

Appendix C

Natural Heritage Review

Technical Memorandum

To: Karen Montain, Transportation Analyst, LEA Consulting Limited
cc: Grant Kauffman, Vice President, Ontario Region, LGL Limited
From: Lisa Coburn, Botanist/ISA Certified Arborist
Date: March 18, 2015
Re: St. Clair Avenue West Railway Underpass Structure and Road Improvements Functional Planning Study

1.0 INTRODUCTION

The City of Toronto is undertaking a functional planning study to develop, identify, and evaluate short-term and long-term alternative options to address the traffic operations and safety conditions along St. Clair Avenue West between Keele Street and Old Weston Road. The study limits are presented in **Figure 1**. The functional planning study is being conducted by Lea Consulting Ltd. on behalf of the City of Toronto. LGL Limited, as a sub-consultant to Lea Consulting Ltd., is providing natural heritage services. The Technical Memorandum profiles existing natural heritage conditions found in the study area.

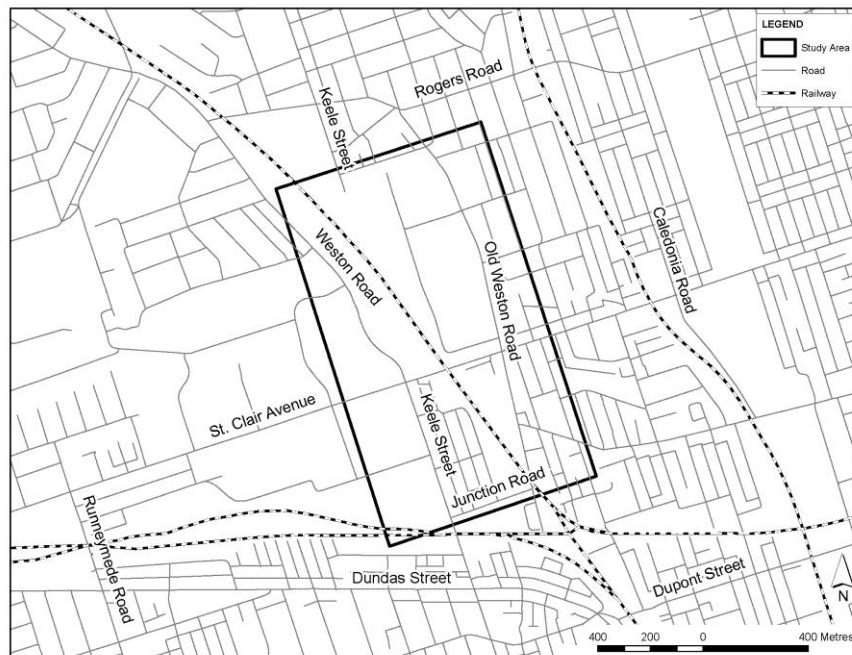


FIGURE 1. KEY PLAN

2.0 EXISTING CONDITIONS

The study limits are located within a highly urbanized environment, with natural heritage features limited to highly disturbed vegetation communities, parks and street trees. The following discussion outlines the existing environmental conditions and identifies natural heritage areas and/or features of environmental sensitivity and/or significance.

2.1 Physiography and Soils

The study area is located within the South Slope physiographic region. This physiographic region occupies approximately 2,400 km² and extends from the Niagara Escarpment in the west to the Trent River in the east (Chapman and Putnam 1984). The South Slope predominately consists of shallow shale and till plains which slopes gently in a southeasterly direction towards Lake Ontario. The topography is mostly subdued and includes low-relief drumlins and moraines. The study area has been previously developed for residential commercial and transportation facilities. As such the soils in the study area are highly disturbed.

2.2 Aquatic Habitats and Communities

The study area is located in the Highland Creek and Waterfront watershed. Based on review of Ontario Base Map 30M-11, and Toronto and Region Conservation Authority subwatershed mappings, there are no watercourses located within the study area.

2.3 Vegetation and Vegetation Communities

In general, vegetation and vegetation communities are highly disturbed and of low quality. The following section describes the vegetation communities, parkland and street trees that form the urban natural heritage features within the study area.

