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**Delmanor West Oak Inc.**

# Environmental Impact Study in Support of a Zoning By-law Amendment

**1280 Dundas St. W. and Fourth Line**
**Town of Oakville, Ontario**

**September 2020**
**SLR Project No.: 209.40574.00000**

# ENVIRONMENTAL IMPACT STUDY IN SUPPORT OF A ZONING BY-LAW AMENDMENT

## 1280 DUNDAS ST. W. AND FOURTH LINE
## TOWN OF OAKVILLE

**SLR Project No.: 209.40574.00000**

Prepared by
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for

DELAMNOR WEST OAK INC.
4800 DUFFERIN STREET
TORONTO, ONTARIO

18 September 2020

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# 1.0 INTRODUCTION

SLR Consulting (Canada) Ltd. (SLR) was retained by Tridel on behalf of Delmanor West Oak Inc. to undertake an Environmental Impact Study (EIS) in support of a Zoning By-law Amendment (ZBA) for a proposed transitional long-term care facility on lands located 1280 Dundas St. W. and Fourth Line in the Town of Oakville (the Town). An EIS is required due to the presence of natural heritage and physical features (Natural Areas) within and adjacent to the Site being subject to the Official Plan (OP) policies of the Town and portions of the Site being under the jurisdiction of Conservation Halton (CH) through Ontario Regulation 162/06: Development, Interference with Wetlands and Alterations to Shorelines and Watercourses. Portions of the Subject lands are designated under the Town's OP as Private Open Space and Natural Area (Schedule H) within the built boundary (Schedule A2). These lands are also included as an exception under policy 27.3.2 which permits uses including senior citizens' housing. This EIS was prepared based on pre-consultation and subsequent and on-going consultation with the Town and CH and in accordance with the CH EIS Guidelines (2005).

## 1.1 Goals and Objectives

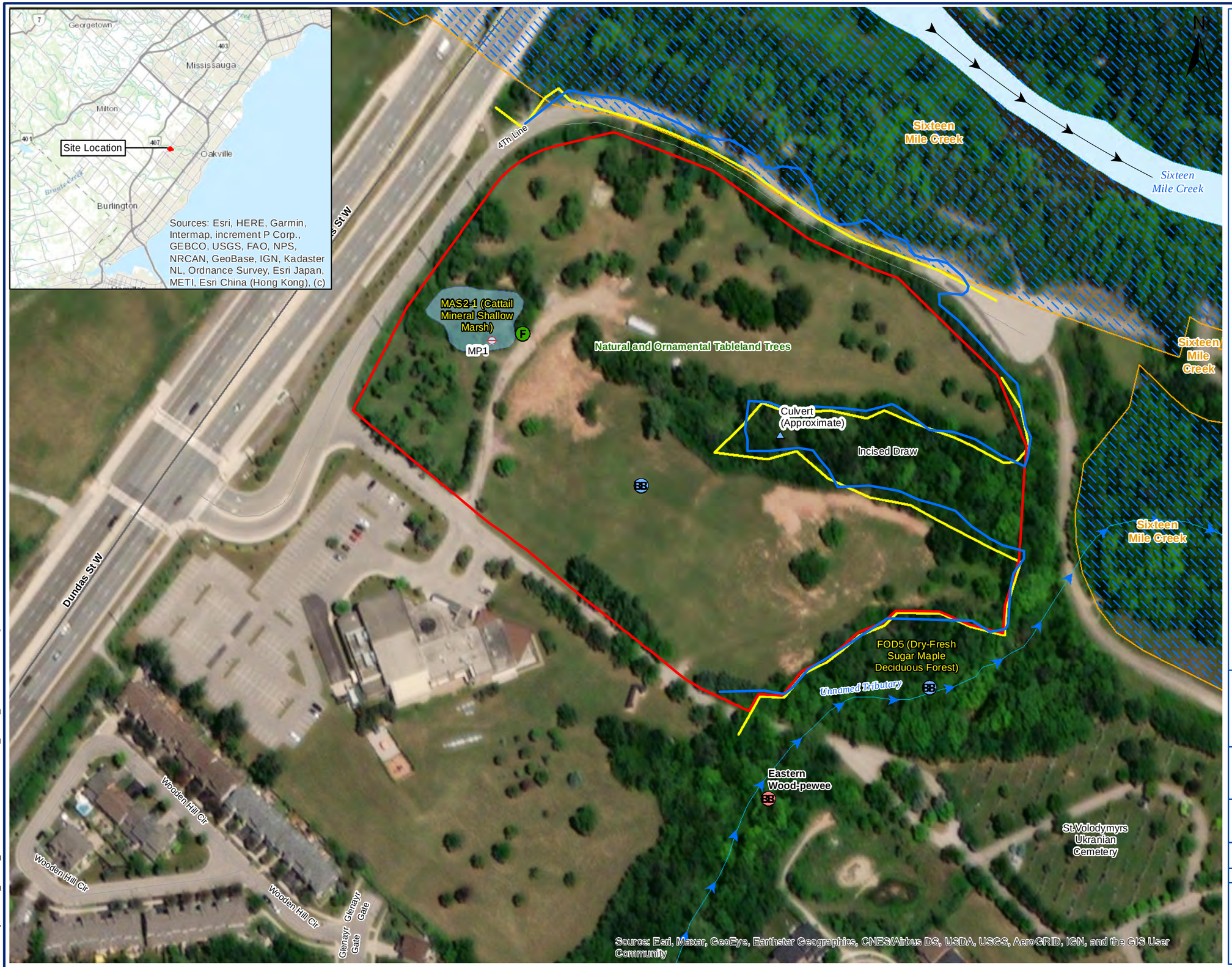
The purpose of this study is to review the proposed ZBA application and the conceptual Site Plan in the context of the Town of Oakville Official Plan (2016), in addition to the *Planning Act*, the Provincial Policy Statement (PPS) and other relevant polices as identified below. The objective of the exercise was to identify Natural Areas and confirm the appropriate limit of development using a constraints trace overlay method together with the application of policy directed set-backs and appropriate buffers.

The following instruments provide the applicable regulatory and policy framework for the zoning review:

- *Provincial Policy Statement*, Policy 2.1, 2020;
- *Endangered Species Act* (ESA), 2007;
- Ontario Regulation 162/06: *Development, Interference with Wetlands and Alterations to Shorelines and Watercourses* (CH);
- Livable Oakville Plan 2009 Town of Oakville Official Plan) and associated Schedules (January 15, 2016 Consolidation);
- Region of Halton Official Plan and associated Schedules (Office Consolidation May 11, 2017); and,
- Halton Region Integrated Growth Management Strategy (2019)

## 1.2 Site Location and Description

The Subject Property (the Site) is located at 1280 Dundas St. W. and Fourth Line in the Town within the Regional Municipality of Halton (HR). It is bounded at the northwest by the Dundas Street and Fourth Line, to the northeast by Fourth Line and Sixteen Mile Creek and to the east and south east by an unnamed tributary of the Sixteen Mile Creek. Specifically, the Delmanor Site is located on the east side of the north-south driveway access that serves the St. Vlodymyr's lands (**Figure 1**). This EIS will primarily focus on the Site with consideration of features on adjacent lands in accordance with Policy 2.1 of the PPS (2020).




**Legend**

- The Site
- Shallow Pond (MAS2-1)
- Provincial - Candidate ANSI, Life Science
- Longterm Stable Top of Slope (LTSTS) (BIG Consulting June 20, 2018)
- Staked Physical Top of Bank/ Feature (Conservation Halton March 23, 2018)
- Tributary to Sixteen Mile Creek (LIO, 2018)
- Culvert (Approximate) (SLR, 2018)
- Mini-peizometer (SLR, 2018)
- Frog Survey Location
- Breeding Bird Survey Location
- Breeding Bird Observation

0 12.5 25 50 Meters

SCALE: 1:1,600
WHEN PLOTTED CORRECTLY AT 11 x 17
NAD 1983 UTM Zone 17N

NOTES

This map is for conceptual purposes only and should not be used for navigational purposes.

Basedata: World Imagery (Halton Region, 2015,01,15)

DELMANOR WEST OAK INC.

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**SITE LOCATION AND EXISTING CONDITIONS**

| September 23, 2020 | Revision 0 | Figure No. 1 |
|---|---|---|
| Project No. 209.40574.00000 | | |

SLR Consulting (Canada) Ltd.

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The Site is positioned within the Sixteen Mile Creek watershed and under CH jurisdiction. The Site was formerly used as active agriculture and has been primarily used and maintained for passive recreation by St. Vlodymyr. In addition to the adjacent treed Sixteen Mile Creek valley and its unnamed tributary, the primary natural features include incised draw feature and its associated woodland, a remnant agricultural pond, and sporadically occurring mature tableland trees, maintained for aesthetic purposes.

## 2.0 AGENCY CONSULTATION

Representatives from the Town and CH were engaged during the preparation of this EIS, including site visits regarding feature staking and subsequent constraint boundary adjustments. Please refer to **Appendix A** for Record of Consultation.

Correspondence and meetings / site visits included:

- In-field feature staking (top of bank and dripline) of features in central and southern portions of the Site with CH, dated 23 March 2018;
- Pre-consultation meeting with Town, dated 23 October 2019.
- Consultation with HR regarding process requirements via email chain, dated 7 November 2019;
- Consultation initiation with CH regarding process requirements via email chain, dated 7 November 2019;
- SLR memo to CH and return correspondence regarding regulation limit of the on-site remnant pond, dated 19 November 2019;
- Meeting with CH to discuss limits of development, dated July 2020;
-

## 3.0 METHODOLOGY

Existing conditions were characterized through a review of secondary source materials combined with field investigations to assess and delineate natural features.

The details associated with these tasks are described in the sections below.

### 3.1 Background Review

A secondary source review and desktop analysis was performed for data on potential presence of wildlife, in particular rare species, as well as to support the identification and characterization of natural heritage features and functions within and adjacent to the Site. The following documents were reviewed:

- Ontario Geological Survey Mapping (OGS);
- Recent air photos of the site;
- Bird Studies Canada, 2005. Ontario Breeding Bird Atlas (OBBA);
- E-Bird Ontario (Online records Database for Oakville)

- Ontario Ministry of Natural Resources and Forestry (MNRF), 2020. Natural Heritage Information Centre (NHIC) rare species records;
- Ontario Ministry of Natural Resources and Forestry, Land Information Ontario “Make a Map” 2019, Accessed September 2019 and July 2020;
- Ontario Ministry of Natural Resources and Forestry, Land Information Ontario (LIO), Wetlands, ANSI, Natural Features, LIO metadata, Downloaded October 2019;
- Oakville Wildlife Strategy (OWLS), 2012
- Ontario Species at Risk List (O. Reg. 230/08) under the ESA 2007;
- Fisheries and Oceans Canada Distribution Maps for Fish and Mussel Species at Risk (on-line accessed June 2020, modified 2019-08-23);
- Halton Natural Areas Inventory (2003, 2004);
- Growth Plan for Greater Horseshoe (2019);
- Green Belt Plan;
- Oakville Tree By-law (No.2008-156);
- Oakville Zoning By-law (OZBA) (2020);
- Region of Halton Official Plan (HROP) and associated Schedules, Office Consolidation May 11, 2017; and,
- Town of Oakville, 2016. Official Plan Office Consolidation (Oakville OP)), January 15, 2016;

The methodologies used to perform these field studies are provided in the following sections, together with a summary of the purpose and dates of the 2018 / 2019 field studies presented in Error! Reference source not found..

### 3.2 Field Studies

Field studies included vegetation community characterization with a botanical inventory, tree inventory, amphibian surveys, breeding bird surveys, bat acoustic monitoring, and general Species at Risk (SAR) habitat surveys during appropriate and accepted timing windows. Additionally, evidence of wildlife presence was recorded during various field investigations from incidental direct sightings, and indirectly from such indicators as nests, tracks, scats, browse and burrows. A summary of the field studies performed by SLR is provided in **Table 1** and accompanied by a summary discussion of study methods in the following sections; field survey station locations are provided in **Figure 1**, as well.

## Table 1: Summary of Field Studies

| Date | Task | Weather[1] |
|---|---|---|
| March 23, 2018 | Staking Top of Bank; initial HDF assessment, | With Emma DeFields (edefields@hrca.on.ca); Mike Mestyan and Darko Straijn |
| April 26, 2018 | Installation of mini-piezometers in wetland | Weather: part sun / Beaufort 2 / Temp: high: 25.1ºC low: 1.6ºC; |
| May 3, 2018 | Amphibian Survey No. 1 of 2<br><br>SAR habitat, SWH | Weather: clear / Beaufort 0 / Temp: high: 21ºC low: 10ºC |
| May 5, 2018 | Water levels survey; HDF flow regime review | Weather: clear / Beaufort 1/ Temp 15.5ºC |
| May 31, 2018 | Amphibian Survey No. 2 of 2 | Weather: light rain; Beaufort 2 / Temp: 20ºC |
| June 18, 2018 | Breeding Bird Surveys No. 1 of 2<br><br>Passive bat ARU monitoring (hand-held, in-situ). Deployed Bat Acoustic Recording Unit (ARU), SAR habitat, SWH | Weather: clear / Beaufort 0-1/ Temp 13ºC |
| June 26, 2018 | Breeding Bird Survey No.2 of 2,<br><br>Recover Bat ARU, SAR habitat, SWH | Weather: clear / Beaufort 0/ Temp 13ºC |
| September 13, 2018 | Groundwater level measurements | n/a |
| December 10, 2019 | Water pond levels (winter) | Weather: Clear / Beaufort 0/ Temp 0ºC |
| | | |
| July 27 & 29, 2020 | Tree Inventory and ELC – Kuntz | n/a |

[1] The Beaufort Wind Scale is a tool used to estimate wind conditions. [0] Air calm, smoke rises vertically [1] Light air movement, smoke drifts, [2] Wind felt on face, leaves rustle [3] Leaves and small twigs in continual motion, wind extends light flags [4] Wind raises dust, loose paper, moves small branches [5] Small trees begin to sway, white crested wavelets form on inland waters [6] Large branches in motion

### *3.2.1 Flora and Vegetation Communities*

Vegetation communities were delineated and classified generally following the principles of the *Ecological Land Classification (ELC) for Southern Ontario: First Approximation and its Application* (Lee et. al., 1998) by Kuntz during their July 2020 field investigations in support of the tree inventory. ELC communities provide the basis for establishing habitat baseline conditions and support the SAR habitat and SWH screening exercises.

SLR's detailed Botanical Inventory was scoped to the tableland area and existing pond with a general botanical review competed (dominate species and understory composition to characterise the valleyland. Please refer to **Appendix B** for the botanical inventory list.

Presence surveys for Butternut trees and Butternut seedlings were completed by an MECP-qualified Butternut Health Assessor, concurrent with other SLR field investigations.

*Survey Limitations*

*While every effort was used to detect the presence of Butternut and Black Ash by visual examination, seedlings are difficult to detect due to visibility restrictions. Furthermore, seed dispersal (squirrels) may occur and seeds may remain dormant for prolonged periods. Thus, seedlings may occur in the future especially if a parent trees occurs in proximity to the Site.*

### *3.2.2 Feature Staking*

SLR ecologists and CH confirmed and staked the boundary of the top of bank and vegetation dripline during a site walk on March 18, 2018. This exercise focused on the incised draw feature internal to the Site and the unnamed tributary bounding the Site to the east and south east. An initial review of the remnant agricultural pond was also performed during this visit. The agreed-upon staked feature delineations were surveyed by professional surveyors and are illustrated on figures provided in this report.

### *3.2.3 Tree Inventory and Shade Impact Study*

A tree inventory was undertaken on 27 and 29 July 2020 by Kuntz Forestry Consulting Inc. (Kuntz), dated 24 August 2020 **(Appendix C**). The tree inventory addresses the Town of Oakville requirements for tree inventory and preservations plans and provides a Shade Impact Study within as well.

### *3.2.4 Herptiles*

Secondary source literature was reviewed to identify known records of reptiles and/or amphibians potentially found within the Site, including the NHIC database. Amphibian surveys were undertaken to determine the presence of breeding amphibians and presence of SAR species (e.g., Western Chorus Frog (*Pseudacris triseriata*)).

To understand potential breeding habitats for amphibians, calling surveys followed the general methodology of the Marsh Monitoring Program (MMP) (BSC, 2009) (adapted to site conditions) during appropriate weather conditions. One station was selected in the Site for the SLR 2018 nocturnal frog call-count surveys. Survey times are coordinated with several other ecologists

conducting similar assessments at other locations throughout Southern Ontario via an email circulation used to assist surveyors in targeting the prime breeding window for early and late breeders. As climate change has the potential to shift the incidence of calling amphibians, it is increasingly important to coordinate surveys based on weather conditions and seasonal trends. Calling evidence was recorded on a scale of L0-L3 and interpreted as follows:

- L0 – No calling;
- L1 – Individuals can be accurately counted; calls do not overlap;
- L2 – Some calls simultaneous, number of individuals can be estimated; and
- L3 – Full chorus, calls overlap, individuals cannot be estimated.

Reptile habitat surveys and incidental presence observations were conducted concurrently with breeding bird surveys and vegetation surveys. Reptiles are particularly difficult to document and are mainly identified by identifying potential suitable supporting habitat and searching for evidence of activity in suitable habitats or through incidental observation. For example, evidence of basking individuals and potential nesting sites for reptiles were assessed, including seeking evidence of potential overwintering habitats for turtles and evidence of potential snake hibernacula sites.

### *3.2.5 Breeding Birds*

Scoped breeding bird surveys of the tableland area and valleyland and edge were undertaken during the breeding window in June 2018. Additional observations were also recorded during other site surveys. Surveys followed standard methodologies and weather conditions established by the Ontario Breeding Bird Atlas (OBBA) (i.e., between 5:30 and 10:00, low winds, no precipitation and suitable temperatures, two visits at least 10 days apart). Breeding evidence was recorded generally and evaluated as probable, possible or confirmed (e.g., singing male, pair observed or adult carrying food) in accordance with the standard protocols. Breeding bird field survey results are summarized in **Appendix D**, along with the OBBA results.

### *3.2.6 Bats*

Given the recent endangered status of four species of bats under the ESA (2007), coupled with the presence of mature trees, the need to address bats was justified.

General guidance for bat surveys related to development projects under the ESA (2007) does not describe a method that fits all projects. Thus, the protocol should be adapted to the local landscape and existing conditions. While draft guidance documents have been prepared by various MNRF districts for internal use, no formal document has been developed providing direction for use by non-MNRF personnel. Surveys of tree suitability and building review are generally the preferred preliminary step to identify potential bat use. A cursory review for bat habitat presence / absence was completed concurrent with other SLR field investigations, the purpose of which was to determine if potential roost habitat occurs and if bats occur generally within the context of the Site, importantly within the tableland areas. The survey did not involve targeted emergence review of individual trees.

Scoped emergence surveys with detections observed through the use of active (handheld) heterodynes Bat Box II, Echo Metre Touch [EMT]) were used by an SLR biologist experienced and qualified in conducting bat surveys which identify bat pulses (fly-over passes) to evaluate presence in-situ (active monitoring) over two nights, coupled with passive monitoring through

deployment of an ARU June 18 through 26, 2018. Bat signals (or pulses) recorded by the ARU and handheld units were processed using SonoBat software with an automated call measurement and identification tool capability. SAR Bats in Ontario, such as Myotis species and Tri-coloured Bats, have a detection frequency equal to or greater than 40 kHz, (high), whereas non-SAR bats (e.g., Big Brown Bat, Silver-haired Bat, Hoary Bat) have call signatures that are well below this threshold (low).

*Survey Limitations*

*While every effort was used to detect the presence of bats by visual examination and the use of ARUs, the absence of key signals is not an indication that occurrence may not occur in the future. The mobility of these species means that it is difficult to rule out bats using any type of structure for roosting or habitat for foraging in the future.*

### *3.2.7 Aquatic Habitat*

Aerial imagery, MNRF's LIO base mapping data, the NHIC and DFO online databases, and Official Plan schedules and mapping were reviewed to determine the presence of any aquatic features or fish habitat within the Site.

The presence / absence of surface water in the incised draw feature internal to the Site was performed as part of multiple field visits undertaken primarily for other purposes. No aquatic habitat mapping or fish collection was deemed necessary based on the condition and slope of this feature. The function and significance of this feature was further evaluated using the Evaluation, Classification and Management of Headwater Drainage Features Guideline (TRCA & CVC, 2014). This guideline assists in the characterization and classification of headwater water drainage feature (HDF) conditions and the determination of recommended management scenarios.

A mini-piezometer was installed and investigate the shallow groundwater / surface water interaction within the remnant pond for a duration of six months in 2018. Periodic groundwater elevations within the pond were obtained to determine whether the pond receives seasonal groundwater contributions and to assess pond function. Periodic observations of discharge (presence / absence) were made during various site visits in the spring and summer of 2018.

Finally, a CCTV investigation of the pond outlet culvert and subterranean drain was completed in fall 2019 to investigate connection between this feature and the incised draw feature (HDF) in the centre of the Site.

### *3.2.8 Species of Conservation Concern*

For the purpose of this EIS, species that are designated federally, provincially and which are of regional or local interest (e.g., rare to the watershed or municipality) are collectively identified as Species of Conservation Concern (SOCC). Species protected under the ESA (2007) and aquatic species federally listed on Schedule 1 of the *Species at Risk Act* (SARA) are also included in this category. Secondary data sources are included above in Section 3.1 while targeted wildlife investigations performed as part of this study included amphibian, breeding bird and bat surveys (Sections 3.2 to 3.7). Given the scope of this assessment, a habitat-based approach was also applied to evaluate the potential for SOCC to occur within the Site and adjacent lands.

A screening of natural heritage information was undertaken using data listed in **Section 3.1** and 3.2, including current Ministry of the Environment Conservation and Parks (MECP) guidelines *Clients Guide to Preliminary Screening for Species at Risk (Draft 2019)* within and adjacent to the Site to identify potential candidate species to be included in this assessment.

### *3.2.9 Significant Wildlife Habitat*

The criteria provided in the MNRF Significant Wildlife Habitat Technical Guide and Ecoregion Criterion **Schedules 7E** (MNRF, 2015) for significant wildlife habitat (SWH) was reviewed. Anthropogenic features do not qualify as SWH, and therefore was not assessed.

## 4.0 EXISTING CONDITIONS

### 4.1 Background Review Results

### *4.1.1 Landscape Context*

The Site occurs within the Lake Erie Lowland Ecoregion (7E) of the Mixedwood Plains Ecozone (Environment Canada 2005). Ecoregion 7E is contains Carolinian forest where vegetation is typically quite diverse, with common woodland tree species include sugar and silver maple, beech, white and red oak, shagbark hickory, black walnut, butternut, red and black ash, balsam poplar, black cherry, bitternut hickory, and tulip tree.

The Site is entirely within the South Slope Physiographic Region of southern Ontario (Chapman and Putnam, 1984). In Oakville, the South Slope includes the strip of land between the Lake Iroquois shoreline to the south and the Peel Plain to the north. The topography in the till plain is typified by gently undulating to fluted with low relief and poor to moderate drainage. Drainage in the study area generally follows a linear pattern.

Active surrounding development together with historic agricultural and existing passive recreational practices on the Site have influenced the naturalized vegetation and habitat of the Site.

### *4.1.2 Subwatershed*

The Site falls within the Sixteen Mile Creek Watershed (CH, 2020), within its Main Branch Subwatershed (MOECC, 2017; CH, 2019). This Subwatershed is characterized by the Sixteen Mile Creek valley, a prominent feature forming the northeastern boundary of the Site, and which is deeply incised down to underlying shale (MOECC, 2017). The Creek's valley provides a major discharge area, and seeps are found along the walls of the valley (*ibid*).

### *4.1.3 Land Use and Zoning By-law Designations*

Review of the *Planning and Justification Report: 1280 Dundas Street West* (MacNaughton Hermsen Birtton Clarkson Planning Limited, 2020) indicates that the Site, which is currently vacant, forms a portion of the St. Volodymyr Cultural Centre. The Site will be severed as its own development block, while the St. Volodymyr Cultural Centre and associated cemetery will remain to its south as its own parcel. The report indicates surrounding land uses as follows:

- The Oakville OP Schedule A1: Urban Structure (2016) designates the Site and surrounding area as *Residential Area,* as *Urban Area*, per Map 16: *Key Features within the Greenbelt and Regional Natural Heritage Systems* of the HROP (2018), and *Private Open Space* within the Oakville OP Schedule H (2016). It is zoned *Private Open Space* (O2 sp:122) (OZBA, 2020);
- To the north, the Site is bounded by 4th Line, then Dundas Street West, beyond which to are additional vacant lands in use by telecommunication facilities and also designated as *Urban Area* (HROP, 2018). It is zoned primarily *Existing Development* (ED) by (OZBA, 2020);
- To the east, the Site is bounded Fourth Line where it ends near the south; there, it becomes municipal right-of-way. Further east beyond the road are valleylands associated with Sixteen Mile Creek, designated as *Key Features* (HROP, 2018) and as *Natural Area* by the Oakville OP Schedule H (2016). It is zoned *Natural Area* (N) by Oakville Zoning By-law (OZBA, 2020);
- To the south lies the Sixteen Mile Creek unnamed tributary which is also designated as *Key Features* (HROP, 2018) and *Natural* by Oakville OP Schedule H (2016), beyond which lies St. Volodymyr Ukrainian Cemetery designated *Private Open Space* by Oakville OP (2016), then a residential neighbourhood, all designated as *Urban Area* (HROP, 2018) with the residential designated as *Low Density Residential* by Oakville OP Schedule H (2016). It is zoned a combination of *Natural Area*, *Cemetery* (CEM), Stormwater Management Facility (SMF), and Residential Low (RL6) (OZBA, 2020);
- To the west lies the St. Volodymyr Cultural Centre, beyond which lies residential which is designated as *Low* and *Medium* and *High Density Residential* by Oakville OP Schedule H (2016). It is zoned a combination of *Natural Area*, *Park* (O1), *Residential Low* (RL7), and *Residential Medium* (RM1) (OZBA, 2020).

### *4.1.4 Designated Natural Heritage Features*

Review of the NHIC Make-A-Map natural feature mapping online tool (2020) designates Sixteen Mile Creek as Urban River Valley. The Creek, along with the wooded portions within the Site, are also therein designated as Natural Heritage System.

Policy 16.1 of the Town's OP provides the permitted uses and protection direction for land development applications positioned within or adjacent to Natural Areas. Schedule B of the Town's OP identifies the Sixteen Mile Creek valley as an Area of Natural and Scientific Interest (ANSI) and an Environmental Sensitive Area (ESA) (**Figure 1**). The Halton Natural Areas Inventory (HNAI, 2006) identified a significant portion of the Sixteen Mile Creek valley as ESA #16. The boundary of the ESA extends along the Sixteen Mile Creek valley from Derry Road south to Lake Ontario. Due to its size, this area supports a significant number of native plant and wildlife species, including are nationally, provincially, and locally rare species. The length and location of the valley allows movement of both terrestrial and aquatic species, including migrating birds, large mammals such as white-tailed deer and fish.

This valley together with the unnamed tributary valley forming the east and southeast boundary of the Site and a portion of the incised draw feature are also identified as Valleylands and Floodplain on Schedule B and their treed portions are identified as Woodlands. Existing conditions are illustrated on **Figures 1**.

