
Ease of Implementation	1	-1
Technical Sub-Total	1	-2
TOTAL	4	-3

6.2.2.3 Revised Alignments Description

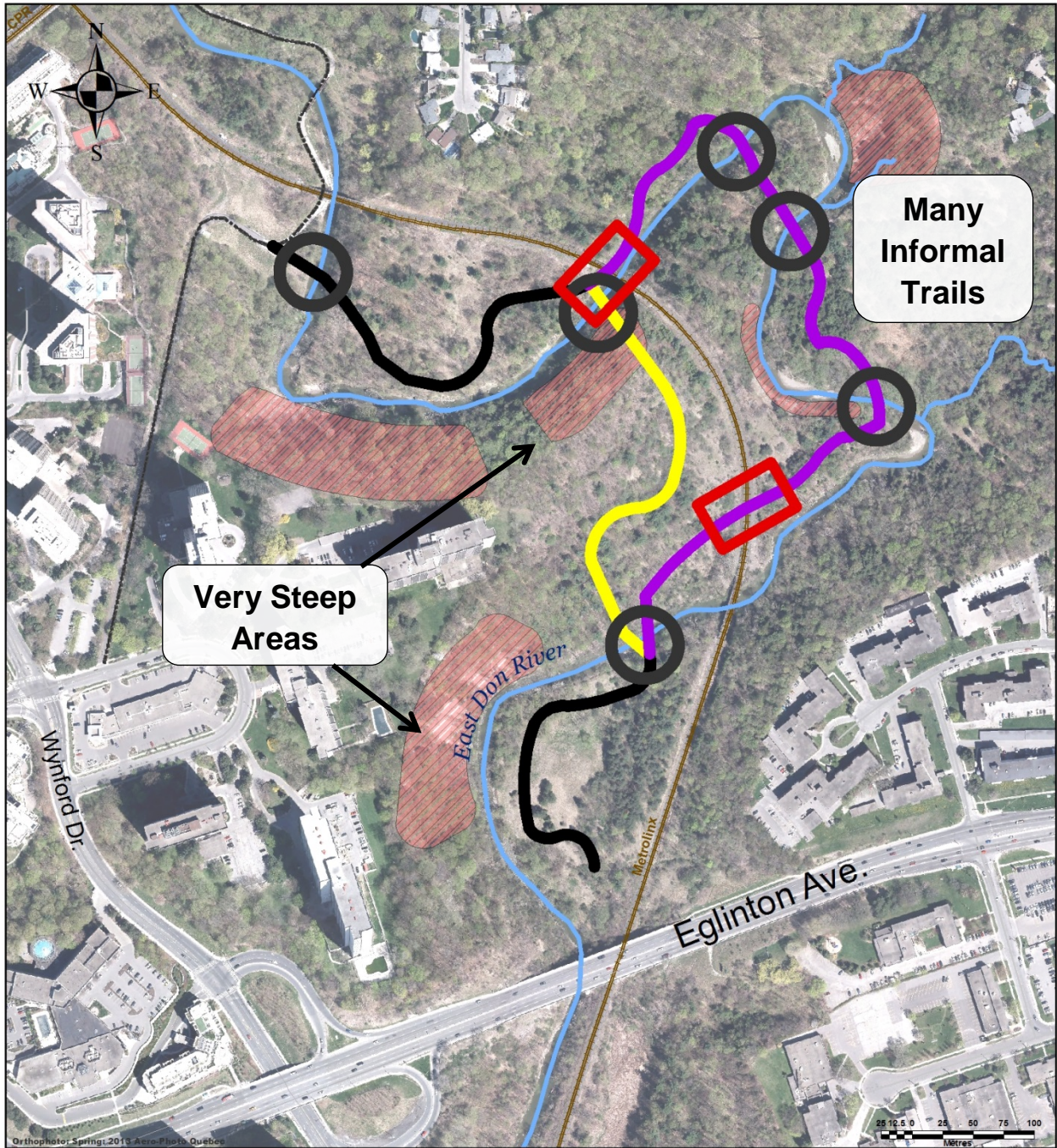
The *original* alternative trail alignments and preliminary evaluation results (described in Section 6.2.2.2) were presented and made available to the public and project stakeholders. The majority who provided feedback were supportive of the presented evaluation results, with Forest Trail A being the preliminary preferred alternative trail

alignment in Area 1. At the same time, the project team received several requests for further investigation of the potential for a trail alignment on the west side of the river and rail line. As a result, the Project Team developed one Area 1 *revised* alignment:

- Forest Trail C, routed west of the river and rail line

The preliminary preferred alignment and the *revised* alignment were carried forward with Forest Trail A being evaluated against Forest Trail C. The *original* Forest Trail B was omitted from further consideration, as it scored lowest in the previous evaluation and received least public support. As outlined in Section 6.2.1, only the areas where trail alignments diverged were evaluated.

Both Forest Trail A and Forest Trail C travel from the south end of the existing East Don Trail to immediately north of Eglinton Avenue (note the revised Area 1 boundary), as shown in Figure 6-4. The two alignments share the upper and lower segments (black line, or “common to all”), with the middle segments (purple for Forest Trail A and yellow for Forest Trail C) having different routes. Key alignment characteristics are summarized in Table 6-7, and the detailed description can be found in **Appendix A** Section A3 under Meeting #5.




East Don Trail EA 1:4,000	River Crossing	Common To All
	Rail Line Crossing	Forest Trail A
 Toronto and Region Conservation for The Living City	Existing Multi-Use Trail	Forest Trail C
	Railway	Potential Slope Stability Issue

Figure 6-4: Area 1 revised alternative trail alignments

Source: TRCA 2014

Table 6-7: Area 1 revised alternative trail alignments key characteristics

	Forest Trail A	Forest Trail C
Functional Value		
Common to All	<ul style="list-style-type: none"> Does not meet nor preclude additional initiatives outside of the EA process 	
Key Differences	<ul style="list-style-type: none"> Located within valley lands and natural area Supports multi-user, some grades vary Improves access for some infrastructure and emergency vehicles Easy future connection to Victoria Village community 	<ul style="list-style-type: none"> Located within natural area Very steep areas limit access and use by all users Does not improve access to infrastructure and steep areas may limit access by emergency vehicles Eliminates easy future connections to Victoria Village community Steep areas may limit use as a travel route
Natural and Physical Environment		
Common to All	N/A	
Key Differences	<ul style="list-style-type: none"> Large amount of informal trails Through a variety of terrestrial habitats with many invasive species Travels adjacent to wetlands Higher impacts to aquatic habitat, river processes, and hydraulics Trail location will assist in the management of informal trails 	<ul style="list-style-type: none"> Few informal trails Through undisturbed forested area with few invasive species Greater impact on wildlife use and habitat Moderate impacts on river processes and hydraulics Potential to impact bank stability (bridge is adjacent to eroding banks) Outside of floodplain Does not provide additional benefits
Social and Cultural Environment		
Common to All	<ul style="list-style-type: none"> No disruption to business operations Potential to contain archaeological sites 	
Key Differences	<ul style="list-style-type: none"> Safety concerns include proximity to river and additional crossings Variety of natural landscapes Provides the best variety of user experiences No noise disruption concerns 	<ul style="list-style-type: none"> Higher level safety concerns due to height and length of bridge, erosion areas and closer to rail line Fewer landscapes and does not provide access to river Least variety of user experiences Noise level concerns associated with proximity to rail line
Cost		
Common to All	N/A	
Key Differences	<ul style="list-style-type: none"> Higher capital cost due to rail line tunnel and additional bridges Higher operational costs as trail is longer, contains more bridges and is located in the valley lands 	<ul style="list-style-type: none"> Lower capital cost, large bridge will be a major cost Lower operation and maintenance cost as located outside of floodplain
Technical		
Common to All	<ul style="list-style-type: none"> Moderate ease of implementation 	
Key Differences	<ul style="list-style-type: none"> Fewer technical challenges 	<ul style="list-style-type: none"> Technical challenges with steep grades and meeting trail standards

 Shading indicates highest ranking alignment in a given criteria category

6.2.2.4 Revised Alignments Evaluation Results

The results of the detailed evaluation of Forest Trail A and Forest Trail C alignments are found in Table 6-8. The total score represents the sum of each broad criterion's sub-total scores. The highest total indicates the preferred alternative for Area 1. The preferred alternative trail alignment based on the evaluation results was Forest Trail A. **Therefore, Forest Trail A was moved to the Phase 3 of the EA as the preferred alternative trail alignment for Area 1.**

Table 6-8: Revised Area 1 alternative trail alignments evaluation results

Criteria	Forest Trail A	Forest Trail C
Functional Value		
Meets project high-level goal #1: Trail is located within the valley lands	2	2
Meets project high level goal #2: Trail supports multi-users	0	-2
Meets access requirements for infrastructure maintenance vehicles and for police and emergency medical services vehicles	0	-2
Promotes future opportunities to create local community connections	2	-2
Meets objectives for additional planning initiatives (not related to EA objectives)	0	0
Functional value as a travel route	0	0
Functional Value Sub-Total	4	-4
Natural and Physical Environment		
Potential impact to terrestrial vegetation and communities	-1	-1
Potential impact to wildlife habitat and connectivity	-1	-2
Potential impact to aquatic habitat	-1	1
Potential impacts on surface drainage and groundwater	-1	0
Potential impact to East Don River processes	-2	0
Potential to provide additional benefits to the natural and physical environment	1	0
Natural and Physical Environment Sub-Total	-5	-2
Social and Cultural Environment		
Impact to public safety objectives	-1	-2
Disruption to Local Study Area business operations and services	2	2
Aesthetics	2	1
User experience	2	0
Noise Level	2	1
Potential to impact known or potential archaeological sites, built heritage sites, and cultural heritage landscapes	-2	-2
Social and Cultural Environment Sub-Total	5	0
Cost		
Capital Cost	-2	0
Operational and Maintenance Cost	-2	1
Land acquisition cost/additional non construction related costs	2	2
Cost Sub-Total	-2	3
Technical		
Technical Feasibility	0	-1
Ease of Implementation	0	0
Technical Sub-Total	0	-1
TOTAL	2	-4

6.2.3 Area 2

6.2.3.1 Original Alignments Description

The middle portion of the Study Area, Area 2, is located between Eglinton Avenue East and approximately Pavane Linkway and will make a connection to Bermondsey Road. Area 2 is adjacent to the Flemingdon Park community (Figure 6-5).

Nine alignments identified in Area 2 are a combination of three different Spine Trail options (Road Link, River Walk, and Rail Trail) and three different Gatineau options (A, B, and C), as depicted in Figure 6-5. The Spine Trail options represent connections to the remainder of the trail (Area 1 and Area 3) in the north-south direction, while the Gatineau options represent connections to Bermondsey Road in the east-west direction.

Spine Trail options extend adjacent to Linkwood Lane and St. Dennis Drive (Road Link), the East Don River (River Walk) and the west side of the rail line (Rail Trail). Gatineau options extend along Wilson Brook, an East Don River tributary (A), the Gatineau Hydro Corridor maintenance route (B), and along the east side of the rail line connecting to the Gatineau Hydro Corridor maintenance route (C) (Figure 6-5).

The Gatineau connection to Bermondsey Road was intended to make a connection with the future planned Gatineau Corridor Trail extension. Due to uncertainties associated with the location of the planned Gatineau Corridor Trail in the west (a planning process outside of the scope of this EA), the connection of the proposed East Don Trail to the Gatineau Corridor Trail may not be made at this particular Area 2 location. The connection to Bermondsey Road in the east-west direction will still be made.

For clarity and comparative purposes, Area 2 alignments have been grouped by Spine Trail options. Similarly to Area 1 alignment options, some Area 2 alignments share trail segments in areas where only one trail alignment option is feasible due to existing conditions (e.g., topography and property constraints). These segments are termed “common to all”.

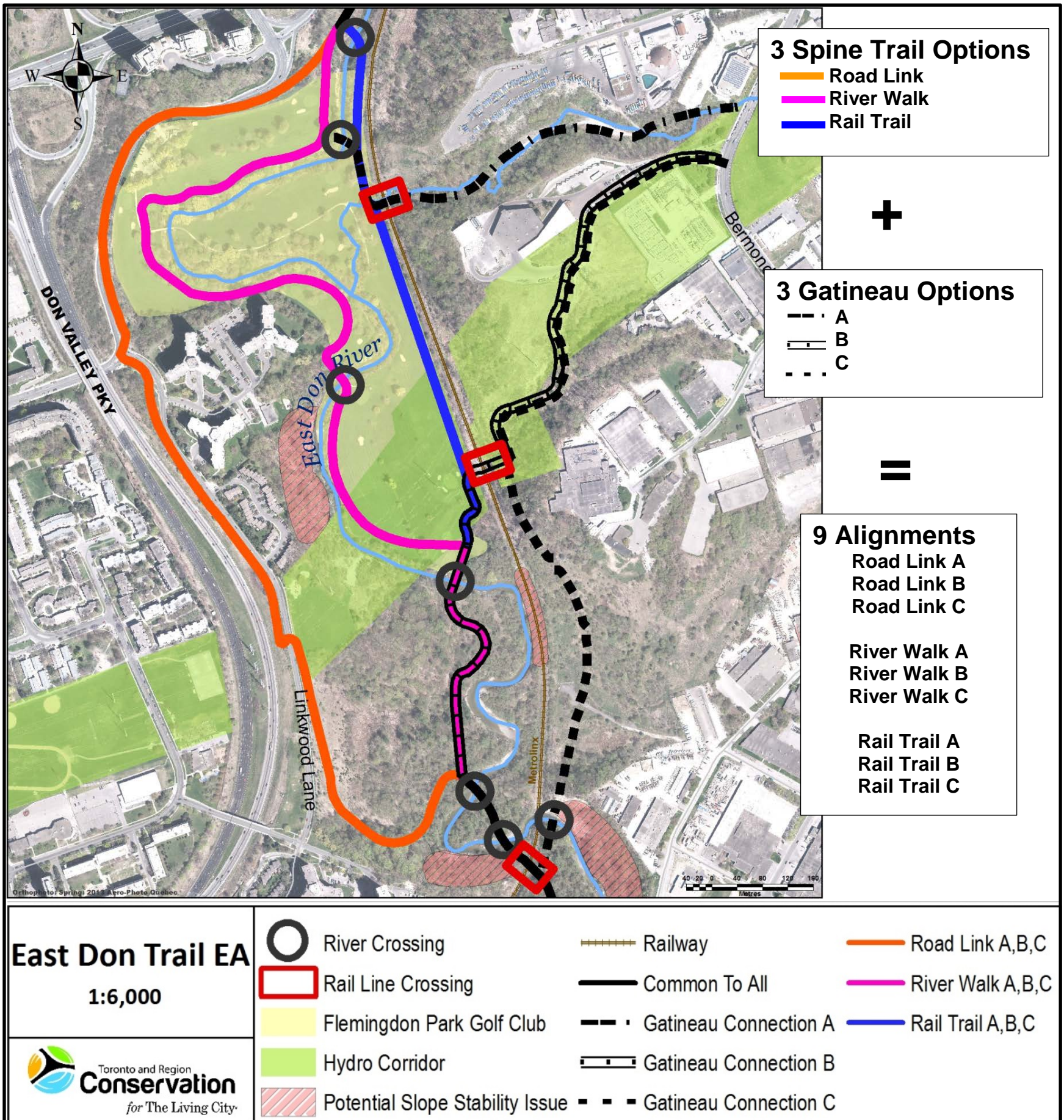


Figure 6-5: Area 2 alternative trail alignments

Source: TRCA 2014

Road Link Alignments

As mentioned above, the Spine Trail portion of the three Road Link alignment options - Road Link A, Road Link B and Road Link C - travels in the north-south direction adjacent to the local roadways Linkwood Lane and St. Dennis Drive as a separated boulevard trail (Figure 6-6). Due to existing conditions, this portion would require significant retaining wall structures and relocation of infrastructure. A detailed description of the Road Link alignment options are provided in **Appendix A** Section A3 under Meeting #4.

River Walk Alignments

Three River Walk alignment options travelling adjacent the East Don River - River Walk A, River Walk B and River Walk C - are partly routed through the Flemingdon Park Golf Club golf course (Figure 6-7). As the golf course is privately owned, River Walk alignment implementation would require the acquisition of this property. A detailed description of the River Walk alignments is provided in **Appendix A** Section A3 under Meeting #4.

Rail Trail Alignments

All three Rail Trail alignments - Rail Trail A, Rail Trail B, and Rail Trail C - are routed between the existing golf course and the rail line (Figure 6-8), within the rail line right-of-way. As the rail line and golf course are both active, the alignments would require fencing along the majority of the Spine route. At the time of the *original* alignments development and evaluation, neither the rail line nor golf course operations were thought to be impacted as result of Rail Trail implementation. Detailed descriptions of Rail Trail alignments are provided in **Appendix A** Section A3 under Meeting #4.

Key characteristics of Area 2 *original* alignments can be found in Table 6-9. Area 2 alignments considered land acquisition as some of the alignments were routed through land under private ownership (Flemingdon Park Golf Club). The detailed description of each of the nine alignments can be found in **Appendix A** Section A3 under Meeting #4.

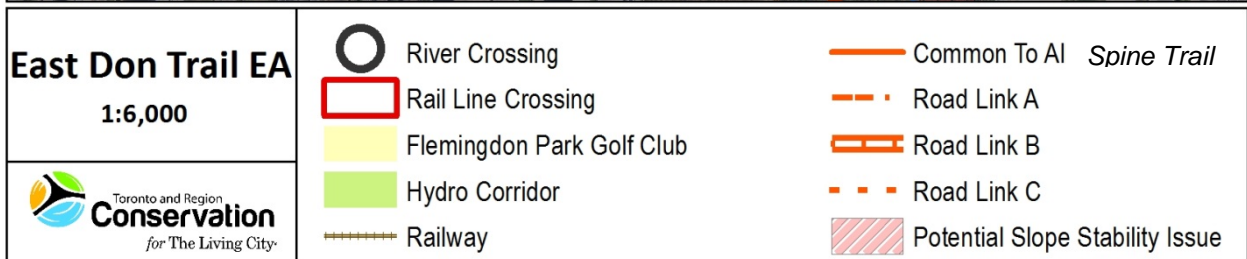
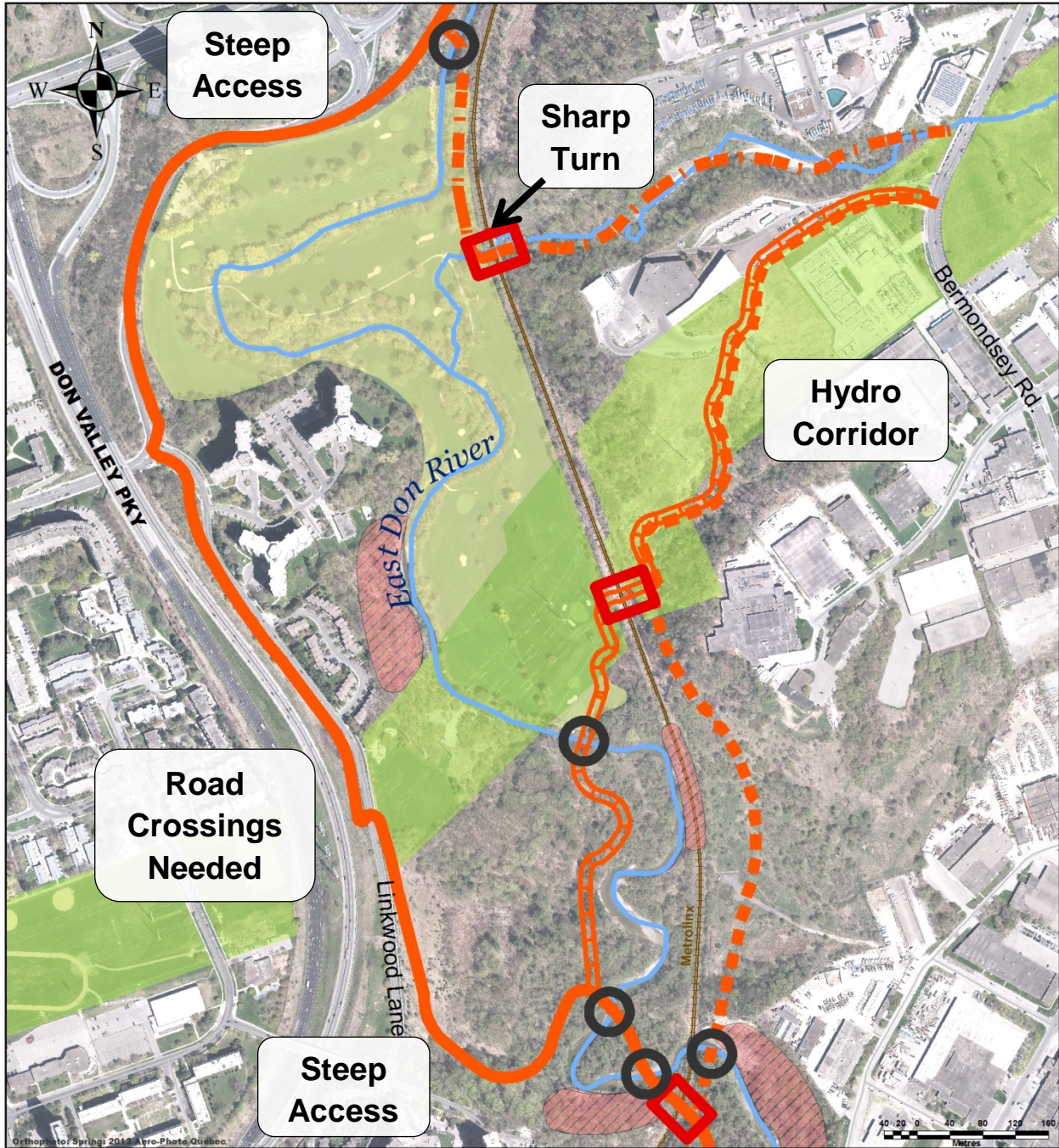


Figure 6-6: Area 2 alternative trail alignments: Road Link A, B, and C

Source: TRCA 2014

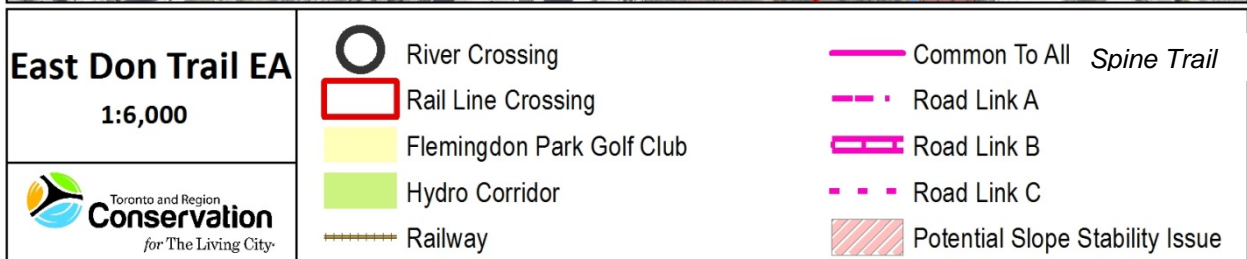
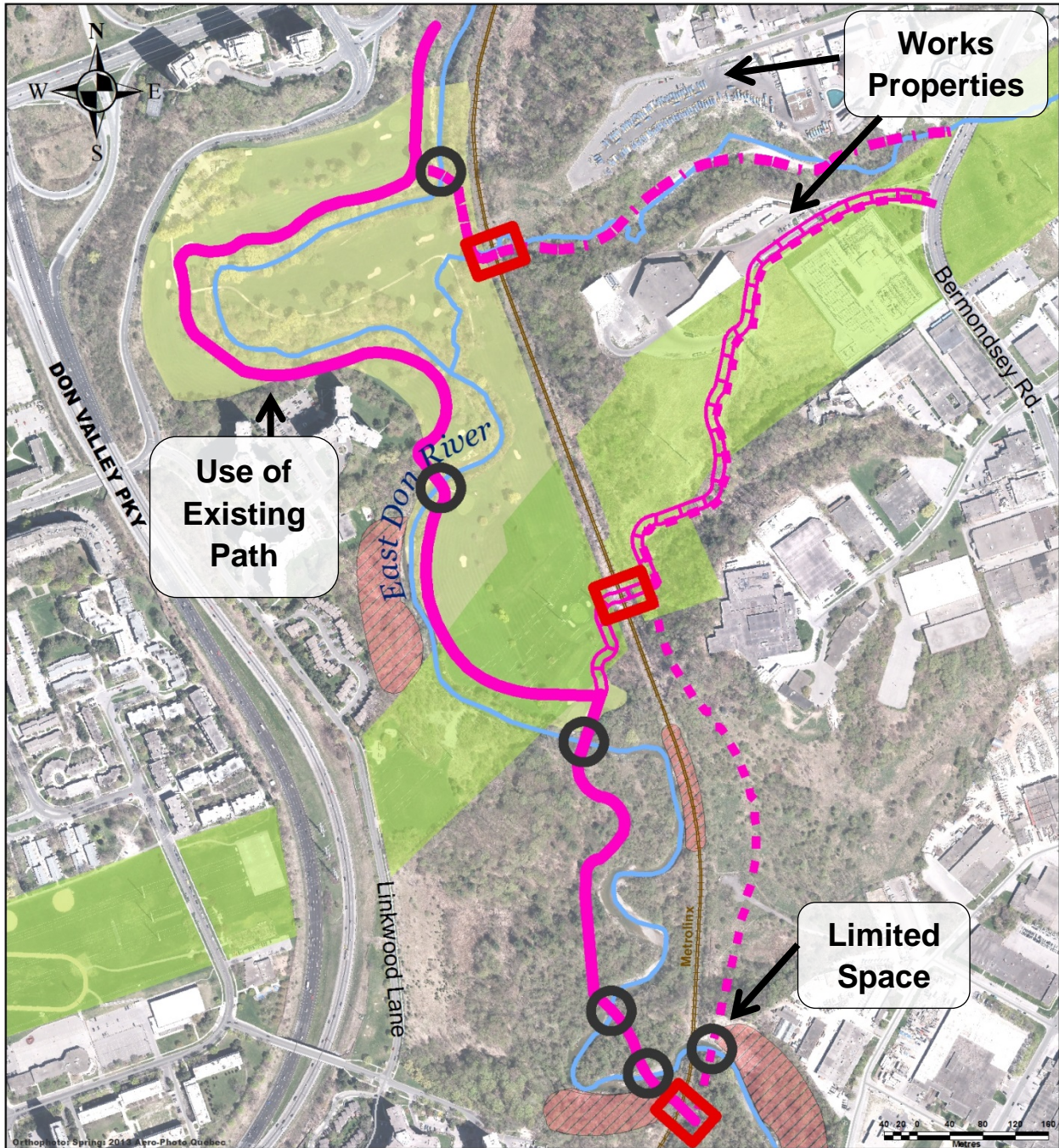


Figure 6-7: Area 2 alternative trail alignments: River Walk A, B, and C

Source: TRCA 2014

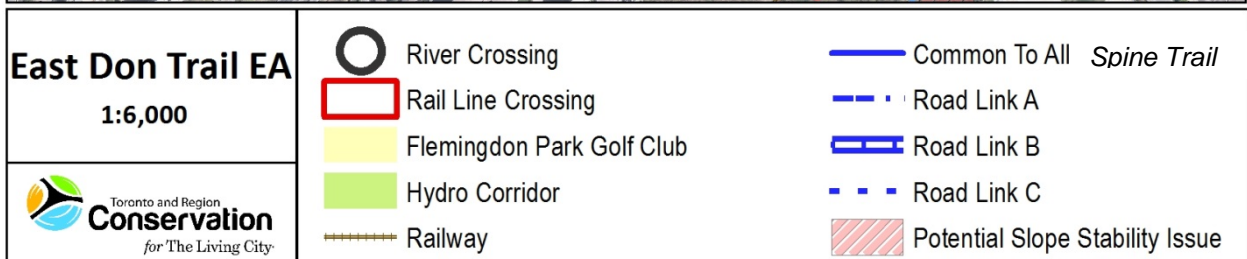
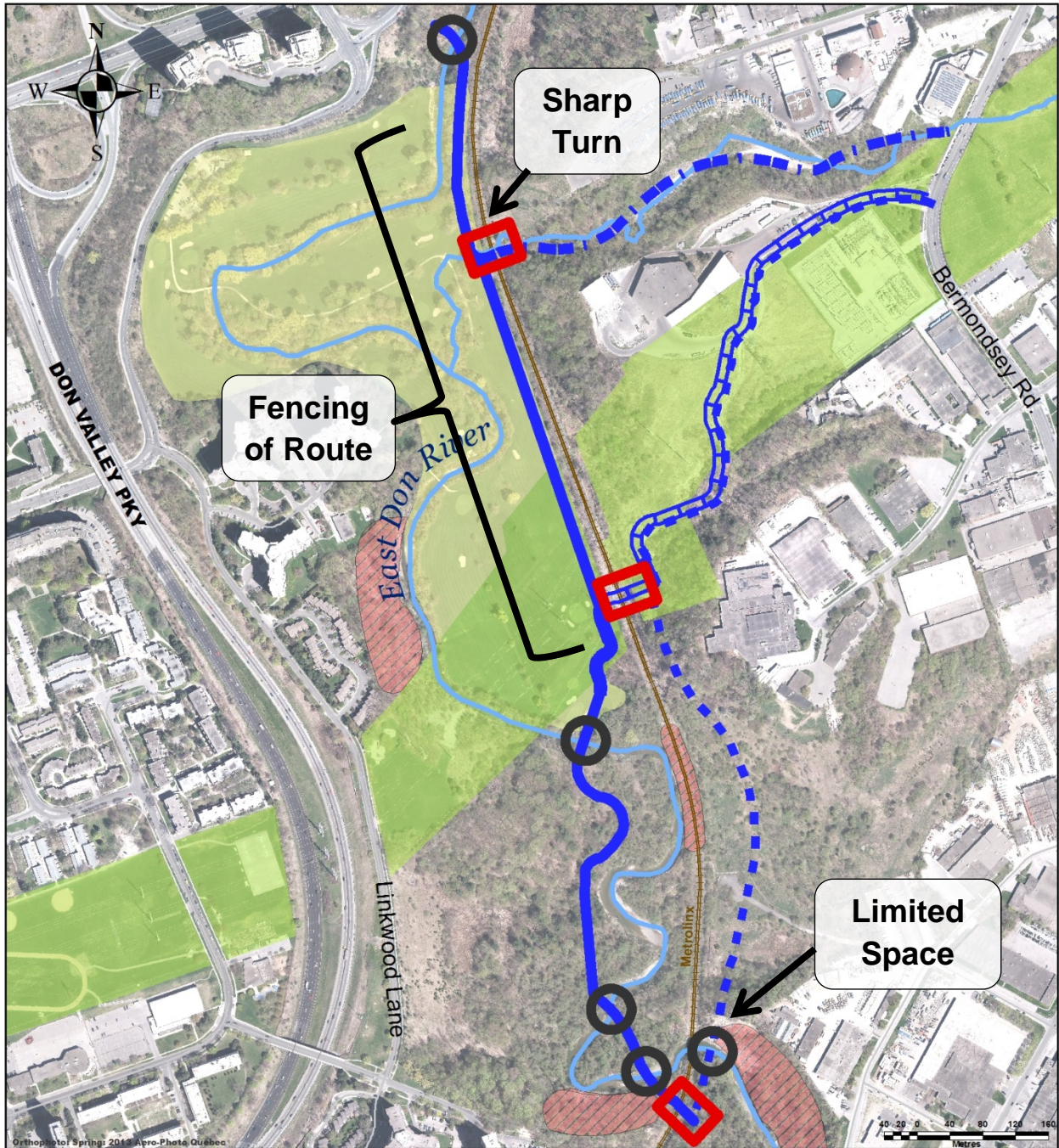



Figure 6-8: Area 2 alternative trail alignments: Rail Trail A, B, and C

Source: TRCA 2014

Table 6-9: Key characteristics of Area 2 *original* alternative trail alignments

Criteria Category	Road Link A	Road Link B	Road Link C	River Walk A	River Walk B	River Walk C	Rail Trail A	Rail Trail B	Rail Trail C
Functional Value	<ul style="list-style-type: none"> Majority of trail outside of valley lands. Very steep access limits some users. Does not improve access to infrastructure or emergency vehicles. Many travel disruptions and relatively long length. 	<ul style="list-style-type: none"> Half of trail outside of valley lands. Very steep access limits some users. Slightly improves access to infrastructure or emergency vehicles. Many travel disruptions and relatively long length. 	<ul style="list-style-type: none"> Half of trail outside of valley lands. Very steep access limits some users. Slightly improves access to infrastructure or emergency vehicles. Many travel disruptions and longest travel route. 	<ul style="list-style-type: none"> Within valley lands. Easy access and use for all users. Improves access for infrastructure and emergency vehicles. Easy community connections. Direct travel route with no disruptions. Meets most additional planning initiatives. 	<ul style="list-style-type: none"> Within valley lands. Easy access and use for all users. Improves access for infrastructure and emergency vehicles. Easy community connections. Direct travel route with no disruptions. Meets most additional planning initiatives. Functional as a travel route. 	<ul style="list-style-type: none"> Within valley lands. Easy access and use for all users. Improves access for infrastructure and emergency vehicles. Easy community connections. Direct travel route with no disruptions. Meets most additional planning initiatives. 	<ul style="list-style-type: none"> Within valley lands. Easy access and use for all users. Slightly improves access for infrastructure and emergency vehicles. Complex community connections. Most direct travel route. Meets some additional planning initiatives. 	<ul style="list-style-type: none"> Within valley lands. Easy access and use for all users. Slightly improves access for infrastructure and emergency vehicles. Complex community connections. Most direct and quickest route. Meets some additional planning initiatives. 	<ul style="list-style-type: none"> Within valley lands. Easy access and use for all users. Slightly improves access for infrastructure and emergency vehicles. Complex community connections. Most direct travel route. Meets some additional planning initiatives.
Natural and Physical Environment	<ul style="list-style-type: none"> High amount of vegetation removed. Presence of invasive species. Greatest impact to wetland habitat. Moderate impact to river processes. Large impact to wildlife habitat. Travels through a native restored area and highest amount of forest. 	<ul style="list-style-type: none"> High amount of vegetation removed. Presence of invasive species. Greatest impact to wetland habitat. Least impact to river processes. Travels through a native restored area and high amount of forest. 	<ul style="list-style-type: none"> High amount of vegetation removed. Presence of invasive species. Greatest impact to wetland habitat. Highest impact to river processes. Travels through a native restored area and a regionally rare terrestrial community. Provides opportunity to remediate significant erosion. 	<ul style="list-style-type: none"> Low amount of vegetation removed. High amount of invasive species. No impact to wetland habitat. High impact to river processes. Highest potential to flood. Provides an opportunity for restoration and regenerate of valley lands. Travels through a moderate amount of forest. 	<ul style="list-style-type: none"> Lowest amount of vegetation removed. High amount of invasive species. No impact to wetland habitat. High impact to river process. Highest potential to flood. Provides an opportunity for restoration and regeneration of valley lands. Least impact to wildlife habitat. 	<ul style="list-style-type: none"> Low amount of vegetation removed. High amount of invasive species. Minimal impact to wetland habitat. Highest impact to river processes. Highest potential to flood. Presence of regionally rare terrestrial community. Provides an opportunity for restoration and regenerate of valley lands, and to remediate erosion. 	<ul style="list-style-type: none"> Highest amount of vegetation removed. High amount of invasive species. No impact to wetland habitat. Moderate impacts to river processes. Fencing of route creates a barrier to wildlife movement. Travels through a high amount of forest. 	<ul style="list-style-type: none"> High amount of vegetation removed. High amount of invasive species. No impact to wetland habitat. Moderate impacts to river processes. Fencing of route creates a barrier to wildlife movement. 	<ul style="list-style-type: none"> Highest amount of vegetation removed. High amount of invasive species. Minimal impact to wetland habitat. High impacts to river processes. Fencing of route creates a barrier to wildlife movement. Presence of regionally rare terrestrial community. Opportunity to remediate significant erosion. Large impact to wildlife habitat.

Criteria Category	Road Link A	Road Link B	Road Link C	River Walk A	River Walk B	River Walk C	Rail Trail A	Rail Trail B	Rail Trail C
Social and Cultural Environment	<ul style="list-style-type: none"> High amount of safety concerns. No impact to business operation or use (License agreement or easement necessary). Highest noise level concerns. Least appealing route for all user experience. 	<ul style="list-style-type: none"> Highest amount of safety concerns. No impact to business operation or use (License agreement or easement necessary). High noise level concerns. Less aesthetically appealing with visual distractions. Least appealing route for all user experience. 	<ul style="list-style-type: none"> Highest amount of safety concerns. No impact to business operation or use (License agreement or easement necessary). Highest noise level concerns. Less aesthetically appealing with visual distractions. Least appealing route for all user experience. 	<ul style="list-style-type: none"> Lowest amount of safety concerns. Cease to operation and use of golf course. Some noise level concerns. Most aesthetically pleasing. Interesting route. 	<ul style="list-style-type: none"> Low amount of safety concerns. Cease to operation and use of golf course. Most aesthetically pleasing. Most interesting and appealing route for all user experience. 	<ul style="list-style-type: none"> Low amount of safety concerns. Cease to operation and use of golf course. Most aesthetically pleasing. Interesting route. 	<ul style="list-style-type: none"> High amount of safety concern (travel between Rail line and golf course and fencing of trail). No impact to business operation or use (License agreement or easement necessary). Highest noise level disruptions. 	<ul style="list-style-type: none"> High amount of safety concerns (travel between Rail line and golf course and fencing of trail). No impact to business operation or use (License agreement or easement necessary). High noise level disruptions. 	<ul style="list-style-type: none"> Highest amount of safety concerns (travel between Rail line and golf course and fencing of trail). No impact to business operation or use (License agreement or easement necessary). High noise level disruptions.
Cost	High capital, maintenance, and operations cost.	Moderate capital, maintenance, and operations cost.	Highest capital, maintenance, and operations cost.	Low capital cost, moderate maintenance cost.	Lowest capital cost, low maintenance cost.	Moderate capital cost, high maintenance and operation costs.	Low capital, maintenance, and operation cost.	Lowest capital, operation and maintenance cost.	Moderate capital, maintenance, and operation costs.
Technical	Low feasibility and difficult/long to implement.	Moderately feasible and implementable.	Least feasible and most difficult/longest to implement.	Moderately feasible and moderately difficult to implement.	Highly feasible and moderately difficult/long to implement.	Most feasible and most difficult to implement.	Moderately feasible and easy to implement.	Most feasible and easiest/quickest to implement.	Least feasible and moderately difficult to implement.
Land Acquisition Required	No.	No.	No.	Yes.	Yes.	Yes.	No.	No.	No.

 Shading indicates highest ranking alignment in a given criteria category

6.2.3.2 Original Alignments Evaluation Results

The results of the detailed evaluation of Area 2 *original* alignments are presented in Table 6-10. The total score represents the sum of each broad criterion's sub-total scores. The highest score in this summary indicates the preliminary preferred alternative for Area 2. A "land acquisition required (yes/no)" line (see the bottom of Table 6-10) was added to indicate whether this action would be needed to implement the alternative trail alignment. This was done to allow for alignments comparison based on the environmental impact considerations while acknowledging the additional challenges associated with land ownership. Based on the evaluation considering the environmental impacts and excluding the land ownership constraints, **the preliminary preferred trail alignment in Area 2 was River Walk B.**

Table 6-10: Area 2 *original* alternative trail alignments evaluation results

Criteria	Alternative Trail Alignments								
	Road Link A	Road Link B	Road Link C	River Walk A	River Walk B	River Walk C	Rail Trail A	Rail Trail B	Rail Trail C
Functional Value									
Meets project high level goal #1: Trail is located within the valley lands	-1	0	0	2	2	2	2	2	2
Meets project high level goal #2: Trail supports multi-users	-2	-1	-1	0	0	0	0	0	0
Meets access requirements for infrastructure maintenance vehicles and for police and emergency medical services vehicles	-1	2	-1	1	1	0	0	0	-1
Promotes future opportunities to create local community connections	2	2	2	1	1	1	-1	-1	-1
Meets objectives for additional planning initiatives (not related to EA objectives)	0	1	1	1	2	2	-1	0	0
Functional value as a travel route	-1	-1	-1	0	1	0	1	2	0
Functional Value Sub-Total	-3	1	0	5	7	5	1	3	0
Natural and Physical Environment									
Potential impact to terrestrial vegetation and communities	-2	-1	-2	-1	0	-1	-2	-1	-2
Potential impact to wildlife habitat and connectivity	-2	-2	0	-1	0	-1	-2	0	-2
Potential impact to aquatic habitat	-1	-1	0	-2	-1	-2	-2	-1	-1
Potential impacts on surface drainage and groundwater	0	1	-1	-1	0	-1	0	1	-1
Potential impact to East Don River processes	1	0	0	-1	-1	-2	0	0	-1
Potential to provide additional benefits to the natural and physical environment	0	0	1	1	1	2	0	0	1

Criteria	Alternative Trail Alignments								
	Road Link A	Road Link B	Road Link C	River Walk A	River Walk B	River Walk C	Rail Trail A	Rail Trail B	Rail Trail C
Natural and Physical Environment Sub-Total	-4	-3	-2	-5	-1	-5	-6	-1	-6
Social and Cultural Environment									
Impact to public safety objectives	-1	-2	-2	1	0	0	-2	-2	-2
Disruption to Local Study Area business operations and services	0	0	0	-2	-2	-2	-1	-1	-1
Aesthetics	-1	0	0	1	2	2	0	1	1
User experience	-2	-1	-1	0	2	0	0	1	1
Noise Level	-2	-1	-2	0	1	0	-2	-1	-2
Potential to impact known or potential archaeological sites, built heritage sites, and cultural heritage landscapes	-1	-1	-1	-2	-2	-2	-2	-2	-2
Social and Cultural Environment Sub-Total	-7	-5	-6	-2	1	-2	-7	-4	-5
Cost									
Capital Cost	-1	0	-2	1	2	0	1	2	0
Operational and Maintenance Cost	-1	0	-2	0	1	-1	1	2	0
Cost Sub-Total	-2	0	-4	1	3	-1	2	4	0
Technical									
Technical Feasibility	-1	0	-2	0	1	2	0	1	-2
East of Implementation	-1	0	-2	-1	-1	-2	1	2	0
Technical Sub-Total	-2	0	-4	-1	0	0	1	3	-2
Total	-18	-7	-16	-2	10	-3	-9	-5	-13
Land Acquisition Required	No	No	No	Yes	Yes	Yes	No	No	No

6.2.3.3 Revised Alignments Description

As with the Area 1 alternative trail alignments, the *original* Area 2 alternative trail alignments and preliminary evaluation results were presented to project stakeholders and the public and, as a result of input received, *revised* Area 2 alignments were developed.

The majority of members of the public and other project stakeholders were supportive of the presented evaluation of the *original* alternative trail alignments, with River Walk B as the preliminary preferred alternative alignment in Area 2. At the same time, the project team received several requests for further investigation of the potential to develop a shared-use alternative between the trail and the existing golf course as well as the

potential for a trail alignment on the east side of the rail line. In addition, discussions with Metrolinx at this time revealed that all Area 2 Rail Trail alignments would no longer be viable route options due to the potential future rail line expansion.

As a result, the Project Team developed two *revised* alternative trail alignments in Area 2:

- Hillside Trail to investigate an alignment east of the rail line, via extending the *original* Rail Trail towards Eglinton Avenue East and routing it in the valley lands east of the rail line
- Corridor Trail to investigate a shared-use option, via extending the *original* Rail Trail towards Eglinton Avenue East and routing it immediately west of the rail line corridor (off the rail line property), along the edge of the golf course property

Rail Trail A, B, and C were removed from further consideration since they occupied the land required for the potential future rail line expansion, as stated above. In addition, the *original* Road Link A, B, and C alignments, which scored lowest in the previous evaluation and received least public support, were omitted from further consideration.

The *revised* Area 2 alignments travel from immediately north of Eglinton Avenue East to approximately Bartley Drive, connecting with Bermondsey Road through the Gatineau Hydro corridor, as shown in Figure 6-9 (note the revised Area 2 boundary). The three alignments share the segment that travels from Area 3 to Bermondsey Road via the hydro corridor (black line, or “common to all”, in Figure 6-9). The key characteristics of the *revised* alignments Corridor Trail, Hillside Trail and the preliminary preferred alignment River Walk are described in Table 6-11. A detailed description of the *revised* Area 2 alignments can be found in **Appendix A** Section A3 under Meeting #5.

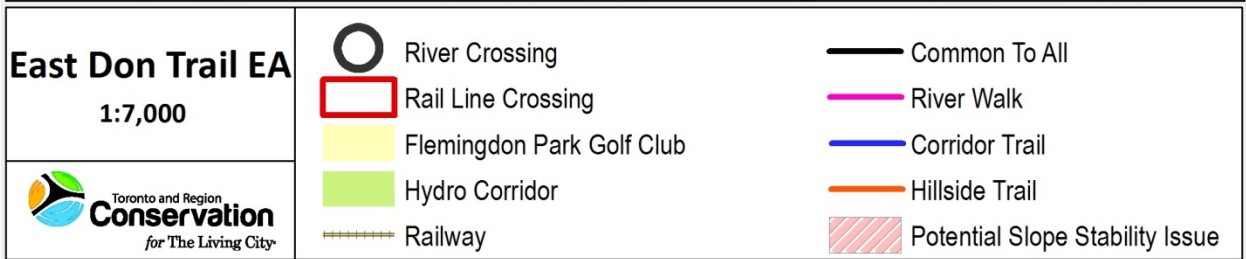
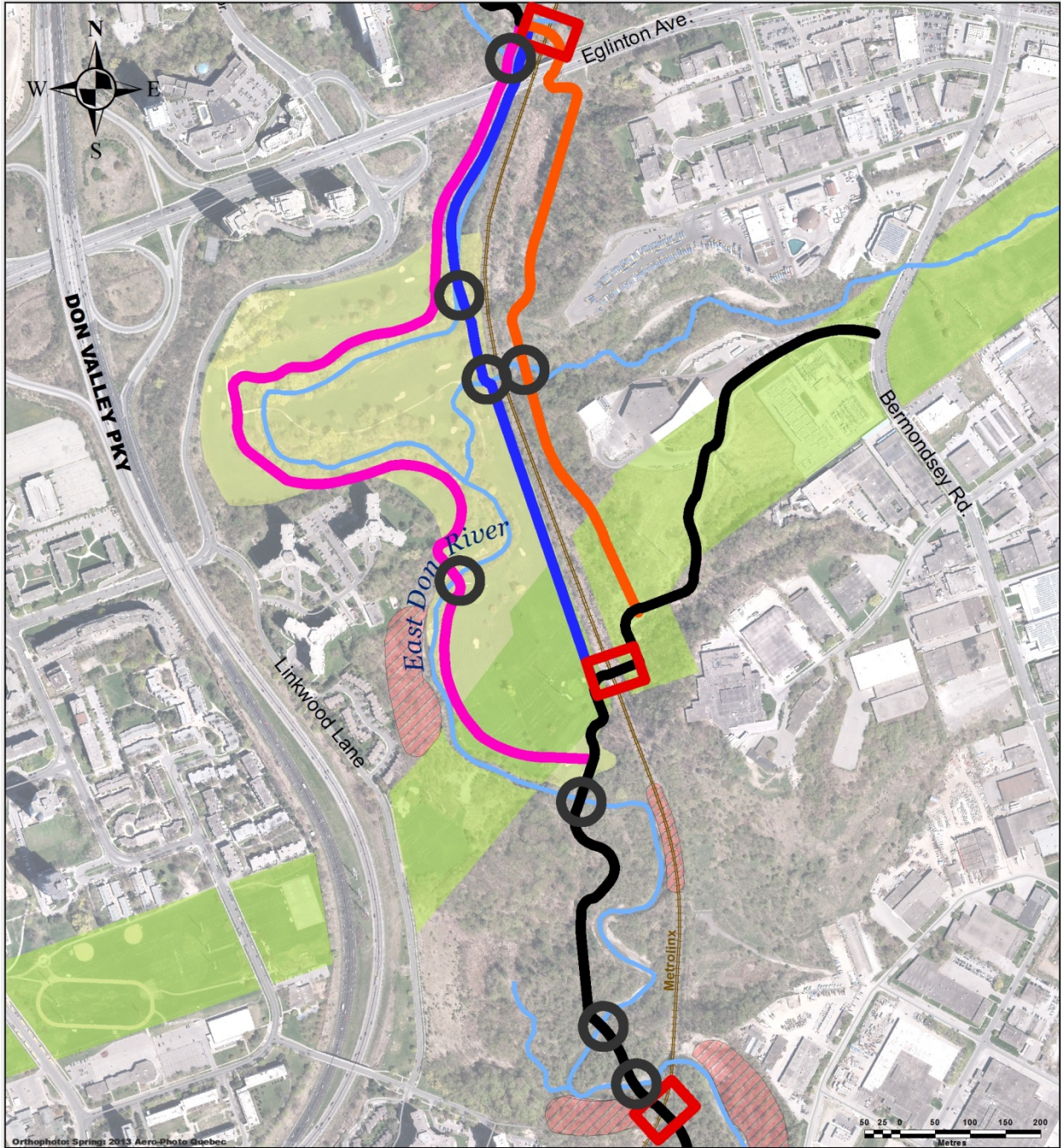


Figure 6-9: Area 2 revised alternative trail alignments.
 Source: TRCA 2014

Table 6-11: Area 2 revised alternative trail alignments key characteristics

River Walk	Corridor Trail	Hillside Trail
Functional Value		
<ul style="list-style-type: none"> • Flat and even terrain supports multi-user • Improves access to infrastructure and emergency vehicles • Allows for easy future connections to Flemingdon community • Meets additional objectives, Don Watershed Plan, increase in parklands • Good travel route; flat and even, few obstacles, some bridges 	<ul style="list-style-type: none"> • Flat and even terrain supports multi-user • Does not improve access to infrastructure • Does not improve additional community connections • Best travel route; quickest travel route, no disruptions 	<ul style="list-style-type: none"> • Some very steep areas limit access and use by all users • Does not improve access to infrastructure, steep areas may limit access to emergency vehicles • Allows for easy future connections to Eglinton Ave • Steep areas could provide challenge as a travel route
Natural and Physical Environment		
<ul style="list-style-type: none"> • Little removal of vegetation, current monoculture habitat • Least negative impact on wildlife habitat • Greatest impact on aquatic habitat, surface drainage, and river process as contains number of bridges, longer in length and is located closer to river • Additional benefits include some naturalization of floodplain and increase in natural cover 	<ul style="list-style-type: none"> • Little removal of vegetation, riparian vegetation removal necessary for bridge placement • Fence could be a barrier to wildlife movement • Impact to aquatic habitat from large bridge and travel along riparian area • Additional benefits include potential to fix erosion 	<ul style="list-style-type: none"> • Largest amount of vegetation removed, through some relatively undisturbed areas • Greatest impact to wildlife habitat, travels through track of undisturbed forest and wetland area • Least impact on aquatic habitat and river process as away from the main branch of the East Don River • Area full of seepage, trail would intercept much drainage as at toe of slopes • Additional benefits include potential to fix tributary erosion
Social and Cultural Environment		
<ul style="list-style-type: none"> • Safety concerns with proximity to river and number of bridges • Greatest disruption to local business operation (cease of golf course operations) • Aesthetically pleasing, adjacent to river • Provides a large variety of user experiences • Low amount of noise disruptions 	<ul style="list-style-type: none"> • Greatest safety concerns, adjacent golf course and rail line • Large amount of disruption to business operation (potential re-working of golf course) • Least aesthetically pleasing, less access to natural areas • Provides the least amount of variety of user experiences • Highest amount of noise disruptions 	<ul style="list-style-type: none"> • Safety concerns with steep areas and proximity to rail line • No disruption to local business operations • Aesthetically pleasing, varying landscapes • Provides a large variety of user experiences • Lowest amount of noise disruptions
Cost		
<ul style="list-style-type: none"> • Lowest construction cost 	<ul style="list-style-type: none"> • Low construction cost 	<ul style="list-style-type: none"> • Highest construction cost

River Walk	Corridor Trail	Hillside Trail
<ul style="list-style-type: none"> • High maintenance cost due to bridges located in floodplain • Highest additional costs (acquisitions) 	<ul style="list-style-type: none"> • Highest maintenance cost due to fencing and bridges • High amount of additional costs (mitigation of golf course lands after re-work) 	<ul style="list-style-type: none"> • Lowest maintenance cost • Some potential additional costs (easement of Metrolinx land)
Technical		
<ul style="list-style-type: none"> • Least technically challenging • Difficulties with implementation due to property acquisition 	<ul style="list-style-type: none"> • Some technical challenges • Most difficult to implement due to shared use and re-working of golf course 	<ul style="list-style-type: none"> • Most technically challenging • Easiest to implement

 Shading indicates highest ranked alignment in a given evaluation criteria category

6.2.3.4 Revised Alignments Description and Evaluation Results

The results of Area 2 revised alternative trail alignments evaluation can be found in Table 6-12. As with the *revised* Area 1 alignments, only the portions where the *revised* Area 2 alignments diverged were evaluated.

