



GUIDING SOLUTIONS IN THE
NATURAL ENVIRONMENT

Environmental Impact Study 2660, 2670 and 2680 Brock Road City of Pickering

Prepared For:

The Brock Zents Partnership.

Prepared By:

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Date: *Project:*

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1. Introduction

Beacon Environmental Limited (Beacon) was retained by The Brock Zents Partnership to prepare an Environmental Impact Study (EIS) in support of a Zoning By-law Amendment (ZBA) and Draft Plan of Subdivision for the proposed residential development of the properties located at 2660, 2670 and 2680 Brock Road in the City of Pickering, Durham Region (herein referred to as 'subject properties'; **Figure 1**). The subject properties are located within the Duffin Heights Environmental Servicing Plan (ESP) area on the west side of Brock Road, south of Zents Drive.

The subject properties are presently undeveloped with two detached residential dwellings fronting onto Brock Road. Natural features are located on the western portion of the subject properties and include woodland and unevaluated wetland. The western portion of the properties are regulated by Toronto Region Conservation Authority (TRCA) due to the presence of wetlands.

The objectives of this EIS are to:

- Characterize natural heritage resources and ecological functions on the subject properties;
- Identify significant natural heritage resources and functions;
- Identify environmental constraints and confirm development limits;
- Describe the proposed development plan;
- Assess potential impacts of the proposed development plan on significant natural heritage features and ecological functions;
- Recommend mitigation measures for avoiding or minimizing potential development related impacts to significant natural heritage features and functions;
- Describe restoration and compensation measures including the channel re-alignment and naturalization; and
- Demonstrate conformity of the proposed development with the applicable natural heritage legislation, regulations and policies.

The conceptual design of the future north-south public collector road (Four Seasons Lane) is illustrated for context and will be addressed through detailed design for the portion of the road on the subject properties. As such, the EIS assessment of impacts and proposed mitigation measures are specific to the proposed residential development. The findings of the EIS are presented in the following sections.

2. Policy Review

The following sections discuss the existing conditions and designations on the subject properties in the context of the various policy documents applicable to natural heritage aspects of the proposed development.

2.1 Provincial Policy Statement (2020)

Section 2.0 of the Provincial Policy Statement (PPS) provides direction to regional and local municipalities regarding planning policies specifically for the protection and management of natural heritage features and resources.

Section 2.1 of the PPS describes eight natural heritage features and provides planning policies for each. The Natural Heritage Reference Manual (MNR 2010) is a technical document used to help assess the natural heritage features listed below:

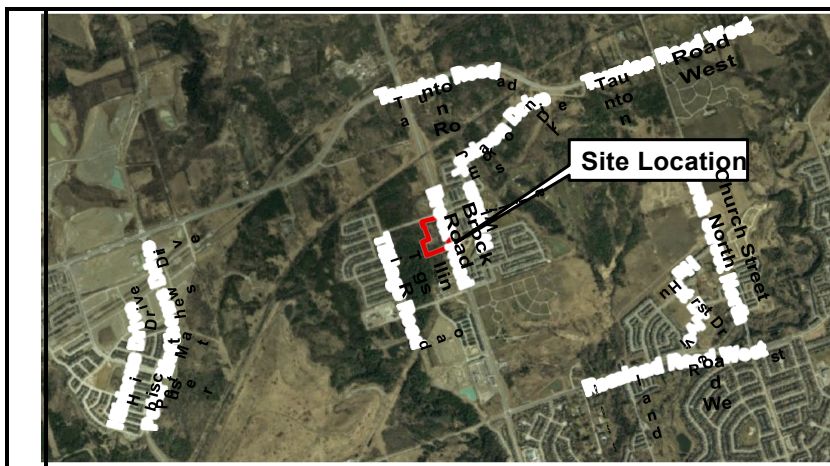
- Significant wetlands;
- Significant coastal wetlands;
- Significant habitat of endangered and threatened species;
- Fish habitat;
- Significant woodlands;
- Significant valleylands;
- Significant Areas of Natural and Scientific Interest (ANSIs); and
- Significant wildlife habitat.


Each of these features is afforded varying levels of protection subject to guidelines, and in some cases, regulations. Identification of the various natural heritage features noted above is a responsibility shared by Ministry of Natural Resources and Forestry (MNRF), Ministry of Environment Conservation and Parks (MECP), Fisheries and Oceans Canada (DFO) and the local planning authority.

MNRF is responsible for the identification of PSWs and Areas of Natural and Scientific Interest (ANSIs), while MECP is responsible for the confirmation of habitat of endangered species and threatened species, and for its regulation under the *Endangered Species Act*.

Local and regional planning authorities are responsible for the identification of Significant Woodlands, Significant Valleylands, and Significant Wildlife Habitat (SWH), with support from applicable guidance documents (i.e., *Natural Heritage Reference Manual* [MNR 2010]; *Significant Wildlife Habitat Technical Guidelines* [MNR 2000]; and *Significant Wildlife Habitat Criteria for Ecoregion 6E*, [MNRF 2015]). Local and regional planning authorities in southern Ontario also typically work with their local conservation authority to identify and confirm significant natural heritage features that may have significance at the local or regional level. Identification and verification of fish habitat is now self-regulated although enforcement of the related policies and regulations is still managed by MNRF and regulated by the DFO.

In areas where significant natural heritage features are present, the boundaries of natural heritage features are further refined through site-specific studies undertaken as part of the planning process and in accordance with the requirements of municipal policies.



Site Location		Figure 1	
2660,2670,2680 Brock Road EIS & TIPP			
UTM Zone 17 N, NAD 83			
First Base Solutions Web Mapping Service 2021			
0 35 70 140 Metres		1:4,000	
		Project 218091 October, 2022	

Sections 2.1.5 states that development and site alteration shall not be permitted in natural features unless it has been demonstrated that there will be no negative impacts on the natural features or their ecological functions. Development of lands adjacent to natural features unless the ecological function has been evaluated and it has been demonstrated that there will be no negative impacts on features or functions. Further Sections 2.1.6 and 2.1.7 state that development shall not be permitted in fish habitat or habitat of threatened and endangered species, except in accordance with provincial and federal requirements.

2.2 Region of Durham Official Plan (2020 Office Consolidation)

The Official Plan for Durham Region provides direction on land use within the Region. The Durham Regional Official Plan, Consolidation May 26, 2020, is the most current version of the Regional Official Plan.

Durham's Official Plan contains policies intended to preserve, conserve and enhance the Region's natural environment and protect its natural heritage features through its defined Greenlands System.

Greenlands include the following Key Natural Heritage Features (KNHF). The list of KNHFs is similar, but not identical, to the PPS list:

- Significant habitat of endangered and threatened, special concern and rare species;
- Fish habitat;
- Wetlands;
- Life Science Areas of Natural and Scientific Interest (ANSIs);
- Significant valleylands;
- Significant woodlands;
- Significant wildlife habitat;
- Sand barrens, savannahs and tallgrass prairies; and
- Alvars.

The Official Plan also recognizes the following Key Hydrologic Features (KHF):

- Permanent and intermittent streams;
- Wetlands;
- Lakes and their littoral zones;
- Kettle lakes and their surface catchment areas;
- Seepage areas and springs; and
- Aquifers and recharge areas.

The subject properties are designated on Schedule A, 'Map A-4' Regional Structure of the Durham Region Official Plan as Living Areas within the Built Boundary. Key Natural Heritage and Hydrologic Features are identified on the subject properties on Schedule B, 'Map B-1d' Greenbelt Natural Heritage System & Key Natural Heritage and Hydrologic Features.

As per Section 2.3.14, the location and extent of key natural heritage and/or hydrologic features may be further confirmed through an EIS. Section 2.3.15 states that development or site alteration is not permitted within a KNHF/KHF and its associated vegetation protection zone. The subject properties fall

within an Urban Area and the vegetation protection zone for any features present on the subject property shall be determined through an EIS completed in accordance with Policy 2.3.43 of the Plan.

2.3 City of Pickering Official Plan (2022)

The City of Pickering published its latest Official Consolidated Plan (Edition 9) dated March 2022. It builds on the framework presented in the Region of Durham's Official Plan and protects natural heritage features through the Open Space System, which incorporates three types of natural areas: core areas, corridors and linkages. Schedule I – Land Use Structure identifies the subject properties as Mixed Corridor with Open Space System comprised of Natural Areas to the west.

Land uses for Natural Areas in the Open Space System are restricted and include conservation, environmental protection, restoration, education, passive recreation, existing residential and agricultural uses.

The Open Space System recognizes a connected and integrated natural heritage system comprised of KNHF and KHF and includes minimum vegetation protection zones. KNHF and KHF for the City's Open Space System are consistent with those identified in the PPS and Region of Durham OP. The City identifies the Natural Heritage System on Schedules IIIA through IIIE – Resource Management: Natural Heritage Features of the OP. Schedule IIIA identifies Natural Heritage System immediately adjacent to the subject properties to the west. Schedule IIIB identifies Significant Woodland extending onto the subject properties from the Natural Heritage System to the west. Schedule IIID identifies the subject properties as within a High Aquifer Vulnerability Area and Groundwater Recharge Area.

