

## APPENDIX D

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### NATURAL HERITAGE REPORT



# NATURAL HERITAGE REPORT

**Oakville Transit Facility  
Transit Project Environmental Assessment**

*prepared for:*

**The Town of Oakville  
and**



*prepared by:*



**May 2009**

# NATURAL HERITAGE REPORT

Oakville Transit Facility

Transit Project Environmental Assessment

*prepared by:*



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**MAY 2009**

**LGL Project # TA4781**

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## 1.0 INTRODUCTION

The Town of Oakville is conducting a Transit Environmental Assessment with a Transit Project Assessment Project (TPAP) under Ontario Regulation 231/08 to investigate the construction of a new Oakville Transit operations and maintenance garage located at 430 Wycroft Road. The study area is presented in Figure 1. The IBI Group is conducting the study on behalf of the Town of Oakville. LGL Limited, as a sub-consultant to IBI Group, is providing natural heritage services. This Draft Natural Heritage Report documents the results of the natural heritage investigation conducted for this proposed project.

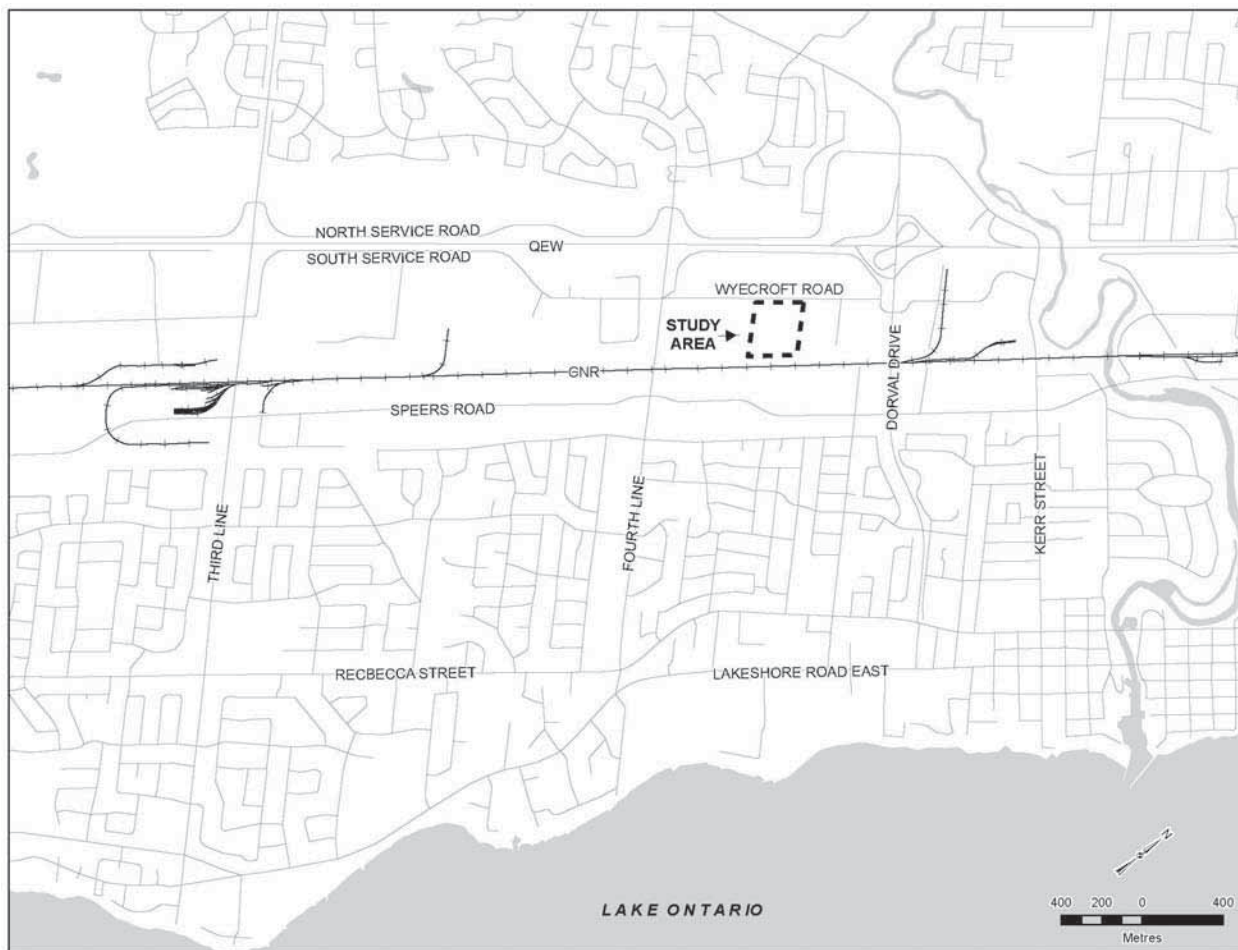


FIGURE 1. KEY PLAN OF STUDY AREA

## 2.0 EXISTING CONDITIONS

The following discussion outlines the existing environmental conditions within the study area and identifies natural heritage areas and/or features of environmental sensitivity and/or significance.

### 2.1 Designated Natural Areas

Designated natural areas include areas identified for protection by the Ontario Ministry of Natural Resources (OMNR), Halton Region Conservation Authority (HRCA) and upper and lower tier municipalities. A review of the information contained in the Natural Heritage Information Centre data base (NHIC 2008) indicates that there are no Provincially Significant Wetlands (PSWs), Areas of Natural and Scientific Interest (ANSIs) or Environmentally Significant/Sensitive Areas (ESAs) within 120 m of the subject area. A review of the Town of Oakville Official Plan (2006) indicates that there are no designated woodlands, ESAs, or locally identified wetlands within 120 m of the site.