The site investigations and data analysis completed in support of this EIS together with the feature staking exercise in March 2018 have further refined the position and extent of these Natural Areas and identified Significant Wildlife Habitat 9SWH) and Natural Corridors within the adjacent larger valley systems.

## 4.2 Field Results

The site is likely to provide suitable habitat for urban tolerant mammals. Wildlife observed were characteristic of the culturally influenced landscapes of urban areas where species are tolerant to disturbances within the landscape and able to adapt to changing environments. Wildlife observed included Eastern Grey Squirrel (*Sciurus carolinensis*) Eastern Chipmunk (*Tamias striatus*), Raccoon (*Procyon lotor*) and White-tail Deer.

### *4.2.1 Flora and Vegetation Communities*

Review of the NHIC database indicated no occurrence records for flora ranked provincially as Endangered, Threatened, or Special Concern.

The natural vegetation communities assessed by Kuntz (2020) within the Site and the immediate valleylands are considered common and secure in Ontario. No regionally or locally flora were observed. **Table 2** outlines the communities assessed and summarizes the dominant vegetation cover. For further tableland vegetation composition, please refer to the accompanying *Tree Inventory and Preservation Plan & Shade Impact Analysis Report* (Kuntz 2020) (**Appendix C**).

**Table 2: Summary of Vegetation Communities**

| Vegetation Community Type | Community Characterization | Comments |
|---|---|---|
| Pond – MAS2--1 | Cattail Marsh<br>Reed Canary Grass<br>Multiflora Rose<br>Zigzag Goldenrod<br>Spotted Jewelweed | Crack willow riparian with Manitoba maple |
| Tableland (Anthropogenic)<br><br>No ELC Code | Community resulting from, or maintained by, cultural or anthropogenic-based disturbance.<br><br>Vegetation communities often have a large proportion of non-native plant species.<br><br>Black Locust<br>Basswood<br>Black Walnut<br>Silver Maple<br>Common Lilac<br>Tufted Vetch<br>Norway Spruce<br>White Spruce | Manicured grass, and former amenity area (barn, storage structures) with planted trees |

| Vegetation Community Type | Community Characterization | Comments |
|---|---|---|
| Remnant Hedgerow<br><br>No ELC Code | Planted rows of Coniferous trees<br><br>Cedar, Spruce Eastern White Cedar | Top of finger to staked valleyland Limit<br><br>Refuse dumping, storage |
| Valleyland<br><br>FOD5: Dry-Fresh Sugar Maple Deciduous Forest | Red Oak<br>Manitoba maple<br>Black Walnut<br>White Ash<br>Maple Species.<br>Associations of:<br>Common Buckthorn<br>Spreading Dogbane<br>Tartarian Honeysuckle<br>Chicory<br>Tall Goldenrod | Treed community (deciduous dominated with fringes of "old field species"). |

SLR's Botanical Inventory (**Appendix B**) yielded 85 species of plants, all of which are considered common and secure in Ontario. No SAR or SOCC vegetation communities or species were encountered during SLR's surveys; this included no observations of Butternut trees or seedlings, though this species is known to occur in the general area, and might be present off-site however, SLR did not have permission to access the adjacent lands.

### *4.2.2 Tree Inventory and Shade Impact Study*

The 2020 Kuntz tree inventory documented 193 trees, as well as 13 tree polygons, within 6 m of the proposed development and the road right-of-way. Of these, the proposed development will require removal of 137 trees and 13 tree polygons, while remaining trees can be retained through adherence to the Kuntz (2020) mitigation and avoidance recommendations. No tree SAR were encountered. The total value of all Town-owned trees proposed for removal is $17,856.00. The Kuntz (2020) shade impact study indicated that impacts of shade on the tree communities from the proposed development will be minimal.

### *4.2.3 Herptiles*

Review of the NHIC database indicated no occurrence records for reptiles or amphibians ranked provincially as Endangered, Threatened, or Special Concern.

Suitable available habitat for amphibians is limited on site and scoped to the pond (wetland) with calling activity also limited for a pond (offsite in the cemetery) and the Sixteen Mile Creek valley north of the site (fourth Line) at the Dundas street bridge crossing. Spring Peepers (L2), Gray Tree Frog (*Hyla versicolor*) (L2), Northern Leopard Frog (L1) and Green Frogs (L2) were heard within the Site at the pond.

American Toads (*Anaxyrus americanus*) (L1) were heard dispersed in the open manicured areas. This is not uncommon for this species as it is a habitat generalist and will move frequently in a larger area and occupy small field "puddles". Calling activity for frogs at the nearby reference site

on the same night were calling at level 2 and 3, indicating that the low numbers observed on-site can be attributed to the presence of suboptimal habitat (hydroperiods, shallow standing water depth, etc.) as opposed to weather conditions.

### *4.2.4 Breeding Birds*

Review of the OBBA 10 km by 10 km mapsquare 17PJ01, which overlays the Site, yielded 91 records of potential breeding birds. Note that the vast majority are unlikely to find suitable breeding habitat within a project's boundaries, as is the case with this Site. Review of the NHIC database indicated occurrence records for two bird SAR: Northern Bobwhite (*Colinus virginianus*) ranked as Endangered, and Barn Swallow (*Hirundo rustica*) ranked as Threatened. Northern Bobwhite are generally historic records, and no supporting habitat is found within or adjacent to the Site, therefore it is not anticipated to be present. Barn Swallow was not observed breeding nor foraging in or adjacent to the Site during SLR's breeding bird field investigations.

Birds observed on the Site during SLR's breeding surveys are typical of forested areas and urban environments. These species are tolerant to disturbances within the landscape and able to adapt to changing environments. Not surprising observations of were limited for the Tableland areas. For example, American Crow (*Corvus brachyrhynchos*), American Goldfinch (*Spinus tristis*), and American Robin, Eastern, King Bird, Eastern Phoebe, and Red Winged Black Bird were frequently encountered within the Valleyland. Two Red-tailed Hawks were observed overhead (no nest could be located) on one occasion. **Table 3** below provides a summary of breeding birds observed during SLR breeding bird surveys.

One SOCC bird, the Eastern Wood-pewee (*Contopus virens*), was also observed by SLR during the early June on one visit only within the Sixteen Mile Creek unnamed tributary valley; it is ranked provincially as Special Concern. A single male was heard singing within from within the Sixteen Mile Creek unnamed tributary valleyland area to the east of the Site; as such, it is considered a "probable" breeder, though likely a vagrant. Efforts to detect breeding individuals over the subsequent surveys did not record this species. Given this species was detected in suitable habitat within the adjacent valleyland community, it is presumed breeding habitat.

## Table 3. SLR Breeding Birds Observed

| Latin Name | Common Name | S-Rank[2] | SARA Schedule 1[3] | [4]SARO | SLR Observation | NHIC Result |
|---|---|---|---|---|---|---|
| *Sayornis phoebe* | Eastern Phoebe | S5B | | | x | |
| *Myiarchus crinitus* | Great Crested Flycatcher | S4B | | | x | |
| *Buteo jamaicensis* | Red-tailed Hawk | S5 | | NAR | x | |
| *Colinus virginianus* | Northern Bobwhite | S1 | END | END | | x |
| *Contopus virens* | Eastern Wood-pewee | S4B | SC | SC | x | |

[2] S-Ranks - Provincial (or Subnational) ranks are used by the Natural Heritage Information Centre (NHIC) to set protection priorities for rare species and natural communities. These ranks are not legal designations. Provincial ranks are assigned

in a manner similar to that described for global ranks, but consider only those factors within the political boundaries of Ontario.

S1 Critically Imperiled—Critically imperiled in the nation or state/province because of extreme rarity (often 5 or fewer occurrences) or because of some factor(s) such as very steep declines making it especially vulnerable to extirpation from

the state/province.

S2 Imperiled—Imperiled in the nation or state/province because of rarity due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors making it very vulnerable to extirpation from the nation or

state/province.

S3 Vulnerable—Vulnerable in the nation or state/province due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors making it vulnerable to extirpation.

S4 Apparently Secure—Uncommon but not rare; some cause for long-term concern due to declines or other factors.

S5 Secure—Common, widespread, and abundant in the nation or state/province.

S#S# Range Rank —A numeric range rank (e.g., S2S3) is used to indicate any range of uncertainty about the status of the species or community. Ranges cannot skip more than one rank (e.g., SU is used rather than S1S4).

SX Apparently extirpated from Ontario, with little likelihood of rediscovery. Typically not seen in the province for many decades, despite searches at known historic sites.

SNA (Formally SE) Exotic; not believed to be a native component of Ontario's flora.

[3] **SARA** - Species at Risk Act (S.C. 2002, c. 29) Act current to 2018-07-05 and last amended on 2018-05-30.

[4] SARO - ONTARIO REGULATION 230/08 under the Endangered Species Act, 2007 species at risk in Ontario list. Act current to 2018-08-01. COSEWIC (Committee on the Status of Endangered Wildlife in Canada)

EXT Extinct - A species that no longer exists.

EXP Extirpated - A species no longer existing in the wild in Canada, but occurring elsewhere.

END Endangered - A species facing imminent extirpation or extinction.

THR Threatened - A species likely to become endangered if limiting factors are not reversed.

SC Special Concern (formerly vulnerable) - A species that may become a threatened or an endangered species because of a combination of biological characteristics and identified threats.

NAR Not At Risk - A species that has been evaluated and found to be not at risk of extinction given the current circumstances.

DD Data Deficient (formerly Indeterminate) - Available information is insufficient to resolve a species' eligibility for assessment or to permit an assessment of the species' risk of extinction.

* - Species on Schedule 1 of Species At Risk Act (SARA)

| Latin Name | Common Name | S-Rank[2] | SARA Schedule 1[3] | [4]SARO | SLR Observation | NHIC Result |
|---|---|---|---|---|---|---|
| *Tyrannus tyrannus* | Eastern Kingbird | S4B | | | x | |
| *Hirundo rustica* | Barn Swallow | S5B | THR | THR | | x |
| *Cyanocitta cristata* | Blue Jay | S5 | | | x | |
| *Corvus brachyrhynchos* | American Crow | S5B | | | x | |
| *Poecile atricapillus* | Black-capped Chickadee | S5 | | | x | |
| *Troglodytes aedon* | House Wren | S5B | | | x | |
| *Sturnus vulgaris* | European Starling | SNA | | | x | |
| *Cardinalis cardinalis* | Northern Cardinal | S5 | | | x | |
| *Melospiza melodia* | Song Sparrow | S5B | | | x | |
| *Agelaius phoeniceus* | Red-winged Blackbird | S4 | | | x | |
| *Haemorhous mexicanus* | House Finch | SNA | | | x | |
| *Turdus migratorius* | American Robin | S5B | | | x | |
| *Quiscalus quiscula* | Common Grackle | S5B | | | x | |

### *4.2.5 Bats*

Where suitable treed habitats occur, such as larger snag trees with loose bark and cavities in woodland areas, hedgerows and landscape trees, potential suitable roosting and foraging habitat is present for SAR bats, and bats generally. Winter hibernation habitats are not present, however; summer roost sites can be under the loose bark of dead trees, the hollows of trees or within man-made structures.

Trees were assessed as having good opportunities for roosting bats (generally) but limited in the tableland area for Northern Myotis and/or Tri-coloured Bats based on current science and species biology. Mature trees and snag tree areas are associated with valleyland limits along the Top of Slope. Given that in Ontario Little Myotis (SAR) is often associated with buildings, trees are likely to be used by non-SAR such a Big Brown Bat or Hoary Bat.

During the active surveys using hand-held devices, only low-frequency calls were documented, indicating the presence of non-SAR bats. The emergence counts were low (only a few individuals at dusk) with few bat passes recorded on the devices or visually observed foraging over the tableland area.

Evidence of bats was detected at the passive ARU monitoring station established near the pond area. This is also the cluster area where the larger deciduous trees occur within the tableland area. Few high-frequency calls of SAR bats were detected at this station. The following species were identified with 98% accuracy of identification: Silver-haired Bat and Hoary Bat were recorded more frequently, with some recordings of Big Brown Bat and a few of Eastern Red Bats. The high-frequency detections (SAR bats) were faint, indicating observations were at a distance from the observer and at the range limits of the ARU. It is likely that the valleyland may provide roost opportunities for SAR bats, particularly Northern Myotis.

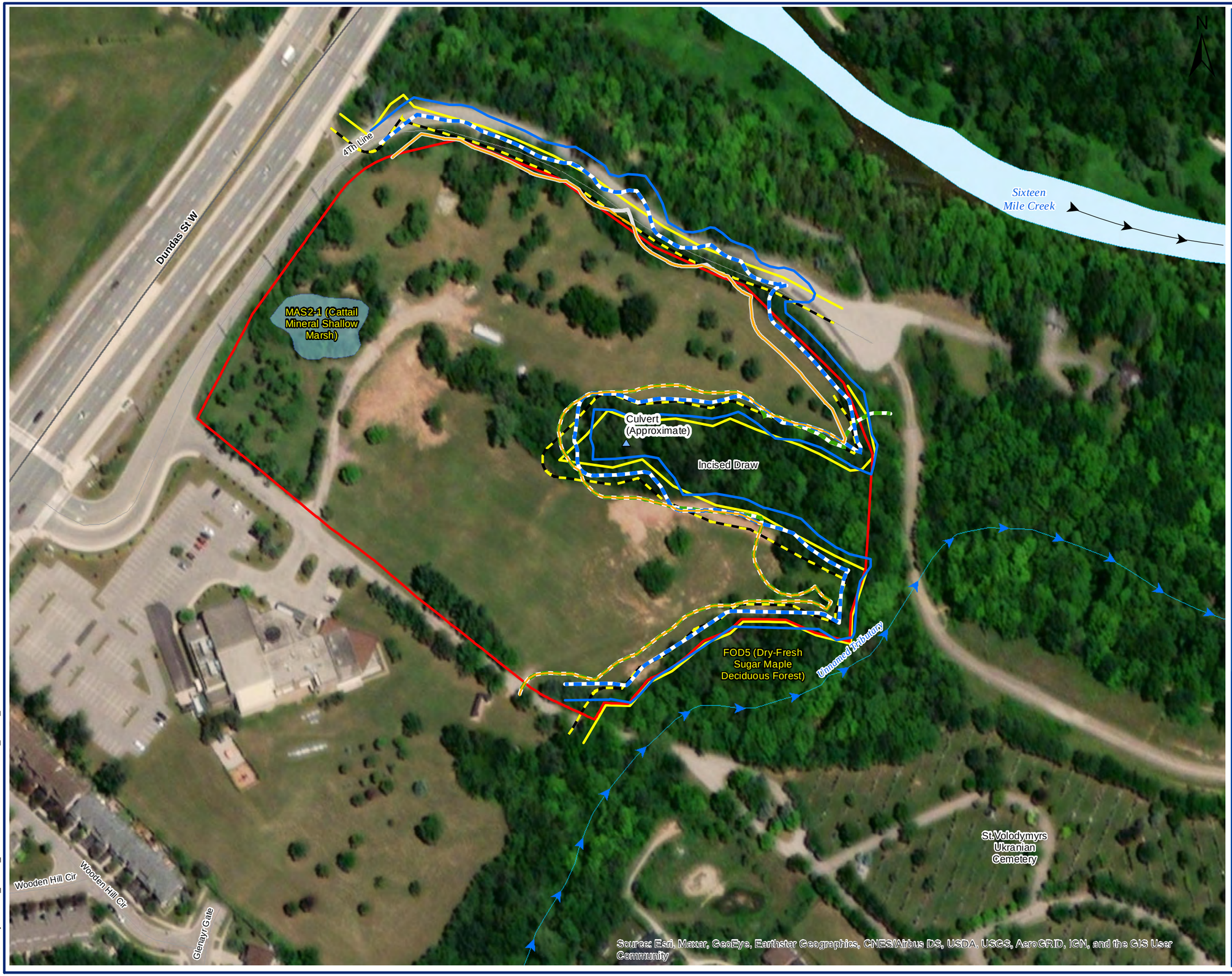
### 4.2.6 ***Aquatics***

From a watershed perspective, the Site is positioned in the Lower Main Branch of Sixteen Mile Creek which extends approximately from Highway 407 to the north, south to Lake Ontario. As a consequence, the majority of the Sixteen Mile Creek drainage area occurs upstream of the Site. The steep sided valley wall of Lower Main Branch of Sixteen Mile Creek occurs to the northeast of the Site, adjacent to Fourth Line. This valley's long-term stable top-of-slope (LTSTS) feature illustrated on all of the **Figures** was derived by BIG Consultants in support of the subject application.

The Lower Branch of Sixteen Mile Creek provides fish habitat for a variety of minnow and dater fish species including Blacknose Dace (*Rhinichthys atratulus*), Longnose Dace (*Rhinichthys cataractae*), Common Shiner (*Luxilus cornutu*), Fantail Darter (*Etheostoma flabellare*) Rainbow Darter (*Etheostoma caeruleum*). While water temperature monitoring by CH (2011) indicate this branch generally provides habitat for warm water resident fish species, the fish species assemblage indicates warm-cool water habitat is present. Migratory salmonids including salmon and rainbow trout (*Oncorhynchus mykiss*) are also present in the fall (Conservation Halton 2013. Long Term Environmental Monitoring Program Grindstone Creek, Sixteen Mile Creek and Supplemental Monitoring. Conservation Halton, Burlington, ON. 176 pp.).

A small unnamed tributary of Sixteen Mile Creek bounds the Site to the southeast. This tributary exhibits intermittent, seasonal flow. Diverse substrates include clay, silt and gravel with some evidence of cobble. This small tributary valley has relatively steep densely treed valley walls with an average bankful width of 1.9 m (Town of Oakville North Oakville Creeks Subwatershed Study, 2006). No existing fish community data was available for this small unnamed tributary. Given that the conceptual site plan avoids disturbance of fish habitat, no fish community sampling or habitat mapping was undertaken as part of this study.

The incised draw feature protruding westward into to the center of the Site appears to only receive and convey ephemeral surface run-off derived from the lands immediately surrounding the feature. While historically this feature may have received additional discharge from the remnant pond, recent CCTV investigations of the pond outlet culvert concluded the subsurface pipe is blocked / collapsed at more than one location. As such, the pond does not contribute discharge into this HDF. Early spring flow was observed on March 23, 2018. Discharge was not observed in this feature during subsequent site visits performed in May and June 2018 for amphibian and breeding bird surveys. This feature connects to the small unnamed tributary of Sixteen Mile Creek and he woodland habitat of both features are contiguous. While considered and evaluated as a candidate HDF, this densely treed incised draw feature almost exclusively provides terrestrial habitat.




**Legend**

- The Site
- Shallow Pond (MAS2-1)
- Development Limit Line
- Longterm Stable Top of Slope (LTSTS) (BIG Consulting June 20, 2018)
- LTSTS / Staked ToB 7.5m Buffer
- LTSTS / Staked ToB 15m Buffer
- Woodland 10m Buffer
- Staked Physical Top of Bank/ Feature (Conservation Halton March 23, 2018)
- Staked Physical Top of Bank 7.5m Buffer
- Tributary to Sixteen Mile Creek (LIO, 2018)
- Culvert (Approximate) (SLR, 2018)

0 12.5 25 50 Meters

SCALE: 1:1,600
WHEN PLOTTED CORRECTLY AT 11 x 17
NAD 1983 UTM Zone 17N

NOTES

This map is for conceptual purposes only and should not be used for navigational purposes.

Basedata: World Imagery (Halton Region, 2015,01,15)

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# NATURAL FEATURES CONSTRAINTS AND DEVELOPMENT LIMIT LINE

| | | |
|---|---|---|
| September 23, 2020 | Revision 0 | Figure No. 2 |
| Project No. 209.40574.00000 | | |

SLR Consulting (Canada) Ltd.

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#### 4.2.6.1 *HDF Evaluation*

When considered in the context of the HDF Evaluation, Classification and Management Guidelines (TRCA & CVC, 2014) the following values were identified:

**Hydrology Classification:** Flow observations indicated that the HDF is ephemeral (that is: present only for short periods when there is greater rainfall). The remnant pond does not contribute discharge into this HDF and therefore the HDF has Contributing functions.

**Riparian Vegetation:** Woodland vegetation exists throughout this feature, extending along the feature's floor and along each side. The approximate width of the woodland feature varies between 20 m toward the centre of the Site to nearly 40 m near its connection to the small unnamed tributary of Sixteen Mile Creek. For this reason, the feature was evaluated as providing an Important Riparian function.

**Fish and Fish Habitat:** None. The subject HDF does not provide direct habitat. Similarly, it is unlikely that its ephemeral discharge provides enough flow to contribute to fish habitat in the small unnamed tributary of Sixteen Mile Creek during periods when fish may be present in that feature.

**Terrestrial Habitat Classification:** Woodland is present throughout this feature. No amphibian calls were recorded within this feature. At a local landscape scale, this feature provides movement opportunities for non-amphibian wildlife by connecting the small unnamed tributary of Sixteen Mile Creek to the remnant pond. For this reason, the feature was evaluated as providing an Important a Contributing terrestrial habitat function.

**Management Recommendations:** In accordance with the HDF Evaluation, Classification and Management Guidelines, the management recommendation for the incised draw feature HDF is Protection. Interestingly, this recommendation is based almost exclusively on its terrestrial attributes of woodland and local landscape connecting functions.

#### 4.2.6.2 *Aquatic Species at Risk*

Silver Shiner (*Notropis photogenis*), a federally and provincially Threatened fish species, is identify as being present or potentially present within the Lower Branch of Sixteen Mile Creek and the small unnamed tributary of Sixteen Mile Creek according to the DFO online SAR mapping tool (accessed September 2020). The Recovery Potential Assessment of Silver Shiner in Canada (DFO, 2012) cites the known location of Silver Shiner in Sixteen Mile Creek being 9 km ESE of Milton and therefore within the North Oakville Creeks Subwatershed lying north of Dundas Street and the Subject site. This document also notes that no sampling effort, specifically targeting Silver Shiner has been performed south of Dundas Street in the Sixteen Mile Creek watershed. Taking a precautionary approach, it is reasonable to assume that Silver Shiner could be present in the main Lower Branch of Sixteen Mile Creek adjacent to and downstream of the study area. However, given that typical suitable habitat for Silver Shiner consists of medium to large streams or rivers, usually with widths generally greater than 20 m with pools as deep as 2 m (DFO, 2012), habitat for this species is unlikely to occur in the small unnamed tributary bounding the southeast limit of the Site.

Silver Shiner are a small minnow sized fish related to Carp that are often found in schools. Spawning occurs in May and June in Ontario over about a two week period, at water temperatures of 18-23 °C. This fish is primarily a surface feeder that consumes aquatic insects, crustaceans, flatworms, surface insects, and algae (DFO 2012).

While it appears relatively little is known about the threats to Silver Shiner survival and recovery, it appears that dam construction, channelization, and deteriorating water quality (turbidity, pollution and impoundments) have been responsible for population declines in other jurisdictions such as Ohio. The provincial ESA, 2007 website (MECP, 2020) suggests significant alteration of aquatic habitat, water temperature and water chemistry as threats to the species together with rapid or permanent alteration of water quantity and significant alteration of riparian and floodplain conditions. Similarly, DFO (2012) describes the greatest threats to the survival and persistence of Silver Shiner in Canada as habitat reduction, fragmentation or habitat degradation attributed to turbidity and sedimentation; nutrient loading and contaminant or other toxic substance introductions as possible threats to the survival of this species. In Sixteen Mile Creek specifically, DFO suggests that the greatest threats to Silver Shiner populations are contaminant or other toxic substances. nutrient loading and flow management.

### 4.3 Species of Conservation Concern

The background screening, coupled with the SLR field investigations, identified potential SOCC. The list was scoped to species which may occur on the Site based on the presence of suitable habitat and excluded those species that do not have habitat affinities on the site or are historical in nature (i.e., observations made greater than 40 years). Recently, Black Ash has been designed as Special Concern and Threatened respectively by Committee on the Status of Endangered Wildlife in Canada (COSEWIC) but is not currently listed under O. Reg. 230/08 *Species at Risk in Ontario List* under the ESA (2007). This species is included as it may be listed within the next five years. The review provided below in **Table 4** below includes a summary of species relevance to the proposed application

## Table 4. Species of Conservation Concern Screening

| Common Name[5] | Scientific Name | Provincial Designation[6] | Habitat Affinities Present Within the Site |
|---|---|---|---|
| ***Mammals*** | | | |
| [1]Tri- Coloured Bat | *Perimyotis subflavus* | Endangered<br>ESA regulated | Suitable trees present. |
| [1, 7]Little Brown | *Myotis lucifugus* | Endangered<br>ESA regulated | Suitable trees present. |
| [1]Northern Long-eared Bat | *Myotis septentrionalis* | Endangered<br>ESA regulated | Suitable trees present. |
| [1]Eastern Small-footed Bat | *Myotis leibii* | Endangered<br>ESA regulated | Suitable trees present. |
| ***Avian*** | | | |
| [1]Barn Swallow | *Hirundo rustica* | Threatened | Not Observed<br>No structures, habitats types are not suitable |
| [1, 3] Chimney Swift | *Chaetura pelagica* | Threatened | Not Observed<br>No structures. Natural treed cavities occur |
| [1,3] Red-headed Woodpecker | *Melanerpes erythrocephalus* | Special Concern | Not Observed<br>Suitable trees present assessed during surveys may occur in association with the Valleyland |

[5] Source: MNRF, SARO List, SLR expertise

[6] NHIC (2017)

[7] Previous Studies

*Designation Status*

*Provincial Status - Species at Risk in Ontario list maintained by the Ontario Ministry of Natural Resources and Forestry, O.Reg. 230/08. Endangered Species Act Regulation OMNR S.O. 2007, Chapter 6. Schedules 1 thru 5.4. O. Reg. 242/08.*

*Regional or Local*

*Provincial (or Subnational) ranks are used by the Natural Heritage Information Centre (NHIC). S3 [Vulnerable] Vulnerable in the nation or state/province due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors making it vulnerable to extirpation.*

| Common Name[5] | Scientific Name | Provincial Designation[6] | Habitat Affinities Present Within the Site |
|---|---|---|---|
| [1] Wood Thrush | *Ammodramus savannarum* | Special Concern | Not Observed<br>Habitats types are not suitable for this species |
| [1,3]Eastern Wood-pewee | *Contopus virens* | Special Concern | 1 male observed, not observed during subsequent breeding bird surveys. |
| Evening Grosbeak | Coccothraustes vespertinus | Special Concern | No – Incidental<br>Breeds in boreal forest may be seen in winter |
| ***Herpetofauna*** | | | |
| [2]Snapping Turtle | Chelydra serpentina | Special Concern | Yes<br>Watercourses small wetlands and marsh features provides opportunities and movement corridors |
| [1]Midland Painted Turtle | Chrysemys picta marginata | *Designated in 2018 by COSEWIC, not legally listed Provincially | Yes<br>Watercourses small wetlands and marsh features provides opportunities and movement corridors East Ron River / NHS provides opportunities and movement corridors |
| ***Flora*** | | | |
| [1]Butternut | *Juglans cinerea* | Endangered<br>ESA Regulated | Not observed during surveys<br>Known to occur in area |
| [1,3] Black Ash | *Fraxinus americana* | Not Designated under ESA but recently (2018) listed as Threatened by COSEWIC | Not observed during surveys<br>Known to occur in area |
| Woodland Flax | *Linum virginianum* | S2<br>Not Designated under ESA | Probable - Sixteen Mile Creek Valleyland |

## 4.4 Significant Wildlife Habitat

The significance of an area as wildlife habitat is often difficult to appropriately determine at the site-specific level, as the assessment must incorporate information from a wide geographic area and consider other factors such as regional resource patterns and landscape effects. This is why, under the PPS, the planning authorities have the responsibility to identify and designate Significant Wildlife Habitat. Wildlife habitat significance includes:

- Seasonal concentration areas (e.g., conifer forests for deer wintering);
- Rare vegetation communities or specialized habitats for wildlife;
- Habitats of species of conservation interest, excluding the habitats of endangered and threatened species which are protected under the 2020 PPS and 2007 ESA); and
- Animal movement corridors.