Section 16.51 requires that within the Open Space System, outside of the Oak Ridges Moraine and the Seaton Urban Area, development or site alteration proposed within the minimum area of influence of a KNHF or HSF (120 m) requires an environmental study to be completed. Table 18 of the Plan summarizes the minimum area of influence and prescribes the following minimum protection zones for KNHF and HSF:

- **Wetlands** – all land within 30 metres of any part of the feature;
- **Fish habitat** – all land within 30 metres of any part of the feature;
- **Significant valleylands** – all land within 30 metres of any part of the feature;
- **Significant woodlands** – all land within 10 metres from the dripline of woodlands;
- **Permanent and intermittent streams inside the Pickering urban area** – all land within 10 metres of the stable top of bank or the limit of the floodplain, whichever is the greater;
- **Seepage areas and springs** – all land within 30 metres of any part of the feature;
- **Shoreline along Lake Ontario** – all lands within 30 m of the shoreline; and
- Any additional distances demonstrated as necessary through technical reports.

The subject properties are within the South Pickering urban area and Section 16.51(c) states:

Consider vegetation protection zones smaller than those distances specified in Table 18 in the South Pickering where the conservation authority determined it to be appropriate, and where it can be demonstrated that there is no increase in risk to life or property; no impact to the control of flooding, erosion, dynamic beach, or pollution; and where a net environmental benefit can be established on the property.

2.3.1 Duffin Heights Environmental Servicing Plan (2008)

The Duffin Heights ESP was prepared in order to determine the environmental limits and servicing requirements for the lands within the planning area. Specifically, the ESP confirmed the limits of the Natural Heritage System (NHS) west of Brock Road, addressing the requirements of the Duffin Heights Neighbourhood policies of the Pickering Official Plan. This includes the limits of the natural feature on the western portion of the subject properties.

The ESP recommends that naturalized buffers be established adjacent to most of the NHS with the width varying from 5 to 30 m. In most areas, including on the subject property, a 10 m buffer is proposed adjacent to the NHS.

It is recommended that when development is proposed adjacent to the NHS, Edge Management Plans should be prepared in support of individual draft plans. Invasive species management plans can be incorporated into the edge management plans to minimize that potential for invasive species to spread into the NHS.

Drawing DL-1- Development Limits Plan identifies the wooded area on the western portion of the subject properties to be removed in order to accommodate a road and future development. These limits are to be staked with the TRCA for consideration of compensation related to individual development applications. This figure also identifies potential restoration areas both within the development limits and within the natural heritage system. Compensation for feature removal on the subject properties, inclusive of the Four Seasons Lane easement and development lands, has been agreed to and approved with TRCA.

The ESP included a Water Balance Study which identified the reduction in infiltration volumes in the proposed development areas was not expected to negatively affect the aquatic conditions in the Ganatsekiagon Creek or Urfe Creek. No infiltration was assumed for the Mixed Use Corridor north of Dersan Street and west of Brock Road as the flows 'must be conveyed to the west Tributary Branch 2 of Urfe Creek to maintain base flows'.

2.4 Toronto and Region Conservation Authority Regulations and Policies

2.4.1 Ontario Regulation 166/06 (2006)

The TRCA regulates land use activities in and adjacent to wetlands, watercourses and valleylands under Ontario Regulation 166/06 (*Regulation for Development, Interference with Wetlands and Alterations to Shorelines and Watercourses*), made under the *Conservation Authorities Act*.

The TRCA may grant permission to develop within regulated areas "if, in its opinion, the control of flooding, erosion...pollution or the conservation of land will not be affected by the development". As part of its permitting process, the TRCA typically requires the proponent to prepare an Environmental Impact Statement (EIS), which must demonstrate that the development can proceed without resulting in any alteration to a watercourse or interference to the hydrologic function of a wetland.

Wetland refers to any wetland, regardless of whether they have been formally evaluated or not. Generally, development within the flood limit of a watercourse is not allowed. However, subject to conformity with the applicable Official Plans and the completion of appropriate studies and Conservation

Authority permits, development *may* be permitted within other regulated areas. The TRCA generally requires that all watercourses be protected from adjacent development. This is often achieved through the use of a vegetative buffer.

The western portion of the subject properties are regulated by TRCA due to the presence of unevaluated wetlands both on and off property.

2.4.2 Toronto and Region Conservation Authority Living City Policies for Planning and Development (2014)

The Living City Policies for Planning and Development in the Watersheds of the Toronto and Region Conservation Authority (LCP) was approved by the Authority Board on November 28, 2014. The document replaces TRCA's previous policy document, the Valley and Stream Corridor Management Program (1994).

The LCP has been developed to guide the implementation of TRCA's legislated and delegated roles in the planning approval process. It was developed to conform with provincial legislation including the Oak Ridges Moraine Conservation Plan, the Greenbelt Plan, the Places to Grow Growth Plan, and the PPS.

The LCP contains policies related to terrestrial resources, water resources, natural features and areas, natural hazards, and potential natural cover and buffers. Section 7.3 contains TRCA's policies for how to define, protect, enhance, and secure a Natural Heritage System. The policies described in Section 7.3.1.4. have been identified with the goal of protecting lands that have the potential to be restored in order to enhance existing natural cover and manage natural hazards. Section 7.3.1.4. prescribes the following buffers to natural features and natural hazards:

- **Valley or Stream Corridors** – a 10 meter buffer from the greater of the long term stable top of slope/bank, stable toe of slope, regulatory flood plain, meander belt, and any contiguous natural features or areas;
- **Woodlands** - a 10 meter buffer from the dripline and any contiguous natural features or areas;
- **Wetlands** – a 30 metre buffer from Provincially Significant Wetlands and a 10-metre buffer for all other wetlands and any contiguous natural features or areas;
- **Lake Ontario Shoreline** – a 10 metre buffer from the greater limit of the flood hazard, erosion hazard and/or dynamic beach hazard and any contiguous natural features or areas;
- Any additional distances prescribed by federal, provincial, or municipal requirements or standards (e.g., Greenbelt); and
- Any additional distances demonstrated as necessary through technical reports.

2.5 Endangered Species Act (2007)

MECP provides oversight of the *Endangered Species Act* (ESA) for the regulation of Species at Risk (SAR) in Ontario. Under the ESA, native species that are in danger of becoming extinct or extirpated from the province are identified as being extirpated, endangered, threatened and special concern. Under the ESA, protection is provided to threatened or endangered species and their habitat, as well as providing stewardship and recovery strategies for species. Permitting is required to conduct works

within habitat regulated for threatened or endangered species. Species of Special Concern require management plans from the MECP but are not directly protected under the ESA.

Seasonally appropriate field investigations for target species may be necessary to determine the presence or absence of species subject to the provision of the ESA.

3. Methodology

To characterize natural heritage resources and functions associated with the subject properties and adjacent lands, Beacon Environmental completed a review of available background information and undertook seasonal field investigations. A summary of the background information and seasonal surveys is summarized below.

A Terms of Reference (TOR) was originally submitted to TRCA in December 2018 and received comments from TRCA in April 2019. An updated TOR was submitted July 2022 (**Appendix A**).

3.1 Background and Policy Review

Background information was gathered and reviewed at the outset of the project. This involved consideration of the following documents and information sources, as relevant to the subject properties:

- Regional Municipality of Durham Official Plan (Office Consolidation May 2020);
- City of Pickering Official Plan (Office Consolidation, March 2022);
- Duffin Heights ESP (2008);
- TRCA Regulations (2006) and Policies (2014); and
- Land Information Ontario and MNRF resource information.

Other sources of information such as current and historical aerial photographs, topographic data, soil geology and physiography mapping, wildlife atlas data, and natural resource mapping were also reviewed prior to commencing field investigations.

3.1.1 Desktop Species at Risk Screening

A desktop review of available information sources was undertaken to determine potential species at risk. As part of the desktop screening, the following information sources were reviewed:

- Natural Heritage Information Centre (NHIC) Data via the Make-A-Map application;
- Databases of the Ontario Breeding Bird Atlas (OBBA) project;
- Ontario Reptile and Amphibian Atlas (ORAA);
- SAR range maps <https://www.ontario.ca/environment-and-energy/species-risk-ontario-list>;
- Aquatic SAR maps <http://www.dfo-mpo.gc.ca/species-especes/fpp-ppp/index-eng.htm>;
- High Resolution aerial photography of the property; and
- Natural and physical feature layers from Land Information Ontario (LIO).

The information sources referenced above were reviewed in a Geographic Information System (GIS) mapping environment that Beacon uses to assess the likelihood that sensitive fish habitat or potential endangered or threatened species are present in an area of interest. This system allows Beacon to combine the most current information provided by MNR through the LIO portal with GIS layers from provincial floral and faunal atlases. All relevant layers can then be overlaid on the most recent high resolution ortho-imagery. The screening process helps identify areas that can then be targeted (for example, potential habitat) during field assessment to maximize the efficiency and effectiveness of on-site investigations.

3.2 Field Investigations

Beacon ecologists undertook field investigations on the subject properties and adjacent lands in 2018 and 2019. A summary of the field visits and survey dates is presented in **Table 1**. More detailed survey descriptions are provided in the subsections that follow.

