



74 Berkeley Street, Toronto, ON M5A 2W7
Tel: 647-795-8153 | www.pecg.ca

12148 Albion Vaughan Road

Scoped Environmental Impact Study

Palmer Project #
160461

Prepared For
12148 Albion Vaughn Inc.

December 23, 2020

December 23, 2020

Mike Liburdi
12148 Albion Vaughn Inc.
27 Fenton Way
Brampton ON
L6P 0P4

Dear Mr. Liburdi:

Re: 12148 Albion Vaughan Road – Scoped Environmental Impact Study
Project #: 160461

Palmer is pleased to submit the following Scoped Environmental Impact Study for the proposed housing development located at 12148 Albion Vaughan Road in Bolton, Town of Caledon.

Based on the findings and recommendations of the report, it is our opinion that with the implementation of the mitigation measures as provided in this report, the proposed development is environmentally feasible and no negative impacts to the natural environment are expected. Please let us know if you have question or comments on this submission.

Yours truly,

Palmer™

Prepared By:



Austin Adams, M.Sc., EP.
Sr. Terrestrial Ecologist,
ISA Certified Arborist #ON-2000A

Approved By:



Dirk Jana, B.Sc.
Principal, Senior Ecologist

Table of Contents

Letter

1.	Introduction	3
1.1	Overview	3
1.2	Scope of Work and Objectives	3
2.	Environmental Policy	6
2.1	Provincial Policy Statement 2020	6
2.2	Region of Peel Official Plan (December 2018 Consolidation)	6
2.3	Town of Caledon Official Plan (2018)	7
2.4	TRCA Regulations and Policies	7
2.5	Endangered Species Act (2007)	8
2.6	Migratory Birds Convention Act (1994)	8
3.	Study Approach	9
3.1	Background Review	9
3.2	Agency Consultation	9
3.3	Ecological Surveys	9
3.3.1	Vegetation	9
3.3.2	Tree Inventory	10
3.3.3	Wildlife	10
3.3.4	Aquatic Habitat	10
3.3.5	Species at Risk	10
4.	Existing Conditions	11
4.1	Site Description	11
4.2	Physiography	11
4.3	Vegetation	11
4.3.1	Vegetation Communities	11
4.3.2	Tree Inventory	12
4.4	Wildlife	14
4.5	Aquatic Habitat	14
4.6	Species at Risk	18
5.	Assessment of Significance	20
5.1	Designated Natural Areas	20
5.2	Aquatic Habitat and Stream Corridor	20
5.3	Wetlands	20
5.4	Woodlands	20
5.4.1	Tableland Vegetation	21
5.5	Species at Risk	21

5.6	Significant Wildlife Habitat.....	21
6.	Development Concept	22
7.	Impact Assessment and Proposed Mitigation	24
7.1	Watercourse Feature Buffer	24
7.2	In-Water Work.....	25
7.2.1	Dam-and-Pump	25
7.2.2	Fish Protection	25
7.3	Erosion and Sediment Control	26
7.4	Restoration Plan	26
7.4.1	Soil Amendments	27
7.4.2	In-Channel Restoration	27
7.4.3	Floodplain and Natural Feature Setback	28
7.4.4	Floodplain Buffer	29
7.4.5	Timing	30
7.4.6	Tending for Restoration Plantings.....	30
7.5	Species at Risk and Migratory Birds.....	30
8.	Policy Conformity.....	32
9.	Conclusions	33
10.	Certification	34
11.	References	35

List of Figures

Figure 1. Site Location	5
Figure 2. Existing Environmental Conditions	13
Figure 3. Proposed Development and Environmental Constraints.....	23

List of Tables

Table 1: Recommended Live-Stake Restoration Species	27
Table 2: Example Planting Prescription	29

List of Appendices

Appendix A.	Arborist Report and Tree Preservation Plan
Appendix B.	Correspondence

1. Introduction

1.1 Overview

Palmer was retained to complete a Scoped Environmental Impact Study (EIS) for the proposed housing development to be located at 12148 Albion Vaughan Road in Bolton, Town of Caledon (the Subject Property; **Figure 1**). A development application consisting of 240 apartment units in two adjoining towers central to the property, and 20 townhomes in two blocks along Albion Vaughan Road is proposed for the entire Subject Property. As part of the proposed development, the portion of Robinson Creek through the property will also be re-aligned, stabilized and enhanced.

The Subject Property is located within the Main Humber River watershed, under the jurisdiction of the Toronto and Region Conservation (TRCA). The property currently supports residential buildings, including one house, a barn and manicured lawns with scattered trees. Robinson Creek, a headwater tributary of the Humber River, enters the property at the northwest corner and runs southward along the western edge. Immediately adjacent lands include a residential property to the north and a commercial property to the south. A small treed riparian area is present within the residential property to the north. Albion Vaughan Road and Regional Road 50 border the Subject Property to the east and west, respectively. No designated natural heritage areas such as Provincially Significant Wetlands, Areas of Natural and Scientific Interest or Environmentally Sensitive Features have been identified within or immediately adjacent to the Subject Property. The watercourse and its associated flood limit are regulated under the TRCA Ontario Regulation 166/06.

The Town of Caledon Official Plan requires that development applications identify and evaluate elements of its ecosystem framework on or adjacent to properties that may be subject to impacts by a proposed development. These elements include Natural Core Areas, Natural Corridors, Supportive Natural Systems, and Natural Linkages, as described in Table 3.1 of the Official Plan. Known Natural Core Areas and Natural Corridors are mapped as Environmental Policy Area (EPA) on Official Plan Schedule C (Bolton Land Use Plan). None are mapped on the Subject Property. The Town of Caledon Official Plan schedules show the property as within a Special Residential land use designation.

Palmer has also completed an Erosion Hazard Assessment of Robinson Creek (Palmer Environmental Consulting Group, 2018). This assessment was conducted to identify infrastructure and property limits that are potentially at risk from fluvial geomorphological processes and to provide recommendations to improve the geomorphological form and function of Robinson Creek.

1.2 Scope of Work and Objectives

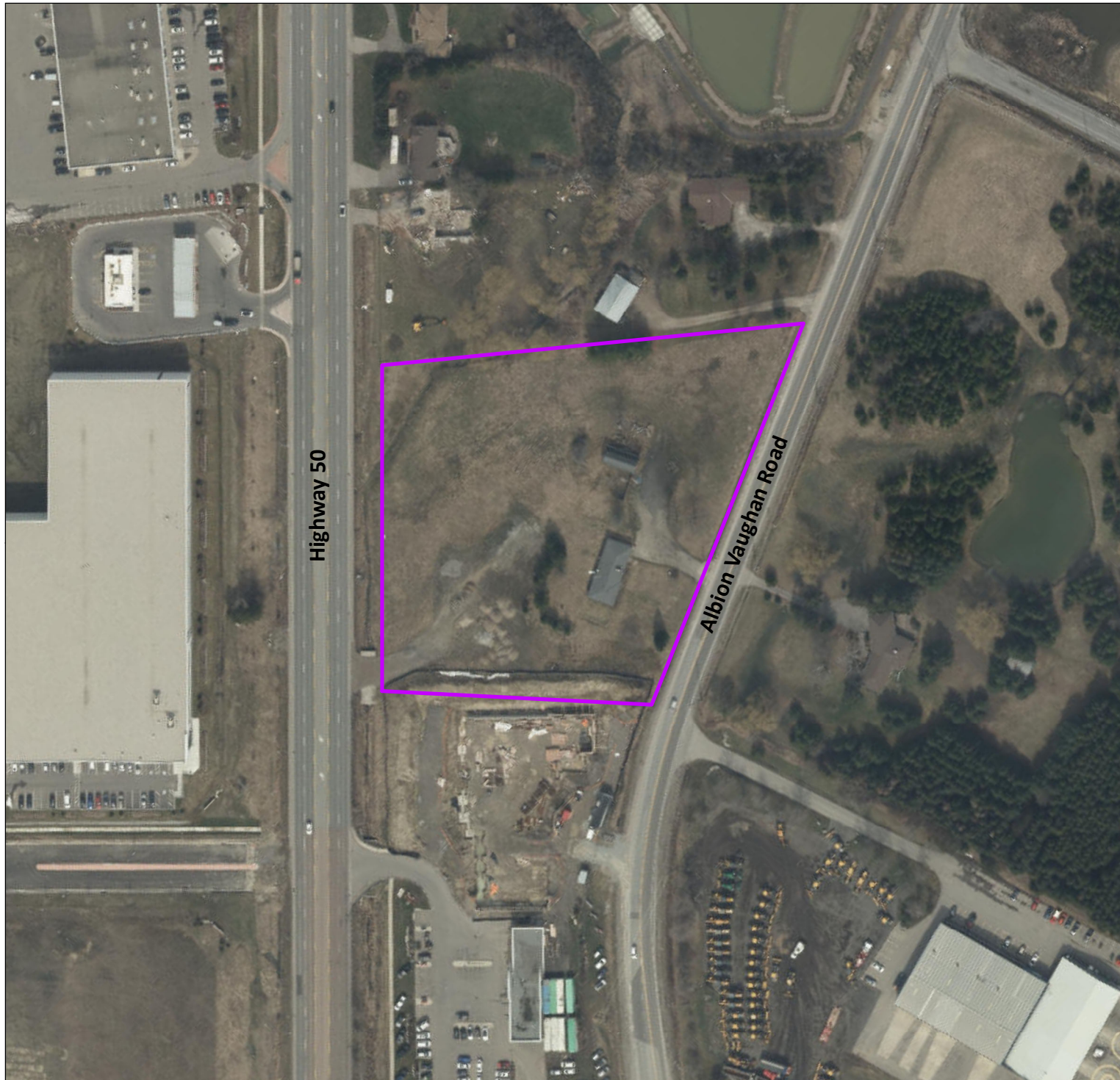
This scoped EIS addresses environmental considerations identified in the guiding policy documents for this area, namely the Region of Peel Official Plan (December 2018), Town of Caledon Official Plan (April 2018 Consolidation), and the TRCA EIS guidelines (2007) and associated policies.

The objectives of the EIS are to inventory and evaluate the existing natural heritage features and ecological functions within and adjacent to the Subject Property, determine an appropriate development limit for the

protection of these features, where applicable, and/or recommend mitigation measures to address potential impacts.

The following items are addressed as part of this scoped EIS report, in accordance with policies of the TRCA and other regulating authorities.

- Documentation of the existing conditions and associated natural heritage features and constraints on the Subject Property.
- A summary of the applicable environmental policies and regulatory requirements.
- Identification of the potential impacts of the project on existing natural heritage features.
- A discussion of the proposed mitigation measures for potential direct and indirect impacts to existing natural heritage features and functions.

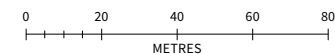


OVERVIEW



LEGEND

- SUBJECT PROPERTY (1.57 ha)
12148 Albion Vaughan Road,
Bolton, Town of Caledon



COORDINATE SYSTEM: NAD 1983 UTM ZONE 17N
SCALE: 1:2,000

DATA SOURCES: Imagery provided York Region (2018). Watercourse (edited) provided by Ontario Hydro Network. Overview basemap: National Geographic, Esri, Garmin, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment P Corp.

Project: 12148 Albion Vaughan
Client: Aztec Restoration

PREPARED BY:

Palmer™

DRAWN: B. Elder
CHECKED: A. Adams
PROJECT: 160461
DATE: Nov 25, 2020

Site Location

FIGURE 1

2. Environmental Policy

2.1 Provincial Policy Statement 2020

Policy 2.1 of the Provincial Policy Statement (PPS) (2020) provides direction to regional and local municipalities regarding planning policies for the protection and management of natural heritage features and resources. The 2020 PPS defines eight types of natural heritage features and adjacent areas, and provides planning policies for each (Ontario Ministry of Municipal Affairs and Housing, 2020):

Policy 2.1 of the 2020 PPS provides direction to regional and local municipalities regarding planning policies for the protection and management of natural heritage features and resources. The 2020 PPS defines eight natural heritage features and provides planning policies for each.

2.1.4 *Development and site alteration shall not be permitted in:*

- a) *significant wetlands in Ecoregions 5E, 6E and 7E; and*
- b) *significant coastal wetlands.*

2.1.5 *Development and site alteration shall not be permitted in:*

- a) *significant wetlands in the Canadian Shield north of Ecoregions 5E, 6E and 7E;*
- b) *significant woodlands in Ecoregions 6E and 7E (excluding islands in Lake Huron and the St. Mary's River);*
- c) *significant valleylands in Ecoregions 6E and 7E (excluding islands in Lake Huron and the St. Mary's River);*
- d) *significant wildlife habitat;*
- e) *significant areas of natural and scientific interest; and*
- f) *coastal wetlands in Ecoregions 5E, 6E and 7E that are not subject to policy 2.1.4(b)*

unless it has been demonstrated that there will be no negative impacts on the natural features or their ecological functions.

2.1.6 *Development and site alteration shall not be permitted in fish habitat except in accordance with provincial and federal requirements.*

2.1.7 *Development and site alteration shall not be permitted in habitat of endangered species and threatened species, except in accordance with provincial and federal requirements.*

2.1.8 *Development and site alteration shall not be permitted on adjacent lands to the natural heritage features and areas identified in policies 2.1.4, 2.1.5 and 2.1.6 unless the ecological function of the adjacent lands has been evaluated and it has been demonstrated that there will be no negative impacts on the natural features or on their ecological functions.*

Each of these natural heritage features is afforded varying levels of protection subject to guidelines, and in some cases, regulations.

2.2 Region of Peel Official Plan (December 2018 Consolidation)

The Region of Peel Official Plan (OP) was adopted by Regional Council on July 11, 1996. It was approved with modification by the Ministry of Municipal Affairs and Housing in 1996 (Region of Peel, 2018). Portions

of the plan are under appeal at the Ontario Municipal Board (OMB). The Region's new OP was consolidated in December 2018.

The Subject Property is within a Rural Service Centre designated area within the Regional Structure of Peel, as designated by Official Plan Schedule D.

The natural heritage features in Peel Region are protected by its Greenlands System, which consists of Core Areas, Natural Areas and Corridors, and Potential Natural Areas and Corridors. Schedule A Core Area of the Greenlands System shows none of these designated areas as occurring within or immediately adjacent to the Subject Property.

2.3 Town of Caledon Official Plan (2018)

The existing Town of Caledon Official Plan (Consolidated in April 2018), includes detailed land use policies for the Bolton Core Area Secondary Plan (Town of Caledon, 2018). As shown in Official Plan Schedule C – Bolton Land Use Plan, the Subject Property is within a Special Residential designation.

As described in the Official Plan,

A Special Residential designation may be used to recognize certain existing residential areas within or immediately adjacent to settlements that are subject to site-specific policy provisions.

The Official Plan identifies that ecosystem components identified as Natural Core and Natural Corridors represent the fundamental biological and physical building blocks of ecosystems in the Town. In addition to being subject to the general environmental policies and performance measures of the Plan, these lands are designated Environmental Policy Area and are subject to detailed land use policies.