Using criteria outlined in Ecoregion 7E Criterion Schedules, candidate SWH identified through the background review was limited with no candidate areas identified for the tableland whereby SWH may occur for the Valleyland.

The following candidate SWH areas were identified:

- Woodland Area-Sensitive Bird Breeding Habitat

The following SWH were confirmed through:

- Special Concern and Rare Wildlife
- Amphibian Breeding Habitat (Wetlands)

SWH candidate features are summarized in **Table 5** below.

**Table 5. SWH Candidate Features**

| Wildlife Habitat Category[8] | Candidate Habitat Identified Based on MNRF Criteria for Ecoregion 7E |
|---|---|
| **Seasonal Concentration Areas of Animals (Wildlife Species)** | |
| Waterfowl Stopover Staging Areas (Terrestrial) | None<br>Habitat criteria not met. No large fields capable of supporting sheet flow or agricultural areas which provide for stopover areas |
| Waterfowl Stopover Staging Areas (Aquatic) | None<br>Habitat criteria not met. No large ponds or reservoirs capable of supporting shelter areas as stopovers |
| Shorebird Migratory Stopover Area | None<br>Habitat criteria not met. No lakes shorelines or coastal areas |
| Raptor Wintering Area (i.e., used for feeding and/or roosting) | None<br>Habitat criteria not met. While Retail Hawk observed, woodland and fields do not extend > than 20 ha. It is recognized that the woodland and Valleyland are likely to provided refuge for Hawks and Owls in the winter this habitat is not uncommon in Halton Region and does not meet criteria threshold. |
| Bat Hibernacula | None<br>Habitat criteria not met. No known Karst, escarpment areas or rock features (caves) |
| | |
| Turtle Wintering Areas | None<br>Habitat criteria not met. The pond is small with limited depth and organics reduced oxygenated waters and pond freezes almost bottom |
| Reptile Hibernaculum | Not expected<br>Structures have been removed and while there is remnant cement from the old barn footprint. These do not appear to penetrate deep below the frost line. May occur in woodlands if using burrows (rock piles not present) of the valleyland features will be protected |

[8][1]Ontario Ministry of Natural Resources. 2015. Significant Wildlife Habitat Criteria Schedules For Ecoregion 6E. Accessed December 11, 2018 at: https://dr6j45jk9xcmk.cloudfront.net/documents/4775/schedule-6e-jan-2015-access-ver-final-s.pdf

| Wildlife Habitat Category[8] | Candidate Habitat Identified Based on MNRF Criteria for Ecoregion 7E |
|---|---|
| Colonially-Nesting Bird Breeding Habitat (Bank and Cliff) | None<br>Habitat criteria not met. No exposed Eroding banks in proximity to the site sandy hills or steep slopes. |
| Colonially-Nesting Bird Breeding Habitat (Tree/Shrubs) | None<br>Habitat criteria not met. No stick nests observed or evidence of nest structures by herons in proximity to the Site. May occur in the broader Valleyland which will be protected. |
| Colonially-Nesting Breeding Habitat (Ground) | None<br>Habitat criteria not met. No exposed rocks or island peninsulas |
| Migratory Butterfly Stopover Areas | None<br>Habitat criteria not met. While Milkweed is present the Site is not close to Lake Ontario or large enough to maintain large foraging opportunities. Stopover areas have very specific intentions for protection in Ontario and are generally associated with areas such as long point and along the Great Lakes shoreline. |
| Land bird Migratory Stopover Areas | None<br>Habitat criteria not met. Valleylands and woodland are not part of the typical migration path within 5 km of the Great Lakes |
| Deer Winter Congregation Areas | None<br>Not defined by MNRF |
| **Rare Vegetation Communities** | |
| Cliffs and Talus Slopes, Sand Barren Alvar, Tallgrass Prairie, Savannah | None<br>Habitat criteria not met |
| Old Growth Forest (captured by *Significant Woodlands*) | None<br>Habitat criteria not met |
| Provincially Rare S1, S2 and S3 vegetation communities | None<br>Habitat criteria not met |
| Regionally or Locally Rare vegetation communities | None<br>Habitat criteria not met |

| Wildlife Habitat Category[8] | Candidate Habitat Identified Based on MNRF Criteria for Ecoregion 7E |
|---|---|
| **Specialized Habitats of Wildlife** | |
| Waterfowl Nesting Area | None<br>Habitat criteria not met. Pond is too small and dominated by cattails (choked with no open water) |
| Bald Eagle and Osprey Nesting, Foraging and Perching Habitat | None<br>Habitat criteria not met. Valleyland not along a major river corridor or stick nets observed |
| Raptor Nesting - Woodland Habitat | Not expected<br>– Habitat criteria not met. While Retail Hawk observed, woodland does not have greater than > 30 ha with >4ha of interior habitat. It is recognized that the woodland and valleyland are likely to provided nesting for Hawks and Owls however this habitat is not uncommon in Halton Region and does not meet criteria threshold. |
| Turtle Nesting Areas | Not expected<br>Limited opportunities for nesting along the pond with no nests observed or evidence of predated nests indicating usage |
| Seeps and Springs | None<br>Habitat criteria not met. Not observed during field evaluations in proximity to the valley edge. |
| Amphibian Breeding Habitat (Woodland) | None<br>No woodland breeding vernal pools ponds observed. |
| Amphibian Breeding Habitat (Wetlands) | Confirmed<br><br>Criteria of Calling Individuals met.<br>While Low calling levels of (L1/ L2) Gray Tree Frog, Northern Leopard Frog and Green Frogs. It is expected that for every male there is assumed one female therefore numbers likely exceed 20 individuals. However, the pond is of low quality, it is choked by cattails with limited riparian vegetation (shrubs and log) |
| Woodland Area-Sensitive Bird Breeding Habitat | Candidate<br>Interior habitat is limited and marginally occurs within property (broader valleyland area) where interior habitat is at least 200 m from the forested edge. Woodlands within the valleyland will be protected. |

| Wildlife Habitat Category[8] | Candidate Habitat Identified Based on MNRF Criteria for Ecoregion 7E |
|---|---|
| **Habitats of Species of Conservation Concern (not Endangered or threatened)** | |
| Marsh Bird Breeding Habitat | None<br>Pond is very small with limited shallow water (choked by cattails). Marsh birds were not heard during evening Amphibian surveys or early Dawn Breeding Bird surveys. |
| Open Country Bird Breeding Habitat | None<br>Habitat criteria not met |
| Shrub/Early Successional Bird Breeding Habitat | None<br>Habitat criteria not met |
| Terrestrial Crayfish | None<br>Habitat criteria not met |
| Special Concern and Rare Wildlife Species | Confirmed<br>Presence of Eastern Wood-pewee |
| **Animal Movement Corridors** | |
| Amphibian Movement Corridors | Not expected<br>During the amphibian surveys migrations or movement were not observed along the open fields or along the disturbed hedgerow rows connected with the valley. |

### 4.5 Natural Corridors and Linkages

The Sixteen Mile Creek valley and its unnamed tributary provides a Natural Corridor for wildlife movement between the natural features (woodlands) both on and off site. The connections occur along the east to west linear corridor at the south edge of the study area and north south corridor along the Sixteen Mile Creek valley providing a direct connection to habitats up and downstream beyond the Site boundaries. The treed incised draw feature provides limited connection between features off-site although likely provides a local function within the site for refuge and movement of urban tolerant wildlife.

## 5.0 DESCRIPTION OF THE SITE PLAN

Review of the *Planning and Justification Report* (MHBC, 2020) indicates that the Site will be severed as a separate development block from the St. Volodymyr Cultural Centre and cemetery lands within which it is currently associated. The development will consist of an 8-storey seniors' residence with 315 suites, with an additional 27 seniors-friendly townhouse units, for a total of 342 units. Overall, this will provide 34 assisted living suites, 34 memory care suites, 116 independent supportive living suites, 131 independent living suites, and the 27 independent townhouses.

## 6.0 ENVIRONMENTAL CONSTRAINTS

### 6.1 Constraints and Identification of Buffers and / or Vegetation Protection Zones

Policy 16.1 of the Town's OP provides the permitted uses and protection direction for land development applications positioned within or adjacent to Natural Areas. Schedule B of the Town's OP identifies the Sixteen Mile Creek valley as an Area of Natural and Scientific Interest (ANSI) and an Environmental Sensitive Area (**Figure 1**). This valley together with the tributary valley forming the east and southeast boundary of the Site and a portion of the internal incised draw feature are also identified as Valleylands and Floodplain on Schedule B and their treed portions are identified as Woodlands.

The site investigations and data analysis completed in support of this EIS together with the feature staking exercise in March 2018 have further refined the position and extent of these Natural Areas and identified Significant Wildlife Habitat 9SWH) and Natural Corridors within the adjacent larger valley systems.

Accordingly, the set-backs/buffers summarized below in **Table 6** have been adopted in the ZBA application:

**Table 6. Minimum Setbacks/Buffers as Identified in Policy 16.1 of the Town's OP**

| Feature | Reference | Set-back/Buffer |
|---|---|---|
| ANSI | As mapped in OP | As determined through an EIS |
| Environmentally Sensitive Area | Regional OP | As determined through an EIS |
| Woodland | Dripline | 10 m |

| Feature | Reference | Set-back/Buffer |
|---|---|---|
| Major Valleylands* | Staked Top of Bank or established long-term stable top-of-slope (LTSTS) | 15 m |
| Minor Valleylands* | Staked Top of Bank or established LTSTS | 7.5 m |
| Fish Habitat | Sixteen Mile Creek and Unnamed Tributary | 30 m for coldwater creeks |
| Significant Wildlife Habitat | As Identified in OP or determined through an EIS | As determined through an EIS |
| Natural Corridors | As determined through an EIS | As determined through an EIS |

*Both the Town and CH policies apply

### *6.1.1 ANSI and ESA Buffer*

Owing to the natural separation distance between of the Site and the Sixteen Mile Creek valley and the majority of the ANSI and Environmentally Sensitive Area, buffer determination was guided by the setbacks applied to other Natural Areas and features including LTSTL. The position of Fourth Line and the municipal trail head parking lot along the northeast and eastern boundary of the Site represent an existing disturbance and land use that do not require protection using relatively large set-backs.

For this reason, the 7.5 m set-back adjacent to the LTSTS was recommended in the Slope Stability report (BIG, 2020). In keeping with the direction and policies of the City and CH, a 15 m set-back has been adopted along the overlapping ANSI and ESA boundary north and northeastern boundary of the Site.

### *6.1.2 Major and Minor Valleylands*

While it is understood that according to the Town's OP Policy 16.1.9, Major Valleylands include all tributaries to Sixteen Mile Creek and that CH policies and guidelines also adopt the same designation, the Site Plan has been created using the prescribed set-back for a Minor Valleyland against the incised draw feature. This has been done as a reflection of the features dominant terrestrial function and its lack of permanent or intermittent discharge due to the feature's once subterranean connection with the remnant pond having been removed sometime ago. As discussed above, the former piped connection between these two features was investigated using a CCTV device in 2019 and found to be obstructed. A further consideration for the adoption of a Minor Valleyland set-back of 7.5 m to this feature was the inclusion by the Town of all valleys and tributaries within the Town of Oakville as "Minor" with the exception of Bronte Creek and Sixteen Mile Creek. Many portions of the watercourses within the numerous subwatersheds listed in Policy 16.1.9 b (ii) provide more significant aquatic and terrestrial functions than the incised draw feature, yet are assigned a 7.5 m set-back. It the position of the applicant and supported by SLR that a 7.5 m set-back to the incised draw feature is appropriate to protect its physical form and terrestrial functions within the Site Plan. The geotechnically study by BIG (2020), which established the LTSTL, also supports a 7.5 m set-back as being adequate to protect against erosion of the valley slopes. As illustrated on **Figure 1, 2** and

**3**, the application of a 10 m buffer to the staked feature effectively creates a larger set-back than 7.5 m to this incised draw feature, being in some locations as large as 15 m.

This is further supported by the compatibility of the proposed land use adjacent to this feature. The Site Plan contemplates passive private recreational uses on both sides of this feature consisting of minor trails and resting/viewing areas for the senior residents of the Site. The one exception to this occurs at the most westerly end of the feature where it emerges onto the landscape. Here, surface parking is proposed on adjacent lands (**Figure 3**) however the presence of the 10 m woodland buffer in this location results in the proposed parking lot being set-back 15 m from the LTSTS.

### *6.1.3 Fish Habitat*

No encroachment into the riparian habitat of Sixteen Mile Creek or the unnamed tributary will occur. As previously noted, the boundaries of the incised draw feature and the unnamed tributary were staked in March 2018 with CH staff and further delineation of the LTSTS was completed by BIG consultants in support of the subject application. The limits of these features, together with the woodland boundary and applicable buffers and set-backs were used to establish the limit of development for the Site. In doing so, the protection of fish habitat is achieved and promoted in the subject application. By extension, the application also conforms with the HDF management recommendation for the incised draw feature.

### *6.1.4 Significant Wildlife Habitat*

Confirmed and Candidate SWH were identified through the background review, in combination with targeted wildlife inventories identified SWH within the adjacent Valleylands. Neither the tablelands, nor the incised draw feature, were determined to contain SWH. Maintenance of these features and the application of vegetation and slope stability buffers and set-backs applied to both the Sixteen Mile Creek valleyland and that of its unnamed tributary are equally appropriate to protect the SWH identified on and adjacent to the Site.

### *6.1.5 Natural Corridors*

The Natural Corridor functions of the Sixteen Mile Creek valley and its unnamed tributary will be protected within the set-backs and buffers applied to other Natural Areas and features. The adoption of a 15 m set-back from the LTSTS along both of these valley features will adequately protect the natural wildlife corridor functions of these features due to their steep valley walls and dense woodland vegetation creating a natural separation between tableland activities (such as trails) and other potential uses and the valley floor along which animals can move.

Issues to be discussed as part of the impact assessment phase include:

- Determination of appropriate buffers to the ANSI, ESA, SWH and Natural Corridor;
- Minor refinements and adjustments to established set-backs and buffers of other Natural Areas;
- Removal of remnant pond;
- Removal of tableland trees;
- Proposed stormwater outfall; and,

- Compatibility of proposed development with adjacent Natural Features.

## 7.0 IMPACT ASSESSMENT AND MITIGATION

The site plan was overlain on mapping of existing conditions and policy constraints to illustrate the strong degree of alignment and conformity of with the Town's Natural Area protection policies (OP Section 16.1) and to identify minor refinements and adjustments to established set-backs and buffers (**Figure 3**). As provided above in **Section 6**, few issues require discussion in this impact assessment section due to the adoption and adherence to the set-backs/buffers in the Site Plan.

### 7.1 Removal of Remnant Pond

The existing pond positioned along the midwestern boundary of the Site is a remnant man-made pond from past agricultural practices on the landscape. Flow contributions toward the pond were previously reduced during upgrades to Dundas St. West and the pond's outflow toward the incised draw feature also became obstructed over the past unknown number of years, leaving the feature isolated on the landscape. The pond has a typical depth of approximately 1 m to 1.5 m. Evening amphibian surveys recorded low levels of activity, Chorus Frogs were not observed / detected during the any of the survey events; as such, it is not providing suitable habitat to wildlife.

Through correspondence and information sharing between SLR ecologists and CH in December 2019 and January 2020, it was determined by CH that the pond would not be added to the CH Regulation Limit. The removal of the pond as part of the ZBA application is not considered an impact to the local Sixteen Mile Creek, since the pond is isolated and likely functioned ecologically as a wildlife sink, meaning outflow contributions and wildlife dispersal from the feature are limited and the quality of the habitat present is low.

### 7.2 Minor Refinements and Adjustments to Established Natural Area Set-backs and Buffers

Due to local topography and challenges created by the configuration and position of Natural Areas within the Site, minor adjustments to staked feature boundary and the established Natural Area set-backs and buffers are required along the southern boundary of the incised draw feature. Here, minor adjustments to the staked feature were made to align with the LTSTS and its 7.5 m set-back (**Figure 3**). To off-set for this reduction in feature size and buffer area, an additional buffer area will be added to the woodland buffer in the southeast corner of the Site against the boundary of the unnamed tributary. Adding buffer width against the woodland unnamed tributary is supported ecologically, as this feature contains an aquatic unnamed tributary and functions as a Natural Corridor within the Sixteen Mile Creek watershed. This additional buffer area will be enhanced with vegetation plantings, in the same manner as other Natural Area buffers, to increase the size of the natural heritage system and protect the existing woodland edge.

While the selection of vegetation species to be planted in the buffer will be determined during detailed design, species selection will be restricted to a suite of native woodland and edge tolerant species and, where possible, to those naturally occurring within the Sixteen Mile Creek watershed.

### 7.3 Proposed Stormwater Outfall

For the protection of fish and fish habitat in the downstream receiving bodies of Sixteen Mile Creek and the unnamed tributary water quality control objectives of enhanced (80%) TSS removal and erosion control will be utilized at this Site. Details relating to stormwater quality and quantity controls to protect fish and fish habitat will be provided as part of the supporting documentation to the Site Plan application.

The Functional Servicing Report (FSR), prepared by RV Anderson and Associates, proposes to discharge treated stormwater (STM) at a controlled rate into the incised draw feature (**Figure 3**). The outfall will consist of a pipe supported by a headwall positioned at the upstream end of the feature near its origin on the landscape. It is envisioned that the outfall will include the construction of a rock lined plunge pool and additional rocky ramps along a portion of the draw length down gradient. Placement of the rock will be done in manner that limits disturbance of the existing vegetation lining the feature's walls. While the extent of rock reinforcement and size of rock required will be determined at detailed design, it is anticipated that the rock material will become naturalized into the feature over time as herbaceous and woody vegetation naturally become re-established. If determined to be required based on the degree of potential disturbance, restoration planting could be included as part of and/or following construction.

The use of this incised draw feature to convey treated STM toward the unnamed tributary will reinstate intermittent flow into the feature following freshet and storm events of greater than 5 mm. Intermittent flow within this feature likely occurred when the upstream pond was larger and the connection (via surface or later via subsurface) was active. While many aquatic functions are not anticipated to be created in this feature due to its steep gradient, benthic macroinvertebrates will likely become established in the interstitial voids created in the rock lined invert. The purposeful creation of step pools along the invert may prolong the discharge hydroperiod and promote the retention of standing water for use by wildlife.

During construction, effective sediment and erosion control measures will be used to prevent the entry of sediment into the adjacent downstream unnamed tributary of Sixteen Mile Creek. Regular inspection of these measures to ensure they are functioning properly will be completed during construction and until re-vegetation has successfully been established. Additional environmental protection measures will be developed a as part of Site Plan and future detailed design.

### 7.4 Species at Risk – Silver Shiner

The protection of Silver Shiner is achieved and promoted in the subject application Stormwater management will provide both on-site quantity and quality controls. Water quality control objectives of enhanced (80%) TSS removal and erosion control will be utilized at this Site. It is envisioned that the stormwater discharge will be directed to the Central incised draw feature in the centre of the Site. Details relating to stormwater quality and quantity controls to protect Silver Shiner will be provided as part of the supporting documentation to the Site Plan application.

## 7.5 Tableland Tree Removal

All tableland trees were tagged and documentation of their species, size and health reported by Kuntz (2020)**.** These data have been used to calculate tree removal quantities and identify appropriate restoration plantings and valuation calculations in accordance with the Town's Tree Replacement Formula / Cash-in-lieu formula. All opportunities will be investigated to compensate on or adjacent to the Site in order to minimize the effect of the tree removals. Additional compensation in the form of cash in leu to the Town has been identified by Kuntz (2020) through their tree valuation, totalling an estimate of $17,856.00.

The encroachment and removal of individual trees will remove habitat (foraging and nesting/shelter) for resident and migratory birds and common urban mammal species however none of these features are known to provide specialized or unique habitat opportunities. Many of the trees to be removed are non-native plant species or native plant species commonly occurring within adjacent urban and rural landscapes of the Sixteen Mile Creek watershed. The effect of the removal of Candidate SWH (maternity roost sites for SAR bats) provided by the tableland trees will be negligible due to the abundance of suitable trees within the retained valley systems on and adjacent to the Site. The removal of Candidate SWH (maternity roost sites for SAR bats) and protection of the induvial bats will be addressed using appropriate timing removal schedules for the protection of SAR bat species and confirmed with the Ministry of Environment, Conservation and Parks (MECP) as part of a parallel approvals process under the provincial ESA (2007).

## 7.6 Potential Effects of Lighting

While the core of the Sixteen Mile Creek valley occurs well beyond the likely influence of any lighting, the proposed project will potentially introduce additional night-time light sources to the tableland area and the edge of the Sixteen Mile Creek ESA and the small unnamed tributary. The direct effects of artificial lighting on wildlife have been widely studied and documented. Potentially affected wildlife includes bats, songbirds, and even invertebrates such as moths and fireflies. In general, artificial lights can alter an animal's circadian rhythm or create miss-cues that initiate activities such as foraging (feeding & substance), sheltering, mating and reproducing and communicating. For instance, artificial lights can attract and disorient animals such as moths and other flying night-time insects or potentially deter a nocturnal animal from using the area. For bats, potential effects can include changes to roost emergence times, degradation of existing and potential roost quality, and effects on foraging patterns.

Mitigating the potential effects of artificial night-time light on wildlife can be achieved through the selection of lighting formats, lighting design and layout and operational procedures.

The first objective would be to use only the minimum amount of light needed for the task. Selecting light sources known to be less intrusive or altering of wildlife behaviour can also reduce potential impacts from artificial lighting in natural settings. The use of low-pressure sodium, high-pressure sodium, metal halide and light emitting diodes (LEDs) has been shown to be preferred over traditional sources of lighting. For this reason, the use of these types of light sources (or similar) will be considered in the design of the buildings and its amenities.

Design elements that should be used include downcast lighting or direct lighting or installing directional accessories such as shields or baffles to direct light and reduce light spill-over and illumination into adjacent habitat components. Similarly, roadway lighting can be designed with a light distribution pattern that spreads the length of the roadway so that adjacent areas are not illuminated.

Operationally, areas not requiring full time illumination can be fitted with motion activated lights to reduce the duration of illumination and maintain darker areas of adjacent habitat.

The above recommendations are included as guidance toward reducing the potential effects of artificial night-time light on wildlife. The issue will be examined and addressed more thoroughly during subsequent design phases as part of photometric / light pollution study however, at a minimum, all exterior light fixtures will be shielded to meet the IESNA full cut-off classification or an up-light rating of 0.

### 7.7 Bird Friendly Design Elements

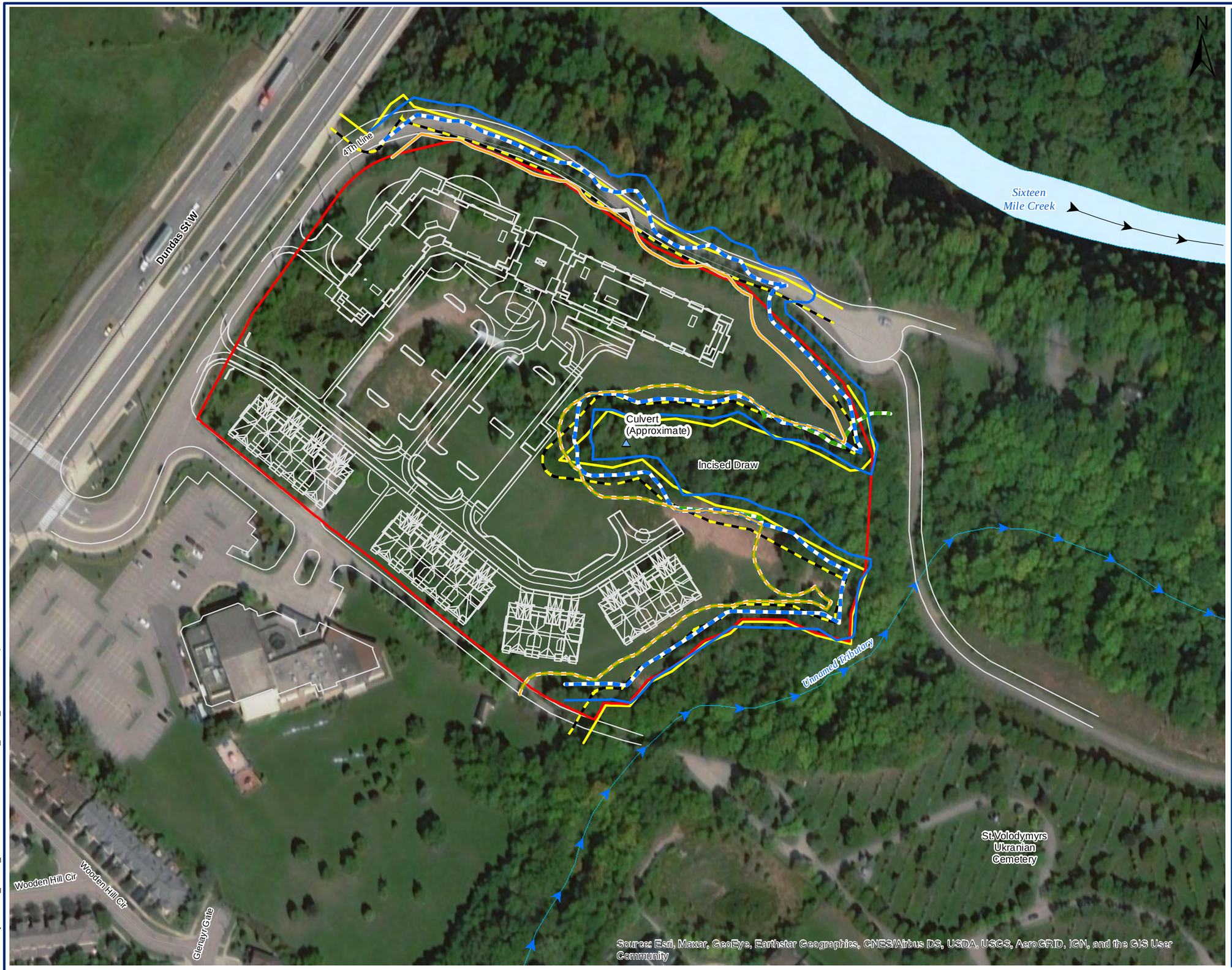
The proposed addition of an 8-story building adjacent to greenways such as the Sixteen Mile Creek valley corridor can present potential for collision and harm of resident and migratory birds. To deter bird collisions and reduce potential harm to birds design elements and mitigation provided in the City of Toronto Bird Friendly Development Guideline and Toronto Green Standard (TGS) “Bird Collision Deterrence” and the “Light Pollution” performance measures and best practices will be incorporated into the building design as part of the SPA application and future design phases. This will include glass treatment at applicable elevation zones. The issue will be examined and addressed more thoroughly during subsequent design phases.