The preferred Area 2 alternative trail alignment based on the evaluation results was River Walk B. However, this alignment was not moved forward to Phase 3 as it is routed on private property that is not currently available, as per the discussions with the property owner Flemington Park Golf Club.

Lowest-scoring Corridor Trail alignment was omitted from further consideration as well. This alternative would require either purchase of or acquisition of an easement for a portion of the golf course land, fencing of the trail route, potential golf course reconfiguration, and other mitigation measures as part of construction. Discussions with Flemington Park Golf Club were undertaken where golf course representatives indicated they were not in favor of Corridor Trail, citing concerns with liability, safety, trespassing and impact to golfer experience.

As a result, the second highest ranked alternative - **Hillside Trail - was moved forward to Phase 3 as the preferred alternative trail alignment.**

Table 6-12: Area 2 *revised* alternative trail alignments evaluation results

Criteria	River Walk	Corridor Trail	Hillside Trail
Functional Value			
Meets project high-level goal #1: Trail is located within the valley lands	2	2	2
Meets project high-level goal #2: Trail supports multi-users	2	2	0
Meets access requirements for infrastructure maintenance vehicles and for police and emergency medical services vehicles	2	0	-1
Promotes future opportunities to create local community connections	1	0	1

Criteria	River Walk	Corridor Trail	Hillside Trail
Meets objectives for additional planning initiatives (not related to EA objectives)*	1	0	0
Functional value as a travel route	1	2	0
Functional Value Sub-Total	9	6	2
Natural and Physical Environment			
Potential impact to terrestrial vegetation and communities	1	0	-2
Potential impact to wildlife habitat and connectivity	1	0	-2
Potential impact to aquatic habitat	-2	-1	1
Potential impacts on surface drainage and groundwater	-2	1	-1
Potential impact to East Don River processes	-1	0	1
Potential to provide additional benefits to the natural and physical environment	2	1	1
Natural and Physical Environment Sub-Total	-1	1	-2
Social and Cultural Environment			
Impact to public safety objectives	1	-1	0
Disruption to Local Study Area business operations and services	-2	-1	2
Aesthetics	2	1	2
User experience	2	1	2
Noise Level	1	-1	0
Potential to impact known or potential archaeological sites, built heritage sites, and cultural heritage landscapes	-2	-2	-2
Social and Cultural Environment Sub-Total	2	-3	4
Cost			
Capital Cost	1	0	-2
Operational and Maintenance Cost	0	-1	1
Land acquisition cost/additional non-construction related costs	-2	-1	1
Cost Sub-Total	-1	-2	0
Technical			
Technical Feasibility	1	-1	-2
Ease of Implementation	-1	-2	0
Technical Sub-Total	0	-3	-2
TOTAL	9	-1	2

*NOTE: while a connection to Eglinton Avenue is feasible with these alignments, discussions confirming which trail connections to Eglinton LRT are built will need to be undertaken between the City of Toronto and Metrolinx.

6.2.3.5 Potential for Amendment

Pending approval of this EA, the entire East Don Trail will take a few years to complete detailed design and construction, during this duration changes in circumstance may occur that would require design or scheduling modifications.

As indicated in Section 6.2.3.4, River Walk B was evaluated the highest ranking alternative trail alignment in Area 2. This alternative could not move forward to Phase 3 as it is routed on private property owned by the Flemingdon Park Golf Club. As such the second highest evaluated alignment, Hillside Trail was selected as the preferred alternative trail alignment. If all or portions of the private property become available to the City of Toronto the preferred alternative selected for Area 2 may be modified through an amendment to the EA. The amendment would reexamine the trail alignment including trail location, length, and grades along with rail line and watercourse crossings.

In the event that the City of Toronto decided to pursue an amendment to the EA, an addendum would be issued to the ESR. The addendum would describe the circumstances necessitating the change, the environmental implications of the change, and what, if any can and will be done to mitigate any negative environmental impacts (MEA, 2015). The addendum would be filed for a 30-day public review with notice being issued to all potentially affected members of the public and review agencies as well as those who were notified in the preparation of the original ESR.

6.2.4 Area 3

6.2.4.1 Alignments Description

The southern-most portion of the Study Area, Area 3, extends from approximately Pavane Linkway to the north end of the Lower Don Trail as well as West Don Trail and Taylor Creek Trail heads. Area 3 is adjacent to the Parkview Hills, O'Connor-Parkview, Flemingdon Park and Thorncliffe Park communities (Figure 6-10).

Three alignments were identified in Area 3: Access Route A, Access Route B and Access Route C (Figure 6-10). All alignments are routed along the existing Toronto Water access route, with the connection to the existing Don Trails being the main difference between the three. The key characteristics of the Access Routes A, B and C are described in Table 6-13. Detailed descriptions of Access Routes A, B and C are provided in **Appendix A** Section A3 under Meeting #4.

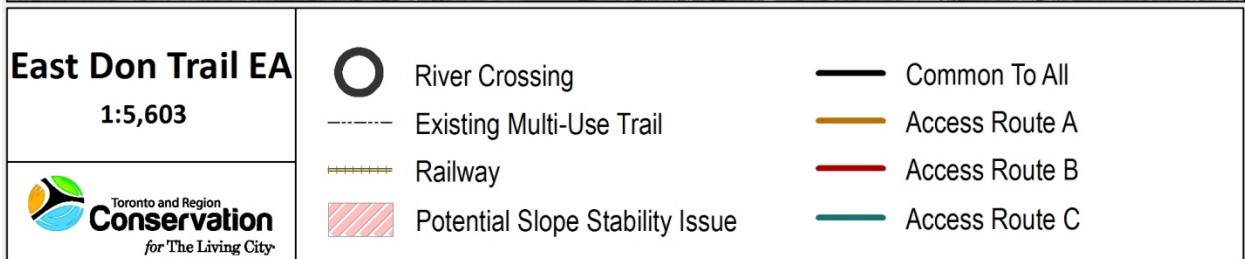
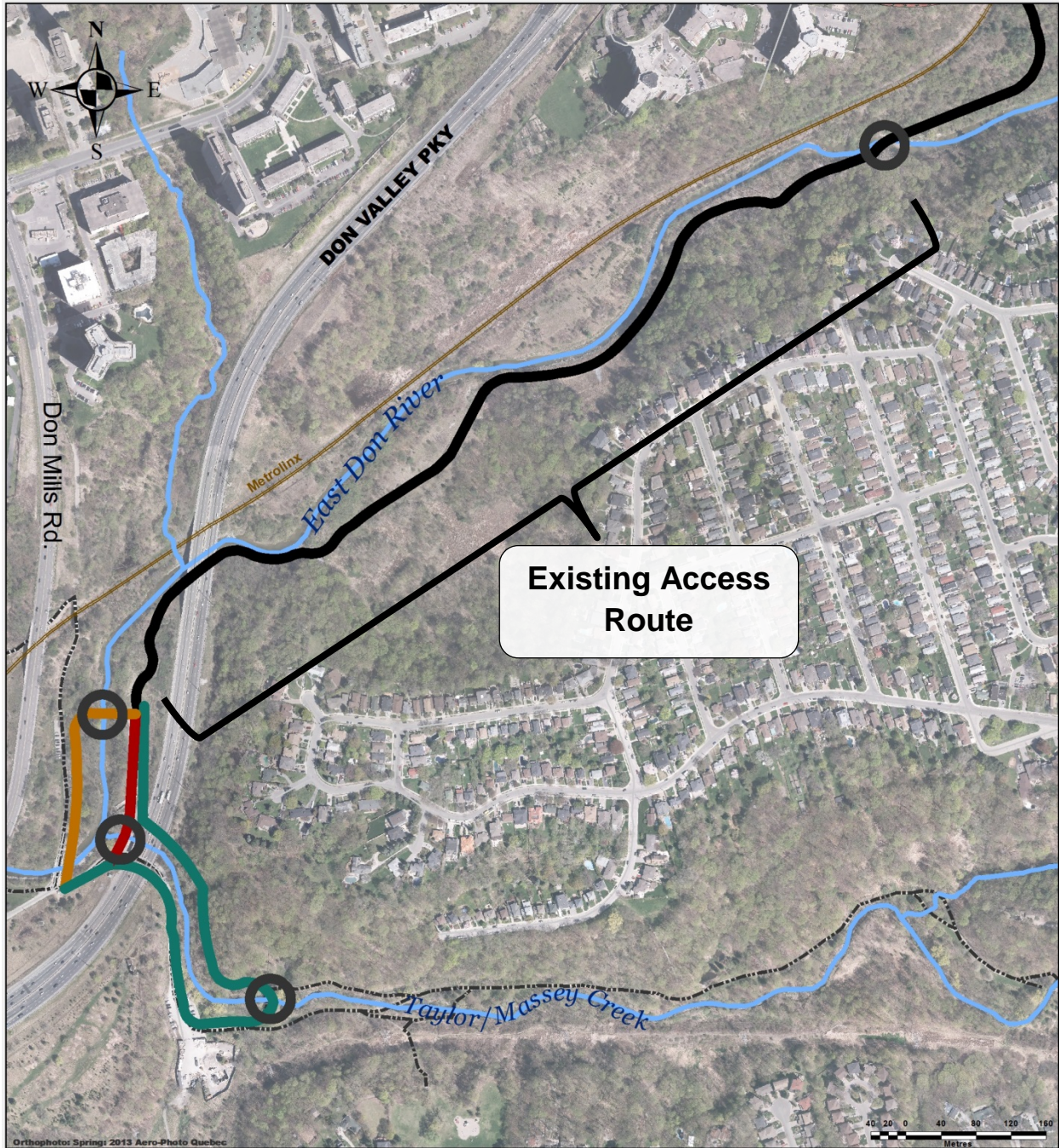


Figure 6-10: Area 3 alternative trail alignments

Source: TRCA 2014

Table 6-13: Summary of Area 3 alternative trail alignments key characteristics

	Access Route A	Access Route B	Access Route C
Functional Value Criteria			
Common to All	<ul style="list-style-type: none"> Alignments located within valley lands Flat and even terrain provides easy access and use for all users Meets some additional planning initiatives No travel disruptions 		
Key Differences	<ul style="list-style-type: none"> Provides access to infrastructure and for emergency vehicles Easy future connections 	<ul style="list-style-type: none"> Provides access to infrastructure and for emergency vehicles Complex future connections 	<ul style="list-style-type: none"> Less direct access to infrastructure and for emergency vehicles Easy future connections Slightly longer route
Natural and Physical Environment Criteria			
Common to All	<ul style="list-style-type: none"> Alignments use existing access route Some impact to natural habitat, as alignments travel by wetlands and adjacent to river course Moderate impact to aquatic habitat 		
Key Differences	<ul style="list-style-type: none"> Lowest impacts to river processes Low amount of vegetation removed 	<ul style="list-style-type: none"> Low impacts to river processes Low amount of vegetation removed 	<ul style="list-style-type: none"> Low impacts to river processes Medium amount of vegetation removed Travels through high amount of forest Travels along Taylor Creek
Social and Cultural Environment Criteria			
Common to All	<ul style="list-style-type: none"> Alignments are routed along the river with minor safety concerns Interesting and easy to follow route 		
Key Differences	<ul style="list-style-type: none"> Aesthetically appealing Potential for archaeological sites 	<ul style="list-style-type: none"> Aesthetically appealing Potential for archaeological sites 	<ul style="list-style-type: none"> Most aesthetically appealing Highest potential to impact cultural heritage Sharp turns impact sight lines Travels in close proximity to residential neighborhoods
Cost Criteria			
Common to All	N/A		
Key Differences	<ul style="list-style-type: none"> High capital cost Low operation and maintenance cost 	<ul style="list-style-type: none"> Moderate capital, and operation and maintenance cost 	<ul style="list-style-type: none"> Moderate capital cost High operation and maintenance cost
Technical Criteria			
Common to All	<ul style="list-style-type: none"> Easy to implement 		
Key Differences	<ul style="list-style-type: none"> High technical feasibility 	<ul style="list-style-type: none"> Lowest technical feasibility 	<ul style="list-style-type: none"> High technical feasibility

 Shading indicates highest ranked alignment in a given evaluation criteria category

6.2.4.2 Evaluation Results

Access Route A and Access Route B were the highest scoring alternative trail alignments based on the evaluation results. The results of Area 3 alignments evaluation can be found in Table 6-14. Following additional hydraulic analysis and discussions with Toronto Water, **the preferred alignment selected was Access Route B.**

It was found that due to future works (not related to the East Don Trail project) Taylor Massey Creek hydraulics would be altered in the area of the Access Route B southern-most bridge location. Hydraulic modeling indicated that under these conditions the flooding risks would be lower. This would decrease maintenance costs associated with flooding, decrease anticipated impacts on the hydraulics of both Taylor Massey Creek and the East Don River, and make this route more technically feasible.

In addition, the discussions with Toronto Water revealed that the Access Route B southern-most bridge location would facilitate optimal access to Toronto Water infrastructure. Toronto Water will require the bridge to support large/heavy equipment and thus require a bridge structure larger than other bridges proposed along the East Don Trail. As a bridge over Taylor Massey Creek would have a fairly short span, it would be easier to implement and cost less than a bridge over the East Don River (as seen in Access Route A).

Table 6-14: Area 3 alternative trail alignments evaluation results

Criteria	Access Route A	Access Route B	Access Route C
Functional Value			
Meets project high-level goal #1: Trail is located within the valley lands	2	2	2
Meets project high-level goal #2: Trail supports multi users	1	1	-2
Meets access requirements for infrastructure maintenance vehicles and for police and emergency medical services vehicles	1	2	0
Promotes future opportunities to create local community connections	1	0	1
Meets objectives for additional planning initiatives (not related to EA objectives)	1	1	1
Functional value as a travel route	1	1	0
Functional Value Sub-Total	7	7	3
Natural and Physical Environment			
Potential impact to terrestrial vegetation and communities	2	2	0
Potential impact to wildlife habitat and connectivity	-1	-1	-2
Potential impact to aquatic habitat	0	0	-1
Potential impacts on surface drainage and groundwater	1	1	0
Potential impact to East Don River processes	0	-1	-1
Potential to provide additional benefits to the natural and physical environment	0	0	0
Natural and Physical Environment Sub-Total	2	1	-4
Social and Cultural Environment			
Impact to public safety objectives	0	1	0
Disruption to Local Study Area business operations and services	2	2	2
Aesthetics	1	1	2
User experience	2	2	2
Noise Level	1	1	0
Potential to impact known or potential archaeological sites, built heritage sites, and cultural heritage landscapes	-1	-1	-2
Social and Cultural Environment Sub-Total	5	6	4
Cost			
Capital Cost	-1	0	0
Operational and Maintenance Cost	1	0	-1
Cost Sub-Total	0	0	-1
Technical			
Technical Feasibility	1	0	1
Ease of Implementation	1	1	1
Technical Sub-Total	2	1	2
TOTAL	16	15	4

6.3 Preferred Alternative Solution Summary

The following is a summary of the preferred trail alignment by Area.

By combining the preferred trail alignments for each Area, a preferred alignment for the entire Study Area was created and brought forward into Phase 3 (alternative design concepts) of the EA process. The preferred alternative trail alignment consists of Forest Trail A in Area 1, Hillside Trail in Area 2 and Access Route B in Area 3 (Figure 6-11).

The preferred alignment was developed, evaluated, refined and selected based on input from the TAC, CLC, Key Stakeholders and the public. Key factors that contributed to the selection included technical constraints, environmental impacts, ability to meet project objectives, property constraints, and the needs and requirements of various trail user types (including public as well as maintenance and emergency vehicles access).

In Area 1, Forest Trail A provides improved access for infrastructure and emergency vehicles and is more easily accessible by trail users, including those with limited mobility. This alignment also allows for an easy future connection to be made to the Victoria Village community. As it is located in an area characterized by multiple informal trails, Forest Trail A would provide the local community with opportunities to enjoy the valley lands while minimizing impacts on the environmentally sensitive areas and discouraging public access to potentially unsafe areas (e.g., high eroded river banks). Finally, Forest Trail A constitutes an aesthetically pleasing route that travels through a variety of landscapes and offers a diversity of user experiences.

In Area 2, River Walk B scored highest in the evaluation. However, as discussed in Section 6.2.3.4, this trail alignment cannot be considered further at this time as the property that would be required for trail implementation is not currently available. As a result, the second-highest scoring alignment, Hillside Trail, was identified as the preferred alignment and moved forward to Phase 3, with the Hydro Corridor Connection facilitated via the B option.

Hillside Trail allows for an easy connection to be made to Eglinton Avenue East, which, in turn, allows for a connection to future proposed Eglinton Avenue bike lanes and the Eglinton Crosstown LRT, thereby increasing access to and connectivity among transportation modes. Though this alignment is partly routed through well-forested areas (see Section 0 for Environmental Impacts and Mitigation Measures), Hillside Trail results in a low impact to aquatic habitat, river processes and hydraulics of the East Don River. In addition, this alignment results in the least impact on local business operations while providing an aesthetically pleasing route that will travel through a variety of settings. Anticipated trail maintenance costs are lower as there are fewer bridges to maintain and, routed away from the East Don River, the trail would flood less frequently (as compared to other Area 2 alignments where the trail is routed closer to the river).

In Area 3, the majority of Access Route B is located along the existing Toronto Water maintenance access route, which is to be formalized as a multi-use trail. Access Route B connects to the Don Trails and Taylor Creek Trail via the Taylor Massey Creek bridge. This connection not only allows trail users to access East Don Trail from the Lower Don, West Don, and Taylor Massey Creek trail systems but also provides an optimal infrastructure access point for Toronto Water.

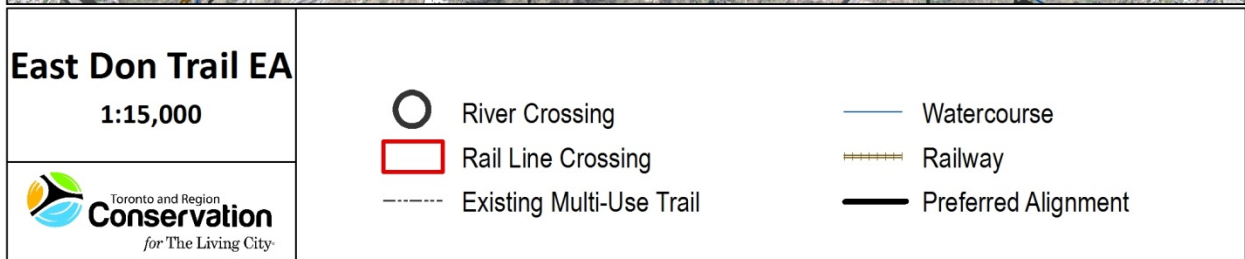
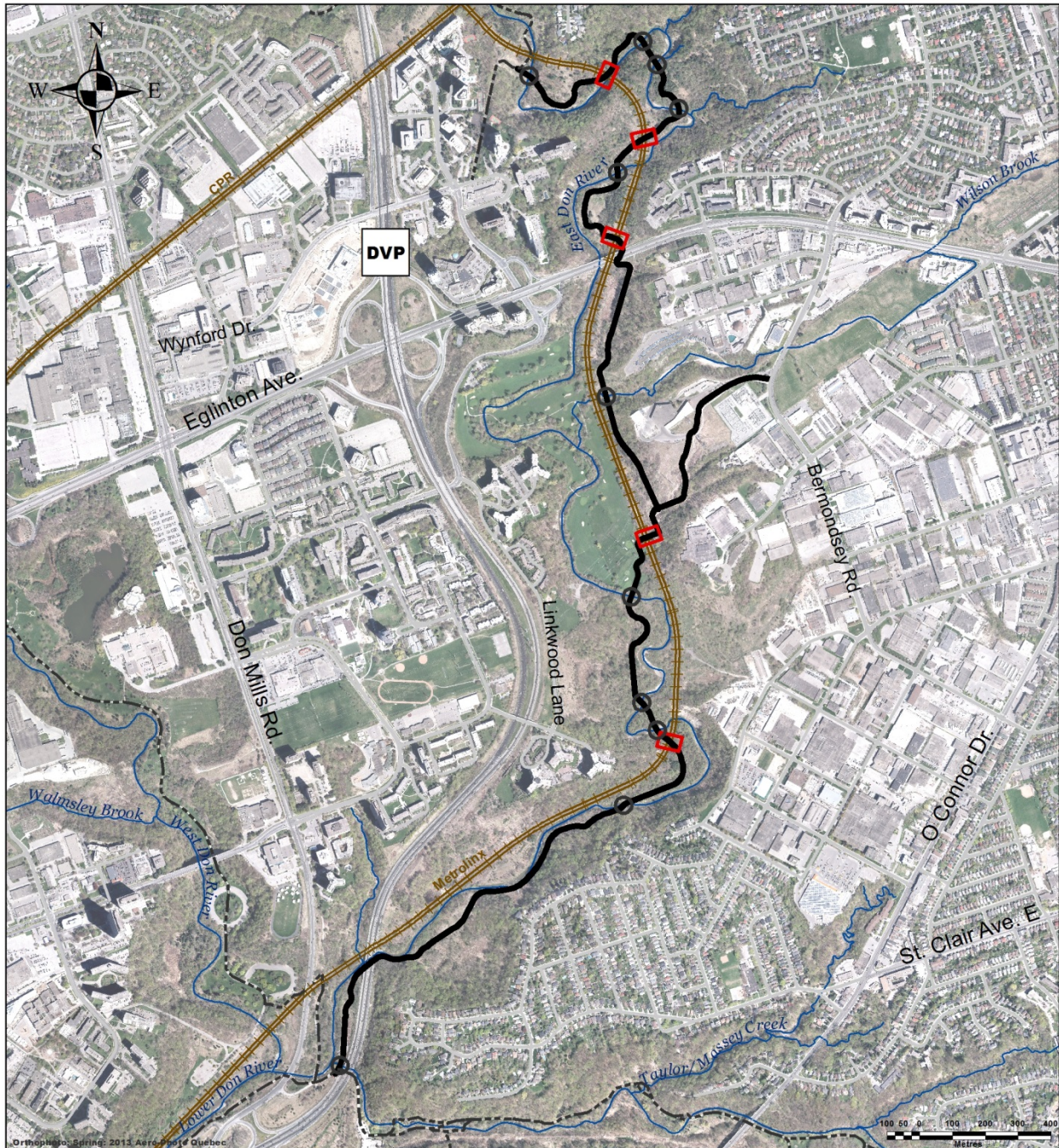


Figure 6-11: Preferred alternative trail alignment

Source: TRCA 2014

6.4 Phase 2 Public Consultation

Public consultation in Phase 2 included a number of activities, as identified in Table 6-15. From June 19, 2013, to April 2, 2014, the Project Team received communications from 19 members of the public via e-mail, phone, or mail.

Table 6-15: Summary of consultation during Phase 2

Date	Consultation
July 15, 2013	Community Liaison Committee (CLC) Meeting #3
August 12, 2013	CLC Meeting #4
September 9, 2013	Presentation to Wynford Concorde Residents Group
September 12, 2013	Public Event #2
September 12, 2013	Links to Public Event #2 materials posted on project web page and link sent to Listserv email mailing list
September 25, 2013	Project Update #1 sent to stakeholder register through Listserv or mail
November 4, 2013	City of Toronto Ward 31 Ravine meeting
January 20, 2014	Frequently Asked Questions (Update #1) posted to project webpage
March 6, 2014	CLC Meeting #5
November 21, 2013	Don Watershed Regeneration Council meeting
May 21, 2014	Project Update # 2 sent to stakeholder register through Listserv or mail

6.4.1 Public Events

Public Event #2

On September 12, 2013, the City of Toronto and TRCA hosted a second Public Event at The Estonian House (958 Broadview Avenue, Toronto) from 5:30 p.m. to 8:30 p.m. The purpose of Public Event #2 was to gain feedback on the draft evaluation criteria, alternative trail alignments, and preliminary evaluation of the alternative trail alignments. Residents and interested individuals were invited to view display panels and talk with members of the Project Team. In addition, two presentations were made during the meeting to provide an overview of the trail route options; each was followed by a question and answer period. Participants were also encouraged to fill out comment forms.

Overall, the event was well attended (70 participants signed in at the public event) and solicited a range of feedback about the project. Feedback was generally positive at the public event, on comment sheets, and through correspondence following the event. While the majority of public responses supported the alternative trail alignments being considered and the evaluation criteria, there was also some opposition and concern regarding potential impacts on the natural environment and private property.

The following sources of information were incorporated into the public feedback shared with the Project Team:

- Comment forms received during the comment period (15 comment forms)

- Conversation topics between City of Toronto and TRCA staff and Public Event participants
- E-mail and Phone correspondence received during the public comment period from September 12, 2013, to September 27, 2013
- Question and answer session following Project Team presentations (see **Appendix A** for minutes)

6.4.2 Community Liaison Committee

Meeting #3

CLC Meeting #3 was held on July 15, 2013, in the 2nd-floor meeting room of Flemingdon Park Library (29 St. Dennis Dr., Toronto) and was attended by three City of Toronto staff, three TRCA staff, and 11 CLC members. The meeting took place from 6:30 p.m. to 8:30 p.m. and included a presentation by the Project Team. During and after the presentation, a facilitated question and answer session allowed for two-way communication between CLC members and the Project Team during which numerous questions, responses, and comments were provided.

The purpose of Meeting #3 was to present the alternative trail alignments to CLC members and to receive feedback and input from members regarding the evaluation criteria that would be used to evaluate the alternative trail alignments. A handout was distributed to the CLC members to provide feedback. TRCA received feedback from nine CLC members.

Meeting notes were taken during the meeting and included summarized comments. Draft meeting notes were circulated to CLC members following the meeting to ensure that comments were accurately recorded and appropriately addressed.

Documentation of CLC Meeting #3 is provided in **Appendix A**.

Meeting #4

CLC Meeting #4 was held on August 12, 2013, in the 2nd-floor meeting room of Flemingdon Park Library (29 St. Dennis Dr., Toronto) and was attended by one City of Toronto staff, three TRCA staff, and 12 CLC members. The meeting took place from 6:30 p.m. to 8:30 p.m. and included a presentation by the Project Team. During and after the presentation, a facilitated question and answer session allowed for two-way communication between CLC members and the Project Team during which numerous questions, responses, and comments were provided.

The purpose of Meeting #4 was to present the preliminary evaluation of the alternative trail alignments and to receive feedback and input from members regarding the preliminary evaluation completed by the Project Team. A handout was distributed to the CLC members to provide feedback. TRCA received feedback from eight CLC members.

Meeting notes were taken during the meeting and included summarized comments. Meeting notes were circulated to CLC members following the meeting to ensure that comments were accurately recorded and appropriately addressed.

Documentation of CLC Meeting #4 is provided in **Appendix A**.

Meeting #5

CLC Meeting #5 was held on March 6, 2014, at the Flemington Health Centre (10 Gateway Blvd., Toronto) and was attended by three City of Toronto staff, three TRCA staff, and 10 CLC members. The meeting took place from 6:30 p.m. to 8:30 p.m. and included a presentation by the Project Team. During and after the presentation, a facilitated Question and Answer session allowed for two-way communication between CLC members and the Project Team during which numerous questions, responses, and comments were provided.

The purpose of Meeting #5 was to provide an update on the EA process, provide a summary of the public and stakeholder feedback that was received after CLC#4 and Public Event #2, present the refinements to Phase 2 of the EA process with a focus on Areas 1 and 2, and to gather feedback and input from members regarding the evaluation of the refined trail alignments as prepared by the Project Team. A handout was distributed to the CLC members to provide feedback. TRCA received feedback from four CLC members.

Meeting notes were taken during the meeting and included summarized comments. Meeting notes were circulated to CLC members following the meeting to ensure that comments were accurately recorded and appropriately addressed.

Documentation of CLC Meeting #5 is provided in **Appendix A**.

6.4.3 Representative Feedback Received During Phase 2

Table 6-16 below represents key public comments received during Phase 2 of the MCEA process, along with the responses provided, and/or the impact on the East Don Trail EA Study. To view the correspondence log and comment tracking table for Phase 2 see **Appendix A**.

Table 6-16: Representative comments received during Phase 2 public consultation

Comment	Response/Impact
<p><u>Evaluation criteria</u> Members of the public and CLC generally agreed with evaluation criteria presented at the meeting. However, there were some requests regarding the evaluation criteria:</p> <ul style="list-style-type: none"> a) Address the fact that the trail would serve multiple purposes and each of these purposes would have different demands. b) Add a criterion for Operating Window that 	<ul style="list-style-type: none"> a) The criterion “User Experience” was added to take into account the different user types and how their experiences on the trail would differ. The preferred alternative under this criterion would reflect the most variable experience for users (e.g., cyclist, fitness, limited mobility, hikers, and nature appreciation). b) Flooding, debris buildup, and damage in

Comment	Response/Impact
<p>could include flooding, debris buildup, and damage in storms.</p> <ul style="list-style-type: none"> c) Add the ability to enforce legitimate use of public land. d) Reflect that shorter routes with minimal diversions are best. e) Look at the possibility of flooding on the various routes. 	<p>storms was taken into account under "Operations and Maintenance".</p> <ul style="list-style-type: none"> c) Enforcement of legitimate use of public land was already taken into consideration in "alternatives to" and therefore would not be addressed again at this stage. d) Shorter routes with minimal diversions were incorporated into the evaluation criteria under "Functional Value as a Travel Route". e) Studies were undertaken by the technical consultant to determine flooding on various routes and were incorporated into "Operations and Maintenance".
<p><u>Alternative Trail Alignments</u> CLC members and the public generally agreed with the alternative trail alignments presented in Phase 2 and how they were evaluated within each of the Areas. However, there were requests for additional alternative trail alignments to be looked at in both Area 1 and Area 2.</p> <p><u>Area 1:</u></p> <ul style="list-style-type: none"> a) Majority agreed with evaluation, with Forest Trail A as the preferred. b) Concern about impacts on the natural environment/forest. c) Concern with the replacement of existing natural trails with a multi-use trail in the Anewen Park Area. d) Request to stay on the west bank of the river. <p><u>Area 2</u></p> <ul style="list-style-type: none"> a) Both support and opposition to River Walk as the preferred trail alignment. b) Acquisition of the golf course was a concern associated with the River Walk alignments. c) Consider shared use - integrate the golf course and trail uses. d) Consider the east side of the rail line. 	<p>As a result of feedback from CLC members and the public, an additional step was added to Phase 2 of the EA process to address these requests. This additional step included refinements to the alternative trail alignments and the evaluation of these refined alternative trail alignments.</p> <p><u>Area 1</u></p> <ul style="list-style-type: none"> a) Based on CLC and public feedback refinements were made and an additional alignment was looked at: Forest Trail C, which would run along west bank of the river. b) Forest Trail C was evaluated against the preliminary preferred alignment, Forest Trail A, and focused on the differences between the two alignments. Feedback for the evaluation was collected from the CLC, and TAC. c) The results of the evaluation and feedback confirmed Forest Trail A as preferred trail alignment. d) The results of the evaluation were provided to both the public (at Public Event #3) and CLC (at CLC Meeting #5). <p><u>Area 2</u></p> <ul style="list-style-type: none"> a) Based on feedback received from the public and stakeholders, refinements were made and two revised alignments were looked at: Corridor Trail (west of rail line, shared use with golf course, not on rail line right-of-way) and Hillside Trail (located east of the rail line). b) Both additional alignments were evaluated against the preliminary preferred alternative, River Walk, and focused on the differences between the alignments. Feedback for the evaluation was collected from the CLC and TAC. c) The results of the evaluation and feedback

Comment	Response/Impact
	<p>confirmed River Walk as the preferred trail alignment. However, given the constraints with acquiring the golf course property, the Hillside Trail alternative was moved forward.</p> <p>d) The results of the evaluation were provided to both the public (at Public Event #3) and CLC (at CLC Meeting #5).</p>

CLC – Community Liaison Committee

6.5 Indigenous Communities

Project updates were sent to the identified Indigenous communities (see Section 3.3) at key milestone points throughout the East Don Trail EA. For each update, a request was made to each community to review and provide comment on the provided material, including identifying to TRCA any concerns or questions about each given stage of the EA.

Circulated on September 3, 2013, Project Update #1 (Notification #2) included an update letter to the community, the “alternatives to”, a description of the alternative trail alignments, the proposed evaluation criteria for the alternative trail alignments, and a public event flyer.

Circulated on December 17, 2013, Project Update #2 (Notification #3) included an update letter to the community, the Stage 1 Archaeological Assessment report with the Ministry of Tourism, Culture and Sport Letter of Entry into Public Register, the Draft Baseline Environmental Inventory, and the evaluation of the alternative trail alignments.

Circulated on May 5, 2014, Project Update #3 (Notification #4) included an update letter to the community, the revised alternative trail alignments, selection of the preferred trail alignment, and project next steps.

Table 6-17 provides a summary of correspondence with the Indigenous communities as part of Phase 2. Project Update #1, #2, and #3 are provided in **Appendix A**.

Table 6-17: Summary of correspondence with Indigenous Communities in Phase 2

Indigenous Community	Engagement
Beausoleil First Nation	<p>Notification #2</p> <p><i>September 3, 2013:</i> Couriered and emailed notification package.</p> <p><i>September 9, 2013:</i> Email response from Chief Monague indicating receipt of package, interest in Stage 1 archaeological assessment report, and request to copy Williams Treaty Coordinator on all correspondence.</p> <p><i>December 16, 2013:</i> TRCA response indicating that archaeological report will be sent and that this and all correspondence is being copied to the Williams Treaty Coordinator.</p> <p>Notification #3:</p> <p><i>December 17, 2013:</i> Couriered notification package.</p> <p>Notification #4:</p> <p><i>May 5, 2014:</i> Couriered and emailed notification package.</p>

Indigenous Community	Engagement
Chippewas of Georgina Island First Nation	<p>Notification #2: <i>September 3, 2013:</i> Couriered and emailed notification package. <i>September 11, 2013:</i> Georgina Island response indicating receipt of the package, the community has no current concerns, and requesting project updates.</p> <p>Notification #3: <i>December 17, 2013:</i> Couriered notification package. <i>February 10, 2014:</i> Georgina Island response indicating receipt of the package, and inquiring if comments can still be made on Notification #3. <i>February 10, 2014:</i> TRCA response indicating comments can still be made. <i>February 11, 2014:</i> Georgina Island response indicating no comments on the provided package, inquires if archaeological monitors will be present during Stage 2 assessment. <i>February 11, 2014:</i> TRCA response indicating that generally monitors will not be employed until archaeological sites are found; if sites are found during Stage 2 assessment, all requests for monitors will be considered.</p> <p>Notification #4: <i>May 5, 2014:</i> Couriered and emailed notification package.</p>
Chippewas of Rama-Mnjikaning First Nation	<p>Notification #2 <i>September 3, 2013:</i> Copied on information couriered and emailed to the Williams Treaty Coordinator.</p> <p>Notification #3: <i>December 17, 2013:</i> Copied on information couriered and emailed to the Williams Treaty Coordinator.</p> <p>Notification #4: <i>May 5, 2014:</i> Couriered and emailed notification package Copied on information couriered and emailed to the Williams Treaty Coordinator.</p>
Curve Lake First Nation	<p>Notification #2 <i>September 3, 2013:</i> Couriered and emailed notification package.</p> <p>Notification #3: <i>December 17, 2013:</i> Couriered notification package.</p> <p>Notification #4: <i>May 5, 2014:</i> Couriered and emailed notification package.</p>
Conseil de la Nation Huronne-Wendat	<p>Notification #2 <i>September 3, 2013:</i> Couriered and emailed notification package. <i>September 4, 2013:</i> Huronne-Wendat response indicating they have received the package and will follow up later in the fall, if interest.</p> <p>Notification #3: <i>December 17, 2013:</i> Couriered notification package. <i>December 19, 2013:</i> Huronne-Wendat response indicating receipt of the package.</p> <p>Notification #4: <i>May 5, 2014:</i> Couriered and emailed notification package.</p>
Coordinator Williams Treaty	Notification #2

Indigenous Community	Engagement
First Nations	<p><i>September 3, 2013:</i> Couriered and emailed notification package.</p> <p>Notification #3:</p> <p><i>December 17, 2013:</i> Couriered notification package.</p> <p>Notification #4:</p> <p><i>May 5, 2014:</i> Couriered and emailed notification package.</p>
Haudenosaunee Confederacy Chiefs Council via Haudenosaunee Development Institute	<p>Notification #2</p> <p><i>September 3, 2013:</i> Couriered and emailed notification package.</p> <p><i>September 11, 2013:</i> Email from Ms. Hazel Hill, Director of Haudenosaunee Development Institute, indicating HDI's interest in all of TRCA's projects and requesting to set up a meeting with TRCA in order to discuss an "umbrella approach" to review and consultation.</p> <p><i>September 19, 2013:</i> Phone conversation between M. Kenedy and T. Williams (HDI) to discuss moving forward.</p> <p><i>September 19, 2013:</i> Response from M. Kenedy expressing TRCAs interest in meeting with HDI but explaining that more guidance was being obtained from directors as well as crown before she would be able to respond.</p> <p><i>October 8, 2013:</i> Response from M. Kenedy, Senior Archaeologist at TRCA, indicating interest on behalf of the TRCA for meeting to discuss relationship building between TRCA and HDI. Requested dates that would work for HDI in the end of October / start of November 2013</p> <p><i>October 15, 2013:</i> Response from H. Hill indicating dates of 23rd, 28th, and 30th of October for possible meeting dates.</p> <p><i>October 16, 2013:</i> Response from M. Kenedy (TRCA) inquiring about November 6th as a possible date.</p> <p><i>November 4, 2013:</i> M. Kenedy sent an email asking if HDI is still interested in meeting. Commenting that several voicemails were left on H. Hill's office number and there has been no response. M. Kenedy suggests considering a date in January or February 2014 to allow for scheduling</p> <p><i>November 4, 2013:</i> Ms. Hill responds that HDI would like a meeting as soon as possible and that until an understanding can be reached that there would be increased likelihood of conflict between TRCA and HDI.</p> <p>Notification #3:</p> <p><i>December 17, 2013:</i> Couriered notification package</p> <p><i>March 03, 2014:</i> Phone conversation between A. Parks (TRCA) and H. Hill (HDI) for another project where H. Hill indicated interest in meeting with TRCA again to discuss all projects.</p> <p><i>March 03, 2014:</i> Email from A. Parks to H. Hill following up on phone conversation and cc'ing Todd Williams (HDI) and M. Kenedy (TRCA) to begin scheduling</p> <p>Notification #4:</p> <p><i>May 5, 2014:</i> Couriered and emailed notification package</p> <p><i>May 29, 2014:</i> Email from Hazel Hill requesting to reschedule a meeting planned the previous year, but never held; meeting was proposed to discuss general relationships between TRCA and HCCC</p> <p><i>May 29, 2014:</i> TRCA emailed Ms. Hill to clarify if her meeting request was to discuss the Storm Damage EAs (Northover Street), or if it was going to relate more to general practices and collaborations</p>

Indigenous Community	Engagement
	<p><i>May 29, 2014:</i> Email from Ms. Hill indicating proposed meeting will discuss both general practices, and specific projects related to Storm Damage EAs (Northover Street); Requested the meeting be held at their offices</p> <p><i>May 29, 2014:</i> Confirmation that HDI will organize the meeting</p> <p><i>June 3, 2014:</i> Email from Tracey General (HDI) with suggested meeting dates and times</p> <p><i>June 6, 2014:</i> TRCA email indicating preferred meeting date (June 26) and time</p> <p><i>June 17, 2014:</i> TRCA email requesting HDI confirm the meeting date and location</p> <p><i>June 25, 2014:</i> TRCA email indicating that since no confirmation was received, TRCA staff could not attend the June 26th meeting</p> <p><i>June 25, 2014:</i> Email from Aaron Detlor (HDI) indicating the purpose of the meeting, which Mr. Detlor suggests will now be held at TRCA offices on June 26th</p> <p><i>June 25, 2014:</i> TRCA email indicating that TRCA will attempt to find a meeting space, and confirm whether TRCA staff will be able to attend on short notice</p> <p><i>June 25, 2014:</i> Mr. Detlor (HDI) asks about the status of EAs, and how TRCA plans to address engagement</p> <p><i>June 25, 2014:</i> TRCA email indicates TRCA believes that dialoguing about these questions is the purpose of the meeting; requests meeting attendee numbers from HDI</p> <p><i>June 25, 2014:</i> Mr. Detlor (HDI) indicates two people will be attending: himself and Mr. W. Hill.</p> <p><i>June 25, 2014:</i> TRCA email confirming date, time, and location of meeting</p> <p><i>June 26, 2014:</i> Meeting held</p> <p><i>June 27, 2014:</i> Email from Mr. Detlor to TRCA, sent as follow-up to meeting</p> <p><i>June 27, 2014:</i> Email from Mr. Detlor to TRCA lawyer (and June 26th meeting attendee) Julie Abouchar, sent as a follow up to the meeting; HDI asks for an annual amount of \$500,000 for review of all TRCA permits and projects or an amount of \$3,000 for reviewing individual projects.</p> <p><i>July 2014:</i> Julie Abouchar, TRCA lawyer, acknowledged receipt of email</p> <p><i>July 2014 to February 2015:</i> TRCA sought provincial guidance on response to HDI payment requests</p>
Hiawatha First Nation	<p>Notification #2</p> <p><i>September 3, 2013:</i> Couriered and emailed notification package.</p> <p><i>September 5, 2013:</i> Hiawatha response indicating receipt of package, community has no current concerns but would like regular updates; requested to be notified if artifacts area found, and requested a copy of completed archaeological assessment report; requested that if any archaeological sites are identified, that monitors be present in the proceeding stages of assessment. Community requests shapefile of project areas.</p> <p>Notification #3:</p> <p><i>December 17, 2013:</i> Couriered notification package.</p>

Indigenous Community	Engagement
	<p>Notification #4: <i>May 5, 2014:</i> Couriered and emailed notification package. <i>May 7, 2014:</i> Hiawatha response indicating receipt of package, community has no current concerns but would like regular updates; requested to be notified if artifacts area found, and requested a copy of completed archaeological assessment report; requested that if any archaeological sites are identified, that monitors be present in the proceeding stages of assessment.</p>
Kawartha Nishnawbe First Nation	<p>Notification #2 <i>September 3, 2013:</i> Mailed and emailed notification package. Notification #3: <i>December 17, 2013:</i> Mailed notification package. Notification #4: <i>May 5, 2014:</i> Mailed and emailed notification package.</p>
Metis Nation of Ontario	<p>Notification #2 <i>September 3, 2013:</i> Couriered and emailed notification package. Notification #3: <i>December 17, 2013:</i> Couriered notification package. Notification #4: <i>May 5, 2014:</i> Couriered and emailed notification package.</p>
Mississaugas of Alderville First Nation	<p>Notification #2 <i>September 3, 2013:</i> Couriered and emailed notification package. <i>October 1, 2013:</i> Alderville response indicating receipt of the package, community has no current concerns; requested project updates; requested to be notified if any archaeological sites or burials are found; requested to be notified of any environmental impacts. Notification #3: <i>December 17, 2013:</i> Couriered notification package. <i>December 19, 2013:</i> Alderville response indicating receipt of package, community has no current concerns; requested project updates; requested to be notified if any archaeological sites or burials are found; requested to be notified of any environmental impacts. Notification #4: <i>May 5, 2014:</i> Couriered and emailed notification package.</p>
Mississaugas of the New Credit First Nation	<p>Notification #2 <i>September 3, 2013:</i> Couriered and emailed notification package. Notification #3: <i>December 17, 2013:</i> Couriered notification package. Notification #4: <i>May 5, 2014:</i> Couriered and emailed notification package.</p>
Mississaugas of Scugog Island First Nation	<p>Notification #2 <i>September 3, 2013:</i> Couriered and emailed notification package.</p>

Indigenous Community	Engagement
	<p>Notification #3: <i>December 17, 2013:</i> Couriered notification package. <i>March 18, 2014:</i> Mr. Mowat contacted Margie Kenedy via telephone and requested to speak to someone from the environmental assessment team in order to better review the material provided in Notification #3. <i>April 9, 2014:</i> Project Manager Violetta Tkaczuk contacted Mr. Mowat and provided a brief background of the project and its purpose; Mr. Mowat was interested in further information about how the trail gap was identified, and asked for specific details about how the proposed trail alignments will connect to the Lower Don; Ms. Tkaczuk indicated the gap was identified by the City of Toronto, and that the trail will reach the Lower Don. Ms. Tkaczuk also indicated the length of the trail will be approximately 5 km, but at this point did not know how long the entire multi-use trail system would be.</p> <p>Notification #4: <i>May 5, 2014:</i> Couriered and emailed notification package.</p>
Moose Deer Point First Nation	<p>Notification #2 <i>September 3, 2013:</i> Couriered and emailed notification package.</p> <p>Notification #3: <i>December 17, 2013:</i> Couriered notification package.</p> <p>Notification #4: <i>May 5, 2014:</i> Couriered and emailed notification package.</p>
Six Nations of the Grand River	<p>Notification #2 <i>September 3, 2013:</i> Couriered and emailed notification package.</p> <p>Notification #3: <i>December 17, 2013:</i> Couriered notification package.</p> <p>Notification #4: <i>May 5, 2014:</i> Couriered and emailed notification package.</p>

6.6 Review Agencies

Identified Review Agencies were emailed a notice of Public Event #2 on August 28, 2013. Following the Public Event and finalization of the preferred alternative trail alignment, they were mailed and emailed a project update on April 23, 2013. The project update outlined the progress to date in Phase 1 and Phase 2, presented the results of the alternative trail alignments, and next steps of the Study. A map showing alternative trail alignments considered and the selected preferred alignment was included in the update. Table 6-18 outlines the responses received from Review Agencies and impacts on the project.

In addition, one conference call was held with the Ministry of Tourism, Culture, and Sport to provide background on the project, discuss built heritage identification, parameters of a built heritage impact assessment and if one is required for the East Don Trail project.

Table 6-18: Summary of consultation with Review Agencies in Phase 2

Stakeholder	Correspondence Received	Impact on Project
Canadian Environmental Assessment Agency	Received letter indicating that if <i>Canadian Environmental Assessment Act 2012</i> does not apply, and to remove them from the correspondence list.	As <i>Canadian Environmental Assessment Act, 2012</i> does not apply at this time, removed from mailing list.
Ministry of Natural Resources and Forestry	Indicated same comments apply as per comments from Phase 1.	A full tree inventory to identify Butternut was completed for the preferred alternative trail alignment in Phase 2, no butternuts were found.
Bell Canada	Indicated no concerns about potential impact to Bell infrastructure as a result of trail route.	None at this time.

6.7 Key Stakeholders

During Phase 2 all Key Stakeholders were emailed two updates. The first update sent on September 19, 2013, included information about the alternative trail alignments and evaluation, an invitation to Public Event #2, and next steps of the Study. The second update sent on April 24, 2014, provided information about the refined alternative trail alignments, the preferred alternative trail alignment, and next steps of the Study. In addition, further correspondence and meetings were held with representatives from each organization. Table 6-19 summarized the discussions held during Phase 2 with each Key Stakeholder. Key correspondence is available in **Appendix A**.

Table 6-19: Summary of consultation with Key Stakeholders in Phase 2

Stakeholder	Summary Discussions
Metrolinx	<p><i>Email Correspondence</i></p> <ul style="list-style-type: none"> Request for Metrolinx to consider level crossings. Request for Metrolinx to consider use of their right-of-way along Hillside Trail (maintain a distance of approximately 30 m). Discussion on safety assessment for proposed level crossings. <p><i>Meeting October 11, 2013</i></p> <ul style="list-style-type: none"> Project update. Preferred alignment – discussions on level crossing and right of way. Upcoming field work on Metrolinx land. Built heritage assessment.
Enbridge	<p><i>Email Correspondence</i></p> <ul style="list-style-type: none"> Requested information on additional oil pipelines. Result was that no oil pipelines are owned by Enbridge in the Study Area and that no oil pipelines are located within Local Study Area.
Hydro One	<p><i>Email Correspondence</i></p> <ul style="list-style-type: none"> Discussions on field work on Hydro One land and permission to enter. <p><i>Meeting October 11, 2013</i></p> <ul style="list-style-type: none"> Project update. Preferred alignment – discussions on distance to Hydro One towers and infrastructure.