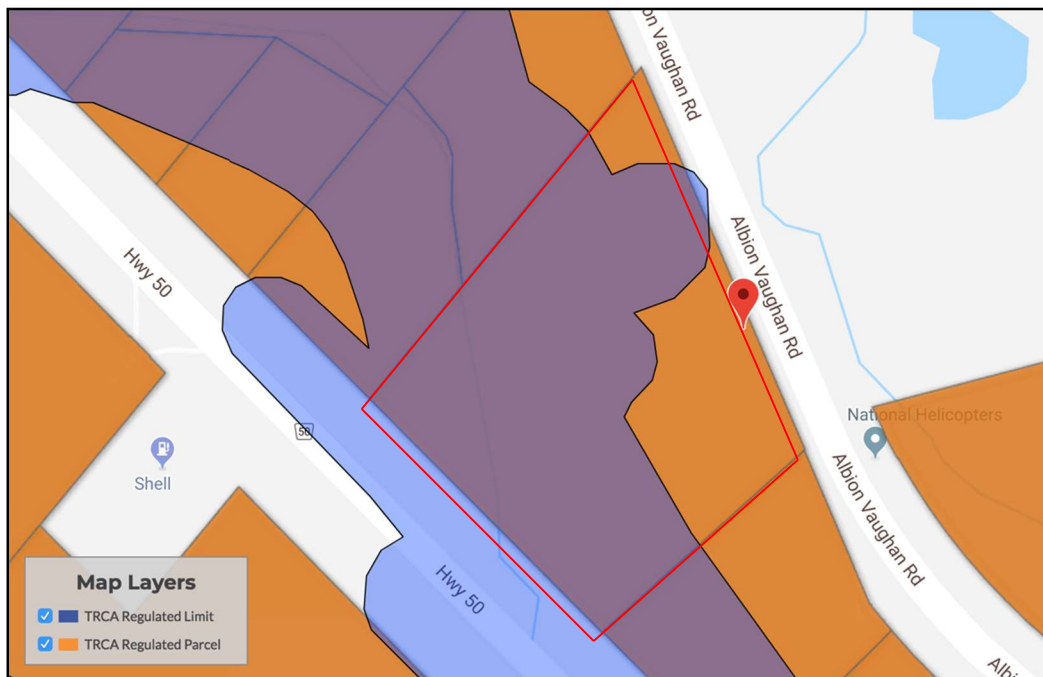
No Environmental Policy Areas have been designated within or adjacent to the Subject Property.

2.4 TRCA Regulations and Policies

Relevant TRCA regulations and policies include the following:

- Ontario Regulation 166/06 – *Development, Interference with Wetlands and Alteration to Shorelines and Watercourses*. Through this regulation, TRCA regulates activities in natural and hazardous areas (e.g., areas in and near rivers, streams. Floodplains, wetlands and slopes and shorelines).
- *The Living City Policies* (Toronto and Region Conservation Authority, 2014) and associated Planning and Development Procedural Manual (Toronto and Region Conservation Authority, 2008). These documents present TRCA's planning and permit review practices and technical guidelines. Relevant policies will be discussed in applicable sections of this report.

The Subject Property occurs within area regulated by TRCA in accordance with O. Reg. 166/06. The TRCA regulation limits are shown in **Map A** below, associated with the watercourse and its flood limit through the property.



Map A. TRCA Regulated Area in the vicinity of the Subject Property

2.5 Endangered Species Act (2007)

Species designated as Endangered or Threatened by the Committee on the Status of Species at Risk in Ontario (COSSARO) are listed as Species at Risk in Ontario (SARO). These Species at Risk (SAR) and their habitats (e.g. areas essential for breeding, rearing, feeding, hibernation and migration) are afforded legal protection under the *Endangered Species Act* (ESA) (Government of Ontario, 2007).

The protection provisions for species and their habitat within the *ESA* apply only to those species listed as Endangered or Threatened on the SARO list, being Ontario Regulation 230/08 of the *ESA*. Species listed as Special Concern may be afforded protection through policy instruments respecting significant wildlife habitat (e.g. the PPS) as defined by the Province or other relevant authority, or other protections contained in Official Plan policies.

2.6 Migratory Birds Convention Act (1994)

The *Migratory Birds Convention Act*, MBCA (1994) and Migratory Birds Regulations, MBR (2014) protect most species of migratory birds and their nests and eggs anywhere they are found in Canada. General prohibitions under the MBCA and MBR protect migratory birds, their nests and eggs and prohibit the deposit of harmful substances in waters / areas frequented by them. The MBR includes an additional prohibition against incidental take, which is the inadvertent harming or destruction of birds, nests or eggs.

Compliance with the MBCA and MBR is best achieved through due diligence, which identifies potential risk based on a site- specific analysis in consideration of the Avoidance Guidelines and Best Management Practices information on the Environment Canada website.

3. Study Approach

The approach to the study has been scoped in consideration of existing site conditions, applicable policy and feedback received through agency consultation.

3.1 Background Review

As part of this study, Palmer initiated agency consultation and reviewed relevant background material to provide a focus to field investigations and ensure compliance with regulations and policy. Background review included the collection and review of relevant mapping and reports, including Official Plans and the Natural Heritage Information Centre (NHIC) Make-a-map application for species occurrences and designated area mapping. The TRCA and the Ministry of Natural Resources and Forestry (MNRF) Aurora District office were contacted for natural heritage information for the Subject Property and local area.

3.2 Agency Consultation

As part of the natural environment review and assessment, agency consultation has been on-going and has included the following:

- **Terms of Reference.** A Terms of Reference (TOR) for the project was submitted to the TRCA for review and approval. The TOR was based on correspondence previously provided to the client and data gathered from the Palmer site visits. The TRCA indicated that they had no objections to the outlined TOR in correspondence dated November 23, 2018.
- **Study Area Natural Heritage Information.** The TRCA and Ministry of Natural Resources and Forestry (MNRF) Aurora District office, were both contacted for natural heritage information in the local area. Data and records were obtained from both agencies.

It is noted that since correspondence took place in 2018, the responsibility for SAR and associated administration of the *Endangered Species Act* has transferred from the MNRF to the Ministry of Environment, Conservation and Parks (MECP).

3.3 Ecological Surveys

Palmer ecologists undertook field investigations to conduct an assessment of vegetation, conduct a tree inventory, characterize aquatic habitat, assess physical terrain characteristics, and provide an assessment of the ecological features and functions within the Subject Property. Survey methods are described below.

3.3.1 Vegetation

The vegetation communities on the property were investigated following the Ecological Land Classification (ELC) System for Southern Ontario (Lee, et al., 1998), within the Subject Property.

A fall season botanical survey was completed on November 7, 2016 by traversing the Subject Property and recording species observed. Identified vascular plants were checked for their status at local, regional and

provincial levels. Local plant rarity status is based on TRCA species L-ranks (Toronto and Region Conservation Authority, 2019). Provincial plant status was based on the *Rare Vascular Plants of Ontario* (Oldham & Brinker, 2009) and the NHIC database.

3.3.2 Tree Inventory

A tree inventory for the Subject Property was completed by a Certified Arborist on November 7, 2016. The tree inventory was completed for all trees (all measured greater than 5 centimetres (cm) diameter at breast height (DBH)) within the Subject Property. The tree inventory was guided by *The Town of Caledon Development Standards, Policies & Guidelines* (Town of Caledon, 2009). Information collected for the inventory included species names, tree tag number, DBH, location and an assessment of health and condition.

Searches for Butternut (*Juglans cinerea*), an Endangered tree, were completed during the tree inventory.

3.3.3 Wildlife

Based on the agreed upon terms of reference, breeding bird and breeding amphibian surveys were not conducted due to the lack of potential habitat opportunities for these species on the Subject Property. Rather, habitat quality and opportunities were assessed generally while conducting the vegetation classification and vegetation inventory. Any observed wildlife, or evidence of wildlife, including nests, tracks, or scat, were recorded.

3.3.4 Aquatic Habitat

The Subject Property was visited on November 29th, 2016 by a qualified fish biologist. The aquatic habitat was characterized along Robinson Creek within the property. Observations such as substrate composition, signs of groundwater seepage or upwellings, aquatic vegetation, riparian vegetation, woody debris, barrier to fish passage and spawning habitat were recorded. The weather was cloudy with some rain, air temperature 12°C, with approximately 10 millimetres (mm) of rain received in the preceding day.

3.3.5 Species at Risk

For the purposes of this report, Species at Risk (SAR) include species listed as Endangered, Threatened or Special Concern under Ontario's *ESA*.

Prior to fieldwork, existing SAR records were queried through correspondence with the MNRF Aurora district and the NHIC database. Habitat opportunities for SAR on the Subject Property were then assessed by comparing habitat preferences of species deemed to have potential to occur, against current site conditions. The SAR identified by MNRF as being recorded in the vicinity of the Subject Property, those noted during the NHIC search, and others known through professional experience to have potential to occur in urban environments were considered in the assessment.

4. Existing Conditions

4.1 Site Description

The Subject Property predominately supports residential buildings, including one house, a barn and manicured lawns with scattered trees. One watercourse (Robinson Creek) enters the property at the northwest and runs southward along the west edge. Immediately adjacent lands include a residential property to the north and commercial to the south. A small treed riparian area is present within the residential property to the north. Albion Vaughan Road and Regional Road 50 flank the Subject Property to the east and west respectively.

4.2 Physiography

The Subject Property is located in the southeastern corner of Bolton, within the Town of Caledon. The property is between Regional Road 50 and Albion Vaughan Road, just north of the intersection of these roads. The terrain of the Subject Property is relatively flat.

The Subject Property is located along the northern limit of the Peel Plain physiographic region (Chapman & Putnam, 1984). This area is a relatively flat glaciolacustrine clay plain that extends across the York, Peel, and Halton Regions. The region was influenced by the succession of changing levels of glacial Lake Peel, whose sediments occur throughout the lows in the till plain. The surface of this region therefore consists of lake sediments, or till. Topography in this region generally varies between level and gently rolling, and gradually slopes towards Lake Ontario. The Subject Property is located in Ecoregion 7E (Crins, Gray, Uhlig, & Wester, 2009).

4.3 Vegetation

4.3.1 Vegetation Communities

The Subject Property predominately supports residential buildings, including one house, a barn and manicured lawns (i.e. turfgrass) with scattered trees. At the time of the field survey, a hedgerow was present along the southeastern side of the property (**Figure 2**). The scattered trees on the property are dominated by the following species: Eastern White Pine (*Pinus strobus*), Norway Spruce (*Picea abies*) and White Spruce (*Picea glauca*).

At the time of the original field survey in 2016, the only representative vegetation community on the property was a Hedgerow 1 (HR1) that was located along the southeast property boundary. The hedgerow was dominated by ash (*Fraxinus* sp.), but has since been removed. Palmer understands that the five (5) Ash trees located along the hedgerow were removed on adjacent lands subsequent to the inventory, likely due to adjacent development. The remaining vegetation consists of a mowed lawn dominated by Kentucky Blue Grass (*Poa pratensis*).

4.3.2 Tree Inventory

Within the proposed developable area, a total of 34 trees and an untagged tree grouping were inventoried. There were no Species at Risk (SAR) trees observed, such as Butternut (*Juglans cinerea*). There were seven (7) White Ash (*Fraxinus americana*) trees, which are at high risk of infestation by Emerald Ash Borer (EAB), some of which have already been infected. The most dominant species inventoried was Norway Spruce (*Picea abies*), followed by White Spruce (*Picea glauca*). All data collected during the tree inventory and a Tree Preservation Plan is provided in **Appendix A**.



OVERVIEW



LEGEND

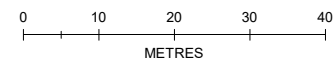
- SUBJECT PROPERTY (1.57 ha)
12148 Albion Vaughan Road,
Bolton, Town of Caledon
- ELC COMMUNITY
- WATERCOURSE
- MEANDER BELT BOUNDARY

ELC COMMUNITIES

Terrestrial

HR1 - Hedgerow 1

ANTH - Anthropogenic



COORDINATE SYSTEM: NAD 1983 UTM ZONE 17N
SCALE: 1:1,000

DATA SOURCES: Imagery provided York Region (2018). Watercourse (edited) provided by Ontario Hydro Network. Overview basemap: National Geographic, Esri, Garmin, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment P Corp.

Project: 12148 Albion Vaughan

Client: Aztec Restoration

PREPARED BY:

Palmer™

DRAWN: B. Elder

CHECKED: A. Adams

PROJECT: 1604601

DATE: Nov 25, 2020

**Existing Environmental
Conditions**

FIGURE 2

4.4 Wildlife

Given the urban nature of the surrounding area, wildlife habitat opportunities within the Subject Property are very limited, with wildlife expected to be present consisting of common, generalist and urban-adapted species (e.g. urban species of birds, Raccoon [*Procyon lotor*], Skunk [*Mephitis mephitis*] and Grey Squirrel [*Sciurus carolinensis*]). Although the Subject Property is bounded by two high-traffic roadways (Albion Vaughan Road and Regional Road 50), the watercourse corridor may provide some movement opportunities. At the immediate site level, habitat representation consists of the aquatic environment (seasonal) of the creek, and patches of regenerating and planted woody vegetation.

4.5 Aquatic Habitat

The watercourse (Robinson Creek) that runs through the Subject Property is a tributary of Rainbow Creek, part of the Main Humber River watershed. Fish community information for the specific reach is lacking, but Rainbow Creek is characterized by warm water habitats that have been affected to varying degree by past and present urbanization (Toronto and Region Conservation Authority, 2008). However, in their correspondence of November 23, 2018, the TRCA state that this reach/Robinson Creek is classified as a 'cool water' stream and the timing window for conducting any in-water or near-water works is July 1 to September 15.

The channel wetted width is uniform and approximately 1.5 metres (m) throughout the reach within the Subject Property (**Photo 1**). The bankfull width is greater in sections due to erosion and failing slopes, providing evidence of a "flashy" system (i.e., quick increase in flows following rain events/spring melt), see **Photo 2**. Erosion hazard assessment studies conducted for this project show a history of channel realignment within the Subject Property (Palmer Environmental Consulting Group, 2018). The limits of this channel are thus defined by the meanderbelt limit, as outlined in the aforementioned study (**Figure 2**). Within the property limits, there are observed instabilities along Robinson Creek that are a response to historical and recent channel realignments as well as upstream urban development (changes to flow regime and sediment supply).

Along Regional Road 50, the channel has also been straightened, and essentially functions as a roadside drainage ditch (**Photo 3**). The channel flows under a box culvert and upstream there is high proportion of cattails (*Typha* sp.) within the channel. Water depth was approximately 25 cm at the time of the site visit, with turbid water indicative of sediment transport after the heavy rain. The channel banks throughout the entire reach within the Subject Property consisted of mowed grass, and a great proportion of slumped slopes and erosion gullies, which had led to exposed soils, with no riparian vegetation present to provide slope stability or other ecological function to the watercourse.

There were little in-stream features that provided cover or refuge for fish. Substrate in the channel consisted of sand, gravel and some scattered rubble. There were localized areas (less than 10% of the area within the Subject Property) of in-stream aquatic vegetation – cattails. Leaf litter was present in the channel from the upstream wooded-area. No barriers to fish passage were observed, but low flow conditions are likely in the summer months. Evidence of the urban setting was present, with garbage along the stream from the adjacent road, as well as exposed service cables/pipes in one section (**Photo 4**).

Review of the Fisheries and Oceans Canada (DFO) Aquatic Species at Risk Map (Fisheries and Oceans Canada, 2020) and correspondence with the MNRF Aurora district did not identify Robinson Creek as either direct or indirect habitat for aquatic SAR (**Appendix B**).