### 2.2 Vegetation and Vegetation Communities

The geographical extent, composition, structure and function of the vegetation communities were identified through airphoto interpretation and a field investigation. Airphotos were interpreted to determine the limits and characteristics of the vegetation communities. Field investigations of semi-natural vegetation were conducted within the study area on March 18, 2009 to ground truth the boundaries of the vegetation community and to conduct a late winter botanical survey.

The vegetation communities were classified according to the *Ecological Land Classification for Southern Ontario: First Approximation and Its Application* (Lee *et al.* 1998). A plant list and a description of the general composition of the communities were obtained during the field survey. Vascular plant nomenclature follows Newmaster *et al.* (1998), with a few exceptions.

The plant survey was completed at 430 Wyecroft Road in Oakville. The study area is bounded by a hydro corridor and railway line to the south, Wyecroft Road to the north, and industrial units to both the west and east.

#### 2.2.1 Vegetation Communities

There are four vegetation communities within the subject property including: Mineral Cultural Thicket (CUT1), Mineral Cultural Woodlot (CUW1), Fresh-Moist White Elm Lowland Deciduous Forest (FOD7-1), and Cattail Mineral Marsh (MAS2-1). In addition, there are also several areas of manicured garden and manicured grass, vegetation features that are not recognized as distinct vegetation communities in the Ecological Land Classification methodology (Lee *et al.* 1998). A description of the four recognized vegetation communities are included in the "Summary of Ecological Land Classification Vegetation Communities" (Table 1).

On the north side of the existing building, between it and Wyecroft Road, there is a typical, urban landscaped manicured garden. This garden is dominated by grass species (likely *Poa* sp.) within the mown area. Other woody, planted species include sugar maple (*Acer saccharum* ssp. *saccharum*), red pine (*Pinus resinosa*), Canadian yew (*Taxus canadensis*), and ground juniper *Juniperus communis*). There are several non-native plant species that have become established within this area including garlic mustard (*Alliaria petiolata*). Riverbank grape (*Vitis riparia*), an evasive species, has grown into the canopy of several trees and shrubs. At the eastern end of this landscaped area there is a small ditch that begins at Wyecroft Road and crosses the grassed area and then under the laneway located at the east side of the site. This ditched area is partially lined with cattails (*Typha angustifolia*).

**TABLE 1**  
**SUMMARY OF ECOLOGICAL LAND CLASSIFICATION VEGETATION COMMUNITIES**

ELC Code	Vegetation Type	Species Association	Comments
<b>Terrestrial- Cultural</b>			
CUW	CULTURAL WOODLAND		
CUW1	Mineral Cultural Woodland	<p><b>Canopy:</b> Norway spruce (<i>Picea abies</i>), cottonwood (<i>Populus deltoides</i>), Manitoba maple (<i>Acer negundo</i>) and Siberian elm (<i>Ulmus pumila</i>).</p> <p><b>Understorey:</b> staghorn sumac (<i>Rhus hirta</i>), willow (<i>Salix</i> sp.), and Manitoba maple and Siberian elm.</p> <p><b>Ground Cover:</b> Canada goldenrod (<i>Solidago canadensis</i>), wild carrot (<i>Daucus carota</i>), and blue vervain (<i>Verbena hastata</i>).</p>	<p>Cultural communities (CU).</p> <p>Tree cover and shrub cover &lt; 25 % (M).</p> <p>This community can occur on a wide range of soil moisture regimes (Dry-Moist) (-1).</p> <p>Pioneer community resulting from, or maintained by, anthropogenic-based influences.</p>
CUT	CULTURAL THICKET		
CUT1	Mineral Cultural Woodland	<p><b>Canopy:</b> Norway spruce, cottonwood, and Manitoba maple.</p> <p><b>Understorey:</b> red pine, staghorn sumac, willow, Manitoba maple.</p> <p><b>Ground Cover:</b> Canada goldenrod, wild carrot, and blue vervain.</p>	<p>Cultural communities (CU).</p> <p>Tree cover and shrub cover &lt; 25 % (M).</p> <p>This community can occur on a wide range of soil moisture regimes (Dry-Moist) (-1).</p> <p>Pioneer community resulting from, or maintained by, anthropogenic-based influences.</p>
<b>Terrestrial-Natural/Semi-natural/Cultural</b>			
FOD	DECIDUOUS FOREST		
FO7-1	Fresh-Moist White Elm Lowland Deciduous Forest	<p><b>Canopy:</b> Siberian elm and cottonwood.</p> <p><b>Understorey:</b> trembling aspen (<i>Populus tremuloides</i>), and grey dogwood (<i>Cornus foemina</i> ssp. <i>racemosa</i>).</p> <p><b>Ground Cover:</b> yellow avens (<i>Geum aleppicum</i>), tall goldenrod (<i>Solidago altissima</i>), and sulphur cinquefoil (<i>Potentilla recta</i>).</p>	<p>Tree cover &gt; 60% (FO).</p> <p>Deciduous trees &gt; 75% of canopy cover (D).</p> <p>Deciduous forest (7).</p> <p>Coarse and fine loams and occasionally sands and clays; soils have finer silt and clay components (-1).</p>
<b>Wetland</b>			
MAS	MINERAL SHALLOW MARSH		
MAS2-1	Cattail Mineral Shallow Marsh	<p><b>Emergent:</b> white willow (<i>Salix alba</i>).</p> <p><b>Ground Cover:</b> narrow-leaved cattails (<i>Typha angustifolia</i>) is dominant.</p>	<p>Standing or flowing water for much of the growing season (MA).</p> <p>Tree and shrub cover &lt; 25 % (S).</p> <p>Parent mineral substrate; sand, gravel, shingle or cobble (2-1).</p>