### 7.8 Compatibility of ZBA

While previously presented in **Section 6.0**, the compatibility of the proposed land use adjacent to the existing Natural Areas should be recognized. The proposed use of the site as a transitional long-term care facility means that use and maintenance of the Site’s boundaries along the natural features will be under the direct control of a single owner. Single ownership and the construction of single facility with passive outdoor amenities (patios, private walking trails, etc.) adjacent to the larger Sixteen Mile Creek valley corridor will reduce the risk of incursion and disturbance into the natural edge as is often associated with multi-unit residential developments adjacent to valleylands. The conceptual Site Plan also contemplates passive private recreational uses on both sides of the incised l draw feature consisting of minor trails and resting/viewing areas for the senior residents of the property (**Figure 3**). The one exception to this occurs at the most westerly end of the feature where it emerges onto the landscape. Here, surface parking is proposed on adjacent lands (**Figure 3**) however the presence of the 10 m woodland buffer in this location results in the proposed parking lot being set-back 15 m from the LTSTS.

The potential effects to wildlife within the Sixteen Mile Creek valley from security and pathway night-time lighting can be minimized by using design elements including downcast lighting or direct lighting or installing directional accessories such as shields or baffles to direct light and reduce light spill-over and illumination into adjacent habitat components. Operationally, areas not requiring full time illumination could be fitted with motion activated lights to reduce the duration of illumination and maintain darker areas of adjacent habitat. In addition, the use of low-pressure sodium, high-pressure sodium,

metal halide and light emitting diodes (LEDs) has been shown to be preferred over traditional sources of lighting.




**Legend**

- Property Boundary
- Development Limit Line
- Longterm Stable Top of Slope (LTSTS) (BIG Consulting June 20, 2018)
- LTSTS / Staked ToB 7.5m Buffer
- LTSTS / Staked ToB 15m Buffer
- Woodland 10m Buffer
- Staked Physical Top of Bank/ Feature (Conservation Halton March 23, 2018)
- Staked Physical Top of Bank 7.5m Buffer
- Site Plan (IBA, 2020)
- Tributary to Sixteen Mile Creek (LIO, 2018)
- Culvert (Approximate) (SLR, 2018)

**DRAFT**

0 12.5 25 50 Meters

SCALE: 1:1,600
WHEN PLOTTED CORRECTLY AT 11 x 17
NAD 1983 UTM Zone 17N

NOTES

This map is for conceptual purposes only and should not be used for navigational purposes.

Basedata: World Imagery (Halton Region, 2015,01,15)

DELMANOR WEST OAK INC.

DELMANOR WEST OAK

**SITE PLAN OVERLAY**

| November 11, 2020 | Revision 0 | Figure No. 3 |
|---|---|---|
| Project No. 209.40574.00000 | | |

SLR Consulting (Canada) Ltd.

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## 8.0 LEGISLATIVE AND POLICY CONFORMITY

This EIS was prepared in the context of the policy framework identified in **Section 3**. The purpose of this section is to identify the key pieces of applicable environmental legislation, regulations and/or policies to be respected throughout the planning, construction and operation of the proposed development plan and to demonstrate how the ZBA application and conceptual Site Plan achieve conformity and compliance (**Table 6**).

**Table 7. Summary of Policy Conformity**

| Policy | | Conformity | Rationale |
|---|---|---|---|
| The Growth Plan for the Greater Golden Horseshoe (GGH), 2019 | Section 4.2.2 - New development or site alteration must demonstrate no negative impacts on key natural heritage features or key hydrologic features | Conforms | The application conforms to these policies; no development or site alteration is proposed within the NHS features and their boundaries have been refined based on field and empirical studies. Appropriate set-backs and buffers have been applied to all features of provincial significance and it has been demonstrated through an EIS that no negative impacts to these features or their ecological functions will occur. |
| Greenbelt Plan (2017) | The Site occurs beyond the boundaries of the provincial Greenbelt although the Greenbelt Plan designates Sixteen Mile Creek valley an Urban River Valley. | Conforms | The designation as an Urban River Valley recognizes the creek as a key component of the long-term health of the Greenbelt Plan's Natural System. Only publicly owned lands are subject to the policies of the Urban River Valley designation meaning the Greenbelt Plan's policies do not apply to subject application. |
| Provincial Policy Statement (2020) | Policy 2.1 | Conforms | No development or site alteration is proposed within the features of provincial significance and their boundaries have been refined based on field and empirical studies. Appropriate set-backs and buffers have been applied to all features of provincial significance and it has been demonstrated through an EIS that no negative impacts to these features or their ecological functions will occur. Passive recreation areas will be cited adjacent to much of the features of provincial significance on and adjacent to the Site. |

| Policy | | Conformity | Rationale |
|---|---|---|---|
| *Endangered Species Act, 2007* | | In Compliance | No SAR identified on the Site<br>To avoid harm to potentially occurring SAR bat species, tree removal should not occur between April to September when bats are in summer day or maternity roosts. |
| *Migratory Birds Convention Act* (MBCA, 1994) | | In Compliance | Vegetation clearing will not occur within the breeding bird period provided under Environment Canada guidance for periods of highest nesting probability (i.e. cannot occur generally between April 1st and August 31st) |
| *Fisheries Act* | Prohibits harmful alteration, disruption or destruction of fish habitat | In Compliance | Fish and direct fish habitat adjacent to the Site will not be directly affected. Stormwater controls will achieve Enhanced level quality per MECP SWM manual and CH erosion control standards |
| *Halton Region Official Plan* Sections 115.3 and 118 (June 19, 2018 Office Consolidation) | Regional Natural Heritage System (NHS) include Key Features and requirement for an EIS | Conforms | No development or site alteration is proposed within the Key Features identified per Section 115.3 and their boundaries have been refined based on field and empirical studies. Appropriate set-backs and buffers have been applied to all Key Features and it has been demonstrated through an EIS that no negative impacts to these features or their ecological functions will occur.<br><br>Passive recreation areas will be cited adjacent to much of the Key Features on and adjacent to the Site |
| *Town of Town of Oakville Official Plan Policy 16.1 and Schedule B (August 28, 2018 C*onsolidation). | Natural Area protection and Requirements for set-backs and buffers. Relevant natural features include:<br>• Woodlands<br>• Valleylands<br>• Significant Wildlife Habitat<br><br>• ESA<br>• ANSI | Conforms | No development or site alteration is proposed within the Natural Areas and their boundaries have been refined based on field and empirical studies. Appropriate set-backs and buffers have been applied to all Natural Areas and it has been demonstrated through an EIS that no negative impacts to these features or their ecological functions will occur.<br><br>Passive recreation areas will be cited adjacent to much of the Natural Areas on and adjacent to the Site. |

| Policy | | Conformity | Rationale |
|---|---|---|---|
| | • Fish Habitat and,<br>• Natural Corridors | | Adjustment to one Major Valleyland setback width with a Minor Valleyland setback value although rationale provided and effective buffer due to other overlapping constraints approaches 15 m in many locations including adjacent to proposed surface parking lot. |

## 9.0 RECOMMENDATIONS

The following are recommended based on the assessment as provided above to support the ZBA application.

### 9.1 Edge Management and Tree Replacement

- Tree replacement should occur in accordance with the Arborist Report.
- Re-vegetation of the new SWM outfall location should be carried out immediately following construction. This is to include a native plant seed mix using a biomulch or other approved technique to provide a solid base for the seeds to establish and is resistant erosion and the addition of woody plant species.
- The native plant seed mix should include species that are attractive to native pollinators (e.g., Milkweed for Monarch habitat).

### 9.2 Avoidance of Harm to Wildlife

- Aside from tree replacement planting and other compensation provided in the Arborist Report mitigation should include performing vegetation removal outside of the period from March to September to avoid impacts to breeding birds, potential occupation of treed roosts (individual trees) by bats.

### 9.3 Protection and Recovery of Silver Shiner

- Stormwater management should provide both on-site quantity and quality controls. Water quality control objectives of enhanced (80%) TSS removal and erosion control should be utilized at this Site.

### 9.4 Best Management Practices

- All outdoor lighting (including any new street lighting and external lighting on buildings) should be directed towards the ground and/or away from the natural areas.
- The erosion and sediment control strategy for the wetland channel basin construction will be designed in conformance with the Town and CH guidelines.

## 10.0CONCLUSIONS

The analysis of the natural heritage features and functions associated with Site and on adjacent lands confirm the proposed use of the subject lands as provided in the ZBA application and the conceptual Site Plan can proceed in conformity/compliance within the applicable regulatory and policy framework, including the policies of the PPS, the Town of Oakville Official Plan, the Region of Halton OP and Growth Strategy, CH policies and guidelines, Ontario Regulation **162/06** and the ESA (2007) so as to protect key natural heritage features and their functions. This will be achieved by respecting the recommended development limits, including the established set-back and buffers adjacent to the top of bank and valley woodland edge, improving stormwater quality run-off and providing naturalization and ecological enhancements within the buffers.

## 11.0STATEMENT OF LIMITATIONS

This report has been prepared and the work referred to in this report has been undertaken by SLR Consulting (Canada) Ltd. (SLR) for **Delmanor West Oak Inc.**, hereafter referred to as the "Client". The report has been prepared in accordance with the Scope of Work and agreement between SLR and the Client. It is intended for the sole and exclusive use of Client. Other than by the Client and as set out herein, copying or distribution of this report or use of or reliance on the information contained herein, in whole or in part, is not permitted unless payment for the work has been made in full and express written permission has been obtained from SLR.

This report has been prepared for specific application to this site and site conditions existing at the time work for the report was completed. Any conclusions or recommendations made in this report reflect SLR's professional opinion.

Information contained within this report may have been provided to SLR from third party sources. This information may not have been verified by a third party and/or updated since the date of issuance of the external report and cannot be warranted by SLR. SLR is entitled to rely on the accuracy and completeness of the information provided from third party sources and no obligation to update such information.

Nothing in this report is intended to constitute or provide a legal opinion. SLR makes no representation as to the requirements of compliance with environmental laws, rules, regulations or policies established by federal, provincial or local government bodies. Revisions to the regulatory standards referred to in this report may be expected over time. As a result, modifications to the findings, conclusions and recommendations in this report may be necessary.

The Client may submit this report to related environmental regulatory authorities or persons for review and comment purposes.

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# APPENDIX A
# Record of Consultation

EIS in Support of a Zoning By-law Amendment
1280 Dundas Street, West, and Fourth Line, Oakville
SLR Project No.: 209.40574.00000

# Delmanor Oakville – Consultant Kick-Off Meeting

October 23rd, 2019

**Attendees:** Michael Mestyan (Tridel), Sheldon Gould (Tridel), Jeremiah Stinson (Tridel), Kara Green (Tridel), Dale Leadbeater (SLR), Michael Roy (SLR), Andrew Turner (RVA), David Stafford (RVA), Oz Kemal (MHBC), Darko Strajin (BIG), Kenneth Chan (LEA), Paul Icke (IBA)

**Copied:** Dale Leadbeater (SLR), Michael Roy (SLR), Andrew Turner (RVA), David Stafford (RVA), Oz Kemal (MHBC), Darko Strajin (BIG), Kenneth Chan (LEA), Paul Icke (IBA) , Robert Levi (Tridel)

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| Item | Content | Action |
|---|---|---|
| **1. General Site/ Planning Items** | | |
| 1.1. Future Towns | - Discussion around whether or not showing future 'townhouses' will be viewed as solely residential (not retirement) by city. OK recommended showing the towns from the initial submission but stressing the use (retirement). | -We will move forward not considering these as conventional towns, but independent seniors living (no stove), that is integrally connected to the main building's amenities and services. Ageing in place & the idea of the village |
| **Item** | **Content** | **Action** |
| **2. Traffic** | | |
| 2.1. Site Access | - Asked KC to provide insight into probable site access.<br>- KC noted visibility beyond the apex of fourth line will be difficult<br>- Question raised by JS to purchase property at end of fourth line potentially having this as a private road (still connects to pedestrian path though) | -KC to mark up site (disregarding the current arch sketch) to determine all areas where we have go/ no go for site access. |
| 2.2. Fourth Line | - Unknown if city will force urbanization of Fourth Line if we add loading access there<br>- Fourth line has curbs until just before its apex at the north west corner. | -info |
| 2.3. Garbage | - Town of Oakville has strict requirement on enclosed garbage areas | -info |
| **Item** | **Content** | **Action** |
| **3. Ecological** | | |
| 3.1. SLR study to date | - Preliminary ecological investigation conducted with no major concerns – however will need to discuss with conservation authority<br>- | -info |
| 3.2. Trees | - Some trees not included in initial summary that may be considered a feature | -info |

| | | |
|---|---|---|
| | - Trees clustered in centre of northern section of site are most valuable<br>- Some bats noted in trees – potentially a few endangered bat species, however if trees removed during appropriate season not anticipated to cause issue | |
| 3.3. Pond/ Culvert | - Pond water is likely surface not ground water<br>- There is an outlet but does not appear to be draining – no open channel<br>- Risk of CA or town requesting the reinstating of channel – options are to either drain pond or relocate it closer to culvert so it does not impact areas of development<br>- Overall – pond is an isolated feature with some water – if it goes or stays not definitive at this point.<br>- If we require a 15m top of bank setback -we could propose that we will reduce to 10m and keep the pong (otherwise would take too much site area) – a negotiation piece<br>- Culvert appears to be blocked. Below water level but no flows | -info/ further discussion with Cons. Auth. & DL<br>-Culvert investigation by AT |
| 3.4. Flood Lines | - DL noted flood lines are required – Can get these from conservation authority | -AT to purchase these from CA |
| 3.5. Species | - As mentioned in trees, some endangered bat species on site. No immediate cause for concern if tree removal timing is coordinated to mitigate negative impacts<br>- Some frogs noted in pond. Abundance are no cause for concern per PPS/SWH<br>- No direct Redside Dace habitat; HDF is contributing habitat. Hydroperiod/discharge to be maintained in HDF<br>- One special concern species of bird (peewee) observed in treed area north of site – may not be impacted – likely no consequences | -info |
| **Item** | **Content** | **Action** |
| **4. Environmental** | | |
| 4.1. Top of Bank | - 10m setback is standard but Oakville OP states 15m. Will need to discuss this with conservation authority – see note in section above regarding negation with pond<br>- Will need to confirm Conservation Authority has accepted Top of Bank | -DL to follow up with Cons. Auth |
| 4.2. Geotech | - Overall, DS has no major concerns with the site from a due diligence perspective. Phase 1 ESA & | -info |

| | | |
|---|---|---|
| | TOB slope stability completed. Needs to do more investigation (below) to help inform SLR when having initial conversations with conservation authority | |
| 4.3. Geotech | - This will need to be completed for entirety of site | -BIG (DStrajin) |
| 4.4. HydroG | - Will need to be completed – DStrajin noted this will take 4-6 weeks, however data can be given to SLR before full report is done | -BIG (DStrajin) |
| **Item** | **Content** | **Action** |
| **5. Civil/ Servicing** | | |
| 5.1. Stormwater | - Storm water will be a challenge on site. Pond, infiltration, cistern still to be explored | -AT/DStafford to investigate further |
| 5.2. Servicing on Dundas | - RVA will need to determine if service availability has changed with proposed developments in area | -RVA to investigate further |
| 5.3. Connection at Glenayr south | - Subdivision South at Glenayr provides potential opportunity for a more feasible service connection. RVA will have to confirm if the capacity is sufficient to support development and Delmanor to investigate this further with St.Volodymyrs. | -RVA AT/DStafford to confirm service capacity<br>-Tridel to connect with St.Volodymyrs |
| 5.4. North Pedestrian Path | - AT noted pedestrian path row to fourth line at back of site potential to have forcemain | -info…TBD |
| **Item** | **Content** | **Action** |
| **6. Next Steps/ Planning/ Critical Timing** | | |
| 6.1. Sequencing of Conversations with Town | - OK noted there should be another check in with town before formal preconsult to inform them on the progress<br>- Before this happens, a conversation will need to occur with the conservation authority to clear any outstanding site concerns<br>- Targeting an initial application submission early Q1 2020 | -DL to touch base with conservation authority once information coordinated with consultants<br>-OK/ KG to discuss timing and setting up initial touch base meeting with town |
| 6.2. ZBA/ SPA | - OK noted Oakville does not accept ZBA/ SPA submission together at first application | -info – this is okay, we will be submitting SPA after first ZBA submission anyways |
| 6.3. RSC | - Record of Site condition likely not required since retirement | -OK/ KG to confirm at initial meeting with Town |
| 6.4. Next Steps Required for end of Due Diligence Period | - DL to update information with other consultant feedback and connect with conservation authority<br>- DStrajin to expedite hydrog to provide data to DL as soon as available<br>- RVA to look into stormwater & culvert | -DL, DStrajin, & AT to submit proposals, begin work, and coordinate with one another – provide updates on timing |

| | |
|---|---|
| **From:** | Kara Green |
| **To:** | Dale Leadbeater; Michael Roy |
| **Subject:** | FW: 1280 Dundas Street - Servicing Investigation |
| **Date:** | November 08, 2019 11:03:02 AM |
| **Attachments:** | image001.png<br>image002.png<br>image004.png<br>image003.png |

Hello Dale,

Please see Emma's email below as an FYI regarding Conservation Halton contact for future communication.

Regards,


**Kara Green** **B.ArchSci., M.Arch., OAA**
Assistant Development Manager
Development Planning
4800 Dufferin Street, Toronto, ON M3H 5S9
**O: 416.649.2704**
**C: 647.551.9441** **tridel.com**


**From:** Emma DeFields <edefields@hrca.on.ca>
**Sent:** November 8, 2019 10:58 AM
**To:** Kara Green <KGreen@Tridel.com>; David Stafford <DStafford@rvanderson.com>; PWPermits@halton.ca; paul.barrette@oakville.ca
**Cc:** Andrew S. Turner <aturner@rvanderson.com>; Mufaddal Shabbir <MShabbir@rvanderson.com>; Colleen Bain <cbain@hrca.on.ca>
**Subject:** RE: 1280 Dundas Street - Servicing Investigation

Thank you Kara,

Understanding that this will go through ZBA and SPA, Colleen Bain, Environmental Planning Analyst, will review any forthcoming submission. I've copied Colleen to follow up.

Thanks
Emma


**Emma DeFields, MES**
Environmental Planner

**Conservation Halton**
2596 Britannia Road West, Burlington, ON L7P 0G3
905.336.1158 ext. 2335 | Fax 905.336.6684 | edefields@hrca.on.ca
conservationhalton.ca

**From:** Kara Green <KGreen@Tridel.com>
**Sent:** November 8, 2019 10:09 AM
**To:** Emma DeFields <edefields@hrca.on.ca>; David Stafford <DStafford@rvanderson.com>; PWPermits@halton.ca; paul.barrette@oakville.ca
**Cc:** Andrew S. Turner <aturner@rvanderson.com>; Mufaddal Shabbir <MShabbir@rvanderson.com>
**Subject:** RE: 1280 Dundas Street - Servicing Investigation

Good morning Emma,

My name is Kara Green and am with Tridel's Development Planning team and will be working on this file. We will be submitting an application for both ZBA and SPA.

Thank you in advance,

**Kara Green** **B.ArchSci., M.Arch., OAA**
Assistant Development Manager
Development Planning
4800 Dufferin Street, Toronto, ON M3H 5S9
**O: 416.649.2704**
**C: 647.551.9441** **tridel.com**

---

**From:** Emma DeFields <edefields@hrca.on.ca>
**Sent:** November 8, 2019 8:55 AM
**To:** David Stafford <DStafford@rvanderson.com>; PWPermits@halton.ca; paul.barrette@oakville.ca
**Cc:** Kara Green <KGreen@Tridel.com>; Andrew S. Turner <aturner@rvanderson.com>; Mufaddal Shabbir <MShabbir@rvanderson.com>
**Subject:** RE: 1280 Dundas Street - Servicing Investigation

Thanks David. Can you please confirm what type of application this is expected to be associated with (i.e. Official Plan Amendment, Zoning Bylaw Amendment, Site Plan, etc.)? Based on the anticipated application, I can pass this email along to the appropriate staff here at Conservation Halton.

Thanks
Emma

**Emma DeFields, MES**
Environmental Planner

**Conservation Halton**
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**From:** David Stafford <DStafford@rvanderson.com>
**Sent:** November 7, 2019 6:13 PM
**To:** PWPermits@halton.ca; Emma DeFields <edefields@hrca.on.ca>; paul.barrette@oakville.ca
**Cc:** Kara Green <KGreen@Tridel.com>; Andrew S. Turner <aturner@rvanderson.com>; Mufaddal Shabbir <MShabbir@rvanderson.com>
**Subject:** 1280 Dundas Street - Servicing Investigation

Hello Emma and Paul and to whom it may concern at the Region of Halton,

R.V. Anderson Associates Limited (RVA) has been retained by Delmanor Oakville Limited (Delmanor) to complete a civil servicing investigation as part of their due diligence stage associated with the offer to purchase a portion of the St. Volodymyr lands located to the north and east of the cultural centre building site at 1280 Dundas Street. Please see attached figure showing the site location.

As part of this due diligence exercise, Delmanor requires an investigation of the site servicing requirements related to the proposed development. It is Delmanor's intent to develop a seniors living centre which may consist of mid to high rise buildings.

At this point in time, RVA has accumulated multiple drawings of existing infrastructure of the surrounding right of ways. Additionally, we are currently scheduling a sub-surface engineering (SUE) investigation to further review existing infrastructure which may service the proposed development.

On behalf of Delmanor, we would like to request a meeting at one of your offices to collectively review possible servicing options which may support the proposed development.

We kindly request that you provide us with the appropriate contacts who we should be in touch with to discuss servicing options for this development. Following receipt of this information, we will follow up with potential servicing options that we have prepared in advance of the meeting so everyone has time to review ahead of time.

Regards,

**David Stafford, P.Eng., LEED AP BD+C**
*Associate*

**R.V. Anderson Associates Limited**
2001 Sheppard Avenue East, Suite 300
Toronto, ON M2J 4Z8

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| | |
|---|---|
| **From:** | MacKenzie, Ronald |
| **To:** | "David Stafford"; Philip Kelly |
| **Cc:** | Mufaddal Shabbir; Andrew S. Turner; Paul Barrette; "Kara Green"; Dale Leadbeater; Michael Roy; Colleen Bain; Natywary, Laurielle; Najak, Zahir; Huang, Alex |
| **Subject:** | RE: 1280 Dundas Street - Servicing Investigation |
| **Date:** | November 22, 2019 11:35:45 AM |
| **Attachments:** | image001.png<br>image003.png<br>image004.png |

David,

In response to your question in the email below our answer is as follows:

Although our current bylaw doesn't specifically note that services cannot cross property lines the Region discourages servicing in such a manner due to the risks, liability issues and problems that it causes the Region as well as the property owners in the long term for such situations. It should also be noted that the Region is currently amending our sewer bylaw and it is probably a good chance that this issue will be addressed in the new bylaw to not allow such connections.

Thanks,

Ron

**Ronald MacKenzie**
**Development Project Manager**
Planning Services
Legislative & Planning Services
**Halton Region**
905-825-6000, ext. 7628 | 1-866-442-5866



**From:** David Stafford <DStafford@rvanderson.com>
**Sent:** Friday, November 22, 2019 9:53 AM
**To:** Philip Kelly <philip.kelly@oakville.ca>; MacKenzie, Ronald <Ronald.MacKenzie@halton.ca>
**Cc:** Mufaddal Shabbir <MShabbir@rvanderson.com>; Andrew S. Turner <aturner@rvanderson.com>; Paul Barrette <paul.barrette@oakville.ca>; 'Kara Green'

<KGreen@Tridel.com>; Dale Leadbeater <dleadbeater@slrconsulting.com>; Michael Roy <mroy@slrconsulting.com>; Colleen Bain <cbain@hrca.on.ca>
**Subject:** RE: 1280 Dundas Street - Servicing Investigation

Hi Philip,

Thank you for your comments.

With respect to the Region's servicing policy, we would like to request some more clarification on servicing through a private property (Option 1).

**Ron – can you please provide comments on the following:**

With respect the identified servicing Option 1 which proposes a direct service connection from the site to the municipal services that passes through an adjacent property on easement (see attached plan), the Town has indicated that this option wouldn't be supported by the Region due to a bylaw that prohibits a private property being serviced through another property. We have reviewed the Region of Halton By-Law 184-5 13. (2), which states:

*No Person shall connect more than one private Property to a Building Sewer.*

This By-Law appears to echo the requirements of Ontario Building Code (OBC) 7.1.5.4 (1) with respect to Separate Services, which states:

*Except as provided in Sentences (2) and (3), piping in any building shall be connected to the public services separately from piping of any other building.*

We note our proposal for Servicing Option 1 is for a completely independent building sewer located on easement through the St. Volodymyr private property (subject to being able to obtain this easement of course). This building sewer would have no interconnection with building drains from any other property and would be protected by the easement. To the best of our knowledge, this proposal would not contravene the requirements of the Ontario Building Code with respect to Separate Services or the requirements of the Region of Halton By-Law 184-5 13 (2).

Can you provide comment or confirmation with respect to this. Option 1 is potentially a preferred option subject to obtaining an easement for the connection and as such, we want to ensure that it is not ruled out based on a bylaw without carful examination of the bylaw.

Thank you,

**David Stafford, P.Eng., LEED AP BD+C**
*Associate*

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**From:** Philip Kelly <philip.kelly@oakville.ca>
**Sent:** November 21, 2019 3:40 PM
**To:** David Stafford <DStafford@rvanderson.com>; Colleen Bain <cbain@hrca.on.ca>
**Cc:** Mufaddal Shabbir <MShabbir@rvanderson.com>; Andrew S. Turner <aturner@rvanderson.com>; Paul Barrette <paul.barrette@oakville.ca>; Ronald.MacKenzie@halton.ca; 'Kara Green' <KGreen@Tridel.com>; Dale Leadbeater <dleadbeater@slrconsulting.com>; Michael Roy <mroy@slrconsulting.com>
**Subject:** RE: 1280 Dundas Street - Servicing Investigation

David:

At this high level stage I think that Option 2 is the best servicing Option.

Option 1 likely does not work as the Region has either a procedure or a policy that does not allow a private property to be serviced thru another private property. Option 1 seems to take this approach.

Option 3 is proposing private services in the Town's Natural Heritage System (NHS). Not recommended.

Philip

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**From:** David Stafford [mailto:DStafford@rvanderson.com]
**Sent:** Wednesday, November 20, 2019 12:11 PM
**To:** Colleen Bain <cbain@hrca.on.ca>
**Cc:** Mufaddal Shabbir <MShabbir@rvanderson.com>; Andrew S. Turner <aturner@rvanderson.com>; Paul Barrette <paul.barrette@oakville.ca>; Ronald.MacKenzie@halton.ca; Philip Kelly <philip.kelly@oakville.ca>; 'Kara Green' <KGreen@Tridel.com>; Dale Leadbeater <dleadbeater@slrconsulting.com>; Michael Roy <mroy@slrconsulting.com>
**Subject:** RE: 1280 Dundas Street - Servicing Investigation

Hello Colleen,

Thank you for your response. Please find attached the survey which indicates the staked out top of bank.