Stakeholder	Summary Discussions
Flemingdon Park Golf Club	<p><i>Email Correspondence</i></p> <ul style="list-style-type: none"> <li>• Updates on Study progress. <li>• Field work updates, located on Golf Course and adjacent land. <li>• Sent revised alternative trail alignments and potential impacts to golf course operations requesting comments and feedback. Comments received included preference of staying east of the rail line within the area of the golf course. <p><i>Meeting January 14, 2014</i></p> <ul style="list-style-type: none"> <li>• Property interests. <li>• Alternative trail alignments and revised alternative trail alignments. <li>• Potential impacts to golf course. <li>• Public feedback heard from Public Event #2.

6.8 Technical Advisory Committee

Meeting #3

TAC Meeting #3 was held on June 20, 2013, at the Toronto City Hall, located at 100 Queen Street West, Toronto and was attended by nine City of Toronto staff, six TRCA staff, and two staff from Aquafor Beech Ltd. The meeting took place from 2:00 p.m. to 4:00 p.m. and included a presentation by the Project Team. Questions and discussion were held throughout the duration of the presentation.

The following topics were discussed during the presentation:

- Update on the schedule
- Update on opportunity statement and project objectives
- Update on issues and challenges of the Study Area (as discussed at TAC meeting #2)
- Alternative trail alignments
- Draft evaluation criteria

Meeting #4

The fourth TAC meeting was held on July 31, 2013, at the Toronto City Hall located at 100 Queen Street West and was attended by nine City of Toronto staff, five TRCA staff, and one staff from Aquafor Beech Ltd. The meeting took place from 2:00 p.m. to 4:00 p.m. and included a presentation by the Project Team. Questions and discussion were held throughout the duration of the presentation.

The following topics were discussed during the presentation:

- Update on the schedule
- Changes to alternative trail alignment
- Evaluation of revised alternative trail alignments

Meeting #5

TAC meeting #5 was held on February 3, 2014, at the Toronto City Hall located at 100 Queen Street West and was attended by nine City of Toronto staff, five TRCA staff, and one staff from Aquafor Beech Ltd. The meeting took place from 2:00 p.m. to 4:00 p.m. and included a presentation by the Project Team. Questions and discussion were held throughout the duration of the presentation.

The following topics were discussed during the presentation:

- Update on the schedule
- Public and stakeholder feedback on alternative trail alignments
- Revised alternative trail alignments
- Evaluation of revised alternative trail alignments

6.9 Local Politicians

The four affected ward councillors (as identified in Section 3.7) were engaged throughout Phase 2 mainly through email correspondence and updates. All councillors were issued a formal invitation and event flyer for Public Event #2 on August 28, 2013, with an offer to meet to discuss the project. Following the Public Event the councillors were issued links to all the handouts and comments forms on September 13, 2013, and the summary report from Public Event #2 on October 29, 2013. In addition three updates were sent. The first update sent on September 26, 2013, included information on upcoming field work in the Study Area. The second update sent on October 29, 2013, outlined the EA process to date including technical work, public consultation, and next steps. Sent on April 27, 2014, the third update focused on the revised alternative trail alignments and the preferred trail alignment.

In addition, one meeting was held with Councillor Janet Davis prior to the second Public Event on September 6, 2013, to discuss the upcoming event, alternative trail alignments and public engagement.

See **Appendix A** for key correspondence with local Politicians.

7.0 ALTERNATIVE DESIGN CONCEPTS FOR PREFERRED SOLUTION (PHASE 3)

Phase 3 of a Municipal Class EA Schedule C process focuses on the examination of alternative methods of implementing the preferred solution, based upon the existing environment, public and Review Agency input, anticipated environmental effects (or impacts) and methods of minimizing negative effects and maximizing positive effects (MCEA, 2015).

Phase 3 of East Don Trail EA included:

- Development of the design concepts for the preferred trail alignment selected during Phase 2 of the EA
- Preparation of the detailed environmental inventory
- Evaluation of the potential impacts of design concepts
- Selection of the preliminary preferred design concept
- Description of preferred design concept (preferred alternative)
- Identification of environmental impacts and mitigation of preferred alternative

7.1 Development of Alternative Design Concepts

7.1.1 Trail Segments

To create the design concepts, the preferred trail alignment selected in Phase 2 of this EA was divided into 12 segments delineated by watercourse or rail line crossings.

As shown in Figure 7-1, two or more design concepts were developed for each segment, which included trail path sections (segments A to D, F, G, I, J and L) as well as crossings (segments E, H and K). Alternative design concepts developed for trail segments A to L are discussed in Section 7.2.

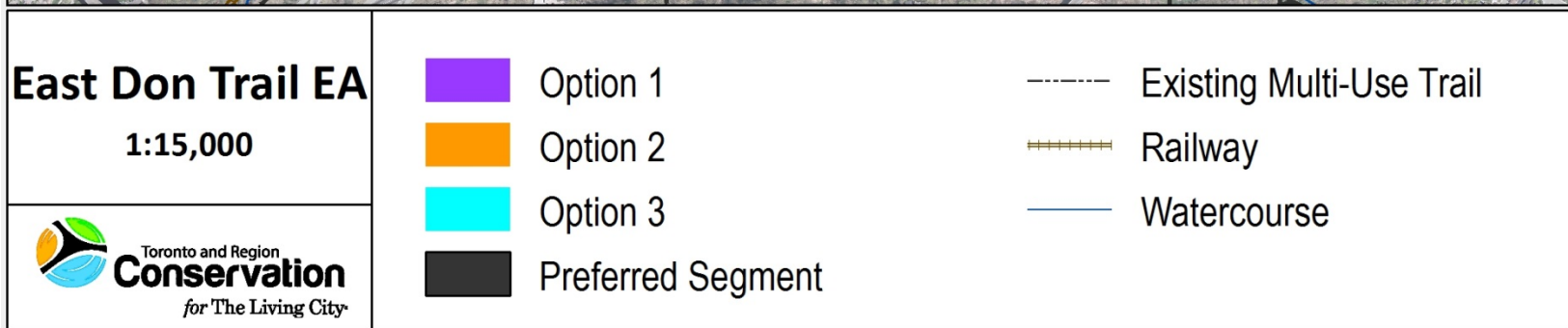
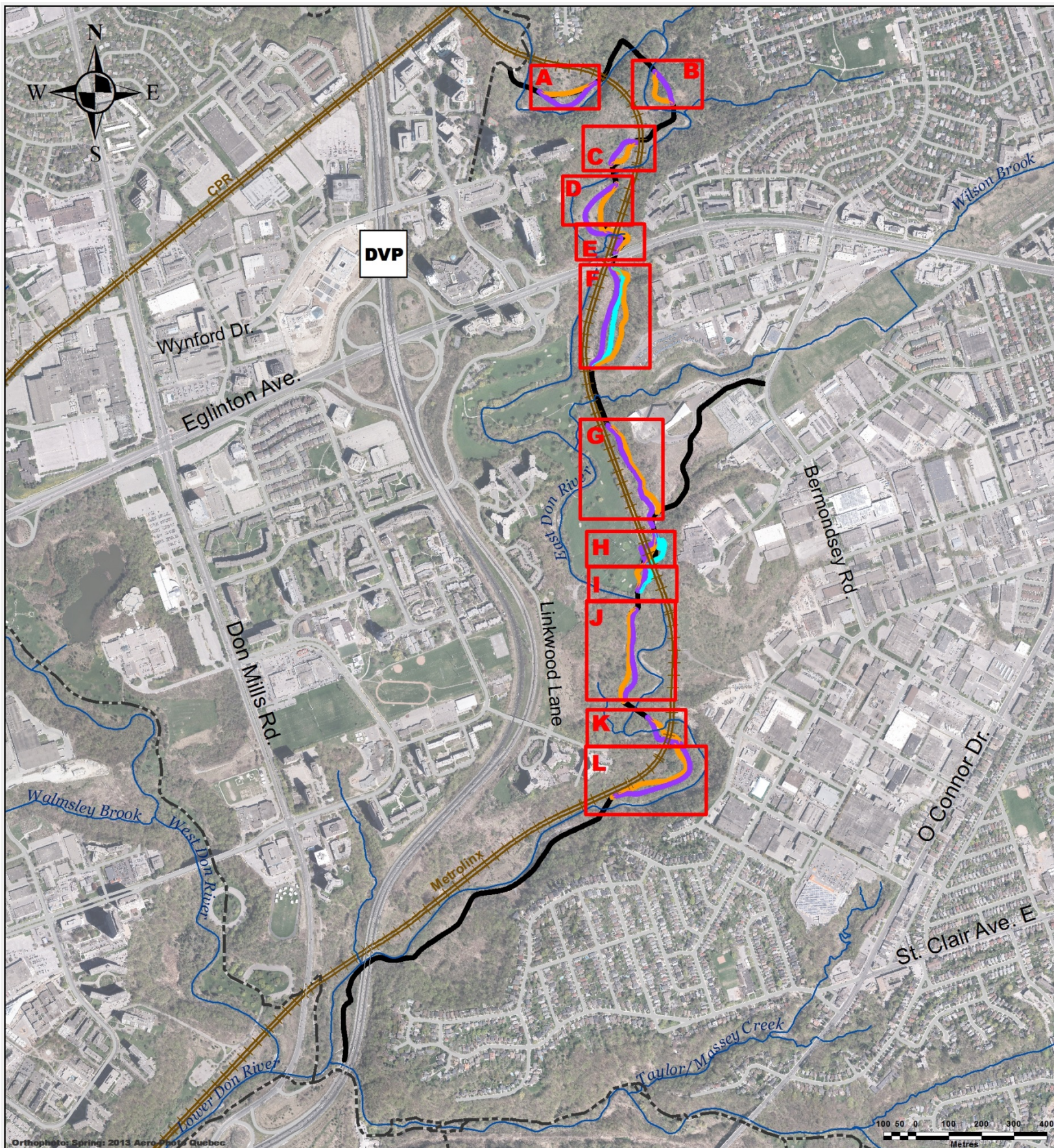


Figure 7-1: Trail segments A through L and corresponding alternative design concepts (options)
 Source: TRCA 2014

Developing a range of viable alternative design concepts for some trail portions was impractical or infeasible. These areas, shown in Figure 7-2, were identified as preferred segments and will be included in the trail detailed design.

Alternative design concepts were not developed for:

- Short sections of the preferred trail alignment
- Existing access routes
- Majority of watercourse crossings
- Transition areas

Short sections of the preferred trail alignment

Relatively short trail sections of the preferred trail alignment such as the section of the trail between segments B and C did not have multiple design concepts as design concept development for these areas was limited by topographical, property or other constraints.

Existing access routes

Existing access routes (hydro corridor access route and the Toronto Water access route) did not have multiple design concepts as these routes constitute an existing footprint.

Majority of watercourse crossings

Design concepts were not developed for all watercourse crossings with the exception of Segment K crossing as this crossing location and dimensions are dependent on the adjacent rail line crossing. Notably, all watercourse crossings are subject to review and approval by the appropriate regulatory agencies (e.g., Transport Canada) and have to meet specific design/engineering requirements (refer to Section 8.3 for more information).

Transition areas

Design concepts were not developed for trail portions immediately adjacent to crossings (watercourse and rail line) - termed "transition areas". As multiple design concepts were considered for trail segments and crossings, there would be multiple options as to how the two would be connected. In other words, transition areas of the trail are dependent on the preferred design concept, which could not be selected until the end of Phase 3 of the EA. Therefore, trail alignment within transition areas will be defined following the finalization of the preferred design concept.

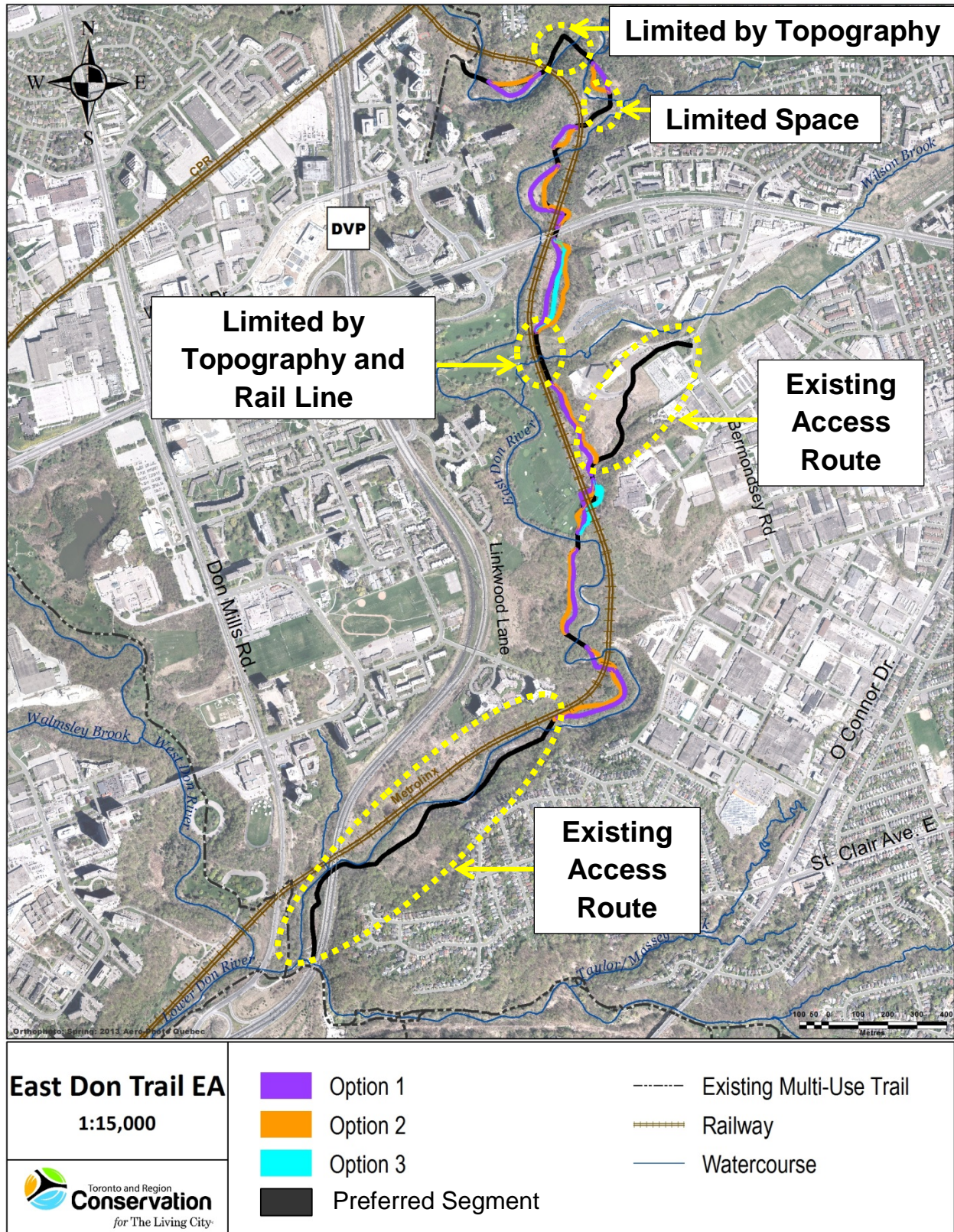


Figure 7-2: Alternative design concepts and preferred segments

Source: TRCA 2014

7.1.2 Constraints and Guiding Principles

Alternative design concept development was informed by the location of existing informal trails, directed by several technical constraints within the area (Section 7.1.2.1). Concepts were also considered against project guiding principles (Section 7.1.2.2) to ensure that only viable design concepts that met project objectives were brought forward for evaluation.

In the early stages of design concept development, trail alternative design concepts were informed by the location of the existing informal trails, where present. Informal trails are typically created by area visitors to serve as the most direct or easy routes between points of interest or routes with the aim of avoiding obstacles. Review of the existing network of informal trails in the Study Area guided initial routing of the design concept options in this Phase.

7.1.2.1 Constraints

The three main technical constraints imposed by the area and associated with design concept development included topography, flooding frequency, and extent of existing urban forest. These constraints represent existing conditions of the valley lands and the alternative design concepts developed aimed to work within these conditions.

Topography

Topography maps (**Appendix F**) were used to guide design concepts development with the aim to avoid significant changes in grades. Detailed topography surveys of the preferred trail alignment selected in the EA Phase 2 were conducted as well, which was particularly important for the development of design concepts at rail line crossings.

Flooding (frequency and extent)

East Don River 2 year, 5 year and Regional flood levels were mapped to assess the potential frequency of flooding of the trail. Water spilling or ponding along the trail as a result of flooding often deposits sediment and debris, leading to both maintenance and usability issues. In addition, regular flooding of an asphalt trail surface may cause premature trail weathering and debris deposits increase maintenance needs and costs.

The flood levels were derived from TRCA's East Don River HEC-RAS model - continually updated software that computes flood depths and velocities. Refer to Section 5.3.3.4 and **Appendix B** for further information on flood levels.

Trees (existing urban forest)

To refine and subsequently evaluate the design concepts as well as assess potential impacts of the proposed trail and its construction on the local urban forest, a detailed tree inventory was compiled. The inventory collection process and the impact evaluation method are described in **Appendix F**.

The detailed topography surveys, flood mapping, and tree surveys constituted the detailed environmental inventory collected to develop the alternative design concepts in Phase 3 of this EA.

7.1.2.2 Guiding Principles

To ensure design concept viability and achievement of project goals (defined in Section 4.3), a number of ***guiding principles*** were developed that included the following:

- Meet accessibility requirements, where possible
- Maintain grades of less than 5%, where possible
- Meet user needs (e.g., ensure adequate sight lines)
- Route trail outside of the 2 year floodline, where possible
- Minimize impacts to the physical and natural environment
- Meet the needs of infrastructure emergency and maintenance vehicles, where possible

Design concepts that did not meet the majority of the guiding principles were not considered viable options. Only those concepts that met the majority of the guiding principles were selected to be evaluated and are outlined in Section 7.2.

7.2 Alternative Design Concepts

As stated in Section 7.1, to create alternative design concepts, the preferred trail alignment was divided into 12 segments delineated by watercourse or rail line crossings (Figure 7-1).

Each of the 12 segments had two or more design concepts developed that represented alternate methods of implementing the preferred solution. The segments are briefly described in Table 7-1 and segment design concepts (or options) are illustrated in Figure 7-3 to Figure 7-14.

Table 7-1: Description of the alternative trail design concepts

SEGMENT	DESCRIPTION
A	Northern-most trail path segment providing a connection to the existing East Don Trail and trail access via Wynford Drive; delineated by a watercourse bridge in the west end and a rail line underpass in the east end.
B	Trail path segment situated on the east side of the East Don River in close proximity to the Victoria Village community; delineated by the bridges over the East Don River in both north and south ends.
C	Trail path segment located along the west river bank in a well-treed area; delineated by a rail line crossing (proposed tunnel) in the east and a watercourse bridge in the west end.
D	Trail path segment situated between the East Don River and Metrolinx rail line north of Eglinton Avenue; delineated by a watercourse bridge in the north and a rail line crossing in the south end.
E	Rail line crossing immediately north of Eglinton.
F	Trail path segment located south of Eglinton Avenue and east of the rail line in a relatively undisturbed natural area containing a wetland and mature forest areas with few informal trails.
G	Trail path segment that connects to the existing access route (Hydro Corridor Connection).
H	Rail line crossing within the Gatineau Hydro Corridor; adjacent to the Flemingdon Park Golf Club on the west side of the rail line.
I	Short trail path segment delineated by the Gatineau hydro corridor rail line crossing and a watercourse bridge; characterized by existing steep gradients.
J	Trail path segment situated on the west bank of the East Don River; delineated by watercourse bridges.
K	Crossing segment containing a watercourse bridge and a rail line tunnel.
L	Southern-most trail path segment delineated by rail line crossing (proposed tunnel) in the north end and a watercourse bridge in the south end; connects to the existing Toronto Water access route.

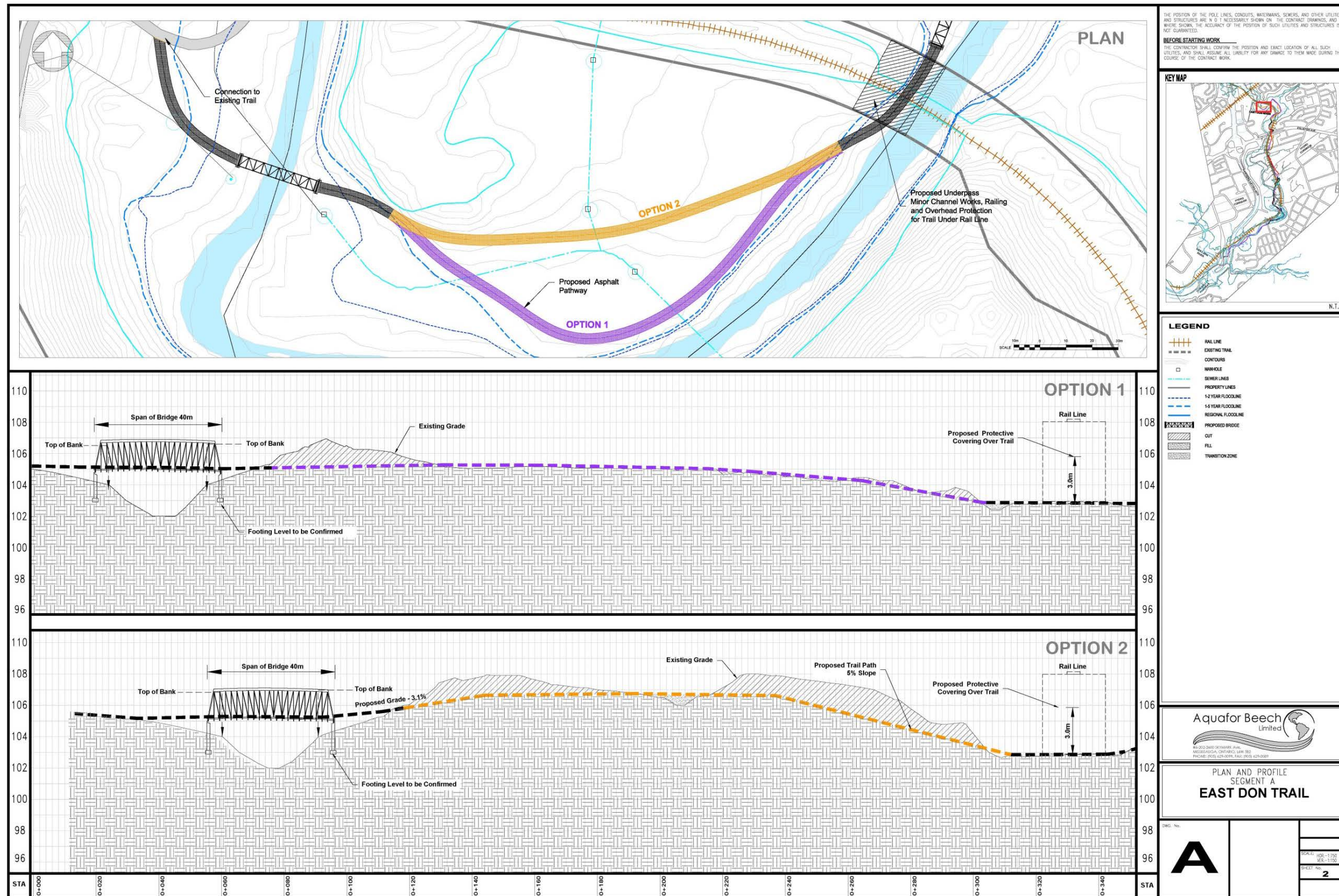


Figure 7-3: Alternative design concepts for Segment A
Source: Aquafor Beech Limited 2014

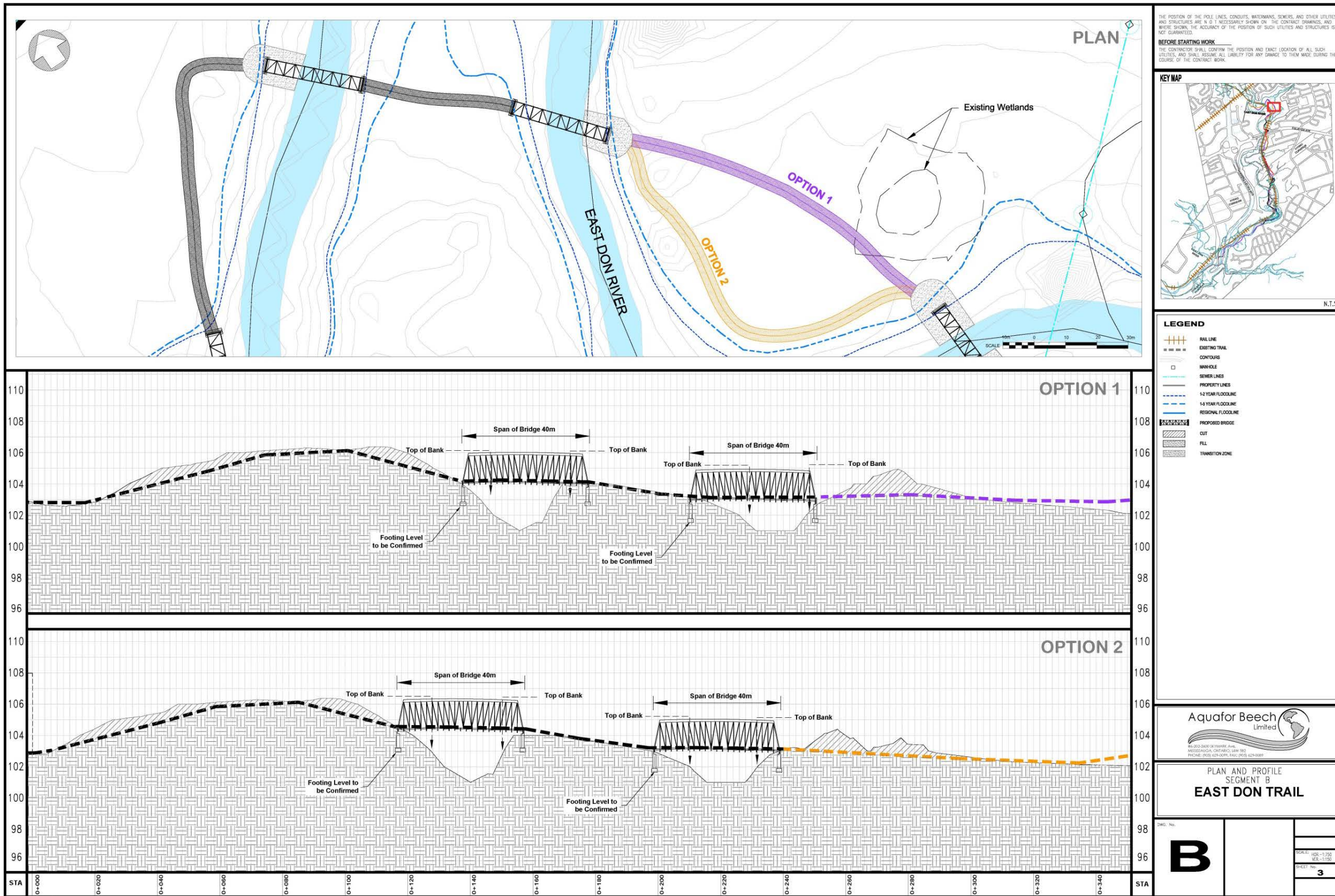


Figure 7-4: Alternative design concepts for Segment B

Source: Aquafor Beech Limited 2014

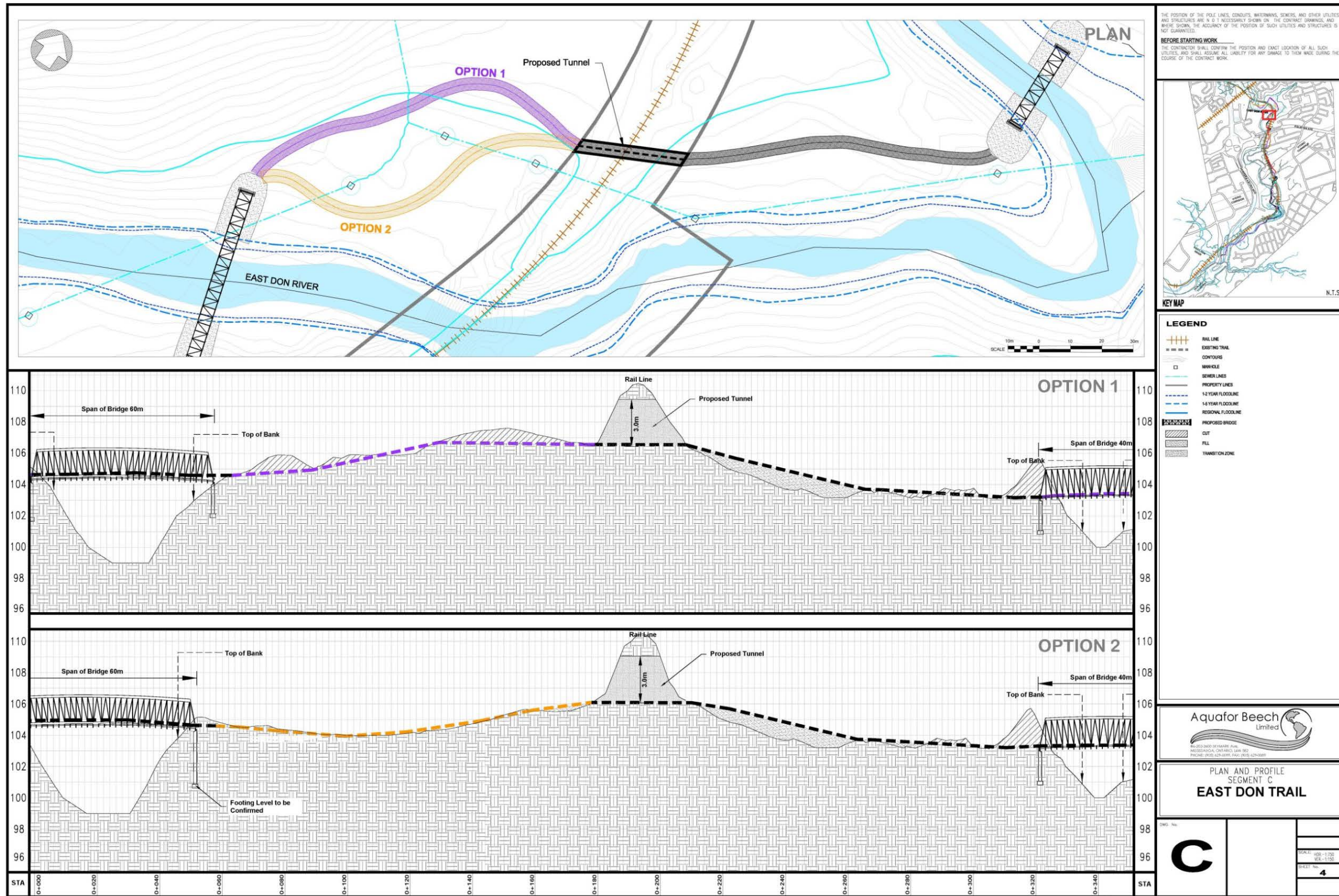


Figure 7-5: Alternative design concepts for Segment C

Source: Aquafor Beech Limited 2014

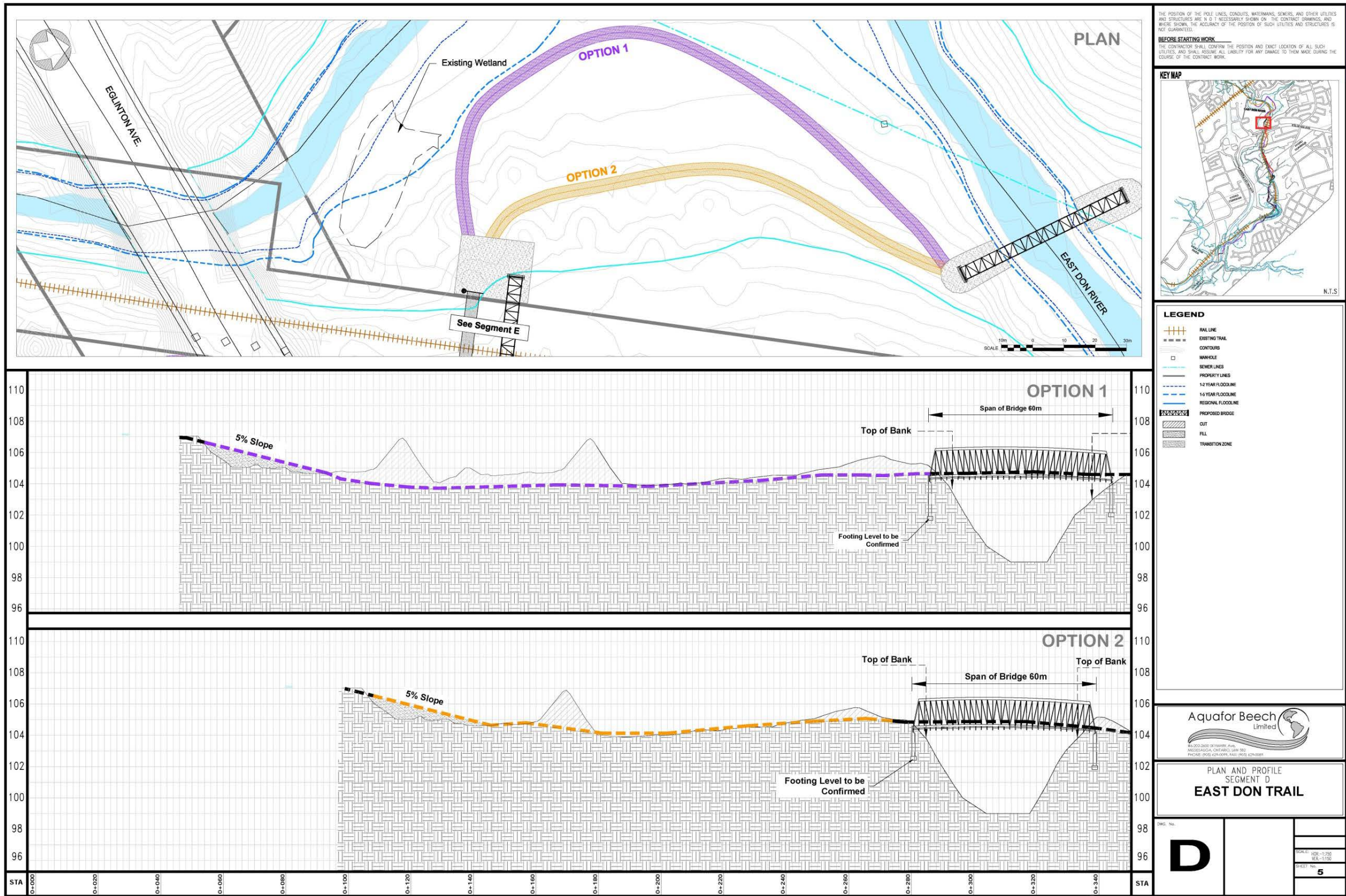


Figure 7-6: Alternative design concepts for Segment D
Source: Aquafor Beech Limited 2014

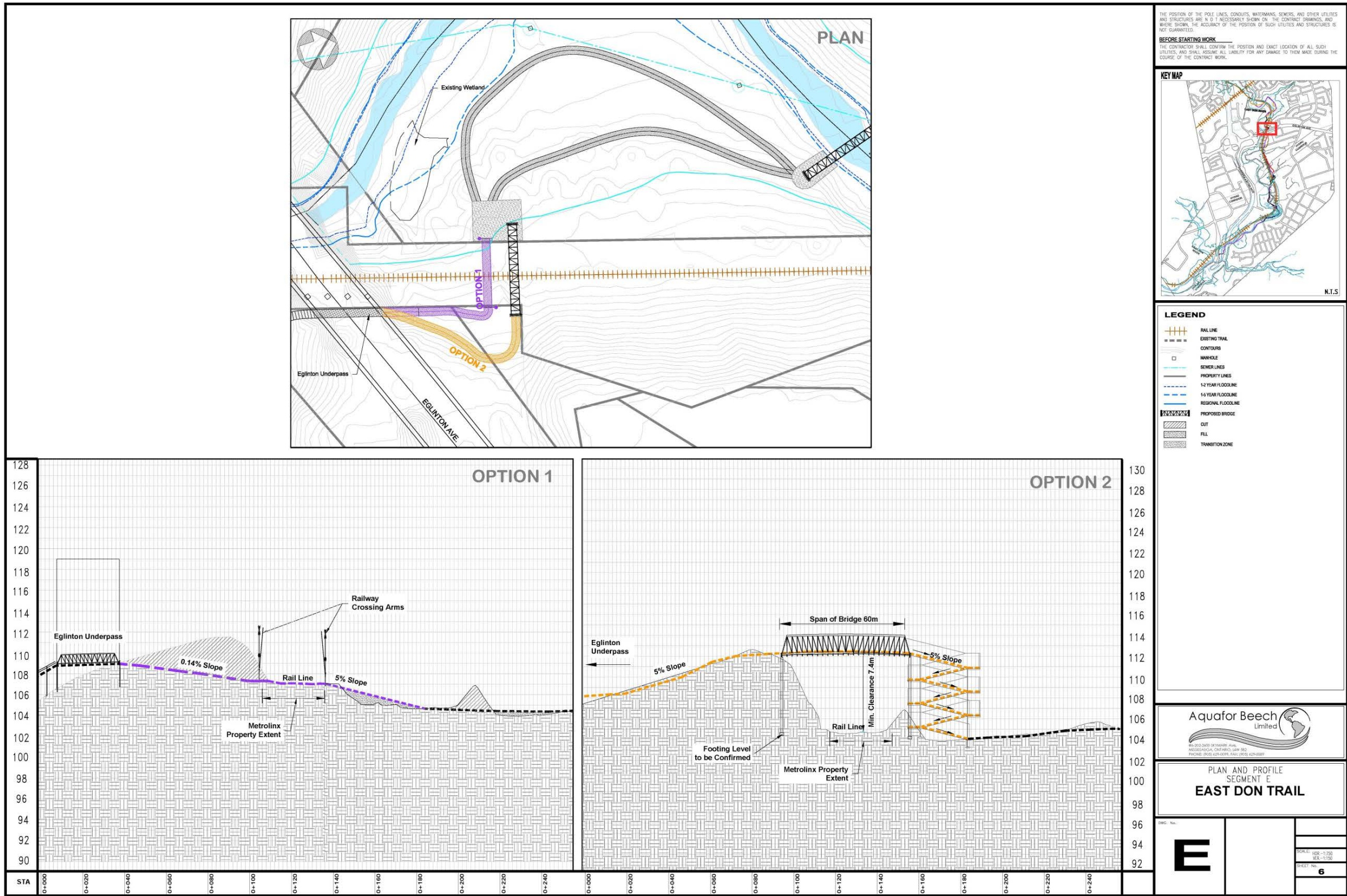


Figure 7-7: Alternative design concepts for Segment E
Source: Aquafor Beech Limited 2014

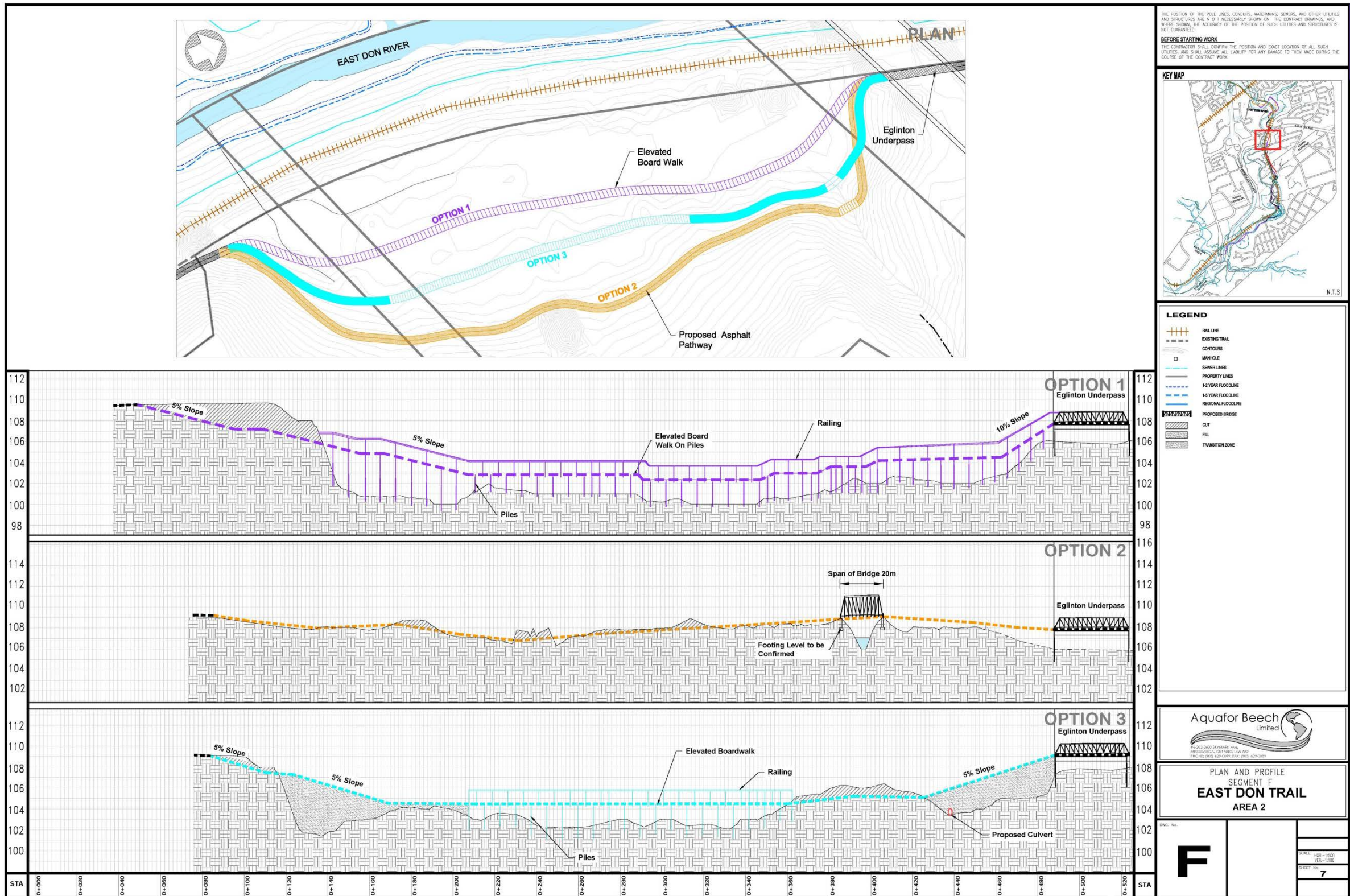


Figure 7-8: Alternative design concepts for Segment F
Source: Aquafor Beech Limited 2014

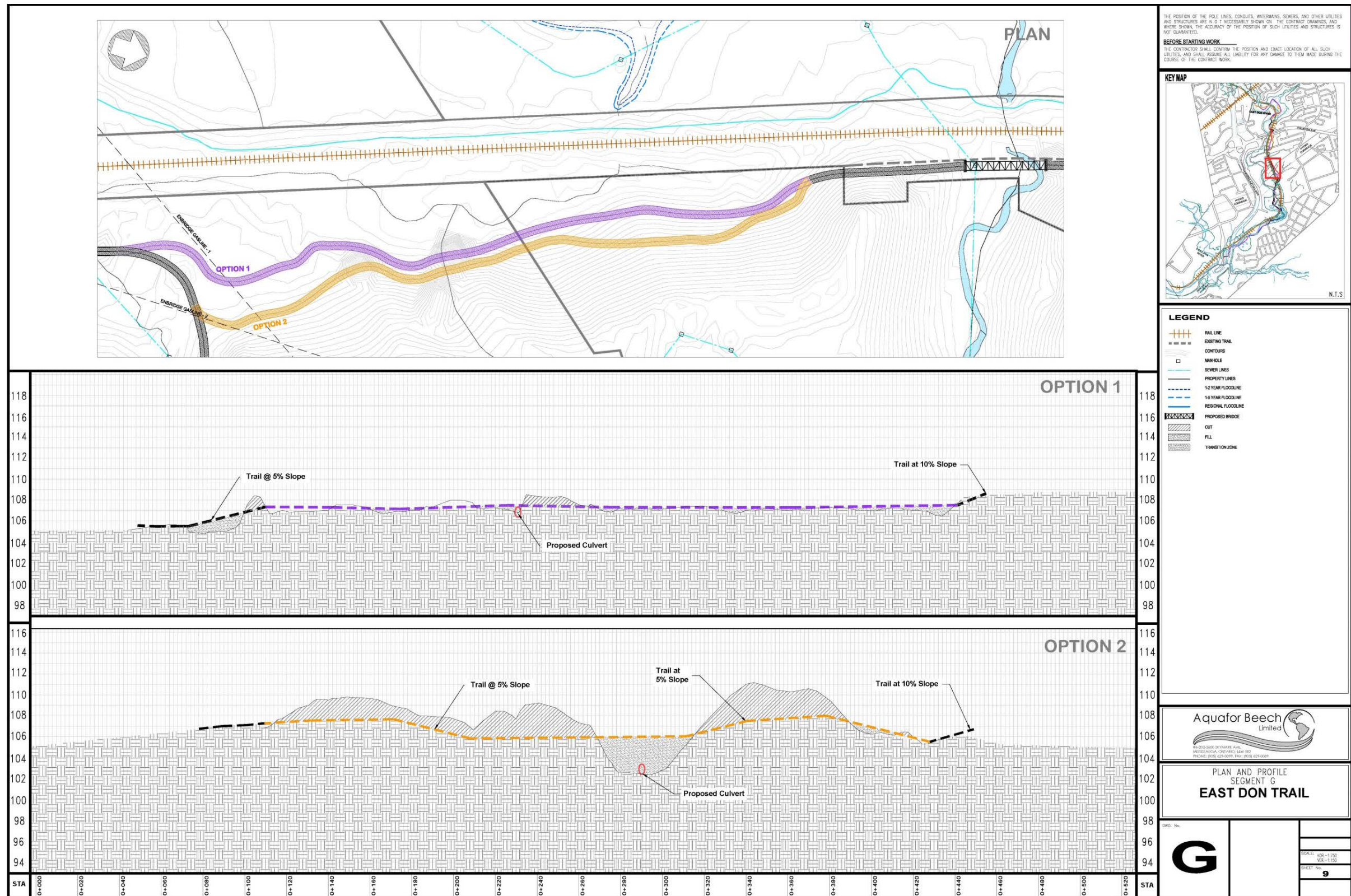


Figure 7-9: Alternative design concepts for Segment G

Source: Aquafor Beech Limited 2014

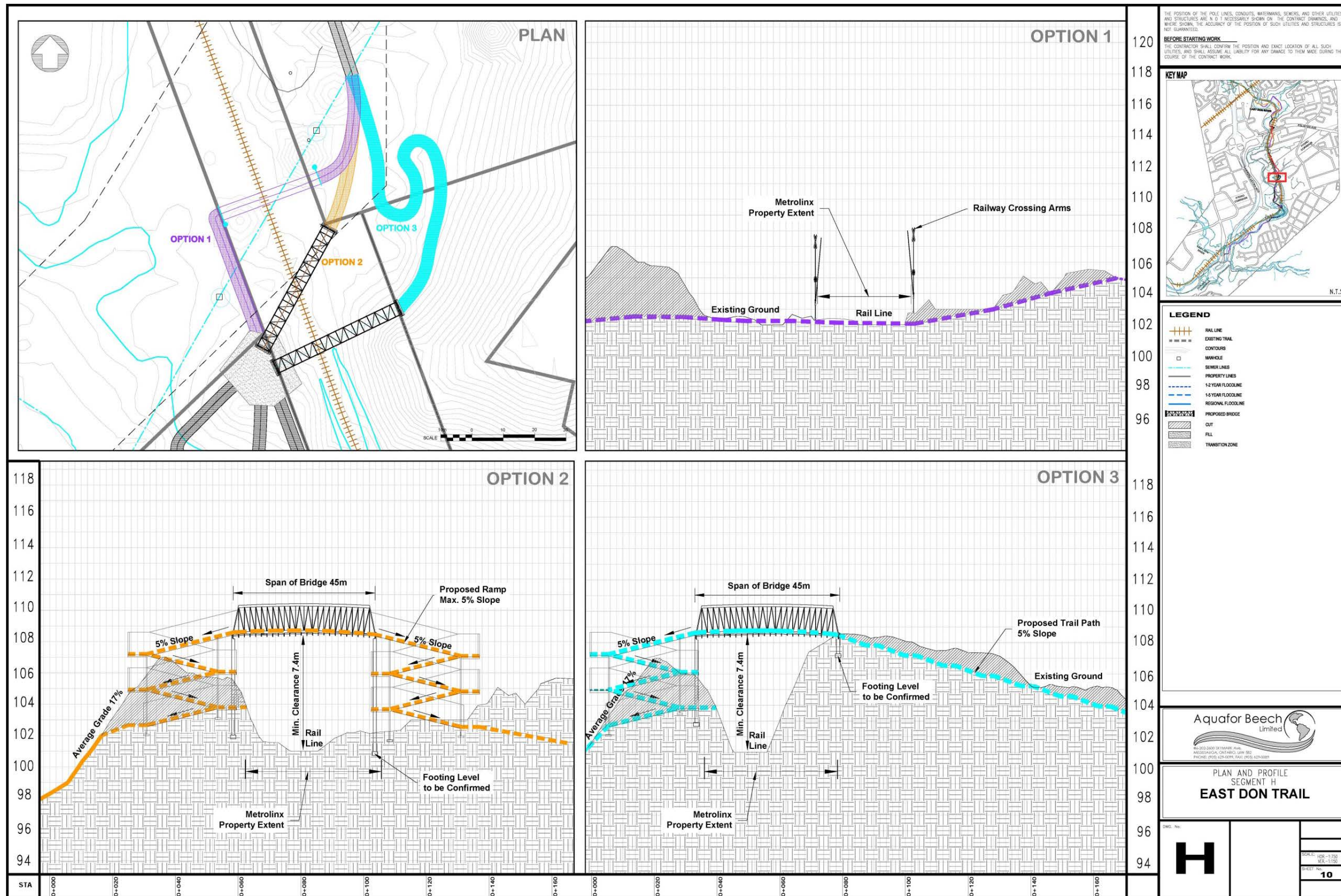


Figure 7-10: Alternative design concepts for Segment H
 Source: Aquafor Beech Limited 2014