Photograph 1. Channel along Regional Road 50 showing slumping of the slopes and erosion gullies



Photograph 2. Typical slope slumping and erosion observed along the entire channel



Photograph 3. Tributary as it joins the roadside drainage ditch, showing exposed sands and soil



Photograph 4. Exposed service cables/pipes at the tributary as it joins the drainage ditch along Regional Road 50

Fish community sampling was not conducted and there would appear to be direct connection to up- and down-stream reaches, at least during periods of high flow. The presence of fish can therefore not be discounted, even if only present on a seasonal basis. However, the habitat quality in the reach in the Subject Property is low and does not provide any specialized ecological function. Water quality appears to be adversely affected by the high degree of sedimentation from the exposed channel banks and proximity to an urban roadway and stormwater runoff. There is no riparian cover, and habitat is affected by the urban setting and flash flood system.

4.6 Species at Risk

The MNRF was contacted during the original background review in 2016 for information on SAR occurrences or potential presence in and surrounding the Subject Property. The MNRF identified the potential for SAR bat habitats in tree cavities, including for:

- Eastern Small-footed Myotis (*Myotis leibii*);
- Little Brown Myotis (*Myotis lucifugus*);
- Northern Myotis (*Myotis septentrionalis*); and
- Tri-coloured bat (*Perimyotis subflavus*).

Habitat on the Subject Property was screened against the requirements of these SAR bat species to determine the likelihood of their presence.

In correspondence with the MECP, it was recommended that the on-site barn be screened for Barn Swallow (*Hirundo rustica*) prior to removal (**Appendix B**). No rare species records were previously identified for the Subject Property or adjacent lands, through a search of the NHIC database.

SAR Bats

Populations of several bat species have been in decline in recent years due to the spread of a fungal pathogen known as “white nose syndrome”. This includes the above listed species, which are all listed as *Endangered* under the ESA and are afforded general habitat protection.

Eastern Small-footed Myotis will roost in a variety of habitats, including in or under rocks, in rock outcrops, in buildings, under bridges or in caves, mines or hollow trees (Ministry of Natural Resources and Forestry, 2017). Little Brown Myotis often select attics, abandoned buildings and barns for summer colonies where they can raise their young (Ministry of Natural Resources and Forestry, 2018). Northern Myotis bats are associated with a range of forests, choosing to roost under loose bark and in the cavities of trees (Ministry of Natural Resources and Forestry, 2018). They may also roost in anthropogenic structures. Tri-colored Bat is found in a variety of forested habitats during the summer. It forms day roosts and maternity colonies in older forest and occasionally in barns or other structures. It forages over water and along streams in the forest (Ministry of Natural Resources and Forestry, 2017).

From professional experience, summer maternal roosting habitat, representing one of the most sensitive life stages for bats, is generally the focus of protection efforts on the part of MNRF/MECP in regard to the ESA requirements for these species. The other primary concern is winter hibernation habitat; however,

these habitats primarily include caves and old mines, none of which are present in the vicinity of the Subject Property.

There are no forest communities within or immediately adjacent to the Subject Property and therefore habitat opportunities for bats within tree cavities are limited and their presence is unlikely. In addition, as of 2018, the home and barn were still actively occupied and used, making the potential for use of these structures by bats unlikely.

Barn Swallow

The barn swallow is a threatened species, is found throughout southern Ontario, and can range into the north as long as suitable nesting locations can be found. These birds prefer to nest within human made structures such as barns, bridges, and culverts. Barn swallow nests are cup-shaped and made of mud; they are typically attached to horizontal beams or vertical walls underneath an overhang. A significant decline in populations of this species has been documented since the mid-1980s, which is thought to be related to a decline in prey. Since the barn swallow is an aerial insectivore, this species relies on the presence of flying insects at specific times during the year. Changes in building practices and materials may also be having an impact on this species (Ministry of Natural Resources and Forestry, 2019).

The barn on-site has the potential to be used by this species, and a screening for nest structures should be completed prior to demolition.

5. Assessment of Significance

5.1 Designated Natural Areas

Designated areas are environmentally significant features that are identified by provincial or local authorities, such as provincial plan areas (e.g., Greenbelt Plan), Provincially Significant Wetlands, Areas of Natural and Scientific Interest, and components of regional or municipal natural heritage systems or other significant areas identified in municipal Official Plans.

No Provincially Significant Wetlands (PSW), Areas of natural and Scientific Interest (ANSI), or Environmentally Sensitive Features occur on or immediately adjacent to the Subject Property. Official Plan schedules show no 'Core Areas' of the Region of Peel within or adjacent to the Subject Property (Regional Official Plan Schedule A) or 'Environmental Policy Areas' of the Town of Caledon (Town Official Plan Schedule C).

Guidance for identifying and evaluating natural features and determining constraints is provided by Official Plan policies, the Natural Heritage Reference Manual (Ontario Ministry of Natural Resources, 2010), and the TRCA regulations and policy. A summary and evaluation of the potential significance, functions and sensitivity of existing features on the Subject Property is provided below.

5.2 Aquatic Habitat and Stream Corridor

The aquatic assessment (Section 4.5) demonstrates that Robinson Creek provides limited opportunities for fish habitat. This section of the creek is characterized by low riparian cover and minimal in-stream features that provide refuge for fish. The erosion hazard assessment of the creek shows a history of anthropogenic re-alignment within the Subject Property (Palmer, 2018). The current limits of this stream feature are defined by the meanderbelt, as defined within the 2018 Palmer study and illustrated on **Figure 2**.

5.3 Wetlands

Based on field investigations, no wetland communities were identified within or directly adjacent to the Subject Property.

5.4 Woodlands

Criteria for determining woodland significance are provided in the Region of Peel Official Plan and in the *Natural Heritage Reference Manual* (Ontario Ministry of Natural Resources, 2010).

No forest or woodland vegetation communities were identified within the Subject Property. The treed riparian area to the north of the Subject Property is not identified as part of the Greenlands System by the Region of Peel or Environmental Policy area on Official Plan Schedule C – Bolton Land Use Plan for the Town of Caledon.

5.4.1 Tableland Vegetation

The Town of Caledon Woodlands by-law protects Caledon's Woodlands and promotes good forestry practices. The Town does not have a Tree By-law applicable to individual trees that occur outside of woodland communities. The Subject Property does contain several trees for which compensation is recommended. The recommended replacement ratio is provided in the Arborist Report (**Appendix A**).

5.5 Species at Risk

There are limited habitat opportunities for SAR bats associated with the existing building structures (house and barn) and trees. However, provided the proposed development demolition activities are completed when bats are inactive (i.e., between October 1st and March 31st), these activities are unlikely to result in an impact to these species. There is also a limited opportunity for Barn Swallow to be actively using the on-site barn. A screening for nest structures should be completed prior to demolition.

5.6 Significant Wildlife Habitat

Significant Wildlife Habitat (SWH) is considered a significant feature in Provincial, Regional, and Municipal policies. Significant Wildlife Habitat (SWH) is defined by the MNRF in the Significant Wildlife Habitat Technical Guide (Ontario Ministry of Natural Resources, 2000) and includes the following broad categories:

- seasonal concentration areas;
- rare vegetation communities or specialised habitats for wildlife;
- habitats of species of conservation concern, excluding the habitats of endangered and threatened species; and
- animal movement corridors

Criteria for the identification of these features are provided in the *Significant Wildlife Habitat Criteria Schedules For Ecoregion 7E* (Ontario Ministry of Natural Resources and Forestry, 2015). These criteria were used to screen wildlife habitat within the study area for potentially significant wildlife habitat.

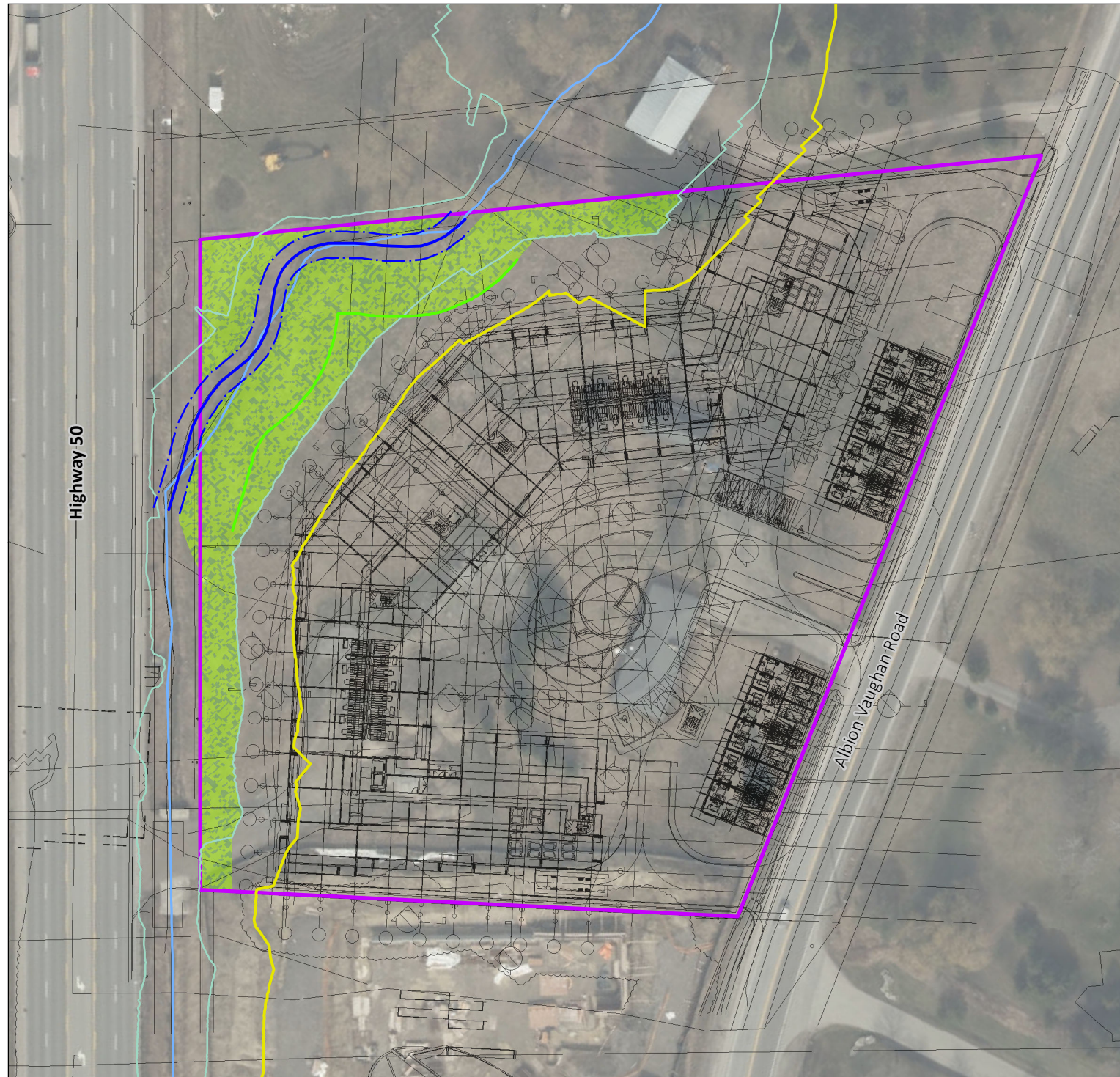
The potential for SWH on-site is limited, as natural vegetation features on the Subject Property are limited in size and function. In the immediate area of the proposed development, habitat opportunities consist of the predominately unvegetated creek corridor through the Subject Property and small treed riparian area to the north. No rare vegetation communities within the proposed construction areas have been identified. Potential suitable breeding amphibian habitat is limited to the existing creek corridor, but is not large enough nor contain the still, ponded waters necessary to qualify as SWH for these species.

6. Development Concept

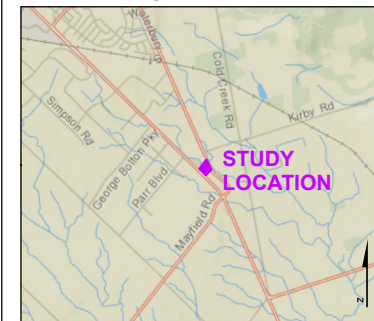
The proposed site plan is shown on **Figure 3** and provides an illustration of the proposed development overtop of the environmental constraints to allow for an assessment of the environmental feasibility of the proposed site plan with associated property access and future building envelopes in consideration of site constraints.

The proposal for the Subject Property includes the demolition of the existing buildings and the development of 240 apartment units in two adjoining towers central to the property, and 20 townhomes in two blocks along Albion Vaughan Road. Access is proposed via Albion Vaughan Road. Two levels of subsurface parking is proposed centrally in the Subject Property, while above ground visitor parking stalls are proposed to ring the underground parking entrance.

The portion of Robinson Creek within the property is proposed to be realigned in order to maximize the developable area and improve flood storage.



OVERVIEW



LEGEND

- RE-ALIGNED WATERCOURSE (CENTRELINE)
- - - BANKFULL CHANNEL WIDTH
- 10 M NATURAL FEATURE SETBACK
- FLOODPLAIN LIMIT
- 10 M FLOODPLAIN SETBACK
- EXISTING WATERCOURSE (CENTRELINE)
- SITE PLAN
- PLANTING AREA
- SUBJECT PROPERTY



0 10 20 30 40
METRES

COORDINATE SYSTEM: NAD 1983 UTM ZONE 17N
SCALE: 1:1,000

DATA SOURCES: Imagery provided York Region (2018). Watercourse (edited) provided by Ontario Hydro Network. Overview basemap: National Geographic, Esri, Garmin, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment P Corp.

Project: 12148 Albion Vaughan
Client: Aztec Restoration

PREPARED BY: **Palmer™**
DRAWN: B. Elder
CHECKED: A. Adams
PROJECT: 1604601
DATE: Nov 25, 2020

**Proposed Development
and Environmental
Constraints**

FIGURE 3

7. Impact Assessment and Proposed Mitigation

Given the location of the proposed development within a property currently supporting existing residential buildings, ancillary structures, paved area and manicured lawn, there is no natural vegetation removal required. The only impacts to vegetation of the proposed development include the removal of planted landscape trees and shrubs. Of the 34 inventoried trees, the results indicate that 24 trees and a tree grouping will require removal to support the proposed development plan. The removal of these trees has a limited potential to affect wildlife habitat (e.g. nests) within these trees.

The portion of Robinson Creek within the property is proposed to be realigned has been designed to address the observed instabilities in the current alignment and also improve channel form and function, ecological functions and fish habitat. The surrounding floodplain will also be redesigned to increase flood capacity. There is the potential for sedimentation from both the development construction area and the channel realignment works to enter Robinson Creek during construction. Appropriate sediment and erosion control measures will therefore be required.

The realignment of Robinson Creek, floodplain creation and grading required for the development will require a restoration plan that enhances the green spaces of the property and controls the potential for colonization by invasive species.

7.1 Watercourse Feature Buffer

Buffers are generally defined as vegetated areas of land between development areas and sensitive natural features within which no or very limited site alteration may occur. These buffers function to protect the features by way of creating a biophysical barrier between an adjacent land use, such as a development, and the natural feature.