We have also attached a revised sketch. We note the following:

- The proposed property/severance line is schematic and not official in any way. This is shown schematically to illustrate that Servicing Option 1 would be through the adjacent property
- The existing pond feature has been labelled showing a culvert alignment south towards the regulated area. We note the CCTV investigation revealed this pipe was plugged with debris
- The existing storm sewers are shown on 4th line
- Proposed storm discharge location to the CH regulated area
    - We note the existing site drainage discharges to this location
- We are not showing a proposed discharge location to the 4th line sewers for two reasons:
    - Based on site topography it would be challenging to drain the entire site into this sewer
    - The existing site drainage currently discharges to the regulated area, so we assume CH would want to maintain this drainage pattern

Can CH please comment on the feasibility of a proposed storm sewer outfall and any concerns issues with the proposed water and sanitary servicing routes for Options 1 through 3.

Any additional comments with respect to a potential development are also welcomed.

Thanks,

**David Stafford, P.Eng., LEED AP BD+C**
*Associate*

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**From:** Colleen Bain <cbain@hrca.on.ca>
**Sent:** November 15, 2019 3:42 PM
**To:** David Stafford <DStafford@rvanderson.com>
**Cc:** Mufaddal Shabbir <MShabbir@rvanderson.com>; Andrew S. Turner <aturner@rvanderson.com>; Paul Barrette <paul.barrette@oakville.ca>; Ronald.MacKenzie@halton.ca; Philip Kelly <philip.kelly@oakville.ca>
**Subject:** RE: 1280 Dundas Street - Servicing Investigation

Hi David,

Thank you for your email and the conceptual servicing drawing for 1280 Dundas Street. Conservation Halton's (CH's) policies direct new development (including servicing on private land and creation of a new lot) to be outside of the regulated area. In order to determine the extent of the regulated area, studies, stakings and surveys are required to define the regulated natural

features and/or hazards present on the site. CH regulates a distance of 15m from the limit of the flooding and erosion hazards associated with the creek system; 30m from wetlands less than 2 hectares in size; and 120m from wetlands greater than 2 hectares in size or provincially significant wetlands.

CH staff attended the site on March 23, 2018 and staked top of bank. Since that date we have not received a formal survey with the staking delineated for us to approve. Additionally, the pond feature at the front of the property needs to be evaluated to determine if it is a regulated feature; a geotechnical slope stability study is required to determine long term stable top of bank; and we have yet to confirm what would be necessary in terms of floodplain modelling, meander belt assessment, etc.

Upon our preliminary review of the drawing against our existing mapping, we are concerned that the proposed severance appears to create a new regulated lot, which CH policies do not support. Additionally, some of the proposed servicing looks like it may be within the regulated area, which may also not be supported. Finally, on the provided conceptual servicing drawing the "Existing Storm" and "Proposed Storm" are unclear, as they are represented too similarly. Further to Philip's email below, CH will comment on the stormwater management for this site and any new outlets to the regulated area would need to be supported by CH Policy and require a CH Permit.

To provide additional feedback on the proposed works on the site, CH requires:

1. A survey delineating the staking from March 23, 2018; and
2. An updated drawing that clearly differentiates between existing and proposed storm.

In addition to the above, it appears that the property contains lands within the Regional Natural Heritage System, which may need to be evaluated and protected through any future application. Given the natural features and hazards on site, staff strongly recommend a preconsultation with CH, Town and Regional staff to understand a full scope of requirements and possible development constraints on site.

Should you have any further questions, please feel free to contact me to discuss.

Best regards,

**Colleen Bain, MES (Planning)**
Environmental Planning Analyst

**Conservation Halton**
2596 Britannia Road West, Burlington, ON L7P 0G3
905.336.1158 ext. 2257 | Fax 905.336.6684 | cbain@hrca.on.ca
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---

**From:** David Stafford <DStafford@rvanderson.com>
**Sent:** November 15, 2019 3:33 PM

**To:** Philip Kelly <philip.kelly@oakville.ca>; Colleen Bain <cbain@hrca.on.ca>
**Cc:** Mufaddal Shabbir <MShabbir@rvanderson.com>; Andrew S. Turner <aturner@rvanderson.com>; Paul Barrette <paul.barrette@oakville.ca>; Ronald.MacKenzie@halton.ca
**Subject:** RE: 1280 Dundas Street - Servicing Investigation

Thank you Philip,

Can you tentatively hold these dates.

We will not know for sure Ron's schedule until he is back from vacation.

**Colleen** – can you kindly confirm your availability.

Thankyou,

**David Stafford, P.Eng., LEED AP BD+C**
*Associate*

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2001 Sheppard Avenue East, Suite 300
Toronto, ON M2J 4Z8

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**From:** Philip Kelly <philip.kelly@oakville.ca>
**Sent:** November 14, 2019 3:48 PM
**To:** David Stafford <DStafford@rvanderson.com>; cbain@hrca.on.ca
**Cc:** Mufaddal Shabbir <MShabbir@rvanderson.com>; Andrew S. Turner <aturner@rvanderson.com>; Paul Barrette <paul.barrette@oakville.ca>; Ronald.MacKenzie@halton.ca
**Subject:** RE: 1280 Dundas Street - Servicing Investigation

David – Wed and Friday are open

Region has jurisdiction for Sani and water in Oakville.

Town has jurisdiction over storm. Assume you will need to undertake on-site SWM for at least quantity and quality control. Erosion control likely also required.

Regards

Philip Kelly

**Philip Kelly, M.Sc, P.Eng**
**Manager- Development and Environmental Engineering**
**Development Engineering**
Town of Oakville | 905-845-6601, ext.3298 | f: 905-338-4414 | www.oakville.ca

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**From:** David Stafford [mailto:DStafford@rvanderson.com]
**Sent:** Thursday, November 14, 2019 10:36 AM
**To:** Philip Kelly <philip.kelly@oakville.ca>; cbain@hrca.on.ca
**Cc:** Mufaddal Shabbir <MShabbir@rvanderson.com>; Andrew S. Turner <aturner@rvanderson.com>; Paul Barrette <paul.barrette@oakville.ca>; Ronald.MacKenzie@halton.ca
**Subject:** RE: 1280 Dundas Street - Servicing Investigation

Hi Colleen and Philip,

I hope you are doing well.

Further to the emails below, Tridel/Delmanor (the Developer) is currently in the due diligence period of a land acquisition deal at the subject property 1280 Dundas Street West. If the land acquisition is completed, it is our understanding that there would be a severance of the one legal property into two legal properties.

As you may be aware, there is not much in the way of municipal sewer and water fronting the site on Dundas and Fourth Line to service the site. There are twin sanitary forcemains and a 1200mm diameter CPP watermain on Dundas, i.e. no sewer and local distribution watermains. Therefore, we would like to discuss some preliminary servicing options for this site with you.

We have prepared a rough sketch attached to this email illustrating some preliminary sanitary and watermain servicing options for the site at 1280 Dundas Street. This sketch was forwarded to Ron Mackenzie at Halton Region for his review. Ron advised us that he will have some time mid-next week and later to have a look at this.

Ultimately we would like to set up a meeting sometime next Wednesday-Friday to discuss servicing options with you. Due to the limited options available for the site we feel it would be beneficial to have the Region, the Town and Conservation around a table to discuss what our options are.

Can you kindly provide your availability next Wednesday-Friday and hopefully we can arrange a meeting.

Regards,

**David Stafford, P.Eng., LEED AP BD+C**
*Associate*

**R.V. Anderson Associates Limited**
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**From:** Paul Barrette <paul.barrette@oakville.ca>
**Sent:** November 11, 2019 11:52 AM
**To:** David Stafford <DStafford@rvanderson.com>
**Cc:** Kara Green <KGreen@Tridel.com>; Andrew S. Turner <aturner@rvanderson.com>; Mufaddal Shabbir <MShabbir@rvanderson.com>; Philip Kelly <philip.kelly@oakville.ca>; MacKenzie, Ronald (Ronald.MacKenzie@halton.ca) <Ronald.MacKenzie@halton.ca>; 'Colleen Bain' <cbain@hrca.on.ca>
**Subject:** RE: 1280 Dundas Street - Servicing Investigation

Hi David,

I spoke with your colleague today and understand that a preliminary servicing plan is expected to be provided mid-week to inform the servicing discussion. At this stage, it would be best to meet directly with Development Engineering, at the Town, Halton Region and Conservation Halton. Should the due diligence advance further and a concept / site plan be prepared, the town could host a pre-consultation meeting which would facilitate a broader range of feedback.

In the meantime, I've copied Philip Kelly (Manager of Development Engineering at the Town), and Ron Makenzie (Development Project Manager at Halton Region) who would be the appropriate contacts to get in touch with to discuss servicing options for this development. I believe you already have Colleen Bain's contact information from Conservation Halton who is also copied on this email.

Paul

**Paul Barrette, MCIP, RPP**
**Senior Planner**
**Planning Services**
Town of Oakville | 905-845-6601, ext.3041 | www.oakville.ca

---

**From:** David Stafford [mailto:DStafford@rvanderson.com]
**Sent:** Thursday, November 07, 2019 6:13 PM
**To:** PWPermits@halton.ca; edefields@hrca.on.ca; Paul Barrette
**Cc:** Kara Green; Andrew S. Turner; Mufaddal Shabbir
**Subject:** 1280 Dundas Street - Servicing Investigation

Hello Emma and Paul and to whom it may concern at the Region of Halton,

R.V. Anderson Associates Limited (RVA) has been retained by Delmanor Oakville Limited (Delmanor) to complete a civil servicing investigation as part of their due diligence stage associated with the offer to purchase a portion of the St. Volodymyr lands located to the north and east of the cultural centre building site at 1280 Dundas Street. Please see attached figure showing the site location.

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At this point in time, RVA has accumulated multiple drawings of existing infrastructure of the surrounding right of ways. Additionally, we are currently scheduling a sub-surface engineering (SUE) investigation to further review existing infrastructure which may service the proposed development.

On behalf of Delmanor, we would like to request a meeting at one of your offices to collectively review possible servicing options which may support the proposed development.

We kindly request that you provide us with the appropriate contacts who we should be in touch with to discuss servicing options for this development. Following receipt of this information, we will follow up with potential servicing options that we have prepared in advance of the meeting so everyone has time to review ahead of time.

Regards,

**David Stafford, P.Eng., LEED AP BD+C**
*Associate*

**R.V. Anderson Associates Limited**
2001 Sheppard Avenue East, Suite 300
Toronto, ON M2J 4Z8

**T** 416 497 8600 x 1368 | **C** 416 268 8382

**website** | **facebook** | **twitter** | **linkedin**

**From:** Colleen Bain
**To:** Dale Leadbeater
**Cc:** Kara Green; Michael Roy; Jess Taylor
**Subject:** RE: 1280 Dundas Street W., Oakville - Delmanor
**Date:** January 08, 2020 9:54:10 AM
**Attachments:** image011.png
image012.png
image013.png
image014.png
image015.png
image017.png

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Hi Dale,

Hope you had a great holiday season!

I just wanted to provide an update based on internal discussions regarding the pond on the site. It has been determined that the pond would not be regulated by CH. As such, the valley feature is the limit of the CH regulated portion of the property, the extent of which is still to be determined by the required geotechnical slope stability study.

Please let me know if you'd still like to meet.

Best regards,

**Colleen Bain, MES (Planning)**
Environmental Planning Analyst

**Conservation Halton**
2596 Britannia Road West, Burlington, ON L7P 0G3
905.336.1158 ext. 2257 | Fax 905.336.6684 | cbain@hrca.on.ca
conservationhalton.ca



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**From:** Dale Leadbeater <dleadbeater@slrconsulting.com>
**Sent:** December 20, 2019 3:26 PM
**To:** Colleen Bain <cbain@hrca.on.ca>
**Subject:** RE: 1280 Dundas Street W., Oakville - Delmanor

Hi! Thanks for this…just checking with the team for timing. I know that Jan 7 doesn't work.

Happy Holidays!

Dale

Dale Leadbeater, B.Sc., B.Ed., P.Biol., R.P.Bio.
Principal Ecologist
905-415-7248
416-996-6976
dleadbeater@slrconsulting.com
SLR Consulting (Canada) Ltd.
300 Town Centre Blvd, Suite 200, Markham, ON L3R 5Z6

**From:** Colleen Bain <cbain@hrca.on.ca>
**Sent:** December 20, 2019 2:36 PM
**To:**
**Cc:**
**Subject:** RE: 1280 Dundas Street W., Oakville - Delmanor

Hi Dale,

Are you available to meet at the CH Administrative Building (2596 Britannia Road West, Burlington) from 2:00-3:00pm on Tuesday January 7th or Monday January 13th?

Let me know if either of these work for you, and if not please provide some alternative dates and times.

Happy holidays,

**Colleen Bain, MES (Planning)**
Environmental Planning Analyst

**Conservation Halton**
2596 Britannia Road West, Burlington, ON L7P 0G3
905.336.1158 ext. 2257 | Fax 905.336.6684 | cbain@hrca.on.ca
conservationhalton.ca



**Season's Greetings with all the best for the New Year. The office will be closed Tuesday, December 24 at 1:00 pm and will re-open on Thursday, January 2 at 8:30 am. Emails, voicemail messages and faxes will not be retrieved during this time. Please also note that I will be away from the office for the holidays starting Friday December 20.**

---

**From:** Dale Leadbeater <dleadbeater@slrconsulting.com>
**Sent:** December 10, 2019 1:56 PM
**To:** Colleen Bain <cbain@hrca.on.ca>
**Cc:** Kara Green <KGreen@tridel.com>; Michael Roy <mroy@slrconsulting.com>; Jess Taylor <jtaylor@hrca.on.ca>
**Subject:** Re: 1280 Dundas Street W., Oakville - Delmanor

Excellent! Thanks so much. I had a wetland biologist and fisheries biologist out last Friday so I have a little more information.

I appreciate you getting back to me and look forward to the dates.

Cheers

Sent from my iPhone

Dale Leadbeater, B.Sc., B.Ed., P.Biol., R.P.Bio.
Principal Ecologist

905-415-7248
416-996-6976
dleadbeater@slrconsulting.com

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300 Town Centre Blvd, Suite 200, Markham, ON L3R 5Z6



On Dec 10, 2019, at 1:03 PM, Colleen Bain <cbain@hrca.on.ca> wrote:

Good afternoon Dale,

Sorry we keep missing each other on the phone, thank you for your patience.

We are having internal discussions about the wetland, and would also like to meet with you to discuss. I will provide potential meeting dates within the next week or so.

Best regards,

**Colleen Bain, MES (Planning)**
Environmental Planning Analyst

**Conservation Halton**
2596 Britannia Road West, Burlington, ON L7P 0G3
905.336.1158 ext. 2257 | Fax 905.336.6684 | cbain@hrca.on.ca
conservationhalton.ca



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**From:** Dale Leadbeater <dleadbeater@slrconsulting.com>
**Sent:** December 5, 2019 3:26 PM
**To:** Colleen Bain <cbain@hrca.on.ca>
**Cc:** 'Kara Green' <KGreen@Tridel.com>; Michael Roy <mroy@slrconsulting.com>
**Subject:** 1280 Dundas Street W., Oakville - Delmanor

Greetings Colleen!

I'm following up on our conversation regarding the features on the above property, most notably the pond and the HDF in the middle of the site. I believe that you were going to discuss with Emma regarding the information you have (site photos among the data). I would like to meet at either of our offices or on the site to discuss the function and extent of regulated area. As you are aware, this is of great consequence to the potential future use of the property.

Please let me know when we could get together.

Kind regards
Dale

Dale Leadbeater, B.Sc., B.Ed., P.Biol., R.P.Bio.
Principal Ecologist

905-415-7248
416-996-6976
dleadbeater@slrconsulting.com

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# APPENDIX B
# Botanical Inventory List

EIS in Support of a Zoning By-law Amendment
1280 Dundas Street, West, and Fourth Line, Oakville
SLR Project No.: 209.40574.00000

| Latin Name | Common Name | SRank[1] |
|---|---|---|
| Symphyotrichum novae-angliae | New England Aster | S5 |
| Picea abies | Norway Spruce | SNA |
| Picea glauca | White Spruce | S5 |
| Pinus nigra | Black Pine | SNA |
| Pinus strobus | Eastern White Pine | S5 |
| Pinus sylvestris | Scots Pine | SNA |
| Juniperus virginiana | Eastern Red Cedar | S5 |
| Thuja occidentalis | Eastern White Cedar | S5 |
| Salix petiolaris | Meadow Willow | S5 |
| Phalaris arundinacea | Reed Canary Grass | S5 |
| Phleum pratense | Common Timothy | SNA |
| Populus tremuloides | Trembling Aspen | S5 |
| Juglans nigra | Black Walnut | S4? |
| Ostrya virginiana | Eastern Hop-hornbeam | S5 |
| Quercus macrocarpa | Bur Oak | S5 |
| Quercus rubra | Northern Red Oak | S5 |
| Rumex crispus | Curly Dock | SNA |
| Chenopodium album | White Goosefoot | SNA |
| Dianthus armeria | Deptford Pink | SNA |
| Saponaria officinalis | Bouncing-bet | SNA |
| Ranunculus acris | Tall Buttercup | SNA |
| Alliaria petiolata | Garlic Mustard | SNA |
| Capsella bursa-pastoris | Common Shepherd's Purse | SNA |
| Hesperis matronalis | Dame's Rocket | SNA |
| Fragaria virginiana | Wild Strawberry | S5 |
| Geum aleppicum | Yellow Avens | S5 |
| Geum urbanum | Wood Avens | SNA |
| Potentilla recta | Sulphur Cinquefoil | SNA |
| Rosa multiflora | Multiflora Rose | SNA |
| Rubus occidentalis | Black Raspberry | S5 |
| Solidago flexicaulis | Zigzag Goldenrod | S5 |
| Crataegus macracantha | Large-thorned Hawthorn | S5 |
| Securigera varia | Common Crown-vetch | SNA |
| Lotus corniculatus | Garden Bird's-foot Trefoil | SNA |
| Medicago lupulina | Black Medic | SNA |
| Melilotus albus | White Sweet-clover | SNA |
| Robinia pseudoacacia | Black Locust | SNA |
| Vicia cracca | Tufted Vetch | SNA |
| Trifolium hybridum | Alsike Clover | SNA |
| Oxalis stricta | Upright Yellow Wood-sorrel | S5 |
| Euphorbia cyparissias | Cypress Spurge | SNA |
| Syringa vulgaris | Common Lilac | SNA |
| Toxicodendron radicans | Poison Ivy | S5 |
| Rhus typhina | Staghorn Sumac | S5 |
| Acer tataricum ssp. ginnala | Amur Maple | SNA |
| Acer negundo | Manitoba Maple | S5 |
| Acer platanoides | Norway Maple | SNA |
| Acer saccharum | Sugar Maple | S5 |
| Impatiens capensis | Spotted Jewelweed | S5 |
| Rhamnus cathartica | Common Buckthorn | SNA |
| Vitis riparia | Riverbank Grape | S5 |
| Tilia americana | American Basswood | S5 |
| Tilia cordata | Little-leaf Linden | SNA |
| Daucus carota | Wild Carrot | SNA |
| Fraxinus americana | White Ash | S4 |
| Apocynum androsaemifolium | Spreading Dogbane | S5 |
| Apocynum cannabinum var. hypericifolium | Clasping-leaved Hemp Dogbane | S5 |
| Vincetoxicum rossicum | European Swallow-wort | SNA |
| Convolvulus arvensis | Field Bindweed | SNA |
| Glechoma hederacea | Ground Ivy | SNA |
| Leonurus cardiaca | Common Motherwort | SNA |
| Prunella vulgaris | Self-heal | S5 |
| Solanum triflorum | Cut-leaved Nightshade | SNA |
| Plantago lanceolata | English Plantain | SNA |
| Galium mollugo | Smooth Bedstraw | SNA |
| Lonicera tatarica | Tartarian Honeysuckle | SNA |
| Dipsacus fullonum | Common Teasel | SNA |
| Ambrosia artemisiifolia | Common Ragweed | S5 |
| Arctium lappa | Great Burdock | SNA |
| Arctium minus | Common Burdock | SNA |
| Cichorium intybus | Chicory | SNA |
| Cirsium arvense | Canada Thistle | SNA |
| Cirsium vulgare | Bull Thistle | SNA |
| Erigeron annuus | Annual Fleabane | S5 |
| Lactuca serriola | Prickly Lettuce | SNA |
| Leucanthemum vulgare | Oxeye Daisy | SNA |
| Tripleurospermum inodorum | Scentless Chamomile | SNA |
| Sonchus arvensis | Field Sow-thistle | SNA |
| Sonchus oleraceus | Common Sow-thistle | SNA |
| Taraxacum officinale | Common Dandelion | SNA |
| Solidago altissima | Tall Goldenrod | S5 |
| Parthenocissus vitacea | Thicket Creeper | S5 |
| Syringa reticulata | Japanese Tree Lilac | SNA |
| Salix x fragilis | (Salix alba X Salix euxina) | SNA |

[1]**S-Ranks** - Provincial (or Subnational) ranks are used by the Natural Heritage Information Centre (NHIC) to set protection priorities for rare species and natural

**S1** Critically Imperiled—Critically imperiled in the nation or state/province because of extreme rarity (often 5 or fewer occurrences) or because of some factor(s) such as very steep declines making it especially vulnerable to extirpation from the state/province.

**S2** Imperiled—Imperiled in the nation or state/province because of rarity due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors making it very vulnerable to extirpation from the nation or state/province.

**S3** Vulnerable—Vulnerable in the nation or state/province due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors making it vulnerable to extirpation.

**S4** Apparently Secure—Uncommon but not rare; some cause for long-term concern due to declines or other factors.

**S5** Secure—Common, widespread, and abundant in the nation or state/province.

S#S# Range Rank —A numeric range rank (e.g., S2S3) is used to indicate any range of uncertainty about the status of the species or community. Ranges cannot skip more than one rank (e.g., SU is used rather than S1S4).

sites.

**SNA** (Formally SE) Exotic; not believed to be a native component of Ontario's flora.

# APPENDIX C
# Tree Inventory

EIS in Support of a Zoning By-law Amendment
1280 Dundas Street, West, and Fourth Line, Oakville
SLR Project No.: 209.40574.00000

# Tree Inventory and Preservation Plan &
# Shade Impact Analysis Report
# 1280 Dundas Street West
# Oakville, Ontario

prepared for

**Delmanor West Oak Inc.**
**4800 Dufferin Street**
**Toronto, Ontario**
**M3H 5S9**

prepared by

KUNTZ
FORESTRY
CONSULTING Inc.

146 Lakeshore Road West
PO Box 1267 Lakeshore W PO
Oakville ON L6K 0B3
t: 289.837.1871
e: consult@kuntzforestry.ca

31 July 2020
Revision 1: 24 August 2020

KUNTZ FORESTRY CONSULTING INC Project P2451

# Table of Contents

## 1.0 Introduction

Kuntz Forestry Consulting Inc. was retained by Delmanor West Oak Inc. to complete a Tree Inventory and Preservation Plan & Shade Impact Analysis Report in support of a proposed development application for the eastern portion of the property located at 1280 Dundas Street West in Oakville. The property is located south of Dundas Street West and west of Fourth Line within a residential area. The property is adjacent to the Sixteen Mile Creek natural heritage feature.

The work plan for the tree preservation study included the following:

- Prepare an inventory of tree resources over 10cm DBH occurring on and within six metres of the proposed development, and trees of all sizes on the road right-of-way;
- Evaluate potential tree saving opportunities based on proposed development plans; and
- Document the findings in a Tree Inventory and Preservation Plan Report.

The work plan for the shade impact analysis included the following:

- Obtain Ecological Land Classification (ELC) data for vegetation resources on the subject property east of the proposed buildings and on the adjacent natural heritage vegetation community on the east side of Old Fourth Line;
- Review shade studies prepared by ICKE Brochu Architects Inc.;
- Evaluate potential impacts of shade on vegetation communities assessed; and
- Document the findings in a Shade Impact Analysis Report.

The results of the evaluation are provided below.

## 2.0 Methodology

*Tree Inventory and Preservation Plan*

Field assessments for the tree inventory were conducted on 27 July 2020 and 29 July 2020. Trees measuring over 10cm DBH on and within six metres of the subject property and trees of all sizes on the road right-of-way were identified in the tree inventory. Trees were located using the topographic survey provided, aerial imagery, and estimates made in the field. Trees were tagged by surveyors with the numbers 137 – 139, 142 – 174, 176 – 183, 185 – 203, 205 – 299, 301, and 305 – 395. Trees that were not surveyed were labeled with the numbers 1 – P34.

All individual tree resources included in the inventory were visually assessed for condition utilizing the following parameters:

**Tree #** - number assigned to tree that corresponds to Figure 1.
**Species** - common and botanical names provided in the inventory table.
**DBH** - diameter (centimetres) at breast height, measured at 1.4 metres above the ground.
**Condition** - condition of tree considering trunk integrity, crown structure, and crown vigour. Condition ratings include poor (P), fair (F) and good (G).
**Drip Line** – Crown radius; and
**Comments** - additional relevant detail.

Where trees were situated in groups, they were inventoried in tree polygons. Trees within a tree polygon were inventoried using a 100% tally analysis by species, size class, and quality. On private property, trees with a DBH of 10cm or greater were included in the stand tally analysis. Within the City right-of-way, trees of all sizes were included in the stand tally analysis. Trees were assessed for condition utilizing the following parameters.

**Species:** Common and botanical names provided in the inventory table;
**Size Class (DBH):** 1 – 24cm / 10 – 24cm, 26 – 36cm, 38 – 48 cm, 50cm and above
**Quality Class:** Acceptable Growing Stock (AGS), Unacceptable Growing Stock (UGS)

Trees classified as AGS are trees with no major defects in the bole and exhibit a relatively good crown structure and vigour. Trees classified as UGS are trees with a major defect in the bole or exhibiting a relatively poor crown structure or vigour. Refer to Table 1 and Table 2 for the detailed tree inventory.

*Shade Impact Analysis*

Field assessments were conducted on 29 July 2020. The areas to be assessed were informed by the Sun/Shadow Study prepared by Icke Brochu Architects Inc. on 27 May 2020. Vegetation communities on the subject property east of the proposed buildings and on the adjacent top-of-bank natural heritage vegetation community on the east side of Old Fourth Line were visually assessed to determine vegetation types and plant associations. Trees along the slope on the east side of Old Fourth Line were not assessed, as the Sun/Shadow Study indicated that these trees would not be impacted. Information obtained during the field assessments was used to assess how potential shade impacts from the proposed development may affect existing vegetation communities.

*Tree Valuation*

A tree valuation was calculated for the trees proposed for removal within the road right-of-way based on the information obtained by the tree inventory and stand tally analysis conducted in the field. The value was calculated using the Reproduction Cost Method – Trunk Formula Technique as described in the Guide for Plant Appraisal, 10$^{th}$ Edition (CTLA, 2019). The value was calculated using the Trunk Formula Technique. This method is described in the Guide for Plant Appraisal, 10$^{th}$ Edition (CTLA 2018). The Ontario Supplement (2003) provides regionally relevant data pertaining to basic costs for trees.

*Trunk Formula Technique*

This method is used for trees that are larger than what is commonly available for transplant from a nursery. The Unit Tree Cost of the replacement tree is derived from a survey of nurseries or supplied by the Regional Plant Appraisal Council and published within the Ontario Supplement (2003). For Ontario, the unit tree cost has been set at \$6.51/cm$^2$ within the Supplement and this value has been used for the calculation. For trees that were small enough in size to be replaced with nursery stock, the price of the nursery stock was obtained through wholesale price quotes from multiple nurseries throughout southern Ontario.