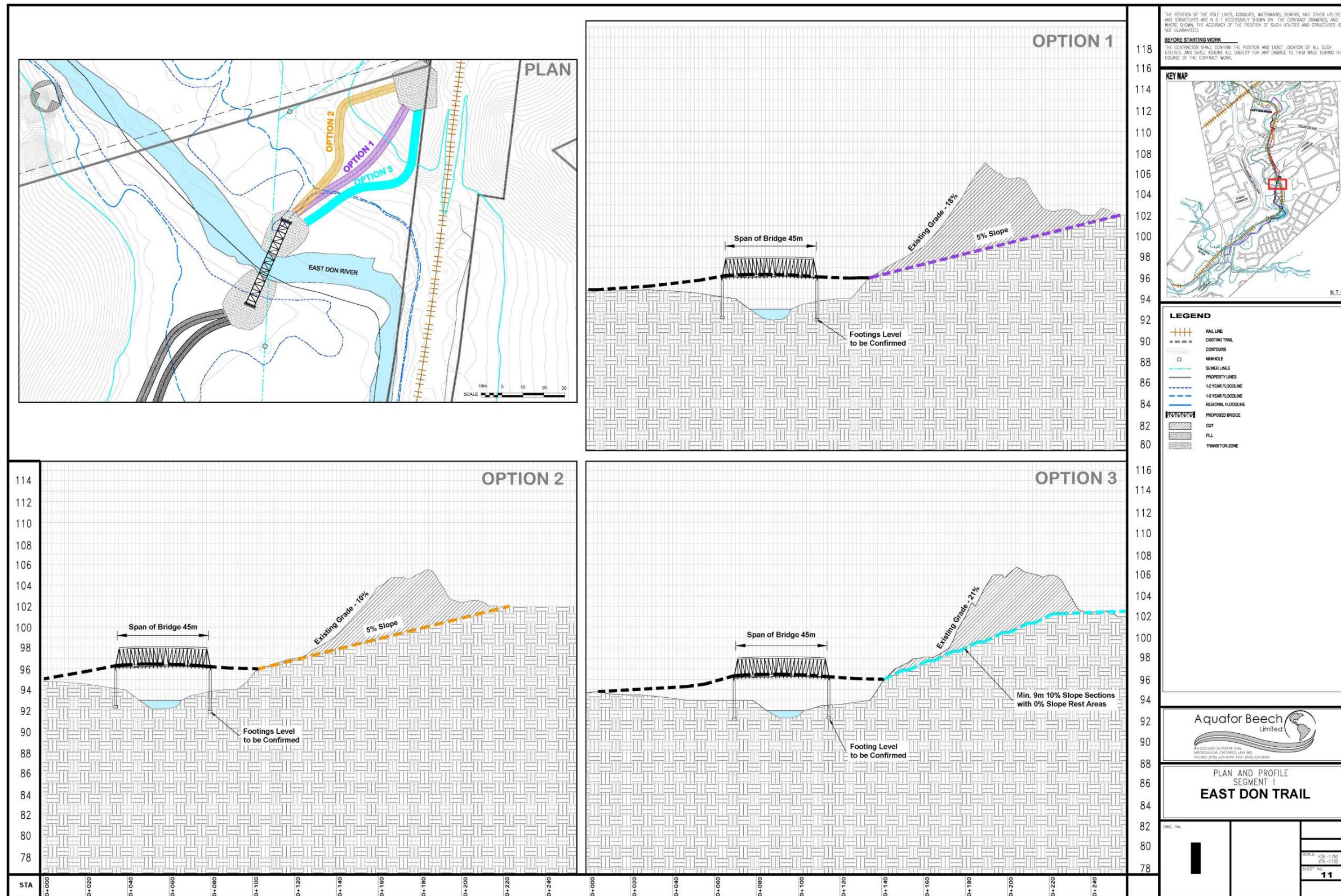


Figure 7-11: Alternative design concepts for Segment I

Source: Aquafor Beech Limited 2014

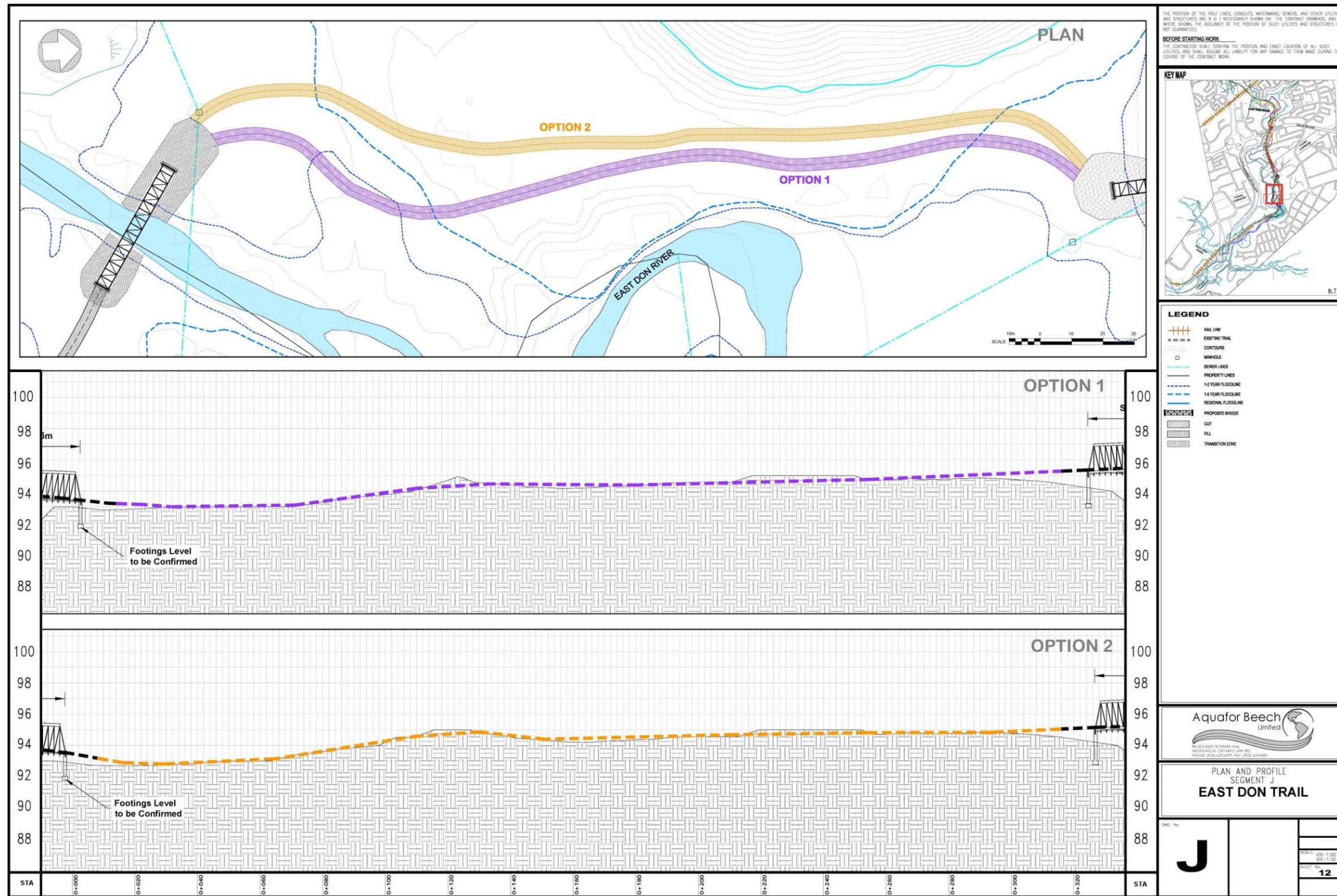


Figure 7-12: Alternative design concepts for Segment J

Source: Aquafor Beech Limited 2014

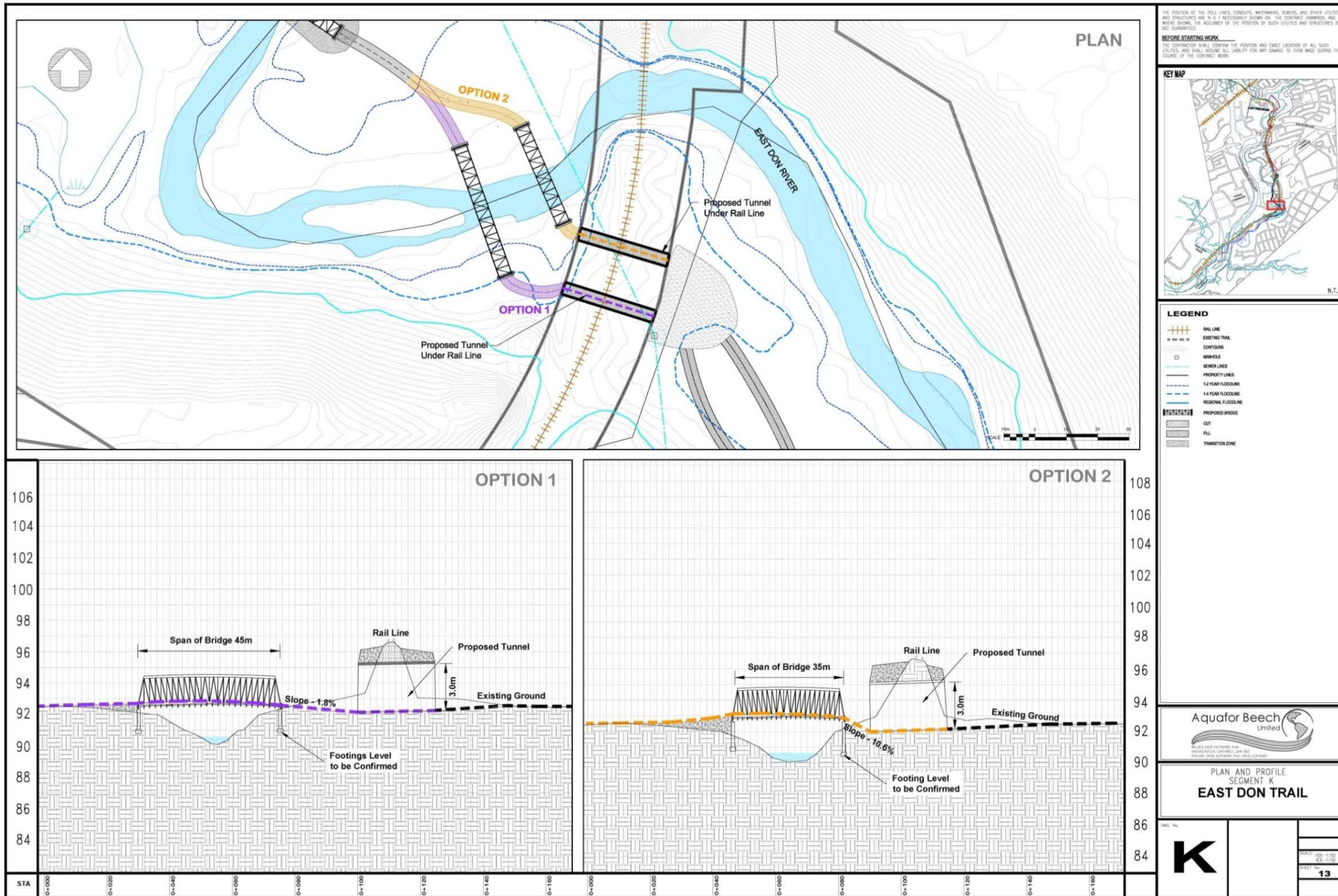


Figure 7-13: Alternative design concepts for Segment K
Source: Aquafor Beech Limited 2014

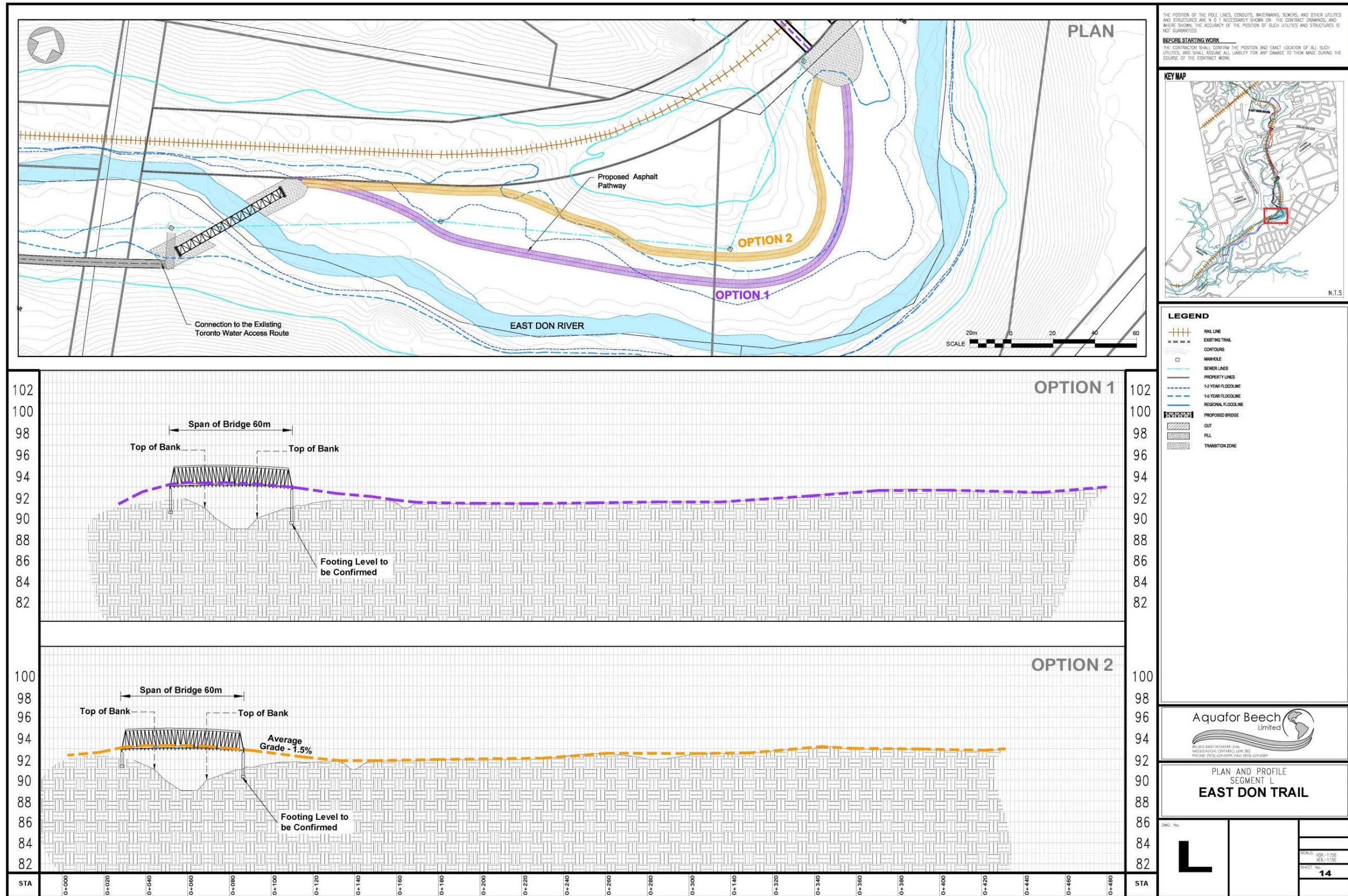


Figure 7-14: Alternative design concepts for Segment L
Source: Aquafor Beech Limited 2014

7.3 Evaluation of Alternative Design Concepts

7.3.1 Evaluation Approach

Alternative design concepts evaluation incorporated identification and assessment of the potential environmental impacts of each alternative design concept to select the preferred design concept.

Design concept for trail path segments (A to D, F, G, I, J and L) and crossing segments (E, H, and K) were evaluated using distinct sets of criteria for each as they are functionally different. Evaluation criteria and descriptions for trail path and trail crossing segments are presented in **Appendix G**. For consistency purposes, Phase 3 evaluation criteria were organized in a manner similar to those used in Phase 2 of the EA, where individual criteria were grouped according to categories of impact: Functional Value, Natural and Physical Environment, Social and Cultural Environment, Cost, and Technical. Criteria considered and removed during criteria development – due to the fact that they were addressed in previous EA stages or otherwise - are listed in **Appendix G**.

As in Phase 2, criteria indicators, or specific parameters considered under each criterion, were developed to facilitate the evaluation process. As indicated above, the preferred alternative trail alignment was divided into segments (trails and crossings), with the identified alternative design concepts being evaluated against each other within each segment. The impact of the alternative design concepts was determined by assigning a score between (-2) and (+2) for each of the criteria as guided by the indicators. The alignment with the highest total score was considered the preliminary preferred design concept

Trail path and crossing areas where no design concepts were developed, the preferred segments, were excluded from the evaluation, as outlined in Section 7.1.

7.3.2 Evaluation Results

The results of the alternative design concepts evaluation are presented in Table 7-2 for trail path segments and Table 7-3 for crossing segments. As outlined in Section 7.3.1, the alternative design concepts were evaluated based on specific criteria and associated indicators and measures for assigning scores (**Appendix G**). Summaries of evaluation results for each segment, based on the evaluation scores and input from the TAC, CLC, public, and Review Agencies, are provided in the following table.

Table 7-2: Trail path segments alternative design concepts evaluation results

CRITERIA	TRAIL PATH SEGMENTS AND ALTERNATIVE DESIGN CONCEPTS (OPTIONS)																			
	A		B		C		D		F			G		I			J		L	
	O1	O2	O1	O2	O1	O2	O1	O2	O1	O2	O3	O1	O2	O1	O2	O3	O1	O2	O1	O2
FUNCTIONAL VALUE																				
Consistency of trail topography (i.e., steepness)	2	0	2	2	0	1	2	2	-2	2	1	2	1	-1	-1	-2	2	2	2	2
NATURAL AND PHYSICAL ENVIRONMENT																				
Potential impact to existing urban forest	-2	-2	0	-2	-2	-2	-2	-2	1	-2	-1	-2	-2	-2	-1	-1	-2	-2	-1	-2
Potential impact to wetlands	2	2	-1	0	2	2	0	1	-1	0	-1	2	2	2	2	2	1	1	2	2
SOCIAL AND CULTURAL ENVIRONMENT																				
Potential impact to trail users safety	1	-1	1	1	1	1	2	2	0	1	1	1	1	-1	-2	-1	0	1	1	1
Aesthetics and general user experience	1	2	1	2	1	2	2	1	2	1	2	1	1	0	-1	-1	2	2	0	-1
Potential impact to cultural heritage	-2	-1	-2	-2	-2	-2	-2	-2	-1	-2	-1	-2	-2	-2	-2	-2	-2	-2	-2	-2
COST																				
Capital cost	1	2	2	1	2	2	1	2	-2	2	-1	2	1	2	0	1	2	2	2	2
Operational and maintenance cost	1	2	2	1	2	1	1	2	-1	2	0	2	2	2	1	2	1	2	1	2
TECHNICAL																				
Ease of Implementation based on stakeholder/Review Agency approval	1	1	0	1	1	1	2	1	0	0	0	1	0	0	-1	-1	1	1	0	1
Flood susceptibility	1	1	1	1	1	1	1	1	N/A			N/A		0	0	0	0	1	0	1
River erosion susceptibility	-1	0	1	-1	1	1	2	2	N/A			0	1	1	1	1	-2	-2	1	2
TOTAL SCORE	5	6	7	4	7	8	9	10	-4	4	0	7	5	1	-4	-2	3	6	6	8
Preliminary Preferred	O2		O1		O2		O2		O2			O1		O1			O2		O2	

O = Option, or Alternative Design Concept

N/A = Not Applicable

Table 7-3: Crossing segments alternative design concepts evaluation results

CRITERIA	CROSSINGS ALTERNATIVE DESIGN CONCEPTS (OPTIONS)						
	E		H			K	
	O1	O2	O1	O2	O3	O1	O2
FUNCTIONAL VALUE							
Consistency of trail topography (i.e., steepness)	1	-1	2	-2	-1	2	1
NATURAL AND PHYSICAL ENVIRONMENT							
Potential impact to existing urban forest	-1	-2	2	2	-2	-2	-2
SOCIAL AND CULTURAL ENVIRONMENT							
Impact to user safety objectives* *Railway safety assessed as a separate criterion (see Technical Criteria)	0	0	0	-1	0	1	0
Aesthetics and general user experience	0	-1	0	-2	-1	-2	-2
Potential impact to cultural heritage	0	0	2	1	1	-2	-2
COST							
Capital cost	2	-1	2	-2	-1	1	2
Operational and maintenance cost	2	-1	2	-2	-1	2	0
TECHNICAL							
Ease of Implementation, as indicated by stakeholder/Review Agency approval	-1	0	-2	-2	0	1	0
Flood Susceptibility (<i>where applicable</i>)	N/A		N/A			-1	-2
Erosion Susceptibility (<i>where applicable</i>)	N/A		N/A			0	-1
Railway safety, as preferred by Metrolinx (<i>where applicable</i>)	-1	0	-1	0	0	1	1
TOTAL SCORE	3	-6	8	-7	-5	0	-6
Preliminary Preferred	O1		O1			O1	

O = Option, or Alternative Design Concept

N/A = Not Applicable

Segment A

Segment A Option 1 scored 5 and Option 2 scored 6.

Option 1 is characterized by relatively flat ground (grades of less than 5%) and would result in higher capital, operational and maintenance cost and higher erosion susceptibility.

Option 2 has some grades of 5 to 9%, contributing to greater user safety concerns. At the same time, it offers trail users a greater variety of views and landscapes. Being routed further from the East Don River, Option 2 is anticipated to require less maintenance as it would be less susceptible to sedimentation (a common public concern). It would also be lower in capital cost.

Though both design concepts scored a (-2) with respect to the potential impact on the local trees, it was found that Option 1 may impact more high preservation value trees than Option 2.

No specific comments regarding the evaluation of this segment were received from the public or other project stakeholders.

Option 2 was selected as the preferred design concept for Segment A.

Segment B

Segment B Option 1 scored 7 and Option 2 scored 4.

Option 1 intercepts a wetland boundary and leads trail users away from a well-used informal trail along the river bank. At the same time, it would be less susceptible to watercourse erosion and would thus be lower in operational and maintenance costs.

Option 2 offers trail users a greater variety of views and landscapes, however, would have a greater negative impact on the local trees and be more susceptible to erosion, therefore having greater maintenance requirements. These factors were considered of greater impact than the potential impact to wetland drainage and less favorable user experience with Option 1.

No specific comments regarding the evaluation of this segment were received from the public or other project stakeholders.

Option 1 was selected as the preferred design concept for Segment B.

Segment C

Segment C Option 1 scored 7 while Option 2 scored 8.

Option 1 is characterized by consistent 5 to 9% grades, lower aesthetics, and general user experiences, and would have lower operational and maintenance costs than Option 2.

Option 2 is slightly flatter and offers a greater variety of views and landscapes; in addition Option 2 has a lower impact on trees than Option 1.

The evaluation resulted in both options scoring fairly similarly. Therefore, a more in-depth review of the potential environmental impacts was undertaken. Given that the impact to the natural environment was cited as the highest overall consideration by the majority of the public, this criterion was used for the additional evaluation (refer to **Appendix A**). It was determined that Option 2 would result in removal of a higher number of trees, though fewer high preservation value trees would be impacted or removed. In addition, Option 2 is routed away from a well-vegetated slope area considered to contain a fairly high-quality forest. Overall, Option 2 would provide an opportunity for enhanced user experience (as this Option is routed closer to the watercourse than Option 1) without high negative impacts to the natural environment.

No specific comments regarding the evaluation of this segment were received from the public or other project stakeholders.

Option 2 was selected as the preferred design concept for Segment C.

Segment D

Segment D Option 1 scored 9 while Option 2 scored 10.

Option 1 is located closer to an existing wetland. While offering a potentially greater variety of views, it would have higher capital, operational and maintenance costs.

Option 2 is located further from the existing wetland and the river and would, therefore, have less of an impact on these natural features and be lower in operating and maintenance costs.

Public feedback concerning Segment D indicated more public support for Option 2 (see Section 0) as it would reduce fragmentation of habitat: Option 2 also follows along the edge of the meadow rather than bisecting it the way Option 1 does.

Option 2 was selected as the preferred design concept for Segment D.

Segment E

Segment E Option 1 (level crossing with signals) scored 3 and Option 2 (bridge over rail line with a ramp on the east side) scored (-6).

Option 1 is characterized by lower capital, operational and maintenance costs, greater accessibility and less impact on the natural environment.

Option 2 would require steep grades approaching the bridge and include a ramp structure. It would also result in a greater impact on both local trees and the natural aesthetic of trail. However, Option 2 would have lower rail line safety concerns compared to Option 1, as it would achieve grade separation between the rail line and trail traffic, therefore reducing the traffic interaction.

Selection of Option 1 received more public support than Option 2. The public supported the evaluation of Option 1 for the following reasons: greater accessibility, less impact on natural environment and lower costs.

Based on the evaluation, Option 1 scored highest and was selected as the preliminary preferred design concept for Segment E. This Option was presented to the public, project stakeholders, Review Agencies, and Indigenous communities (refer to Section 7.4).

Similar to all other rail line crossings, Segment E is subject to approval by Metrolinx (rail line owner). Following discussions and review with Metrolinx, the design concept selected as the preferred for this Segment was altered. While the evaluation resulted in Option 1 scoring higher, Metrolinx indicated that their policy direction is to not permit any new level crossings of active railway corridors; therefore Option 2 was selected as the preferred design concept. The updated preferred design concept was presented to the public, project stakeholders, Review Agencies and Indigenous communities (refer to Section 7.4). Detailed design and implementation of the bridge will be subject to approval by Metrolinx.

Option 2 was selected as the preferred design concept for Segment E, following policy direction from Metrolinx.

Segment F

Segment F Option 1 (boardwalk across wetland) scored (-4), Option 2 (trail through a forested area) scored 4, and Option 3 (combination of boardwalk and trail along wetland edge) scored 0.

Option 1 is characterized by a number of grade changes with some 5 to 10 % grades present. It would have the least impact on the surrounding urban forest. As the majority of the trail would be boardwalk along this segment length, this Option would result in the highest capital, operational and maintenance costs.

Option 2 is characterized as relatively flat asphalt trail. Option 2 is located within a well-forested area and would have the greatest impact on the surrounding trees compared to other options for this trail path segment. It would also result in the lowest capital, operational and maintenance costs.

Option 3, a combination of both asphalt trail and boardwalk along the forest and wetland edge, would have some relatively steep grades, but would also offer users access to a greater variety of landscapes.

As the impact on the natural environment was a major concern expressed by the public and Segment F travels through a variety of habitats that are considered high quality for the East Don corridor, an in-depth review of stakeholder and public input and the overall impact on the natural environment was undertaken for this segment.

Input received included the following:

1. Project CLC members were in agreement that Option 3 would be the preferred design concept. This option limited habitat fragmentation, as this trail was routed along the wetland/forest edge as opposed to transecting either of these habitats. The CLC noted that although wetlands are valuable and we should be careful about putting trails through wetlands, this particular wetland was of low quality.
2. The City of Toronto's Parks, Forestry and Recreation Community Disability Steering Committee, while preferring Option 2 due to the fact that the trail surface would be asphalt rather than boardwalk (which has a potential to be slippery - a concern for wheelchair users), did find Option 3 acceptable as it contained both asphalt and boardwalk surfaces.
3. In addition, comments received during the Public Event #3 reflected general support of Option 3, mainly due to the fact that this design concept limits forest and wetland habitat fragmentation.
4. Lastly, the City of Toronto Urban Forestry Tree Protection and Plan Review section expressed concern regarding the potential impact Option 2 would have on the local relatively undisturbed forest. Routing a trail in such an area would be undesirable, particularly since other alternatives are available. Urban Forestry indicated that Option 1 was the most preferred, followed by Option 3, and that Option 2 was least preferred.

Option 3 was selected as the preliminary preferred design concept for Segment F, subject to approval by City of Toronto Urban Forestry, Ravine and Natural Feature Protection.

Segment G

Segment G Option 1 scored 7 and Option 2 scored 5.

Option 1 is characterized by relatively flat ground and would result in lower capital costs. However, there would be a slightly higher erosion susceptibility risk.

Option 2 is generally flat, but would contain some grade changes and would cost more to implement.

Public input concerning Segment G focused on the impacts to the natural environment. Feedback collected from the public included suggestions to minimize the amount of cut and fill, as large amounts of added fill material have the potential to alter local hydrology and general landscape, and to recognize the fact that the existing topography may restrict the ability to design/implement a trail with minimal grade changes. Compared to Option 1, it was determined that Option 2 would require greater amounts of cut and fill while still potentially containing a 10% gradient.

Option 1 was selected as the preferred design concept for Segment G.

Segment H

Segment H Option 1 (level crossing with signals) scored 8, Option 2 (bridge over rail line with ramps on both sides) scored (-7), and Option 3 (bridge over rail line with a ramp on the west side and a switchback on east side) scored (-5).

Option 1 is characterized as a level crossing, would have fewer trail user safety concerns, and would be the easiest to access as there would be no grade changes. At the same time, it would have greatest rail line safety concerns due to the lack of grade separation and was not preferred by the rail line owner Metrolinx. This Option would also have lowest capital, operational and maintenance costs and a lower impact on the natural environment.

Option 2 contains ramps (at 5% gradients) on both sides of the crossing, thus presenting potentially higher trail user safety concerns and lowering accessibility by all users. This option would also be less consistent with the trail's natural environment aesthetic setting and have the highest capital, operational and maintenance costs.

Option 3 contains 5% gradients on both sides of the crossing. In addition, this Option incorporates a switchback along a well-treed slope on the east side of the rail line. This crossing would also be less consistent with the trail natural environment aesthetic setting aesthetic and have the second-highest capital, operational and maintenance costs.

This segment, similar to all other rail line crossings, is subject to approval by Metrolinx (rail line owner). Hydro One and Infrastructure Ontario approval would also be required as the crossing is partially located within the hydro transmission corridor managed by Hydro One and owned by Infrastructure Ontario.

Based on the evaluation, Option 1 scored highest and was selected as the preliminary preferred design concept for Segment E. This Option was presented to the public, project stakeholders, Review Agencies, and Indigenous communities (refer to Section 7.4).

Similar to all other rail line crossings, Segment H is subject to approval by Metrolinx (rail line owner). Following discussions and review with Metrolinx, the design concept selected as the preferred for this Segment was altered. While the evaluation resulted in Option 1 scoring higher, Metrolinx indicated that their policy direction is to not permit any new level crossings of active railway corridors. As a result, the second highest ranking Option, Option 3 was selected as the preferred design concept. The updated preferred design concept was presented to the public, project stakeholders, Review Agencies and Indigenous communities (refer Section 7.4).

Detailed design and implementation of the bridge will be subject to approval by Metrolinx. Hydro One and Infrastructure Ontario approval would also be required as the

crossing is partially located within the hydro transmission corridor managed by Hydro One and owned by Infrastructure Ontario.

Option 3 was selected as the preferred design concept for Segment H, following policy direction from Metrolinx.

Segment I

Segment I Option 1 scored 1, Option 2 scored (-4), and Option 3 scored (-2).

Option 1 would have the lowest capital and low operation and maintenance costs; be most user-friendly; and, easiest to implement. It is anticipated that Option 1 would generate the least amount of user conflict concerns compared to Option 2 (conflict with golf course users) and Option 3 (conflict with rail line use).

Option 2 would have the most user safety concerns and would have the highest capital, operational and maintenance costs.

Option 3 is characterized by the steepest grades (10%) but would have the lowest impact on local trees and low operational/maintenance costs.

Several comments from members of the public were received, including the statement that this segment's design concepts involved excessive land alteration (removing soil to achieve certain grades). At the same time, there was an acknowledgement of the need to meet accessibility requirements where possible. Lastly, it was suggested to route the trail as far away from the rail line as possible. As Option 1, Option 2, and Option 3 evaluation scores were distinctly different and no clear preference was stated by the public, Option 1 was selected as the preferred design concept.

Option 1 was selected as the preferred design concept selected for Segment I.

Segment J

Segment J Option 1 scored 3, and Option 2 scored 6.

Both Option 1 and Option 2 are characterized by relatively flat topography (both segments maintain grades of less than 5%) and routed entirely within a natural setting. Option 1 is routed closer to the river and Option 2 is routed further inland. As it routed further away from the river than Option 1, Option 2 would have fewer user safety concerns, lower flooding susceptibility and lower operation and maintenance costs.

As Option 1 and Option 2 evaluation scores were distinctly different and no specific comments were received from the members of the public, Key Stakeholders or Review Agencies, Option 2 was selected as the preferred design concept.

Option 2 was selected as the preferred design concept for Segment J.

Segment K

Segment K Option 1 scored 0, and Option 2 scored (-6).

Option 1 is characterized by consistent grades of less than 5%, and would flood less often, have fewer trail user safety concerns and a higher capital cost. However, it would be lower in operation and maintenance cost than Option 2.

Option 2 has less consistent grades (contains one relatively steep gradient of 10.5% with a short and steep transition between the bridge and the tunnel), and would have higher user safety concerns, higher likelihood of flooded, higher susceptibility to erosion, lower capital cost and higher operation and maintenance cost.

As evaluation scores were distinctly different and no other specific comments regarding this segment were received from the public and other project stakeholders, Option 1 was selected as the preferred design concept. Detailed design and implementation of the tunnel will be subject to approval by Metrolinx.

Option 1 was selected as the preferred design concept for Segment K.

Segment L

Segment L Option 1 scored 6, and Option 2 scored 8.

Option 1 would have a lower potential impact on surrounding trees, higher operation and maintenance costs, higher likelihood of being flooded and higher susceptibility to erosion.

Option 2 would have a higher impact on surrounding trees, lower operation and maintenance costs and flood less often. Both options have minimal grades (less than 5%). An additional consideration when selecting the preferred design concept in this segment was the presence of an actively eroding area along the east bank of the East Don River as this could potentially impact surrounding infrastructure and property (rail line bridge over the East Don River as well as the City of Toronto works yard property). To reduce the impact on this trail segment arising from potential erosion remediation works, should those be undertaken in the future outside of this EA process, having a trail that is routed westward, or away from the watercourse, would be preferable. It would also result in lower maintenance needs and costs. Option 2 would better meet these requirements.

No specific comments regarding the evaluation of this segment were received from the public or other project stakeholders.

Option 2 was selected as the preferred design concept for Segment L.

7.3.3 Preferred Alternative Design Concept

The preferred alternative design concept for the entire trail consists of the preferred alternative design concepts selected for each segment and is illustrated in Figure 7-15. The preferred design concept selection was based on the alternative design concepts

evaluation results (see Section 7.3.2) as well as input from the public (discussed in Section 7.4), Metrolinx (regarding rail line crossings), and other project stakeholders.

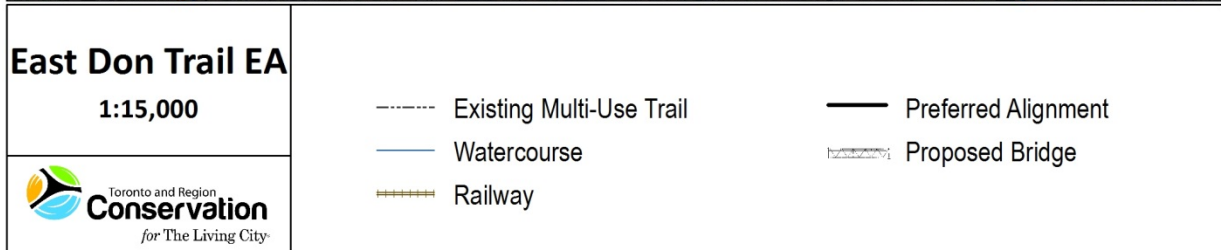
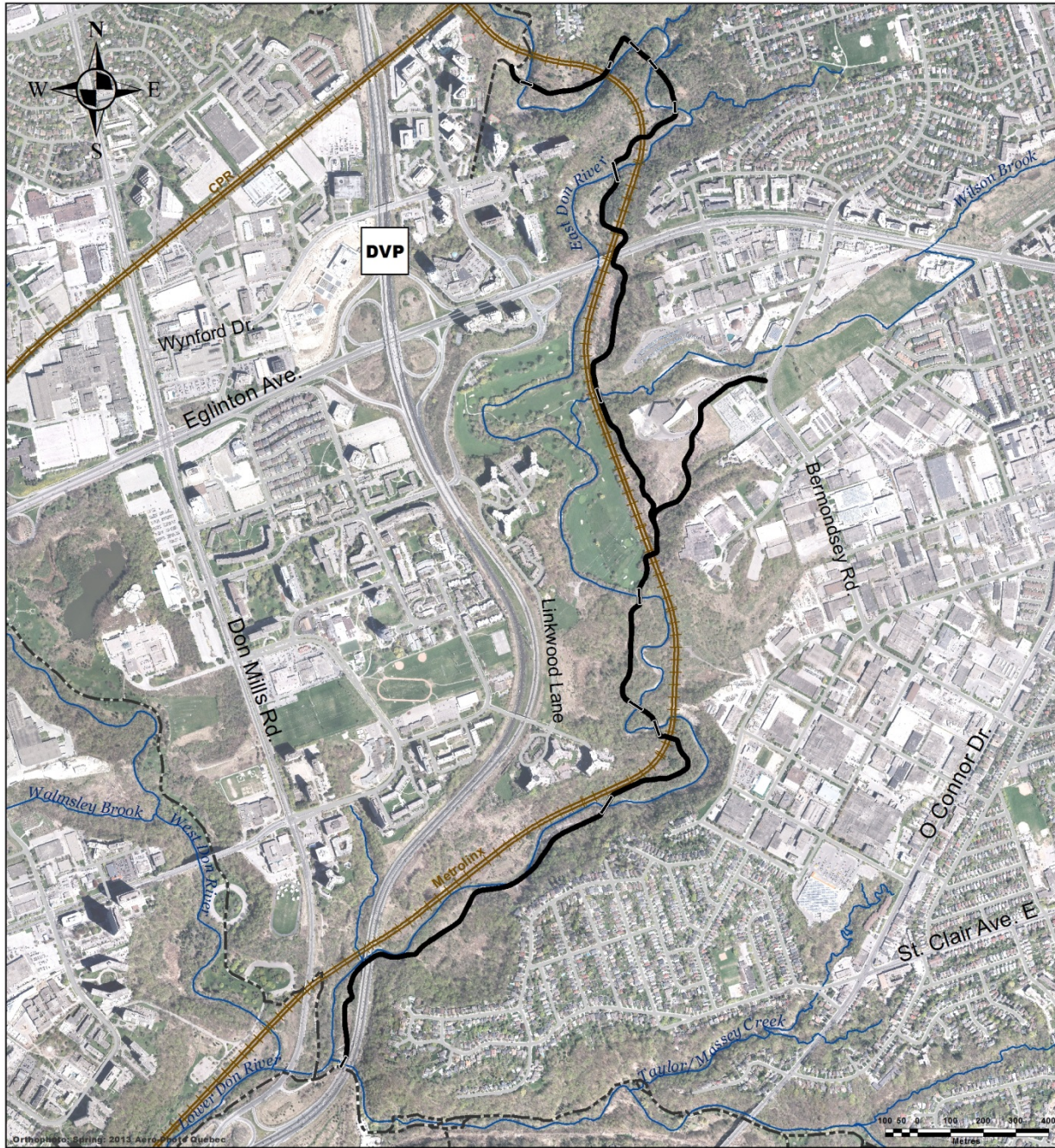


Figure 7-15: The East Don Trail Environmental Assessment preferred alternative design concept

Source: TRCA 2014

7.4 Phase 3 Public Consultation

Public consultation in Phase 3 was divided into two parts: mandatory consultation, which included engagement related to the selection and refinement of a preferred design concept (presented in Section 7); and additional consultation including design concept elements and mitigation measures which extended past the selection of the preferred design concept (presented in Section 9).

Mandatory consultation in Phase 3 included a number of activities, as shown in Table 7-4. From April 23, 2014, to September 21, 2016, the Project Team received communications from 27 members of the public via e-mail, phone, or mail regarding this project phase.

Table 7-4: Summary of consultation during Phase 3.

Date	Consultation
June 10, 2014	Community Liaison Committee Meeting #6
June 12, 2014	Community Disability Steering Committee meeting
June 20, 2014	Links to Public Event #3 materials posted on project web page
June 24, 2014	Public Event #3
July 2014	Frequently Asked Questions (Update #2) posted to project webpage
October 30, 2014	Project Update #3 sent to stakeholder register through the Listserv or mail
September 7, 2016	Project Update #6 sent to stakeholder register through the Listserv or mail

7.4.1 Public Events

Public Event #3

On Tuesday, June 24, 2014, City of Toronto and TRCA hosted the final Public Event at the Victoria Village Hub, located at 1537 Victoria Park Avenue, from 5:30 p.m. to 8:30 p.m. The purpose of the event was to present and gather public feedback on the design concepts for what the preferred trail alignment might look like (i.e., alternative design concepts). Residents and interested individuals were invited to view display panels and talk with members of the Project Team. One presentation was made during the event to provide an overview of the alternative design concepts development process as well as several examples of evaluation outcomes. The presentation was followed by a Question and Answer session. Participants were also encouraged to fill out comment forms.

Overall, the event was well attended (71 participants signed in) and solicited a range of feedback about the project. Feedback was generally positive at the public event, on comment sheets, and through correspondence following the event. While the majority of public responses received agreed with the design concept recommended, there was also some opposition and concern regarding potential impacts on the natural environment.

Feedback and communications related to the public event were collected and documented for this summary report prior to the event and during the two week

comment period following the event (ending on July 11, 2014). The following sources of information were incorporated into the public feedback shared with the Project Team:

- Conversation topics between City, TRCA, and consultant staff, and Public Event participants
- Question and answer session following Project Team presentations (see **Appendix A** for minutes)
- Comment forms received (28 comment forms)
- Email and phone correspondence received during the public comment period from June 20, 2014, to July 11, 2014

Documentation of Public Event #3 is provided in **Appendix A**.

7.4.2 Community Liaison Committee

Meeting #6

CLC Meeting #6 was held on June 10, 2014, at the Dennis R. Timbrell Resource Centre/Flemingdon Park Library (29 St. Dennis Drive, Toronto). The meeting was attended by two City of Toronto staff, three TRCA staff, and two Aquafor Beech Ltd staff as well as four CLC members. The meeting took place from 6:30 p.m. to 8:30 p.m. and included a presentation by the Project Team. During and after the presentation, a facilitated Question and Answer session allowed for two-way communication between CLC members and the Project Team during which numerous questions, responses, and comments were provided.

The purpose of Meeting #6 was to present the trail alternative design concepts to CLC members and to receive feedback and input from members regarding the design concepts evaluation. A questionnaire was distributed to the CLC members to provide feedback. TRCA received feedback from four CLC members.

Meeting notes were taken during the meeting and included summarized comments. Draft meeting notes were circulated to CLC members following the meeting to ensure that comments were accurately recorded and appropriately addressed.

Documentation of CLC Meeting #6 is provided in **Appendix A**.

Members of the CLC were emailed a project update on September 7, 2016, as part of Phase 3 refinements. The project update included refinements of the preferred design concept, progress to date as well as next steps of the Study.

7.4.3 Additional Meetings

As part of Phase 3 public consultation, several members of the Project Team met with the City of Toronto Parks, Forestry and Recreation Community Disability Steering Committee to provide an overview of the project, describe design challenges and obtain the Committee’s feedback related to trail design to meet accessibility requirements. The meeting took place on June 12, 2014, at the March of Dimes Canada Boardroom (10 Overlea Blvd, Toronto), from 10:30 a.m. to 1:30 p.m.

7.4.4 Representative Feedback Received During Phase 3

Table 7-5 below represents key public comments received during Phase 3 of the MCEA process, along with the impact on the East Don Trail EA Study. To view the correspondence log and comment tracking table for Phase 3 see **Appendix A**.

Table 7-5: Representative comments received during Phase 3 public consultation

Comment	Response/Impact
<p><u>Alternative Design Concepts</u> Members of the public and CLC generally agreed with the recommended design concept as presented in Phase 3. Comments were received about specific segments and general considerations:</p> <p><u>Comments related to Trail Segments:</u></p> <ul style="list-style-type: none"> a) In Trail Segment B, the options in the top part of the segment are very close together and have similar levels of impacts. (CLC Meeting #6 discussion item) b) In Trail Segment F, the project team requested direction from the public, CLC members (Meeting #6), and the TAC regarding the recommended concept, as the evaluation resulted in Option 2 being ranked the highest, however, this option would cause the greatest impact to the surrounding forested area. c) Trail Segment F – prefer shorter distanced of boardwalk or none, Option 3 would be an acceptable amount (from City of Toronto, Committee Disability Committee). d) Segment E and H – The bridge crossings should accommodate requirements for the eventual electrification of the rail line and associated infrastructure. <p><u>General Considerations:</u></p> <ul style="list-style-type: none"> a) There are places within the Study Area that were previously disturbed. These should be considered for restoration or remediation as part of the implementation of this project. b) Capital costs should consider fencing and 	<p><u>Comments related to Trail Segments:</u></p> <ul style="list-style-type: none"> a) Trail Segment B was reviewed and it was determined that the differences did not require two options to be shown. As a result, only one option was shown in the top part of Trail Segment B at Public Event #3. b) In Segment F, based on feedback received from the public and agencies it was determined that Option 3 was the best to move forward with as it had the least impact on the existing trees within the area and that impact to the adjacent wetland would be minimal. c) In Segment F, though option 3 contains boardwalks, this linear amount would be less than option 1. d) Any new structures or crossings constructed along the Metrolinx rail line will consider potential future electrifications. For the bridges over the rail line, this means meeting a vertical clearance of 7.4 m to accommodate Overhead Contact Systems. <p><u>General Considerations:</u></p> <ul style="list-style-type: none"> a) The recommendation to investigate and/or identify additional restoration opportunities was included in the ESR as part of the potential future works list.

Comment	Response/Impact
<p>ecological mitigation including the provision of fencing (post and paddle) in sensitive areas to keep people on the trail.</p> <p>c) Opportunity to design bridges and trail infrastructure to create “landmarks” with opportunity for art features.</p> <p>d) The preferred trail provides limited access to the Wynford and Flemingdon Park Communities.</p> <p>e) Members of the public noted that protection of the natural environment and user experience/aesthetics were the most important overall considerations in the design of the trail.</p> <p>f) Requests to include recommendations for future community connections in the ESR.</p>	<p>b) The financial cost of fencing, including that of provision fencing was considered during the evaluation. All ecological mitigations measure costs were not incorporated as these will be fully outlined in the detailed design stage.</p> <p>c) This opportunity will be looked at during the detailed design stage.</p> <p>d) The project team recognizes that community access would have increased had Flemingdon Park Golf Club been acquired for public use, however, this option is not available at the time the EA was being completed. The project team committed to looking at other opportunities to increase access for the community during the detailed design phase.</p> <p>e) The project team used the feedback received from the public to confirm the recommended design concepts. This was based on feedback about what people considered important during the planning of the trail.</p> <p>f) The project team included the recommendation to explore future community connections in this ESR throughout all phases of the EA.</p>

7.5 Indigenous Communities

Project updates were sent to the identified Indigenous communities (see Section 3.3) at key milestone points throughout the EA. For each update, a request was made to each community to review and provide comment on the provided material, including identifying to TRCA any concerns or questions about each given stage of the EA.

Circulated on September 8, 2014, Project Update #4 (Notification #5) included an update letter to the community, the preferred alternative trail alignment, development and evaluation of the alternative design concepts, selection of the preferred design concept, and project next steps.

Circulated on September 8, 2016, Project Update #6 (Notification #7) included an update letter to the community, a summary of key project deliverables completed, and refinement of the preferred design concept.

Table 7-6 provides a summary of correspondence with the Indigenous communities as part of Phase 3. Project Update #4 (Notification #5) and Project Update #6 (Notification #7) are provided in **Appendix A**.

Table 7-6: Summary of correspondence with Indigenous Communities in Phase 3.