In accordance with TRCA's *Living City Policies* (2014) and based on the findings of this EIS, a 10 m natural feature setback is recommended to buffer the realigned watercourse, as defined by the designed Bankfull Width in this instance (**Figure 3**). It is also recommended that the required 10 m natural feature buffer be expanded to include the re-designed floodplain to protect the re-aligned watercourse and its associated functions from impacts associated with the proposed development. This extension will also serve to increase the flood infiltration capacity and provide wildlife habitat potential of the area.

The 10 m natural feature setback and designed floodplain have been combined to create a proposed Planting Area (**Figure 3**). It is recommended that the buffer is planted and restored with *native, self-sustaining vegetation* in consultation with the agencies. In order to extend the potential natural area and functions, the 10 m flood and erosion hazard setback are proposed to be planted with native species, but allow for hazard access and recreational use of the area.

As part of the development it is proposed that the Planting Area and flood/erosion hazard setback be enhanced through a restoration plan as outlined in Section 7.4. The overall goal is to restore and increase natural vegetation cover within the realigned watercourse riparian corridor and improve quality and function

of this feature. As all of the existing area is currently vegetated solely with manicured lawns (i.e. turfgrass), the restoration objective is to provide a naturally vegetated buffer to protect and enhance the feature and its ecological functions.

The Planting Area has also been identified as a location to compensate for the trees to be removed for the project (**Appendix A**).

7.2 In-Water Work

Construction of the Robinson Creek channel realignment should be completed “in the dry”. The dewatering trap should be placed no less than 30 m away from the receiving waterbody and pumped into a densely vegetated receiving area. If a densely vegetated area is not available, coir matting or functionally similar materials should be utilized.

7.2.1 Dam-and-Pump

All in-channel work should be completed in-the-dry through the implementation of a dam-and-pump approach to safely by-pass streamflow around the work area, which will be isolated between temporary cofferdams. The natural flow regime should be maintained for any diversion works. Any minor through-flow or seepage that accumulates within the isolated work area should be collected in a sump and pumped via a small-diameter pipe into a nearby filter bag, which will be set back from the channel and allowed to drain passively through existing riparian vegetation. All in-channel work should be supervised by an environmental monitor and techniques for site isolation and siltation control should be confirmed with the on-site environmental monitor. The isolated works area is to be monitored for trapped fish. If fish are identified, a qualified ecologist should capture and relocate fish trapped from within the isolated area before excavation can begin. A fish collection permit will be required for any capture and relocation of fish.

7.2.2 Fish Protection

Though the potential to encounter fish is considered low (Section 4.5), the construction of the stream realignment will require activities to ensure the protection of fish, in compliance with the Federal *Fisheries Act*. Measures must be taken to avoid harm to fish and fish habitat. For the project, this will involve limiting any in-water work to specific timing windows and relocating any fish trapped within the channel realignment area prior to putting it “on-line”. Specifically:

- In water construct works are to conform to timing windows for in-water works. As the fish community in Robinson Creek is classified as a ‘cool water’ stream and the timing window for conducting any in-water or near-water works is July 1 to September 15. Thus, no in-water work will occur between the restriction periods for southern Ontario, being September 16 to June 30, subject to confirmation with the MNR and the TRCA.
- Fish removal (salvage) will be required pumping out the channel realignment work area. Prior to construction, a License to Collect Fish for Scientific Purposes will be required from the MNR, in order to proceed with the proposed works and fish removal. Fish removal must be completed by a qualified ecologist, and fish salvaged must be relocated downstream of the construction area.

- Any non-native species encountered during the fish salvage will be euthanized and disposed of using appropriate methods. The euthanization of non-native, invasive species is a standard practice and is generally included as a condition of the License to Collect Fish permit.
- Should the channel realignment work area flood, a second fish salvage may need to occur.

7.3 Erosion and Sediment Control

Erosion and Sediment Control (ESC) must be considered for the two construction activities, namely the construction of the development and also the re-alignment of Robinson Creek. For the construction of the development, ESC measures are recommended to be placed (at minimum) at the Planting Area limit (**Figure 3**), that encompasses the newly designed floodplain and watercourse setbacks. For the re-alignment of Robinson Creek, ESC measures should look to limit the opportunities for sediment to be introduced into the upstream and downstream reaches.

An ESC plan will be developed for both stages of the project. The following erosion and sediment control recommendations are provided for incorporation into the final ESC Plan:

- To minimize the potential for erosion and off-site transport of sediment into surface drainage areas and the natural environment, the project will implement Best Practices related to ESC. ESC measures used by the contractor on all construction should meet guidelines as outlined in *Erosion and Sediment Control Guideline for Urban Construction*, (2006) (ESC Guideline), prepared by the Greater Golden Horseshoe Area Conservation Authorities (GGHACA), or equivalent standards.
- ESC measures should be installed prior to beginning work and maintained in working order throughout all stages of the proposed construction activities and remain in place until the buffer and enhancement plantings have been completed.
- All exposed and newly constructed surfaces should be stabilized using appropriate means in accordance with the characteristics of the exposed soils. These surfaces should be fully stabilized and re-vegetated as quickly as possible following the completion of the works, with native vegetation ground cover. Revegetation and sodding recommendations would include use of TRCA seed mixes.
- No sediment, sediment-laden water or deleterious substances are to be discharged into Robinson Creek at any time.;
- All ESC measures will be inspected daily including after every rainfall, cleaned, maintained and/or adjusted accordingly to ensure sediment does not enter the creek at any time.
- No machinery or equipment will be maintained or refueled within 30 m of the creek.
- Any equipment, stockpiled material or construction material will be stored a minimum of 30 m from the creek and in a manner that prevents sediment or deleterious substances from entering the creek.
- Any dewatering (if required) is to be filtered to remove sediment prior to discharging to a well vegetated area at least 30 m from Robinson Creek.

7.4 Restoration Plan

Restoration plantings will be implemented following the completion of the watercourse realignment and construction of the proposed development. The following restoration recommendations follow the practical objectives for the revetment and the restoration methods in the TRCA Guideline for Determining Ecosystem Compensation (Toronto and Region Conservation Authority, 2018). Restoration efforts will aim to restore

the realigned Robinson Creek and the redesigned floodplain. The species to be planted as part of the restoration efforts are native to the region and suitable to the site conditions.

7.4.1 Soil Amendments

Within the redesigned floodplain and flood/erosion hazard access setback, soil compaction is expected to increase due to the use of machinery within the area of disturbance. Soils can be improved after construction works by conducting the following soil amendments on disturbed upland areas (Toronto and Region Conservation Authority, 2012):

- Decompaction of subsoil to a depth of 25 cm, by tilling or scarifying the soil in a perpendicular direction to the realigned watercourse.
- Incorporation of 7 cm of compost into the soils during tilling.
- Application of 20 - 30 cm of uncompacted imported topsoil with 15% organic matter by dry weight.

7.4.2 In-Channel Restoration

Live stakes (branch cuttings from live shrubs) have been recommended to be placed in the bends and vegetated rock revetment portions of the Robinson Creek re-alignment. Recommended species for live stakes includes Alternate-leaved Dogwood (*Cornus alternifolia*), Red-osier Dogwood (*Cornus sericea*), Common Elderberry (*Sambucus canadensis*), Sandbar Willow (*Salix exigua*), and Bebb's Willow (*Salix bebbiana*) (**Table 1**). Live stakes are to be planted in groups of 10/species at 0.3 m on-centre spacing (Toronto and Region Conservation Authority, 2018). Live stakes are recommended to be 25 – 75 mm diameter stakes, to be hand placed between the stone revetment/rip-rap. Stakes should be buried >0.5 m below the rip-rap, ensuring placement within the soil matrix and seasonal water table. Certified soils should be used to fill the remaining space in each planting hole. Additional restoration details are provided on the restoration drawings, presented under a separate cover as part of the project submission package. As the new bend and revetment surface is approximately 25 m², it is estimated that up to 225 live-stakes can be planted to increase wildlife cover/habitat and increase bank stability.

Table 1: Recommended Live-Stake Restoration Species

Common Name	Scientific Name	Density	Quantity
Alternate-leaved Dogwood	<i>Cornus alternifolia</i>	1 x 1 m	50
Red-osier Dogwood	<i>Cornus sericea</i>	1 x 1 m	40
Common Elderberry	<i>Sambucus canadensis</i>	1 x 1 m	15
Sandbar Willow	<i>Salix exigua</i>	1 x 1 m	60
Bebb's Willow	<i>Salix bebbiana</i>	1 x 1 m	60

Palmer also recommends implementing bioengineering techniques (e.g. brush layers) and riparian plantings to help improve the shear strength of the channel banks and reduce channel migration potential. These recommendations are consistent with the erosion hazard assessment completed by Palmer (Palmer, 2018). The improvements to the channel form could enhance the habitat function, and be conducted with no impact to any existing fish, for example, by working within timing windows, or periods of low flow or frozen conditions (in the dry) (Section 7.2).

7.4.3 Floodplain and Natural Feature Setback

As the floodplain and natural feature setback (Planting Area) are currently comprised of anthropogenic/cultural communities, it is recommended that these lands be planted in order to enhance their buffer/protective functions for Robinson Creek.

The Planting Area is to be seeded and planted to buffer the watercourse/natural features from the development (**Figure 3**). The setback is to be seeded at a rate of 25 kgs/ha with an early succession wet meadowseed mix that aligns with the TRCA *Seed Mix Guidelines* (Toronto and Region Conservation Authority, 2004; Credit Valley Conservation Authority, 2014). The recommended Early Succession Wet Meadow Mix (CVC 6) includes:

- Bebb's Sedge (*Carex bebbii*) 5%
- Purple Stemmed Aster (*Aster puniceus*) 1%
- Fowl Bluegrass (*Poa palustris*) 25%
- Fox Sedge (*Carex vulpinoidea*) 25%
- Great Blue Lobelia (*Lobelia siphilitica*) 1%
- New England Aster (*Aster novae-angliae*) 1%
- Path Rush (*Juncus tenuis*) 3%
- Canada Goldenrod (*Solidago canadensis*) 2%
- Soft Rush (*Juncus effusus*) 5%
- Stalk-grain Sedge (*Carex stipata*) 4%
- Tall Manna Grass (*Glyceria grandis*) 2%
- Virginia Wild Rye (*Elymus virginicus*) 25%
- Wild Bergamot (*Monarda fistulosa*) 1%

To assist in establishment and promote biomass, the Planting Area should also be seeded with a nurse crop of Common Oats (*Avena sativa*) or Buckwheat (*Fagopyrum esculentu*) at a rate of 25 kgs/ha.

Subsequently, following the Enhanced Reforestation Typicals within the *Guideline for Determining Ecosystem Compensation* (Toronto and Region Conservation Authority, 2018) as a guide, the Planting Area is to be planted with trees at a density of 2.45 m x 2.45 m (6 m²), and shrubs at a 1 m x 1 m (1 m²) spacing. Replacement tree and species are recommended be native to TRCA's watershed, and targeted to provide *natural, self-sustaining vegetation* (Toronto and Region Conservation Authority, 2014). Plantings should be of species native and common to the TRCA watershed as well as suit the existing vegetation assemblage and site conditions. For the Subject Property and the Planting Area specifically, species should be suited to naturalization, perform well in somewhat moister conditions in full to partial sun, and be tolerant of salt spray due to their proximity to Highway 50 (Vineland Research and Innovation Centre, 2020). Based on these existing site conditions, suitable woody species may include (but are not limited to):

Trees:

- Silver Maple (*Acer saccharinum*)
- Paper Birch (*Betula papyrifera*)
- Hackberry (*Celtis occidentalis*)
- Tamarack (*Larix laricina*)
- Eastern Cottonwood (*Populus deltoides*)

- American Elm (*Ulmus americana*) – Dutch Elm Disease resistant cultivars

Shrubs:

- Speckled Alder (*Alnus rugosa*)
- Red-osier Dogwood (*Cornus sericea*)
- Chokecherry (*Prunus virginiana*)
- Staghorn Sumac (*Rhus typhina*)

The natural feature setback and floodplain area to be restored is approximately 2,000 m² and the recommended planting spacing would allow planting of about 330 trees or 2,000 shrubs, or combination thereof. To provide a balance between diversity and reproduction opportunities, trees and shrubs are to be planted in groups of approximately 10 per species following the *Guideline*, at the spacing outlined above. For trees and shrubs, two to four gallon pot sizes are recommended. The planting prescription in **Table 2** has been developed following the above criteria.

Table 2: Example Planting Prescription

Common Name	Scientific Name	Quantity	Size
Trees			
Silver Maple	<i>Acer saccharinum</i>	50	2 - 4 gallon pot
Paper Birch	<i>Betula papyrifera</i>	50	2 - 4 gallon pot
Hackberry	<i>Celtis occidentalis</i>	45	2 - 4 gallon pot
Tamarack	<i>Larix laricina</i>	40	100 – 150 cm (height)
Eastern Cottonwood	<i>Populus deltoides</i>	50	2 - 4 gallon pot
American Elm*	<i>Ulmus americana</i>	45	2 - 4 gallon pot
Shrubs			
Speckled Alder	<i>Alnus rugosa</i>	100	2 gallon pot
Red-osier Dogwood	<i>Cornus sericea</i>	100	2 gallon pot
Chokecherry	<i>Prunus virginiana</i>	50	2 gallon pot
Staghorn Sumac	<i>Rhus typhina</i>	50	2 gallon pot

* Note: Dutch Elm Disease resistant cultivars recommended.

7.4.4 Floodplain Buffer

It is recommended that the 10 m flood/erosion access setback be seeded and planted to further buffer the Planting Area from the development, but also allow for maintenance, hazard access and recreational/passive use of the area (**Figure 3**). The flood/erosion access setback should be seeded at a rate of 25 kgs/ha with a native grass seed mix that aligns with the TRCA *Seed Mix Guidelines* (Toronto and Region Conservation Authority, 2004). A recommended grass seed mix includes:

- Canada Wild Rye (*Elymus canadensis*) – 20%
- Switchgrass (*Panicum virgatum*) – 20%
- Fowl Bluegrass (*Poa palustris*) – 20%
- Big Bluestem (*Andropogon gerardii*) – 10%
- Little Bluestem (*Andropogon scoparius*) – 10%
- Fox Sedge (*Carex vulpinoidea*) – 10%

Similar to the Floodplain Planting Area, the 10 m setback should also be seeded with a nurse crop of Common Oats or Buckwheat at a rate of 25 kgs/ha.

7.4.5 Timing

Planting and seeding should be completed in the spring or fall. The spring season planting window is April to mid-May and the fall season window is mid-September to late October. Seeding should be completed immediately after the planting of woody vegetation but not during drought-prone summer months (Toronto and Region Conservation Authority, 2004). The assessment of plant stock should be conducted upon delivery to ensure that the material consists of appropriate native species in proper quantities.

All trees and woody debris from removed due to site disturbance should be kept on-site and distributed throughout the site to provide wildlife habitat opportunities, away from the active flow channel, after to completion of restoration plantings. In addition, if of small enough diameter, tree material could be used as embedded woody debris to be incorporated into the channel realignment design.

7.4.6 Tending for Restoration Plantings

The restoration plantings will require regular watering to facilitate the establishment of young trees, which are typically highly susceptible to water stress. At a minimum, watering should occur when trees show signs of stress and during periods of natural drought conditions (e.g. if there is less than 25 mm of rain over a 30-day period during late spring to the end of summer).