At the rear of the existing building, there are several additional areas of manicured garden and mown grass. South of and adjacent to the existing building, there is a small manicured garden that is dominated by a manicured grassed area. Directly to the south, and across an existing laneway, there is another large manicured grassed area. These grassed areas are likely comprised of bluegrass species (*Poa* sp.), but could not be identified with certainty at the time of the survey. Further to the west there is large area of manicured garden. Again, a large proportion of this area consists of manicured grass, but there are sections where species such as red pine have been planted. Other plant species within this area include red-osier dogwood (*Cornus sericea*) and white willow (*Salix alba*), however, it is not clear whether these were planted because much of this community is in transition (i.e., not maintained as a garden).

Along the northern and western edges of the large manicured garden area there is a small ditch that contained standing water at the time of the site visit. A small cattail community has emerged within this ditch and continues south through the property. The existence of this small cattail community was debatable with respect to its origin – naturally occurring or the result of human intervention. To resolve this issue, historical stereo pair aerial photographs (OMNR, 1972, 1978) were reviewed. Prior to 1972, the land in the immediate area surrounding Wycroft Road was under agricultural production. Historically there was a small swale that extended in a south westerly direction through the precise location of the proposed Oakville Transit Facility. The swale extended from north of the present day culvert (located in north east section of the property), south through the property following the present day ditch that supports the cattail community. There was no evidence of any emergent vegetation communities along the length of the swale.

Initial development of 430 Wycroft Road took place during the early 1970's. At this time, the swale and any associated water flows were diverted east ward toward an existing drainage ditch on the east side of the property and as a result, surface runoff was no longer conveyed through the property. This drainage ditch along with associated cattail vegetation is evident today in the north east part of the property.

The swale that was present historically (south of the existing building) was not filled in during initial development in the 70's. It is assumed that it was left in an undisturbed state to allow it to function as a drainage ditch for surface runoff resulting from the newly created parking area and lane ways situated to the south of the existing building. Over time, the seasonally wet drainage ditch provided a suitable environment for the emergence of a cattail community. Other than surface runoff, there are no sources of water input to the ditch.

At the south limit of the property the cattail vegetation community becomes wider forming a distinct marsh area (MAS2-1) that extends into the hydro corridor that abuts the subject property.

Along the eastern and southern edges of the property there is a ditch that contained water at the time this plant survey was undertaken. The ditch is generally at a 0.5 m to 1 m lower elevation than the adjacent land. Along the southern boundary, the vegetation community associated with the ditch area has been identified as cultural woodland (CUW1). Overall, the cultural woodland is dominated by woody species including Manitoba maple (*Acer negundo*), Norway spruce (*Picea abies*), red pine, cottonwood (*Populus deltoides*) and Siberian elm (*Ulmus pumila*). There are very small pockets of cattails, primarily along the eastern portion of this community. A narrow stretch of vegetation extends along the eastern edge of the site toward Wycroft Road. This community has a lower degree of upper canopy and appears to be more disturbed than the cultural woodlot; consequently, it is best described as a cultural thicket community (CUT1).

South of the existing building, the entire southeast quadrant of the property supports a deciduous forest that is dominated by Siberian elm. The closest associated community in the ELC classification methodology (Lee *et al.* 1999) is a white elm deciduous forest (FOD7-1) and this description was used to

classify this vegetation community. Several of the Siberian elm trees in this urban forest do not appear to be in good condition as many were observed having broken limbs, and bark damage. It is possible that some of these trees are infected with dutch elm disease.

### 2.2.2 Flora-Species Summary

Plant decomposition in the winter is advanced and limits plant identification. A total of 59 plant species were recorded on the subject property at 430 Wycroft Road. Seven of these plants were only identified to genus. Of the 52 plants that were identified to species, 21 of these species are non-native (40%). Given that a large proportion of the subject property is landscaped, and that the property is surrounded by industrial units, roads, a hydro corridor and a railroad track, the high percentage of non-native species is not unexpected. A floristic quality assessment was undertaken and all of the plant communities within the study site had low FQI values (<15.00). Overall, this is an indication of the lack of specialized plant species at the site. Almost all of the plant species identified are considered to be generalists and are able to withstand a range and intensity of disturbance activities, and can survive in a wide range of habitats. Notwithstanding that the number of plants identified within the study site is not likely a full representation of the species actually present, the low FQI value is considered to be an acceptable descriptor of this site.

A list of vascular plants identified within the study area is presented in Appendix A.

### 2.2.3 Species at Risk

Plant species status was reviewed using plant lists for the Halton Region Conservation Authority (Varga *et al.* 2000; HRCA date unknown) and Ontario (Oldham 1999). No plant species considered rare, threatened or endangered in Ontario were noted during the field investigation. Two plant species: red pine (*Pinus resinosa*) and common evening-primrose (*Oenothera biennis*) are identified as HRCA species of concern. Though these species are HRCA plant species of concern, provincially their status is secure (S5).