Table 1. Dates of Field Investigations

Survey	Date of Survey(s)
Amphibian Surveys	May 1, 23 and June 20, 2018
Breeding Bird Surveys	June 5 and 19, 2018, June 3, 2019
Ecological Land Classification & Floristic Inventory	August 30, 2018 and June 25, 2019
Feature Staking with TRCA	October 29, 2018
Bat Habitat Assessment	April 24, 2018 and March 19, 2019
Bat Acoustic Monitoring	June 1 to 11, 2018 and June 1 to 13, 2019
Butternut Health Assessment	August 30, 2018

3.2.1 Amphibian Surveys

Three evening visits were made to the subject property to survey for breeding amphibians: April 27, May 31, and June 29, 2018. Breeding surveys were conducted according to Environment Canada’s Marsh Monitoring Program Protocol (Bird Studies Canada, 2009). Surveys consisted of auditory surveys undertaken during the prime breeding period to record calling males that are present, spread throughout the breeding season in an attempt to include the short temporal peak for each species of interest. Survey stations were placed according to the presence of wetland or in proximity to wetland habitat where amphibians may be breeding. The surveys involved visiting the site after dusk with minimum night-time air temperatures of at least 5°C during the first visit, 10°C during the second visit, and 17°C during the third visit. Calling amphibians, if present, were identified to species and chorus activity was assigned a code from the following options:

- 0 No calls;
- 1 Individuals of one species can be counted, calls not simultaneous;
- 2 Some calls of one species simultaneous, numbers can be reliably estimated and shown in brackets; and
- 3 Full chorus, calls continuous and overlapping.

3.2.2 Breeding Bird Surveys

Breeding birds were surveyed on the mornings of June 5 and 19, 2018 for the southern parcel and June 3, 2019 for the northern parcel. The visits commenced between 7:00 am and 7:30 am on days with low winds, no precipitation, and temperatures within 5° C of seasonal average. The entire site was walked to within 50 m of all parts of the subject property such that all singing birds could be heard or observed and recorded. All birds heard or observed with some inclination towards breeding were recorded at the location observed on an aerial photograph of the site.

3.2.3 Ecological Land Classification and Floristic Inventory

Vegetation units on the subject properties were mapped on August 30, 2018 and June 25, 2019 and described according to the Ecological Land Classification system for southern Ontario (Lee *et al.* 1998). This is the standard method used for describing vegetation communities in southern Ontario. At the same time as vegetation community mapping was undertaken, a floral inventory occurred which consisted of a compilation of a list of plants observed on the properties. A targeted search for Butternut (*Juglans cinerea*) was also conducted.

3.2.4 Feature Staking with TRCA

A feature staking was completed with TRCA staff (Vanessa Aubrey, Elyssa Elton and Jamie Milnes) on October 29, 2018 to delineate the outermost limit of the natural heritage feature present on the subject properties. The dripline represented the outermost natural feature limit and was staked. Unevaluated wetlands present on the subject properties were reviewed and it was agreed with TRCA staff that these features did not require staking.

3.3 Endangered and Threatened Species

3.3.1 Bat Habitat Assessment

3.3.1.1 Snag Surveys

A habitat assessment was undertaken in accordance with the Ministry of Natural Resources and Forestry Guelph District's '*Survey Protocol for Species at Risk Bats within Treed Habitats*' guideline dated April 2017. Beacon completed Ecological Land Classification (ELC) to identify communities that could provide potential maternity roost habitat. Beacon completed snag surveys in all woodland communities to determine habitat potential for species at risk bats.

Detailed bat snag surveys were completed during leaf off, and under suitable conditions (i.e., no precipitation, not immediately following heavy snowfall) to determine the occurrence of potential roost trees in the woodland communities present on the subject properties. Potential for candidate maternity roost habitat was identified and snag surveys were completed in accordance with Phase 1 and 2 of the Ministry of Natural Resources and Forestry Guelph District's '*Survey Protocol for Species at Risk Bats within Treed Habitats*' guideline dated April 2017. Woodland communities were surveyed in their entirety to identify all snags present.

3.3.1.2 Acoustic Monitoring

Based on the habitat assessment, bat acoustic monitoring was undertaken in June 2018 and 2019 to determine if any endangered bat species occurred within the proposed development. Acoustic monitors were deployed from June 1 to 11, 2018 and June 1 to 13, 2019. Following the MNRF protocol, this deployment period provided at least ten nights of data recorded under suitable weather conditions (air temp $\geq 10^{\circ}\text{C}$, low winds, and minimal precipitation). Five monitoring locations were established within the subject property in the woodland communities with potential habitat (FOMA). The use of five detectors is consistent with the MNRF recommended monitoring station densities of four detectors/hectare to achieve near simultaneous monitoring of entire ELC units. An SM4BAT passive monitor equipped with a SMM-U1 ultrasonic microphone was installed. Microphones were oriented to optimize the echolocation detections.

The monitors were programmed to record during triggered events each night for a period of five hours, beginning at sunset. A 12dB gain setting, was selected based on the SMM-U1 microphone and the surrounding habitat and proximity to potential roost trees. The unit was programmed to record in full spectrum with a 256 kHz sample rate. The high pass filter was set to 16 kHz to eliminate low frequency noise but to still capture the lowest frequency bat calls (i.e. Hoary Bat for the subject property). The trigger level was set to +18SNR with a 0.5 second minimum call duration trigger. All files were recorded as full spectrum in .WAV format.

3.3.2 Butternut Health Assessment

In conjunction with the ELC and floral surveys, Butternut surveys were completed. Butternut Health Assessments were conducted on all Butternut encountered by a certified Butternut Health Assessor, as per Ontario Regulation 242/08.

4. Existing Conditions

The subject properties are primarily undeveloped with two residential dwellings and associated former lawn areas and hedgerows (**Figure 2**). The hedgerows are dominated by Eastern White Cedar (*Pinus strobus*), Scots Pine (*Pinus sylvestris*), Eastern White Cedar (*Thuja occidentalis*) and Manitoba Maple (*Acer negundo*).

4.1 Breeding Amphibians

No amphibians were recorded during the first site visit. During the second survey, four Spring Peepers (*Pseudacris crucifer*) were recorded within the wetland on the subject properties and a full chorus of Spring Peeper and Gray Treefrog (*Hyla versicolor*) were recorded off site to the west. Three American Toads (*Anaxyrus americanus*) were identified during the third survey within the wetland on the subject properties as well as off site to the west.

C:\ODBI\OneDrive - Beacon Environmental\GeoSpatial\GeoProjects\2018\218091\MXD\2018-10-30_Figure02_Existing Conditions_218091.mxd



Existing Conditions

Figure 2

2660,2670,2680 Brock Road EIS & TIPP

- Legend**
- Subject Property
 - ELC Communities
 - Staked Dripline (TRCA 2018)
 - Wetland (Beacon 2018)
- Butternut Trees**
- Category 1 Tree
 - Cultivated Tree
 - Hybrid Tree

ELC Code	ELC Community
<i>Wetland Communities</i>	
SWT2-5	Red-Osier Dogwood Mineral Thicket Swamp
<i>Forest Communities</i>	
FOMA	Fresh-Moist Mixed Forest - White Pine/Manitoba Maple
<i>Cultural Communities</i>	
CUM1-1	Dry-Moist Old Field Meadow
CUT1-A	Mineral Cultural Thicket - Common Buckthorn
HE	Hedgerow
ANT	Anthropogenic

UTM Zone 17 N, NAD 83	
First Base Solutions Web Mapping Service 2021	
0 10 20 40 Metres	1:1,200

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4.2 Breeding Birds

A total of 21 species of breeding birds were recorded on the subject properties during the 2018 and 2019 breeding seasons (**Appendix B**). The bulk of breeding species encountered were birds that are commonly encountered in urban and urbanizing landscapes, including the following in the highest abundance: European Starling (*Sturnus vulgaris*), Song Sparrow (*Melospiza melodia*), American Robin (*Turdus migratorius*), American Goldfinch (*Spinus tristis*) and Northern Cardinal (*Cardinalis cardinalis*).

Much of the vegetation on the subject properties was associated with a cultural community originating in some form of disturbance, including low quality meadow and thicket habitat. Higher quality woodland and swamp habitat was identified along the western portion of the subject properties and contained a greater density of less commonly observed species that typically associate with woodland habitats. Woodland species observed included four species classified as area-sensitive, which are those that have a higher breeding success in larger areas of suitable habitat, as “area-sensitive” species: Pine Warbler (*Setophaga pinus*), American Redstart (*Setophaga ruticilla*), Black-throated Green Warbler (*Setophaga virens*) and Hairy Woodpecker (*Dryobates villosus*). Given that only a small portion of the larger woodland feature extends onto the subject properties relative to the surrounding matrix, it is likely the majority of these birds territories fall outside of the property boundaries. One pair of each of these birds was observed.

No species ranked as S1 through S3 (Critically Imperiled through Vulnerable) by the province, or species regulated under the ESA were recording during the 2018 or 2019 breeding bird seasons

The TRCA has developed a species ranking system that assigns an ‘L’ ranking to wildlife based on variables including patch sensitivity and tolerance to disturbance. Species with an L1 ranking are those of highest concern and L5 are commonly occurring species of least concern. Species between the L1 and L3 range are considered species of conservation concern and introduced bird species are designated as L+. One species with an L3 ranking was present, Black-throated Green Warbler, with the remainder of the native species considered to be L4 or L5 and therefore are not considered species of regional concern (L1 to L3).

4.3 Ecological Communities

ELC vegetation communities were mapped and described according to the ELC system for southern Ontario (Lee *et al.* 1998). Vegetation communities on the subject property are illustrated on **Figure 2** and described below.

4.3.1 Wetland Communities

Red-Osier Mineral Swamp Thicket (SWT2-5)

This community is dominated by Red-Osier Dogwood (*Cornus sericea*) with Green Ash (*Fraxinus pennsylvanica*) and American Elm (*Ulmus americana*) saplings. The ground flora cover is sporadic and includes Sensitive Fern (*Onoclea sensibilis*), Spotted Jewelweed (*Impatiens capensis*), Dog Strangling Vine (*Cynanchum rossicum*), and Purple Loosestrife (*Lythrum salicaria*; **Photograph 1**).