7.5 Species at Risk and Migratory Birds

Provided the demolition and tree removal activities for the proposed development occur over the fall to early spring period (i.e., October to early April), the activities are unlikely to result in a direct impact to SAR bats or migratory birds. In the unlikely event that SAR bats or other SAR species are encountered, work will stop and the MECP will be contacted for direction.

In order to avoid potential impacts to bat species, all tree removals and demolition activities should be completed outside the bat maternity roost season and general activity period of **April 1 to September 30** for southern Ontario (Ontario Ministry of Natural Resources, 2011; Ministry of Natural Resources, 1984). To avoid potential harm to migratory birds, any vegetation removal (including tree removal) should be conducted outside the C2 Area breeding bird timing window of **April 15 to August 31** (i.e. vegetation removal to occur between September 1 to April 14) (Government of Canada, 2019). Potential habitat is expected to be enhanced following the restoration efforts within the Subject Property.

By avoiding demolition and tree clearing within the combined **April 1 to September 30** timing window, potential impacts to both breeding birds and roosting bats should be avoided. In the event that demolition or tree removal must be completed within the restricted timing window, a qualified biologist must screen the area for active nests and roosting activity. Compensation for trees lost is discussed in Section 7.4 and **Appendix A** of this report. A letter has been submitted to the MECP to confirm the timing windows and mitigation for the proposed activities.

Prior to demolition, the on-site barn should be screened for Barn Swallow nest structures by a qualified biologist. If nest structures are observed, a SAR registration under the ESA should be completed, and appropriate mitigation implemented (**Appendix B**). This process is described at: <https://www.ontario.ca/page/alter-structure-habitat-barn-swallow>. The demolition of the barn should also take place during the **April 1 to September 30** timing window.

8. Policy Conformity

Provincial and Municipal Policy

According to the Provincial Policy Statement, Region of Peel and Town of Caledon OP policies, development is generally prohibited within significant natural heritage features as defined in those policies. Due to its current limited fish habitat opportunities and stream quality, the realignment of Robinson Creek and the restoration of the floodplain and natural feature setback will create a *net gain in environmental quality on the natural feature and its ecological functions*. Additionally, Robinson Creek has been adequately setback from the post-construction limits of the proposed development to ensure protection under these policies and other relevant policies (e.g. TRCA *Living City Policies*). The results of our assessment indicate no other significant natural heritage features are present on the Subject Property. Thus, the development as proposed is considered to conform to the abovementioned policies.

Endangered Species Act

The mitigation measures proposed in Section 7.5 should avoid contravention of the ESA in the unlikely event SAR are present, including bats, birds, and Barn Swallow specifically.

Migratory Birds Convention Act (MBCA)

Works with potential MBCA implications will occur during the construction phase of the project when the Subject Property is cleared and grubbed of vegetation. Compliance with the MBCA may be achieved using the following due diligence approach:

- Proponent awareness of the MBCA and the potential for bird nesting in the area and for inadvertent impacts to migratory birds, nests and eggs.
- Avoiding vegetation removal within the “regional nesting period” for this area (generally mid-April to end of August).

Conservation Authorities Act

The Subject Property falls within the jurisdiction of the Toronto Region Conservation Authority (TRCA). Robinson Creek within the Subject Property and its associated flood limit are regulated under the TRCA O.Reg. 166/06 – *Regulation of Development, Interference with Wetlands and Alterations to Shorelines and Watercourses*. As the Subject Property is within TRCA regulated lands and a realignment of the creek is proposed, an application under Ont. Reg. 166/06 is required.

The proposed development is setback at minimum 10 m from the bankfull width of the realigned creek, and restoration/naturalization of both this area and the entire redesigned floodplain has been proposed (the Planting Area). Restoration proposed is designed to be comprised of *native, self-sustaining vegetation*. The Planting Area will be further buffered by planting the flood/erosion hazard setback with a native grass seed mix. With the proposed mitigation, the project will create a net environmental gain, and is considered to be in conformity with the *Living City Policies* (Toronto and Region Conservation Authority, 2014).

9. Conclusions

The findings of our study are the result of a background review, an ecological field survey, and an analysis of data using current scientific understanding of the ecology of the area and natural heritage policy requirements. We have evaluated the environmental sensitivities, constraints and development opportunities of the Subject Property, which are described in this report and illustrated on **Figure 2** and **Figure 3**.

Based on the results of the EIS it is our professional opinion that the proposed development is environmentally feasible and would not result in a negative impact to the natural heritage features provided that the recommended mitigation and enhancement measures described in this report are implemented. Restoration of the realigned creek and redesigned floodplain is expected to result in a net gain in environmental quality of the watercourse system and adjacent lands.

10. Certification

This report was prepared, reviewed and approved by the undersigned:

Prepared By:



Austin Adams, M.Sc., EP.
Sr. Terrestrial Ecologist,
ISA Certified Arborist #ON-2000A

Reviewed By:



Dirk Janas, B.Sc.
Principal, Senior Ecologist

11. References

- Chapman, L. J., & Putnam, D. F. (1984). *The Physiography of Southern Ontario - Third Edition*. Ontario.
- Credit Valley Conservation Authority. (2014). *Credit Valley Conservation Seed Mixes - Version 1.1 August 2014*. Retrieved from Credit Valley Conservation Authority: <https://cvc.ca/wp-content/uploads/2013/05/planning-seedmix-flyer-may-20131.pdf>
- Crins, W. J., Gray, P. A., Uhlig, P. W., & Wester, M. C. (2009). *The Ecosystems of Ontario, Part 1: Ecozones and Ecoregions*. Peterborough, Ontario: Ontario Ministry of Natural Resources. Retrieved from <https://www.ontario.ca/page/ecosystems-ontario-part-1-ecozones-and-ecoregions>
- Fisheries and Oceans Canada. (2020). *Aquatic Species at Risk Map*. Retrieved from Fisheries and Oceans Canada: <http://www.dfo-mpo.gc.ca/species-especes/sara-lep/map-carte/index-eng.html>
- Government of Canada. (1994). Migratory Birds Convention Act, 1994 (S.C. 1994, c. 22). Retrieved from <http://laws-lois.justice.gc.ca/eng/acts/m-7.01/>
- Government of Canada. (2019). *Nesting Zones*. Retrieved from Government of Canada - Environment and Climate Change: https://www.canada.ca/en/environment-climate-change/services/avoiding-harm-migratory-birds/general-nesting-periods/nesting-periods.html#_zoneC_calendar
- Government of Ontario. (2007). Endangered Species Act, 2007, S.O. 2007, c. 6. Retrieved from <https://www.ontario.ca/laws/statute/07e06>
- Greater Golden Horseshoe Conservation Authorities. (2006). *Erosion and Sediment Control Guidelines for Urban Construction*. Retrieved from www.trca.on.ca/dotAsset/40035.pdf
- Lee, H. T., Bakowsky, W. D., Riley, J., Bowles, J., Puddister, M., Uhlig, P., & McMurray, S. (1998). *Ecological Land Classification for Southern Ontario: First Approximation and its Application*. Ontario Ministry of Natural Resources, Southcentral Science Section, Science Development and Transfer Branch.
- Ministry of Natural Resources. (1984). *Habitat Management Guidelines for Bats in Ontario*. Retrieved from Ontario Ministry of Natural Resources and Forestry: [file:///C:/Users/Austin%20Adams/AppData/Local/Packages/Microsoft.MicrosoftEdge_8wekyb3d8bbwe/TempState/Downloads/guide-bats%20\(1\).pdf](file:///C:/Users/Austin%20Adams/AppData/Local/Packages/Microsoft.MicrosoftEdge_8wekyb3d8bbwe/TempState/Downloads/guide-bats%20(1).pdf)

- Ministry of Natural Resources and Forestry. (2017). *Eastern small-footed myotis*. Retrieved from Ministry of Natural Resources and Forestry: <https://www.ontario.ca/page/eastern-small-footed-myotis>
- Ministry of Natural Resources and Forestry. (2017). *Tri-coloured Bat*. Retrieved from Ministry of Natural Resources and Forestry: <https://www.ontario.ca/page/tri-colored-bat>
- Ministry of Natural Resources and Forestry. (2018). *Little Brown Myotis*. Retrieved from Ministry of Natural Resources and Forestry: <https://www.ontario.ca/page/little-brown-myotis>
- Ministry of Natural Resources and Forestry. (2018). *Northern Myotis*. Retrieved from Ministry of Natural Resources and Forestry: <https://www.ontario.ca/page/northern-myotis>
- Ministry of Natural Resources and Forestry. (2019). *Barn Swallow*. Retrieved from ontario.ca: <https://www.ontario.ca/page/barn-swallow>
- Oldham, M. J., & Brinker, S. R. (2009). *Rare Vascular Plants of Ontario, Fourth Edition*. Peterborough, Ontario: Natural Heritage Information Centre, Ministry of Natural Resources.
- Ontario Ministry of Municipal Affairs and Housing. (2020). *Provincial Policy Statement, 2020*. Toronto, ON. doi:ISBN 978-1-4606-3522-3
- Ontario Ministry of Natural Resources. (2000). *Significant Wildlife Habitat Technical Guide*. Peterborough: Queen's printer for Ontario. Retrieved from <https://www.ontario.ca/document/guide-significant-wildlife-habitat>
- Ontario Ministry of Natural Resources. (2010). *Natural Heritage Reference Manual for Natural Heritage Policies of the Provincial Policy Statement, 2005. Second Edition*. Toronto: Queen's Printer for Ontario. Retrieved from <http://cloca.ca/resources/Outside%20documents/Natural%20Heritage%20Policies%20of%20the%20Provincial%20Policy%20Statement%20MNR%202010.pdf>
- Ontario Ministry of Natural Resources. (2011). *Bats and Bat Habitats: Guidelines for Wind Power Projects*. Queen's Printer for Ontario. Retrieved from <https://www.ontario.ca/document/bats-and-bat-habitats-guidelines-wind-power-projects>
- Ontario Ministry of Natural Resources and Forestry. (2015). *Significant Wildlife Habitat Criteria Schedules For Ecoregion 7E*. Peterborough: Regional Operations Division, Southern Region Resources Section.

- Palmer Environmental Consulting Group. (2018). *Erosion hazard assessment of Robinson Creek, 12148 Albion Vaughan Road in Bolton, Town of Caledon*. Submitted to 12148 Albion Vaughan Inc.
- Region of Peel. (2018). *Region of Peel Official Plan. December 2018 Consolidation*. Retrieved from Region of Peel: <http://www.peelregion.ca/planning/officialplan/index.htm>
- Toronto and Region Conservation Authority. (2004). *Seed Mix Guidelines*. Retrieved from <http://trca.on.ca/dotAsset/40025.pdf>
- Toronto and Region Conservation Authority. (2008). *Humber River State of the Watershed Report – Aquatic System*.
- Toronto and Region Conservation Authority. (2008). *Planning and Development Procedural Manual*. Retrieved from Toronto and Region Conservation Authority: <https://trca.ca/planning-permits/procedural-manual-and-technical-guidelines/>
- Toronto and Region Conservation Authority. (2012). *Preserving and Restoring Healthy Soil: Best Practices for Urban Construction*. Retrieved from Toronto and Region Conservation Authority: <https://trca.ca/planning-permits/procedural-manual-and-technical-guidelines/>
- Toronto and Region Conservation Authority. (2014). *The Living Cities Policies*. Retrieved from Toronto and Region Conservation Authority: <https://trca.ca/planning-permits/living-city-policies/>
- Toronto and Region Conservation Authority. (2018, June). *Guideline for Determining Ecosystem Compensation*. Retrieved from Toronto and Region Conservation Authority: <https://laserfiche.trca.ca/WebLink/0/edoc/1499894/Guideline%20for%20Determining%20Ecosystem%20Compensation,%20June%202018.pdf>
- Toronto and Region Conservation Authority. (2019). *2019 Flora Ranks and Scores*. Retrieved from Toronto and Region Conservation Authority: https://s3-ca-central-1.amazonaws.com/trcaca/app/uploads/2019/07/08142613/2019_Flora_Ranks__Scores.pdf
- Town of Caledon. (2009). *Development Standards, Policies and Guidelines*. Retrieved from <https://www.caledon.ca/en/townhall/resources/DevelopmentStandardsPoliciesGuidelines.pdf>
- Town of Caledon. (2018). *Town of Caledon Official Plan, April 2018 Consolidation*. Retrieved from Town of Caledon: <https://www.caledon.ca/en/townhall/officialplan.asp>

Vineland Research and Innovation Centre. (2020). *Eastern Canada Tree Species Selector*. Retrieved from Vineland Research and Innovation Centre: <https://www.greeningcanadianlandscape.ca/tree-species-selector/eastern-canada-tree-species#>

Appendix A

Arborist Report and Tree Preservation Plan

December 23, 2020

Mike Liburdi
12148 Albion Vaughn Inc.
27 Fenton Way
Brampton ON
L6P 0P4

Dear Mike Liburdi:

Re: Arborist Report and Tree Preservation Plan for 12148 Albion Vaughan Road, Bolton (PECG#160461)

1. Introduction

Palmer has completed an Arborist Report for the proposed development of 12148 Albion Vaughan Road, in the community of Bolton, Town of Caledon, Region of Peel (the Subject Property).

Currently, residential buildings, including one house, a barn and manicured lawns with scattered trees occupy the Subject Property (**Figure 1**). Robinson Creek, a headwater tributary of Humber River, enters the property at the northwest corner and runs southward along the western edge, lying within the Toronto and Region Conservation Authority (TRCA) Regulatory Floodplain.

This report includes an assessment of applicable policy, methods and results of the tree inventory completed within the Subject Property, and the identification of trees to be retained and trees to be removed. Recommendations for tree removals, replacement tree species and planting locations are also provided in this report as well as recommended tree protection measures for trees to be retained.

2. Guidance Documents

This Arborist Report and Tree Preservation Plan is guided by The Town of Caledon *Development Standards, Policies & Guidelines* (Town of Caledon, 2009), supplemented by the City of Toronto *Tree Protection Policy and Specifications for Construction Near Trees* (2016). The Town of Caledon document guides the content of the report and details the standards for tree protection measures. Where additional construction management and monitoring guidance was required, the City of Brampton *Tableland Tree Assessment Guidelines* (2018) were employed, employing standards from the nearest neighbouring municipality.

3. Methods

A tree inventory was completed for trees within and adjacent to the area proposed for development on the Subject Property. The tree inventory was completed by a Certified Arborist on November 7, 2016.

Information collected during the inventory includes species name, tree tag number, diameter at breast height (DBH), location, a general health assessment, and notes on tree trunk and canopy conditions.

4. Results

4.1 Tree Inventory

The tree inventory comprised 34 individual trees, with an additional grouping of untagged Eastern White Cedar trees. The inventory included 14 trees and one (1) grouping which were native species (43%), nine (26%) trees that were non-native, and 11 (31%) trees were identified to the genus only. There were 32 trees identified as live, two (2) individual dead trees and a grouping of dead trees on the Subject Property (**Table 1**). The inventory included 11 (31%) trees which were deciduous species and 24 (69%) trees that were coniferous species. The trees identified as dead were not tagged during this inventory. All are trees commonly found and/or planted in southern Ontario landscapes. There were no Species at Risk (SAR) trees observed, such as Butternut (*Juglans cinerea*); although there were several trees at high risk of disease or infestation, including Ash species (*Fraxinus* sp.). Complete tree inventory details are provided in **Appendix A**. The locations of inventoried trees are shown on **Figure 2**.