## 2.3 Wildlife and Wildlife Habitat

Field investigations at and directly adjacent to the subject property located at 430 Wycroft Road were conducted on March 17, 2009 to document wildlife and wildlife habitat and to characterize the nature, extent and significance of animal usage within the project limits. Direct observations, calls, tracks, scats and runways were used to record wildlife present within the study area. Weather conditions March 17, 2009 were 14 °C with partially cloudy skies and calm wind.

### 2.3.1 Wildlife Habitat

A review of the Town of Oakville Official Plan indicates that the lands encompassing the Wycroft Road area in general fall within the land use designation of 'Queen Elizabeth Way – West Employment District'. As a result of past and present land uses in the section between Fourth Line and Dorval Drive, the amount of natural areas remaining in the study area that could provide wildlife habitat is minimal. In general terms, the habitat that is available is of poor quality, is somewhat degraded and would not support a high diversity of resident wildlife species.


The northwest half of the study area is comprised largely of an unoccupied warehouse with manicured grass, shrubs and several trees fronting Wycroft Road. Along the western limit of the property there is virtually no wildlife habitat present as the entire length of the property boundary has been highly disturbed from past activities. In the southeast portion of the study area, over half of the land base is taken up by manicured grassed areas and gardens. Nonetheless, wildlife habitat is present, represented by:

cultural woodlot (CUT1), deciduous forest (FOD7-1), and marsh (MAS2-1). It is unfortunate, yet not unexpected, that these areas are also in various stages of disturbance. The eastern limit of the property is defined by cultural thicket habitat (CUT1). This narrow strip of vegetation has a sparse upper canopy and appears to be more disturbed than either the woodlot (CUW1) or the deciduous (FOD7-1) habitat.

Aquatic features included a small ditch running parallel to the railroad tracks and along the eastern limit of the property as well as a marsh area located near the western limit of the property. Most if not all of the aquatic habitats are seasonal and do not provide suitable habitat to support fish. Wildlife utilization of these aquatic settings is likely minor.



**LEGEND**

-  Property Boundary
-  Vegetation Community Boundary

- Vegetation Communities**
- CUT1** Mineral Cultural Thicket
  - CUW1** Mineral Cultural Woodland
  - FOD7-1** Fresh-Moist White Elm Lowland Deciduous Forest
  - MAS2-1** Cattail Mineral Shallow Marsh
  - M** Manicured Grass
  - MG** Manicured Garden
  - TC** Tennis Court

Data Sources: LGL Limited field surveys, 2008 aerial photography.

**NATURAL HERITAGE**



<b>Project:</b> TA4781	<b>Figure:</b> 2
<b>Date:</b> April 2009	<b>Prepared By:</b> MWF
<b>Scale:</b> 1 : 2000	<b>Checked By:</b> GAN

### 2.3.2 *Wildlife Species*

A total of 44 wildlife species including: 34 species of birds, eight species of mammals and two herpetofauna species were identified as occurring in the study area. These numbers are based on direct field observations and habitat interpretation. A summary of wildlife documented in the study area is presented in Table 2.

Mammal trails, corridors, and overall habitat utilization appeared relatively low. Sign of eastern cottontail (*Sylvilagus floridanus*) browse and raccoon (*Procyon lotor*) tracks were documented. Additionally, an active red fox (*Vulpes vulpes*) den was found in the open forest habitat at the southwest extent of the study area. All mammal species recorded within the subject lands are very human/urban tolerant and will likely thrive in any human-related changes within the area, especially if it provides easier food sources.

Due to the seasonal timing of investigations no herpetofauna species were documented during investigations. Based on habitat and secondary source data, two species are likely to occur.

### 2.3.3 *Species at Risk*

Background information indicated that of the 44 wildlife species recorded within the study area, none are listed federally by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) or provincially by the Committee on the Status of Species at Risk in Ontario (COSSARO). Twenty-four (24) species of birds recorded are protected under the *Migratory Birds Convention Act* (MBCA) while two (2) species are protected under the *Fish and Wildlife Conservation Act* (FWCA). Four (4) of the bird species found within the study area are recommended by Bird Studies Canada as priority species for conservation within Halton Region. Seven (7) species of mammals recorded are regulated under the FWCA.

**TABLE 2.**  
**WILDLIFE SPECIES DOCUMENTED IN THE STUDY AREA**  
**(Based on Direct Observation and Habitat Interpretation)**