Photograph 1. Red-Osier Mineral Swamp Thicket (August 30, 2018)

4.3.2 Woodland Communities

Fresh – Moist Mixed Forest (FOMA)

This community has a canopy dominated by Scotch Pine (*Pinus sylvestris*) and Manitoba Maple (*Acer negundo*), with White Pine (*Pinus strobus*), White Cedar (*Thuja occidentalis*), Green Ash and Black Walnut (*Juglans nigra*). The majority of trees are less than 50 cm diameter at breast height (DBH). The understory includes Common Buckthorn (*Rhamnus cathartica*) with Green Ash saplings, Chokecherry (*Prunus virginiana*) and Tatarian Honeysuckle (*Lonicera tatarica*). The ground flora is dominated by Dog Strangling Vine with Heart-leaved Aster (*Symphyotrichum cordifolium*), Enchanter's Nightshade (*Circaea lutetiana*) and Calico Aster (*Symphyotrichum lateriflorum*; **Photograph 2**).



Photograph 2. Fresh – Moist Mixed Forest (August 30, 2018)

4.3.3 Cultural Communities

Mineral Cultural Thicket (CUT1-A)

This community forms the edge of the woodland on the eastern portion of the property. It is dominated by Common Buckthorn with Riverbank Grape (*Vitis riparia*) and American Elm saplings. The ground flora is dense and dominated by Dog Strangling Vine (**Photograph 3**).



Photograph 3. Mineral Cultural Thicket along Woodland Edge (August 30, 2018)

Dry-Moist Old Field Meadow (CUM1-1)

This community is comprised of Canada Goldenrod (*Solidago canadensis*), Panicked Aster, Queen Anne's Lace (*Daucus carota*), Lesser Burdock (*Arctium minus*), Dog Strangling Vine, Ragweed (*Ambrosia artemisiifolia*), and Field Bindweed (*Convolvulus arvensis*; **Photograph 4**).



Photograph 4. Dry – Moist Old Field Meadow (August 30, 2018)

4.4 Flora

A total of 111 species were recorded on the subject properties, with native species accounting for 53% of the species recorded. One provincially endangered species, Butternut (*Juglans cinerea*), was recorded on the subject properties and is further discussed in Section 4.5.2. One regionally rare species, Virginia Stickseed (*Hackelia virginiana*), and two regionally uncommon species, Canada Goldenrod and Black Walnut were recorded on the subject property (Varga et al. 2005). Three regional Species of Conservation Concern, White Spruce (*Picea glauca*), Tamarack (*Larix laricina*) and Butternut were recorded on the subject properties (TRCA, 2019).

A list of the vascular plants identified on the subject properties can be found in **Appendix C**.

4.5 Endangered and Threatened Species

Review of background information and provincial databases has indicated that there are records of 17 endangered or threatened species with suitable habitat recorded on or within a 5 km radius of the subject properties (**Appendix D**). The results of the endangered and threatened species assessment are based on site review combined with knowledge of the habitat preferences and natural history of the species known to occur within 5 km of the subject property.

Through this assessment, it was determined that one species, Butternut, was present on the subject properties and potentially suitable habitat is present for four species of endangered bats.

Seasonal surveys confirmed the remaining 12 species and potentially suitable habitat are not present on the subject properties.

4.5.1 Endangered Bats

Seasonal surveys confirmed that the woodland on the subject properties provides suitable habitat for endangered bats. The acoustic monitoring conducted in 2018 and 2019 indicated that the woodland was not being utilized as roosting habitat by endangered bats.

4.5.2 Butternut

A total of six Butternut were recorded the subject property. Four Butternut were assessed as Category 1 trees (non-retainable; Trees No. 1, 2, 3, and 5), one tree (Tree No. 6) was confirmed to be cultivated with MNRF and one tree (Tree No. 4) was confirmed to be a hybrid through genetic testing. The results of the Butternut Health Assessment and genetic testing were confirmed with MNRF (**Appendix E**).

4.6 Candidate Significant Wildlife Habitat

Significant Wildlife Habitat designation is the responsibility of the planning authority and determination of it on a site by site basis is generally not an appropriate manner in which to determine this constraint given that it is necessary to understand the context of the habitat within the local environment. In this case, the City of Pickering has not identified significant wildlife habitat within their jurisdiction. There is guidance provided in two provincial documents: the Significant Wildlife Technical Guide (OMNR 2000) and the Natural Heritage Reference Manual (MNRF 2010).

The *Significant Wildlife Habitat Technical Guidelines* (MNRF 2000) identify four broad categories of Significant Wildlife Habitat (SWH):

- Seasonal Concentration Areas of Animals;
- Rare Vegetation Communities or Specialized Habitat for Wildlife;
- Habitat for Species of Conservation Concern; and
- Animal Movement Corridors.

Within each of these categories, there are multiple types of SWH, each intended to capture a specialized type of habitat that may or may not be captured within other existing feature-based categories (e.g., significant wetlands, significant woodlands).

As the identification of SWH is the under the jurisdiction of the planning authority (i.e., Municipality or Region) any types of SWH discussed below have been identified as candidate SWH for the purposes of this study. Based on a review of the MNRF (2015) criteria, LIO database and seasonal survey results the natural features present on the subject properties do not meet the recommended thresholds suggested by the MNRF.

The woodland and wetland off property to the west may qualify as candidate SWH for specialized habitat for wildlife as amphibian breeding habitat (woodland and wetland).

4.7 Landscape Connectivity

Landscape connectivity is recognized as an important component of natural heritage planning. A wide range of benefits can be attributed to maintaining connectivity within the natural landscape. Corridors allow organisms to move between areas of high habitat importance. Conservation of distinct habitat types to protect species may be less effective unless the corridors between them are also protected or restored.

From a wildlife perspective, the features on and adjacent to the subject properties are fragmented by the urban road network and are isolated on the landscape.

5. Natural Heritage Feature Summary

The findings of the background review and field investigations have been relied upon to confirm whether the subject properties support any of the natural heritage components recognized under the PPS, Regional and City policies. The Natural Heritage Reference Manual (MNRF, 2010) was consulted to provide additional technical guidance where required.

No provincial ANSIs have been mapped on or adjacent to the subject properties.

There are no PSW on or adjacent to the subject properties. An unevaluated wetlands is present on the subject properties which extends off property to the west and is contiguous with the woodland feature.

The Region of Durham Official Plan and City of Pickering define significant woodlands as:

An area which is ecologically important in terms of features such as species composition, age of trees and stand history; functionally important due to its contribution to the broader landscape because of its location, size or due to the amount of forest cover in the planning area; or economically important due to site quality, species composition, or past management history.

As noted in Section 4.3.2, the portion of the mixed forest (FOMA) on the subject properties has canopy dominated by Scotch Pine and Manitoba Maple with an understory of Common Buckthorn. This woodland is identified on the City's Official Plan mapping as Significant Woodland and the larger woodland that this community forms part of meets the Region and City's criteria to be considered significant woodland due to its size (>10 ha) and functional contribution to the broader landscape. The limit of this feature was staked in the field with TRCA.

Seasonal surveys confirmed the Butternut located on the subject properties are not regulated by the ESA as they were assessed as non-retainable, hybrid or cultivated as confirmed with MNRF. Based on the acoustic monitoring results, the woodland was not being utilized as maternity roosting habitat for endangered bats. No other threatened or endangered species or their habitat are present on the subject properties.

The Planning Authority has not identified Significant Wildlife Habitat on the subject properties or within its boundaries. The natural features present on the subject properties do not meet the recommended thresholds suggested by the MNRF to provide candidate Significant Wildlife Habitat,

6. Proposed Development Plan

The proposed development is for multi-storey townhouses with aboveground parking. The proposed development will have access from Four Seasons Lane located west of the proposed development (**Figure 3**).

The conceptual road design of Four Seasons Lane on and adjacent to the subject properties is shown on **Figure 3** for illustrative purposes. The detailed road design is currently being completed and will be addressed at Site Plan Application for the portion of the road on the subject properties. The design and construction of the road is being coordinated with the adjacent landowners.

6.1 Site Servicing

A Functional Servicing and Stormwater Management Report (FSSR) has been prepared for the proposed development by TYLin (September 2022). A summary of the FSSR is detailed below.