Indigenous Community	Engagement
Beausoleil First Nation	<p>Notification #5: <i>September 8, 2014:</i> Couriered and emailed notification package</p> <p>Notification #7: <i>September 8, 2016:</i> Couriered and emailed project update</p>
Chippewas of Georgina Island First Nation	<p>Notification #5: <i>September 8, 2014:</i> Couriered and emailed notification package</p> <p>Notification #7: <i>September 8, 2016:</i> Couriered and emailed project update <i>September 28, 2016:</i> Chippewas of Georgina Island First Nation noted no current questions. Requested to be informed regarding archaeological assessments and if any other First Nation raises concerns.</p>
Chippewas of Rama-Mnjikaning First Nation	<p>Notification #5: <i>September 8, 2014:</i> Copied on information couriered and emailed to the Williams Treaty Coordinator</p> <p>Notification #7: <i>September 8, 2016:</i> Copied on information couriered and emailed to the Williams Treaty Coordinator</p>
Curve Lake First Nation	<p>Notification #5: <i>September 8, 2014:</i> Couriered and emailed notification package</p> <p>Notification #7: <i>September 8, 2016:</i> Couriered and emailed project update</p>
Conseil de la Nation Huronne-Wendat	<p>Notification #5: <i>September 8, 2014:</i> Couriered and emailed notification package</p> <p>Notification #7: <i>September 8, 2016:</i> Couriered and emailed project update</p>
Coordinator Williams Treaty First Nations	<p>Notification #5: <i>September 8, 2014:</i> Couriered and emailed notification package</p> <p>Notification #7: <i>September 8, 2016:</i> Couriered and emailed project update</p>

Indigenous Community	Engagement
<p>Haudenosaunee Confederacy Chiefs Council via Haudenosaunee Development Institute</p>	<p>Notification #5: <i>September 8, 2014:</i> Couriered and emailed notification package <i>June 4, 2015:</i> TRCA circulated a letter to HDI providing MNRF's guidance letter, a response to the annual payments to HDI for review, and a response to the \$3000 HDI request for review and provided a copy of TRCA's Draft Engagement Guidelines Notification #7: <i>September 8, 2016:</i> Couriered and emailed project update <i>September 8, 2016:</i> Email request from T. General for a meeting to discuss the East Don Trail project. <i>September 19, 2016:</i> K. Brown (TRCA) confirmed meeting date via telephone of September 27, 2016 at HDI. K. Brown sent proposed agenda and requested input. <i>September 26, 2016:</i> T. General sent new agenda including 'Treaty Rights and Other Interests', 'Impairment', 'Consent Justification', and 'Release of TRCA Assessment of Rights and Interests'. <i>September 26, 2016:</i> Meeting cancelled by TRCA, as TRCA believed the meeting was to discuss the East Don Trail and Gibraltar Point Environmental Assessments. However the new agenda did not include the discussion regarding the projects, and TRCA noted that the issues raised by HDI need to be discussed with the Crown present. <i>September 26, 2016:</i> Response from A. Detlor stating that the project will impair and interfere. A. Detlor notes that they do not believe that TRCA has notified them at the mandatory contact points throughout the MCEA process. <i>September 26, 2016:</i> Response from A. Detlor requesting contact information of Crown contacts and a project status update. <i>September 26, 2016:</i> Response from A. Detlor with Municipal Class EA Planning and Design Process flow chart (MCEA Exhibit A.2) attached. HDI notes mandatory public contact points that he believes were missed. September 27, 2017: Email from K. Brown to A. Detlor noting that TRCA would like to reschedule the meeting to discuss specific concerns related to the project and the impact they may have on rights or interests. <i>October 10, 2016:</i> Response from A. Detlor requesting a meeting to discuss the engagement during the environmental assessment and request for file date of the ESR. <i>October 11, 2016:</i> Response from K. Brown acknowledging receipt of email. <i>October 11, 2016:</i> Response from A. Deltor requesting an update. <i>October 17, 2016:</i> Response from K.Brown indicating the TRCA and City of Toronto are working filing the East Don Trail EA with the MOECC in November 2016. <i>October 26, 2016:</i> Response from K. Brown reiterating TRCAs interest in receiving comments directly related to the East Don Trail EA. TRCA has referred HDI's specific concerns noted on the September 27, 2016 meeting agenda to MOECC Environmental Assessment Services and Indigenous Relations Branch as those concerns are not delegated to TRCA.</p>
<p>Hiawatha First Nation</p>	<p>Notification #5: <i>September 8, 2014:</i> Couriered and emailed notification package Notification #7: <i>September 8, 2016:</i> Couriered and emailed project update</p>
<p>Kawartha Nishnawbe First Nation</p>	<p>Notification #5: <i>September 8, 2014:</i> Mailed and emailed notification package Notification #7: <i>September 8, 2016:</i> Mailed and emailed project update</p>

Indigenous Community	Engagement
Metis Nation of Ontario	Notification #5: <i>September 8, 2014:</i> Couriered and emailed notification package Notification #7: <i>September 8, 2016:</i> Couriered and emailed project update
Mississaugas of Alderville First Nation	Notification #5: <i>September 8, 2014:</i> Couriered and emailed notification package Notification #7: <i>September 8, 2016:</i> Couriered and emailed project update
Mississaugas of the New Credit First Nation	Notification #5: <i>September 8, 2014:</i> Couriered and emailed notification package Notification #7: <i>September 8, 2016:</i> Couriered and emailed project update
Mississaugas of Scugog Island First Nation	Notification #5: <i>September 8, 2014:</i> Couriered and emailed notification package Notification #7: <i>September 8, 2016:</i> Couriered and emailed project update
Moose Deer Point First Nation	Notification #5: <i>September 8, 2014:</i> Couriered and emailed notification package Notification #7: <i>September 8, 2016:</i> Couriered and emailed project update
Six Nations of the Grand River	Notification #5: <i>September 8, 2014:</i> Couriered and emailed notification package Notification #7: <i>September 8, 2016:</i> Couriered and emailed project update

7.6 Review Agencies

Identified Review Agencies were notified of the Public Event #3 on April 23, 2014, as part of the Phase 3 project update. Following Public Event #3 and subsequent selection of the preferred design concept, the Review Agencies were emailed a project update on September 22, 2014. The project update outlined the progress to date as well as next steps of the Study. A map of alternative design concepts considered and the selected preferred design concept was included in the update.

Identified Review Agencies were emailed a project update on September 7, 2016, as part of Phase 3 refinements. The project update included refinements of the preferred design concept. The project update outlined the progress to date as well as next steps of the Study. Table 7-7 outlines the responses received and impacts on the project. Key Correspondence can be found in **Appendix A**.

Table 7-7: Summary of consultation with Review Agencies in Phase 3

Stakeholder	Correspondence Received	Impact on Project
Ministry of Natural Resources and Forestry	<p>After project team’s request to assess whether the preferred design concept route has the potential to affect species at risk that may be present within the Study Area, received a letter requesting more detailed information on the proposed project to assess the impacts of the works on species at risk via an Information Gathering Form for threatened and endangered species that may be present in or near the proposed activity – Eastern Meadowlark (<i>threatened</i>), Bank Swallow (<i>threatened</i>), and Butternut (<i>endangered</i>), followed by a request for breeding bird surveys in the project study area.</p> <p>Additional consultation confirmed that MNRF does not have concern with the project impacting breeding birds listed under the Species at Risk Act as long as site preparation works do not occur during sensitive periods (migratory and breeding bird timing windows).</p>	<p>Breeding bird surveys were conducted in Summer 2015. Barn swallow – L4, had a “confirmed” breeding status (highest certainty of breeding activity). A number of “possible” breeding instances for other species were also noted.</p> <p>During detailed design, scheduling of site preparation works will consider the sensitive period for bird migration and breeding.</p>
Transport Canada	<p>Transport Canada noted that an established legal trail will help address existing trespassing issues at the Bala Rail Line. Transport Canada provided safety recommendations and referred the project team to the Railway Safety Act.</p>	<p>Metrolinx/GO Transit (the rail line owners) has been consulted throughout the EA process. Both Metrolinx/GO Transit and Transport Canada will continue to be engaged throughout the detailed design phase of the project and the necessary permits and approvals will be obtained.</p>

7.7 Technical Advisory Committee

Meeting #6

TAC meeting #6 was held on April 29, 2014, at the Toronto City Hall located at 100 Queen Street West and was attended by 11 City of Toronto staff, five TRCA staff and two staff from Aquafor Beech Ltd. The meeting took place from 2:00 pm to 4:00 pm and included a presentation by the project team. Questions were taken and discussions were held throughout the duration of the presentation.

The following topics were discussed during the presentation:

- Update on the project schedule
- Overview of the preferred alternative trail alignment selected at the end of Phase 2
- Overview of Phase 3 alternative design concepts development

- Phase 3 evaluation criteria
- Design concepts and evaluation results for Areas 1 and 3

Design concepts description and evaluation results for Area 2 were circulated to TAC members following TAC Meeting #6.

Members of the TAC were emailed a project update on September 7, 2016, as part of Phase 3 refinements. The project update included refinements of the preferred design concept, progress to date as well as next steps of the Study.

7.8 Key Stakeholders

During Phase 3, all Key Stakeholders were sent a Public Event #3 notice as well as one project update. The Public Event #3 notice was emailed on June 6, 2014. Following the Public Event and finalization of the preferred design concept, the Key Stakeholders were emailed a project update on September 2, 2014. The project update outlined the progress to date and presented the results of the alternative design concepts evaluation as well as next steps of the Study. A map of alternative design concepts considered and the selected preferred design concept was included in the update.

All Key Stakeholders were emailed a project update on August 2, 2016, outlining the project status, additional studies completed, and status of the preferred alternative. Additionally, Key Stakeholders were emailed a project update on August 26, 2016, included refinements of the preferred design concept, progress to date as well as next steps of the Study.

In addition, further correspondence and meetings were held with a number of Key Stakeholders over the course of Phase 3. Table 7-8 provides a summary of the discussions held in Phase 3 with each Key Stakeholder involved. Key correspondence can be found in **Appendix A**.

Table 7-8: Summary of consultation with Key Stakeholders in Phase 3.

Stakeholder	Summary Discussions
Metrolinx	<p><i>Email Correspondence</i></p> <ul style="list-style-type: none"> • Discussions regarding geotechnical investigation on Metrolinx property to support design of proposed rail line crossings • Discussion regarding proposed level crossings in Segments E and H, Metrolinx indicated new railway crossings that are pursued should be either above or below grade. The project team indicated the technical challenges associated with crossing above or below grade at both proposed level crossing locations. As a result bridge crossings over the rail line were added as design concept options. Tunnel crossings were explored at these locations but were deemed not feasible due to length and safety concerns. • Initiation of a Safety Assessment of the two proposed level crossings of Metrolinx rail line • Metrolinx indicated support in building the tunnels to existing conditions • Metrolinx indicated support of routing a portion of the trail (in Area 2) on Metrolinx right-of-way that extends beyond their 30 m wide rail corridor. Metrolinx Realty and Legal will need to be engaged at a future date (during detailed design). • Metrolinx indicated it is their policy direction to not allow any new at-grade crossings of the rail line. As a result, the preliminary preferred crossing options for Segments E and H selected based on the evaluation were refined, from level to bridge crossings. <p><i>Meeting June 10, 2014</i></p> <ul style="list-style-type: none"> • Project update • Discussions on proposed rail line crossings, crossing agreements and property requirements(use of Metrolinx right-of-way) • Informed Metrolinx of upcoming field work including Heritage Assessment <p><i>Meeting September 9, 2014</i></p> <ul style="list-style-type: none"> • Project update • Discussions on tunnel crossings design requirements and constraints, geotechnical investigation, fencing from the rail line, and crossing agreements <p><i>Meeting January 12, 2016</i></p> <ul style="list-style-type: none"> • Project update • Discussions on proposed level crossings and alternative methods of crossing the rail line (including bridges and tunnels) and the challenges associated with each crossing type.
Enbridge	<p><i>Email Correspondence</i></p> <ul style="list-style-type: none"> • After requesting information on the exact location of natural gas pipeline located within the Gatineau Hydro Electric Power Corridor, TRCA was informed that the exact location of the pipeline could not be disclosed. To ensure there is no conflict, TRCA was asked to submit proposed trail design to Enbridge for review and approval <p><i>Email Correspondence</i></p> <ul style="list-style-type: none"> • TRCA submitted revised preferred design concept and requested additional information on pipeline crossing guidelines and information on their detailed design review processes.

7.9 Local Politicians

The four affected ward councillors (as identified in Section 3.7) were engaged throughout Phase 3 mainly through email correspondence.

All councillors were issued a formal invitation and event flyer to Public Event #3 on June 6, 2014. Following the Public Event the councillors were issued a link to all the panels, presentation, and meeting minutes along with the summary report from Public Event #3 and a Phase 3 project update on September 16, 2014.

In addition, one meeting was held with Councillor Mary Fragedakis prior to Public Event #3 on June 5, 2014, to discuss the upcoming event, alternative design concepts and public engagement.

All ward councillors were emailed a project update on September 7, 2016, as part of Phase 3. The project update included refinements of the preferred design concept, progress to date as well as next steps of the Study.

In addition, meetings were held with Councillor Janet Davis on September 20, 2016, Councillor Mark Fragedakis on September 28, 2016, and Councillor John Burnside on October 4, 2016. Councillor Minnan Wong's office also contacted the study team in September 2016 to discuss the recent update.

See **Appendix A** for key correspondence with local Politicians.

8.0 PREFERRED ALTERNATIVE DESCRIPTION

The preferred alignment is a combination of the 12 preferred design concepts joined with the preferred segments in which only one viable option was available, as outlined in Section 7.1. The preferred multi-use trail alignment connects the Lower Don Trail at the convergence of the East Don River and Taylor Massey Creek upstream through the East Don corridor to the existing East Don Trail. The resulting alignment provides a continuous recreational and transportation corridor through various landscapes such as deciduous forests and open meadows, across river channels, and through deep valley settings.

This section provides a description of the preferred multi-use trail alignment and associated structures, as follows:

- General route description
- Trail design parameters
- Watercourse crossings
- Rail line crossings
- Eglinton underpass

In addition, parameters and consideration necessary to construct the East Don Trail are described in this section. These parameters and considerations will guide detailed design of the trail and include:

- Aesthetics and design elements
- Drainage and stormwater management
- Infrastructure/utilities and Key Stakeholders considerations
- Property requirements
- Construction phasing, staging and access
- Construction monitoring considerations
- Preliminary cost estimates

8.1 General Route

The preferred trail alignment is approximately 4.8 km long, and includes 10 watercourse crossings (bridges) over the East Don River and Taylor Massey Creek, two bridges over tributaries of the East Don River, five crossings of the Metrolinx rail line, and extends through properties owned by the City of Toronto, TRCA, and Hydro One (Infrastructure Ontario).

The preferred trail alignment is illustrated in Figure 8-1, with key elements such as bridges, tunnels and trail connections noted. The bridges and rail line crossings have been numbered from south to north as the implementation of the trail is proposed to be phased in a similar manner (refer to Section 8.10)

A summary of key characteristics of the trail alignment has been broken down into segments (for clarity purposes) and is provided below (Figure 8-2 to Figure 8-4). Representative pictures of key areas along the trail can be found in **Appendix H**.

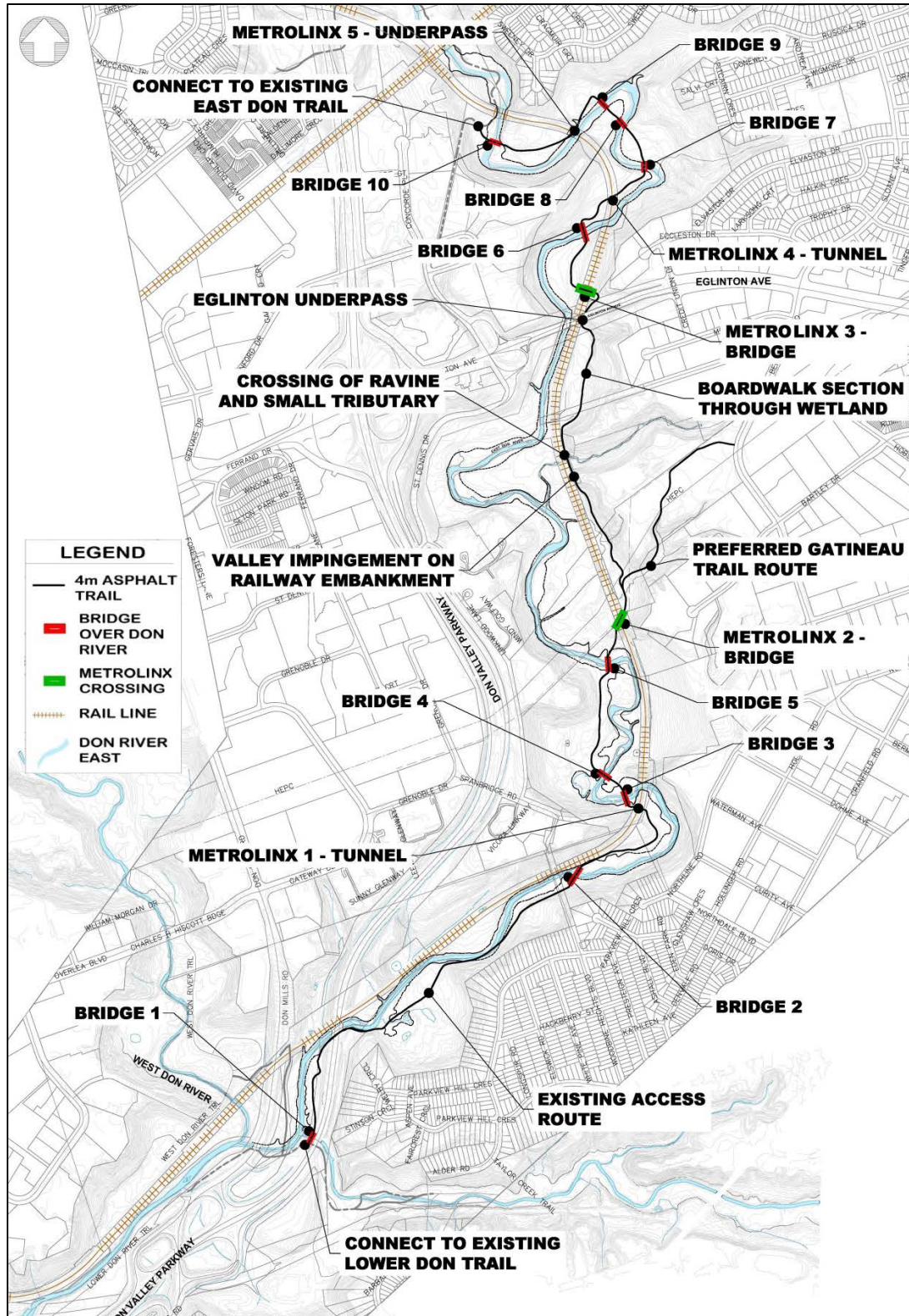


Figure 8-1: Preferred alignment
 Source: Aquafor Beech Limited 2014

Bridge 10 to Eglinton Underpass

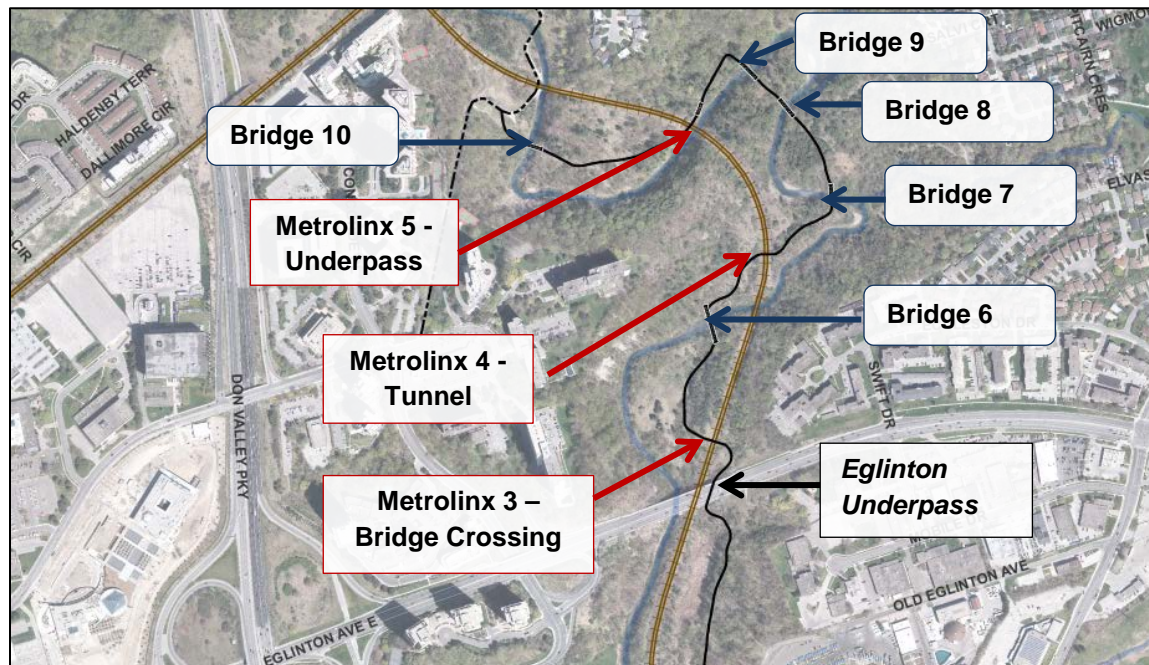


Figure 8-2: Preferred alignment between Bridge 10 and Metrolinx 3 (Bridge crossing)

Source: TRCA 2014

- The proposed trail begins at Bridge 10, which is the northernmost crossing of the trail and provides the connection to the existing East Don Trail and access to Wynford Drive and Wynford Heights Crescent.
- Along the trail segment between Bridge 10 and the rail line underpass (Metrolinx 5: Underpass), the trail extends along a relatively low open flood plain and active slope contacts of the west valley are observed.
- Between Metrolinx 5: Underpass and Bridge 9, the trail runs adjacent to the river, through the upper end of the Wigmore Park Ravine, crossing a small drainage feature.
- The trail then continues through Wigmore Park Ravine, where the East Don River actively meanders through deciduous and mixed forests and extends south through elevated canopy cover crossing Bridges 8 and 7.
- South of Bridge 7 the trail moderately inclines as it travels towards the rail line underpass (Metrolinx 4: Tunnel), and then moderately declines towards Bridge 6.
- The trail then extends through mid-level floodplain running along the perimeter of open grassland and wooded area towards the bridge over the rail line (Metrolinx 3: Bridge Crossing), which will require safety gates, lights, and crossing predictors (this and other rail line crossings are subject to approval by the rail line owner Metrolinx/GO Transit).

- The trail leaves Wigmore Park Ravine, continues south and traverses a steep embankment under the Eglinton Avenue East road bridge via an elevated structure (Eglinton Underpass).

Eglinton Underpass to Metrolinx 2 (Bridge Crossing)

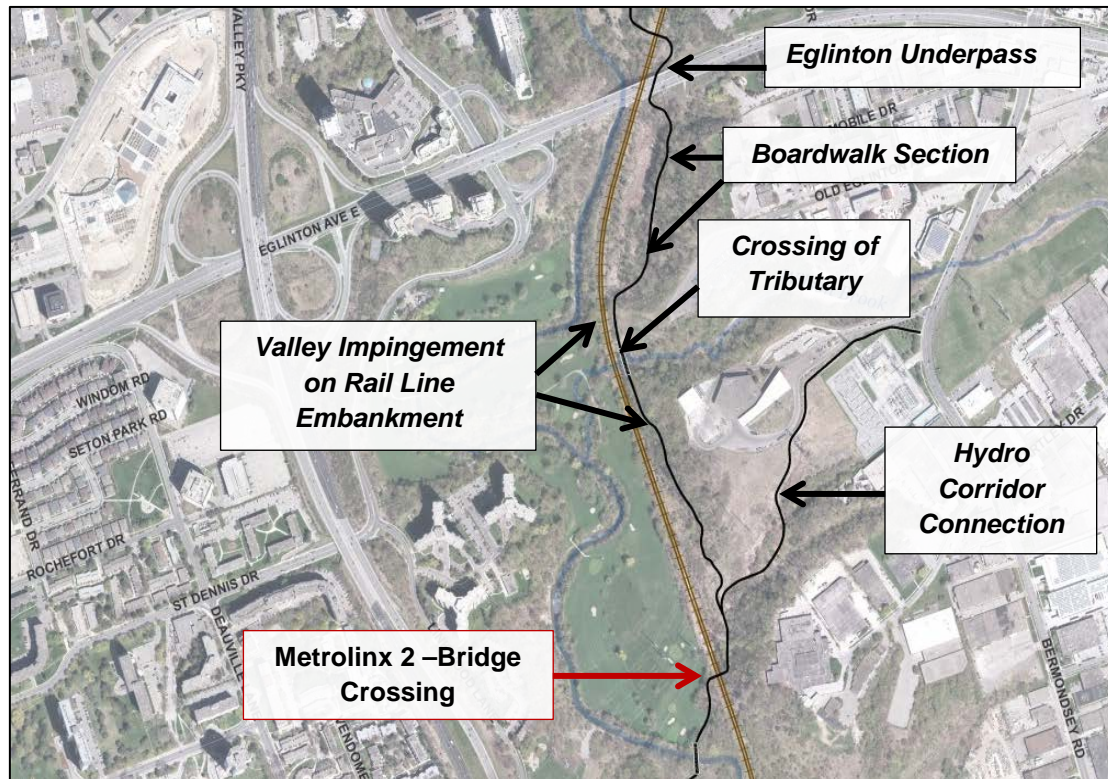


Figure 8-3: Preferred alignment between Eglinton Underpass to Metrolinx 2 (bridge crossing)

Source: TRCA 2014

- South of the Eglinton Underpass, the trail lowers in elevation and travels along a segment between a wetland and mature deciduous forest. Within this section, the trail will have an asphalt surface and include a boardwalk section adjacent to the wetland to allow for proper drainage.
- Following the wetland section, the trail inclines and crosses Wilson Brook, a tributary of the East Don Trail, in an area where valley slope impinges on the rail line right-of-way. The trail maintains accessibility requirements in the impingement area as it climbs the slope, where it also provides an elevated vantage point over the rail line and Flemington Park Golf Club.
- The trail then extends through a deciduous forest followed by an open grassy area (within the Hydro Corridor) traveling between the east valley slope and rail line, connecting to the Hydro Corridor Connection and continuing south toward

the bridge crossing of the rail line (Metrolinx 2: Bridge Crossing). As stated above this and other rail line crossings are subject to approval by the rail line owner Metrolinx/GO Transit.

Hydro Corridor Connection - Metrolinx 2 (Bridge Crossing) to Bermondsey Road

- The trail enters the hydro corridor along the existing access route and continues through the corridor to connect with Bermondsey Road. The access route is gently sloped with one steep portion leading out of the valley, while the east section along the top lands is generally flat. The top lands are dominated by grasses and maintained mowed areas, and contain hydro towers and a generating station.

Metrolinx 2 (Bridge Crossing) to Bridge 1

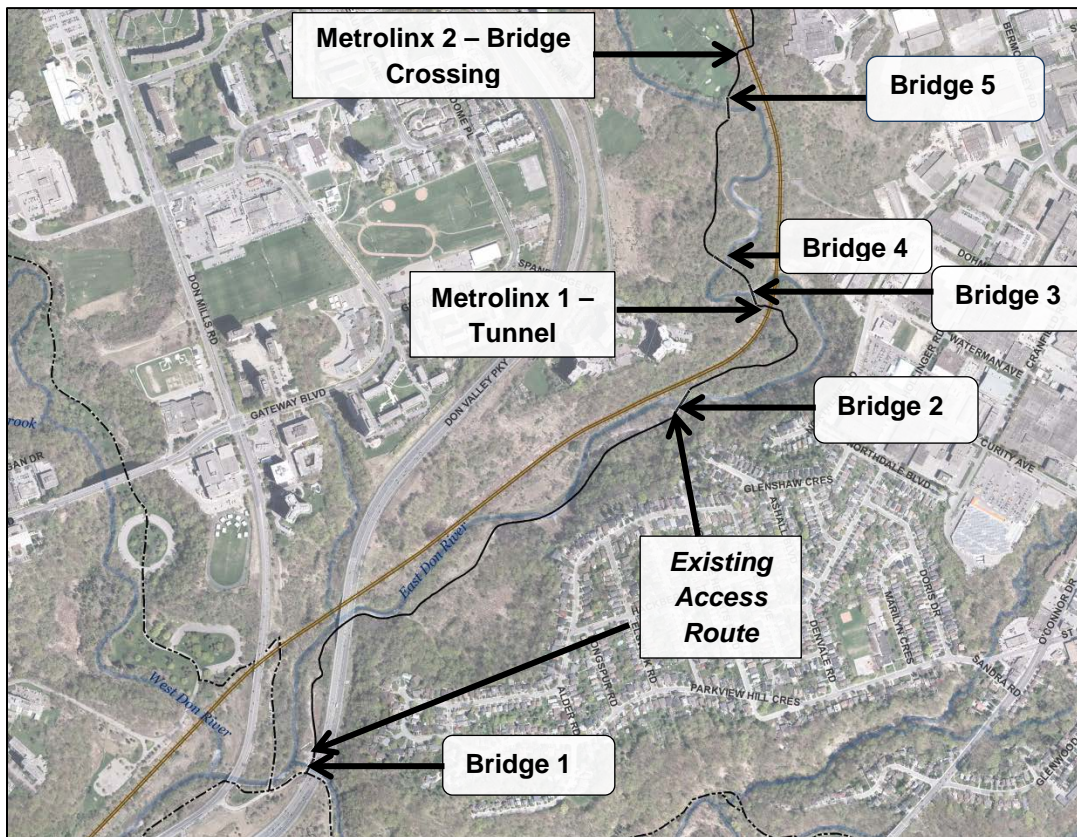


Figure 8-4: Preferred alignment between Metrolinx 2 (bridge crossing) to Bridge 1

Source: TRCA 2014

- This trail continues from Metrolinx 2, which is a bridge crossing over the rail line.
- Once on the west side of the rail line, the trail extends along the south limit of the Flemington Park Golf Club, with grades becoming less steep as it travels towards Bridge 5, where it crosses the river. Now on the west side of the river,

the trail continues along the toe of the valley slope for approximately 300 m to Bridge 4.

- The trail crosses the East Don River at Bridge 4 and continues through the center of the wooded valley floor and across the inside of a large river bend toward Bridge 3.
- After crossing Bridge 3, the trail travels underneath the rail line via another tunnel (Metrolinx 1: Tunnel) and then travels south through a wooded floodplain towards Bridge 2.
- After crossing the East Don River at Bridge 2, the trail connects to the existing Toronto Water access route and travels south along this route until it reaches Bridge 1. The existing access route will be converted into an asphalt pathway consistent with the rest of the trail.
- At this point, the proposed trail terminates at its southern limit, where it connects to the existing trail system that includes the Lower Don Trail, Taylor Massey Creek Trail and parking area at Don Mills Road and DVP.

8.2 Trail Design

An asphalt multi-use trail, approximately 3.6 to 4 m wide, is recommended by the City to accommodate typical two-way pedestrian and non-motorized uses (bike, rollerblading, etc.) as well as occasional City of Toronto maintenance or EMS vehicle access while maintaining a reduced footprint through the natural environment.

The trail design will follow the Toronto Multi-Use Trail Design Guidelines (2014) where feasible, adhering to the following guiding principles:

- Consistency and Excellence – meet and exceed best practices and use of evolving technologies
- Safety, Security, and Comfort – primary consideration for all trail users
- Accessibility – universal design for all people and abilities
- Sustainability – sustainable building and maintenance technologies
- Environmental Protection – minimize impacts to the adjacent trail corridor

Specific to this trail, major design criteria taken into consideration include:

- Path width between 3.6 and 4.2 m as high levels of cyclists, joggers and pedestrians as well as other uses are expected
- Centerline to delineate trail traffic separation between opposite directions of travel will be considered
- Avoidance of steep grades to the maximum extent possible. Maximum grade recommended is 5%, with sustained grades limited to 2-3%. Widened path along steeper sections for passing, maneuverability, resting, etc.

- 0.6 to 1.0 m lateral clearance beyond edge of trail clear from obstructions, with fall protection for trails adjacent to slopes or continuous obstructions
- 20 km / hour cycling speed used to determine a minimum turning radius of 10 m, with a preferred radius of 20 m to account for potential increased speeds
- Preferred vertical clearances of 3 m where crossing through a feature such as a tunnel

Typical trail configuration, slopes or drop-offs scenarios and slope mitigation techniques most relevant to the East Don Trail through a ravine setting are illustrated in Figure 8-5, Figure 8-6 and Figure 8-7, respectively.

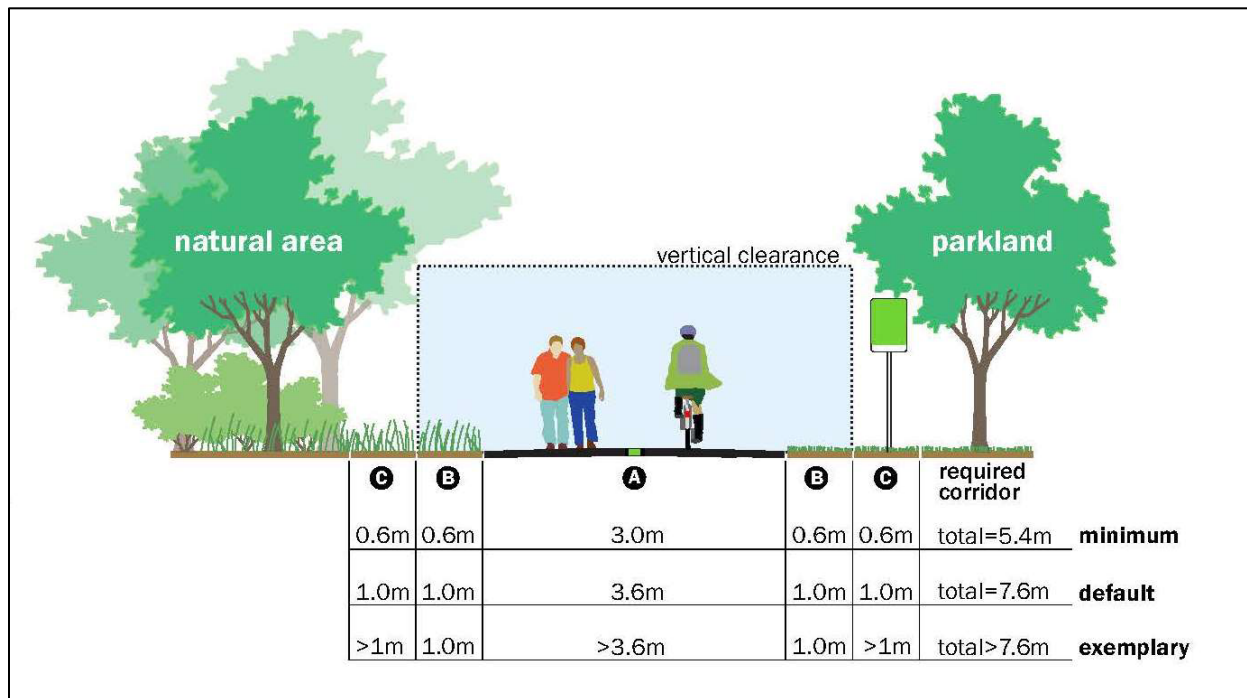


Figure 8-5: Example of a multi-use trail configuration, where A is multi-use trail surface, B is lateral clearance and C is furnishing zone

Source: City of Toronto 2014

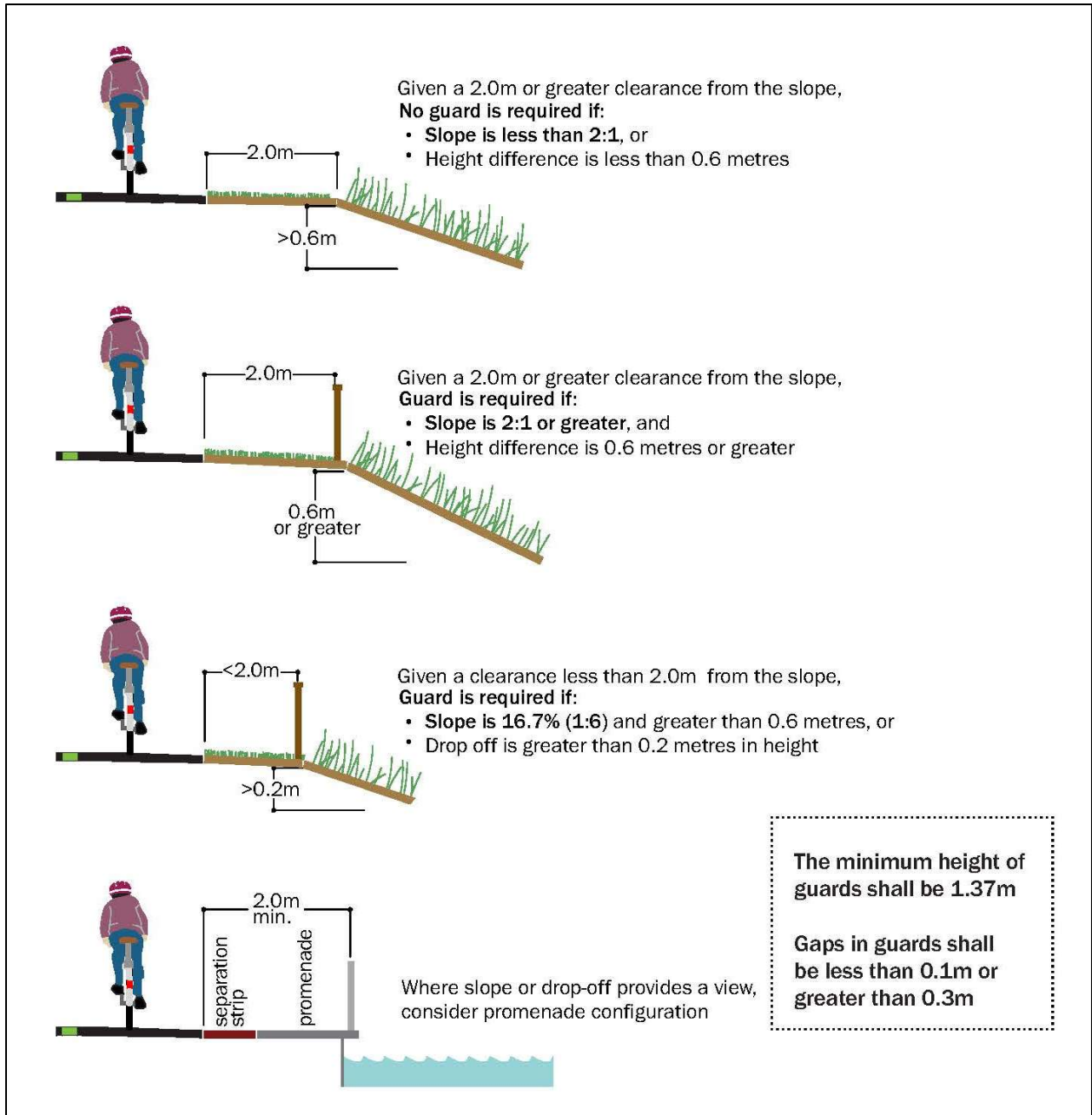


Figure 8-6: Multi-use trail: slopes or drop-offs parallel to trail

Source: City of Toronto 2014

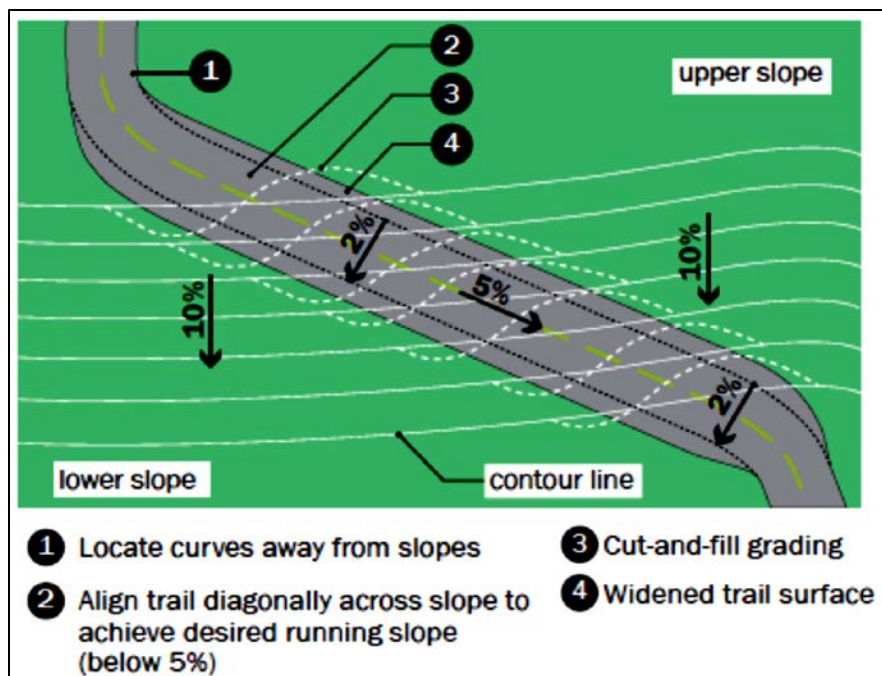


Figure 8-7: Preferred design for trails on slopes

Source: City of Toronto 2014

As mentioned above, asphalt has been selected as the trail surface for the proposed East Don Trail. Asphalt is a durable material for trail surfaces and can be placed on slopes and curves, it remains stable where native soils or compacted aggregate trails may erode. This surface is intended to support a wide variety of non-motorized uses and recreational modes, including cycling, in-line skating, walking, running, as well as wheelchair users and people with strollers.

Typical trail construction is illustrated in Figure 8-8. Asphalt surface would be overlaying an aggregate base and compacted native subgrade. In order to provide a stable subgrade while maintaining a relatively consistent gradient, cutting and filling may be required, along with a biaxial geogrid layer for additional stability below the crushed aggregate.

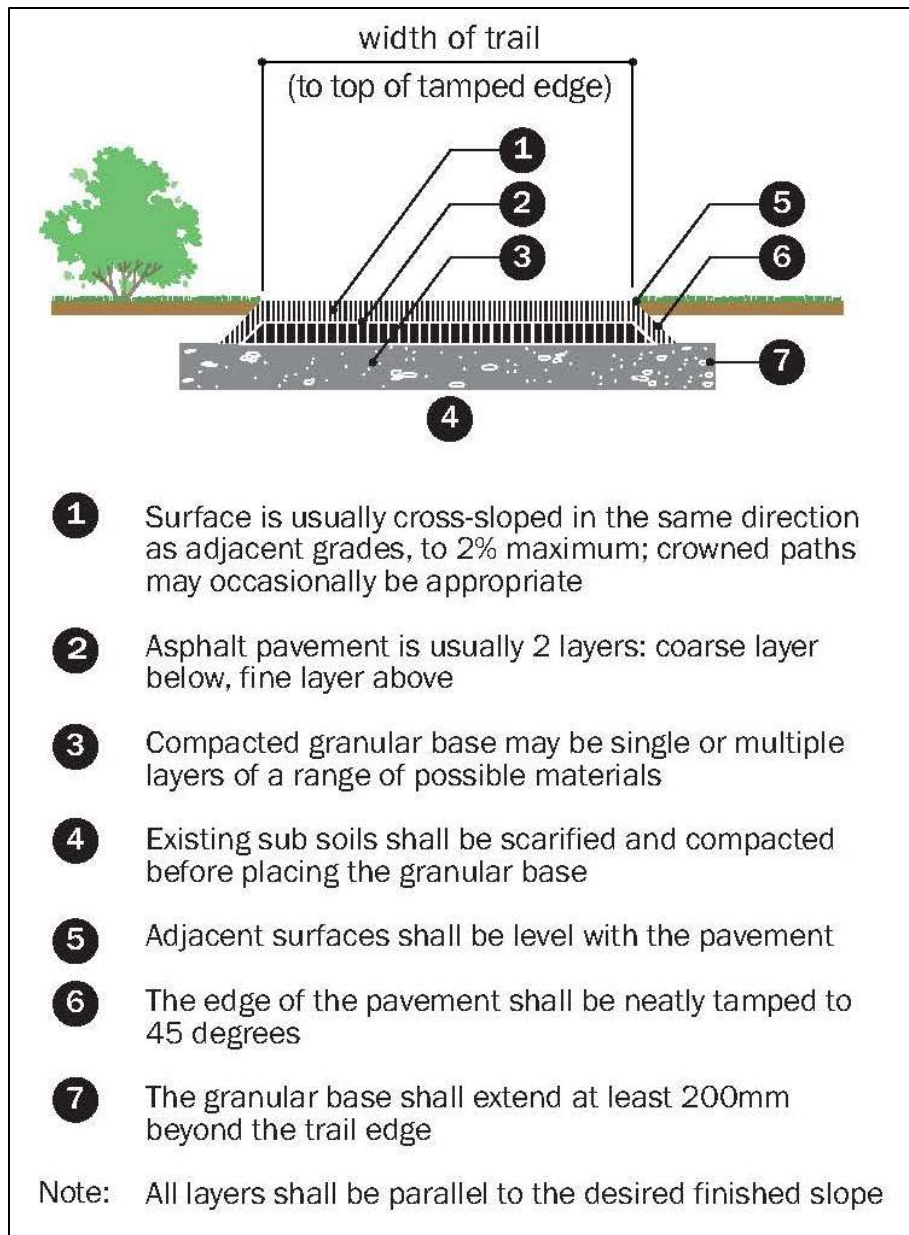


Figure 8-8: Typical trail construction

Source: City of Toronto 2014

8.3 Watercourse Crossings

The preferred alignment includes nine East Don River, one Taylor Massey Creek and two drainage tributaries crossings (Figure 8-1). The Taylor Massey Creek bridge design and implementation will be carried out by Toronto Water in consultation with the East Don Trail Project team.

Although multi-use trail crossings do not have the same potential to impact flood levels as major road crossings of a watercourse, a number of criteria must be met to ensure

that the required longevity of the crossing structure is not inhibited from a geomorphic process perspective. In order to achieve that, watercourse crossings would be placed perpendicular to riffle sections along straight and stable sections, where possible, as opposed to on a meander (bend) of the river. Bends generally experience higher rates of migration and in turn, would necessitate longer bridge spans and greater long-term maintenance. Also, it is generally preferred to have a bridge placed perpendicular to flow under both low flow and high flow conditions to ensure overall stability of the structure.

Specific sizing of the crossings will be completed in the detailed design project phase. Typically, a minimal allowance defined as a 25 year erosion threshold is applied to bridge abutments beyond the channel top of bank to allow for natural creek tendencies such as erosion, migration or enlargement. Also, consideration will be given to the impact of the structure on hydraulic conditions within the channel during a range of flow events. For example, if a crossing causes a constriction in flow conditions, there is a potential for scour and destabilization of the channel. In addition, consideration to sufficient deck height will prevent blockages caused by debris and ice jams. Bridge width will be determined with the function of a multi-use trail in mind, aiming for a clearway (i.e., travel area) width of 3.5 m.

A typical design detail of a watercourse crossing is shown in Figure 8-9, representing a pre-fabricated, weathering (COR-TEN™) steel structure, which provides an aesthetic favorable to natural settings and is capable of withstanding rigors of the valley's seasons.

As load requirements include passage of emergency and maintenance vehicles, box trusses would likely be required for stability purposes as well as structural integrity.

With regard to decking, proposed bridges may have weathering steel planks similar to bridge truss material, or galvanized steel planks. Alternatively, concrete can be used, though the truss must be designed to account for the additional mass.

With regard to construction, bridges such as the one in shown in Figure 8-9 are generally delivered to the site in 10-12 m segments, and connected and installed on site. This enables pre-fabrication and ease of delivery on both City streets as well as through wooded areas.

A photographic representation of an existing bridge over the Humber River similar in size and structure to the proposed East Don Trail bridges is provided in Figure 8-10. Further design and implementation considerations may include the following:

- The degree and extent of disturbance to the surrounding environment as a result of the structures delivery, types of equipment required for installation and crossing of the East Don River and Metrolinx rail line

- Bridges must allow for watercourse navigability (passage by recreational users such as canoers and kayakers)
- Ensure an anti-slip bridge surface, to be determined by final material type

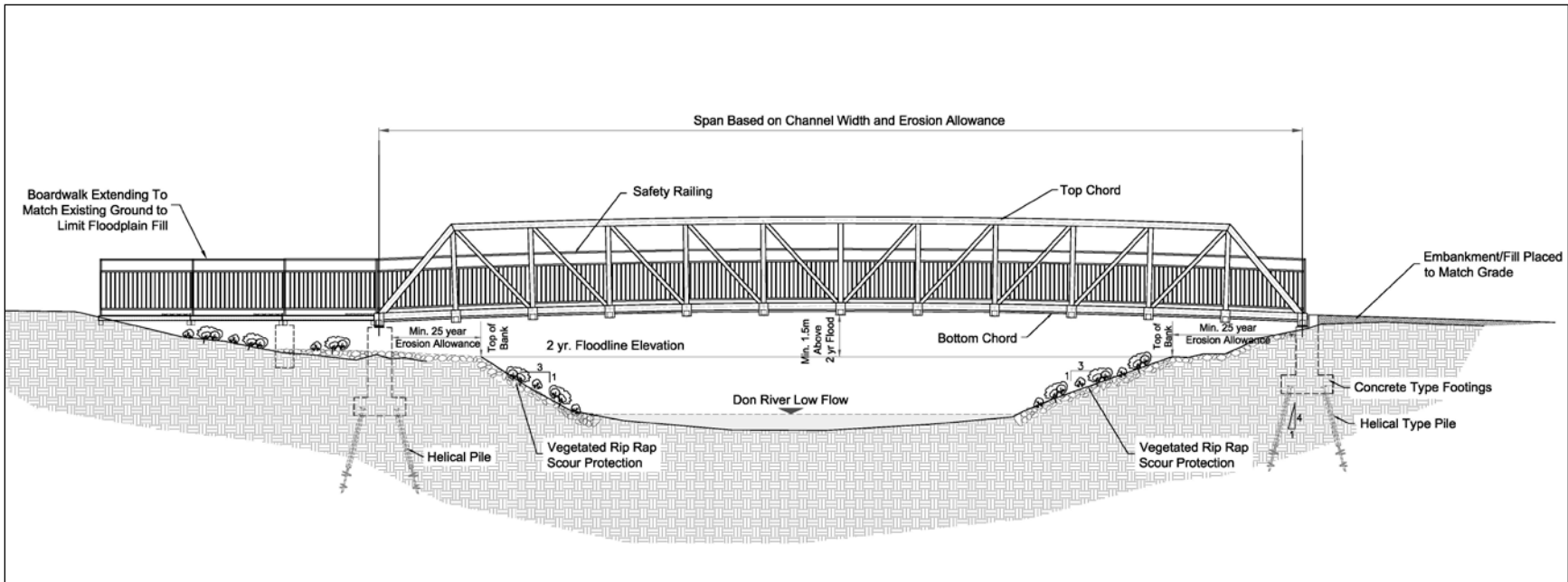


Figure 8-9: Representative bridge over East Don River - detail

Source: Aquafor Beech Limited 2014



Figure 8-10: Example of weathering steel (COR-TEN) prefabricated bridge along the Humber River

Source: Aquafor Beech Limited 2014

8.4 Rail line Crossings

A total of five crossings of the Metrolinx rail line are required to facilitate the preferred alignment. Metrolinx's preferred method of crossing a rail line is a tunnel, a method providing the greatest separation between trail users and active rail line.

Other rail line crossings of the trail, as dictated by physical constraints, include two bridge crossings and one underpass where the trail extends under an existing bridge alongside the Don River. All rail line crossings are subject to approval by the rail line owner Metrolinx/GO Transit. Further discussion of each crossing type follows.

8.4.1 Rail Line Tunnels

At two of the rail line crossings - Metrolinx 1 and 4 (Figure 8-11, Figure 8-12) - constructing a tunnel through an elevated embankment is feasible.