Table 1. Summary of Tree Inventory Results

Scientific Name	Common Name	Total Number
<i>Acer x freemanii</i> *	Freeman's Maple	1
<i>Fraxinus</i> sp.	Ash Species	7
<i>Juglans</i> sp.	Walnut Species	2
<i>Malus</i> sp.	Apple Species	1
<i>Picea</i> sp.	Spruce Species	1
<i>Picea abies</i>	Norway Spruce	8
<i>Picea glauca</i> *	White Spruce	7
<i>Picea pungens</i>	Blue Spruce	1
<i>Pinus strobus</i> *	Eastern White Pine	6
<i>Thuja occidentalis</i> *	Eastern White Cedar	1 Grouping
Total		35

*Native species

4.2 Trees to be Retained

A total of five (5) trees are proposed to be retained (**Table 2**). All six are Eastern White Pine, a native species. These trees are considered to be in good to fair health and are located along the northwestern property boundary of the Subject Property (**Figure 2**).

Table 2. Trees Proposed to be Retained

Scientific Name	Common Name	Good to Fair Health	Poor Health	Total Count
<i>Pinus strobus</i> *	Eastern White Pine	5	0	5

Total trees to be retained	5	0	5
----------------------------	---	---	---

4.3 Trees to be Removed

A total of 24 inventoried trees and a tree grouping are proposed to be removed to accommodate the proposed development (**Table 3**). This includes ten (42%) trees of which are native, nine (38%) trees are non-native and six (20%) trees were identified to the genus only. The trees proposed to be removed are scattered throughout the Subject Property (**Figure 2**). Most of these trees were observed to be in good to fair health; however, there were several ash trees that were affected by Emerald Ash Borer (*Agrilus planipennis*) and in poor health. There was also a grouping of dead Eastern White Cedar in the northern portion of the Subject Property. Palmer understands that the five (5) Ash trees located along the hedgerow at the southeastern property boundary were removed subsequent to the inventory (between 2016 and 2018), likely due to adjacent development (**Figure 2, Table 3**). It is assumed that removal conditions have been previously obtained from the municipality for these trees; therefore, these trees will not be proposed for compensation.

Table 3. Trees Proposed to be Removed

Scientific Name	Common Name	Fair to Good Health	Poor Health	Dead**	Total Count
Trees to be Removed					
<i>Acer x freemanii</i> *	Freeman's Maple	1	0	0	1
<i>Fraxinus</i> sp.	Ash	1	0	1	2
<i>Juglans</i> sp.	Walnut	2	0	0	2
<i>Malus</i> sp.	Apple	1	0	0	1
<i>Picea</i> sp.	Spruce	0	0	1	1
<i>Picea abies</i>	Norway Spruce	8	0	0	8
<i>Picea glauca</i> *	White Spruce	6	1	0	7
<i>Picea pungens</i>	Blue Spruce	1	0	0	1
<i>Pinus strobus</i> *	Eastern White Pine	1	0	0	1
<i>Thuja occidentalis</i> *	Eastern White Cedar	0	0	1 Grouping	1
<i>Subtotal</i>		21	1	3	25
Trees Removed Subsequent to Inventory (2016 – 2018)					
<i>Fraxinus</i> sp.	Ash	4	1	0	5
<i>Subtotal</i>		4	1	0	5
Total		24	2	3	29

*Native species

**Dead trees in various stages of decay.

5. Tree Preservation Plan

5.1 Tree Protection

The specifications for tree protection are detailed on the Tree Preservation Plan (**Figure 2**), including the locations of required tree protection fencing. The Tree Preservation Plan is intended to act in concert with this Arborist Report; it is expected that the recommendations of both instruments be implemented within construction drawings and/or Site Plans for the project. The five trees proposed to be retained will be protected by tree protection fencing, which is to be placed at minimum beyond the dripline as determined as per the Town of Caledon *Development Standards, Policies & Guidelines* (Town of Caledon, 2009).

The recommended fencing locations encompass the Tree Protection Zones (TPZ) of the trees to be retained, providing protection from potential damage during construction activities such as the use of machinery near trees and branches, and stockpiling of materials over the root zone. The TPZ have been defined by radii that follow the Tree Protection Zone criteria outlined in the *Tree Protection Policy and Specifications for Construction Near Trees* (City of Toronto, 2016). The TPZ has been used as a conservative measure of the dripline requirements, per the Town of Caledon Specifications.

5.1.1 Tree Protection Fencing

Tree protection fencing is to consist of rigid snow fencing complete with iron “T” bars placed at a maximum of 2.4 metres (m) on-centre (maximum spacing) as per Town of Caledon Tree Protection Standard #707 (**Appendix B**). Snow fencing is to be 1.2 m high. Prior to the start of any site work, the Contractor shall supply and install tree protection barriers around each tree or group of trees designated to be protected (**Figure 2**), or as directed by the Consulting Arborist or Landscape Architect, and the Town (Town of Caledon, 2009).

Tree fencing, as a minimum, is to be located at the outer limit of the dripline of the tree (**Figure 2**). The dripline is defined as the outside edge of the tree canopy. The TPZ for each tree has been provided in this report as a conservative and quantifiable measure of the dripline. No fill, machinery, chemicals, fuel or materials are to be placed within the protective barrier. No re-grading, including filling or excavation, is to take place within the protected area. If required, all underbrush that is to be removed from within the protective barriers must be cleared by hand. The method of removal of brush from the protected area is to be approved by the Town (Town of Caledon, 2009).

General construction specifications in relation to trees are also detailed on the Tree Preservation Plan (**Figure 2**). These specifications provide additional details regarding tree protection fencing and their management.

5.1.2 Tree Removals

All trees to be removed should be felled into the Subject Property so as to avoid damage to adjacent trees and property. While most trees to be removed can be root-pulled as necessary to accommodate development, **Tree 390 (Figure 2)** should be cut and the stump ground to below surface in order to protect the roots of adjacent trees.

6. Compensation Plantings

6.1 Tree Removal and Compensation

A total of 22 live trees are to be removed as a result of the project (**Table 4, Figure 3**). It is recommended that a tree compensation ratio of 2:1 be implemented, resulting in 44 trees to be planted. Planting and restoration efforts will aim to restore the natural areas where disturbances have occurred as a result of anthropogenic disturbance.

Table 4: Recommended Tree Removal and Compensation

	Compensation Ratio (2:1)	Total
Total number of tree removals	21	21
Total number of replacement trees	44	44

6.2 Tree Species

To match with the restoration activities on the Subject Property as outlined in the Environmental Impact Study (EIS) for the proposed development (Palmer, 2020), the following tree species and composition are proposed to be planted in compensation (**Table 5**). While other species can be considered, another planting criterion should be selecting only native trees to increase the quality and character of the overall natural heritage system. Selecting Ash species should be avoided (at present) due to the advance of Emerald Ash Borer (EAB) in Ontario.

Table 5: Proposed Compensation Tree Species

Tree/Shrub Species	Quantity	Recommended Size
Silver Maple (<i>Acer saccharinum</i>)	10	2 – 4 gallon pot
Tamarack (<i>Larix laricina</i>)	10	100 - 150 cm wire basket
Paper Birch (<i>Betula papyrifera</i>)	10	2 – 4 gallon pot
Hackberry (<i>Celtis occidentalis</i>)	12	2 – 4 gallon pot

The sizes proposed in **Table 5** are reflective of the sizes recommended for ecosystem naturalization, as outlined in the *Guideline for Determining Ecosystem Compensation* (Toronto and Region Conservation Authority, 2018).

6.3 Planting Location

The replacement trees are proposed to be planted on the Subject Property. As outlined in the EIS for the proposed development, the restoration Planting Area surrounding Robinson Creek is able to accommodate approximately 330 trees, far in excess of the proposed tree compensation.

The proposed Planting Area includes areas between Robinson Creek and the proposed development along the western boundary of the Subject Property (**Figure 2**). Trees planted adjacent to the stream should be able to tolerate some sun and moist soils along the stream riparian zone.

This tree compensation plan should be incorporated into the landscaping plan for the Project. Trees should be planted a minimum of 2.45 m x 2.45 m from each other and any proposed development structure or feature.

7. Management and Monitoring Phase

The following general management and monitoring actions are submitted to help ensure the protection of the trees to be retained on the Subject Property.

7.1 Pre-Construction Phase

The tree protection fencing erected should be inspected by a Certified Arborist. Any pruning or trimming of trees necessary to accommodate the fencing should be completed by a Certified Arborist using good arboricultural practices. All trees to be removed should be felled into the Subject Property so as to avoid damage to adjacent trees and property.

7.2 Construction Phase

Tree protection fencing should be maintained throughout the project and regularly inspected for damage by construction personnel. Any damage will be reported to the construction supervisor and repaired immediately. Any build up of sediments at tree bases will be removed as part of fencing repairs. All plant material damaged as a result of improper installation or maintenance of protective barriers must be replaced with material of equal value, at the cost of the Developer.

7.3 Post-Construction Phase

The removal of tree protection barriers should only be initiated once all construction activities have been completed and landscaping has been initiated. Planting of compensation trees as per Section 6 will be initiated as part of restoration activities. Planting will occur solely during the spring or fall planting seasons when establishment is most successful; being April 15 - July 1, and September 15 – November 15, respectively.

8. Closure

We trust that this letter provides sufficient guidance for the incorporation of tree protection measures into the relevant construction drawings and site plans for the proposed development of 12148 Albion Vaughan Road. Should you need any further clarification concerning this letter, please contact the undersigned at 647-461-2372 or austin.adams@pecg.ca.

Yours truly,

PalmerTM

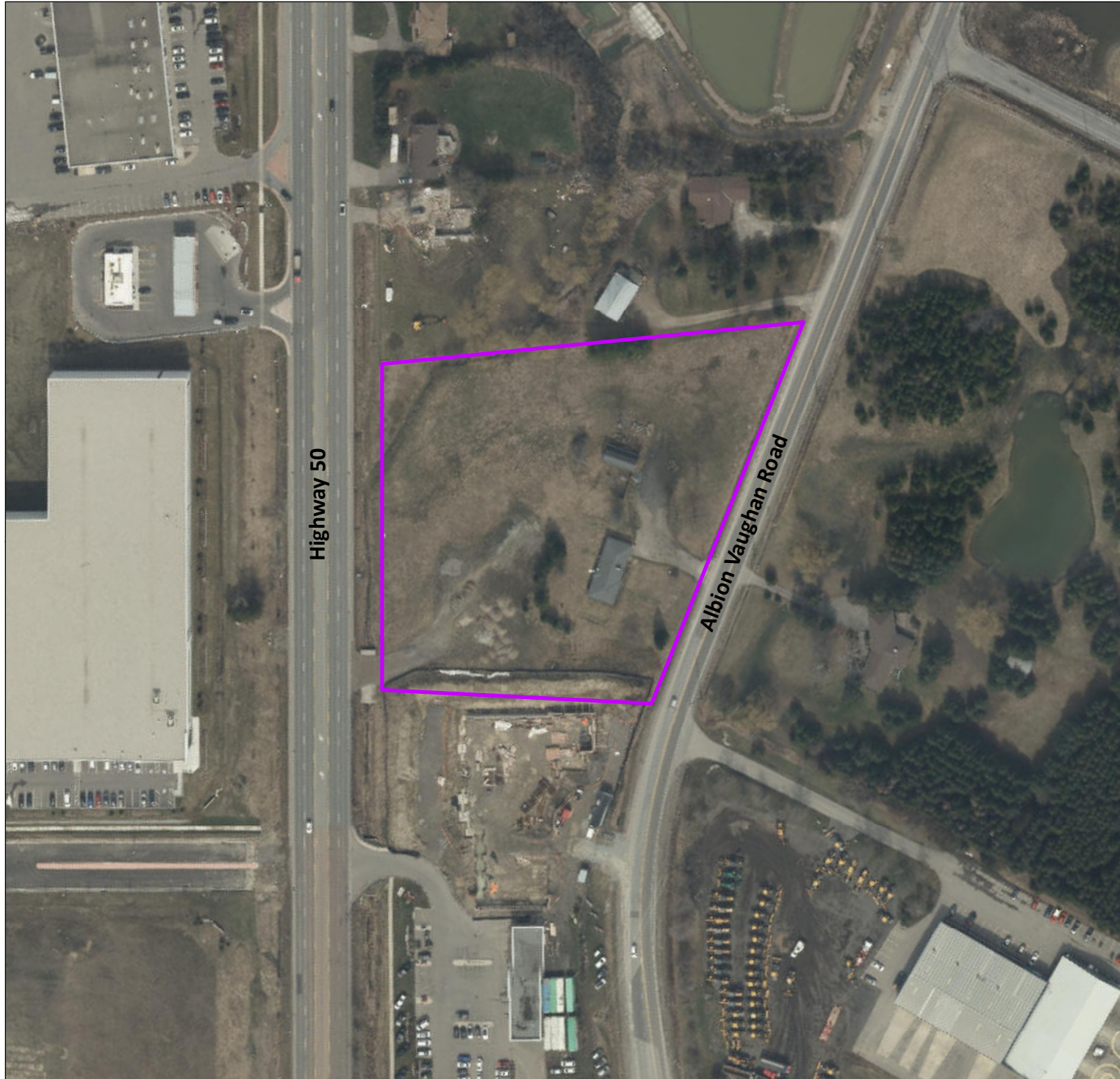
Prepared By:



Austin Adams, M.Sc., EP
Sr. Ecologist, ISA Certified Arborist ON-2000A

References

- City of Toronto. (2016). *Tree Protection Policy and Specifications for Construction Near Trees*. Toronto. Retrieved from <https://www.toronto.ca/data/parks/pdf/trees/tree-protection-specs.pdf>
- City of Brampton. (2018). *Tableland Tree Assessment Guidelines*. Retrieved July 5, 2018, from http://www.brampton.ca/EN/Business/planning-development/guidelines-manuals/Documents/Tableland_Tree_Assessment_Guidelines.pdf
- Palmer. (2020). 12148 Albion Vaughan Road - Scoped Environmental Impact Study. Prepared for 12148 Albion Vaughan Inc.
- Town of Caledon. (2009). *Development Standards, Policies and Guidelines*. Retrieved from <https://www.caledon.ca/en/townhall/resources/DevelopmentStandardsPoliciesGuidelines.pdf>

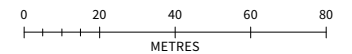


OVERVIEW



LEGEND

- SUBJECT PROPERTY (1.57 ha)
12148 Albion Vaughan Road,
Bolton, Town of Caledon



COORDINATE SYSTEM: NAD 1983 UTM ZONE 17N
SCALE: 1:2,000

DATA SOURCES: Imagery provided York Region (2018). Watercourse (edited) provided by Ontario Hydro Network. Overview basemap: National Geographic, Esri, Garmin, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment P Corp.