Wildlife	Scientific Name	Common Name	COSEWIC	MNR	Local	Legal Status	Occurrence	
Herpetofauna	<i>Bufo Americanus</i>	American Toad					*	
	<i>Thamnophis sirtalis</i>	Eastern Garter Snake					*	
Birds	<i>Branta canadensis</i>	Canada Goose				MBCA		
	<i>Anas platyrhynchos</i>	Mallard				MBCA	*	
	<i>Buteo jamaicensis</i>	Red-tailed Hawk				FWCA(P)		
	<i>Charadrius vociferus</i>	Killdeer				MBCA		
	<i>Larus delawarensis</i>	Ring-billed Gull				MBCA		
	<i>Columba livia</i>	Rock Dove						
	<i>Zenaida macroura</i>	Mourning Dove				MBCA		
	<i>Picoides pubescens</i>	Downy Woodpecker				MBCA	*	
	<i>Picoides villosus</i>	Hairy Woodpecker				MBCA	*	
	<i>Colaptes auratus</i>	Northern Flicker				MBCA	*	
	<i>Empidonax traillii</i>	Willow Flycatcher				MBCA	*	
	<i>Myiarchus crinitus</i>	Great Crested Flycatcher				MBCA	*	
	<i>Vireo olivaceus</i>	Red-eyed Vireo				MBCA	*	
	<i>Cyanocitta cristata</i>	Blue Jay				FWCA(P)		
	<i>Corvus brachyrhynchos</i>	American Crow						
	<i>Hirundo rustica</i>	Barn Swallow				BSC	MBCA	*
	<i>Poecile atricapillus</i>	Black-capped Chickadee				BSC	MBCA	
	<i>Certhia americana</i>	Brown Creeper				BSC	MBCA	*
	<i>Sitta corolinensis</i>	White-breasted Nuthatch					MBCA	
	<i>Turdus migratorius</i>	American Robin					MBCA	
	<i>Bombycilla cedrorum</i>	Cedar Waxwing					MBCA	*
	<i>Sturnus vulgaris</i>	European Starling						
	<i>Dendroica petechia</i>	Yellow Warbler					MBCA	*
	<i>Cardinalis cardinalis</i>	Northern Cardinal					MBCA	
	<i>Spizella arborea</i>	American Tree Sparrow					MBCA	
	<i>Spizella passerina</i>	Chipping Sparrow					MBCA	*
	<i>Melospiza melodia</i>	Song Sparrow					MBCA	
	<i>Icterus galbula</i>	Baltimore Oriole					MBCA	*
	<i>Agelaius phoeniceus</i>	Red-winged Blackbird						
	<i>Quiscalus quiscula</i>	Common Grackle						
	<i>Molothrus ater</i>	Brown-headed Cowbird						*
	<i>Carpodacus mexicanus</i>	House Finch						
<i>Carduelis tristis</i>	American Goldfinch				BSC	MBCA		
<i>Passer domesticus</i>	House Sparrow						*	

Mammals	<i>Didelphis virginiana</i>	Virginia Opossum				FWCA(F)	*
	<i>Sylvilagus floridanus</i>	Eastern Cottontail				FWCA(G)	
	<i>Sciurus carolinensis</i>	Gray Squirrel				FWCA(G)	
	<i>Microtus pennsylvanicus</i>	Meadow Vole					
	<i>Vulpes vulpes</i>	Red Fox				FWCA(F)	
	<i>Procyon lotor</i>	Raccoon				FWCA(F)	
	<i>Mustela vison</i>	American Mink				FWCA(F)	*
	<i>Mephitis mephitis</i>	Striped Skunk				FWCA(F)	*

\* Occurrence based on habitat interpretation

COSEWIC – Committee on the Status of Endangered Wildlife in Canada:

- END – Endangered
- THR – Threatened
- SC – Special Concern

MNR – Ontario Ministry of Natural Resources:

- END – Endangered
- THR – Threatened
- SC – Special Concern

Legal Status:

- MBCA – Migratory Birds Convention Act
- SARA – Species at Risk Act
- ESA – Endangered Species Act
- FWCA – Fish and Wildlife Conservation Act
- (P) Protected; (G) Game; (F) Furbearing species

Local Status-

- CP – Bird Studies Canada species of conservation priority

### **3.0 PROJECT DESCRIPTION**

The Town of Oakville is currently planning the construction of a new Oakville Transit operations and maintenance garage at 430 Wycroft Road in the Town of Oakville. The project will result in a substantial increase in bus storage and bus maintenance capacity for the Oakville Transit System.

### **4.0 ANALYSIS, IMPACT ASSESSMENT AND ENVIRONMENTAL PROTECTION**

#### **4.1 General Concerns**

Disturbance and minor changes to existing topography at each site will result from site grading. Impacts resulting from these operations will be minimal, nonetheless site specific mitigation measures will be implemented prior to and during the construction phase. These control measures are applicable for each site and will include:

- limiting the geographical extent of the disturbance;
- implementing standard erosion and sedimentation control measures, where required, in accordance with Ontario Provincial Standard Specification (OPSS)577 including: silt fence placed along the margins of areas of soil disturbance; applying conventional seed and mulch and/or erosion control blanket in areas of soil disturbance to provide adequate slope protection and long term slope stabilization; and,
- managing surface water outside of work areas to prevent water from coming in contact with exposed soils.

Monitoring of these mitigative control measures during and after construction will be implemented to ensure their effectiveness. These environmental measures will greatly reduce/minimize adverse environmental impacts.

#### **4.2 Vegetation and Vegetation Communities**

The construction of the transit garage facility has the potential to result in impacts to vegetation and vegetation communities. Effects on vegetation may include:

- Displacement/ disturbance of vegetation and vegetation communities;
- displacement of rare, threatened or endangered vegetation or significant vegetation communities.

The existing vegetation/vegetation communities that are present are representative of previously disturbed environments, consequently the significance of the resulting impacts is somewhat diminished.

##### ***4.2.1 Displacement/Disturbance of Vegetation and Vegetation Communities***

Based on a preliminary site plan (March, 2009), all of the ELC communities identified on the subject property will be displaced or disturbed by the site construction.

The FOD7-1 forest covers an area of approximately 0.5 ha. and essentially all of it will need to be removed to accommodate the garage facility. Loss of this quantity of urban forest from an area that is already heavily stressed by human disturbance can be considered as significant as very few semi-natural vegetation communities remain in this industrial section of Oakville. This significance however, is diminished as the health of the woodlot is in question. Several of the Siberian elm trees in this urban forest do not appear to be in good condition as many were observed with broken limbs, and bark damage. It is also possible that some of these trees are infected with dutch elm disease.