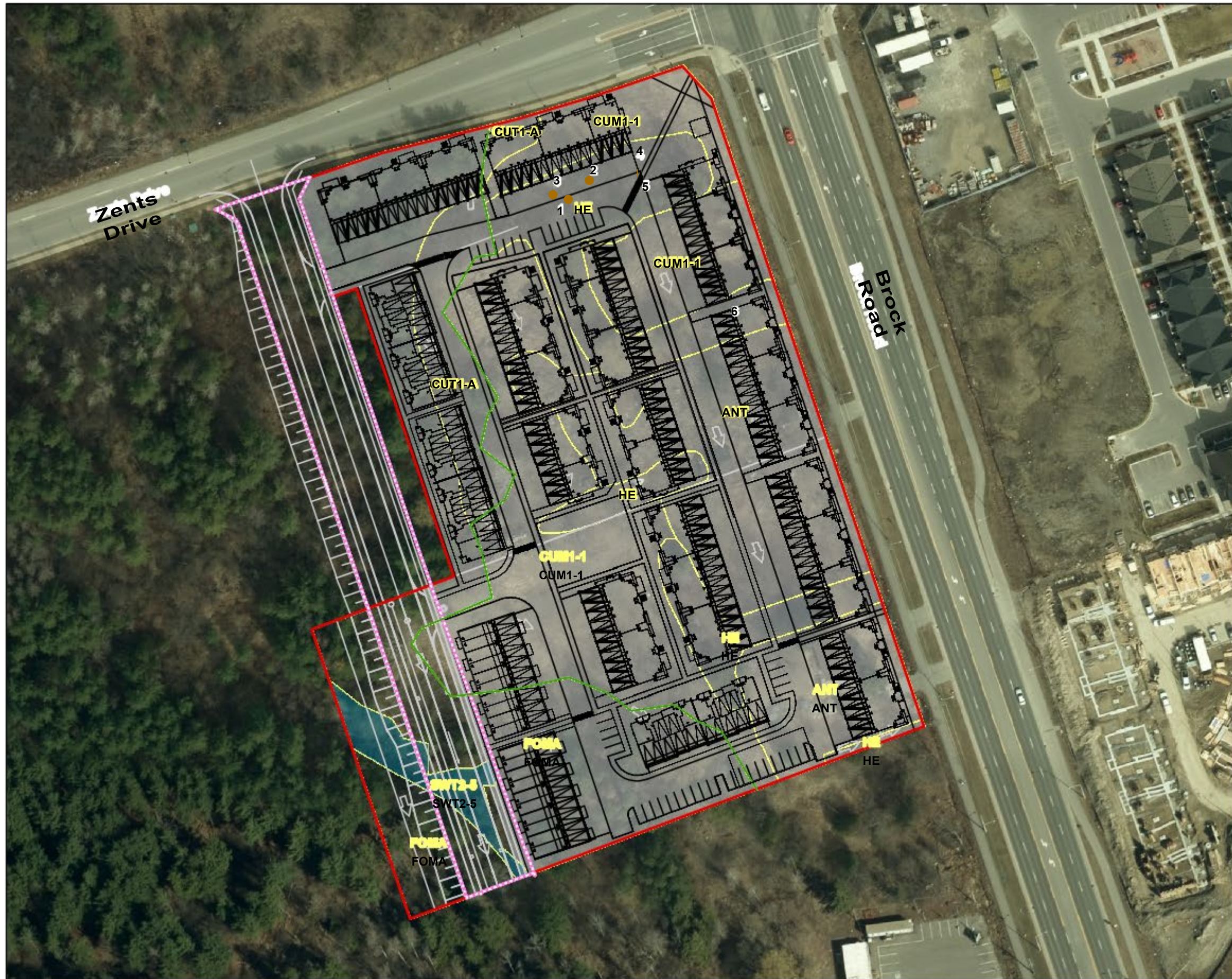
6.1.1 Stormwater Management

The proposed development will convey 2 year storm flows to the existing 300 mm clean water storm collector pipe (CWC) in Brock Road at a controlled flow rate and ultimately released into West Tributary Branch 1 (WTB1) in accordance with the Duffin Heights ESP. An underground storage tank and flow regulator are proposed to achieve the required controlled release rate (TYLin, 2022).

All flows above the 2-year storm event and up to the 10-year storm event will be conveyed overland and captured by a catch basin on the development to be received by the proposed storm sewer on Brock Road. Flows above the 10-year storm up to the 100-year storm event will drain overland to Brock Road where they will be captured and conveyed to SWMF#4 (TYLin, 2022).

In post-development conditions, the site has been designed to allow some areas along the north, east and west property to flow unrestricted offsite to Zents Drive, Brock Road North and Four Seasons Lane, respectively. The total area of uncontrolled flow to Four Seasons Lane is 788 m². The downstream capacity of the receiving storm sewer on Four Seasons Lane will be confirmed through detailed design with the adjacent landowners design consultants (TYLin, 2022).

Quality Control will be provided for 80% TSS removal through oil-grit separator unit prior to releasing into the CWC.



Proposed Development **Figure 3**

2660,2670,2680 Brock Road EIS & TIPP

Legend

- Subject Property
- ELC Communities
- Proposed Development
- Future Road Allowance
- Conceptual Road Design
- Staked Dripline (TRCA 2018)
- Wetland (Beacon 2018)

Butternut Trees

- Category 1 Tree
- Cultivated Tree
- Hybrid Tree

ELC Code	ELC Community
<i>Wetland Communities</i>	
SWT2-5	Red-Osier Dogwood Mineral Thicket Swamp
<i>Forest Communities</i>	
FOMA	Fresh-Moist Mixed Forest - White Pine/Manitoba Maple
<i>Cultural Communities</i>	
CUM1-1	Dry-Moist Old Field Meadow
CUT1-A	Mineral Cultural Thicket - Common Buckthorn
HE	Hedgerow
ANT	Anthropogenic

UTM Zone 17 N, NAD 83

First Base Solutions
Web Mapping Service 2021

0 10 20 40 Metres 1:1,200

Project 218091
October, 2022

6.1.2 Water Balance

As part of the 'Duffin Heights Neighbourhood ESP', a water balance study was completed, and a mitigation strategy was proposed including the implementation of Low Impact Development measures (LIDS), or infiltration facility. Existing surface water flows will be maintained and controlled as these flows must be conveyed to the WTB1 of Urfe Creek to maintain baseflows (TYLin, 2022).

Incorporation of LIDs will be reviewed through detailed design and best efforts will be taken to match pre-development infiltration (TYLin, 2022).

6.1.3 Sanitary Servicing

The proposed development will connect to the future sanitary sewer on Four Seasons Lane. Due to the depth of the proposed sanitary sewer on Four Seasons Lane, the sanitary flows from the townhouse blocks along Brock Road cannot be drained by gravity and a second sanitary sewer line is proposed for these units which will connect to the existing 250 mm sanitary sewer located within the Brock Road North right-of-way (TYLin, 2022).

6.1.4 Water Servicing

It is proposed to service the proposed development from the existing 200 mm fire stub and 50 mm domestic stub off the 400 mm diameter watermain located within the Brock Road right-of-way (TYLin, 2022).

7. Impact Assessment

The following sections identify the potential impacts of the proposed development, either during the construction phase or following completion of construction, on the natural features and functions present on the subject properties.

7.1 Natural Feature Removal

The proposed development footprint including the Four Seasons Lane right-of-way encompasses the majority of the subject properties and will require 0.91 ha of natural feature removal. The 0.91 ha of natural feature removal is comprised of the following:

- 0.03 ha of a thicket swamp wetland;
- 0.74 ha of woodland; and
- 0.14 ha of cultural thicket.

7.1.1 Four Seasons Lane

The road right-of-way on the adjacent IO lands will require an additional 0.33 ha of natural feature removal (0.14 ha of wetland and 0.19 ha of woodland). The preliminary design for the road shows minor grading encroachments further into the feature (woodland and wetland) beyond the road right-of-way on both the subject properties and IO lands. Any additional removals and a full assessment of impacts to the adjacent natural features will be determined through the detailed road design.

7.2 Regionally Rare Flora

Three regional Species of Conservation Concern (TRCA 2019) and an additional three regionally rare or uncommon species (Varga *et al.*, 2005) were recorded on the subject properties. White Spruce and Tamarack are not naturally occurring in the landscape and appeared to be planted. The three species ranked regionally rare and uncommon are frequently found on the landscape in Durham Region.

7.3 Buffer Removal

The proposed development, including the future road, will not provide any buffers to the natural features (woodland and wetland).

7.4 Hydrological Changes

Development on the subject properties has the potential to affect the water quality and quantity of the tableland wetlands recorded on the adjacent IO lands. Under existing conditions, the topography of the site slopes from west to east and north to south, with low points at the ditch located along Brock Road (TYLin, 2022). The proposed development has been designed in accordance with the water balance strategy outlined in Appendix G of the Duffin Heights ESP and may result in an infiltration deficit.

7.5 Sedimentation and Soil Erosion

Construction works such as grading, grubbing and excavation have the potential to result in the movement of sediment into the significant woodland and staked wetland to the southwestern portion of the subject property.

7.6 Noise and Light Effects on Wildlife

Acute and cumulative effects for a development associated with noise and light are very difficult to quantify. Noise may be a reason why landscape-level effects are known to occur within urban matrices even as natural areas are set aside. The effects of these stressors can be significant in previously undeveloped areas; however, given the urban development in the planning area, a measurable effect on wildlife because of the proposed development plan is not anticipated.

7.7 Tree Removals

A total of 321 trees at least 15 cm DBH were inventoried and assessed on the subject property. All 321 trees inventoried and assessed on the subject property are recommended for removal due to the proposed development (Beacon 2022).

8. Recommended Mitigation Measures

The following section recommends mitigation and compensation measures to be utilized to minimize the effects of the proposed development.

8.1 Edge Management Plan

In accordance with the Duffin Heights ESP, an edge management plan for Four Seasons Lane as part of the detailed design for the road. The edge management plan will incorporate the following design principles:

- Follow the planting guidelines outlined in the Forest Edge Management Guidelines by TRCA (July 2004);
- Utilize native species complimentary to the existing woodland;
- Planting of deciduous species to increase species diversity in the existing woodland;
- Increased density of shrub plantings to provide an immediate buffer effect;
- Invasive species management plans to minimize that potential for invasive species to spread into the NHS; and
- Enhancement of existing woodland feature through selective removal of invasive species, small fill pile and underplanting of shrubs.

The conceptual location of the edge management planting is along the new wooded edge on the west side of Four Seasons Lane shown on the Landscape Plans prepared by Adesso Design Inc. (**Appendix F**).