Project: 12148 Albion Vaughan
Client: Aztec Restoration

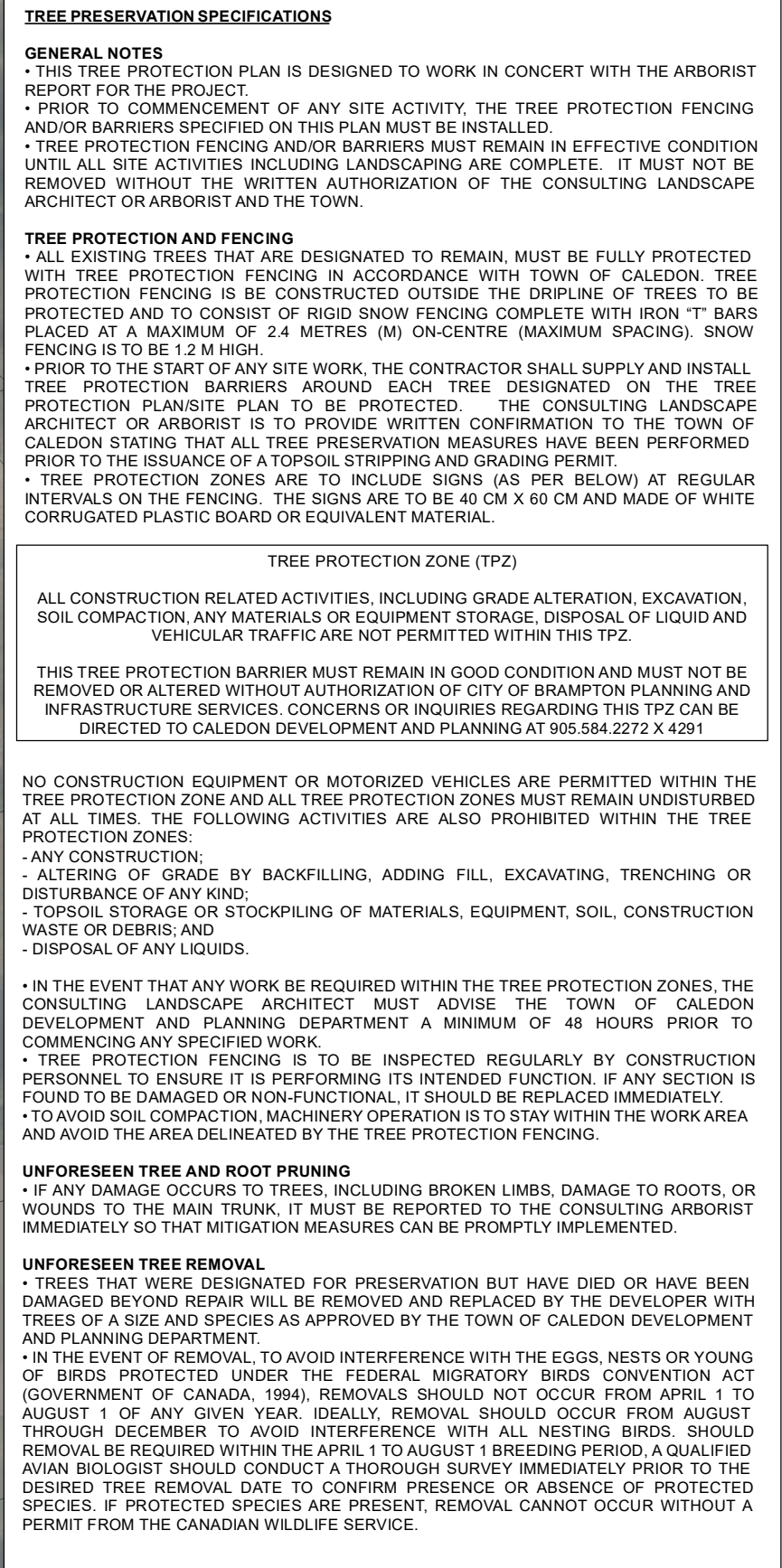
PREPARED BY:

Palmer™

DRAWN: B. Elder
CHECKED: A. Adams
PROJECT: 160461
DATE: Nov 25, 2020

Site Location

FIGURE 1



Document Path: G:\Shared drives\Projects 2016\16046 - Aztec Restoration\1604601 - 12148 Albion Vaughan Inc\Mapping\mxd\160461_Figure2_TPP.mxd

Appendix A

- Tree Inventory

Appendix A. Tree Inventory

Tree ID	UTM	Common Name	Species Name	# of trunks	DBH (cm)	Effective DBH (cm)*	Tree Protection Zone (m)	Health/ Condition	Recommendation	Comments
400	604618, 4856207	Ash sp.	<i>Fraxinus</i> sp.	1	21.5	21.5	1.8	F	previously removed	3 stems, 2 cut, EAB
399	604629, 4856218	Ash sp.	<i>Fraxinus</i> sp.	1	23.6	23.6	1.8	F	previously removed	EAB, large wound at base
398	604636, 4856224	Ash sp.	<i>Fraxinus</i> sp.	1	22	22	1.8	F	previously removed	No signs of decay or wounds, EAB
397	604640, 4856228	Ash sp.	<i>Fraxinus</i> sp.	1	27.7	27.7	1.8	F	previously removed	Significant branch dieback, piece of fence through tree, epicormic branching
396	604648, 4856234	Ash sp.	<i>Fraxinus</i> sp.	1	21.2	21.2	1.8	P	previously removed	EAB, epicormic branching, top is broken, branch dieback
395	604644, 4856258	Apple sp.	<i>Malus</i> sp.	1	39.5	39.5	2.4	G	remove	Callused wound on trunk, slight lean, good canopy vigour
394	604649, 4856263	Blue Spruce	<i>Picea pungens</i>	1	42.5	42.5	3	G	remove	Lower branches pruned
393	604628, 4856303	Walnut sp.	<i>Juglans</i> sp.	1	48.6	48.6	3	G	remove	
392	604624, 4856300	Walnut sp.	<i>Juglans</i> sp.	1	35	35	2.4	G	remove	Minor branch dieback
A, No tag	604607, 4856286	Spruce sp.	<i>Picea</i> sp..	1	44.6	44.6	3	Dead	remove	Woodpecker damage, beetle holes
391	604583, 4856310	Freeman's Maple	<i>Acer x freemanii</i>	1	32.7	32.7	2.4	G	remove	Minor epicormics, possible butt rot, mechanical damage at base, good canopy
B, No tag	604617, 4856316	Ash sp.	<i>Fraxinus</i> sp.	1	N/A	N/A	N/A	Dead	remove	Top broken, codominant stems
390	604572, 4856332	Eastern White Pine	<i>Pinus strobus</i>	1	34.5	34.5	2.4	G	remove	
389	604568, 4856328	Eastern White Pine	<i>Pinus strobus</i>	1	34.2	34.2	2.4	G	retain	Top broken
388	604565, 4856327	Eastern White Pine	<i>Pinus strobus</i>	1	25	25	1.8	G	retain	

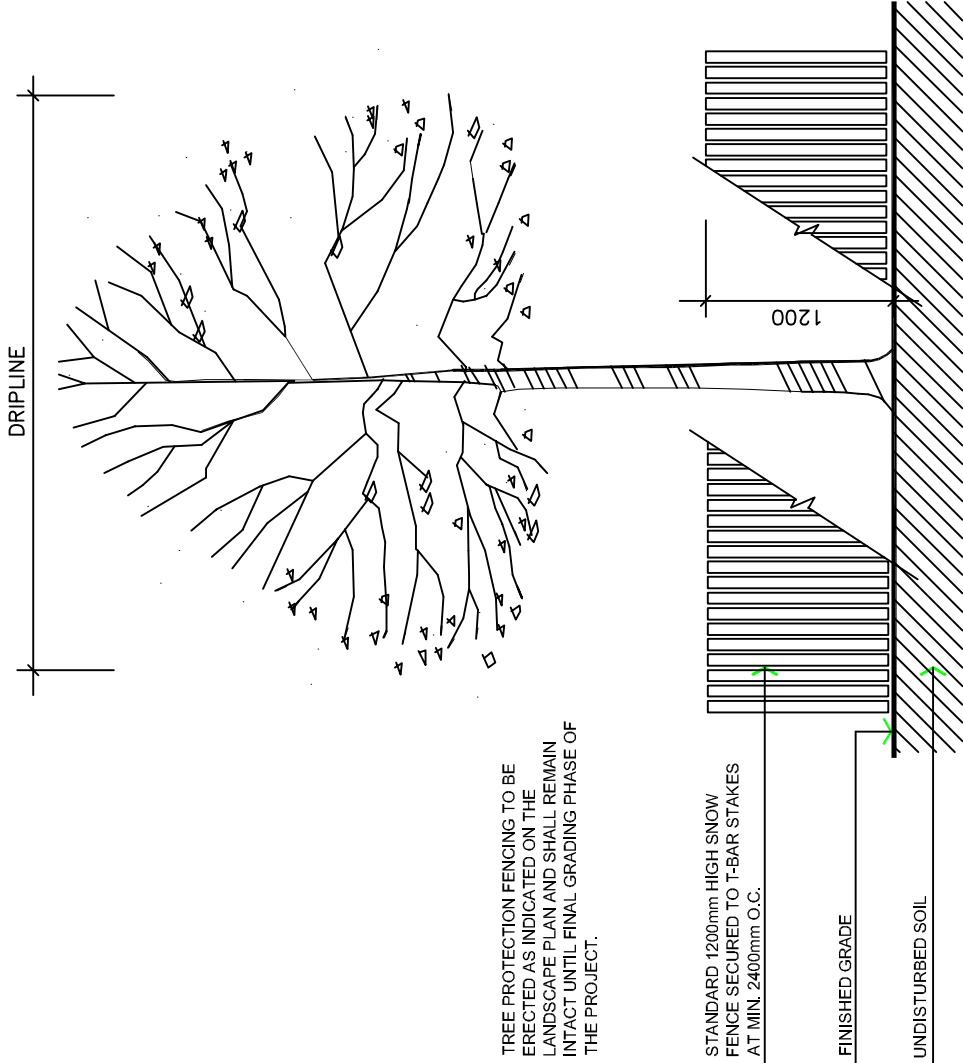
Tree ID	UTM	Common Name	Species Name	# of trunks	DBH (cm)	Effective DBH (cm)*	Tree Protection Zone (m)	Health/ Condition	Recommendation	Comments
387	604565, 4856327	Eastern White Pine	<i>Pinus strobus</i>	1	26.3	26.3	1.8	G	retain	
386	604563, 4856322	Eastern White Pine	<i>Pinus strobus</i>	1	37	37	2.4	G	retain	
385	604559, 4856321	Eastern White Pine	<i>Pinus strobus</i>	1	28.7	28.7	1.8	G	retain	
No tag, TG1	604578, 4856291	Eastern White Cedar	<i>Thuja occidentalis</i>	~50	~10	70	4.2	Dead	remove	Majority of stems ≤10 cm dbh, width 5 m, approx. 50 stems. Surrounded by thicket of buckthorn.
384	604595, 4856263	Ash sp.	<i>Fraxinus</i> sp.	1	6.5	6.5	1.2	G	remove	
383	604597, 4856262	Norway Spruce	<i>Picea abies</i>	1	19	19	1.8	G	remove	
382	604600, 4856264	Norway Spruce	<i>Picea abies</i>	1	14.7	14.7	1.8	G	remove	
381	604602, 4856262	Norway Spruce	<i>Picea abies</i>	1	33	33	2.4	G	remove	
380	604604, 4856258	Norway Spruce	<i>Picea abies</i>	1	19.8	19.8	1.8	G	remove	
379	604602, 4856253	Norway Spruce	<i>Picea abies</i>	1	19	19	1.8	G	remove	
378	604606, 4856251	Norway Spruce	<i>Picea abies</i>	1	14	14	1.8	G	remove	
304	604606, 4856248	Norway Spruce	<i>Picea abies</i>	1	12.5	12.5	1.8	G	remove	
311	604610, 4856246	Norway Spruce	<i>Picea abies</i>	1	30.8	30.8	2.4	G	remove	Lower branches pruned
312	604609, 4856238	White Spruce	<i>Picea glauca</i>	1	12.9	12.9	1.8	G	remove	
307	604612, 4856240	White Spruce	<i>Picea glauca</i>	1	18	18	1.8	G	remove	
306	604615, 4856240	White Spruce	<i>Picea glauca</i>	1	14.2	14.2	1.8	G	remove	
305	604617, 4856241	White Spruce	<i>Picea glauca</i>	1	17.5	17.5	1.8	G	remove	
308	604619, 4856242	White Spruce	<i>Picea glauca</i>	1	16.9	16.9	1.8	F	remove	Top broken
310	604620, 4856244	White Spruce	<i>Picea glauca</i>	1	17	17	1.8	G	remove	
301	604624, 4856246	White Spruce	<i>Picea glauca</i>	1	14	14	1.8	P	remove	Top broken, majority of leaves dead.

* Effective DBH calculated as the square root of the sum of squares for all tree stems.

**Dead trees in various stages of decay.

Appendix B

- Town of Caledon Standard #707 – Tree Preservation



SPECIFICATIONS FOR THE PROTECTION AND PRESERVATION OF EXISTING VEGETATION:

1. PRIOR TO ISSUANCE OF THE BUILDING PERMIT, ALL EXISTING TREES THAT ARE TO BE PRESERVED SHALL BE FULLY PROTECTED WITH HOARDING (IE SNOW FENCING) OUTSIDE THEIR 'DRIPLINES', TO THE SATISFACTION OF THE TOWN.
2. GROUPS OF TREES AND OTHER EXISTING PLANTINGS TO BE PROTECTED SHALL BE TREATED IN A LIKE MANNER WITH HOARDING AROUND THE ENTIRE CLUMP(S).
3. AREAS WITHIN THE PROTECTIVE FENCING SHALL REMAIN UNDISTURBED AND SHALL NOT BE USED FOR THE STORAGE OF BUILDING MATERIALS OR EQUIPMENT. NO CONTAMINANTS SHALL BE DUMPED OR FLUSHED WHERE FEEDER ROOTS OF TREES EXIST.
4. PRUNE BRANCHES TO REMOVE DAMAGED LIMBS ONLY. DO NOT DAMAGE LEADERS. ALL CUTS OVER 25mm SHALL BE TREATED IN ACCORDANCE WITH APPROPRIATE HORTICULTURAL PRACTICES AS APPROVED BY THE TOWN.
6. CUTTING OF ROOTS OR CHANGING OF GRADES AROUND EXISTING TREES TO BE PRESERVED WILL NOT BE PERMITTED WITHOUT THE APPROVAL OF THE PUBLIC WORKS AND ENGINEERING DEPARTMENT.
7. TREES THAT HAVE DIED, OR HAVE BEEN DAMAGED BEYOND REPAIR SHALL BE REPLACED AT THE DEVELOPER'S EXPENSE, WITH TREES OF A SIZE AND SPECIES APPROVED BY THE TOWN.
8. IF TREES ARE BEING ADVERSLY AFFECTED BY CONSTRUCTION, A WATERING AND FERTILIZING PROGRAM IS TO BE SET UP TO THE SATISFACTION OF THE TOWN.
9. TREE PRESERVATION FENCE TO BE INSPECTED BY THE CONSULTING LANDSCAPE ARCHITECT AND APPROVED PRIOR TO CONSTRUCTION COMMENCING.