Notwithstanding the above, the following environmental protection measures, designed to reduce impacts to this vegetation community will be considered on a site-specific basis during detail design:

- reduce grading requirements to the minimum extent possible;
- retain a buffer of 10m along the eastern limit of the area;
- identify and protect trees to be retained during construction using a temporary tree protection barrier in accordance with OPSS 565; and,
- prepare a restoration plan during detail design to provide compensation for the lost vegetation. This should be done in compliance with HRCA requirements.

The CUT1 and CUW1 communities are also at risk. It is recommended that both of these communities be retained, if possible as part of the site design, to afford some protection to the seasonal watercourses/ditches that are found in each of these areas.

The manicured gardens and grassed areas to the south of the existing building will be removed to accommodate the new transit facility. The majority of vegetation found in these sections of the property, that will be removed are planted, non-native or evasive species and this loss is not considered significant.

The main component of the marsh community (MAS2-1) is not on the subject property and with proper mitigation, should not be affected. Silt fencing will be placed around this feature to minimize any siltation resulting from construction activity on the property. The small intermittent ditch that enters the marsh area from the north, within the subject property, could be re-graded. Presently, this ditch functions as a storm water run-off collector and consequently, is seasonally wet and does support cattail vegetation. The cattails will be removed however the drainage function of this ditch may be incorporated into the overall drainage plan for the new facility. The loss of the small quantity of cattail vegetation is considered negligible. In addition, there was no evidence that the ditch provides fish habitat as no fish species were observed during any of the site visits.

#### *4.2.2 Disturbance to Vegetation and Vegetation Communities*

If the CUT1 and CUW1 features are retained, they should be protected from any further disturbance. This can be easily achieved by installing barrier or silt fencing along the periphery of the features.

#### *4.2.3 Displacement of Rare, Threatened or Endangered Vegetation or Significant Vegetation Communities*

No designated natural areas or rare, threatened or endangered species within or adjacent to the study area were identified. Two plant species: red pine (*Pinus resinosa*) and common evening-primrose (*Oenothera biennis*) are identified by HRCA as species of concern. Though these species are HRCA plant species of concern, provincially their status is secure (S5). Nonetheless it is recommended that these species of concern be transplanted if possible, or planted as seedlings and incorporated into the landscaping as a part of the new construction.

### **4.3 Wildlife and Wildlife Habitat**

Effects on wildlife related to the expansion of the existing transit facilities could include:

- displacement of wildlife and wildlife habitat;
- barrier effects on wildlife passage; and,
- displacement of rare, threatened or endangered wildlife and significant wildlife habitat.

#### ***4.3.1 Displacement of Wildlife and Wildlife Habitat***

As indicated above, the study area is located on the south side of Wyecroft Road, midway between the Fourth Line and Dorval Drive in the Town of Oakville. The area is best described as predominately industrial services with a minor component of commercial land uses, north of Speers Road, and major residential land uses south of Speers Road. Areas of vegetation and wildlife habitat that are remaining have been modified or disturbed and this has resulted in fragmented patches of vegetation with low habitat structure and diversity providing limited habitat potential. Nonetheless, many species of wildlife that do occur within the study area are afforded protection through various types of legislation.

Numerous bird species that were recorded as occurring on the Wyecroft Road property are listed under the *Migratory Birds Convention Act* (MBCA). The MBCA prohibits the killing, capturing, injuring, taking or disturbing of migratory birds (including eggs) or damaging, destroying, removing or disturbing of nests. Migratory insectivorous and non-game birds are protected year-round. No permits are issued for the destruction of migratory birds or their nests incidental to an undertaking, activity or project works. To meet the requirements of the MBCA, no vegetation removals at site should occur during the nesting season. With several exceptions, this includes the period from April 1 to July 31. If vegetation clearing is required during this period, a bird nest survey should be carried out by a qualified avian biologist prior to construction activity. If active nests are found, a site-specific mitigation plan should be prepared in consultation with the Canadian Wildlife Service.

Direct observations on bird activity at site accounted for 50% of the species recorded as utilizing the area and this was not unexpected. The birds that were seen are typical of an urban / industrial environment as they are tolerant of human disturbance. Loss of habitat due to site preparation is not considered significant as the opportunistic nature of the bird species present will allow them to relocate successfully. The remaining 50% of the bird species recorded as occurring at site (based on habitat interpretation) can be regarded as casual visitors during migration or during daily movement activities. Again, loss of a small quantity of patchy habitat is not considered significant as other areas of available habitat will be utilized.

The available habitat at site supports small mammals, both resident and transient, but because of the opportunistic nature of these species, they could easily relocate if the habitat was lost due to site preparation. Resulting impacts are of a minor nature and are not considered to be significant. All mammal species recorded within the subject lands are very human/ urban tolerant and will likely thrive in any human-related changes within the area.

#### ***4.3.2 Barrier Effects on Wildlife Passage***

No new barriers to mammalian movement should occur as a result of this project

#### ***4.3.3 Displacement of Rare, Threatened or Endangered Wildlife Species***

No rare, threatened or endangered wildlife were documented within the study area.

## **5.0 MONITORING**

An environmental inspector should monitor the site during construction to ensure that construction fencing and erosion/sedimentation control measures are installed correctly and are functional.

## **6.0 SUMMARY**

The Town of Oakville is currently planning a new Transit Garage Facility located at 430 Wycroft Road in the Town of Oakville. The project will result in a substantial increase in bus storage and bus maintenance capacity for the Oakville Transit System.