Vegetation communities within the study area are culturally influenced as a result of the density of urban development and are generally restricted to areas adjacent to the rail corridor. Cultural vegetation communities are disturbed and generally contain a high proportion of invasive and non-native plant species. In addition, one deciduous forest community was identified within the study area adjacent to the rail corridor. It is likely this forest community is highly disturbed as a result of existing land uses.

In addition, vegetation is located within the City of Toronto parks system. Though these parks are manicured by City maintenance staff, the vegetation still provides ecological services, such as carbon filtration and water uptake. A number of parks are located within the study area, including: Turnberry North Park, Turnberry South Park, Sadra Park, Ontario Hydro Lands, Upper Junction Park, and Keele/Mulock Parkette. The locations of these parks are presented on **Figure 2**.

The City of Toronto maintains a database of street trees that are within the urban area; and these trees are considered part of the City's 'urban forest.' The locations of street trees within the study area are presented on **Figure 2**. Please note, some dots on the figure are on top of buildings; this is due to the fact that the dots are associated with the address, and not a Global Positioning System (GPS) recorded location. Each street tree dot location indicates tree(s) on the property.

Based on a review of the data collected, there are a total of 708 trees, comprised of 67 species different tree species within the study area. The diameter at breast height (DBH) for the recorded trees ranges from 2 to 104 cm, with an average of 20 cm DBH.

The most common species is Norway maple (*Acer platanoides*) with a total of 111 trees, in addition to five different Norway maple varieties, including: Columnar Norway maple (20 trees), Crimson King Norway



LEGEND

- Study Area
- Ravine and Natural Feature Protection Boundary (approximate)
- Tree
- Kentucky-Coffee Tree

Parks

- Park
- 1 Ontario Hydro Lands
- 2 Upper Junction
- 3 Keele Mulock Parkette
- 4 Turnberry North Park
- 5 Turnberry South Park
- 6 Sadra Park

Note: Tree locations are associated within and address and not a Global Positioning System (GPS) recorded location.

Data Source: City of Toronto.

100 50 0 100 Metres



NATURAL HERITAGE EXISTING CONDITIONS



Project: TA8384	Figure: 2
Date: March, 2015	Prepared By: MWF
Scale: 1 : 8000	Checked By: LMC

maple (14 trees), Deborah Norway maple (1 tree), Emerald Queen Norway maple (8 trees), and Schwedler Norway maple (8 trees). Norway maple is often used as a street tree due to its tolerance for wind, frost, air pollution and soil acidity. Other common tree species include: honey locust (*Gleditsia tricanthos*) with a total of 64 trees, linden (*Tilia* sp.) with 54 trees, white ash (*Fraxinus americana*) with 41 trees, and Japanese tree lilac (*Syringa reticulata*) with a total of 31 trees.

Species at Risk

A review of the OMNRF Natural Heritage Information Centre (2013) indicates that there are two historic records of plant species that are regulated under the Ontario *Endangered Species Act* or the Canada *Species at Risk Act* within the study area (those plant species regulated as Special Concern, Endangered, Rare or Threatened). A summary of the species identified and the year the species was last observed within the study area is presented in **Table 1**.

TABLE 1.
SUMMARY OF HISTORIC PLANT SPECIES AT RISK OCCURRENCE RECORDS WITHIN THE STUDY AREA

Scientific Name	Common Name	COSEWIC	MNR	Date Last Observed
<i>Morus rubra</i>	Red mulberry	Endangered	Endangered	1941
<i>Eurybia divaricata</i>	White wood aster	Threatened	Threatened	1927

Since the occurrence records for the above mentioned species are over 30 years old, the records are considered historical. As a result of the historic nature of the occurrence records and the highly urbanized/disturbed nature of the study area, it is unlikely that habitat for the above noted plant species at risk is present within the study area.

Kentucky coffee tree

The City of Toronto street tree database identified 3 Kentucky coffee trees within the study area. Kentucky coffee tree is regulated as Threatened under the Ontario *Endangered Species Act* and the Canada *Species at Risk Act*. These trees were likely planted by the City of Toronto for streetscape purposes. The trees range in size from 4 to 8 cm DBH and are located on Mulock Avenue and Vine Avenue. The locations of the Kentucky coffee trees are presented on **Figure 2**. Although MNRF has not been contact in regard to these trees, previous correspondence with Mr. Bohdan Kowalyk (MNRF Aurora District Forester) has revealed that streetscape Kentucky coffee trees are not considered within the context of the *Endangered Species Act*.