The Basic Tree Cost is calculated by multiplying the unit tree cost by the cross-sectional area of the subject tree. For multi-stemmed trees, the appraised trunk area considers the cross-sectional area of all stems. The Appraised Value is calculated by multiplying the Basic

Reproduction Cost by the three depreciation factors (Condition Rating, Functional Limitation Rating, and External Limitation Rating, as described in the Guide).
The appraised value of trees is therefore calculated using the following equation:

*Basic Tree Cost = Appraised Tree Trunk Area X Unit Tree Cost*

*Appraised Value = Basic Tree Cost X Condition Rating X Functional Limitation Rating X External Limitation Rating*

Functional Limitation Ratings and External Limitation Ratings are calculated according to the methods outlined in the guide. Condition ratings were calculated based on the assessed condition of the trees on the site and in accordance with the guide. For trees in polygons, the average DBH was used to calculate the appraisal value. For trees with appraisal values less than $744.00 (Town of Oakville's minimum value per tree), their values were set to $744.00.

## 3.0 Tree Inventory and Preservation Plan

*Existing Site Conditions*

The subject area is currently occupied by vacant meadow lands with scattered landscape trees and an asphalt driveway. A wooded area exists along the east and south boundaries of the subject area. The western portion of the property (which is not proposed for development) is occupied by the St. Vlodymyr Cultural Centre. Tree resources exist in the form of landscape trees and natural regeneration. Refer to Figure 1 for the existing site conditions.

*Individual Tree Resources*

The tree inventory documented 193 trees and 13 tree polygons and within six metres of the proposed development and within the road right-of-way. Tree resources are comprised of Silver Maple (*Acer saccharinum*), Eastern White Cedar (*Thuja occidentalis*), Manitoba Maple (*Acer negundo*), White Pine (*Pinus strobus*), White Ash (*Fraxinus americana*), Apple species (*Malus* sp.), Norway Maple (*Acer platanoides*), White Elm (*Ulmus americana*), White Spruce (*Picea glauca*), Black Walnut (*Juglans nigra*), Basswood (*Tilia americana*), Willow species (*Salix* sp.), Black Locust (*Robinia pseudoacacia*), Eastern Redcedar (*Juniperus virginiana*), Horsechestnut (*Aesculus hippocastanum*), Yew species (*Taxus* sp.), Sugar Maple (*Acer saccharum*), English Oak (*Quercus robur*), Japanese Walnut (*Juglans ailantifolia*), Red Oak (*Quercus rubra*), Blue Spruce (*Picea pungens*), Hazelnut species (*Corylus* sp.), Bur Oak (*Quercus macrocarpa*), Norway Spruce (*Picea abies*), Scots Pine (*Pinus sylvestris*), Cherry species (*Prunus* sp.), Pear species (*Pyrus* sp.), Black Cherry (*Prunus serotina*), Austrian Pine (*Pinus nigra*), Amur Maple (*Acer ginnala*), and Silk Lilac (*Syringa reticulata*). Refer to Table 1 and Table 2 for the full tree inventory and Figure 1 for the location of trees reported in the tree inventory.

Trees 290 and 293 were identified as a Japanese Walnuts (*Juglans ailantifolia*), which can often be confused with Butternut. Pure, naturally-occurring Butternut are protected by the Endangered Species Act (ESA). A visual assessment of Trees 290 and 293 was conducted by KFCI and the trees were identified as Japanese Walnuts, therefore Butternut Health Assessments are not required.

*Proposed Works*

The proposed development includes the demolition of the existing asphalt road and the construction of a seniors living complex with multiple buildings, a parking lot, multiple vehicle laneways, amenity areas, and landscaping upgrades. Two vehicle entranceways are proposed on the north side of the development. Refer to Figure 1 for the existing conditions and proposed site plan.

*Development Impacts/Tree Removals*

The following sections provide a discussion and analysis of impacts, tree removal requirements, and tree preservation relative to the proposed development and existing conditions.

The removal of Trees 1, 2, 6 – 8, 10, 12 – 31, P33, 137 – 139, 142 – 174, 176 – 183, 185 – 203, 205 – 226, 233 – 236, 244, 253, 257, 258, 263, 278 – 299, 301, 305 – 351, 353, and 368 – 395 is required to accommodate the proposed site plan. Trees 1, 2, 168, 176, 179, 197 – 199, 201, 206 – 208, and 293 conflict with the proposed vehicle laneways. Trees 29 and P33 have trunks that conflict with the proposed entranceways off Fourth Line. Trees P24, and 174 are located close to the proposed laneways such that their roots and / or trunks will be impacted by construction. Trees 6 – 8, P13, P17, 18, 137 – 139, 142 – 161, 169 – 172, 180, 193 – 196, 209 – 222, 236, 289 – 292, 294 – 299, 301, 305, 311, 312, 343, 347 – 350, and 378 – 394 conflict with the proposed buildings. Trees 12, 223, 234, 235, 284 – 288, 306, 368 – 377, and 395 are located close to the proposed buildings such that their roots and / or crowns would be impacted by construction. Trees 14 – 16, 162 – 164, 166, 280, 282, 313 – 342, and 344 – 346 conflict with the proposed parking lot. Trees 10, 165, 167, 177, 178, 189 – 192, 200, 203, 278, 279, 281, and 283 conflict with the proposed landscaping upgrades. Trees 19, 20, 181 – 188, 202, 205, 307 – 310, and 351 conflict with the proposed amenity areas. Trees 25 – 28, 30, and 31 have tree protection zones that conflict with the proposed development feature walls along Fourth Line. Tree 22 is advised for removal due to its proximity to Tree 353.

Trees 21, 23, 150, 166 – 180, 189, 190, 194, 196, 210, 216/219, 224 – 226, 233, 244, 253, 257, 258, 263, 283, 290, 293, 299, 311, and 353 are in poor or hazardous condition and their removal is advised regardless of the site plan.

Trees 1, 2, 7, 8, 10, 12 – 14, 16 – 18, 20 – 23, 137 – 139, 142 – 174, 176 – 183, 185 – 203, 205 – 226, 233 – 236, 244, 253, 257, 258, 263, 278 – 299, 301, 305 – 351, 353 and 368 – 395 are greater than 15cm DBH, therefore a permit will be required prior to their removal. Trees 25 – 31 and P33 are located within the road right-of-way and a permit is required prior to the removal of these trees.

*Tree Preservation*

Preservation of Trees 3 – P5, P9, P11, 32, P34, 227 – 232, 237 – 243, 245 – 252, 254 – 256, 259 – 262, 264 – 277, 352, 354 – 367 and trees within the woodland south of the proposed development will be possible with the use of appropriate tree protection measures as indicated on Figure 1. Tree protection measures must be implemented prior to the proposed work to ensure tree resources designated for retention are not impacted by the proposed development. Refer to Figure 1 for the location of required tree preservation

fencing, general Tree Protection Plan Notes, tree preservation fence details. Special mitigation measures are prescribed for P5, P9, P11 and the trees in the environmental feature on the south side of the property, as described below.

*P5, P9, and P11*

It is recommended that trees in poor and / or hazardous conditions within tree polygons P5, P9, and P11 are removed prior to development. Prior to the proposed work, tree protection fencing should be placed at the dripline edge of these polygons, as shown in Figure 1.

*South Environmental Feature*

Prior to construction, tree protection fencing should be placed either at the dripline edge of the retained trees within the existing environmental feature or along the property boundary, depending on what option provides the most tree protection. For the trees adjacent to the proposed vehicle laneway, tree protection fencing should be placed 2.5 metres south of the laneway to provide adequate space for construction. Construction of the vehicle laneway must not encroach within the driplines of any retained trees within the adjacent protected environmental feature. Refer to Figure 1 for the location of the tree protection fencing.

*Tree Valuation*

Refer to Table 3 for the results of the tree valuation. The total value of all Town-owned trees proposed for removal is $17,856.00.

## 4.0 Shade Impact Analysis

*Vegetation Resources*

The vegetation features in the subject area subject to the shade analysis were assessed using Ecological Land Classification (ELC). Field investigations conducted on 29 July 2020 used visual observations to determine the ELC community. Communities are described below according to the Ecological Land Classification system for southern Ontario (Lee *et al. 1998, draft 2008).*

*Dry-Fresh Sugar Maple Deciduous Forest Ecosite*

The vegetation communities on the subject property east of the proposed buildings and on the adjacent natural heritage vegetation community on the east side of Old Fourth Line (top of bank) were both identified as a Dry-Fresh Sugar Maple Deciduous Forest Ecosite (FOD5). Trees were predominantly young to mid-age and had a canopy cover of greater than 60%. The ecosite community was found to be disturbed by anthropogenic activity, as evidenced by the presence of meadow and roadside species. Dominant tree species included Sugar Maple (*Acer saccharum*), Eastern White Cedar (*Thuja occidentalis*), Basswood (*Tilia americana*), and Black Locust (*Robinia pseudoacacia*) with occurrences of White Ash (*Fraxinus americana*), Willow species (*Salix* sp.), Trembling Aspen (*Populus tremuloides*), Black Walnut (*Juglans nigra*), White Oak (*Quercus alba*), Bur Oak (*Quercus macrocarpa*), White Pine (*Pinus strobus*), and Manitoba Maple (*Acer negundo*). Dominant shrub species included Staghorn Sumac (*Rhus typhina*) and Common Buckthorn (*Rhamnus cathartica*), with occurrences of Serviceberry (*Amelanchier* sp.), Common Lilac (*Syringa vulgaris*), Rose

(*Rosa* sp.), and Hawthorn (*Crataegus* sp.). Herbaceous species included Grasses, Raspberry (*Rubus* sp.), Riverbank Grape (*Vitis riparia*), Canada Thistle (*Cirsium arvense*), Goldenrod (*Solidago* sp.), Virginia Creeper (*Parthenocissus quinquefolia*), Garlic Mustard (*Alliaria petiolate*), and Common Burdock (*Arctium minus*).

*Shade Impacts*

The impacts of shade from the proposed development will be minimal on the tree communities, as the dominant native species such as Sugar Maple, Eastern White Cedar, and Basswood are shade tolerant. Trees species with a moderate occurrence on site such as White Ash, White Oak, Bur Oak, and White Pine are partially shade tolerant and will be minimally affected by the shade created by the proposed development. Tree species such as Willow species, Black Walnut, and Trembling Aspen are shade intolerant and may be displaced from the community and replaced with more shade tolerant species over time. These species, however, were found in low-moderate occurrences and the overall community will be minimally affected. Refer to the table below for details of the shade impact analysis for the tree species observed.

**Shade Impact Analysis of Tree Species**

| Tree Species | Shade Tolerance | Impacts |
|---|---|---|
| High Occurrence | | |
| Sugar Maple (*Acer saccharum*) | Shade Tolerant | Negligible |
| Eastern White Cedar (*Thuja occidentalis*) | Shade Tolerant | Negligible |
| Basswood (*Tilia americana*) | Shade Tolerant | Negligible |
| Black Locust (*Robinia pseudoacacia*) | Shade Intolerant | Shade from proposed development may cause the displacement of species over time. This species is invasive and therefore not desirable in the vegetation community. |
| Moderate Occurrence | | |
| White Ash (*Fraxinus americana*) | Intermediate Shade Tolerant | Proposed development will only create partial shade on species. Impacts will be minimal to none. |
| Willow species (*Salix* sp.) | Shade Intolerant | Shade from proposed development may cause the displacement of species over time. |
| White Oak (*Quercus alba*) | Intermediate Shade Tolerant | Proposed development will only create partial shade on species. Impacts will be minimal to none. |
| Bur Oak (*Quercus macrocarpa*) | Intermediate Shade Tolerant | Proposed development will only create partial shade on species. Impacts will be minimal to none. |
| White Pine (*Pinus strobus*) | Intermediate Shade Tolerant | Proposed development will only create partial shade on species. Impacts will be minimal to none. |
| Manitoba Maple (*Acer negundo*) | Shade Tolerant | Negligible |
| Low Occurrence | | |
| Black Walnut (*Juglans nigra*) | Shade Intolerant | Shade from proposed development may cause the displacement of species over time. |
| Norway Spruce (*Picea abies*) | Intermediate Shade Tolerant | Proposed development will only create partial shade on species. Impacts will be minimal to none. |
| Trembling Aspen (*Populus tremuloides*) | Shade Intolerant | Shade from proposed development may cause the displacement of species over time. |

The impacts of shade from the proposed development may impact the shrub community, as Staghorn Sumac, which dominates the shrub layer, is shade intolerant. Shade from the proposed development may cause the displacement of this species over time as it is replaced with more shade tolerant species such as Common Buckthorn. Common Lilac may be impacted as it is also shade intolerant; however, it is invasive and therefore not desirable in the vegetation community. Other shrub species observed are partially shade tolerant and will be minimally affected by the shade created by the proposed development. Refer to the table below for details of the shade impact analysis for the shrub species observed.

### Shade Impact Analysis of Shrub Species

| Shrub Species | Shade Tolerance | Impacts |
|---|---|---|
| High Occurrence | | |
| Staghorn Sumac (*Rhus typhina*) | Shade Intolerant | Shade from proposed development may cause the displacement of species over time. |
| Common Buckthorn (*Rhamnus cathartica*) | Shade Tolerant | Negligible |
| Moderate Occurrence | | |
| Serviceberry (*Amelanchier* sp.) | Intermediate Shade Tolerant | Proposed development will only create partial shade on species. Impacts will be minimal to none. |
| Common Lilac (*Syringa vulgaris*) | Shade Intolerant | Shade from proposed development may cause the displacement of species over time. This species is invasive and therefore not desirable in the vegetation community. |
| Low Occurrence | | |
| Rose (*Rosa* sp.) | Intermediate Shade Tolerant | Proposed development will only create partial shade on species. Impacts will be minimal to none. |
| Hawthorn (*Crataegus* sp.) | Intermediate Shade Tolerant | Proposed development will only create partial shade on species. Impacts will be minimal to none. |

The shade created by the proposed development may impact the herbaceous species found in the subject area. Shade intolerant species such as Grasses, Canada Thistle, and Goldenrod, which were found in high occurrences, may be displaced over time and replaced by prolific shade tolerant herbaceous species such as Virginia Creeper, Garlic Mustard, Common Burdock, and Riverbank Grape. Refer to the table below for details of the shade impact analysis for the herbaceous species observed.

### Shade Impact Analysis of Herbaceous Species

| Herbaceous Species | Shade Tolerance | Impacts |
|---|---|---|
| High Occurrence | | |
| Riverbank Grape (*Vitis riparia*) | Intermediate Shade Tolerant | Proposed development will only create partial shade on species. Impacts will be minimal to none. |
| Canada Thistle (*Cirsium arvense*) | Shade Intolerant | Shade from proposed development may cause the displacement of species over time. This species is invasive and therefore not desirable in the vegetation community. |

| | | |
|---|---|---|
| Goldenrod (*Solidago* sp.) | Shade Intolerant | Shade from proposed development may cause the displacement of species over time. |
| Moderate Occurrence | | |
| Virginia Creeper (*Parthenocissus quinquefolia*) | Shade Tolerant | Negligible |
| Garlic Mustard (*Alliaria petiolate*) | Shade Tolerant | Negligible |
| Common Burdock (*Arctium minus*) | Intermediate Shade Tolerant | Proposed development will only create partial shade on species. Impacts will be minimal to none. |
| Low Occurrence | | |
| Raspberry (*Rubus* sp.) | Intermediate Shade Tolerant | Proposed development will only create partial shade on species. Impacts will be minimal to none. |

Overall, there will be minimal impacts on the tree, shrub, and herbaceous communities located on the subject property east of the proposed buildings and on the adjacent natural heritage vegetation community on the east side of Old Fourth Line (top of bank). It is unlikely that the shade created by the proposed development will create erosion on the slope, as only the top of bank will be partially shaded and the sloped areas will not experience an increase in shade.

## 5.0 Summary and Recommendations

Kuntz Forestry Consulting Inc. was retained by Delmanor West Oak Inc. to complete a Tree Inventory and Preservation Plan & Shade Impact Analysis in support of a development application for the property located at 1280 Dundas Street West in Oakville. A tree inventory was conducted and reviewed in the context of the proposed site plan.

The findings of the study indicate a total of 193 trees and 13 tree polygons on and within six metres of the subject property and within the right-of-way. The removal of 137 trees and nine tree polygons will be required to accommodate the proposed site plan. All other trees can be saved provided appropriate tree protection measures are installed prior to development.

The findings of the shade analysis indicate that there will be minimal impacts on the tree, shrub, and herbaceous communities located on the subject property east of the proposed buildings and on the adjacent natural heritage vegetation community on the east side of Old Fourth Line (top of bank).

The following recommendations are suggested to minimize impacts to trees identified for preservation. Refer to Figure 1 for the location of the required tree protection fencing, general Tree Protection Plan Notes, and tree preservation detail.

- Tree protection barriers and fencing should be erected at locations as prescribed on Figure 1. All tree protection measures should follow the guidelines as set out in the tree preservation plan notes and the tree preservation fencing detail.
- No construction activity including surface treatments, excavations of any kind, storage of materials or vehicles, unless specifically outlined above, is permitted within the area identified on Figure 1 as a tree protection zone (TPZ) at any time during or after construction.

- Branches and roots that extend beyond prescribed tree protection zones that require pruning must be pruned by a qualified Arborist or other tree professional. All pruning of tree roots and branches must be in accordance with Good Arboricultural Standards.
- Site visits, pre, during and post construction is recommended by either a certified consulting arborist (I.S.A.) or registered professional forester (R.P.F.) to ensure proper utilization of tree protection barriers. Trees should also be inspected for damage incurred during construction to ensure appropriate pruning or other measures are implemented.

Respectfully Submitted,
**Kuntz Forestry Consulting Inc.**

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# LEGEND

## Tree Inventory

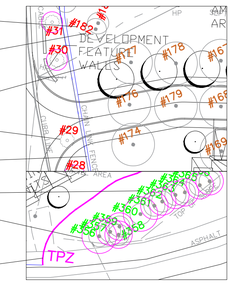
Refer to Table 1 and Table 2 of the report dated 24 August 2020. Trees greater than 10cm on or within six metres of the subject property and trees of all sizes within the City right-of-way were included in the inventory.

## Tree Removals

The removal of 137 trees and nine tree polygons is required to accommodate the proposed development. Removals are indicated with RED or ORANGE labels.

## Tree Preservation

Preservation of 56 trees and four tree polygons will be possible with appropriate tree protection measures. Trees identified for preservation are indicated with GREEN labels. Tree protection measures must be implemented prior to the construction phase (earth works). Minimum tree preservation zones and required tree preservation fencing is indicated in MAGENTA.




**TREE PROTECTION PLAN NOTES**

- It is the applicants' responsibility to discuss potential impacts to trees located near or wholly on adjacent properties or on shared boundary lines with their neighbours. Should such trees be injured to the point of instability or death the applicant may be held responsible through civil action. The applicant would also be required to replace such trees to the satisfaction of Urban Forestry.
- Tree protection barriers shall be installed to standards as detailed in this document and to the satisfaction of Urban Forestry.
- Tree protection barriers must be installed using plywood clad hoarding (minimum 19mm or ¾" thick) or an equivalent approved by Urban Forestry.
- Where required, signs as specified in Section 4, Tree Protection Signage must be attached to all sides of the barrier.
- Prior to the commencement of any site activity such as site alteration, demolition or construction, the tree protection measures specified on this plan must be installed to the satisfaction of Urban Forestry.
- Once all tree/site protection measures have been installed, Urban Forestry staff must be contacted to arrange for an inspection of the site and approval of the tree/site protection requirements. Photographs that clearly show the installed tree/site protection shall be provided for Urban Forestry review.
- Where changes to the location of the approved TPZ or sediment control or where temporary access to the TPZ is proposed, Urban Forestry must be contacted to obtain approval prior to alteration.
- Tree protection barriers must remain in place and in good condition during demolition, construction and/or site disturbance, including landscaping, and must not be altered, moved or removed until authorized by Urban Forestry.
- No construction activities including grade changes, surface treatments or excavation of any kind are permitted within the area identified on the Tree Protection Plan or Site Plan as a tree protection zone (TPZ). No root cutting is permitted. No storage of materials or fill is permitted within the TPZ. No movement or storage of vehicles or equipment is permitted within the TPZ. The area(s) identified as a TPZ must be protected and remain undisturbed at all times.
- All additional tree protection or preservation requirements, above and beyond the installation of tree protection barriers, must be undertaken or implemented as detailed in the Urban Forestry approved arborist report and/or the approved tree protection plan and to the satisfaction of Urban Forestry.
- If the minimum tree protection zone (TPZ) must be reduced to facilitate construction access, the tree protection barriers must be maintained at a lesser distance and the exposed portion of TPZ must be protected using a horizontal root protection method approved by Urban Forestry.
- Any roots or branches indicated on this plan which require pruning, as approved by Urban Forestry, must be pruned by an arborist. All pruning of tree roots and branches must be in accordance with good arboricultural practice. Roots that have received approval from Urban Forestry to be pruned must first be exposed using pneumatic (air) excavation, by hand digging or by a using low pressure hydraulic (water) excavation. The water pressure for hydraulic excavation must be low enough that root bark is not damaged or removed. This will allow a proper pruning cut and minimize tearing of the roots. The arborist retained to carry out crown or root pruning must contact Urban Forestry no less than three working days prior to conducting any specified work.
- The applicant/owner shall protect all by-law regulated trees in the area of consideration that have not been approved for removal throughout development works to the satisfaction of Urban Forestry.
- Convictions of offences respecting the regulations in the Street Tree By-law and Private Tree By-law are subject to fines. A person convicted of an offence under these by-laws is liable to a minimum fine of $500 and a maximum fine of $100,000 per tree, and /or a Special Fine of $100,000. The landowner may be ordered by the City to stop the contravening activity or ordered to undertake work to correct the contravention.
- Prior to site disturbance the owner must confirm that no migratory birds are making use of the site for nesting. The owner must ensure that the works are in conformance with the Migratory Bird Convention Act and that no migratory bird nests will be impacted by the proposed work no less than 48 hours prior to conducting any specified work.

| No. | Issue/Revisions | Date | By |
|---|---|---|---|
| 1 | Report Submission | 31 July '20 | KD |
| 2 | Report Resubmission | 24 Aug. '20 | KD |
| | | | |

Base Data: J.D. Barnes Ltd. (survey), ICKE Brochu Architects Inc. (site plan)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Client: Delmanor West Oak Inc.
4800 Dufferin Street
Toronto, ON

Property: 1280 Dundas Street West
Oakville, ON

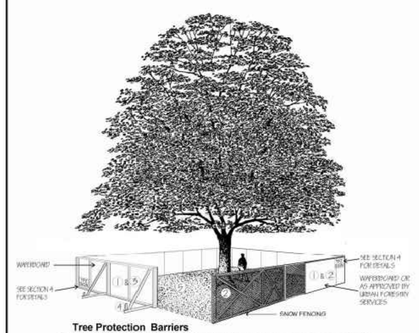
Existing Conditions, Proposed Site Plan, Tree Inventory & Preservation Plan

| | | | |
|---|---|---|---|
| Project | P2451 | Figure | 1 |
| Date | 24 August 2020 | | |
| Scale | 1:500 | | |

**Tree Protection Zone**
No grade change, storage of materials or equipment is permitted within this area.
This tree protection barrier must not be removed without the written authorization of the Town of Oakville.
Report any contraventions to
**Contact Name _____ Tel No. _____**
Unauthorized removal of the tree protection barrier or other contraventions may result in prosecution.

**SCHEDULE 1**
**TREE PROTECTION BARRIER**

OAKVILLE




**Tree Protection Barriers**

PLYWOOD

1. Tree protection barriers must be 1.2m (4ft) high, waterboard hoarding or an equivalent approved by Urban Forestry Services.
2. Tree protection barriers for trees situated on the Town road allowance where visibility must be maintained can be 1.2m (4ft.) high and consist of plastic web snow fencing on a wood frame made of 2"x 4"s .
3. Where some excavate or fill has to be temporarily located near a tree protection barrier, plywood must be used to ensure no material enters the Tree Protection Zone.
4. All supports and bracing should be outside the Tree Protection Zone. All such supports should minimize damaging roots outside the Tree Protection Barrier.
6. No construction activity, grade changes, surface treatment or excavations of any kind is permitted within the Tree Protection Zone.