The results of this Natural Heritage Study indicate that the Wycroft Road Transit Garage Facility project can proceed with minimal impacts to the natural environment. The disturbed nature of the lands that will be used for the expansion precludes the occurrence of:

- any significant vegetation or vegetation communities,
- any significant wildlife habitat or wildlife species,
- presence of any rare, threatened or endangered species, and
- any Designated Natural Features

Loss of mature trees is unavoidable, however the mitigation suggested will help minimize these impacts through vegetation compensation measures. Loss of wildlife habitat will also occur but the resulting impacts are of a minor nature and are not considered to be significant because the opportunistic nature of the bird and mammal species present, will allow them to relocate successfully.

## 7.0 REFERENCES

- Cadman, M.D. et al. 1987. *Atlas of the Breeding Birds of Ontario*. University of Waterloo Press, Don Mills, Ontario.
- Chapman, L.J. and D.F. Putnam. 1984. *The Physiography of Southern Ontario, 3<sup>rd</sup> Edition*. Ontario Geological Survey Special Volume 2.
- Committee on the Status of Endangered Wildlife in Canada. 2003. *Canadian Species at Risk*. Ottawa, Ontario.
- Couturier, A. 1999. *Conservation Priorities for the Birds of Southern Ontario*. Unpublished Bird Studies Canada Report. 17pp.
- Dobbyn, J.S. 1994. *Atlas of the Mammals of Ontario*. Federation of Ontario Naturalists, Don Mills, Ontario.
- Farrar, J.L. 1995. *Trees in Canada*. Fitzhenry and Whiteside Limited and the Canadian Forest Service. Markham, Ontario. 502 pp.
- Lee, H.T., W.D. Bakowsky, J. Riley, J. Bowles, M. Puddister, P. Uhlig and S. McMurray. 1998. *Ecological Land Classification for Southern Ontario: First Approximation and Its Application*. Ontario Ministry of Natural Resources, Southcentral Science Section, Science Development and Transfer Branch. SCSS Field Guide FG-02. North Bay, Ontario. 225 pp.
- Natural Heritage Information Centre. 1997. *Southern Ontario Vegetation Communities List*. Natural Heritage Information Centre, Ontario Ministry of Natural Resources. Peterborough, Ontario. Last revised January 1997.
- Natural Heritage Information Centre. 2006. *Lists of Ontario Plants, Birds, Reptiles, Amphibians, Mammals, Fish and Crustaceans*. Peterborough, Ontario.
- Newmaster, S.G., A. Lehela, P.W.C. Uhlig, S. McMurray and M.J. Oldham. 1998. *Ontario Plant List*. Ontario Ministry of Natural Resources, Ontario Forest Research Institute, Sault Ste. Marie, Ontario, Forest Research Information Paper No. 123, 550 pp. + appendices.
- Oldham, M.J. 1999. *Natural Heritage Resources of Ontario: Rare Vascular Plants*. Natural Heritage Information Centre, Ontario Ministry of Natural Resources. Peterborough, Ontario. 56 pp.
- Oldham, M.J. and W.F. Weller. 2000. *Ontario Herpetofaunal Atlas*. Natural Heritage Information Centre, Ontario Ministry of Natural Resources;
- Ontario Breeding Bird Atlas. 2005. [www.birdsontario.org/atlas/atlasmain.html](http://www.birdsontario.org/atlas/atlasmain.html);
- Ontario Ministry of Natural Resources, Ontario Natural Heritage Information Centre (NHIC) database.
- Ontario Ministry of Natural Resources. 2000. *Significant Wildlife Habitat Technical Guide*. Peterborough, Ontario.

Ontario Ministry of Natural Resources. 2006. *Vulnerable, Threatened, Endangered, Extirpated or Extinct Species of Ontario*. Species at Risk Project. Peterborough, Ontario.

Soper, J.H. and M.L. Heimburger. 1982. *Shrubs of Ontario*. The Royal Ontario Museum. Toronto, Ontario. 495 pp.

Varga, S., D. Leadbeater, J. Webber, J. Kaiser, B. Crins, J. Kamstra, D. Banville, E. Ashley, G. Miller, C. Kingsley, C. Jacobsen, K. Mewa, L. Tebby, E. Mosley and E. Zajc. 2000. *Distribution and Status of the Vascular Plants of the Greater Toronto Area*. Ontario Ministry of Natural Resources. Aurora, Ontario. 103pp

## **Appendix A**

### **WORKING VASCULAR PLANT CHECKLIST**

**Working Vascular Plant List  
430 Wycroft Road**

	Scientific Name	Common Name	S Rank	COSEWIC	MNR	Halton	CUW1	CUT1	FOD7-1	MAS2-1	MG-a	MG-b
	<b>Pinaceae</b>	<b>Pine</b>										
*	<i>Picea abies</i> (L.) Karsten	Norway Spruce	SE3					x				
	<i>Picea</i> sp.	Spruce	S?								x	
	<i>Pinus resinosa</i> Sol. ex Aiton	Red Pine	S5			x					x	
*	<i>Pinus sylvestris</i> L.	Scotch Pine	SE5								x	
	<b>Cupressaceae</b>	<b>Cedar</b>										
	<i>Juniperus communis</i> L.	Ground Juniper	S5								x	
	<i>Thuja occidentalis</i> L.	Eastern White Cedar	S5							x		
	<b>Taxaceae</b>	<b>Yew</b>										
	<i>Taxus canadensis</i> Marshall	Canadian Yew	S5								x	
	<b>Ulmaceae</b>	<b>Elm</b>										
	<i>Ulmus americana</i> L.	American Elm	S5									x
	<i>Ulmus pumila</i> L.	Siberian Elm	SE4				x		x			
	<b>Fagaceae</b>	<b>Beech</b>										
	<i>Quercus rubra</i> L.	Red Oak	S5						x			
	<b>Betulaceae</b>	<b>Birch</b>										
*	<i>Alnus glutinosa</i> (L.) Gaertn.	European Alder	SE4								x	
	<b>Polygonaceae</b>	<b>Smartweed</b>										
*	<i>Rumex crispus</i> L.	Curly Dock	SE5								x	
	<b>Cucurbitaceae</b>	<b>Gourd</b>										
	<i>Echinocystis lobata</i> (Michx.) Torr. & A. Gray	Wild Cucumber	S5							x		
	<b>Salicaceae</b>	<b>Willow</b>										
	<i>Populus deltoides</i> Bartram ex Marshall ssp. <i>monilifera</i> (Aiton) Eckenwalder	Cottonwood	S5				x	x	x	x		