2.4 Wildlife and Wildlife Habitat

Wildlife habitat within the study area is highly disturbed by urban activity, as natural areas are limited to parks with manicured gardens and trees and a small deciduous forest community south of the Keele Street and Lavender Road intersection. Wildlife present in the study area will generally be common to urban areas due to their adaptation to human activities and noise. Such species could include: Gray Squirrel (*Sciurus carolinensis*), Raccoon (*Procyon lotor*), Rock Pigeon (*Columba livia*) and House Sparrow (*Passer domesticus*).

Species at Risk

A review of the OMNRF Natural Heritage Information Centre database (2013) indicates that there are five historic records of wildlife species that are regulated under the Ontario *Endangered Species Act* or the Canada *Species at Risk Act* within the study area (those wildlife species regulated as Special Concern, Endangered, Rare or Threatened). A summary of the species identified, the year the species was last observed in the study area, and a description of suitable habitat types is presented in **Table 2**.

TABLE 2.
SUMMARY OF HISTORIC WILDLIFE SPECIES AT RISK OCCURRENCE RECORDS WITHIN THE STUDY AREA

Scientific Name	Common Name	COSEWIC	MNR	Date Last Observed	Habitat Preference
<i>Regina septemvittata</i>	Queen Snake	Endangered	Endangered	1858	The Queen Snake is a habitat specialist that rarely ventures more than a few meters from their aquatic habitat.
<i>Thamnophis sauritus</i>	Eastern Ribbonsnake	Special Concern	Special Concern	1913	The Eastern Ribbonsnake is generally associated with aquatic habitat edges, particularly where clumps of grasses, sedges or shrubs are present (Harding 1997).
<i>Sternotherus odoratus</i>	Eastern Musk Turtle	Special Concern	Threatened	1858	In the Great Lakes region, the Eastern Musk Turtle is most commonly found in clear lakes or ponds (Harding 1997).
<i>Apalone spinifera</i>	Eastern Spiny Softshell	Threatened	Threatened	1982	The Eastern Spiny Softshell inhabits a variety of aquatic settings such as rivers, streams, bays, ditches and ponds.
<i>Emydoidea blandingii</i>	Blanding's Turtle	Threatened	Threatened	1989	The Blanding's Turtle typically inhabits shallow, weedy waters such as ponds, marshes, swamps and lake coves and inlets (Harding 1997).

The occurrence records for the above mentioned species are over 20 years old and considered historical. As noted above, the study area is now highly disturbed and urbanized. Based on the knowledge of the habitat requirements for the species, it is highly unlikely that they would be found in the study area today.

Barn Swallow

Barn Swallow is regulated as Threatened by the Ontario *Endangered Species Act*. Barn Swallows generally build mud nests on bridges, walls, ledges and barns (Cadman et al. 2007), and typically forage in open areas such as agricultural lands, meadows or over water. Decline in Barn Swallow numbers is not well understood at this time; however, habitat destruction, decline in insect populations and scarcity of suitable nesting sites are all considered to be contributing factors.

A field investigation was conducted on November 26, 2013 to confirm the presence/absence of Barn Swallow nest under the CN Rail Bridge located on St Clair Avenue West just east of Keele Street. No Barn Swallow nests were noted during LGL's field investigation and it was determined the bridge structure does not provide suitable nesting habitat for Barn Swallow. Representative photos of the bridge structure are provided in **Appendix A**.

2.5 Designated Natural Areas

Designated natural areas include areas that have been identified for protection by the Ontario Ministry of Natural Resources and Forestry, Toronto and Region Conservation Authority, and City of Toronto. Based on a review of secondary sources, there are no Environmentally Sensitive Areas (ESAs), Areas of Natural and Scientific Interest (ANSIs), or Provincially Significant Wetlands (PSWs) located within or on adjacent lands up to 120 m of the study area.

City of Toronto Ravine and Natural Feature Protection By-law

The City of Toronto Ravine and Natural Feature Protection By-law restricts activity within the protection limits. A portion of the study is within the City of Toronto's Ravine and Natural Feature Protection By-law limits and is presented on **Figure 2**. A permit will be required from the City of Toronto Urban Forestry for any works undertaken within the Ravine and Natural Feature Protection limits.