## Table 1. Tree Inventory

Location: 1280 Dundas Street West, Oakville Date: 27 July 2020 and 29 July 2020 Surveyors: KD

| Tree # | Common Name | Scientific Name | DBH | TI | CS | CV | CDB | DL | mTPZ | A. mTPZ | Oakville Tree No. | Comments | Ownership | Action |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Black Locust | *Robinia pseudoacacia* | 16 | F | F | F-G | 10 | 3 | - | - | - | Asymmetrical crown (M), bow (L), stem wound (M) at 0.5 metres, stem wound (H) at base, deadwood (M), epicormic branching (L) | Private | Remove |
| 2 | Black Locust | *Robinia pseudoacacia* | 10, 8 | G | F | F | | 3 | - | - | - | Co-dominant stems at 0.25 metres, bow (L), asymmetrical crown (H), suppressed | Private | Remove |
| 3 | Black Locust | *Robinia pseudoacacia* | 12 | G | G | G | | 3 | 2.4 | - | - | | City | Retain |
| 4 | Black Locust | *Robinia pseudoacacia* | 5 - 11 (Ave: 9) | G | F | F-G | | 2.5 | 2.4 | - | - | Multi-stem at base | City | Retain |
| P5 | Refer to Table 2 | | | | | | | | | | | | Shared | Retain |
| 6 | Manitoba Maple | *Acer negundo* | 12 | P-F | P-F | P-F | | 5 | - | - | - | Bow (H), asymmetrical crown H), epicormic branching (H) | Private | Remove |
| 7 | Yew species | *Taxus* sp. | 12, 8 | F-G | P-F | F | | 1.5 | - | - | - | Co-dominant stems at base, asymmetrical crown (H), suppressed | Private | Remove |
| 8 | Eastern White Cedar | *Thuja occidentalis* | 23 | P-F | P-F | G | | 4 | - | - | - | Stem wound (H) from base to 1.5 metres, lean (M) | Private | Remove |
| P9 | Refer to Table 2 | | | | | | | | | | | | Private | Retain |
| 10 | Black Locust | *Robinia pseudoacacia* | 37 | F-G | F-G | F-G | 5 | 5 | 3 | - | - | Asymmetrical crown (M), deadwood (L) | Private | Remove |
| P11 | Refer to Table 2 | | | | | | | | | | | | Shared | Retain |
| 12 | Apple species | *Malus sp.* | ~50, ~40 | P-F | P-F | P-F | 15 | 4 | - | - | - | Pruning wounds (H), epicormic branching (H), one stem previously failed | Private | Remove |
| P13 | Refer to Table 2 | | | | | | | | | | | | Private | Remove |
| 14 | Eastern White Cedar | *Thuja occidentalis* | 16 | P | P | P-F | | 3 | - | - | - | Stem wound (H) from base to 3 metres, fused to Tree 286, lean (M) | Private | Remove |
| 15 | Eastern White Cedar | *Thuja occidentalis* | ~14 | P-F | F-G | F | | 1.5 | - | - | - | Pruning wounds (L) | Private | Remove |
| 16 | Eastern White Cedar | *Thuja occidentalis* | 18, 15 | P | P | P-F | | 4 | - | - | - | Stem wounds (H), co-dominant stems at base, bow (H), top-down dieback on large stem | Private | Remove |
| P17 | Refer to Table 2 | | | | | | | | | | | | Private | Remove |
| 18 | Manitoba Maple | *Acer negundo* | ~12, ~12 | F | F | F | 15 | 2.5 | - | - | - | Co-dominant stems at base | Private | Remove |
| 19 | Eastern White Cedar | *Thuja occidentalis* | 5 - 12 (Ave: 10) | F-G | F | F-G | | 2 | - | - | - | Multi-stem at base, included bark (M) | Private | Remove |
| 20 | Manitoba Maple | *Acer negundo* | ~30 | P-F | P-F | P-F | | 6 | - | - | - | Lean (M), epicormic branching (H) | Private | Remove |
| 21 | White Ash | *Fraxinus americana* | 10 - 25 (Ave: 15) | P-F | P-F | P-F | 20 | 3 | - | - | - | Coppice growth (H), multi-stem at base, deadwood (M), EAB present | Neighbouring | Remove (Condition) |
| 22 | Apple species | *Malus sp.* | ~25 | F | P-F | F | | 4 | - | - | - | Bow (M), asymmetrical crown (H), epicormic branching (H) | Neighbouring | Remove |
| 23 | Sugar Maple | *Acer saccharum* | ~30 | P | F | F-G | | 5 | - | - | - | Canker (H) at 1.5 metres, asymmetrical crown (H) | Neighbouring | Remove (Condition) |
| P24 | Refer to Table 2 | | | | | | | | | | | | Private | Remove |
| 25 | Blue Spruce | *Picea pungens* | ~10 | G | G | G | | 1 | 2.4 | - | - | Vine competition (M) | City | Remove |
| 26 | Manitoba Maple | *Acer negundo* | ~7, ~4 | F-G | F-G | G | | 1 | 1.8 | - | - | Co-dominant stems at 0.25, included fence | City | Remove |
| 27 | Blue Spruce | *Picea pungens* | ~10 | G | G | G | | 1.5 | 2.4 | - | - | Vine competition (L) | City | Remove |
| 28 | Blue Spruce | *Picea pungens* | ~7 | G | F-G | F-G | | 1 | 1.8 | - | - | Asymmetrical crown (H), deadwood (H) | City | Remove |
| 29 | Red Oak | *Quercus rubra* | ~6 | F-G | F | F | | 1 | - | - | - | | City | Remove |
| 30 | Manitoba Maple | | 1 - 5 | G | F | G | | 1 | 1.8 | - | - | Multi-stem at base | City | Remove |
| 31 | Hazelnut species | *Corylus sp.* | 4 | F | F | P-F | 50 | 0.5 | 1.8 | - | - | Asymmetrical crown (H), deadwood (L) | City | Remove |
| 32 | Black Locust | *Robinia pseudoacacia* | ~7, ~5 | G | F | F-G | | 2 | 1.8 | - | - | Co-dominant stems at 1 metre | City | Retain |
| P33 | Refer to Table 2 | | | | | | | | | | | | City | Remove |
| P34 | Refer to Table 2 | | | | | | | | | | | | City | Retain |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 137 | Silver Maple | *Acer saccharinum* | 48 | P-F | F | P-F | 15 | 3.5 | - | - | - | Stem wound (H) at 1 metre, co-dominant stems at 3 metres, included bark (M), deadwood (L), epicormic branching (H), broken branches (M) | Private | Remove |
| 138 | Eastern White Cedar | *Thuja occidentalis* | ~25 | G | F-G | G | | 1.5 | - | - | - | Co-dominant stems at 3 metres | Private | Remove |
| 139 | Silver Maple | *Acer saccharinum* | 30 | F | F | P | 15 | 3.5 | - | - | - | Top-down dieback, epicormic branching (M) | Private | Remove |
| 142 | Silver Maple | *Acer saccharinum* | 36 | F-G | F-G | P-F | 15 | 3 | - | - | - | Epicormic branching (M), top-down dieback | Private | Remove |
| 143 | Eastern White Cedar | *Thuja occidentalis* | ~15 | G | F-G | F-G | | 1.5 | - | - | - | Suppressed, asymmetrical crown (L) | Private | Remove |
| 144 | Eastern White Cedar | *Thuja occidentalis* | ~18 | G | F-G | F0G | | 1.5 | - | - | - | Suppressed, asymmetrical crown (L) | Private | Remove |
| 145 | Silver Maple | *Acer saccharinum* | ~35 | F-G | F | P-F | 15 | 4.5 | - | - | - | Co-dominant stems in crown, top-down dieback, epicormic branching (M) | Private | Remove |
| 146 | Silver Maple | *Acer saccharinum* | ~35 | F-G | F | P-F | 15 | 4.5 | - | - | - | Co-dominant stems at 3 metres, top-down dieback, broken branches (M), epicormic branching (M) | Private | Remove |
| 147 | Eastern White Cedar | *Thuja occidentalis* | ~20, ~18 | F-G | F | G | | 1.5 | - | - | - | Co-dominant stems at base | Private | Remove |
| 148 | Eastern White Cedar | *Thuja occidentalis* | 18 | F | P-F | F | | 1.5 | - | - | - | Lost leader | Private | Remove |
| 149 | Silver Maple | *Acer saccharinum* | 45 | F-G | F | F | 10 | 6 | - | - | - | Co-dominant stems at 5 metres, epicormic branching (M) | Private | Remove |
| 150 | Silver Maple | *Acer saccharinum* | ~35 | F | F | P | 50 | 5 | - | - | - | Top-down dieback, pruning wounds (M), epicormic branching (H) | Private | Remove (Condition) |
| 151 | Eastern White Cedar | *Thuja occidentalis* | 21 | F | F-G | P-F | 10 | 2 | - | - | - | | Private | Remove |
| 152 | Eastern White Cedar | *Thuja occidentalis* | 19.5 | F | G | F | | 1.5 | - | - | - | | Private | Remove |
| 153 | Eastern White Cedar | *Thuja occidentalis* | 23 | G | F-G | G | | 1.5 | - | - | - | Asymmetrical crown (M) | Private | Remove |
| 154 | Refer to Table 2 | | | | | | | | | | | | Private | Remove |
| 155 | Refer to Table 2 | | | | | | | | | | | | | |
| 156 | Refer to Table 2 | | | | | | | | | | | | | |
| 157 | Refer to Table 2 | | | | | | | | | | | | | |
| 158 | Refer to Table 2 | | | | | | | | | | | | | |
| 159 | Refer to Table 2 | | | | | | | | | | | | | |
| 160 | Refer to Table 2 | | | | | | | | | | | | | |
| 161 | Refer to Table 2 | | | | | | | | | | | | | |
| 162 | Refer to Table 2 | | | | | | | | | | | | Private | Remove |
| 163 | Refer to Table 2 | | | | | | | | | | | | | |
| 164 | Refer to Table 2 | | | | | | | | | | | | | |
| 165 | Refer to Table 2 | | | | | | | | | | | | | |
| 166 | Manitoba Maple | *Acer negundo* | ~60 | P-F | P-F | P | | 4 | | | | Epicormic branching (H), coppice growth (H), broken branches (H) | Private | Remove (Condition) |
| 167 | Apple species | *Malus sp.* | 51 | P | P-F | P-F | | 5 | - | - | - | Epicormic branching (H), pruning wounds (H), trunk is hollow | Private | Remove (Condition) |
| 168 | Apple species | *Malus sp.* | 39 | P | P-F | P | 15 | 5 | - | - | - | Pruning wounds (H), cavities (H), epicormic branching (H), deadwood (L) | Private | Remove (Condition) |
| 169 | Apple species | *Malus sp.* | 49 | P-F | P-F | P | 20 | 5 | - | - | - | Pruning wounds (H), cavities (M), epicormic branching (H) | Private | Remove (Condition) |
| 170 | Apple species | *Malus sp.* | ~50 | P | P-F | P | 20 | 6 | - | - | - | Cavity (H) at 0.5 metres, deadwood (M), bow (M), epicormic branching (H) | Private | Remove (Condition) |
| 171 | Apple species | *Malus sp.* | 39 | P | P | P | 20 | 4.5 | - | - | - | Cavity (H) at base, deadwood (H), epicormic branching (H), pruning wound (H) | Private | Remove (Condition) |
| 172 | Apple species | *Malus sp.* | ~35 | P-F | P-F | P | 50 | 4 | - | - | - | Deadwood (H), epicormic branching (H) | Private | Remove (Condition) |
| 173 | Apple species | *Malus sp.* | 39 | P | P | P | 20 | 5 | - | - | - | Cavity (H) at 0.75 metres, epicormic branching (H), co-dominant stems at 2 metres, deadwood (H) | Private | Remove (Condition) |
| 174 | Apple species | *Malus sp.* | ~40 | P-F | P | P | 10 | 4 | - | - | - | Sweep (H), epicormic branching (H), cavity (M) at 0.5 metres | Private | Remove (Condition) |
| 176 | Apple species | *Malus sp.* | ~40 | P-F | P-F | P | 25 | 4 | - | - | - | Pruning wounds (H), epicormic branching (H), deadwood (H) | Private | Remove (Condition) |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 177 | Apple species | *Malus sp.* | 39, 34 | P | P-F | P | 20 | 4 | - | - | - | Deadwood (H), pruning wounds (H), co-dominant stems at 0.5 metres, epicormic branching (H) | Private | Remove (Condition) |
| 178 | Apple species | *Malus sp.* | 46, 32 | P | P-F | P | 20 | 4 | - | - | - | Deadwood (H), epicormic branching (H), codominant stems at 1 metre | Private | Remove (Condition) |
| 179 | Apple species | *Malus sp.* | 46 | P | P-F | P | | 5 | - | - | - | Cavity (M) at 1 metre, deadwood (H), epicormic branching (H) | Private | Remove (Condition) |
| 180 | Apple species | *Malus sp.* | 34 | P | P | P | 40 | 4 | - | - | - | Stem wound (H) at base, deadwood (H), epicormic branching (H) | Private | Remove (Condition) |
| 181 | Manitoba Maple | *Acer negundo* | ~40, ~20, ~15 | F | P-F | P-F | 10 | 6 | - | - | - | Multi-stem at base, deadwood (L), epicormic branching (H) | Private | Remove |
| 182 | Manitoba Maple | *Acer negundo* | 10 - 20 (Ave: 15) | P-F | P-F | P-F | | 5 | - | - | - | Multi-stem at base, sweep (H), epicormic branching (H) | Private | Remove |
| 183 | Manitoba Maple | *Acer negundo* | 10 - 30 (Ave: 20) | P | P | P | | 4 | - | - | - | Multi-stem at base, epicormic branching (H), stem wound (H) at 2 metres, deadwood (M) | Private | Remove |
| 185 | White Pine | *Pinus strobus* | ~20 | G | G | F-G | | 2 | - | - | - | | Private | Remove |
| 186 | Manitoba Maple | *Acer negundo* | ~25 | F | P-F | F | | 4 | - | - | - | Sweep (H), co-dominant stems at 2 metres, epicormic branching (M) | Private | Remove |
| 187 | White Spruce | *Picea glauca* | ~25 | G | F-G | F-G | 5 | 2.5 | - | - | - | | Private | Remove |
| 188 | Black Walnut | *Juglans nigra* | 18 | G | G | G | | 3 | - | - | - | Asymmetrical crown (L) | Private | Remove |
| 189 | Cherry species | *Prunus sp.* | 24 | P | F-G | P | | 2.5 | - | - | - | Epicormic branching (H), stem decay (H), co-dominant stems at 1.5 metres | Private | Remove (Condition) |
| 190 | Basswood | *Tilia americana* | 20 | P | F-G | F | | 2.5 | - | - | - | Stem wound (H) from base to crown, epicormic branching (M) | Private | Remove (Condition) |
| 191/192 | Silver Maple | *Acer saccharinum* | 29, 25, 17 | F | F | P-F | 5 | 5 | - | - | - | Co-dominant stems at base and 0.75 metres, pruning wounds (M), epicormic branching (H), stem wound (H) on branch | Private | Remove |
| 193 | White Spruce | *Picea glauca* | 22 | G | G | G | | 3 | - | - | - | | Private | Remove |
| 194 | White Spruce | *Picea glauca* | ~20 | F | G | P | 80 | 2.5 | - | - | - | Almost dead | Private | Remove (Condition) |
| 195 | Silver Maple | *Acer saccharinum* | 25 - 35 (Ave: 30) | F | F | F | 10 | 8 | - | - | - | Multi-stem at 1 metre, included bark (H), epicormic branching (M) | Private | Remove |
| 196 | Willow species | *Salix sp.* | 57, 36 | P | P | F | | 8 | - | - | - | Co-dominant stems at 0.25 metres, broken branches (H), cavity (M) at base, epicormic branching (M) | Private | Remove (Condition) |
| 197 | Eastern White Cedar | *Thuja occidentalis* | 20 | F-G | F-G | G | | 2 | - | - | - | Pruning wounds (L), sweep (L), asymmetrical crown (M) | Private | Remove |
| 198 | Eastern White Cedar | *Thuja occidentalis* | 19 | F-G | F | F | | 2 | - | - | - | Included bark (M), co-dominant stems at 2 metres, sweep (M) | Private | Remove |
| 199 | Eastern White Cedar | *Thuja occidentalis* | 17 | F-G | F | F-G | | 2 | - | - | - | Asymmetrical crown (H), sweep (L) | Private | Remove |
| 200 | Manitoba Maple | *Acer negundo* | ~40, ~25 | P-F | P-F | P | 10 | 5 | - | - | - | Coppice growth (H), epicormic branching (H), deadwood (L), asymmetrical crown (M), small stem dead, co-dominant stems at base | Private | Remove |
| 201 | Manitoba Maple | *Acer negundo* | 23 | F | F | P-F | | 6 | - | - | - | Sweep (H), epicormic branching (H), broken branches (H), stem wound (H) in crown | Private | Remove |
| 202 | Manitoba Maple | *Acer negundo* | 10 - 30 (Ave: 25) | P-F | P-F | P | | 4.5 | - | - | - | Deadwood (H), eroding on slope, multi-stem at base, coppice growth (L), epicormic branching (H), lost leader on large stem | Private | Remove |
| 203 | Willow species | *Salix sp.* | ~80 | P-F | P-F | F | | 8 | - | - | - | Asymmetrical crown (H), stem wound (H) in crown, epicormic branching (M) | Private | Remove |
| 205 | Willow species | *Salix sp.* | 43, 35 | P-F | F | P-F | | 7 | - | - | - | Small stem dead, co-dominant stems at 0.75 metres, epicormic branching (H), stem wound (H) at 5 metres | Private | Remove |
| 206 | Black Locust | *Robinia pseudoacacia* | 26, 16 | F-G | F | F-G | 10 | 3 | - | - | - | Exposed roots (M), co-dominant stems at base and 1.75 metres, deadwood (M), broken branches (M), epicormic branching (L) | Private | Remove |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 207 | Black Locust | *Robinia pseudoacacia* | 20, 17, 14 | F | F | F-G | 5 | 3.5 | - | - | - | Multi-stem at base, stem wound (H) at base on small stem, stem wound (H) at base on medium stem, deadwood (L), broken branches (L) | Private | Remove |
| 208 | Silver Maple | *Acer saccharinum* | 30 - 45 (Ave: 40) | G | F | F | 10 | 7 | - | - | - | Multi-stem at 1 metre, deadwood (L), epicormic branching (M) | Private | Remove |
| 209 | Pear species | *Pyrus sp.* | ~50 | G | G | P-F | 10 | 3 | - | - | - | Epicormic branching (H), deadwood (L) | Private | Remove |
| 210 | Willow species | *Salix sp.* | 5 - 120 | P | P | P | 10 | 10 | - | - | - | Epicormic branching (H), large stem failing, pruning wounds (H), lean (M) --> hazard | Private | Remove (Condition) |
| 211 | Willow species | *Salix sp.* | ~75, ~60 | F | F | P-F | | 7 | - | - | - | Epicormic branching (H), co-dominant stems at 0.5 metres | Private | Remove |
| 212 / 213 | Manitoba Maple | *Acer negundo* | ~20, ~16 | F | F | F | | 4 | - | - | - | Co-dominant stems at base, epicormic branching (M), deadwood (L), bow (L) | Private | Remove |
| 214 | Manitoba Maple | *Acer negundo* | ~20, ~12 | F | P-F | F | | 4 | - | - | - | Lean (M), co-dominant stems at 1 metre, epicormic branching (M), asymmetrical crown (H) | Private | Remove |
| 216/219 | Basswood | *Tilia americana* | ~35, 26 | P-F | P | P-F | 15 | 5 | - | - | - | Sweep (L) on large stem, sweep (H) on small stem, deadwood (M), epicormic branching (M) | Private | Remove (Condition) |
| 215/217 | Basswood | *Tilia americana* | 33, 18 | P-F | P-F | P-F | 10 | 5 | - | - | - | Bow (H), epicormic branching (H), asymmetrical crown (H), bark peeling, sweep (M), broken branches (M) | Private | Remove |
| 218 | Basswood | *Tilia americana* | 26, 22, 10, 8 | F | F | F | | 5 | - | - | - | Multi-stem at base, included bark (M), included metal stake, epicormic branching (M) | Private | Remove |
| 220 | Manitoba Maple | *Acer negundo* | ~35, ~15, ~10 | P-F | P-F | P-F | | 6 | - | - | - | Multi-stem at base, epicormic branching (H), coppice growth (M) | Private | Remove |
| 221 | Eastern White Cedar | *Thuja occidentalis* | 29 | P-F | F-G | G | | 2 | - | - | - | Seam (H) from base to 1.5 metres, sweep (L), pruning wounds (M) | Private | Remove |
| 222 | Manitoba Maple | *Acer negundo* | 10 - 25 (Ave: 15) | F | P-F | P | | 5 | - | - | - | Epicormic branching (H), multi-stem at base | Private | Remove |
| 223 | Eastern Redcedar | *Juniperus virginiana* | 30 | F | F-G | G | | 2.5 | | | | Asymmetrical crown (L), stem wound (M) from base to 1.5 metres | Private | Remove |
| 224 | Horsechestnut | *Aesculus hippocastanum* | ~55 | P | F | P | 20 | 5 | | | | Trunk is hollow, deadwood (H) -->hazard | Private | Remove (Condition) |
| 225 | - | - | - | - | - | - | - | - | - | - | - | Dead -->hazard | Private | Remove (Condition) |
| 226 | Black Locust | *Robinia pseudoacacia* | 56 | P-F | F | P | 25 | 5 | | - | - | Deadwood (H), top-down dieback, vine competition (L), wildlife cavities (M) | Private | Remove (Condition) |
| 227 | Manitoba Maple | *Acer negundo* | ~25, ~15 | F | F | P-F | 15 | 4 | 3 | - | - | Deadwood (L), co-dominant stems at 0.75 metres, epicormic branching (H) | Shared | Retain |
| 228 | Manitoba Maple | *Acer negundo* | 16 | F | F | P-F | | 2 | 2.4 | - | - | Coppice growth (H), epicormic branching (H), co-dominant stems at 1.75 metres | City | Retain |
| 229 | Refer to Table 2 | | | | | | | | | | | | Private | Retain |
| 230 | Refer to Table 2 | | | | | | | | | | | | | |
| 231 | Refer to Table 2 | | | | | | | | | | | | | |
| 232 | Refer to Table 2 | | | | | | | | | | | | | |
| 233 | Yew species | *Taxus* sp. | 29 | F-G | F | P | 30 | 3 | 2.4 | - | - | Pruning wounds (M), stem wound (M) at 1.25 metres, deadwood (M) | Private | Remove (Condition) |
| 234 | Black Locust | *Robinia pseudoacacia* | ~40, ~40 | P-F | F | P-F | 10 | 5 | 3.6 | - | - | Brackets present, one stem dead, multi-stem at 1 metre, epicormic branching (M) | Private | Remove |
| 235 | Black Locust | *Robinia pseudoacacia* | ~40 | P-F | F-G | F | 10 | 4 | 3 | - | - | Brackets present, epicormic branching (M), vine competition (M), deadwood (L) | Private | Remove |
| 236 | Cherry species | *Prunus sp.* | 33 | G | F-G | F | 5 | 3 | - | - | - | Pruning wounds (M), epicormic branching (H), asymmetrical crown (L) | Private | Remove |
| 237 | Black Locust | *Robinia pseudoacacia* | 34 | G | G | F-G | | 4 | 3 | - | - | Deadwood (L) | Private | Retain |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 238 | Horsechestnut | *Aesculus hippocastanum* | 50 | F-G | F | F | 10 | 7 | 3 | - | - | Asymmetrical crown (M), deadwood (L), epicormic branching (M), seam (M) from base to 2 metres, co-dominant stems at 1.5 metres | Private | Retain |
| 239/240 | Black Locust | *Robinia pseudoacacia* | 36, 30 | F-G | F | F-G | | 6 | 3 | - | - | Co-dominant stems at base, broken branches (M), bow (L) on small stem, deadwood (L) | Private | Retain |
| 241 | Black Locust | *Robinia pseudoacacia* | ~25 | F | F | F | | 4 | 2.4 | - | - | Co-dominant stems at 1.5 metres, included bark (H), vine competition (M) | Private | Retain |
| 242 | Sugar Maple | *Acer saccharum* | ~30 | F-G | F | F | | 3 | 2.4 | - | - | Asymmetrical crown (H), pruning wounds (H) | City | Retain |
| 243 | Eastern White Cedar | *Thuja occidentalis* | 10 - 30 (Ave: 15) | F-G | F | G | | 2.5 | 3 | - | - | | Private | Retain |
| 244 | Eastern White Cedar | *Thuja occidentalis* | ~15 | P-F | P | P-F | | 3 | 2.4 | - | - | Lean (H), vine competition (H) | Private | Remove (Condition) |
| 245 | Black Locust | *Robinia pseudoacacia* | 25 | F | F | F | | 4 | 2.4 | - | - | Co-dominant stems at 1.5 metres, included bark (H), vine competition (M) | Private | Retain |
| 246 | White Pine | *Pinus strobus* | ~18 | F-G | F-G | F | | 2.5 | 2.4 | - | - | Vine competition (H), crook (M) in crown | Private | Retain |
| 247 | Eastern White Cedar | *Thuja occidentalis* | ~15 | G | G | G | | 1.5 | 2.4 | - | - | | Private | Retain |
| 248 | Black Locust | *Robinia pseudoacacia* | ~25 | F-G | F-G | F | | 2.5 | 2.4 | - | - | Vine competition (H) | Private | Retain |
| 249 | Black Walnut | *Juglans nigra* | ~20 | F-G | F | F-G | | 3.5 | 2.4 | - | - | Vine competition (H), asymmetrical crown (H) | Private | Retain |
| 250 | Black Locust | *Robinia pseudoacacia* | 18, 6 | F | F | F | | 4 | 2.4 | - | - | Small stem dead, asymmetrical crown (H), vine competition (H) | Private | Retain |
| 251 | Black Walnut | *Juglans nigra* | 27 | G | F-G | G | | 3.5 | 2.4 | - | - | Asymmetrical crown (M), vine competition (L) | Private | Retain |
| 252 | Black Locust | *Robinia pseudoacacia* | ~40 | F-G | F | F | 10 | 6 | 3 | - | - | Included bark (M), vine competition (H), deadwood (M) | Private | Retain |
| 253 | - | - | - | - | - | - | - | - | - | - | - | Dead | Private | Remove (Condition) |
| 254 | Sugar Maple | *Acer saccharum* | 49 | F | F | F-G | 10 | 7 | 3 | - | - | Girdling roots (M), broken branches (M), cavities (L), asymmetrical crown (L) | City | Retain |
| 255 | English Oak | *Quercus robur* | 26 | G | G | F-G | 5 | 4 | 2.4 | - | - | Asymmetrical crown (L) | Private | Retain |
| 256 | Willow species | *Salix sp.* | ~25 | F | P-F | P-F | | 5 | 2.4 | - | - | Epicormic branching (H), bow (M) | Shared | Retain |
| 257 | Willow species | *Salix sp.* | ~50, ~30 | P | P-F | P-F | | 6 | - | - | - | Cavity (H) at base, stem wound (H) on small stem from base to 3 metres, epicormic branching (H), co-dominant stems at base | City | Remove (Condition) |
| 258 | Willow species | *Salix sp.* | ~50, ~40 | P-F | F | P | | 7 | - | - | - | Sweep (M), epicormic branching (H), co-dominant stems at 0.5 metres | City | Remove (Condition) |
| 259 | White Pine | *Pinus strobus* | 24 | G | G | G | | 3 | 2.4 | - | - | | City | Retain |
| 260 | Black Locust | *Robinia pseudoacacia* | 27 | F-G | F | P-F | 10 | 4 | 2.4 | - | - | | City | Retain |
| 261 | Black Locust | *Robinia pseudoacacia* | 19, 16 | F | F | F | 10 | 3 | 2.4 | - | - | Cavity (L) at union, co-dominant stems at 0.5 metres | City | Retain |
| 262 | Black Locust | *Robinia pseudoacacia* | ~18 | G | F-G | F-G | | 3 | 2.4 | - | - | Asymmetrical crown (L) | City | Retain |
| 263 | Black Locust | *Robinia pseudoacacia* | 26 | P-F | P-F | F-G | | 4 | 2.4 | - | - | Included bark (L), crack (M) at union, stem wound (H) at 3 metres from previous branch failure | City | Remove (Condition) |
| 264 | Black Locust | *Robinia pseudoacacia* | 25 | F-G | F | F-G | | 3.5 | 2.4 | - | - | Included bark (M), broken branches (L) | City | Retain |
| 265 | Black Locust | *Robinia pseudoacacia* | ~30 | F-G | F | F-G | | 4 | 2.4 | - | - | Co-dominant stems at 1.5 metres, broken branches (L) | City | Retain |
| 266 | White Pine | *Pinus strobus* | ~25 | G | G | G | | 3 | 2.4 | - | - | | City | Retain |
| 267 | Black Locust | *Robinia pseudoacacia* | 23 | F | F | F-G | | 4 | 2.4 | - | - | Included bark (M), crack (M) at union, deadwood (L), broken branches (L) | City | Retain |
| 268 | Black Locust | *Robinia pseudoacacia* | 29, 13, 12 | F-G | F-G | F-G | | 5 | 3 | - | - | Included bark (M), co-dominant stems at 1 and 1.25 metres | City | Retain |
| 269 | White Pine | *Pinus strobus* | ~35 | G | G | G | | 4 | 3 | - | - | | City | Retain |
| 270 | Black Locust | *Robinia pseudoacacia* | 5 - 15 (Ave:12) | G | F-G | F-G | | 3.5 | 2.4 | - | - | Multi-stem at 1.25 metres, asymmetrical crown (M) | City | Retain |
| 271 | Black Locust | *Robinia pseudoacacia* | 26 | F | F | F | 10 | 4.5 | 2.4 | - | - | Broken branches (M), deadwood (M) | City | Retain |
| 272 | White Pine | *Pinus strobus* | ~35 | G | G | G | | 3.5 | 3 | - | - | | City | Retain |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 273 | Black Locust | *Robinia pseudoacacia* | ~30 | G | G | F-G | | 4 | 2.4 | - | - | | City | Retain |
| 274 | Norway Spruce | *Picea abies* | ~30 | G | G | G | | 3 | 2.4 | - | - | | City | Retain |
| 275 | White Oak | *Quercus alba* | 15 | G | G | G | | 2.5 | 2.4 | - | - | | City | Retain |
| 276 | Black Locust | *Robinia pseudoacacia* | ~25 | F-G | F-G | F-G | | 4 | 2.4 | - | - | Asymmetrical crown (L) | City | Retain |
| 277 | Black Locust | *Robinia pseudoacacia* | 21 | F | F | F-G | | 3.5 | 2.4 | - | - | Multi-stem at 1.25 metres, asymmetrical crown (M) | City | Retain |
| 278 | Norway Maple | *Acer platanoides* | 23 | G | G | G | | 4.5 | - | - | - | | Private | Remove |
| 279 | Norway Spruce | *Picea abies* | ~18 | G | F-G | G | | 2.5 | - | - | - | Asymmetrical crown (M) | Private | Remove |
| 280 | Norway Spruce | *Picea abies* | ~15 | G | F-G | G | | 2.5 | - | - | - | Asymmetrical crown (M) | Private | Remove |
| 281 | Norway Maple | *Acer platanoides* | 19, 8 | F-G | F | F-G | | 5 | - | - | - | Co-dominant stems at base, dead stem of Tree 283 leaning on trunk | Private | Remove |
| 282 | Manitoba Maple | *Acer negundo* | 31 | F | F | P-F | | 3.5 | - | - | - | Epicormic branching (H), lean (L), co-dominant stems at 1.5 metres | Private | Remove |
| 283 | Willow species | *Salix sp.* | ~90 | P | P | P | 30 | 7 | - | - | - | Deadwood (H), one stem dead, one stem previously failed, co-dominant stems at 1.5 metres, epicormic branching (H), cavity (H) at base from previous stem failure, top-down dieback -->hazard | Private | Remove (Condition) |
| 284 | Eastern White Cedar | *Thuja occidentalis* | 19.5 | P-F | P-F | F | | 2.5 | - | - | - | Sweep (M), seam (H) from base to 1.5 metres, asymmetrical crown (H) | Private | Remove |
| 285 | Eastern White Cedar | *Thuja occidentalis* | ~28 | P-F | P-F | P-F | | 2 | - | - | - | Seam (H) from base to 5 metres, lost leader, lean (M) | Private | Remove |
| 286 | Manitoba Maple | *Acer negundo* | 26, ~14, ~12, ~8 | P-F | P-F | F | | 4 | - | - | - | Multi-stem at base, fused stems, stem wound (H) at base, bow (M), fused at base with Tree 14 | Private | Remove |
| 287 | Eastern White Cedar | *Thuja occidentalis* | ~25 | F | F | F | | 2 | - | - | - | Stem wound (M) from 0.5 metres to 1.5 metres, sweep (L), asymmetrical crown (H) | Private | Remove |
| 288 | Black Locust | *Robinia pseudoacacia* | 34 | G | F-G | F-G | | 4 | - | - | - | Pruning wounds (L), epicormic branching (M), deadwood (L) | Private | Remove |
| 289 | Black Locust | *Robinia pseudoacacia* | 36 | F-G | F-G | F-G | | 4 | - | - | - | Included bark (M), deadwood (L) | Private | Remove |
| 290 | Japanese Walnut | *Juglans ailantifolia* | 37 | P-F | F | P | 10 | 5 | | | | Epicormic branching (H), sweep (M), deadwood (L), stem wound (H) at base from previous stem failure | Private | Remove (Condition) |
| 291 | Apple species | *Malus sp.* | 44 | F | P-F | F | | 3.5 | - | - | - | Pruning wounds (M), crook (H), epicormic branching (M) | Private | Remove |
| 292 | Black Locust | *Robinia pseudoacacia* | 23 | G | F-G | G | | 4 | - | - | - | Broken branches (L), asymmetrical crown (L) | Private | Remove |
| 293 | Japanese Walnut | *Juglans ailantifolia* | 31 | P-F | P-F | P | 10 | 3 | | | | Epicormic branching (H), coppice growth (H), deadwood (L), lean (L), cavity (H) at 5 metres | Private | Remove (Condition) |
| 294 | Black Walnut | *Juglans nigra* | 56 | G | G | F-G | | 8 | - | - | - | Epicormic branching (M), pruning wounds (L), asymmetrical crown (L) | Private | Remove |
| 295 | Black Walnut | *Juglans nigra* | 46 | G | F-G | F-G | | 8 | - | - | - | Asymmetrical crown (L), co-dominant stems at 2 metres, epicormic branching (L), pruning wounds (L), broken branches (L) | Private | Remove |
| 296 | Black Walnut | *Juglans nigra* | 40 | G | F | F | | 8 | - | - | - | Co-dominant stems at 3 metres, pruning wounds (M), asymmetrical crown (M), deadwood (L), epicormic branching (M) | Private | Remove |
| 297 | Bur Oak | *Quercus macrocarpa* | 77 | G | G | P-F | 5 | 8 | - | - | - | Epicormic branching (H), deadwood (L) | Private | Remove |
| 298 | Black Locust | *Robinia pseudoacacia* | 27 | G | F-G | G | | 2.5 | - | - | - | Pruning wounds (L), broken branches (L) | Private | Remove |
| 299 | White Ash | *Fraxinus americana* | ~40 | P | G | P | 90 | 4 | - | - | - | EAB present | Private | Remove (Condition) |
| 301 | - | - | - | - | - | - | - | - | - | - | - | Dead | Private | Remove (Condition) |
| 305 | Black Locust | *Robinia pseudoacacia* | 17 | F | F | F-G | | 2.5 | - | - | - | Sweep (M), pruning wounds (L), stem wound (M) at base | Private | Remove |
| 306 | Black Locust | *Robinia pseudoacacia* | 27 | G | F-G | G | | 3 | - | - | - | Co-dominant stems at 1.5 metres | Private | Remove |
| 307 | Black Locust | *Robinia pseudoacacia* | 43 | F-G | F | G | | 4 | - | - | - | Pruning wounds (M), co-dominant stems at 1.5 metres, included bark (L) | Private | Remove |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 308 | Black Locust | *Robinia pseudoacacia* | 23 | G | F-G | G | | 3.5 | - | - | - | Pruning wounds (L), co-dominant stems at 2 metres | Private | Remove |
| 309 | Black Locust | *Robinia pseudoacacia* | 24 | G | F | G | | 3 | - | - | - | Co-dominant stems at 1.5 metres, stem wound (H) in crown, pruning wounds (L), broken branches (L) | Private | Remove |
| 310 | Black Locust | *Robinia pseudoacacia* | 24 | F-G | F | G | | 3.5 | - | - | - | Pruning wounds (M), multi-stem at 1.75 metres, asymmetrical crown (L) | Private | Remove |
| 311 | Apple species | *Malus sp.* | ~50 | P | F | P-F | 30 | 3.5 | - | - | - | Epicormic branching (H), deadwood (H), cavity (H) at 0.5 metres | Private | Remove (Condition) |
| 312 | Black Locust | *Robinia pseudoacacia* | 29 | F-G | F-G | F-G | | 3.5 | - | - | - | Included bark (M), deadwood (L) | Private | Remove |
| 313 | Refer to Table 2 | | | | | | | | | | | | Private | Remove |
| 314 | Refer to Table 2 | | | | | | | | | | | | | |
| 315 | Refer to Table 2 | | | | | | | | | | | | | |
| 316 | Refer to Table 2 | | | | | | | | | | | | | |
| 317 | Refer to Table 2 | | | | | | | | | | | | | |
| 318 | Refer to Table 2 | | | | | | | | | | | | | |
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| 338 | Refer to Table 2 | | | | | | | | | | | | | |
| 339 | Refer to Table 2 | | | | | | | | | | | | | |
| 340 | Refer to Table 2 | | | | | | | | | | | | | |
| 341 | Refer to Table 2 | | | | | | | | | | | | | |
| 342 | Norway Maple | *Acer platanoides* | 37 | G | F-G | G | | 4.5 | - | - | - | | Private | Remove |
| 343 | Sugar Maple | *Acer saccharum* | 29 | F-G | F-G | G | | 4.5 | - | - | - | Co-dominant at 3 metres | Private | Remove |
| 344 | Refer to Table 2 | | | | | | | | | | | | Private | Remove |
| 345 | Refer to Table 2 | | | | | | | | | | | | | |
| 346 | Refer to Table 2 | | | | | | | | | | | | | |
| 347 | Refer to Table 2 | | | | | | | | | | | | Private | Remove |
| 348 | Refer to Table 2 | | | | | | | | | | | | | |
| 349 | Refer to Table 2 | | | | | | | | | | | | | |
| 350 | Refer to Table 2 | | | | | | | | | | | | | |
| 351 | Black Walnut | *Juglans nigra* | 19.5 | G | F | G | | 3.5 | - | - | - | Co-dominant stems at 1.75 metres | Private | Remove |
| 352 | Red Oak | *Quercus rubra* | 52 | F-G | F | F-G | | 7 | 3.6 | - | - | Sweep (L), asymmetrical crown (M) | Neighbouring | Retain |
| 353 | Black Cherry | *Prunus serotina* | ~50, ~30 | P | P | P | | | - | - | - | Dead --> hazard | Neighbouring | Remove (Condition) |
| 354 | Black Walnut | *Juglans nigra* | 25 | P-F | F-G | F | 10 | 4 | 2.4 | - | - | Stem wound (H) at base, filled piled at base, deadwood (L) | Neighbouring | Retain |
| 355 | Black Walnut | *Juglans nigra* | 26 | F | F | F | | 4.5 | 2.4 | - | - | Co-dominant stems at 1.75 metres, asymmetrical crown (M), fill piled at base, epicormic branching (M), chlorosis (L), stem wound (L) at base | Neighbouring | Retain |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 356 | White Spruce | *Picea glauca* | 36 | G | F-G | F-G | | 3 | 3 | - | - | Pruning wounds (M), asymmetrical crown (M) | Neighbouring | Retain |
| 357 | White Spruce | *Picea glauca* | 26 | G | F-G | G | | 3.5 | 2.4 | - | - | Asymmetrical crown (M) | Neighbouring | Retain |
| 358 | White Spruce | *Picea glauca* | 24 | G | F-G | G | | 3.5 | 2.4 | - | - | Asymmetrical crown (M), pruning wounds (L) | Neighbouring | Retain |
| 359 | White Spruce | *Picea glauca* | 29 | G | G | G | | 3.5 | 2.4 | - | - | Asymmetrical crown (L) | Neighbouring | Retain |
| 360 | White Spruce | *Picea glauca* | ~35 | G | G | G | | 3.5 | 3 | - | - | Asymmetrical crown (L) | Neighbouring | Retain |
| 361 | White Spruce | *Picea glauca* | ~30 | G | G | G | | 3.5 | 2.4 | - | - | | Neighbouring | Retain |
| 362 | White Spruce | *Picea glauca* | ~30 | G | F-G | F-G | | 3.5 | 2.4 | - | - | Asymmetrical crown (M) | Neighbouring | Retain |
| 363 | White Spruce | *Picea glauca* | ~25 | G | F-G | G | | 3.5 | 2.4 | - | - | Asymmetrical crown (M) | Neighbouring | Retain |
| 364 | White Spruce | *Picea glauca* | ~28 | G | F-G | G | | 3.5 | 2.4 | - | - | Asymmetrical crown (M) | Neighbouring | Retain |
| 365 | White Spruce | *Picea glauca* | ~25 | G | F-G | G | | 3.5 | 2.4 | - | - | Asymmetrical crown (M) | Neighbouring | Retain |
| 366 | White Spruce | *Picea glauca* | ~22 | G | G | G | | 2.5 | 2.4 | - | - | | Neighbouring | Retain |
| 367 | Pear species | *Pyrus sp.* | 37 | F | F-G | F | | 4 | 3 | - | - | Cavity (L) at base, cavity (L) at 1 metre, deadwood (L), asymmetrical crown (L), epicormic branching (M) | Neighbouring | Retain |
| 368 | Refer to Table 2 | | | | | | | | | | | | Private | Remove |
| 369 | Refer to Table 2 | | | | | | | | | | | | | |
| 370 | Refer to Table 2 | | | | | | | | | | | | | |
| 371 | Refer to Table 2 | | | | | | | | | | | | | |
| 372 | Refer to Table 2 | | | | | | | | | | | | | |
| 373 | Refer to Table 2 | | | | | | | | | | | | | |
| 374 | Refer to Table 2 | | | | | | | | | | | | | |
| 375 | Refer to Table 2 | | | | | | | | | | | | | |
| 376 | Refer to Table 2 | | | | | | | | | | | | | |
| 377 | Refer to Table 2 | | | | | | | | | | | | | |
| 378 | Refer to Table 2 | | | | | | | | | | | | | |
| 379 | Refer to Table 2 | | | | | | | | | | | | | |
| 380 | Refer to Table 2 | | | | | | | | | | | | | |
| 381 | Refer to Table 2 | | | | | | | | | | | | | |
| 382 | Refer to Table 2 | | | | | | | | | | | | | |
| 383 | Refer to Table 2 | | | | | | | | | | | | | |
| 384 | Refer to Table 2 | | | | | | | | | | | | | |
| 385 | Refer to Table 2 | | | | | | | | | | | | | |
| 386 | Refer to Table 2 | | | | | | | | | | | | | |
| 387 | Refer to Table 2 | | | | | | | | | | | | | |
| 388 | Refer to Table 2 | | | | | | | | | | | | | |
| 389 | Refer to Table 2 | | | | | | | | | | | | | |
| 390 | Refer to Table 2 | | | | | | | | | | | | | |
| 391 | Refer to Table 2 | | | | | | | | | | | | | |
| 392 | Refer to Table 2 | | | | | | | | | | | | | |
| 393 | Refer to Table 2 | | | | | | | | | | | | | |
| 394 | Refer to Table 2 | | | | | | | | | | | | | |
| 395 | White Spruce | *Picea glauca* | 24 | F | P-F | F-G | | 4 | - | - | - | Topped at 3 metres, crook (H) from topping cut | Private | Remove |