**Working Vascular Plant List  
430 Wycroft Road**

	Scientific Name	Common Name	S Rank	COSEWIC	MNR	Halton	CUW1	CUT1	FOD7-1	MAS2-1	MG-a	MG-b
	<i>Populus tremuloides</i> Michx.	Trembling Aspen	S5						x			
*	<i>Salix alba</i> L.	White Willow	SE4							x		
*	<i>Salix alba</i> var. <i>vitellina</i>	White Willow	SU									x
	<i>Salix discolor</i> Muhlenb.	Pussy Willow	S5							x		
	<i>Salix</i> sp.	Willow	S?				x	x		x		
	<b>Brassicaceae</b>	<b>Mustard</b>										
*	<i>Alliaria petiolata</i> (M. Bieb.) Cavara & Grande	Garlic Mustard	SE5							x	x	
	<b>Rosaceae</b>	<b>Rose</b>										
	<i>Amelanchier arborea</i> (Michx. f.) Fern.	Downy Serviceberry	S5						x		x	
	<i>Crataegus</i> sp.	Hawthorn	S?						x			
	<i>Geum aleppicum</i> Jacq.	Yellow Avens	S5						x		x	
*	<i>Malus pumila</i> Miller	Common Crabapple	SE5								x	
*	<i>Potentilla recta</i> L.	Sulphur Cinquefoil	SE5						x			
*	<i>Rubus idaeus</i> L. ssp. <i>idaeus</i>	Red Raspberry	SE1								x	
	<i>Rubus occidentalis</i> L.	Black Raspberry	S5								x	
*	<i>Sorbaria sorbifolia</i> (L.) A. Braun	False Spiraea	SE4									x
	<b>Fabaceae</b>	<b>Pea</b>										
*	<i>Melilotus alba</i> Medik.	White Sweet Clover	SE5				x	x				
	<b>Onagraceae</b>	<b>Evening-primrose</b>										
	<i>Epilobium ciliatum</i> Raf. ssp. <i>ciliatum</i>	Hairy Willow-herb	S5								x	
	<i>Oenothera biennis</i> L.	Common Evening-primrose	S5			x						x
	<b>Cornaceae</b>	<b>Dogwood</b>										
	<i>Cornus alternifolia</i> L. f.	Alternate-leaf Dogwood	S5								x	
	<i>Cornus foemina</i> Miller ssp. <i>racemosa</i> (Lam.) J.S. Wilson	Grey Dogwood	S5						x			
	<i>Cornus sericea</i> L.	Red-osier Dogwood	S5				x	x	x	x	x	x



**Working Vascular Plant List  
430 Wycroft Road**

Scientific Name	Common Name	S Rank	COSEWIC	MNR	Halton	CUWI	CUT1	FOD7-1	MAS2-1	MG-a	MG-b
<i>Solidago altissima</i> L. var. <i>altissima</i>	Tall Goldenrod	S5						x		x	x
<i>Solidago canadensis</i> L.	Canada Goldenrod	S5				x	x				x
<i>Solidago</i> sp.	Goldenrod	S?							x		
<i>Symphotrichum ericoides</i> (L.) Nesom var. <i>ericoides</i>	White Heath Aster	S5									x
<i>Symphotrichum lateriflorum</i> (L.) Löve & Löve var. <i>lateriflorum</i>	One-sided Aster	S5							x		
<b>Cyperaceae</b>	<b>Sedge</b>										
<i>Carex</i> sp.	Sedge	S?						x			
<b>Poaceae</b>	<b>Grass</b>										
* <i>Elymus repens</i> (L.) Gould	Quack Grass	SE5				x	x				
<i>Phragmites australis</i> (Cav.) Trin. ex Steud.	Common Reed	S5							x		
<i>Poa</i> sp.	Bluegrass	S?						x		x	
<b>Typhaceae</b>	<b>Cattail</b>										
* <i>Typha angustifolia</i> L.	Narrow-leaved Cattail	SE5				x	x		x		x

*Non-native plant species			
<b>COSEWIC (Committee on the Status of Endangered Wildlife in Canada):</b>		<b>OMNR (Ontario Ministry of Natural Resources):</b>	
END	Endangered	END	Endangered
THR	Threatened	THR	Threatened
SC	Special Concern	SC	Special Concern
<b>Local Status:</b>		<b>Legal Status:</b>	
Yes or No	Halton Region Conservation Authority (species of concern)	SARA	<i>Species at Risk Act</i> – Schedules (1), (2), (3)
		ESA	<i>Endangered Species Act</i>