Both tunnels will be designed and built based on current conditions (i.e., current rail line right-of-way and embankment dimensions). Where feasible, tunnel design is to meet all applicable standards, including those defined by Transport Canada (specifically, Section 11 of the Railway Safety Act) as well as those of the rail line owner Metrolinx.

To allow more natural light into the tunnels increases users safety and limits construction time and impact on the surrounding area, it is recommended that the tunnel lengths be minimized. This may lead to the need for some additional grading or short retaining walls at the tunnel entrances.

The tunnel dimensions and construction methods (stated in the following: Sections 8.4.1.1 and 8.4.1.2, respectively) proposed at this time and will require the approval by Metrolinx.

8.4.1.1 Tunnel Dimensions

The Toronto Multi-Use Trail Design Guidelines (2014) outlines preferred and minimum dimensions for multi-use trails including tunnel vertical and horizontal clearances. The guidelines indicate a preferred vertical clearance of 3 m with a minimum acceptable clearance of 2.5m. The horizontal clearance dimensions include the trail width and lateral clearance on each side. The guidelines outline a preferred horizontal clearance of 5.6 m (3.6 m trail and 1 m lateral clearance on each side) and a minimum clearance of 4.2 m (3 m trail and 0.6 m lateral clearance each side).

In accordance with the GO Transit Engineering Design Manual (2015), the minimum cover for pedestrian tunnels from the top of the tunnel to the underside of the rail is 0.508 m. The preferred cover, as expressed by Metrolinx representatives, is 0.75 m.

Important variables to consider in the design of both tunnels are tunnel site elevation and distance from the watercourse (East Don River), as they impact trail usage and trail infrastructure maintenance needs. Whenever tunnels flood there is a chance of

sediment being washed into the tunnels and left inside when the water recedes. The sediment could affect the usability of the tunnel and would also require maintenance to remove it from the tunnels.

The south tunnel site is close to the watercourse and will be at a relatively low elevation. Achieving the preferred cover (0.75 m) and the preferred interior dimensions (3 m vertical, 5.6 m horizontal) would lead to more frequent flooding of the tunnel (equal to approximately a 2 year return period). At the same time, trail path flooding would approximately be at the 5 year return period. Designing the tunnel using the minimum clearance values (2.5 m vertical, 4.2 m horizontal) would not prevent flooding, but the frequency would be reduced to the return period of approximately 3 years.

Based on the above considerations and the challenging existing physical conditions, an interior width of 4 m, an interior vertical clearance of 2.5 m and a cover of 0.508 m from the base of the rail to the top of the tunnel will likely be used for the south tunnel (Figure 8-11). The south tunnel will be approximately 15.8 m long.

The north tunnel site is well above flooding elevations for the 5 year flood return period. Therefore, the preferred dimensions (3 m vertical, 5.6 m horizontal) can be incorporated into the design at this location (refer to Figure 8-12). The north tunnel length will be approximately 20.1 m long.

Both tunnels will be designed to be perpendicular to the rail line and will most likely be constructed using cut-and-cover techniques.

It is currently assumed that the tunnels will require shallow foundations; to confirm this, a geotechnical investigation will be conducted prior to tunnel detailed design.

8.4.1.2 Tunnel Constructability

It is proposed that the tunnels be constructed during weekends using precast concrete elements. Discussions with Metrolinx are necessary and will be undertaken to develop an optimal work schedule and ensure minimal impact on the local train traffic schedule.

Once the work is approved and schedule is developed, construction may proceed in the following order:

1. Remove section of track affected by the excavation (performed by a specialty contractor)
2. Excavate for tunnel placement
3. Prepare base of excavation and place a compact granular bedding as required
4. Place precast units with waterproofing membrane at joints
5. Backfill tunnels
6. Place ballast and reinstate ties and track (performed by a specialty contractor)

Access to tunnel sites may be facilitated via the trail path, which is planned to be constructed prior to tunnel construction.

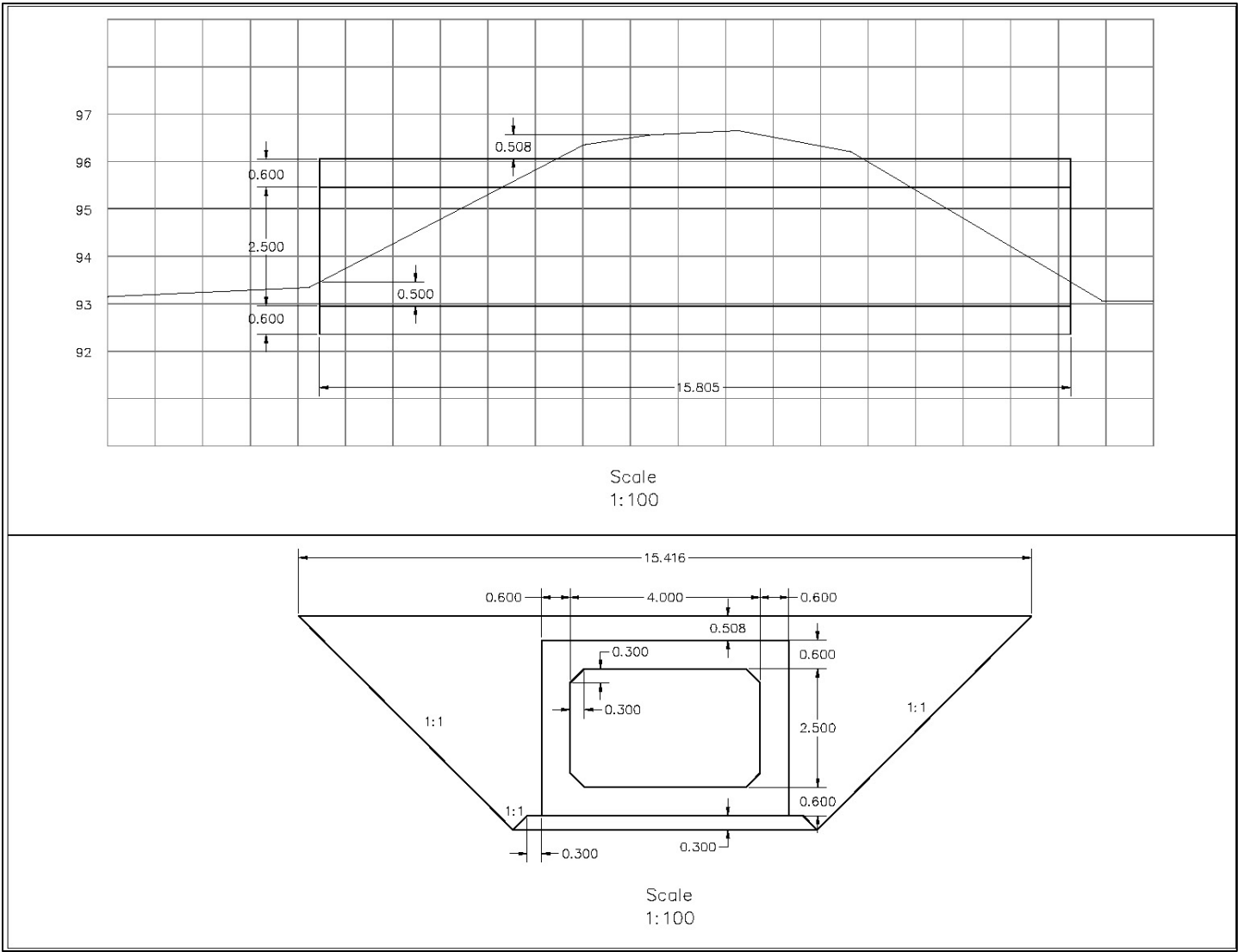


Figure 8-11: Proposed Metrolinx 1 – South Tunnel arrangement (Draft)

Source: Parsons Corporation 2014

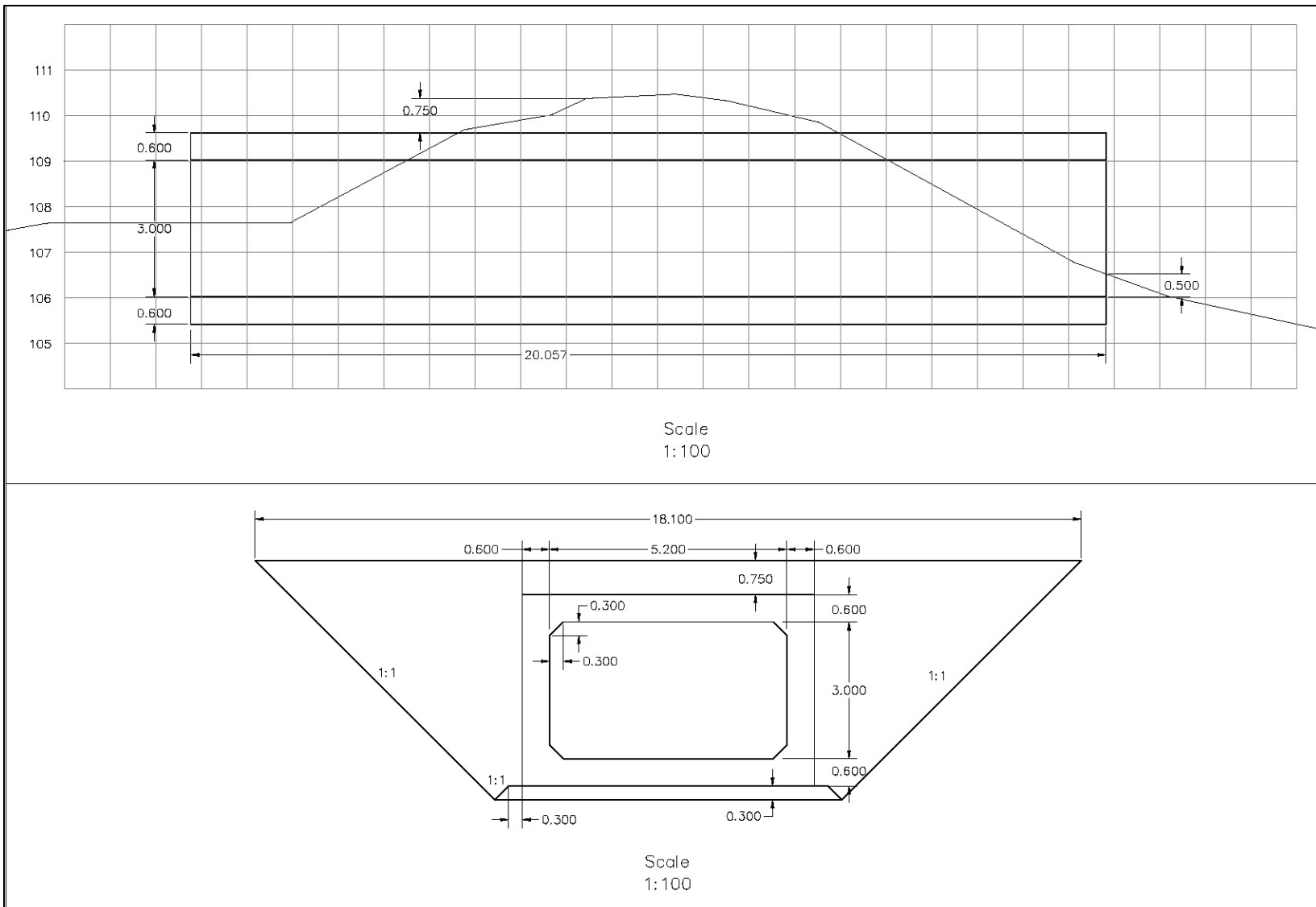


Figure 8-12: Proposed Metrolinx 4 – North Tunnel arrangement (Draft)

Source: Parsons Corporation 2014

8.4.2 Rail Line Underpass

At the northernmost rail line crossing (Metrolinx 5), an existing rail line infrastructure bridge spans the East Don valley with sufficient room for the trail to extend underneath. Appropriate protection will be applied to the East Don River channel banks to minimize the risk of erosion, and overhead protection to minimize the risk of falling materials from above. An example of such crossing is illustrated in Figure 8-13.



Figure 8-13: Rail line underpass along the existing East Don Trail

Source: Aquafor Beech Limited 2014

8.4.3 Rail Line Bridge Crossings

At the proposed Metrolinx crossing 2 and Metrolinx crossing 3 there is not enough separation in grade between the rail line and adjacent lands to tunnel under the track. As a result, the trail would be required to cross over the rail line. The highest evaluated crossing options selected as the preliminary preferred method were level crossings (section link); however, Metrolinx's policy direction is to not permit any new level crossings of active rail corridors and therefore could not be selected as the preferred crossing options. The preferred crossing options as defined in this EA for both Metrolinx 2 and 3 are bridge crossings.

8.4.3.1 Bridge Crossings

Both bridges will be designed and built to span the Metrolinx right-of-way. The approximate spans of Metrolinx crossing 2 and 3 are 45 m and 60 m respectively; the specific sizing of the crossings will be completed in the detailed design project phase. Both bridges will aim to meet a minimum of 7.4 m vertical clearance, the distance from the rail line to the bottom of the bridge structure. Bridge width will be determined with the function of a multi-use trail in mind, aiming for a clearway width of at least 3.5 m

Further design and implementation considerations may include the following:

- Bridge surface material type to consider an anti-slip surface
- Railing height and design to consider safety of trail users and rail line operations
- Bridge abutments and bridge load requirements.

Where feasible, bridge design is to meet all applicable standards, including those defined by Transport Canada (specifically, Section 11 of the Railway Safety Act) as well as those of the rail line owner Metrolinx. Detailed design of both bridges will be done in consultation with Metrolinx.

8.4.3.2 Bridge Transitions Areas

To transition trail users from the trail at ground level to the bridges over the rail line (at approximately 7.4 m above the rail line), three design approaches will be explored: multi-use trail switchbacks, sloped walkways and raised ramp structures.

At Metrolinx Crossing 2 the east transition area will likely utilize the existing topography to create a switchback trail transitioning users in a zig-zag pattern or a sloped walkway, while the west transition area will likely be facilitated by a raised ramp structure. At Metrolinx Crossing 3 the east portion of the bridge abuts a hill, the transition area will likely be facilitated via a sloped walkway, while the west transition area will likely be facilitated via a raised ramp structure (Figure 3).

The specific dimensions for the raised access ramps will be determined during the detailed design project phase and will consider: ramp approach grades, number and location of landings, handrails, guards, length, width, and turn radius. The design of these transition areas will work to meet the Ontario Accessibility Standards for the Design of Public Spaces Guidelines (2013), and City of Toronto Accessibility Design Guidelines (2016, draft).



Figure 8-14: Example of Bridge over Rail Line with Ramps

Source: Aquafor Beech Limited 2014

8.5 Eglinton Underpass

One of the City roadways the trail intersects is Eglinton Avenue, which spans the valley with two rows of concrete piers for interim support. The East Don River and the Metrolinx rail line extend between the two rows of piers.

Due to space restrictions, the trail cannot be routed between the two pier rows, and instead would be required to extend over the east embankment, which is over-steepened and lined with concrete debris and rubble. A photo representing the slope and opening is provided in Figure 8-15, along with a cross-section detail defining the placement and type of elevated structure intended to facilitate the span.

The second East Don Trail underpass currently exists under the Don Valley Parkway as part of the Toronto Water maintenance access route.

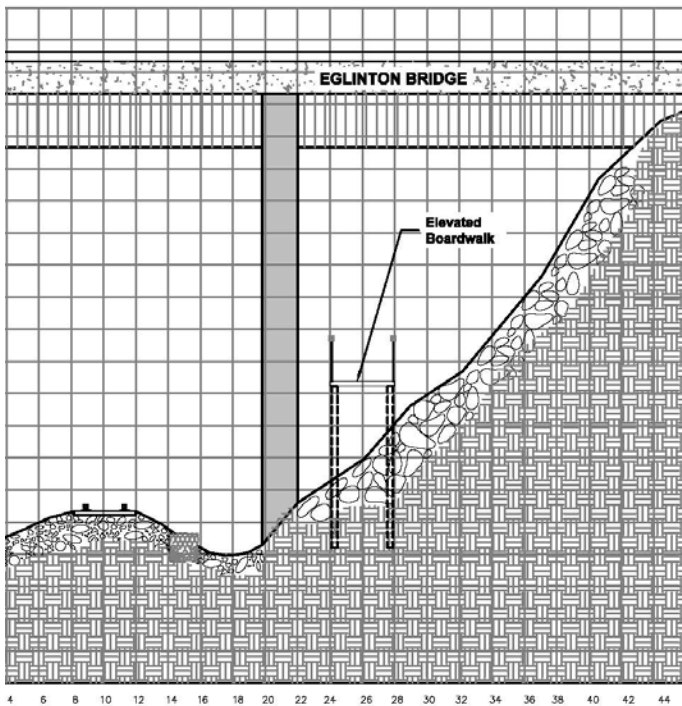


Figure 8-15: Existing conditions under Eglinton Avenue bridge (top) and typical cross-section of boardwalk over embankment (bottom)

Source: Aquafor Beech Limited 2014

8.6 Aesthetics and Design Elements

8.6.1 Overview

Improvements to the landscape within the East Don corridor are proposed to be implemented as an integral component of the trail implementation. Where possible, landscape improvements will be designed to achieve a number of parallel objectives, including the following:

- Mitigation of impacts on vegetation communities anticipated to occur as a consequence of trail construction
- Restoration of existing degraded landscapes within the valley in the vicinity of the alignment of the proposed trail
- Enhancement of user comfort and experience
- Enhancement of user safety and security
- Integration of interpretive narratives
- Establishment of a unique and recognizable aesthetic signature that binds components of the trail together

In response, the design of landscape elements along the trail will need to be multi-dimensional and rooted in an understanding of the specific opportunities and challenges to be addressed along the length of the East Don Trail. During detailed design, the opportunities and challenges will be identified and serve as the catalyst for the development of specific landscape design recommendations.

Key concepts that will be considered during the detailed design stage include:

- Materials and design
- Additional amenities
- Public safety and accessibility
- Interpretive narratives

8.6.2 Materials and Design

The proposed materials to be utilized in the construction of the features and amenities along the trail include the following:

- Naturally weathering steel (COR-TEN™)
- Concrete
- Natural stone

These materials are durable, strong and vandalism resistant. They are also evocative of the industrial heritage of the Don River, including the mills, brickworks, and manufacturing facilities that were once located in the valley. The railway is also a constant presence within the valley and along the route of the proposed trail.

The predominant material for construction of the trail facilities and amenities is proposed to be COR-TEN™ steel. COR-TEN™ steel is a weathering steel that forms a protective layer on its surface if exposed to the natural conditions for several years. If left uncoated, an outer layer with a rust-like appearance forms that protects the steel from further corrosion. The proposed bridges will likely be COR-TEN™ steel truss bridges due to the high strength, longer material life cycle and ease of maintenance (Figure 8-10).

8.6.3 Amenities

A suite of amenities is proposed along the length of the trail to enhance user comfort and experience. Trail nodes will be strategically located to afford trail users to stop, rest, and enjoy the natural attributes and beauty of the valley. Trail nodes will be located offset from the side of the main trail in order to avoid potential conflicts with passing traffic. Trail nodes may be fitted with benches and interpretive and directional signage.

Amenities at major access points into the trail will be addressed in detailed design but may include: entrance signage, benches, bicycle racks, orientation signage and other elements to enhance accessibility and user experience.

Natural surface trails may be formalized in some locations to allow pedestrians to deviate from the main trail and become more immersed in the valley's natural environment. The opportunity for these trails to meander along the river and include informal seating will be examined in the detailed design stage (refer to Section 9.1 for more information). These amenities will provide opportunities for trail users to rest and appreciate the experience of escaping to nature within the confines of Canada's largest urban center.

8.6.4 Public Safety and Accessibility

The trail, associated landscape features, and amenities will be designed with the objectives of improving accessibility and enhancing public safety. The design will be guided by the Integrated Accessibility Standards Regulation Guidelines (2014) Part 4.1 Design of Public Spaces Standard.

At the Metrolinx underpass, a roof structure and/or end barrier is required to be installed to protect trail users from flying ballast and other debris that may be dislodged by moving trains on the railway tracks above the underpass.

Because the trail will be located in close proximity to the rail line corridor, segments of fence are proposed to be erected in locations where the trail is located immediately adjacent the rail line, and at the flanks of the openings of the tunnels.

Along the length of the trail appropriate signage and pavement markings are proposed to be installed to warn trail users of upcoming deviations in trail direction, intersections, underpasses, bridges and other conditions that may pose a safety concern.

8.6.5 Interpretation

Interpretive signage and narratives may be provided at key locations along the trail. The rich natural and cultural heritage and history of the Don Watershed will provide the inspiration for these interpretive storylines. While interpretive information can be conveyed through a standardized system of signage, the proposed bridges, underpasses and other built structures along the trail should also be considered as potential media for integrated interpretive messaging.

The integration of a creative interpretive program with the design of the landscape will contribute to the richness of trail user experience.

8.7 Drainage and Stormwater Management

As the trail is intended to run longitudinally along the East Don River corridor, the trail will need to incorporate elements of drainage and stormwater management to minimize risks due to surficial erosion, sediment deposition, and ponding. Consideration must be given to minimizing high volumes of concentrated flow over the trail while maintaining positive overland drainage.

By constructing a trail along the corridor, it must be expected that areas of natural overland drainage will be affected, potentially delivering both concentrated flow and sediment towards the East Don River.

Key elements to consider during detailed design to minimize risks of erosion or impacts to drainage include:

- Avoidance of long, sustained grades since they concentrate runoff. As an alternate, rolling dips and grade breaks may be installed to allow runoff to direct itself over the trail.
- Avoidance of concentrated runoff from trails, as a sloped (or pitched) cross section minimizes water depth of standing water levels on the trail.
- At low points where drainage does concentrate, provision of appropriate crossing infrastructure including erosion protection on both sides of the trail. An example of a cross drainage feature is provided in Figure 8-16.

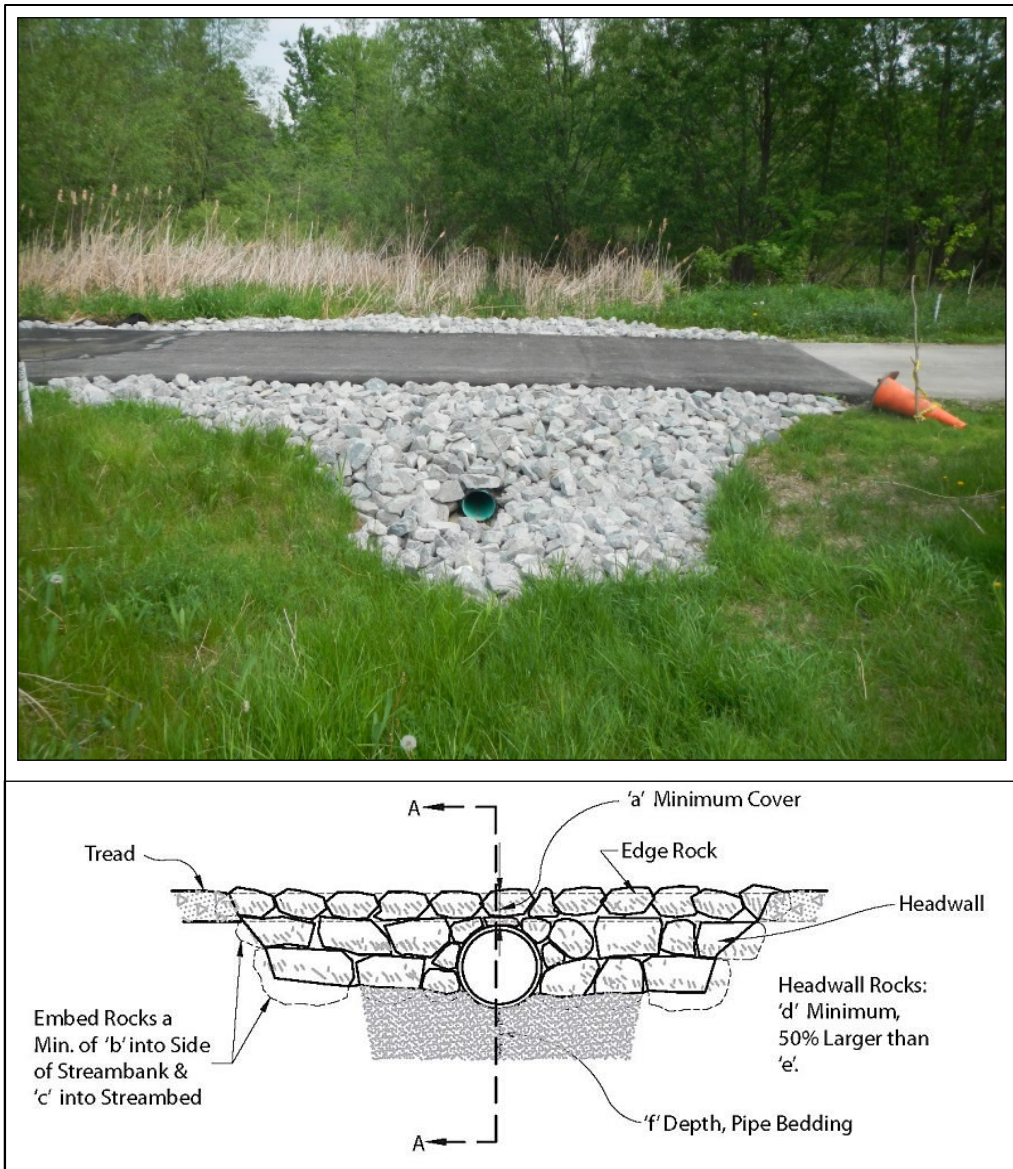


Figure 8-16: Example of a surficial drainage feature for concentrated flows

Source: Aquafor Beech Limited 2014

8.8 Infrastructure/Utilities and Key Stakeholders

The design and construction of the trail is subject to review and approval by a number of agencies and businesses that own land or utilities with the Local Study Area. This group (termed Key Stakeholders for the East Don Trail EA) own and operate infrastructure, utilities, and/or businesses along or adjacent to the trail route.

Utilities and infrastructure which may be affected by the trail include, but are not limited to those owned by Metrolinx, Hydro One, Toronto Hydro, Enbridge, Bell, and Toronto Water. Each of these stakeholders has specific standards to be met throughout design and construction. Prior to construction, locates will need to be performed to accurately define all utilities in the field to minimize the risk of damage or disruption of service. Key utilities (with utility companies being Key Stakeholders) and conditions are summarized below.

In addition to the utility companies mentioned above, Flemington Park Golf Club has been involved in the Study as a Key Stakeholder since the trail is routed in close proximity to this golf course (see Figure 8-20).

8.8.1 Metrolinx

Metrolinx owns and operates the rail line running longitudinally through the Study Area (Figure 8-20). Metrolinx approval is required to facilitate the implementation of the five rail line crossings as part of trail construction. The following is a summary of key conditions and other factors to be considered throughout design and implementation:

- A technical review of all crossings detail designs is required and is to be completed by a third party consultant (AECOM) retained by Metrolinx.
- Crossing agreements will need to be in place for all crossings.
- The crossing type preferred by Metrolinx is a tunnel.
- All tunnel structures must be constructed to meet all rail line and other standards and loading requirements, and be at a 90-degree angle to the rail line.
- A 30 m corridor (of Metrolinx-owned land) must be free of structures (excluding those approved by Metrolinx - e.g., rail line crossings) to accommodate potential future rail expansion and operations.

8.8.2 Hydro One

Hydro One manages a Hydro Corridor owned by Infrastructure Ontario which extends across the East Don River valley setting. The following conditions were noted for trail design and implementation:

- The City would enter into an agreement with Hydro One to allow the construction, operation, and maintenance of the trail.

- Hydro One may require specific setbacks from their existing or planned infrastructure.
- Hydro One may require additional security measures at Bermondsey Road connection such as fencing at the base of the Hydro towers and other facilities as deemed necessary.
- Final location of the trail will be subject to detailed design review and approval by Hydro One.
- Hydro One will require approval from all easement holders within the Gatineau Hydro Corridor (e.g., Enbridge, Toronto Water) which may be affected by the trail.

8.8.3 Infrastructure Ontario

As a landowner, Infrastructure Ontario has certain conditions of approval that must be met prior to entering into a realty agreement that would be required to facilitate the construction of the trail within the Gatineau Hydro Corridor (Figure 8-20). The undertakings of easement and any other associated realty undertaking will be required to be granted by the Ministry of Economic Development, Employment and Infrastructure. In addition, the requirements of the PW Class EA process must be met in order to receive approval and a realty agreement from Infrastructure Ontario (see Section 2.2 for more information). The PW Class EA was triggered as the preferred trail design concept will require granting of an easement on Infrastructure Ontario-managed land.

Following consultation with Infrastructure Ontario, it was determined that the undertaking that is to conform to the PW Class EA process – the segment of the trail located on Infrastructure Ontario managed lands (Figure 8-20) – is classified as a Category B undertaking. This is due to the fact that the footprint of the proposed East Don Trail segments located within the Gatineau Hydro Corridor exceeds 0.5 acres and the Hydro Corridor Connection segment travels longitudinally within the Corridor.

Category B is a screening process applied to undertakings that have some potential for adverse environmental effects. These effects are well understood from a technical perspective and are minor in nature and mitigation is also well understood (Ministry of Infrastructure 2012). Details are available in the Ministry of Infrastructure PW Class EA Document (2012).

It is recognized that some components of the PW Class EA process, such as alternatives evaluation, may take place within another Class EA process framework as long as the overall requirements of the PW Class EA process are met. The East Don Trail study has been streamlined and both EA processes have been undertaken at the same time. The Municipal Class EA Schedule C process, meets a number of the PW Class EA process requirements (details below). The PW Class EA process components

that fall outside of the Municipal Class EA process framework include the seven-point site-specific analysis. The seven-point analysis was conducted for the trail segments located on IO-managed lands and the results are described below.

The seven-point site-specific analysis is carried out in order to confirm that Category B is appropriate (Ministry of Infrastructure 2012). This analysis is considered to be a part of Step B1: Describe Undertaking. The results of this analysis carried out for the Hydro Corridor Connection are presented in Table 8-1.

Alternatives' assessment and the selection of the preferred alternative took place within the Municipal Class EA process framework utilized for the East Don Trail Study. This is permissible under the PW Class EA process as Category B undertakings, by definition, have limited environmental effects that are well understood and are minor in nature (Ministry of Infrastructure 2012).

The Municipal Class EA process meets or exceeds the requirements of the Category B PW Class EA process Steps B2 (Description of Environmental Effects, Mitigation and Monitoring) and B3 (Consult with Directly Affected Agencies and Public). In particular, environmental effects were considered in Phase 2 of the EA (Section 6.0) as well as Phase 3 (Section 7.0) in order to evaluate the preferred alternative solution and, subsequently, preferred design concept.

The environmental impacts and mitigation measures associated with the preferred design concept are described in Section 9.0.

Consultation with the public and affected agencies has taken place throughout the Study and is described in Sections 4.5 to 4.11, 6.4 to 6.9, 7.4 to 7.9 and 9.4 to 9.9. At the same time, PW Class EA process requires that specific agencies identified by IO (e.g., MNRF), be consulted on the application of PW Class EA process to the proposed undertaking. For the East Don Trail EA these agencies include MNRF, TRCA and the City of Toronto. This requirement was met; MNRF, TRCA and the City of Toronto indicated they have no concerns regarding the disposition associated with the MOI Class EA process for the lands designated Hydro-electric Power Commission and Hydro One Networks Inc. Documentation of the relevant correspondence is included in **Appendix A**.

The requirement for Indigenous consultation within PW Class EA process is determined by IO following the review of Indigenous consultation completed to date within the Municipal Class EA framework. The Crown has a legal obligation to consult with Indigenous peoples where it contemplates decisions or actions that may adversely impact asserted or established Indigenous or treaty rights. The requirement for Indigenous consultation is determined by the Minister of Economic Development, Employment and Infrastructure and facilitated by IO. For this realty undertaking, the Provincial requirement for Indigenous consultation was determined to be sufficient as

completed by the Proponent within the Municipal Class EA framework. Refer to **Appendix A** for supporting correspondence.

Table 8-1: Seven point site-specific analysis for the proposed East Don Trail segments located on Infrastructure Ontario-managed land

No.	Parameter	Analysis
1	Existing land use status	<p>No specialty croplands or prime agricultural lands were identified.</p> <p>Existing City of Toronto Official Plan designations can be seen in Figure 8-17. Existing City of Toronto Zoning By-law designations can be seen in Figure 8-18. No changes to the existing designations are proposed.</p> <p>Location of proposed trail on the IO-managed lands and TRCA regulated areas is shown in Figure 8-19. Please note that necessary permits and approvals will be obtained during the trail detailed design project phase.</p>
2	Environmental Condition of the Property	N/A - Environmental Site Assessment, if required by Infrastructure Ontario, will be completed during the trail detailed design and prior to finalizing any reality agreements.
3	Environmentally Significant Areas	None present in or overlap with the Infrastructure Ontario-managed lands within the project Study Area (see Section 5.2.1).
4	Distinctive environmental features	Existing environmental features such as wetlands, surface water, soil, and groundwater are described in Sections 5.2 and 5.3 as well as Appendix F .
5	Servicing capacity	N/A – The proposed trail does not require servicing. Therefore, servicing capacity of the surrounding infrastructure was not examined.
6	Cultural Heritage Resources	<p>The cultural environment of the Study Area is described in Section 5.4</p> <p>A Stage 1 Archaeological Assessments was completed for the East Don Trail Local Study Area. In addition, a Stage 2 Archaeological Assessment was conducted for the preferred alternative located in Construction Phase 1</p> <p>The Stage 1 Archaeological Assessment recommended that a Stage 2 Archaeological Assessment is warranted as the Study Area can be considered as that of a high potential to encounter archaeological sites, with the exception of steep slopes which are considered medium potential. Refer to Section 5.4 for further information. Stage 1 Archaeological Assessment report is found in Appendix C.</p> <p>During the Stage 2 Assessment of the existing Hydro One access route, the footprint of which is proposed to be utilized to implement the Hydro Corridor Connection segment on IO-managed lands,</p>

No.	Parameter	Analysis
		<p>no cultural material was encountered. Therefore, no archaeological concerns were identified for this area. Stage 2 Assessment report is found in Appendix C.</p> <p>The spine trail segment that runs in the north-south direction across the IO-managed lands will undergo Stage 2 Archaeological Assessment during that detailed design project phase.</p>
7	Social and Economic Effects	<p>The proposed multi-use trail is not anticipated to cause long-term changes to the social structure or demographic characteristics of the surrounding community. While the proposed trail, if built, can be considered an improvement to the local transportation network, the scale of this particular undertaking can be considered fairly minor and the undertaking is thus not a significant variable impacting local population structure or processes. For more information on the socio-economic environment refer to Section 5.5.</p>

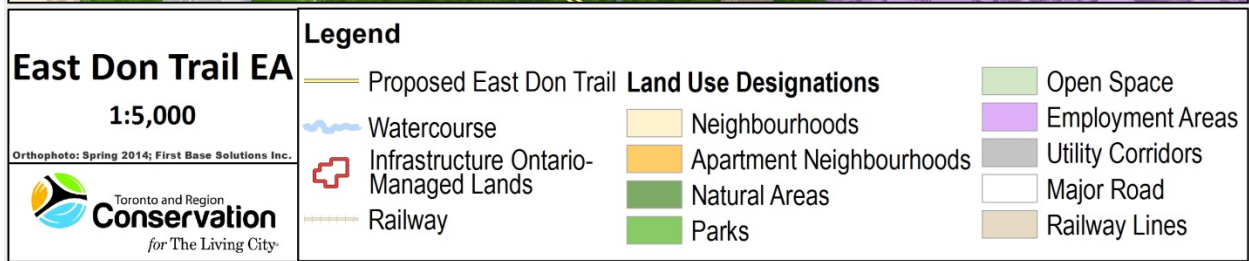
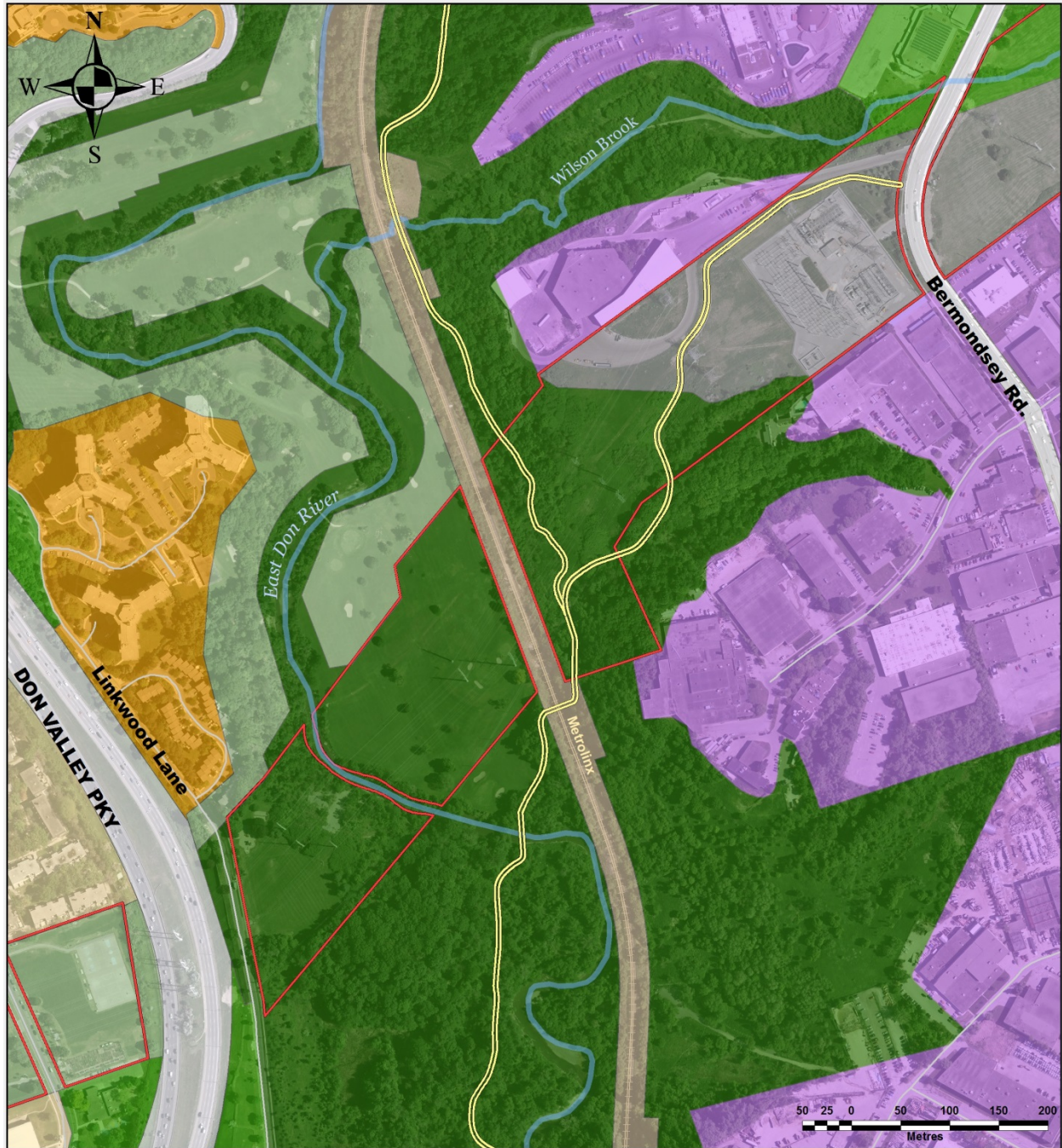


Figure 8-17: Current City of Toronto Official Plan (2006) designations

Source: City of Toronto 2006

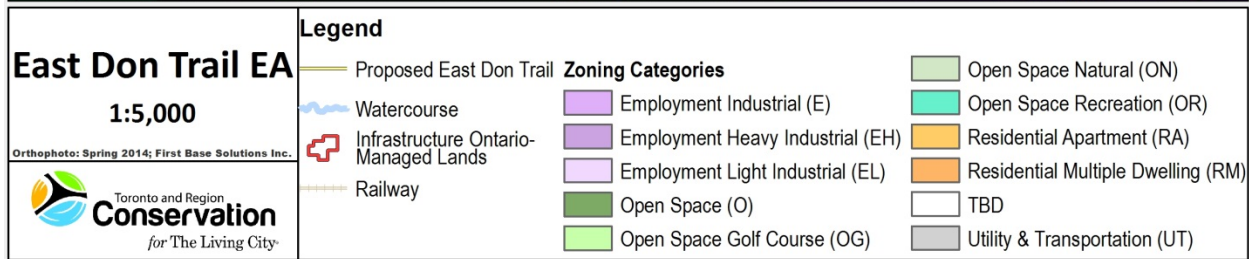
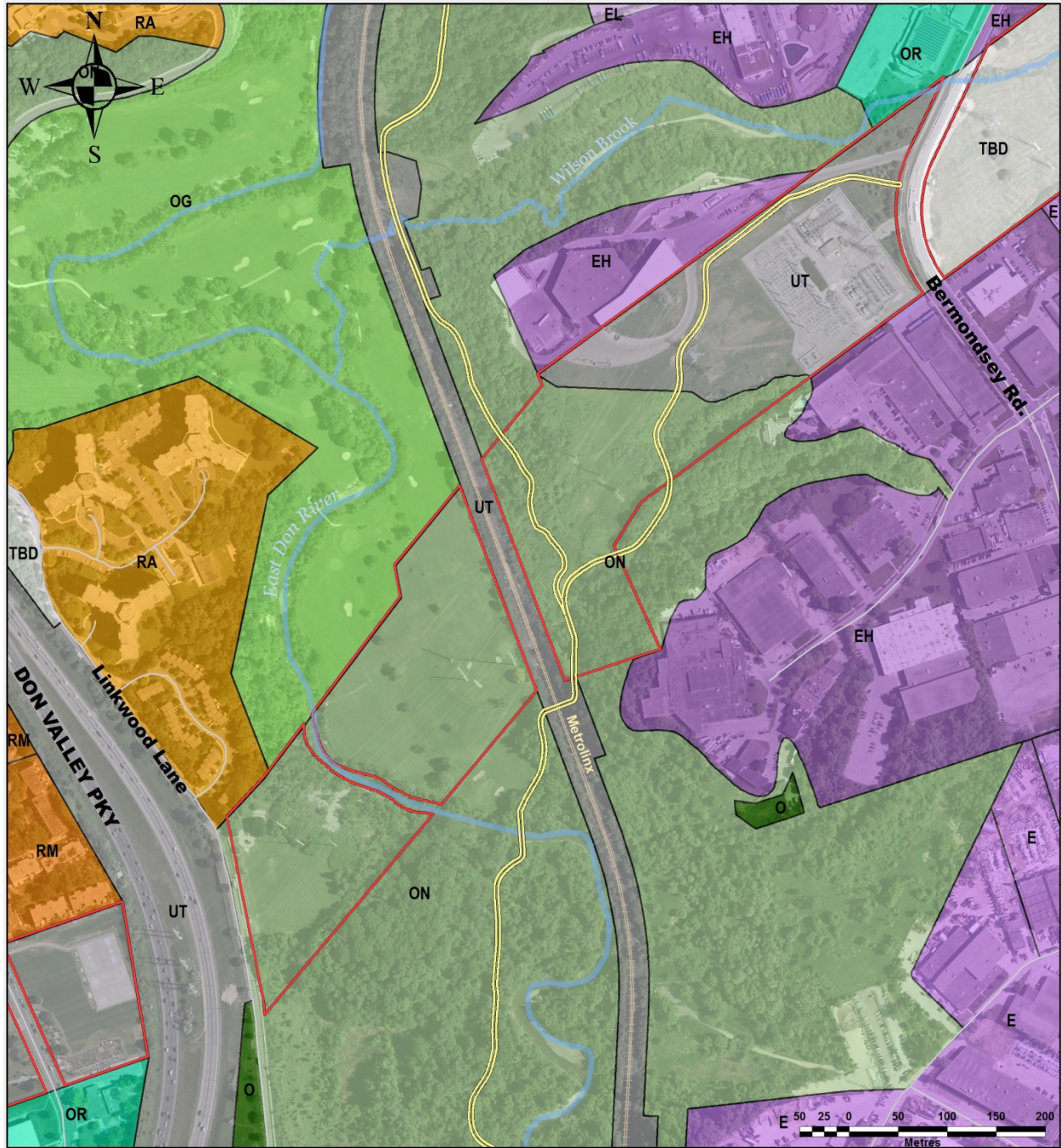


Figure 8-18: City of Toronto Zoning By-law 569-2013 designations

Source: City of Toronto 2013

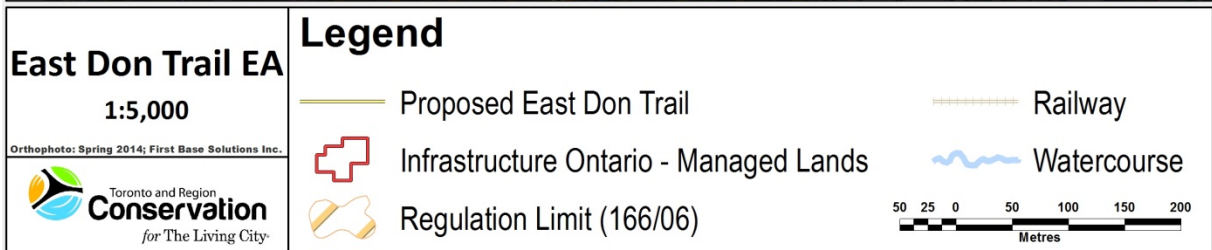


Figure 8-19: Proposed East Don Trail in context of Infrastructure Ontario-managed lands and TRCA Regulation limit

Source: TRCA 2015

8.8.4 Enbridge

Enbridge Gas maintains a pipeline with an easement within the Hydro One Hydro Corridor. The line is defined as a natural gas main. Consultation with Enbridge representatives revealed no objections to construction of a trail across the pipeline. However, trail design and construction would be subject to Enbridge review and inspection.

Throughout design and construction within the vicinity of the pipeline, consideration may need to be given to the following:

- Minimal cover over pipeline (0.9 m on average).
- Addition or cutting of materials over top of the pipeline must account for potential changes in shear stress.
- No light structures within the easement.
- No restoration or plantings over or in close proximity to the pipeline, as root structures may cause damage to the pipeline. Use of root deflectors may be required.
- General requirement that mechanical equipment shall not be operated within 0.3 m of the pipeline. Hand excavation shall be performed when locating and digging within 0.3 m of the pipeline.
- When operating heavy equipment near or overtop of the pipeline, conditions to be met include:
 - Onsite representation by Enbridge while in the vicinity of the pipeline (i.e., within 30 m).
 - Minimize the number of occurrences with all work to be confirmed by Enbridge representative on site.

8.8.5 Toronto Water

Toronto Water operates a number of sewer lines and other infrastructure located in the Study Area and utilizes associated access routes. The following is a summary of key factors to be considered in trail detailed design and construction:

- Confirm and coordinate usage of Toronto Water access route(s) for construction access and potential temporary closure.
- Ensure existing access route conversion into a multi-use trail meets Toronto Water needs (e.g., considers maintenance vehicles specifications).
- Consider future infrastructure projects location and implementation (e.g., new storage tank implementation).
- Toronto Water to coordinate and facilitate Bridge 1 (Taylor Massey Creek bridge) design and implementation.

- Continue discussions with Toronto Water to ensure that Bridge 1 accommodates Toronto Water needs as well as multi-use trail standards and requirements

8.8.6 Flemingdon Park Golf Club

Flemingdon Park Golf Club owns a parcel of land located between Hydro Corridor and Eglinton Avenue west of Metrolinx rail line (Figure 8-20). Where the trail extends north towards Metrolinx Crossing 2 and into Hydro Corridor, it is adjacent to the golf course. Therefore, consideration will need to be given to proximity of trail to golf play areas. For instance, safety netting may be required in some locations to reduce risks to trail users as well as potential disturbance to golfers. In addition, timely notifications of trail construction works taking place in the vicinity of the course would need to be issued. Consultation with Flemingdon Park Golf Club will be conducted to obtain input on trail design where the trail is routed adjacent to the course as well as ensure the construction-related disturbance to golf course users is minimized.

8.9 Property Requirements

Though the trail extends primarily through City of Toronto and TRCA owned lands, the crossing of private properties, right-of-ways and existing easements will require meeting the conditions set by a specific owner or agency. A few examples involve Infrastructure Ontario, Hydro One, and Metrolinx. Infrastructure Ontario manages the lands occupied/used by Hydro One in the Gatineau Hydro Corridor. The preferred alignment will require a realty agreement with Infrastructure Ontario for the easement of land owned by the Ministry of the Economic Development, Employment and Infrastructure. The required realty agreement has triggered the application of the Ministry of Economic Development, Employment and Infrastructure Public Works Class EA, refer to Section 8.8.3 on how the East Don Trail Class EA has/will meet these requirements. Hydro One has identified the requirement for the City to enter into an agreement with Hydro One to allow the construction, operation and maintenance of the trail within the Hydro Corridor between Bermondsey Road and Metrolinx rail line. In addition, at each of the five crossings of the Metrolinx rail line, the City will be required to enter into an agreement outlining permission for usage of Metrolinx property as well as liabilities and future conditions.

Property ownership of the lands intersected or abutted by the trail is shown in Figure 8-20. A title search has been conducted to confirm property ownership and easement holders of the lands affected or potentially affected by the trail (including construction access). City of Toronto sewer line easements were found to be potentially impacted. Temporary and/or permanent easements required for implementation purposes will be addressed in the detailed design project phase in consultation with affected property owners.