| **Codes** | | |
|---|---|---|
| DBH | Diameter at Breast Height | *(cm)* |
| TI | Trunk Integrity | *(G, F, P)* |
| CS | Crown Structure | *(G, F, P)* |
| CV | Crown Vigor | *(G, F, P)* |
| CDB | Crown Die Back | *(%)* |
| DL | Dripline | *(m)* |
| mTPZ | minimum Tree Protection Zone | *TPZ (m) based on Town of Oakville's Tree Protection During Construction (Prcedure EN-TRE-001-001 ) from base of tree* |
| A. mTPZ | Actual minimum Tree Protection Zone | *Actual TPZ (m) achievable during construction from base of tree* |
| ~ = estimate; (L) = light; (M) = moderate; (H) = heavy | | |

## Table 2. Stand Tally Analysis of Tree Polygons

**Trees 154 - 161**

| Tree Size Class > | Polewood (10 - 24 cm DBH) | | Small (26 - 36 cm DBH) | | Medium (38 - 48 cm) | | Large (50 cm +) | | Total All Sizes | |
|---|---|---|---|---|---|---|---|---|---|---|
| *Species* | *AGS* | *UGS* | *AGS* | *UGS* | *AGS* | *UGS* | *AGS* | *UGS* | *AGS* | *UGS* |
| White Spruce (*Picea glauca*) | 4 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 6 | 1 |
| Scots Pine (*Pinus sylvestris*) | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| **Total Number of Trees** | 5 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 7 | 1 |

**Trees 162 - 165**

| Tree Size Class > | Polewood (10 - 24 cm DBH) | | Small (26 - 36 cm DBH) | | Medium (38 - 48 cm) | | Large (50 cm +) | | Total All Sizes | |
|---|---|---|---|---|---|---|---|---|---|---|
| *Species* | *AGS* | *UGS* | *AGS* | *UGS* | *AGS* | *UGS* | *AGS* | *UGS* | *AGS* | *UGS* |
| Manitoba Maple (*Acer negundo*) | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 |
| White Spruce (*Picea glauca*) | 1 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 3 |
| Black Walnut (*Juglans nigra*) | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Bur Oak (*Quercus macrocarpa*) | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| **Total Number of Trees** | 2 | 6 | 2 | 0 | 0 | 0 | 0 | 0 | 4 | 6 |

**Trees 229 - 232**

| Tree Size Class > | Polewood (10 - 24 cm DBH) | | Small (26 - 36 cm DBH) | | Medium (38 - 48 cm) | | Large (50 cm +) | | Total All Sizes | |
|---|---|---|---|---|---|---|---|---|---|---|
| *Species* | *AGS* | *UGS* | *AGS* | *UGS* | *AGS* | *UGS* | *AGS* | *UGS* | *AGS* | *UGS* |
| Black Locust (*Robinia pseudoacacia*) | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 |
| **Total Number of Trees** | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 |

**Trees 313 - 340 and 344 - 346**

| Tree Size Class > | Polewood (5 - 24 cm DBH) | | Small (26 - 36 cm DBH) | | Medium (38 - 48 cm) | | Large (50 cm +) | | Total All Sizes | |
|---|---|---|---|---|---|---|---|---|---|---|
| *Species* | *AGS* | *UGS* | *AGS* | *UGS* | *AGS* | *UGS* | *AGS* | *UGS* | *AGS* | *UGS* |
| White Ash (*Fraxinus americana*) | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 2 |
| Black Walnut (*Juglans nigra*) | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| Manitoba Maple (*Acer negundo*) | 5 | 5 | 0 | 2 | 0 | 2 | 0 | 0 | 5 | 9 |
| Black Locust (*Robinia pseudoacacia*) | 10 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 14 | 0 |
| White Pine (*Pinus strobus*) | 10 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 12 | 1 |
| Cherry species (*Prunus* sp.) | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 3 | 2 |
| Apple species (*Malus* sp.) | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 0 | 0 | 3 |
| Willow species (*Salix* sp.) | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 1 | 2 |
| Pear species (*Pyrus* sp.) | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| **Total Number of Trees** | 26 | 7 | 9 | 4 | 1 | 5 | 1 | 3 | 37 | 19 |

**Trees 347 - 350**

| Tree Size Class > | Polewood (10 - 24 cm DBH) | | Small (26 - 36 cm DBH) | | Medium (38 - 48 cm) | | Large (50 cm +) | | Total All Sizes | |
|---|---|---|---|---|---|---|---|---|---|---|
| *Species* | *AGS* | *UGS* | *AGS* | *UGS* | *AGS* | *UGS* | *AGS* | *UGS* | *AGS* | *UGS* |
| Manitoba Maple (*Acer negundo*) | 2 | 3 | 0 | 1 | 0 | 0 | 0 | 0 | 2 | 4 |
| **Total Number of Trees** | 2 | 3 | 0 | 1 | 0 | 0 | 0 | 0 | 2 | 4 |

**Trees 368 - 394**

| Tree Size Class > | Polewood (10 - 24 cm DBH) | | Small (26 - 36 cm DBH) | | Medium (38 - 48 cm) | | Large (50 cm +) | | Total All Sizes | |
|---|---|---|---|---|---|---|---|---|---|---|
| *Species* | *AGS* | *UGS* | *AGS* | *UGS* | *AGS* | *UGS* | *AGS* | *UGS* | *AGS* | *UGS* |
| White Pine (*Pinus strobus*) | 3 | 0 | 9 | 0 | 7 | 1 | 0 | 0 | 19 | 1 |
| Austrian Pine (*Pinus nigra*) | 1 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 4 | 0 |
| Sugar Maple (*Acer saccharum*) | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 3 | 0 |
| **Total Number of Trees** | 5 | 0 | 14 | 0 | 7 | 1 | 0 | 0 | 26 | 1 |

**P5**

| Tree Size Class > | Polewood (1 - 24 cm DBH) | | Small (26 - 36 cm DBH) | | Medium (38 - 48 cm) | | Large (50 cm +) | | Total All Sizes | |
|---|---|---|---|---|---|---|---|---|---|---|
| *Species* | *AGS* | *UGS* | *AGS* | *UGS* | *AGS* | *UGS* | *AGS* | *UGS* | *AGS* | *UGS* |
| Black Locust (*Robinia pseudoacacia*) | 7 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 2 |
| Manitoba Maple (*Acer negundo*) | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| White Ash (*Fraxinus americana*) | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| Black Walnut (*Juglans nigra*) | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| **Total Number of Trees** | 8 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 5 |

**P9**

| Tree Size Class > | Polewood (1 - 24 cm DBH) | | Small (26 - 36 cm DBH) | | Medium (38 - 48 cm) | | Large (50 cm +) | | Total All Sizes | |
|---|---|---|---|---|---|---|---|---|---|---|
| *Species* | *AGS* | *UGS* | *AGS* | *UGS* | *AGS* | *UGS* | *AGS* | *UGS* | *AGS* | *UGS* |
| Black Locust (*Robinia pseudoacacia*) | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 |
| Eastern White Cedar (*Thuja occidentalis*) | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 |
| **Total Number of Trees** | 5 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 2 |

**P11**

| Tree Size Class > | Polewood (1 - 24 cm DBH) | | Small (26 - 36 cm DBH) | | Medium (38 - 48 cm) | | Large (50 cm +) | | Total All Sizes | |
|---|---|---|---|---|---|---|---|---|---|---|
| *Species* | *AGS* | *UGS* | *AGS* | *UGS* | *AGS* | *UGS* | *AGS* | *UGS* | *AGS* | *UGS* |
| Eastern White Cedar (*Thuja occidentalis*) | 45 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 45 | 1 |
| Manitoba Maple (*Acer negundo*) | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| White Ash (*Fraxinus americana*) | 4 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 12 |
| White Pine (*Pinus strobus*) | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 |
| Black Locust (*Robinia pseudoacacia*) | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 0 |
| Sugar Maple (*Acer saccharum*) | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| Black Walnut (*Juglans nigra*) | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 |
| White Oak (*Quercus alba*) | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Cherry species (*Prunus* sp.) | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 |
| White Elm (*Ulmus americana*) | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| Apple species (*Malus* sp.) | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| Willow species (*Salix* sp.) | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| **Total Number of Trees** | 68 | 16 | 0 | 0 | 0 | 1 | 0 | 0 | 68 | 17 |

**P13**

| Tree Size Class > | Polewood (1 - 24 cm DBH) | | Small (26 - 36 cm DBH) | | Medium (38 - 48 cm) | | Large (50 cm +) | | Total All Sizes | |
|---|---|---|---|---|---|---|---|---|---|---|
| *Species* | *AGS* | *UGS* | *AGS* | *UGS* | *AGS* | *UGS* | *AGS* | *UGS* | *AGS* | *UGS* |
| Eastern White Cedar (*Thuja occidentalis*) | 10 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 2 |
| **Total Number of Trees** | 10 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 2 |

**P17**

| Tree Size Class > | Polewood (10 - 24 cm DBH) | | Small (26 - 36 cm DBH) | | Medium (38 - 48 cm) | | Large (50 cm +) | | Total All Sizes | |
|---|---|---|---|---|---|---|---|---|---|---|
| *Species* | *AGS* | *UGS* | *AGS* | *UGS* | *AGS* | *UGS* | *AGS* | *UGS* | *AGS* | *UGS* |
| Eastern White Cedar (*Thuja occidentalis*) | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| White Spruce (*Picea glauca*) | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| Black Walnut (*Juglans nigra*) | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| **Total Number of Trees** | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 |

**P24**

| Tree Size Class > | Polewood (10 - 24 cm DBH) | | Small (26 - 36 cm DBH) | | Medium (38 - 48 cm) | | Large (50 cm +) | | Total All Sizes | |
|---|---|---|---|---|---|---|---|---|---|---|
| *Species* | *AGS* | *UGS* | *AGS* | *UGS* | *AGS* | *UGS* | *AGS* | *UGS* | *AGS* | *UGS* |
| Amur Maple (*Acer ginnala*) | 5 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 3 |
| **Total Number of Trees** | 5 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 3 |

**P33**

| Tree Size Class > | Polewood (1 - 24 cm DBH) | | Small (26 - 36 cm DBH) | | Medium (38 - 48 cm) | | Large (50 cm +) | | Total All Sizes | |
|---|---|---|---|---|---|---|---|---|---|---|
| *Species* | *AGS* | *UGS* | *AGS* | *UGS* | *AGS* | *UGS* | *AGS* | *UGS* | *AGS* | *UGS* |
| Black Locust (*Robinia pseudoacacia*) | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 0 |
| Blue Spruce (*Picea pungens*) | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| **Total Number of Trees** | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17 | 0 |

**P34**

| Tree Size Class > | Polewood (1 - 24 cm DBH) | | Small (26 - 36 cm DBH) | | Medium (38 - 48 cm) | | Large (50 cm +) | | Total All Sizes | |
|---|---|---|---|---|---|---|---|---|---|---|
| *Species* | *AGS* | *UGS* | *AGS* | *UGS* | *AGS* | *UGS* | *AGS* | *UGS* | *AGS* | *UGS* |
| Black Locust (*Robinia pseudoacacia*) | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 0 |
| Silk Lilac (*Syringa reticulata*) | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 |
| Blue Spruce (*Picea pungens*) | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 |
| Manitoba Maple (*Acer negundo*) | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 2 |
| Black Walnut (*Juglans nigra*) | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 |
| Bur Oak (*Quercus macrocarpa*) | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| White Elm (*Ulmus americana*) | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| White Ash (*Fraxinus americana*) | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| **Total Number of Trees** | 24 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 24 | 4 |

## Table 3. Tree Valuation of Town-Owned Trees

| 1280 Dundas Street West, Oakville | | | | *Appraised Trunk Area ($cm^2$)* | *Unit Tree Cost (RPAC)* | *Basic Tree Cost ($)* | Depreciation | | | *Appraised Tree Value* | *Minimum Value Per Tree ($)* | Quantity of Trees | *Final Appraised Tree Value* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Tree** | **Common Name** | **DBH** | **OC** | | | | *Condition Rating (%)* | *Functional Limitation Rating (%)* | *External Limitation Rating (%)* | | | | |
| 25 | Blue Spruce | 10 | G | 79 | 6.51 | 511.30 | 0.9 | 0.8 | 1 | $ 368.13 | $ 744.00 | 1 | $ 744.00 |
| 26 | Manitoba Maple | 8 | F-G | 50 | 6.51 | 327.23 | 0.75 | 0.8 | 1 | $ 196.34 | $ 744.00 | 1 | $ 744.00 |
| 27 | Blue Spruce | 10 | G | 79 | 6.51 | 511.30 | 0.9 | 0.8 | 1 | $ 368.13 | $ 744.00 | 1 | $ 744.00 |
| 28 | Blue Spruce | 7 | F-G | 38 | 6.51 | 250.53 | 0.75 | 0.8 | 1 | $ 150.32 | $ 744.00 | 1 | $ 744.00 |
| 29 | Red Oak | 6 | F | 28 | 6.51 | 184.07 | 0.5 | 0.8 | 1 | $ 73.63 | $ 744.00 | 1 | $ 744.00 |
| 30 | Manitoba Maple | 7 | F | 38 | 6.51 | 250.53 | 0.5 | 0.8 | 1 | $ 100.21 | $ 744.00 | 1 | $ 744.00 |
| 31 | Hazelnut species | 4 | P-F | 13 | 6.51 | 81.81 | 0.25 | 0.8 | 1 | $ 16.36 | $ 744.00 | 1 | $ 744.00 |
| P33 | Black Locust | 7 | G | 38 | 6.51 | 250.53 | 0.9 | 0.8 | 1 | $ 180.39 | $ 744.00 | 16 | $ 11,904.00 |
| | Blue Spruce | 7 | G | 38 | 6.51 | 250.53 | 0.9 | 0.8 | 1 | $ 180.39 | $ 744.00 | 1 | $ 744.00 |
| | | | | | | | | | | | | | $ 17,856.00 |

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