TOWN OF CALEDON

TREE PRESERVATION

			APR'D:	C.C.	DATE: JUNE 08
2	STANDARD No. 1135 NOW 707, NOTES EDIT	JUNE 08		abal	SCALE: NTS
1	NOTE NO. 9 ADDED	MARCH 08			
NO.	REVISION	APR'D	DATE	STANDARD No. 707	

Appendix B

Correspondence

Austin Adams

From: Eplett, Megan (MECP) <Megan.Eplett@ontario.ca> on behalf of Eplett, Megan (MECP)
Sent: December 10, 2020 1:41 PM
To: Austin Adams
Subject: RE: Proposed SAR Mitigation - 12148 Albion Vaughan Road, Town of Bolton

Hi Austin,

If nests are found and will be removed the rules in regulation for the online registration should be followed. More info can be found here: <https://www.ontario.ca/page/alter-structure-habitat-barn-swallow>.

Thanks,

Megan

**Megan Eplett | Management Biologist | Permissions and Compliance | Species at Risk Branch
| Ontario Ministry of Environment, Conservation and Parks
50 Bloomington Road, Aurora, Ontario, L4G 0L8 | Phone: 289-221-1794 |
Email: megan.eplett@ontario.ca**

From: Austin Adams <austin.adams@pecg.ca>
Sent: Thursday, December 10, 2020 1:31 PM
To: Eplett, Megan (MECP) <Megan.Eplett@ontario.ca>
Subject: RE: Proposed SAR Mitigation - 12148 Albion Vaughan Road, Town of Bolton

CAUTION -- EXTERNAL E-MAIL - Do not click links or open attachments unless you recognize the sender.

Thanks Megan,

The report went to the client in draft – When finalizing, I'll build in a requirement for a nest sweep prior to clearance. Including, if nests are found to create a habitat offsetting plan, coordinating with the MECP. Fair enough?

Regards,
Austin Adams, M.Sc., EP
Senior Ecologist



| t (647) 461 2372 | e austin.adams@pecg.ca

Learn More:
www.pecg.ca

From: Eplett, Megan (MECP) <Megan.Eplett@ontario.ca>
Sent: December 10, 2020 12:47 PM
To: Austin Adams <austin.adams@pecg.ca>
Subject: RE: Proposed SAR Mitigation - 12148 Albion Vaughan Road, Town of Bolton

Hello Austin,

Apologies for the delay in response regarding this file. I've reviewed the memo you submitted pertaining to bats. Provided the removals during the appropriate timing window impacts to species at risk bats are not anticipated.

Please note as the proposed development includes the removal of a barn, this should be searched for presence/evidence of Barn Swallow if not done already.

Thanks,

Megan

**Megan Eplett | Management Biologist | Permissions and Compliance | Species at Risk Branch
| Ontario Ministry of Environment, Conservation and Parks
50 Bloomington Road, Aurora, Ontario, L4G 0L8 | Phone: 289-221-1794 |
Email: megan.eplett@ontario.ca**

From: Austin Adams <austin.adams@pecg.ca>
Sent: November 25, 2020 1:36 PM
To: Species at Risk (MECP) <SAROntario@ontario.ca>
Subject: FW: Proposed SAR Mitigation - 12148 Albion Vaughan Road, Town of Bolton

CAUTION -- EXTERNAL E-MAIL - Do not click links or open attachments unless you recognize the sender.

Hello,

I don't think we ever heard about this memo; could someone please respond? It's been over a year. In one sentence, for mitigation we propose an avoidance timing window of **May 1 to October 31** for tree removals regarding potential SAR Bats. Does that seem appropriate?

The Site in question is a 1.6 ha plot on the Bolton fringe. It is a cleared, developed lot, with only 5 trees that are of a potential DBH size to contain potential Bat Roosting.

Regards,
Austin Adams, M.Sc., EP
Senior Ecologist



| t (647) 461 2372 | e austin.adams@pecg.ca

Learn More:
www.pecg.ca

From: Austin Adams <austin.adams@pecg.ca>
Sent: November 25, 2020 11:19 AM
To: Jeff Andersen <jeff.andersen@ontario.ca>
Subject: RE: Proposed SAR Mitigation - 12148 Albion Vaughan Road, Town of Bolton

November 23, 2018

CFN: 56935.04

BY E-MAIL: ruis@maeng.ca
Rui Song, Masongsong Associates
7800 Kennedy Road, Suite 201
Markham, Ontario
L3R 2C7

Dear Mr. Song:

Re: TRCA Concept Development Application
12148 Albion Vaughan Road, Caledon
Owner: Mike Liburdi – Albion-Vaughan (12148) Inc.

Thank you for the opportunity to review this Concept Development application (received on October 15, 2018). This letter will outline how the subject property is affected by the policies and programs of the Toronto and Region Conservation Authority's (TRCA) Development, Interference with Wetlands and Alterations to Shorelines and Watercourses Regulation (Ontario Regulation 166/06, as amended) as well as TRCA's Living City Policies for Planning and Development in the Watersheds of the TRCA (LCP). This letter will also outline TRCA staff's response to the proposed conceptual development proposal.

Purpose of the Application

Based on our review of the conceptual plans submitted, it is our understanding that the purpose of this application is to investigate the feasibility realigning a watercourse located on the subject property in order to facilitate a residential development.

Applicable TRCA Regulations and Policies

Ontario Regulation 166/06 (as amended):

The subject property is within TRCA's Regulated Area as it is traversed by a stream corridor associated with the Humber River Watershed. In accordance with Ontario Regulation 166/06, as amended (Development, Interference with Wetlands and Alteration to Shorelines and Watercourses), a permit is required from the TRCA prior to any of the following works taking place:

- a) straightening, changing, diverting or interfering in any way with the existing channel of a river, creek, stream or watercourse, or for changing or interfering in any way with a wetland;
- b) development, if in the opinion of the Authority, the control of flooding, erosion, dynamic beaches or pollution or the conservation of land may be affected by the development.

Development is defined as:

- i) the construction, reconstruction, erection or placing of a building or structure of any kind,

- ii) any change to a building or structure that would have the effect of altering the use or potential use of the building or structure, increasing the size of the building or structure or increasing the number of dwelling units in the building or structure,
- iii) site grading,
- iv) the temporary or permanent placing, dumping or removal of any material originating on the site or elsewhere.

TRCA's Living City Policies:

As noted above, the subject property is traversed by stream corridor. To ensure development is appropriately setback from the limit of natural features and their associated hazards, TRCA typically requires a minimum 10 metre buffer, which is considered part of the stream corridor, be established from the greater of the following constraints:

- The physical Top of Bank (TOB);
- The Regulatory Floodplain (i.e. greater of the Regional Storm or 100 Year Flood event standards);
- The limit of the Long Term Stable Top of Bank (LTSTOB);
- The meander belt of the watercourse; or
- The limit of contiguous vegetation associated with the valley corridor; or

Application Background

Based on TRCA's review of the materials submitted in support of this application, it is our understanding that in recent years, the section of the stream corridor traversing the subject property had been realigned by a previous landowner. The landowner did not consult proper authorities prior to conducting the works and as such, the watercourse is significantly narrower and contains less volume than the previous condition. This has ultimately led to negative impacts from an ecology perspective as natural channel design methods were not implemented. Furthermore, as the channel now has less capacity, the property is subject to increased levels of flooding.

Application-Specific Comments

As the highly altered state of the stream corridor has led to a decrease in ecological function and flood storage capacity, it is TRCA opinion that a realignment of the channel traversing the subject lands can be entertained. However, the realignment must follow natural channel design principles as well as improve flooding conditions.

General:

1. Please note that a design brief as well as relevant figures/drawings must be prepared for the proposed realigned channel. Please refer to TRCA's Channel Modification Requirements for more information:
 - https://trca.ca/app/uploads/2016/02/CHANNEL_MODIFICATION_REQUIREMENTS.pdf.
2. Once an appropriate route/design has been selected for the watercourse, all applicable limits (i.e. meander belt, Regulatory Floodplain etc.) should be plotted on the development design drawings. As noted above, TRCA policies require that development must be setback a minimum of 10 metres from the outermost limit of a stream corridor.

Planning Ecology:

3. TRCA Planning Ecology staff reviewed the Terms of Reference (ToR) provided for the Environmental Impact Study (EIS) (prepared by Palmer Environmental, dated November 15, 2018) and have no concerns with the proposed scoping. Please note that the EIS should be included within the above noted design brief (or as an attachment to the document).
4. Please note that this watercourse is classified as a 'cool water' stream and the timing window for conducting any in-water or near-water works is July 1-September 15.
5. Furthermore, the Ministry of Natural Resources and Forestry (MNRF) should also be consulted as this watercourse may be deemed to be contributing Redside Dace habitat. Please provide all correspondence from the MNRF within the requisite design brief.

Water Resources Engineering:

6. The cut and fill approach submitted in support of this application is consisted with TRCA's Cut-Fill Guidelines. However, as TRCA's current floodplain modelling does not account for the recent channel realignment completed by the previous property owner; a hydraulic model must be created for this "revised existing" condition. As such, please cut the new cross sections (2223.131, 2223.132, 2223.133 and 2223.134) using existing ground conditions/elevations and include them in a revised (or refined) existing HEC RAS model. Once the revised model is run, it can be compared with that of the proposed condition. It must be demonstrated that there will be no negative impacts in water surface elevations at each cross section (or upstream and downstream of the subject site) as a result of the proposed channel realignment. A summary table comparing the resulting water surface elevations for all return periods along with a digital copy of the HEC RAS model including existing (pre-channel realignment completed by previous property owner), revised existing (post-channel realignment completed by previous property owner) and proposed condition must be submitted in separate files. This information should be included within (or as an attachment to) the requisite design brief.
7. Recommendations provided within the Erosion Hazard Assessment memo prepared by Palmer Consulting (dated May 3, 2017) should be included in the proposed channel realignment.

PERMITTING

As noted above, the subject property is located within TRCA's Regulated Area. On this basis, a TRCA permit is required from this Authority prior to the proposed works commencing on the subject site, pursuant to Ontario Regulation 166/06, as amended. Details with respect to permit submission requirements are available at our website (<https://trca.ca/planning-permits/apply-for-a-permit/>).

RECOMMENDATION

Please be advised that this letter outlines TRCA's position with regards to the formal Concept Development application submitted for the subject property. Based on the above noted comments, we have no fundamental objection to the realignment of the stream corridor traversing the subject property provided natural channel design principles are implemented. Furthermore, the proposed condition should clearly result in a net ecological gain as well as demonstrate that no negative impacts to flooding will occur. As part of any development

proposal for the site, it is also our expectation that appropriate buffers from the realigned feature will be provided.

I trust these comments are of assistance. Should you have any further questions or comments, please do not hesitate to contact the undersigned.

Sincerely,

Nick Cascone, M.Sc.PI
Planner
Planning and Development
ncascone@trca.on.ca
Extension 5927

NC/



PALMER
ENVIRONMENTAL
CONSULTING
GROUP INC.

74 Berkeley Street, Toronto, ON, M5A 2W7 t 647-795-8153

October 23, 2018

Nick Cascone
Planner I, Planning and Development
Toronto and Region Conservation Authority
101 Exchange Avenue,
Vaughan, ON, L4K 5R6
ncascone@trca.on.ca

Dear Nick,

**Re: Terms of Reference for Scoped Environmental Impact Study at 12148
Albion Vaughan Road, Bolton, Town of Caledon, ON**

Introduction

Palmer Environmental Consulting Group (PECG) is pleased to provide the following proposed Terms of Reference (TOR) for the completion of a Scoped Environmental Impact Study (EIS) located at 12148 Albion Vaughan Road in Bolton, Town of Caledon.

The subject property is currently occupied by residential and commercial buildings, including one barn, and manicured lawn with scattered trees. One watercourse (Rainbow Creek) enters the property at the northwest and runs southward along the west edge. Immediately adjacent lands include a residential property to the north and commercial to the south. A small wooded riparian area is present within the residential property to the north. Albion Vaughan Rd and Regional Road 50 flank the property to the east and west, respectively.

The objectives of the scoped EIS are to inventory and evaluate any existing natural heritage features and ecological functions present within and adjacent to the subject property, determine an appropriate development limit for protection of these features, where applicable, and/or recommend mitigation measures to address potential impacts. PECG has prepared the following TOR for review and approval by Toronto and Region Conservation Authority (TRCA) to guide the Scoped EIS completion.

Background

The Town of Caledon Official Plan requires that development applications identify and evaluate elements of its ecosystem framework on or adjacent to the subject property that may be impacted by the development. These include Natural Core Areas, Natural Corridors, Supportive Natural Systems, and Natural Linkages, as described further in Table 3.1 of the Official Plan. Known Natural Core Areas and Natural Corridors are mapped as EPA on Official Plan Schedule C (Bolton Land Use Plan). None are shown on the subject property. A preliminary search of available background data indicates no designated areas such as Provincially Significant Wetlands, Areas of natural and Scientific Interest, or Environmentally Sensitive Features are known from or immediately adjacent to the site. The watercourse and associated flood limit is regulated under TRCA's O. Reg. 166/06 under the Conservation Authorities Act.

Proposed Scope of Work

1. Background Information Review and Desktop Assessment

A thorough background review will be conducted as part of the Scoped EIS. Documents reviewed will include background information relating to the site's biological and physical resources including records for Species at Risk. Natural heritage mapping and associated environmental policies areas at the provincial, regional and local levels will be identified. We will also consult with TRCA and Ministry of Natural Resources and Forestry (MNRF) regarding any other records they may have of Species at Risk on or near the subject property.

2. Field Investigations

The following field investigations have been completed / are proposed by PECG to describe the conditions of the on-site environmental features:

a. Ecological Communities Assessment

The ecological communities comprising the subject property will be described in accordance with Ecological Land Classification of Southern Ontario (ELC) protocols. The ELC will include inventory of vegetation and description of soils.

b. Fish Habitat Characterization

A characterization of Rainbow Creek was completed November 29, 2016 on the property to generally characterize fish habitat within the watercourse.

c. Species at Risk (SAR) Screening

Conduct a SAR screening for potential habitat opportunities (e.g., Barn Swallow) or occurrences on site (e.g., Butternut).

d. Tree Inventory and Preservation Plan

A tree inventory has been conducted on the property on November 7, 2016. A Preservation Plan will be prepared consistent with the municipal and agency requirements.

In addition, all observations of incidental wildlife will be recorded during each of PECG's site visits.

3. Reporting

A written report will be prepared for circulation to the TRCA and Town of Bolton as part of the application being completed by the proponent. The final report will provide a summary of relevant policy and background information reviewed and a description of site conditions and results of field investigations. The report will provide an assessment of potential impacts from the proposed works on existing natural heritage features, as well as a discussion of suitable measures for mitigation of these impacts (i.e. development setbacks, timing recommendations, etc.). The report will also provide ecological input to other disciplines (e.g., engineering, hydrogeology).

Closing

We trust that the proposed TOR for completion of a Scoped EIS at 12148 Albion Vaughan Road in Bolton, fulfills the TRCA's requirements.

Please feel free to contact me at 647 795 8153 ext.110 if you have any questions.

Yours truly,
Palmer Environmental Consulting Group Inc.

A handwritten signature in black ink, appearing to read 'J. Cole', written in a cursive style.

Jason Cole, M.Sc.
Partner