8.2 Low Impact Development Techniques

Incorporation of LID measures will be reviewed during detailed design and best efforts will be taken to match pre-development infiltration rates.

The CWC is being included in the detailed designs for the road south of the development limits for drainage within the road right-of-way. Further review is needed to determine if the infrastructure can be extended north to Dersan Street with potential outlets to the adjacent wetland within the IO lands.

8.3 Timing of Vegetation Removal

8.3.1 Breeding Birds

The federal *Migratory Bird Convention Act* (1994) protects the nests, eggs and young of most bird species from harm or destruction. Environment Canada considers the 'general nesting period' of breeding birds in southern Ontario to be between late March and the end of August. This includes times at the beginning and end of the season when only a few species might be nesting. In light of this it is recommended that during the peak period of bird nesting (i.e., between mid-April and mid-July), no vegetation clearing or disturbance to nesting bird habitat should occur.

In the 'shoulder' seasons of April 1 to April 15, and July 16 to August 31, vegetation clearing could occur, but only after an ecologist with appropriate avian knowledge has surveyed the area to confirm lack of nesting. For any proposed clearing of vegetation within the breeding bird season an ecologist should undertake detailed nest searches immediately prior (within two days) to site alteration to ensure that no active nests are present.

If nesting is found, then vegetation clearing in an area around the nest, the size of which depends on the specific circumstances, has to wait until nesting has concluded. The likelihood of nesting birds being present in the 'shoulder' seasons also depends on the habitat type.

From September 1 through to March 31, vegetation clearing can occur without nest surveys, but the need to ensure nest protection still applies (i.e., if an active nest is known to be present it must be protected).

8.3.2 Endangered Bats

The ESA protects the habitat of endangered and threatened species. MECP has confirmed all vegetation removals should occur outside of the bat maternity roosting period from April 30 to October 1.

8.4 Erosion and Sediment Control

Construction works such as grading, grubbing and excavation can cause the movement of sediment into the valley corridor, wetland or watercourse on the western portion of the property. Silt fencing will be installed along the limits of development to minimize sediment leaving the site and should be removed when development work is completed and exposed soils stabilized.

An erosion and sediment control plan has been prepared by TYLin for the proposed development (TYLin 2022).

Standard Best Management Practices should also be employed during the construction process.

9. Compensation for Feature Removal

As the subject properties are within the Duffin Heights Secondary Plan Area, compensation for feature removal is to be addressed through a compensation value calculation based on the area of removal. The limits of development on the subject properties were determined through the Duffin Heights Environmental Servicing Plan (ESP; 2008). In order to quantify the amount of feature to be lost as part of the proposed development, a feature staking was completed with TRCA on October 29, 2018. The staked feature on the subject property is comprised of woodland, thicket swamp and cultural thicket.

Further to on-going discussions with the City for the lands within the Duffin Heights Secondary Plan area and proposed Official Plan Amendment 35, it is Beacon's understanding that compensation for vegetation removal is to be determined as follows:

- For lands within the Toronto and Region Conservation Authority (TRCA) regulated area, compensation for tree removal is to be determined in accordance with TRCA's *Guideline for Determining Ecosystem Compensation* (June 2018). The portion of the subject property within the TRCA regulated areas are those lands which fall within 30 m of the unevaluated wetlands as mapped in the EIS; and
- For lands located outside of the TRCA regulated areas, compensation is to be determined in accordance with the City's *Tree Inventory, Preservation, and Removal Compensation Requirements* (undated) protocol.

A compensation agreement has been executed with TRCA for the regulated area impacted by the proposed development and portion of the Four Seasons right-of-way located on the subject properties (**Appendix G**).

An Arborist Report has been prepared by Beacon (2022) under a separate cover and outlines tree compensation requirements for the tree removals on lands outside of the TRCA regulated area.

10. Policy Conformity

This section outlines project compliance with the applicable natural heritage policies and legislation at the provincial, regional, and municipal levels as described in **Section 2** of this report.

10.1 Provincial Policy Statement

Policy 2.1 of the PPS provides direction to regional and local municipalities regarding planning policies specifically for the protection and management of natural heritage features and resources. The PPS provides direction to the planning authority with respect to natural heritage features and functions.

The subject properties do not contain provincially significant wetlands, significant coastal wetlands, significant woodlands, significant valleylands, or ANSIs.

The Planning Authority has not identified SWH on the subject properties or criteria for its identification. The subject properties do not support elements that may qualify as candidate SWH as habitat for species of conservation concern and/or specialized habitat for wildlife depending on whether or not the recommended thresholds suggested by the MNRF were adopted by the municipality.

Seasonal surveys confirmed that the Butternut located on the subject property are not subject to the ESA as they were assessed as non-retainable, cultivated or hybrid.

The acoustic monitoring conducted in 2018 and 2019 indicated that the woodland was not being utilized as roosting habitat by endangered bats. Consultation with MECP will be undertaken to confirm no further work is required to address endangered bats.

10.2 Regional Municipality of Durham Official Plan

The Durham Region Official Plan identifies the subject property as Living Areas within the Built Boundary with the natural features designated as KNHF. The woodland on and adjacent to the subject properties meet the regional criteria to be considered significant due to its size and functional contribution to the broader landscape. The eastern edge of this woodland will be removed by the proposed development in accordance with the Duffin Heights ESP. The portion of woodland to be removed is dominated by non-native and invasive species and this area of removal will not impair the form or function of the significant woodland. An edge management plan will be prepared for the new woodland edge as part of the detailed design for Four Seasons Lane.

Compensation for feature removal has been agreed upon with TRCA to implement off-site compensation.

This EIS recommends mitigation and compensation measures to mitigate the potential impacts on the adjacent natural features during development in accordance with the Duffin Heights ESP.

10.3 City of Pickering Official Plan, Duffin Heights ESP

The City of Pickering Official Plan identifies the subject properties as Mixed Corridor with Open Space System comprised of Natural Areas to the west. The woodland on and adjacent to the subject properties meets the City's criteria to be considered significant due to its size and functional contribution to the broader landscape. As noted in Section 10.1, the removal of the woodland on the subject properties will not impair the form or function of the significant woodland. Compensation for the woodland removal has been determined in accordance with the Official Plan. A compensation agreement has been executed for those lands regulated by TRCA and for lands not regulated by TRCA, compensation has been determined in accordance with the City's *Tree Inventory, Preservation, and Removal Compensation Requirements*.

The majority of the subject property is identified as developable area in the Duffin Heights ESP. This EIS recommends mitigation and compensation measures to limit the potential impacts on the adjacent natural features during development in accordance with the Duffin Heights ESP.

10.4 Toronto Region Conservation Authority Regulations and Policies

The wetland on and adjacent to the subject properties is regulated by the TRCA and a permit will be required for the development within and adjacent to the wetland. This EIS has determined the extent and composition of the TRCA regulated area requiring removal to facilitate development. A compensation agreement has been executed with TRCA for natural feature removal.

A permit will be required from TRCA for the proposed development.

10.5 Endangered Species Act

Seasonal surveys conducted in 2018 and 2019 confirmed the Butternut located on the subject properties are not regulated by the ESA and the woodland was not being utilized as maternity roosting habitat for endangered bats. No other threatened or endangered species or their habitat are present on the subject properties.

Consultation with MECP may be required to confirm no further work is required to address the ESA related to endangered bats.

11. Summary

Beacon Environmental has conducted a background review and seasonally appropriate field investigations in order to prepare this Environmental Impact Study for the proposed development of the subject properties.

The subject properties are primarily undeveloped with two residential dwellings and associated former lawn areas and hedgerows. Unevaluated wetland and woodland are located on the western portion of the subject properties. The development limit and road right-of-way for Four Seasons Lane was established through the Duffin Heights ESP. The limits of the natural features that are located in the western portion of the subject property have been subject to seasonally appropriate field investigations and the limits of natural features within the approved development limits have been staked with the TRCA.

Mitigation measures have been recommended to help reduce the impacts of the woodland removal, including edge management plans, timing of vegetation removal, and erosion and sediment controls during tree removal. Compensation for feature removal on TRCA regulated areas has been agreed upon with the agency.

An Arborist Report, Functional Servicing Report, Hydrogeological Report and Geotechnical Report have also been prepared for the subject properties and are presented under a separate cover. This EIS should be read in conjunction with these companion reports.

With the implementation of the recommended mitigation measures, the proposed plan will achieve conformity and consistency with applicable natural heritage policies as set out in the PPS, Region of Durham Official Plan, City of Pickering Official Plan and the previously approved Duffin Heights

Secondary Plan. TRCA policies and regulations have been addressed and a permit will be required for development and site alteration within the regulated areas.

Surveys have indicated that no threatened or endangered species are present on the subject properties. Consultation with MECP may be required to confirm all requirements of the *Endangered Species Act* have been addressed.

With the implementation of the recommended mitigation measures, the proposed plan will achieve conformity and consistency with applicable natural heritage policies as set out in the PPS, Region of Durham Official Plan, City of Pickering Official Plan and the previously approved Duffin Heights Secondary Plan.