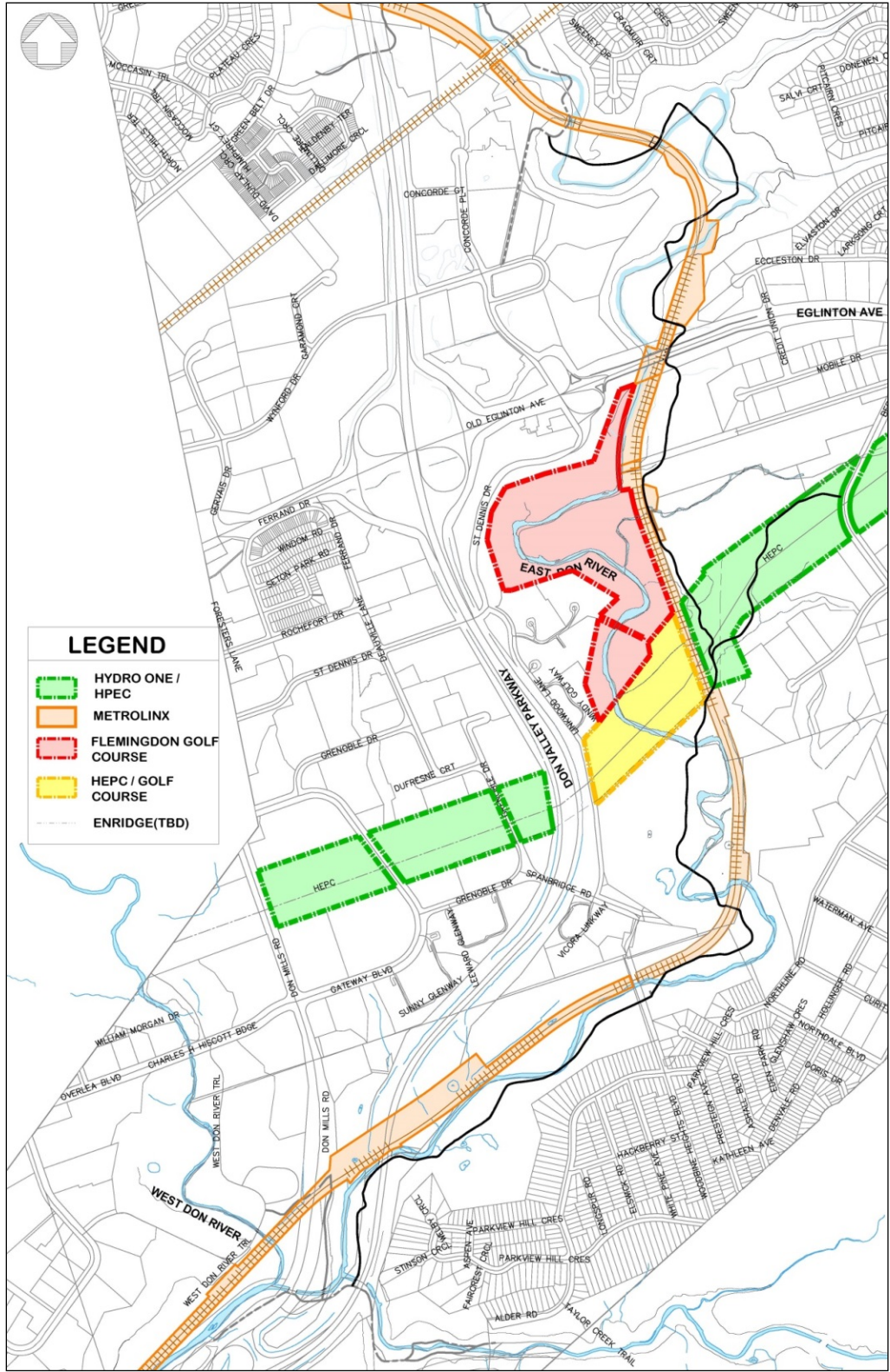


Figure 8-20: Land ownership and easement requirements
 Source: Aquafor Beech Limited 2014

8.10 Construction Phasing, Staging, and Access

Implementation of a project of this scale is often completed in phases in order to construct priority sections, accommodate budgetary constraints and reduce risks involved in tendering and construction. In this regard, the construction of the East Don Trail will likely be undertaken in three phases as described in Sections 8.10.1 to 8.10.3. Please note that construction dates are estimates only and are to be refined in detailed design phase of the project.

8.10.1 Construction Phase 1 – Lower Don Trail to Hydro Corridor Connection

This section of trail is intended to extend from the Lower Don Trail, over Taylor Massey Creek, along the Toronto Water access route and through the lower section of the ravine towards Flemingdon Park Golf Club. Once the trail reaches the south limit of the golf course, it follows along TRCA property, crosses Metrolinx rail line and extends into the Gatineau Hydro Corridor.

Phase 1 extent and key features are illustrated in Figure 8-21. This section of trail is approximately 3.1 km in length, including the Hydro Corridor Connection portion. The key elements include one tunnel crossing of Metrolinx rail line, one bridge over the Metrolinx rail line pending approval), four bridges over the East Don River and one over Taylor Massey Creek. The bridge over Taylor Massey Creek will be designed and constructed by Toronto Water in consultation with the East Don Trail team rather than as part of the East Don Trail Project.

The construction of this segment would be initiated in 2017. With regard to construction access routes, entry is easily gained from both Bermondsey Road as well as the parking lot at the head of the Lower Don Trail off of Don Mills Road and DVP (Don Mills Road access). These access points are illustrated in Figure 8-22. Trail sections south of Metrolinx 1 crossing may be accessed via Don Mills Road using the trail route for access. This includes carrying of materials such as prefabricated bridge sections for Bridges 1 and 2, and access for equipment including cranes, large excavators, graders, and paving machines.

For all sections north of Metrolinx 1 crossing, the Hydro One access route within the Hydro Corridor from Bermondsey Road will be used, with anti-climbing devices on towers where the trail is in close proximity.

Consideration may be given to using Metrolinx rail line to facilitate Metrolinx crossing 1 tunnel construction (e.g., transport prefabricated crossing structure components and construction equipment). Alternatively, tunnel sections and construction equipment could be transported along the trail route from the Don Mills Road access.

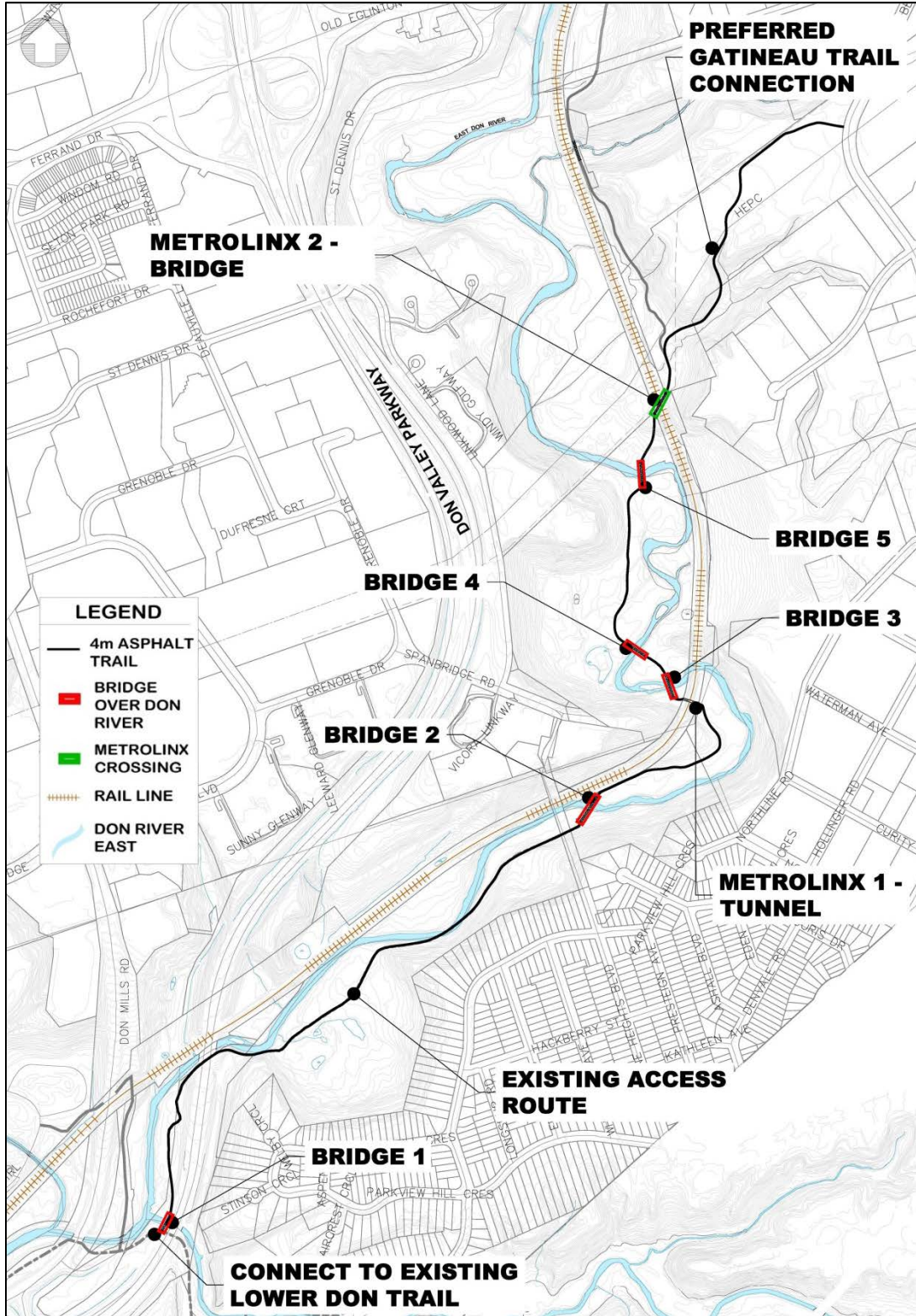


Figure 8-21: Extent of Phase 1 construction – from Lower Don Trail to Bermondsey Road

Source: Aquafor Beech Limited 2016

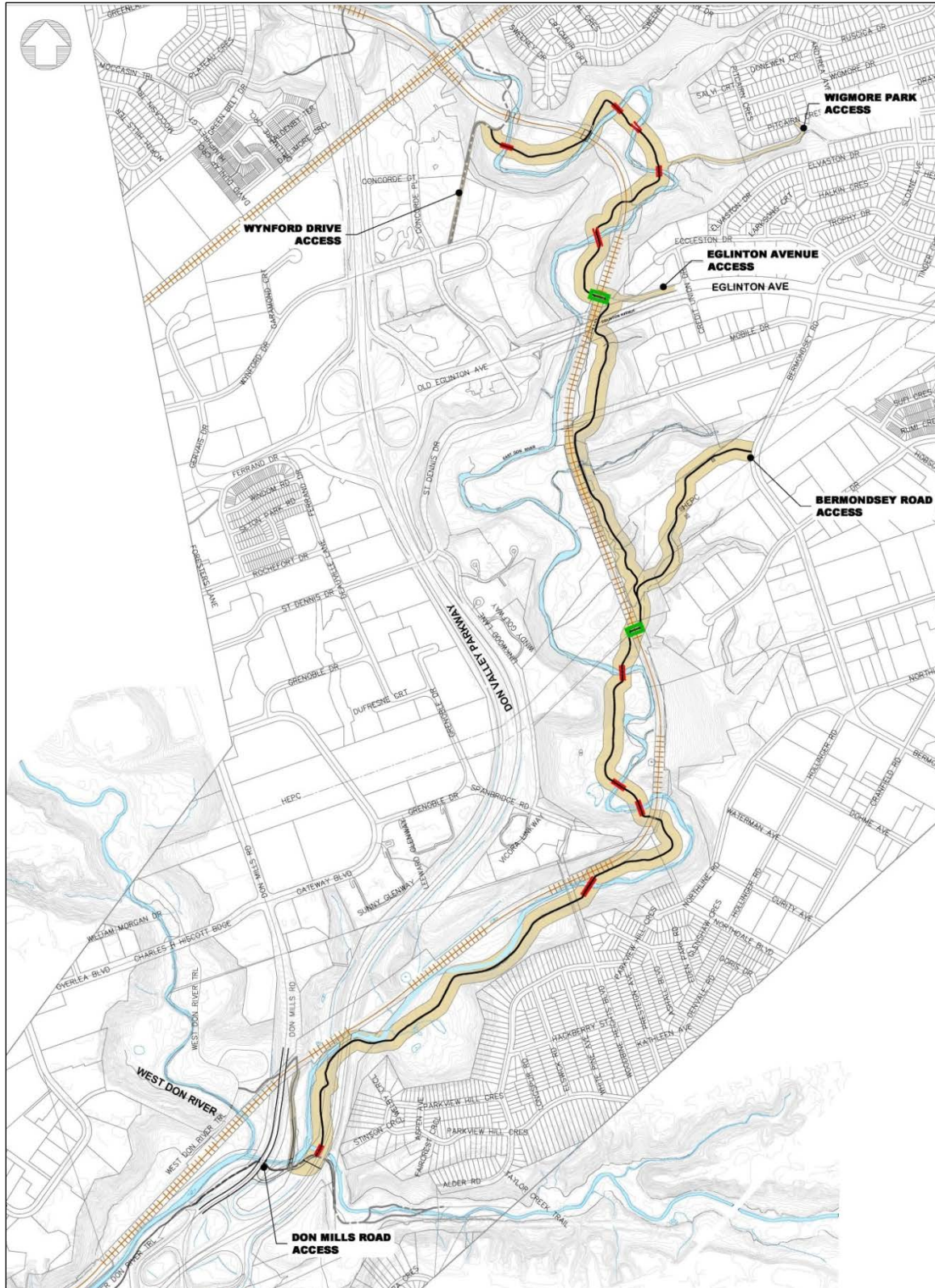


Figure 8-22: Potential construction access points for East Don Trail - all phases
 Source: Aquafor Beech Limited 2014

8.10.2 Construction Phase 2 – Existing East Don Trail to Eglinton Avenue

The second phase of construction is planned to extend from the existing East Don Trail south to Eglinton Avenue East. This phase involves extending the trail segments over five bridges (Bridges 6 – 10), through the Metrolinx underpass (Metrolinx 5), and tunneling through the rail line embankment at Metrolinx crossing 4 (Figure 8-23). This section of the trail is approximately 1.4 km long.

Construction access may be facilitated via 1) the existing East Don Trail where it connects to Wynford Heights Crescent, and/or 2) at the northeast Eglinton Avenue East embankment (Figure 8-22). The establishment of the 3rd access along the Toronto Water easements extending into the valley off Sweeney Drive and Pitcairn Crescent may be considered if access 1 and 2 are not sufficient to bring in bridge structures. It must be noted that this 3rd access point is not preferred as it may involve a significant amount of disturbance to the forested area.

The construction of Phase 2 would potentially commence in late 2017/early 2018.

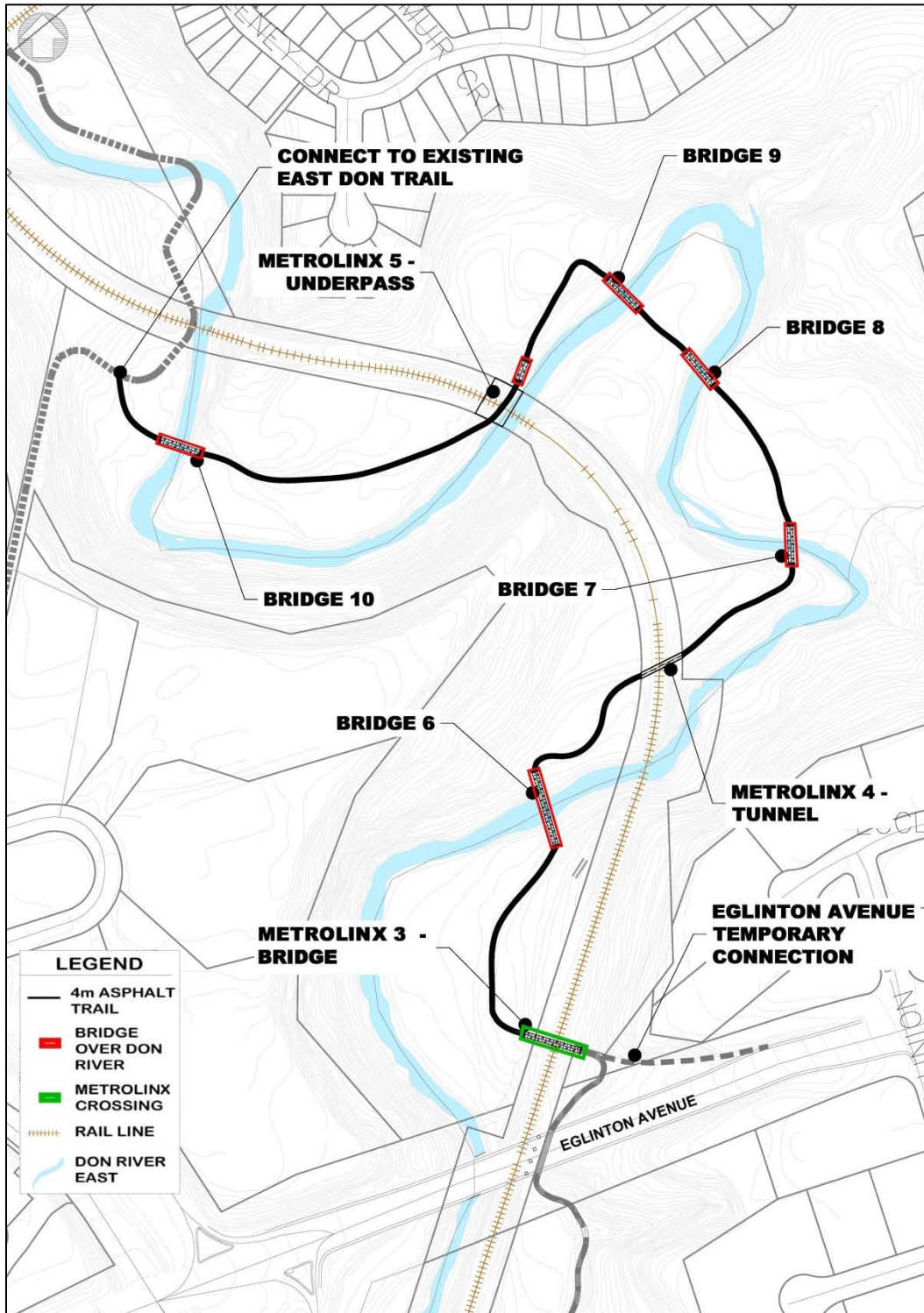


Figure 8-23: Key elements and extent of Phase 2 trail construction

Source: Aquafor Beech Limited 2016

8.10.3 Construction Phase 3 – Eglinton Avenue to Hydro Corridor Connection / Phase 1 Connection

The third phase of construction would connect Phase 1 and Phase 2, extending east of the rail line corridor along the base of the valley slope. While this section is relatively short (approximately 900 m), the trail here traverses the most challenging topography due to significant grade changes and presence of low-lying wet areas as well as areas of impingement where the rail line corridor extends into the base of the valley slope. Where the impingement occurs, the trail traverses along the slope with an appropriate buffer from the rail line (approximately 15 m from the centre line, maintaining area for potential future rail line expansion). In this area, trail construction may involve significant excavation into the slope and installation of retaining features. The extent of the Phase 3 area and key elements are illustrated in Figure 8-24.

Construction access may be facilitated via 1) the Hydro Corridor Connection trail portion as it will have been constructed as part of Phase 1 and/or 2) north east Eglinton Avenue East embankment (Figure 8-20). It must be noted that the establishment of the 3rd access along the Toronto Water maintenance route along the sewer line west of the Victoria Village Arena may be considered if access 1 and 2 indicated above do not provide sufficient access. It must be noted that the 3rd access point is not preferred as it may involve a significant amount of disturbance as the existing maintenance route terminates in a well-forested areas and would need to be extended towards the rail line.

Phase 3 construction start date is to be determined.

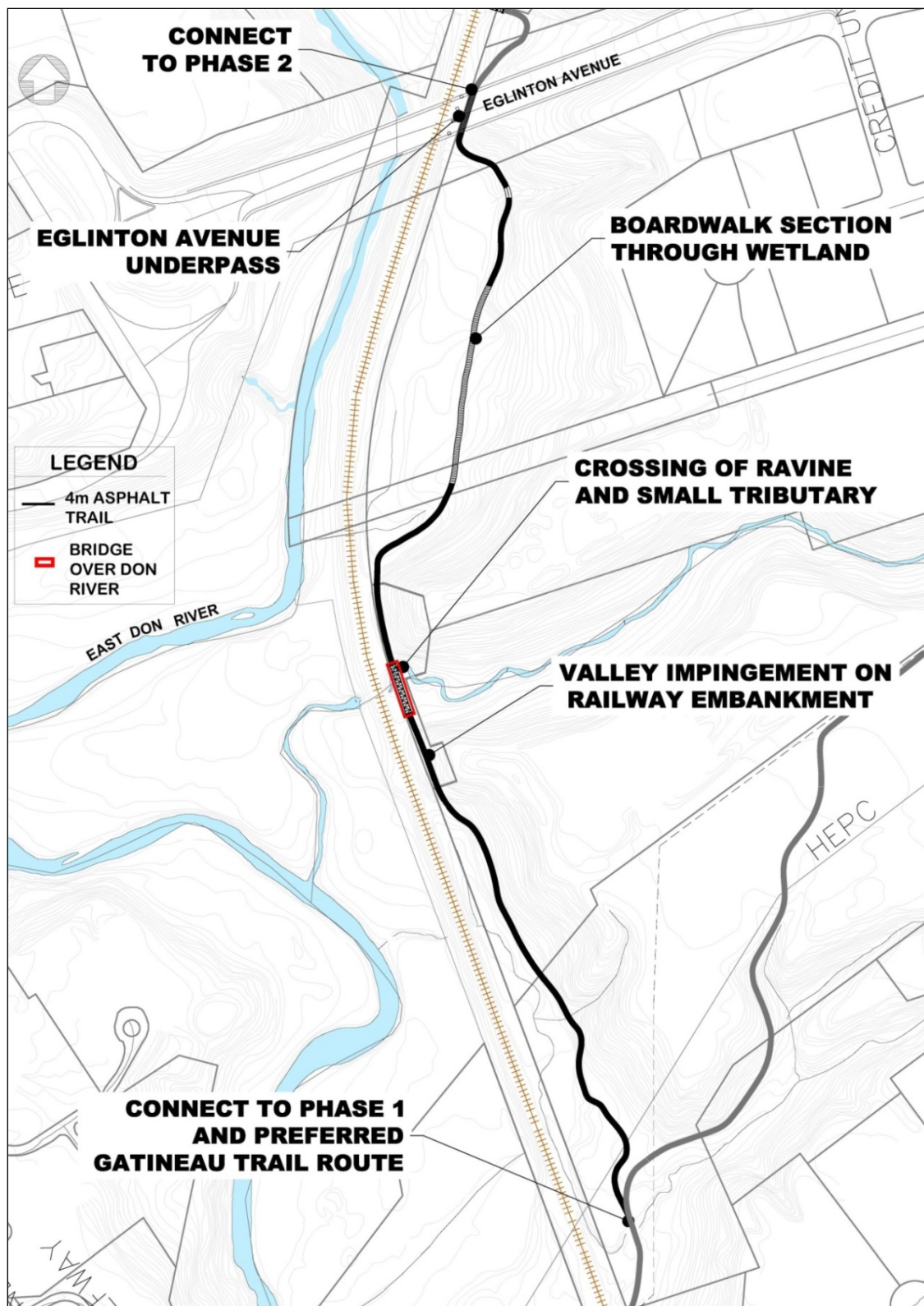


Figure 8-24: Extent of Phase 3 construction - connecting Phases 1 and 2
 Source: Aquafor Beech Limited 2014

8.11 Construction Monitoring Considerations

A key element to construction is monitoring by qualified professionals familiar with the project, ensuring the intricacies and objectives of the design are realized. This also allows for construction issues to be addressed quickly and appropriately and ensure that important design details are implemented.

A construction supervisor will ensure the intricacies of the design are realized while minimizing the footprint to the ravine through construction based on the environmental effects and mitigation measures outlined in this report (Section 9.3). For further information on Construction Management Plan and Monitoring Plan refer to Sections 11.2 and 11.3, respectively.

8.12 Preliminary Cost Estimate

The preferred trail design concept construction cost estimates are summarized in Table 8-2. Cost estimates are based on unit prices of similar projects recently completed as well as previous studies undertaken. These costs are approximate and do not include ancillary fees such as detailed design, project management, contract tendering and administration, insurance, fees associated with utilities, and easement(s) acquisition, and post-construction monitoring fees. These ancillary fees will add approximately 15 percent to the project budget. Construction cost estimates will be refined during the detailed design phase.

The total approximate cost to implement the preferred design concept throughout the entire Study Area is \$26 million (not including applicable taxes). The cost provided should be indexed and adjusted to market conditions at the actual time of construction.

Costing has been subdivided into the three construction phases as defined in Section 8.10.

Table 8-2: Cost estimates for construction Phases 1 to 3

DESCRIPTION	TOTAL
PHASE 1	
Site Preparation, construction access and removals	\$730,734
4m Wide Trail Construction Works (typical details for 3.1 km of trail)	\$2,575,416
Construction of Metrolinx 1 - Tunnel	\$1,030,000
Construction of Metrolinx 2 - Bridge Crossing	\$3,090,000
Construction of Bridge 2,3,4,5 (span 40 m to 60m)	\$1,648,000
Construction of Boardwalk Extensions at Bridge 2,3,4,5	\$247,200
Restoration	\$199,964
Geotechnical Investigations	\$272,970
Construction Administration	\$461,589
Amenities and signage	\$120,000
Environmental Compliance during Construction	\$60,000
Sub-Total	\$10,435,873
Contingency (20%)	\$2,087,175
Sub-Total for Phase 1	\$12,523,048
PHASE 2	
Site Preparation, construction access and removal	\$563,101
4m Wide Trail Construction Works (typical details for 1.4km of trail)	\$599,254
Construction of Metrolinx 5 Underpass (canopy structures)	\$103,000
Construction of Metrolinx 4 - Tunnel	\$1,030,000
Construction of Metrolinx 3 - Bridge	\$3,090,000
Construction of Bridge 6,7,8,9,10 (span 40m to 60m)	\$2,060,000
Restoration	\$76,998
Geotechnical Investigations	\$215,165
Construction Administration	\$359,638
Amenities and Signage	\$120,000
Environmental Compliance during Construction	\$60,000
Sub-Total	\$8,277,155
Contingency (20%)	\$1,655,431
Sub-Total for Phase 2	\$9,932,585.83

DESCRIPTION	TOTAL
PHASE 3	
Site Preparation, construction access and removal	\$300,739
4m Wide Trail Construction Works (900m of trail, including boardwalk and retaining wall)	\$1,296,791
Construction of Eglinton Av. Underpass (canopy structure)	\$515,000
Crossing of Ravine over Tributary	\$412,000
Restoration	\$69,577
Geotechnical Investigations	\$77,823
construction Administration	\$129,705
Amenities and Signage	\$120,000
Environmental Compliance during Construction	\$60,000
Sub-Total	\$2,921,635
Contingency (20%)	\$584,327
Sub-Total for Phase 3	\$3,505,962
Sub-Total for all Phases (1, 2 and 3)*	\$25,961,596

**Note: Sub-Total does not include applicable taxes or adjustment for inflation rate.*

9.0 ENVIRONMENTAL IMPACTS AND MITIGATION

Minimizing or eliminating environmental impacts was an important aspect considered during the selection of the preferred alternative trail alignment in Phase 2 and the preferred design concepts in Phase 3. However, due to the location and scale of the project, there are environmental impacts that may require mitigation through the detailed design. Several categories of the potential impacts of the proposed trail were examined in detail through the completion of the following studies and assessments: Heritage Impact Assessment, Electromagnetic Fields Management Plan, breeding bird surveys and the proposed level rail line crossings safety assessment. The results of these studies, summarized in Section 9.1, will be considered in the trail detailed design and implementation in order to minimize the potential impacts of the proposed trail on the surrounding environment, including public health and safety, biological environment and infrastructure. Section 9.2 outlines the potential impacts associated with routing a trail within a valley system and provides recommendations to reduce and/or eliminate those concerns through the detailed design of the trail. Section 9.3 outlines the potential impacts that may arise during trail construction and provides information on the proposed mitigation measures.

9.1 Additional Studies

9.1.1 Heritage Impact Assessment

A Heritage Impact Assessment was undertaken to determine if the Metrolinx rail line within the Study Area constituted a potential built heritage resource. During the preliminary assessment of built heritage (refer to Section 5.4.3) the rail line was identified as a built feature of potential heritage value, and as such the proposed trail crossings would have the potential to impact the rail line through direct or indirect alteration. This recommendation was due to the following:

- Rail line age (over 100 years old)
- A well-documented history of construction, detailed in the writings of Charles Sauriol, a local conservationist and historian valued by the local community

While the Metrolinx rail line was not registered with the City of Toronto as a heritage rail-scape, a more in-depth assessment of the cultural heritage value of the rail line was undertaken. The Heritage Impact Assessment, conducted by Golder Associates Ltd, assessed the potential cultural value and significance of the rail line within the Study Area, focusing on the five (5) proposed East Don Trail rail line crossings.

The Heritage Impact Assessment concluded that “the physical characteristics of the railway right-of-way, and specifically the area of the five proposed trail crossings, do not have cultural heritage value under Ontario Regulation 9/06”. The Assessment also

concluded that the Study Area does not contain individual built heritage features, however together with the Eglinton Avenue bridge and the Metrolinx railway bridges, it can be considered a cultural heritage landscape defined as an Urban-Valley Landscape. As part of the Assessment, potential design opportunities and recommendations on how to compliment the cultural heritage landscape through trail design were identified. These opportunities and recommendations will be further explored in the detailed design phase of the East Don Trail. Assessment report can be found in **Appendix J**.

As no impacts on built heritage will occur as a result of the proposed trail implementation, this category of environmental impact is removed from further consideration.

9.1.2 Electromagnetic Fields Management Plan

The Radiation Safety Institute of Canada was contracted to assess EMF exposure of children and other individuals using the sections of the proposed trail on or close to the Hydro One access route, as these sections are situated in proximity to the electricity transmission lines of the Gattineau Hydro Corridor (Figure 9-1). This was done in order to meet the requirements of the City of Toronto policy of prudent avoidance, which requires City divisions to design new uses in hydro corridors so as to minimize childhood exposure to EMF. An EMF Management Plan was prepared for these areas according to the Guidance Manual for the Preparation of an EMF Management Plan for the City of Toronto (2010).

The study concluded that the exposure of children to EMFs from the Hydro One transmission towers using the proposed trail will be small. For children using the trail on a daily basis for nine months of the year, the increase in their annual average magnetic field exposure will only be about 9% of the City of Toronto guideline of 2 mG. The options for reducing children's average magnetic field exposure on the proposed trail within and near the Hydro Corridor are limited, as magnetic fields themselves cannot be altered and the velocity of children travelling on the path cannot be controlled. The only practical option is to minimize the incentives for children to spend extra time in areas of higher magnetic field strength. By placing rest areas in locations exhibiting low magnetic field strengths, the exposure of children can be reduced and the principle of prudent avoidance applied at little or no cost.

The EMF Management Plan was reviewed by the City of Toronto's Public Health, who concluded "The EMF field assessment, analysis and interpretation carried out meets the requirements for an EMF management plan as per the prudent avoidance policy. The proposed pathway appears appropriate for the location and situation, and will likely minimize EMF exposure to children where possible, refer to **Appendix A** for correspondence.

If required, the EMF Management Plan may be updated prior to implementation to reflect any changes.

The EMF Management Plan can be found in **Appendix I**.

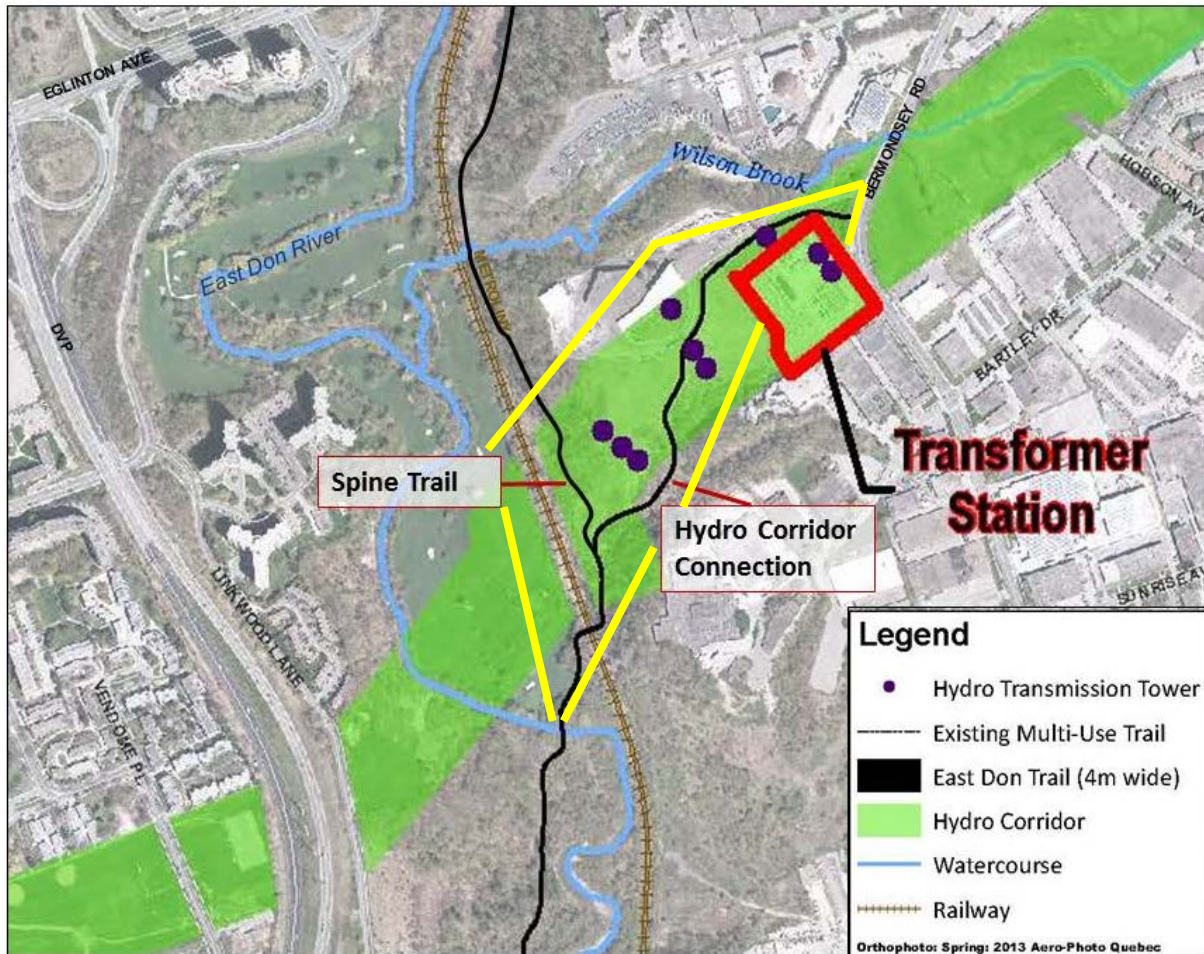


Figure 9-1: EMF study area. The limits of the EMF survey of the proposed trail are indicated by the yellow polygon

Source: TRCA 2014

9.1.3 Breeding Bird Surveys

TRCA undertakes surveys of breeding birds following the Ontario Breeding Bird Atlas Protocol (2001).

Breeding bird surveys were conducted in the project Study Area at the request of MNR to determine whether the proposed trail negatively impacts bird species at risk. Bird species of particular interest included Bank Swallow, Barn Swallow, Eastern meadowlark and Chimney Swift. No confirmed breeding instances were noted for these bird species.

9.1.4 Level Crossings Safety Assessment

Safety Crossing Assessments of the two preliminary level (i.e., at-grade) pedestrian crossing locations along the proposed trail were completed by AECOM Canada Ltd. as part of the crossings approval application to Metrolinx. The assessment report included a record of existing conditions at the two crossings, identification of physical features which may affect road and rail user safety as well as the potential safety hazards, and a number of design recommendations based on the proposed crossings configuration.

9.2 Detailed Design Considerations

Vegetation Impact

During the detailed design stage, all efforts will be made to avoid injury to or removal of as many large long-lived native trees as possible. All tree removals will be subject to approval by City of Toronto Urban Forestry. In addition, trail sections located adjacent to high priority forested areas (those with a low level of disturbance) may include fencing to ensure users remain on the multi-use trail.

Species of Concern

Several protected species of concern were found to have the potential to be present in or near the project Study Area. These include Butternut (*Endangered* status), Bank Swallow (*Threatened*), Barn Swallow (*Threatened*), Chimney Swift (*Threatened*) and Eastern Meadowlark (*Threatened*).

No impact is anticipated to Butternut trees as none were found during the detailed tree surveys conducted in Phase 3. Additional detailed tree surveys will be conducted as required during detailed design.

While no Bank Swallow, Barn Swallow, Chimney Swift or Eastern Meadowlark observations were made in areas immediately adjacent to or overlapping with the areas where the trail is proposed, the project may still have the potential to impact these species' habitat.

Potential impacts to wildlife, including species at risk, have been considered throughout the Study. For example, in order to reduce potential Eastern Meadowlark habitat fragmentation and disturbance, the trail has been routed along the edges of existing open grassy areas (e.g., those within the Gatineau hydro corridor or north of Eglinton Avenue East).

Consultation with MNRF, the agency responsible for protecting Ontario species at risk and their habitat, is ongoing. Should it be determined that the proposed trail implementation (pending Class EA approval) impacts the species listed above and/or their habitat, TRCA will work with MNRF to reduce or eliminate the impact as well as obtain necessary permits or other authorizations.

Archaeological Resources

The TRCA has completed a Stage 1 Archaeological Assessment for this EA (**Appendix C**). The Stage 1 Assessment recommended that a Stage 2 Archaeological Assessment is warranted as the Study Area can be considered as that of a high potential to encounter archaeological sites, with the exception of steep slopes which are considered medium potential. Refer to Section 5.4 for further information.

A Stage 2 Assessment has been completed and entered into the Ontario Public Register of Archaeological Reports for the trail section that is to be constructed during Phase 1 of the trail implementation. In particular, the following segments were assessed: existing access route located between Bridge 1 and 2 (Toronto Water access route), existing access route between Bermondsey Road and Metrolinx Crossing 2 (Hydro One access route), and the trail segments between Bridge 2 and Bridge 5. No cultural material was encountered. Therefore, no archaeological concerns were identified for the areas assessed. The report submitted to the Ministry of Tourism, Culture and Sport can be found in **Appendix C**.

Additional assessment may be necessary during detailed design should any deviations from the defined project area or existing footprint occur. Furthermore, if any deeply buried deposits or human remains are encountered, all activities will cease and the TRCA Archaeological Resource Management Services, as well as the proper authorities, will be contacted immediately.

Trail sections to be constructed in Phases 2 and 3 of the trail implementation will undergo Stage 2 Assessment during detailed design.

Existing Informal Natural (Dirt) Surface Trails

Many informal trails currently exist within the valley system. One objective of the East Don Trail was to formalize a common multi-use path in an effort to concentrate users to minimize impacts to the natural environment and to provide safe and accessible access to the corridor. While this was considered during the routing of trails in EA Phase 2 and 3, however, some areas still remain where it is anticipated that informal use will continue. City of Toronto Parks, Forestry and Recreation addresses the informal use of such areas through their Natural Environment Trails Strategy (see Section 1.6.4). A portion of the EA Regional Study Area was identified as a high priority area for management of informal trails in the strategy. In addition, during detailed design high traffic informal use areas will be assessed to determine if they can be formalized into managed public uses, such as natural environment trails or lookout areas.

Safety and Accessibility

The detailed design will follow the Ontario Accessibility Standards for the Design of Public Spaces Guidelines (2013), City of Toronto Accessibility Design Guidelines (2016,

draft) and the Toronto Multi-Use Trail Design Guidelines (2014), minimizing steep inclines and sharp turns, providing safe transitions from trail to bridge or tunnel crossings and fully meeting accessibility criteria, where physical and environmental constraints allow. In addition, trail portions adjacent to potentially unsafe areas, such the golf course or rail line will be carefully reviewed and may include fencing to decrease the potential for conflict between these uses and trail users.

Safety concerns will be mitigated further through addressing user conflict (see below for further information) and appropriate signage (e.g., steep slope use caution, signs at tunnel locations).

Electromagnetic Fields

The EMF Management Plan was prepared for the trail segments routed within and adjacent to the Gatineau Hydro Corridor (Hydro Corridor Connection segment as well as adjacent spine trail segments, as indicated in Figure 8-21) (see Section 9.1.2). The study concluded that the exposure of children using the proposed trail to EMFs from the electricity transmission towers will be small. The exposure reduction measure identified in the Plan is to place rest areas in locations exhibiting low magnetic field strengths. This recommendation will be taken into consideration during the detailed design of the Gatineau Connection trail segment.

User Conflict

As the trail is being designed as a multi-use trail, it is anticipated to attract a variety of user types. One concern expressed by the public during the EA process was potential trail user conflicts (unfavorable interactions between different user groups such as cyclists and pedestrians). As the purpose of the project is to provide a multi-use trail connection in the East Don Corridor (Section 1.1), creation of different trails for different user groups is not being explored. However, trail design will incorporate a number of parameters that will assist in minimizing user conflicts, such as specific trail width, two directional traffic and lateral clearance for sight lines (Section 8.2). To further reduce conflict between various trail user groups and promote a safe and enjoyable trail use experience, East Don Trail detailed design will incorporate the following:

- Provide opportunities for a variety of trail experiences (e.g., look-out points and formalized natural surface trails, where appropriate)
- Resting and passing areas
- Regulatory, informational and warning signage
- Textured surface treatments that alert trail users to be cautious and slow down either in areas where there is a lot of activity (e.g., where main trail meets an access trail) or where trail may slightly deviate from desired design (e.g., where trail narrows or sightlines are obstructed)

Geotechnical/Subsurface Conditions

With respect to the local subsurface conditions, the potential impacts may include the following:

- Potential slope failures may cause risk to trail users or infrastructure, where the trail encroaches too close to an unstable slope or oversteepened bank
- Soft, unconsolidated subsurface can cause settling or cracking of asphalt trail

A number of mitigation measures will be employed prior to and during trail detail design to eliminate or minimize the above which may include, but are not limited to the following:

- Maintain appropriate buffer between slopes and trail, referred to as long-term stable slope, as well as accounting for potential future slope remediation works at significant valley wall contacts
- Geogrid use to reinforce granular and asphalt layers to prevent local subgrade settling or failures
- Subsurface investigation to support detailed design: specifically, bearing capacity and shallow or deep foundation requirements for crossing structures such as tunnels

Fluvial Geomorphology

With respect to fluvial geomorphology, potential impacts to watercourse bridges from flood flows and erosion may occur. In order to minimize or eliminate those, a historical analysis to predict future channel extents (i.e., bend migration, extension, and translation) and route the trail an appropriate distance away from the potential risks (i.e., 100 year erosion offset) has been performed, and appropriate buffers applied.

In addition, bridges and abutments will be designed to span beyond the top of channel banks to allow for minimum 25 year erosion offset, with appropriate scour protection along the adjacent banks and floodplain. Bridges will be designed to withstand a range of flood flows which may overtop or contact the structure. A fluvial geomorphological assessment and 25 year erosion assessment of each bridge crossing will be conducted to define the meander potential of the watercourse. The assessments are to be submitted to the TRCA for approval. This information will be used to confirm the lengths of the bridge span and footing requirements.

Navigability

The public right of navigation, the right to use navigable waters as a highway, is protected in Canada irrespective of whether the navigable water is included in the List of Scheduled Waters under the *Navigation Protection Act*. Thus, even though East Don River is currently not included in the List of Scheduled Waters, East Don Trail

watercourse crossings may have the potential to impact waterway navigation. To confirm this, a detailed assessment of the watercourse characteristics and history of navigation will be carried out in the detailed design project phase. In addition, crossings will be designed to have a minimum of 1.5 m clearance of bridge undercarriage over bank full or 2 year flood elevation, where possible.

During detailed design a request for review may be submitted to Transport Canada, the agency responsible for the Navigation Protection Act enforcement, if deemed necessary.

Surface Erosion and Overland Flow

Increased erosion in areas of flow concentration may occur as a result of trail implementation. To mitigate this, all efforts will be made for the trail alignment to follow contours of the corridor as opposed to aligning with slopes in order to maintain positive drainage away from the trail. In addition, controlled crossings will be used for concentrated flows and infiltration will be encouraged within the trail buffer via appropriate trail design features (e.g., culvert structures). For further information refer to Section 8.7.

9.3 Potential Impacts and Proposed Mitigation Measures – Trail Construction

Mitigation measures discussed in this Section address possible residual environmental impacts as well as impacts that may arise during trail construction and are intended to provide information that would form the basis for the construction, monitoring and restoration plans (see Table 9-1 below).

Table 9-1: Potential environmental impacts resulting from trail construction and proposed mitigation measures

Area of Concern	Potential Impacts	Proposed Mitigation
Vegetation	<ul style="list-style-type: none"> • Tree removal along trail and construction staging areas. • Tree injury as a result of construction activities. 	<ul style="list-style-type: none"> • Appropriate staging areas and access site location in order to minimize removal of vegetation. • All tree removals and injuries subject to the City of Toronto Ravine and Natural Feature Protection By-law. • Develop and implement a Tree Protection Plan that follows the City's Tree Protection Policy and Specifications for Construction Near Trees (e.g., install fencing along the drip line). • Site restoration - with consideration given to site enhancements – to be carried out following construction. <ul style="list-style-type: none"> - All tree removals, injuries, and replacement planning requirements subject to City of Toronto Urban Forestry Department (see Section 0 for more information on the tree removal permitting process).
Erosion, Sediment and Water Quality	<ul style="list-style-type: none"> • Potential increase in erosion and sediment run-off as a result of trail watercourse crossing work and/or necessary in-stream works. • Fuel spills/leaks. 	<ul style="list-style-type: none"> • Appropriate sediment and erosion control measures (e.g., TRCA's Erosion and Sediment Control Guideline for Urban Construction). • Employ best practices for source control and pollution protection. • Define construction setbacks, secondary drainage measures. • Construction activities adjacent to aquatic resources will be controlled to prevent runoff into wetland/watercourse. • Develop plans for spill control and containment with efficient reporting. • Cover stockpiled excavated and construction material to reduce the potential for runoff. • Ensure all equipment in good working order, define refuelling requirements (refuelling to take place away from the watercourse/wetland) and monitor for leaks in equipment and any above and below grade servicing.
Fish and Aquatic Habitat	<ul style="list-style-type: none"> • Impacts on water quality such as increased turbidity, as a result of sediment run-off and physical land alterations. Equipment oil and/or fuel spills may be a contributing factor 	<ul style="list-style-type: none"> • Appropriate sediment and erosion control measures (e.g., TRCA's Erosion and Sediment Control Guideline for Urban Construction). • Minimal bank vegetation removal, as appropriate. • Regular construction equipment inspections and spill control measures. • Follow the applicable Department of Fisheries and Oceans Measures to Avoid Causing Harm to Fish and Fish Habitat (e.g., worksite isolation to contain suspended sediment). • Comply with applicable timing windows for necessary in-water work. • Develop contingency procedures in the event of a significant increase in turbidity and/or fuel spill, with consideration given to turbidity monitoring to be

Area of Concern	Potential Impacts	Proposed Mitigation
Wildlife and Wildlife Habitat	<ul style="list-style-type: none"> Impacts to migratory birds and other wildlife as a result of vegetation removal and/or an increase in noise and vibration from construction equipment. 	<p>conducted during necessary in-water work.</p> <ul style="list-style-type: none"> Design the trail and configure construction access and staging areas to ensure minimal vegetation removal, grading and filling, where possible. Conform to migratory and breeding bird timing windows for site preparation: vegetation will not be cleared between May 1 and July 31. Post-construction site restoration using native species and considering inclusion of habitat enhancements where appropriate (see Section 11.4 for more information on the post-construction site restoration).
Invasive Species	<ul style="list-style-type: none"> Potential to contribute to invasive species spread. 	<ul style="list-style-type: none"> Minimizing importing and/or moving fill/soil, where possible. Retain as much existing vegetation as possible during site preparation and construction. Avoid transplanting vegetation to minimize the spread of invasive species from infested to non-infested areas. Employ restoration practices that contribute to the prevention of invasive species spread (e.g., use site-appropriate native plants and invasive-free materials for post-construction restoration).
Species of Concern (Protected species) - Butternut, Bank Swallow, Barn Swallow, Chimney Swift and Eastern Meadowlark - have the potential to be present in or near the Study Area	<ul style="list-style-type: none"> Low potential to impact Butternut trees. Initial detailed tree surveys during Phase 3 of the Environmental Assessment found no Butternut trees. Additional tree surveys required at Metrolinx Bridge 2 during detailed design. Low potential to impact Bank Swallow, Barn Swallow, Chimney Swift and Eastern Meadowlark. 	<ul style="list-style-type: none"> During detailed design, conduct additional butternut surveys for areas not surveyed during Phase 3 of the Environmental Assessment. Potential habitat will be identified based on habitat requirements set out in these species recovery strategy and all efforts will be made to avoid or minimize potential impacts. During construction, site preparation activities to conform to migratory and breeding bird timing windows. Minimize vegetation removal, grading, filling and other construction-related disturbance. Post-construction site restoration using native species and considering inclusion of habitat enhancements where appropriate.
Special Concern Species (not Protected)- Wood Thrush, Eastern Wood-Pewee, and Milksnake - have the potential to be present in or near the Study Area	<ul style="list-style-type: none"> Low potential to impact Wood Thrush, Eastern Wood-Pewee, and Milksnake. 	<ul style="list-style-type: none"> Focus of impact mitigation will be on post-construction habitat restoration. During construction, site preparation activities to conform to migratory and breeding bird timing windows. Minimize vegetation removal, grading, filling and other construction-related disturbance.
Archaeological Resources	<ul style="list-style-type: none"> Potential impacts to archaeological resources found during 	<ul style="list-style-type: none"> Prior to detailed design, conduct Stage 2 Archaeological Assessment of the areas impacted by the trail construction (Phases 2 and 3 of the

Area of Concern	Potential Impacts	Proposed Mitigation
	construction.	<p>proposed trail implementation; Phase 1 segments that have yet to be assessed; and assessed Phase 1 segments should they deviate from the alignment assessed (see Section 9.2).</p> <ul style="list-style-type: none"> • Contact Regulatory and Operations Group, Ministry of Tourism, Culture and Sport in the event that archaeological remains are encountered. • Contact the Ontario Provincial Police, Ministry of Tourism and Culture and Registrar/Deputy Registrar, Cemeteries Regulation Unit, Ministry of Consumer and Business Services in the event that human remains are encountered.
Existing Business Operations	<ul style="list-style-type: none"> • Potential disturbance to the Flemingdon Park Golf Club users as a result of construction activities, such as an increase in noise and adjacent visual distractions. 	<ul style="list-style-type: none"> • Consult Flemingdon Park Golf Club representatives during detailed design. • Timely notification and appropriate signage. • Temporary fencing of construction areas adjacent to golf course. • As part of the construction plan include parameters for noise, vibration and dust control.
Existing Infrastructure and Utilities	<ul style="list-style-type: none"> • Potential negative impact on the existing infrastructure that may be affected during path and/or crossings construction. • Potential temporary closure(s) of portions of Metrolinx rail line during construction of crossings. • Potential temporary access restrictions to Toronto Water sewer line and Hydro One infrastructure along existing respective access routes. • No potential negative impacts expected to Enbridge pipeline. • No relocation of major infrastructure or utilities expected. 	<ul style="list-style-type: none"> • Coordinate with City of Toronto's Bridge and Structures department in regards to Eglinton Ave underpass. • During detail design ongoing consultation with potentially affected infrastructure owners – Hydro One, Enbridge, Metrolinx, Toronto Water – in order to minimize potential impacts. • Discussions with Metrolinx concerning appropriate timing of rail line crossing construction to minimize disturbance to usage. • Discussions with Toronto Water and Hydro One concerning the appropriate timing of trail construction along existing access routes. • Continued discussion with Enbridge to ensure construction does not impact pipeline.
Existing natural area uses	<ul style="list-style-type: none"> • Potential use interruptions as a result of possible existing informal trail closures and/or trail decommissioning (where the asphalt path is routed). 	<ul style="list-style-type: none"> • Timely notices and appropriate signage.
Adjacent multi-use trails	<ul style="list-style-type: none"> • Potential temporary closures of portions of 	<ul style="list-style-type: none"> • Timely notification and appropriate signage. • Temporary fencing of construction areas (including

Area of Concern	Potential Impacts	Proposed Mitigation
	adjacent trails and parking lots for construction staging or access.	access and staging).
Noise and Vibration	<ul style="list-style-type: none"> Potential increases in noise and vibration levels as result of construction activities and equipment operation; anticipated to be of relatively short duration, minimal and localized. 	<ul style="list-style-type: none"> Conform to the City of Toronto Noise By-law (591). Construction to take place during hours specified in the Noise By-law; an exemption from the noise by-law will be required for work outside of this time window. Regular equipment inspections.
Air Quality	<ul style="list-style-type: none"> Potential impacts related to possible increases in dust/particulate matter/emissions as a result of construction activities and construction equipment operation. 	<ul style="list-style-type: none"> Regular equipment inspections. Comply with the City of Toronto Idling Control By-law. Dust suppression in dry and windy weather conditions.
Contaminated Soils	<ul style="list-style-type: none"> Potential to encounter contaminated soils, such as those along the rail line corridor. 	<ul style="list-style-type: none"> Trail routed away from the decommissioned landfills identified in the Study Area. During trail detailed design, the potential to encounter contaminated soils will be further assessed on a site-specific basis (e.g., rail line tunnels and areas that require substantial excavation). If required, soil testing will be carried out (prior to construction), to determine/confirm whether contamination exists, the extent of contamination and soil handling and disposal procedures. If encountered, contaminated soils will be handled and disposed of in accordance with the latest Ministry of Environment and Climate Change standards.
Safety	<ul style="list-style-type: none"> Potential impact to local area residents, adjacent multi-use trail and/or valley land users due to proximity to construction access/staging area(s). 	<ul style="list-style-type: none"> Timely public notification and appropriate signage. Security measures such as construction site fencing to prevent unauthorized access to construction area(s) by members of the public. Develop appropriate traffic plan(s) when using public roadway(s) for construction access.
Property Requirements	<ul style="list-style-type: none"> Construction access via private property may be necessary. 	<ul style="list-style-type: none"> If private property access is required, appropriate notification procedure will be followed and an access agreement will be executed, if necessary.