In addition, a portion of the study area is identified as a component of the Natural Heritage System of the City of Toronto (City of Toronto Official Plan 2010).

3.0 EVALUATION OF ALTERNATIVES

3.1 Option 1A and 1B

Impacts related to the construction of the proposed Option 1A and 1B will result in the displacement of and disturbance to vegetation and vegetation communities and wildlife and wildlife habitat. Vegetation communities within the vicinity of the proposed Option 1A and 1B are cultural in origin and likely contain a high proportion of invasive and non-native plant species, consequently, the impacts to the vegetation communities is considered to be minor in significance. The significance of this removal is considered to be low. The proposed roads, for the most part, are planned for areas already disturbed by existing infrastructure. Impacts associated with the proposed road construction will occur in areas that would typically contain a wildlife assemblage which is considered tolerant of human disturbance/anthropogenic influences. Limited negative effects are anticipated as wildlife habitat within the study area likely consists entirely of previously modified/disturbed habitat.

3.2 Option 2A

Impacts related to the construction of the proposed Option 2A will result in the displacement of and disturbance to vegetation and vegetation communities and wildlife and wildlife habitat. Vegetation communities within the vicinity of the proposed Option 2A are cultural in origin and as a result impacts to vegetation communities are considered to be minor. A portion of the Option 2A is located within the RNFP boundary, as such, a permit for the removal of any trees will be required from City of Toronto Urban Forestry. The proposed road, for the most part, is planned for areas already disturbed by existing infrastructure. As a result, no significant impacts to wildlife or wildlife habitat are anticipated.

3.3 Option 3A

Impacts related to the construction of the proposed Option 3A will result in the displacement of and disturbance to vegetation and vegetation communities and wildlife and wildlife habitat. Vegetation communities within the vicinity of the proposed Option 3A is limited to scattered trees adjacent to the rail corridor. As a result, impacts to vegetation and vegetation communities is considered to be minor in significance. The proposed road, for the most part, is planned for areas already disturbed by existing infrastructure. Impacts associated with the proposed road construction will occur in areas that would typically contain a wildlife assemblage which is considered tolerant of human disturbance/anthropogenic influences. As a result, no significant impacts to wildlife or wildlife habitat are anticipated.

3.4 Option 4 and 5

Impacts related to the construction of the proposed Option 4 and 5 will result in the displacement of and disturbance to vegetation and vegetation communities and wildlife and wildlife habitat. Vegetation communities within the vicinity of the proposed Option 4 is limited to culturally influenced communities adjacent to the rail corridor and a small deciduous forest. Impacts associated with the proposed construction of the east west route will result in the removal of cultural communities that likely contain a high proportion of invasive and non-native plant species, consequently, the impact to the vegetation communities is considered to be minor in significance. The proposed construction of the Keele Street extension will result in the removal of a small deciduous forest. It is likely this community is disturbed as a result of the existing land uses. In addition, the entire forest community is located within the RNFP boundary and as a result, a permit for the removal of any trees will be required. The proposed roads, for the most part, is planned for areas already disturbed by existing infrastructure. As a result, no significant impacts to wildlife or wildlife habitat are anticipated.

In addition, the proposed construction of the Davenport Road extension will result in the removal of scattered trees adjacent to the rail corridor. Impacts to vegetation and wildlife related to the proposed extension are considered to minor as a result, of the highly urbanized nature of the study area.

References

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- Department of Fisheries and Oceans, Ontario Ministry of Natural Resources and Toronto and Region Conservation Authority. 2013. *Distribution of Fish Species at Risk Mapping*.
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APPENDIX A
PHOTOGRAPHIC RECORD

PHOTO APPENDIX St. Clair Avenue West



Photo 1. Looking west at east side of railway bridge over St. Clair Ave. West from Old Weston Road.



Photo 2. Looking west at bridge ceiling above center beam support from north side of St. Clair Ave. West



Photo 3. Looking east at bridge ceiling above center beam support from south side of St. Clair Ave. West



Photo 4. Looking north east at north wall ceiling from St. Clair Ave. West along west side of bridge.



Photo 5. Looking east at west side of railway bridge from Keele St. side.



Photo 6. Looking west at light along north side of center ceiling beam from St. Clair Ave. W. north side