Prepared by:
Beacon Environmental



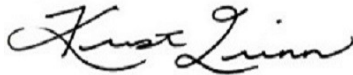
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12. Cited References

- Beacon Environmental Limited. 2022.
Arborist Report. 2660, 2670 and 2680 Brock Road, City of Pickering. October 2022.
- Bird Studies Canada. 2007
The Atlas of the Breeding Birds of Ontario (2001-2005). Survey Square Data.
- Bird Studies Canada. 2009.
Marsh Monitoring Protocol.
- City of Pickering 2022.
City of Pickering Official Plan. Office Consolidation 2022.
- Dobbyn, J. 1994.
Atlas of the Mammals of Ontario. Federation of Ontario Naturalists.
- Government of Ontario. 1994.
Migratory Birds Convention Act. Available online at: <http://laws-lois.justice.gc.ca/eng/acts/m-7.01/>.
- Lee, H.T., W.D. Bakowsky, J. Riley, J. Bowles, M. Puddister, P. Uhlig and S. McMurray. 1998.
Ecological Land Classification for Southern Ontario: First Approximation and Its Application.
Ontario Ministry of Natural Resources. SCSS Field Guide FG-02. 225 pp.
- Ontario Ministry of Municipal Affairs and Housing (MMAH). 2020.
Provincial Policy Statement. Toronto, Ontario.
- Ontario Ministry of Natural Resources. 2000.
Significant Wildlife Habitat Technical Guide (Appendix G). 151 pp. + appendices.
- Ontario Ministry of Natural Resources. 2010.
Natural Heritage Reference Manual for Natural Heritage Policies of the Provincial Policy Statement, 2005, Second Edition.
- Province of Ontario. 2007
Endangered Species Act (S.O. 2007).
- Regional Municipality of Durham. 2017.
Durham Region Official Plan. Office Consolidation May 11, 2017.
- Sernas Group et al. 2008.
Environmental Servicing Plan for the Duffin Heights Neighbourhood, City of Pickering.

Terrapex. 2022.

The Brock Zents Partnership. Hydrogeological Review-Update. Townhome Developments 2660 to 2680 Brock Road and Part of Lot 19, Concession 3; Part 3 and Part 4 on Plan 40R-27228. May 2022.

Toronto Region Conservation Authority. 2006

Ontario Regulation 166/06 Regulation for Development, Interference with Wetlands and Alterations to Shorelines and Watercourses. February 8, 2013

Toronto Region Conservation Authority. 2014.

Living City Policies for Planning and Development.

TYLin. 2022.

Functional Servicing and Stormwater Management Report. Brock Zents Townhomes. September 2022.

Varga, S., D. Leadbeater, J. Webber, B. Crins, D. Banville, E. Ashley, L. Tebby, C. Jacobsen and K. Mewa. 2000.

The Vascular Plant Flora of the Greater Toronto Area (Draft). Ontario Ministry of Natural Resources, Aurora District.

Appendix A

Terms of Reference

December 11, 2018

BEL 218091

Vanessa Aubrey
Planner II, Planning and Development
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Re: Terms of Reference for an Environmental Impact Study– 2660 to 2680 Brock Road, Duffin Heights Neighbourhood, City of Pickering, Regional Municipality of Durham, Ontario

Beacon Environmental Limited (Beacon) has been retained by Brock Zents Development 2660-2670 Inc. to prepare an Environmental Impact Study (EIS) for the proposed residential development for the properties located at 2660, 2670 and 2680 Brock Road in the City of Pickering, Durham Region (herein referred to as subject property). The subject property is located on the west side of Brock Road, north of Dersan Street. As part of the EIS, Beacon has prepared this Terms of Reference (ToR) to outline the field investigations to be undertaken, and the content of the EIS report, to support the proposed development.

The following represents our proposed ToR to undertake the EIS.

Background Review

The subject property is approximately 2.6 ha (6.4 acres) is presently undeveloped with two detached residential dwellings on the eastern portion and a wooded feature on the western portion. The subject property is designated as Mixed Use Area in the City of Pickering's Official Plan (2017). The subject property is also part of the Duffin Heights Secondary Plan (2008) and is identified as a Mixed Corridor with woodland and wetland to be removed on the western portion.

Field Investigations

Based on the known conditions on the subject property the following field investigations were completed to identify existing natural heritage features on the subject property in the 2018 field season (April-October).

Amphibian Surveys (April to May 2018)

Breeding amphibian surveys were completed according to Environment Canada's Marsh Monitoring Program protocol and consisted of three auditory surveys undertaken during the prime breeding period to record calling males that are present.

Breeding Birds (June 2018)

These surveys consisted of three early morning visits that were conducted in June, a minimum of seven days apart, during suitable weather.

Flora and Vegetation Communities (May – August)

Vegetation units on the subject property were described and mapped on current, colour ortho-photography of the lands using the Ecological Land Classification system for southern Ontario (Lee *et al.* 1998). This is the standard method used for describing vegetation communities in southern Ontario. At the same time as vegetation community mapping was undertaken, a floral inventory occurred which consisted of a compilation of a list of plants observed on the property.

Species at Risk (May – August)

A general habitat assessment for species at risk, identified as potentially occurring on the site during the desktop review and SAR screening through MNR, was undertaken during the field investigations outlined above.

Potential habitat for species at risk bats was identified and detailed surveys were undertaken to confirm their presence/absence.

Feature Staking (October)

Feature staking was conducted with staff from TRCA, Elyssa Elton (Ecologist), Jamie Milnes (Ecologist), and Vanessa Aubrey (Planner). Members of the consulting team were also present as well as a land surveyor. It was recognized by all present that this staking was to reflect the previously adopted limit of the Natural Heritage System as depicted in the Duffin Heights ESP. The limit of the natural feature was to determine the area of woodland that falls within the approved development limits. No other features were staked in the field.

Incidental Wildlife Observations

Any species seen on the site during field investigations will be recorded as an incidental observation for the purposes of the Natural Environment Assessment.

Tree Inventory

An ISA Certified Arborist from Beacon will conduct a site visit to inventory all trees greater than 20 cm diameter on and within 6 m of the subject property. The scope of the Tree Inventory will be confirmed with the City.

Reporting

Environmental Impact Study Report

An EIS report will be produced following completion of field investigations and once a final development plan has been produced. Preparation of the report will be an iterative process that will resolve issues related to vegetation removal in accordance with the Duffin Heights ESP and mitigation requirements, including compensation for feature removal.

The EIS report will identify:

- Existing site conditions;
- An impact assessment relative to the proposed development;
- Identification of opportunities and mitigation measures for the proposed development;
- A discussion of net impacts on the existing features on the site;
- Compensation requirements in accordance with the Duffin Heights ESP; and
- Relevant policy as it pertains to this proposed development.

Arborist Report

The Arborist Report will consist of a Tree Inventory and Preservation Plan (TIPP) that will include:

- A summary of arboricultural evaluation methods used to catalogue and assess the trees;
- Descriptions of individual trees and tree groups identified on and adjacent to the subject property; and
- A Tree Inventory and Preservation Plan figure identifying individual trees and tree groups for protection or removal based on the proposed development plan and illustrating tree protection zones and protection measures for trees to be retained.

I trust that this ToR satisfies the TRCA's requirements with regards to the EIS in support of the proposed development on subject property. Should you have any questions or points for discussion, please do not hesitate to contact me at (705) 243-7251 ext. 402.

Yours truly,
Beacon Environmental



Jesse Harnden, B.Sc., ISA
Arborist/Botanist



Kristi L. Quinn, B.E.S
Senior Planning Ecologist

cc. Mr. Jack Greenberg, The Brock Zents Partnership
Mr. Rudy Buczolits, In-Step Real Estate & Development Services Inc.
Mr. Adam Layton, Evans Planning Inc.
Mr. Murray Evans, Evans Planning Inc.

From: [Adam Layton](#)
To: [Kristi Quinn](#); [Jesse Harnden](#)
Cc: [Jack Greenberg](#); [Rudy Buczolits \(instepreds@icloud.com\)](#); [Murray Evans \(evansplanning@sympatico.ca\)](#)
Subject: FW: TRCA Comments - 2660, 2670 and 2680 Brock Road, Pickering
Date: Wednesday, April 24, 2019 4:02:08 PM

Good afternoon all,

We have finally received confirmation of TRCA's acceptance of the staked dripline at Brock Zents. They have also outlined the requirements of the EIS necessary to support any future development applications.

Best Regards,

Adam Layton
Senior Associate Planner

Evans Planning Inc.
8481 Keele Street, Unit 12
Vaughan, Ontario L4K 1Z7
Ph:(905) 669-6992 x 102

From: Vanessa Aubrey <vaubrey@trca.on.ca>
Sent: April 24, 2019 3:58 PM
To: Adam Layton <alayton@evansplanning.com>
Subject: TRCA Comments - 2660, 2670 and 2680 Brock Road, Pickering

Adam

TRCA has complete our review of the survey and have the following comments:

TRCA staff agreed with the staked dripline of vegetation as shown on the Plan of Survey, Part of Lots 1, 2, and 3, R-Plan 585, City of Pickering, Regional Municipality of Durham, prepared by KRCMAR Surveyors Ltd. and dated March 6, 2018.

In addition to any standard submission requirements, TRCA will require the submission of an Environmental Impact Study as part of any future planning application. At minimum, this report should speak to the criteria outlined in the Duffin Heights Environment and Servicing Plan, and include:

- (1) Edge Management Plan to address impacts to the forest edge;
- (2) The amount of the forest habitat to be lost as part the proposal must be quantified and compensation must be determined based on the terrestrial compensation equation outlined in the Duffin Heights ESP
- (3) Detailed design plans will include design features as outlined in the Duffins Heights Fish Habitat Compensation Plan to promote wetland habitat and restoration within the tableland woodland to the north.