9.4 Phase 3 – Additional Public Consultation

Additional public consultation in Phase 3 included a number of activities, as shown in Table 9-2. Additional public consultation extended past the selection of the preferred design concept and included two project updates, and one meeting with the CLC.

Project Update # 4 included a summary of the preferred design concept parameters and construction phasing plan, information on the ESR, and high-level results of the Archaeological Assessment.

Project Update #5 included a summary of key activities being undertaken by the project team including additional studies (Electromagnetic Field Study and Heritage Assessment), the current status of the EA, as well as next steps.

Table 9-2: Summary of Additional Public Consultation during Phase 3.

Date	Consultation
May 12, 2015	Frequently Asked Questions (Update #3) posted to project webpage
May 12, 2015	Project Update #4 sent to stakeholder register through Listserv and email
July 18, 2016	Project Update #5 included sent to stakeholder register through Listserv and email

9.4.1 Community Liaison Committee

Meeting #7

CLC Meeting #7 was held on September 10, 2014, at the Dennis R. Timbrell Resource Centre/Flemingdon Park Library (29 St. Dennis Drive, Toronto). The meeting was attended by three City of Toronto staff, three TRCA staff, and one Aquafor Beech Ltd staff as well as 10 CLC members. The meeting took place from 6:30 p.m. to 8:30 p.m. and included a presentation by the Project Team. During and after the presentation, a facilitated Question and Answer session allowed for two-way communication between CLC members and the Project Team during which numerous questions, responses, and comments were provided.

The purpose of Meeting #7 was to present the description of the preferred design concept, detailed design considerations, preliminary construction approach as well as environmental impacts and mitigation measures.

Meeting notes were taken during the meeting and included summarized comments. Draft meeting notes were circulated to CLC members following the meeting to ensure that comments were accurately recorded and appropriately addressed.

Documentation of CLC Meeting #7 is provided in **Appendix A**.

9.5 Indigenous Communities

Circulated on January 20, 2016, Project Update #5 (Notification #6) included an update letter to the community and a summary of key project deliverables completed including links to the completed Heritage Impact Assessment and Stage 2 Archaeological Assessment.

Table 9-3 provides a summary of additional consultation and correspondence with Indigenous communities as part of Phase 3. Project Update #5 (Notification #6) is provided in **Appendix A**.

Table 9-3: Summary of correspondence with Indigenous Communities in Phase 3.

Indigenous Community	Engagement
Beausoleil First Nation	Notification # 6: <i>January 20, 2016:</i> Couriered and emailed project update
Chippewas of Georgina Island First Nation	Notification # 6: <i>January 20, 2016:</i> Couriered and emailed project update
Chippewas of Rama-Mnjikaning First Nation	Notification # 6: <i>January 20, 2016:</i> Copied on information couriered and emailed to the Williams Treaty Coordinator
Curve Lake First Nation	Notification # 6: <i>January 20, 2016:</i> Couriered and emailed project update
Conseil de la Nation Huronne-Wendat	Notification # 6: <i>January 20, 2016:</i> Couriered and emailed project update
Coordinator Williams Treaty First Nations	Notification # 6: <i>January 20, 2016:</i> Couriered and emailed project update
Haudenosaunee Confederacy Chiefs Council via Haudenosaunee Development Institute	Notification # 6: <i>January 20, 2016:</i> Couriered and emailed project update
Hiawatha First Nation	Notification # 6: <i>January 20, 2016:</i> Couriered and emailed project update
Kawartha Nishnawbe First Nation	Notification # 6: <i>January 20, 2016:</i> Mailed and emailed project update
Metis Nation of Ontario	Notification # 6: <i>January 20, 2016:</i> Couriered and emailed project update
Mississaugas of Alderville First Nation	Notification # 6: <i>January 20, 2016:</i> Couriered and emailed project update
Mississaugas of the New Credit First Nation	Notification # 6: <i>January 20, 2016:</i> Couriered and emailed project update
Mississaugas of Scugog Island First Nation	Notification # 6: <i>January 20, 2016:</i> Couriered and emailed project update
Moose Deer Point First Nation	Notification # 6: <i>January 20, 2016:</i> Couriered and emailed project update
Six Nations of the Grand River	Notification # 6: <i>January 20, 2016:</i> Couriered and emailed project update

9.6 Review Agencies

Additional consultation with identified Review Agencies included consultation with Infrastructure Ontario, the Ministry of Natural Resources, and the Ministry of the Environment and Climate Change. Additional consultation included providing project information and updates. Table 9-4 outlines the responses received and impacts on the project. Key correspondence is provided in **Appendix A**.

Table 9-4: Summary of additional consultation with Review Agencies in Phase 3

Stakeholder	Correspondence Received	Impact on Project
Infrastructure Ontario	<p>Infrastructure Ontario sent PW Class EA document and ESR Review Checklist.</p> <p>Infrastructure Ontario reviewed the draft ESR, noted that Ministry of Economic Development, Employment, and Infrastructure (MEDEI) Duty to Consult is not required, and requested the NOC to review.</p> <p>Infrastructure Ontario requested letters articulating the easement undertaking by stakeholders (i.e., TRCA, City of Toronto, and MNRF)</p>	<p>The East Don Trail Study has been streamlined to ensure both the MCEA process and the PW Class EA process are met</p> <p>The East Don Trail Study not required to undertake MEDEI Duty to Consult and can proceed with the EA as is</p> <p>Letters requested were obtain and sent to Infrastructure Ontario.</p>
Ministry of Natural Resources and Forestry	<p>MNRF requested additional breeding bird surveys be conducted.</p> <p>MNRF noted that approvals may be required under the <i>Public Lands Act</i>, the <i>Fish and Wildlife Conservation Act</i>, and the <i>Lakes and Rivers Improvement Act</i>.</p>	<p>Additional breeding bird surveys were undertaken and submitted to MNRF.</p> <p>Permits and Approvals required for implementation are explored in section 0. All necessary permits and approvals will be obtained during the detailed design phase.</p>

9.7 Technical Advisory Committee

During Phase 3, additional consultation with the TAC included one meeting and correspondence with Toronto Public Health regarding the Electromagnetic Field Study.

Meeting #7

TAC meeting #7 was held on September 15, 2014, at the Toronto City Hall located at 100 Queen Street West and was attended by 10 City of Toronto staff, seven TRCA staff and two staff from Aquafor Beech Ltd. The meeting took place from 2:00 pm to 4:00 pm and included a presentation by the project team. Questions were taken and discussions were held throughout the duration of the presentation.

The following topics were discussed during the presentation:

- Project status and schedule updates
- Description of the preferred design concept
- Trail detailed design considerations and preliminary construction strategy

Toronto Public Health was sent and reviewed the Electromagnetic Field Study outlined in Section 9.1.2. In their review, they noted that “The EMF field assessment, analysis and interpretation meet the requirement for an EMF management plan as per the prudent avoidance policy. The proposed pathway appears appropriate for the location and situation, and will likely minimize EMF exposures to children where possible.”

9.8 Key Stakeholders

During Phase 3, additional consultation with Key Stakeholders included a Notice of Field Work within the Study Area sent on October 28, 2014, as well as Project Update #5 on August 2, 2016. Project Update #5 included a summary of key activities being undertaken by the project team including additional studies (Electromagnetic Field Study and Heritage Assessment), the current status of the EA, as well as next steps.

In addition, additional correspondence and meetings were held with a number of Key Stakeholders over the course of Phase 3. Table 9-5 provides a summary of additional discussions held in Phase 3 with each Key Stakeholder involved. Key correspondence can be found in **Appendix A**.

Table 9-5: Summary of additional consultation with Key Stakeholders in Phase 3.

Stakeholder	Summary Discussions
Flemingdon Park Golf Club	<p><i>Meeting April 1, 2015</i></p> <ul style="list-style-type: none"> • Discussions regarding trail section adjacent to the golf course and separation of uses (trail and golf). • Flemingdon Park Golf Club was informed of upcoming studies within the Study Area and adjacent to the Golf Course, including Heritage Assessment and Electromagnetic Fields survey. <p><i>Email Correspondence</i></p> <ul style="list-style-type: none"> • Discussion regarding access to the Study Area through the golf course for the upcoming EMF study. • Results of the Electromagnetic Field Study were sent to Flemingdon Park Golf Club.
Hydro One	<p><i>Email Correspondence</i></p> <ul style="list-style-type: none"> • Discussion regarding access for Stage 2 Archaeological Study, EMF Study, and Geotechnical Study. • Hydro One assigned a new contact for this Study. The project summary, preferred alignment, past meeting minutes, and the draft ESR were sent to the new contact. • Discussions regarding distance of the proposed trail to Hydro One infrastructure. The East Don Trail project team will explore mitigation measures to address Hydro One’s concern; these will be incorporated into the detailed design sent to Hydro One for approval. • Hydro One requested that proposals for trails that will become a part of the Master Park License Agreement should be channeled to Hydro One via City staff. • Hydro One indicated they require engineered drawings to provide comment. Engineered drawings to be provided to Hydro One for comment during the detailed design phase.

Stakeholder	Summary Discussions
Metrolinx	<p><i>Email Correspondence</i></p> <ul style="list-style-type: none"> <li>• Communications were sent regarding Heritage Assessment field work and obtaining permission to access Metrolinx land. <li>• Completed Heritage Assessment was sent for comment to Metrolinx. Metrolinx indicated underpass should be constructed similar to that along the existing East Don Trail. The project team will review the existing East Don Trail Metrolinx underpass during detailed design <p><i>Meeting November 30, 2015</i></p> <ul style="list-style-type: none"> <li>• Project update <li>• Discussions regarding the final ESR and how crossings of the rail line are communicated.

9.9 Local Politicians

During Phase 3, Local Politicians were sent a Notice of Field Work within the Study Area on October 22, 2014.

During Phase 3, additional consultation with local politicians included Project Update #4 emailed on May 12, 2015, and Project Update #5 emailed on July 18, 2016.

Additional consultation occurred with the office of Councillor Minnan-Wong in October 2014.

In addition, in October 2014 Jon Burnside was elected councillor for Ward 26. A project background summary along with all preceding project updates were sent to Councillor Burnside's office and a meeting was held on February 2, 2015.

10.0 PERMITS AND APPROVALS

City of Toronto, Toronto and Region Conservation Authority and/or the party responsible for the trail implementation will secure necessary permits and approvals for the implementation of the proposed East Don Trail, which may include, but are not limited to those listed in Table 10-1.

Table 10-1: Permits and approvals

Permit, Approval or Notice	Rationale	Administering Agency
Tree removal/injury Permit	Will be required during implementation	City of Toronto
Temporary road closures and/or Road occupancy	May be required during implementation for construction access and/or staging	City of Toronto
<i>Fisheries Act</i>	May be required during implementation for necessary in-water work	Department of Fisheries and Oceans
<i>Fish and Wildlife Conservation Act</i>	May be required during implementation for necessary in-water work.	Ministry of Natural Resources and Forestry
<i>Railway Safety Act</i>	Notice will be required to be provided during implementation for rail line crossing works	Transport Canada
<i>Public Lands Act</i>	May be required during implementation to conduct work onshore lands	Ministry of Natural Resources and Forestry
Regulation 166/06 (Regulation of development, interference with wetlands and alterations to shorelines and watercourses)	Will be required during detailed design to conduct geotechnical work as well as during implementation	TRCA
<i>Ontario Heritage Act</i>	Stage 2 Archaeological Assessment to be conducted during detailed design for trail construction Phases 2 and 3	Ministry of Tourism, Culture and Sport
Notice of Project (Regulation 213/91)	Will be required prior to construction of tunnels	Ontario Ministry of Labour
<i>Lakes and Rivers Improvement Act</i>	May be required during implementation.	Ministry of Natural Resources and Forestry

As well, approvals from a number of Key Stakeholders and property owners whose properties abut or are intersected by the proposed trail will need to be obtained in order to proceed with implementation. These may include, but are not limited to the following:

- Metrolinx

- Enbridge
- Hydro One
- Infrastructure Ontario
- Flemington Park Golf Club

In addition to the permits and approvals to be obtained and notices to be provided that are listed in Table 10-1, requirements of the following Acts and regulations may need to be adhered to during the trail construction:

- *Migratory Birds Convention Act*
- *Species at Risk Act*
- *Lakes and Rivers Improvement Act*

11.0 COMMITMENTS TO FUTURE WORKS

11.1 Detailed Design

Pending approval of this ESR the project will move into Phase 5 of the EA process, detailed design. During this phase, the preferred concept (as outlined in Section 8.0) will be refined and finalized to address site-specific conditions as identified in this EA.

This phase will produce detailed design drawings including construction standards and specifications, Construction Management Plan (Section 11.2), Monitoring Plan (Section 11.3), and the Operations and Maintenance Plan (Section 11.5).

The detailed design drawings to include, at minimum:

- Location plan
- Existing and proposed plan and profiles
- Typical sections and details
- Material specifications in accordance with Ontario Provincial Standards
- Construction access route
- Critical construction sequences and practices
- Tree Protection, Removal and Restoration Plans as approved by TRCA and City of Toronto Urban Forestry
- Erosion and Sediment Control Plan
- Methods for dewatering and “working in the dry”, if applicable

In addition, the detailed design project phase will include the following:

- Continue to engage interested public, Indigenous communities and local politicians
- Continue discussions with Key Stakeholders
- Obtain rail line crossing agreements (from Metrolinx)
- Finalize easement or use requirements (with Metrolinx and Hydro One)
- Confirm locations of all utilities (including but not limited to Enbridge pipeline)
- Conduct hydraulic assessment of all watercourse crossings
- Finalize and receive all necessary permits and approvals from Review Agencies (as outlined in Section 10.0)

The trail detailed design will aim to adhere to the Toronto Multi-Use Trail Design Guidelines (2014), City of Toronto Accessibility Design Guidelines (2016, draft) and the Accessibility Standards for the Design of Public Spaces (2013), where possible.

11.2 Construction Management Plan

A Construction Management Plan will be developed based on the detailed design to minimize disturbance to the surrounding communities and natural environment while maintaining a timely construction schedule. The Plan will outline the trail construction logistics as well as methods of implementing the proposed mitigation measures of the potential environmental impacts (Section 9.3). The Plan will also provide a framework for establishing environmental priorities, identifying potential risks and complying with industry and regulatory standards. Mitigation measures identified in this Study will be included in the construction contract specifications as the responsibility of the contract administrator to ensure that all environmental commitments made in this ESR are adhered to. The plan will be reviewed and revised on an ongoing basis to ensure its efficiency and success, as well as to address any concerns that may arise over the course of construction.

The Plan will include, but is not limited to the following:

- Erosion and Sediment Control Plan, which will identify particularly environmentally sensitive areas and outline the approach to minimize impact
- Materials management strategy
- Detailed tree removal, preservation and protection plan
- Stakeholder consultation plan, including public and Key Stakeholder notification procedures
- Health and Safety protocol to be followed, including Health and Safety requirements associated with works on privately owned land (e.g., Metrolinx right-of-way or Hydro One corridor) and/or in the vicinity of utility lines (e.g., sewer lines, natural gas pipeline, rail line signal cables etc.)
- Requirements and protocols to followed that are associated with oversight of the work by utility company representatives (e.g., Enbridge representative(s), when the work is being conducted in the vicinity of the natural gas pipeline), as applicable
- Public access restrictions schedule
- Public safety protection strategy and methods (e.g., construction zone fencing and signage requirements)
- Delineation of construction access routes, both within the East Don River corridor and surrounding neighborhoods
- Equipment maintenance and idling
- Noise, vibration, and dust control measures, if applicable
- Schedule and hours of construction

11.3 Monitoring Plan

The Construction Management Plan will outline the framework for the construction mitigation measures implementation while the construction Monitoring Plan will outline the procedures to monitor the potential environmental impacts of construction as well as assess the effectiveness of impact mitigation measures. The Plan will be carried out during and following construction and may include the following:

- Key environmental components to be monitored
- Construction and post-construction monitoring requirements
- The period during which the monitoring will be necessary
- Frequency and timing of surveys
- Location of monitoring sites
- Identify how unexpected environmental impacts identified during the monitoring will be addressed
- Project stakeholder notification requirements, where applicable

If any unforeseen issues arise during construction, the appropriate agencies, landowners and Key Stakeholders will be contacted and appropriate measures will be taken to mitigate the issue.

11.4 Restoration Plan

The Restoration Plan will address compensation for necessary vegetation removal required to construct the trail. The plan will specify compensation requirements for the removed and/or injured trees, at a greater amount than removed. All compensation plant material will be comprised of native trees and shrub species that are suitable to site conditions.

The Plan will address the following:

- Compensation ratios for removed trees and shrubs (greater number planted than removed)
- Planting locations
- Timely restoration to promote stabilizing of disturbed areas
- Site-appropriate wildlife habitat enhancements

In addition to the above, the Plan may look at identifying additional (other than those necessitated by the trail construction) restoration opportunities within the East Don River corridor to assist with settling priorities for work outside of this project.

11.5 Operations and Maintenance Plan

A trail Operations and Maintenance Plan will be developed in conjunction with the City of Toronto Parks, Forestry and Recreation. The Plan will outline the frequency and types of maintenance required based on the trail detailed design, as per the framework outlined in the City of Toronto's Multi-Use Trail Design Guidelines (2014). A number of areas along the trail that may require additional operations and maintenance considerations include:

- Trail segments located within the 2 or 5 year flood line
- Trail segments adjacent to slope/watercourse erosion areas
- Trail segments with high anticipated traffic volume
- Bridges
- Boardwalks
- Fenced areas

11.6 Stage 2 Archaeological Assessment

At the time of filing this report, Stage 2 Assessment has been completed for the section of the trail that is to be constructed during Phase 1 of the trail implementation (see Section 9.1 for more information and assessment results).

Conforming to the proposed trail construction phasing approach, trail sections to be constructed in the implementation of Phases 2 and 3 will undergo Stage 2 Assessment during detailed design.

12.0 RECOMMENDATIONS FOR FUTURE WORKS

Throughout Phases 1 to 4 of the EA process, many opportunities such as community trail access points that were outside of the Study scope were discussed with project stakeholders. These opportunities were brought forward by the project CLC, TAC, members of the public, Key Stakeholders, Review Agencies and Indigenous communities. These opportunities are listed below as recommendations to be pursued and implemented if funding becomes available in the future.

Recommendations for future works:

- Explore, design and implement community access points to the East Don Trail.
 - Informal trails and maintenance access routes providing access to the East Don River corridor exist that could potentially be formalized as multi-use trail access points.
 - The proposed East Don Trail construction access routes can be formalized into multi-use trail access points.
 - Explore opportunities to provide access in areas which currently offer limited access due to technical challenges (e.g., steep gradients).
- Collaborate with the Eglinton Connects project to explore opportunities for a pedestrian/bike connection to the future Eglinton Crosstown LRT.
- In the restoration plan (to be developed during trail detailed design as part of this EA), outline additional restoration opportunities in the East Don Valley, beyond those necessary to offset/mitigate project environmental impacts. Additional restoration opportunities discussed included wetland and meadow enhancement as well as erosion control works.
- Commemorate the history of First Nations in the region.
- Commemorate the history of the East Don River corridor.
 - Commemorating Charles Sauriol and promoting the rich conservation history of the area has been suggested by several members of the public.

13.0 PHASE 4 PUBLIC CONSULTATION

Public consultation in Phase 4 includes a review of the draft ESR by the CLC, TAC, and Key Stakeholders, the filing of the ESR document, placement of the ESR on the public record for 30 calendar days for review, and notification of the public and Review Agencies via a Notice of Completion (NOC). A summary of Phase 4 consultation is shown in Table 13-1.

Table 13-1: Summary of consultation during Phases 4

Date	Consultation
December 9, 2014, to December 11, 2014	Draft ESR circulated to CLC, TAC, and Key Stakeholders for review
October 27, 2016	ESR submitted to the Ministry of the Environment and Climate Change
November 10, 2016	ESR filed with the Ministry of the Environment and Climate Change for a public 30 day review period
November 10, 2016	NOC sent to stakeholder register and Indigenous Communities through Listserv or mail.
November 10, 2016	NOC published in local papers
November 10, 2016	ESR posted to project web page and report made available at local libraries in Study Area

For more information about the process for addressing outstanding issues about the project including requests for a Part II Order, see Section 2.4.

REFERENCES

- Bonnell, J. (2011). Don Valley Historical Mapping Project Background. *Don Valley Historical Mapping*. Retrieved from <http://maps.library.utoronto.ca/dvhmp/index.html>
- Burgar, R.W.C. (1990). An Archaeological Master Plan for the Metropolitan Toronto and Region Conservation Authority. Toronto and Region Conservation Authority.
- Canadian Council of Ministers of the Environment (CCME). (2007). Summary of Canadian water quality guidelines for the protection of aquatic life. *Canadian Environmental Quality Guidelines*. Canadian Council of Ministers of the Environment, Winnipeg.
- Chapman, L.J., and Putnam, D. F. (1984). The Physiography of Southern Ontario. Ontario Geological Survey.
- City of Toronto & Toronto and Region Conservation Authority. (2001). City of Toronto Natural Heritage Study – Final Report. A project in partnership between City of Toronto and TRCA
- City of Toronto. (2001). *Toronto Bike Plan: Shifting Gears*
- City of Toronto. (2002). By-law No. 476-2002. *Toronto.ca*. Retrieved from <http://www.toronto.ca/legdocs/bylaws/2002/law0476.pdf>
- City of Toronto. (2003). *Wet Weather Flow Management Master Plan*
- City of Toronto. (2004). *City of Toronto Accessibility Design Guidelines*. Retrieved from https://www1.toronto.ca/static_files/equity_diversity_and_human_rights_office/pdf/accessibility_design_guidelines.pdf
- City of Toronto. (2006). Toronto Official Plan 2015 Office Consolidation. *Toronto.ca*. Retrieved from http://www.toronto.ca/planning/official_plan/introduction.htm
- City of Toronto. (2008). 2006 City of Toronto Ward Profiles: Ward 26. *Toronto.ca*. Retrieved from http://www.toronto.ca/wards2000/pdf/2006/ward26_2006profiles.pdf
- City of Toronto. (2008b). 2006 City of Toronto Ward Profiles: Ward 29. *Toronto.ca*. Retrieved from http://www.toronto.ca/wards2000/pdf/2006/ward29_2006profiles.pdf

- City of Toronto. (2008c). 2006 City of Toronto Ward Profiles: Ward 31. *Toronto.ca*, Retrieved from http://www.toronto.ca/wards2000/pdf/2006/ward31_2006profiles.pdf
- City of Toronto. (2008d). 2006 City of Toronto Ward Profiles: Ward 34. *Toronto.ca*, Retrieved from http://www.toronto.ca/wards2000/pdf/2006/ward34_2006profiles.pdf
- City of Toronto. (2008e). Backgrounder. Issue: 2006 Census update on Social Risk factors in the City's 13 Priority Areas. *Toronto.ca*. Retrieved from <http://www.toronto.ca/demographics/>
- City of Toronto. (2008f). 2006 Flemingdon Park-Victoria Village Priority Area Profile. *Toronto.ca*. Retrieved from <http://www.toronto.ca/demographics/>
- City of Toronto. (2009). *Toronto Walking Strategy: Everyone is a Pedestrian*
- City of Toronto. (2012). 2011 Census: Population and Dwelling Counts. *Toronto.ca*. Retrieved from <http://www.toronto.ca/demographics/>
- City of Toronto. (2012b). Living in Toronto: Business and Economic Development facts. *Toronto.ca*, Retrieved from http://www.toronto.ca/toronto_facts/business_econdev.htm
- City of Toronto. (2012c). Staff report: Bikeway Trails Implementation Plan.
- City of Toronto. (2013). Doing Business: Key Industry Sectors. *Toronto.ca*. Retrieved from <http://www1.toronto.ca/wps/portal/contentonly?vgnextoid=401132d0b6d1e310VgnVCM10000071d60f89RCRD>
- City of Toronto. (2013b). Living in Toronto: Entertainment and tourism. *Toronto.ca*. Retrieved from http://www.toronto.ca/toronto_facts/entertainment_tourism.htm
- City of Toronto. (2013c). Living in Toronto: Toronto festivals and events calendar. *Toronto.ca*. Retrieved from <http://wx.toronto.ca/festevents.nsf/>
- City of Toronto. (2013d). Living in Toronto: Walking. St. Dennis Drive. *Toronto.ca*. Retrieved from <http://www.toronto.ca/transportation/walking/>
- City of Toronto. (2013e). Parks Plan 2013 – 2017.
- City of Toronto and Lees + Associates Landscape Architects and Planners. (2013) *Natural Environment Trail Strategy*. Prepared for City of Toronto.

- City of Toronto, Diversity Management and Community Engagement. (2004). *Accessibility Design Guidelines*.
- City of Toronto Parks, Forestry and Recreation, Urban Forestry (2013). *Sustaining & Expanding the Urban Forest: Toronto's Strategic Forest Management Plan*. Toronto, Ontario.
- City of Toronto Transportation Services and Parks, Forestry & Recreation. (2014). *Toronto Multi-Use Trail Design Guidelines*.
- Committee on the Status of Endangered Wildlife in Canada (COSEWIC). (2013). Database of wildlife species assessed by COSEWIC. *Cosewic.gc.ca*. Retrieved from http://www.registrelep-sararegistry.gc.ca/sar/index/default_e.cfm
- DTAH, AECOM, Public Space Workshop, LURA, Andrew Davies Design, SPH Planning + Consulting. (2013). *Lower Don Trail, Access, Environment + Art Master Plan*.
- Dunkelman, D. (2011). *Your Guide to Toronto Neighborhoods*.
- Flemingdon Park Golf Club, 2012 Course History. Retrieved from <http://www.flemingdonparkgolfclub.com/>
- Friends of the Pan Am Path. (2013). Project Overview. *Panampath.org*. Retrieved from <http://panampath.org/about/sample-page/>
- GO Transit. (2015). *Engineering Design Manual*
- Government of Canada. (2016). Official list of wildlife species at risk: A to Z species index. Retrieved from http://www.sararegistry.gc.ca/sar/index/default_e.cfm
- Lee, H.T., Bakowsky, W.D., Riley, J., Bowles, J., Puddister, M., Uhlig, P., and McMurray, S. (1998). *Ecological Land Classification for Southern Ontario: First Approximation and its Application*. Peterborough, Ontario: Ontario Ministry of Natural Resources, Southcentral Science Section, Science Development and Transfer Branch.
- MacViro Consultants Inc., and CH2M HILL Canada Ltd. (2003). *Combined Sewer Service Area, Study Area 1 of City of Toronto, Toronto Wet Weather Flow Management Master Plan*.
- Marshall Macklin Monaghan (MMM) Group. (2012). *Don River and Central Waterfront Project – Municipal Class EA Environmental Study Report*.
- Marshall Macklin Monaghan (MMM) Group. (2004). *Don River Hydrology Update*.
- Metrolinx. (2013). More Transit for Toronto. Retrieved from: www.thecrosstown.ca

Metrolinx. (ND). Go Rail Service Expansion: More Two-Way All-Day and Rush Hour Service. Retrieved from:
http://www.bigmove.ca/wpcontent/uploads/2013/01/NxWave_GO2WAD.pdf

Ministry of the Environment and Climate Change (MOECC). (2013). *Air Quality in Ontario Report for 2011*. Environmental Monitoring and Reporting Branch.

Minister of the Environment and Climate Change (MOECC). (2015). *Notice of Approval of Amendments, Municipal Engineers Association, Municipal Class Environmental Assessment, October 7, 2015*. Regarding Amendment to the Municipal Class Environmental Assessment, Proponent Municipal Engineers Association (MEA), EA file # EA-03-03-02-02.

Ministry of Finance. (2013). *Ontario Population Projections Update, 2012–2036*. Retrieved from <http://www.fin.gov.on.ca/en/economy/demographics/projections/>

Ministry of Municipal Affairs and Housing (MAH). (2005). Provincial Policy Statement. *Mah.gov.on.ca*. Retrieved from <http://www.mah.gov.on.ca/Asset1421.aspx>

Ministry of Natural Resources and Forestry (MNRF). (2002). *Technical Guide – River and Stream Systems: Erosion Hazard Limit*.

Ministry of Natural Resources and Forestry (MNRF). (2011). *Identification and Confirmation Procedure for Areas of Natural and Scientific Interest*. Retrieved from www.ontarioparks.com/english/planning_pdf/ansi/ansi_procedure.pdf

Ministry of Natural Resources and Forestry (MNRF). (2016). Species at Risk: What's at risk in Ontario? Retrieved from <https://www.ontario.ca/environment-and-energy/species-risk-ontario-list>

Ministry of Public Infrastructure Renewal. (2006). *Growth Plan for the Greater Golden Horseshoe*.

MMM Group. (2012). *Don River and Central Waterfront Project, Municipal Class EA Environmental Study Report. 10-08008-024-PM1*. Prepared for City of Toronto

Municipal Engineers Association. (2015). *Municipal Class Environmental Assessment (MCEA)*

North-South Environmental Inc. (2012). *Environmentally Significant Areas (ESAs) in the City of Toronto*. Retrieved from
http://www.toronto.ca/planning/environment/pdf/esa_report_volume1_sept2012.pdf

Ontario Ministry of the Environment and Energy (OMOEE). (1994). *Policies, Guidelines and Provincial Water Quality Objectives of the Ministry of Environment and Energy*. Toronto.

Panampath.org. (ND). Project Overview. Retrieved from <http://panampath.org/about-the-pan-am-path/sample-page/>

Racca, D.P. and A. Dhanju. (2006). *Project report for property value/desirability effects of bike paths adjacent to residential areas*. Retrieved from <http://128.175.63.72/projects/DOCUMENTS/bikepathfinal.pdf>

Royal Commission on the Future of Toronto Waterfront. (1992). *Regeneration: Toronto's waterfront and the sustainable city final report* (ISBN 0-660-14400). Toronto, ON: Queen's Printer of Ontario.

R.V. Anderson, City of Toronto, and Toronto and Region Conservation Authority. 2012. *East Don Trail Master Plan Update Final Report. RV112334. Prepared for Toronto and Region Conservation Authority and City of Toronto*

Toronto and Region Conservation Authority. (2007). *Terrestrial natural heritage system strategy – Appendix B: Vegetation community and species ranking and scoring method* [Data file]. Retrieved from <http://www.trca.on.ca/dotAsset/26728.pdf>

Toronto and Region Conservation Authority. (2009). *Don River watershed plan: Baseflow and water use assessment – Report on current conditions* [Data file]. Retrieved from <http://trca.on.ca/dotAsset/55387.pdf>

Toronto and Region Conservation Authority. (2009b). *Don River watershed plan: Terrestrial natural heritage – Report on current conditions and refinement of a target system* [Data file]. Retrieved from <http://trca.on.ca/dotAsset/55397.pdf>

Toronto and Region Conservation Authority. (2009c). *Don River Watershed Plan: Geology and Groundwater Resources – Report on Current Conditions*.

Toronto and Region Conservation Authority. (2009d). *Don River watershed plan: Surface water hydrology/hydraulics and stormwater management – Report on current conditions*. Retrieved from <http://trca.on.ca/dotAsset/55383.pdf>

Toronto and Region Conservation Authority. (2009e). *Don River watershed plan: Aquatic system – Report on current conditions* [Data file]. Retrieved from <http://trca.on.ca/dotAsset/55393.pdf>

Toronto and Region Conservation Authority. (2009f). *Don River watershed plan – Chapter 3 Current conditions* [Data file]. Retrieved from <http://www.trca.on.ca/dotAsset/68761.pdf>

Toronto and Region Conservation Authority. (2010). *Guided Walks: Wilket creek*.

- Toronto and Region Conservation Authority. (2011). *Regional watershed monitoring program: Fish community summary 2001-2009* [Data file]. Retrieved from <http://www.trca.on.ca/dotAsset/158842.pdf>
- Toronto and Region Conservation Authority. (2011b). *Regional watershed monitoring program: Surface water quality summary 2006-2010* [Data file]. Retrieved from <http://www.trca.on.ca/dotAsset/158845.pdf>
- Toronto and Region Conservation Authority. (2013). *Archaeological Assessment (Stage 1) in the City of Toronto, East Don Trail Project*. Downsview, ON.
- Toronto and Region Conservation Authority. (2013b). *Don River watershed report card 2013* [Data file]. Retrieved from <http://trca.on.ca/dotAsset/157161.pdf>
- Toronto Public Health. (2012). *Road to Health: Improving Walking and Cycling in Toronto*
- Toronto Transit Commission (TTC)/City of Toronto. (2010). *Eglinton Crosstown Light Rail Transit - Transit Project Assessment - Environmental Project Report. Toronto.ca*. Retrieved from http://www.toronto.ca/involved/projects/eglinton_crosstown_lrt/epr/chapter-3-project-description-sections-3-1-to-3-4.pdf

GLOSSARY OF TERMS

Alternative Solutions: Alternative ways of solving a documented deficiency, including the alternative of doing nothing. An assessment of alternative solutions must precede determination of alternative remedial measures and alternative methods/designs.

Analyte: A substance whose chemical elements are being identified and measured.

Archaeological Potential: The possibility of a previously unidentified archaeological resource existing in an area is evaluated by determining the area's archaeological potential. Geographical and historical factors associated with human settlement are indicators of archaeological potential. In areas of significant archaeological potential, an archaeological assessment should be conducted to check for the existence of an archaeological resource.

Archaeological Resource: The remains of any building, structure, activity, place or cultural feature, which, because of the passage of time is on or below the surface of the land or water. Significant archaeological resources are those which have been identified and evaluated and determined to be significant to the understanding of the history of a people or place.

Armourstone: Large quarried rock material that is used in construction. It can be used to build shoreline or streambank protection devices. When used as shore protection it dissipates wave energy and reduces erosion.

Backwater: Water moved or held back.

Biodiversity: A term describing the variety of species, both flora and/or fauna, contained within an ecosystem.

Boulevard Trail: A trail in the boulevard of the road right-of-way or trail adjacent to roadway.

Broad Evaluation Criteria: High level standards that will be assessed, and have been based on Environmental Assessment objectives. Each Broad Evaluation Criteria contains additional Sub Evaluation Criteria

Broad Spectrum of Users: A wide range of user types (e.g., cyclists, walkers, rollerbladers, etc.) and abilities.

Built Heritage Resource: One or more buildings, structures, monuments, installations, or remains associated with architectural cultural, social, political, economic or military history.

Channel: A natural stream that conveys water; a ditch or channel excavated for the flow of water.

Class Environmental Assessment Document: A report documenting the EA process for a class of undertakings which is formally submitted for approval under the Environmental Assessment Act in Ontario. Once a Class EA document is approved, specific projects covered by the Class EA can be implemented by proponents without having to obtain separate approval. This is provided that the approved planning and design process is followed, and there is compliance with the Notice of Approval.

Class Environmental Assessment (EA) Process: A planning and design process used for a group of undertakings which have a generally predictable range of effects, and have relatively minor environmental significance.

Conservation: The wise use and management of natural resources to maintain, restore, enhance and protect the quantity and quality of the resources for sustained benefit.

COR-TEN: Naturally weathering steel, trademarked COR-TEN, forms a natural looking, rusted surface negating the need for painting. This steel is easy to maintain and not easily vandalized.

Cultural Heritage Landscape: A geographic area of heritage significance, which has been modified by human activities. Such an area is valued by a community and is of significance to the understanding of the history of a people or place.

Cut-and-cover Technique(s): Construction methodology which involves removing and excavating materials required to construct a tunnel through a rail line embankment. Once the tunnel is constructed, the embankment and rail tracks are replaced.

Degradation: Involves the lowering of the streambed elevation and a corresponding increase in channel capacity.

Drainage Line: a route or course along which water moves or may move to drain a region.

Ecological Land Classification (ELC): A cartographical delineation of distinct ecological areas, identified by their geology, topography, soils, vegetation, climate conditions, living species, habitats, water resources, as well as anthropic factors. Ontario's ELC is a tool for the identification, description, naming, mapping and monitoring of ecosystems.

East Don Valley Corridor: The adjacent area surrounding the East Don Trail River (between Lawrence Avenue and approximately Millwood Road) used for recreation purposes, including the valley lands, parks system, hydro corridor, golf course and associated walking routes.

East Don Trail Project: Refers to all activities associated with the completion of

the East Don Trail, including planning (through the Environmental Assessment), detailed design, implementation and monitoring.

East Don Trail Study: Refers to the planning and decision making process, as completed through the Environmental Assessment process, associated with the East Don Trail

Ecosystem: A dynamic totality comprised of interacting living and non-living components which encompasses the interacting components of sunlight, air, water, soil, plants, and animals (including humans), within the system.

Effluent: Outflowing of liquid

Environment: As defined in the Environmental Assessment Act subsection 1.(1), “environment” means:

- a) air, land or water,
- b) plant and animal life, including human life,
- c) the social, economic and cultural conditions that influence the life of humans or community,
- d) any building, structure, machine or other device or thing made by humans,
- e) any solid, liquid, gas, odour, heat, sound, vibration or radiation resulting directly or indirectly from human activities, or
- g) any part or combination of the foregoing, and the interrelationships between any two or more of them, in or of Ontario.

Environmental Study Report (ESR): The documentation for a specific project planned in accordance with the procedures for Schedule C projects for Ontario's Class Environmental Assessment processes. The ESR sets out the planning and decision making process, including consultation practices, which has been followed to arrive at the preferred solution. The ESR also sets out the mitigating measures proposed to avoid or minimize environmental impacts.

Environmentally Significant Area: An area which contains significant natural features, ecosystems and/or ecological functions which warrant identification, conservation and protection in the long term interest of the environment and the public at large

Erosion: A term used in this document collectively referring to:

- a) The wearing away of the land surface by running water, wind, ice or other geological agents;
- b) Detachment and movement of soil or rock fragments by water, wind, ice or gravity;
- c) Instability of a slope.

Fauna: A collective term for animal species present in an ecosystem.

Fill: Any material deposited by any agent so as to fill or partly fill a channel, valley, or other depression.

Flood: A rise in the water level resulting in the inundation of areas adjacent to a lake or stream channel not ordinarily covered by water.

Flood Event: A riverine flood occurrence typically measured by return period (i.e., a 100 year return period has a 1% probability of being equalled or exceeded in any given year).

Flood Plain: The area adjacent to a watercourse which is inundated as a result of flows exceeding the channel capacity of the watercourse. Floodplain can be defined according to design storms which inundate specified areas depending on certain conditions.

Flora: The collective term for the plant species present in an ecosystem.

Fluvial: The features (morphology) and process related to flowing water. Fluvial processes, including the movement of sediment due to erosion, transportation and deposition, and the formation of river channel features (morphology) such as (but not inclusive of), sediment bars, banks, channel sinuosity, floodplains, pools, riffles, and islands.

Gabion: A rectangular or cylindrical wire mesh cage filled with rock and used in protecting against erosion.

Geomorphology: The physical features of the earth and ongoing processes which shape landforms.

Groundwater: Subsurface water in zone of saturation.

Habitat: The place or site where an animal or plant community naturally or normally lives. The environment in which the life needs of a plant or animal organism, population, or community are supplied.

HEC-RAS: A model used to estimate flow conditions. HEC-RAS is an acronym for Hydrologic Engineering Centers River Analysis System.

Hydraulic: The movement of water through conveyance systems.

Hydrology: The occurrence, distribution and movement of the waters of the earth and their environmental relationships.

Impact Evaluation: High level assessment results of each of the “alternatives to”, done for each of the Sub Evaluation Criteria

Impervious/Impermeable Soil: A soil through which water, air or roots cannot penetrate.

Informal Trails: Unmanaged Natural Environment Trails (see definition on the

following page). Also termed informal natural surface (dirt) trails.

Jurisdiction: The extent of territory over which authority may be legally exercised.

L Ranking System: System of ranking and scoring species and vegetation communities to provide guidelines for natural heritage protection and management at both small and large scales developed by the Toronto and Region Conservation Authority and applied to species and vegetation communities within TRCA's jurisdiction.

Landform: A discernible natural landscape, such as a floodplain, stream terrace, plateau, or valley.

Level crossing: An intersection where a railway line crosses a road or path at the same level/grad, as opposed to the railway line crossing over or under using a bridge or tunnel.

Listserv: Email subscription service for City of Toronto e-newsletter updates. Users can subscribe to a variety of topics and types of updates.

Master Plan: A long range plan which integrates infrastructure requirements for existing and future land use with environmental assessment principles.

MNRF: Ontario Ministry of Natural Resources and Forestry (Previously the Ministry of Natural Resources (MNR)).

MOECC: Ontario Ministry of the Environment and Climate Change (Previously the Ministry of the Environment (MOE)).

Multi-modal Transportation: combination of two or more modes of transportation (e.g., bicycle, vehicle, train, subway, etc.)

Multi-use Trail: Facilities separated from the roadway, which support a number of non-motorized uses such as walking, running, cycling, inline skating, wheelchair users, and dog walking, amongst others. In order to accommodate these uses, the multi-use trail must be approximately 3.5 to 4 meters in width with an asphalt surface. Where possible, the trail will meet accessibility requirements and provide access for EMS and maintenance vehicles.

Natural Environment Trails: Refers to the extensive network of informal natural surface (dirt) trails within natural area parkland and ravines that have been created organically by users. These trails are heavily used by hikers, dog-walkers, school and day-camp groups, nature enthusiasts and mountain bikers,

Outfall: Point where water flows from a conduit or drain.

Overall Evaluation: Based on the outcomes of the sub evaluation criteria, the "alternative to" are each assigned either "Least Preferred" or "Most Preferred" for the Broad Evaluation Criteria in order to determine which option is most suitable.

Part II Order: The legal mechanism whereby the status of an undertaking can be elevated from an undertaking within a Class EA to an Individual Environmental Assessment.

Permeable/Pervious: Capable of transmitting air or liquid.

Project: A specific activity planned and implemented in accordance with the Class EA. The project consists of all those activities necessary to solve a specific problem or address an opportunity.

Proponent: The Conservation Authorities of Ontario for the Class EA document. For a specific undertaking planned in accordance with the approved Class EA, it is the individual Conservation Authority.

Public: Includes interest groups, associations, and individuals.

Rapid Geomorphic Assessment (RGA): A standardized assessment protocol that documents observed indicators of channel instability. Observations are quantified based on evidence of aggradation, degradation, channel widening, and planform adjustment. The index produces values that indicate whether the channel is stable/in regime (score <0.25), stressed/transitional (score 0.26-0.50) or adjusting (score >0.51).

Regulations: Statutory controls, enacted through legislation, for the purpose of controlling land and water use.

Revetment: A sloped facing of stone, concrete etc. built to protect an embankment or shore structure against erosion and failure by wave action or currents.

Review Agencies: Government agencies, ministries or public authorities or bodies whose mandates require them to have jurisdiction over matters affected or potentially affected by projects planned under the Class EA.

Riffle: A short, relatively shallow, and often straight and wide length of stream where water runs fast over coarse-bedded rocks.

Rip-rap: A protective layer of quarystone, usually of mixed size, graded within wide size limit, placed to prevent erosion, scour, or sloughing of an embankment or bluff.

Risk: The chance that is associated with any action where harm or loss can be encountered. The risk associated with building in the floodplain can be assigned a percentage value based upon the degree of flood susceptibility of the proposed development.

River Reach: A section of a watercourse containing a set of specified characteristics depending on the criteria (e.g., geomorphology, aquatic habitat, etc.)

Riverine: Of or pertaining to inland streams or rivers as opposed to lakeshores.

Roundstone: Quarried rock material that is rounded, also known as river stone.

Runoff: The conveyance of surface water caused by precipitation and/or snowmelt.

Sediment: Solid material, both mineral and organic, that is in suspension, is being transported, or has been moved from its site or origin by air, water, gravity or ice and has come to rest on the earth's surface either above or below sea level.

Slope: The degree of deviation of a surface from horizontal, measured in a numerical ratio, percent or degrees.

Slope Failure: The failure or collapse of a slope, common types include transitional slides, rotational slides (circular, shallow, non-circular), successive slips, retrogressive slides (transitional, rotational), and flows (mud, earth, sheet).

Stability Index: Referring to score from the Rapid Geomorphic Assessment (RGA) standardized classification system, used to define a watercourse as stable, in-transition, or unstable.

Stable Slope: The angle a slope would achieve when toe erosion is absent.

Storm Event: A rainfall event where the amount of rain that falls is measured as opposed to the volume of runoff. One storm referred to is the 1:100 Year Storm: the storm that produces an amount of rainfall that based on historical data occurs on the average once in 100 years.

Stratigraphy: Stratigraphy refers to the formation, composition, and sequence of sediments that make up different layers of earth. Distinction of different layers is often visible in channel banks and valley slopes.

Study: A detailed investigation or analysis of a topic, subject or situation, when used in reference to the East Don Trail refers to the planning process undertaken by the Environmental Assessment (see East Don Trail Study).

Sub Evaluation Criteria: Specific standards that each “alternative to” will be evaluated against.

Successional Communities: Represents the progression of different types of vegetation communities within an area following past disturbances or initial colonization.

Summary of Evaluation: A sum of the impact evaluation for each sub evaluation criteria in the form of a simple illustration. The illustration is meant to allow for easy and comprehensive comparison of the impact evaluation.

Surface Runoff: That component of precipitation that results in overland flow and

becomes a temporary part of stream flow.

Terrestrial Natural Heritage System Strategy: An approach developed by the Toronto and Region Conservation Authority that provides extensive data, scientific models, mapping and guidance for TRCA staff, TRCA's partner municipalities and community groups for achieving natural heritage protection objectives

Thalweg: A line defining the lowest points along the course of a valley or river bed.

Topography: The relative positions and elevations of the natural or built features of an area that describe the configuration of its surface.

Toe Erosion: The erosion which occurs at the toe of slopes, largely as a result of the continuous removal of earthen material by waves and currents.

Trail Network: a series of interconnecting multi-use trails with multiple access points.

Trail System: a specific multi-use trail section that connects one area to another and is individually named (e.g., Taylor Creek Trail, Lower Don Trail, etc.)

Undertaking: a single project or group of projects carried out in accordance with the requirement of the Environmental Assessment Act.

Urban Runoff: Storm water generated from urban or urbanizing areas.

Vascular Plant: higher plants characterized by presence of complex conducting tissue formed by more than one cell type.

Watershed: The area drained by a river or lake system. A drainage area, drainage basin, or catchment area.

Watercourse: Flowing water, though not necessarily continuous, within a defined channel and with a bed and banks which usually discharges itself into some other watercourse or body of water.

Weir: Device for measuring or regulating the flow of water.

Wetland: Land that is seasonally or permanently covered by shallow water, as well as land where the water table is close to or at the surface. In either case, the presence of abundant water has caused the formation of hydric soils and has favoured the dominance of either hydrophytic or water-tolerant plants. The four major types of wetlands are swamps, marshes, bogs and fens. Land being used for agricultural purposes, that is periodically 'soaked' or 'wet', is not considered to be a wetland in this definition.

Wildlife: A term used in this document to refer to all forms of animal life including insects, amphibians, reptiles, birds, and mammals.