I trust these comments are of assistance. Any further questions/concerns, please don't hesitate to contact me.

Vanessa Aubrey, MES
Planner II
Development Planning and Permits | Development and Engineering Services

T: 416-661-6600 ext. 5662

E: vaubrey@trca.on.ca

A: 101 Exchange Avenue, Vaughan, ON, L4K 5R6

Toronto and Region Conservation Authority (TRCA) | trca.ca

July 28, 2022

BEL 218091

Stephanie Dore
Planner, Development Planning and Permits
Toronto and Region Conservation Authority
101 Exchange Avenue
Vaughan, ON L4K 5R6

**Re: Terms of Reference for Environmental Impact Study – 2660, 2670 and 2680 Brock Road,
City of Pickering, Durham Region**

Dear Mrs. Dore:

Beacon Environmental Limited (Beacon) has been retained by Brock Zents Development 2660-2670 Inc. to prepare an Environmental Impact Study (EIS) for the proposed development for the property municipally known as 2660, 2670 and 2680 Brock Road in the City of Pickering, Regional Municipality of Durham (hereafter referred to as the “subject property”). The subject property is approximately 2.6 ha (6.4 acres) and located on the west side of Brock Road, south of Zents Drive (**Figure 1**).

As part of the EIS, Beacon has prepared this Terms of Reference (TOR) to outline the field investigations undertaken, and the content of the EIS report, to support the proposed residential development.

The subject property is undeveloped with two detached residential dwellings on the eastern portion and a wooded feature on the western portion. The subject property is designated as Mixed Use Area in the City of Pickering Official Plan (2017). The subject property is also part of the Duffins Heights Secondary Plan (2008), and the subject property is identified as a Mixed Corridor with woodland to be removed on the western portion.

The following subsections present the proposed ToR to undertake the EIS.

Background Review

Beacon will complete a review of various background information sources and companion studies pertaining to the subject property including, but not limited to:

- Duffin Heights Secondary Plan;
- City of Pickering Official Plan;
- Regional Municipality of Durham Official Plan;
- Toronto Region Conservation Authority (TRCA) file data and Living City Policies;
- Natural Heritage Information System Center (NHIC) Database;
- Screening for Species at Risk; and

- Aerial photography and topographic maps.

Field Investigations

Based on the known conditions on the subject property, the following field investigations were completed to identify existing natural heritage features on the subject property in the 2018 and 2019 field seasons (April to July).

Amphibian Surveys (Completed in 2018)

Breeding amphibian surveys were completed over three (3) evenings through the spring and early summer according to Environment Canada's Marsh Monitoring Program protocol to survey and identify presence/absence of breeding amphibians.

Ecological Land Classification and Floral Survey (Completed in 2018 and 2019)

Vegetation communities on the property were mapped and described according to the Ecological Land Classification (ELC) system, which is the current standard methodology for classifying ecosystems in southern Ontario. Vegetation communities were delineated on an aerial photography of the subject property and pertinent information regarding the structure and composition of the communities documented.

Concurrently, a floral species inventory was undertaken which determined the presence and location of any Butternut (*Juglans cinerea*), an endangered species of tree, and any other endangered and threatened species of plant, shrub or tree. Butternut locations were recorded using a handheld GPS. Vascular plant species encountered were noted, and a plant list compiled.

Breeding Bird Surveys (Completed in 2018)

Three early morning roving surveys were completed in June to ensure compliance with the *Endangered Species Act*. Surveys were completed a minimum of seven days apart, during suitable weather conditions.

Feature Staking (October 29, 2018)

One site visit for feature staking was completed with TRCA staff to stake the natural heritage features (i.e. woodlot driplines) on the subject property.

Species at Risk

A general habitat assessment for species at risk that have the potential to occur, was undertaken during the field investigations outlined above. Detailed surveys were conducted for threatened and endangered species that have the potential to occur, as outlined below.

Butternut Health Assessment

A Butternut Health Assessment and hybridity testing was completed in 2018 for Butternut recorded on the subject property and consultation was undertaken with the Ministry of Natural Resources and Forestry.

Bat Habitat Assessment

Detailed snag surveys were completed on April 24, 2018 and March 19, 2019 on the subject property in accordance with the current Ministry of Environment, Conservation and Parks (MECP) protocol for suitable ELC communities within the development footprint.

Acoustic monitoring was completed in June 2018 and 2019 to confirm if endangered bats are present within the woodland on the subject property. Consultation with MECP is on-going to confirm that the requirements of the *Endangered Species Act* are addressed.

Incidental Wildlife Observations

During all site visits, incidental wildlife observations were recorded.

EIS Report

An EIS report will be produced following completion of field investigations and once a final development plan has been determined. Preparation of the report will be an iterative process that will resolve issues related to potential effects of the proposed development and recommendations for mitigation.

The EIS report will identify:

- Existing site conditions;
- An impact assessment relative to the proposed development;
- Identification of opportunities and mitigation measures for the proposed development;
- A discussion of net impacts on the existing natural heritage features on and adjacent to the proposed development;
- A summary of the compensation strategy required for natural feature removal in accordance with City and TRCA guidelines; and
- Relevant natural heritage policy as it pertains to the proposed development.

We propose that this TOR satisfies the TRCA's requirements with regards to the EIS in support of the proposed development on the subject property. Should you have any comments or questions, please do not hesitate to contact the undersigned at (905) 375-9514 or jcampbell@beaconenviro.com .

Prepared by:
Beacon Environmental



Hayley Brown, B.Sc. (Hons.)
Ecologist,
ISA Certified Arborist (ON-2742A)

Reviewed by:
Beacon Environmental



Jesse Campbell, B.Sc., Cert. Eco. Restoration
Senior Ecologist,
ISA Certified Arborist (ON-1540A)



Site Location		Figure 1	
2660,2670,2680 Brock Road EIS			
UTM Zone 17 N, NAD 83			
First Base Solutions Web Mapping Service 2017			
0	35	70	140 Metres
			1:4,000
			Project 218091 September 2018

From: [Stephanie Dore](#)
To: [Jesse Campbell](#); [Catalina Herrera](#)
Cc: [Jamie Milnes](#); [Shauna Fernandes](#); [Adam Layton](#); [Matthew Howard](#); [Steve Brown \(sb@iconhomes.com\)](#); [jackgreenberg@greenberglawyers.ca](#); [Kristi Quinn](#)
Subject: RE: 2660, 2670 & 2680 Brock Road, City of Pickering - Terms of Reference for Environmental Impact Study
Date: Wednesday, November 2, 2022 10:03:38 AM
Attachments: [image001.png](#)
[image002.png](#)

Good Morning Jesse & Team,

Through further internal discussion and closer review of the MESP materials, we would like to provide an update to the Terms of Reference (ToR) items that were previously identified in the scoped ToR received on August 12th. The ToR submitted is acceptable subject to an agreement to the revisions identified in [blue](#) below. If you have any questions, we are happy to discuss however we assume that based on the revisions provided that we may not have to move forward with the meeting scheduled on Thursday. If you could kindly confirm by end of day if you would like to still proceed with our meeting that would be appreciated.

- The focus of the discussion was on the development east of the road alignment. It was acknowledged that any impacts west of the road right-of-way are still being determined and subject to the detailed design of the road;

[TRCA PE Response \(October 2022\):](#) After internal discussion within TRCA and with the City, it was determined that the proposed road needs to be considered in conjunction with the proposed development in way of cumulative effect impacts, given that both works are not independent of the other. Consideration and recommendations for mitigation measures should take into account the proposed road when addressing issues associated with feature base water balance risk evaluation/assessment and SWM.

[TRCA PE Revised Response Nov 1, 2022-](#) Through the scoped EIS, the impacts associated with the proposed development and where the road requires consideration should be addressed in compliance with the approved MESP. Should unanticipated impacts not identified through the MESP be determined, mitigation measures should be provided.

- The extent of the natural features on site are valid as documented, as per the executed compensation agreement. No additional site visits or staking with TRCA are required for the subject lands. Additional work may be required once the extent of grading is determined for the road if it extends outside the road right-of-way;

[TRCA PE Response \(October 2022\):](#) Correct and the above recommendation should be included in the EIS.

[TRCA PE Response November 1, 2022-](#) No change to comment.

- A environmental constraints figure/map is not required, it is understood that the proposed development will result in feature removal as per the approved development limits;
[TRCA PE Response \(October 2022\):](#) Though there will be feature removal within the subject site, there remains other key natural heritage features (significant woodland) and key

hydrologic features (PSWs) adjacent to the subject site. It is important to have a comprehensive picture of all constraints in one figure to inform direct, indirect, and cumulative impacts. Staff notes that the development limits have been approved through the compensation document.

TRCA PE Revised Response Nov 1, 2022 – The constraints mapping is intended as part of the EIS to determine mitigation measures for impacts such as lighting, dust, noise, edge management etc., and while recognizing the approved compensation areas which do not exist in isolation. The status of the wetlands have not been determined through an evaluation through the ESP process and detail design, as such the status of the wetland should remain as unevaluated, although there was no change to the proposed treatment or management associated of these wetlands proposed through the Terms of Reference (TOR). It is still an expectation to receive a constraint map of all KNHF and KHF as per comment above.

- The EIS will summarize all the studies/approvals/agreements completed to date;
TRCA PE Response (October 2022): Excellent thank you.
TRCA PE Response November 1, 2022- No change to comment.
- Mitigation measures for the wetland remaining west of the road are limited due to the future public road providing a barrier from the proposed development. As the proposed development is separated from the remaining features by a road, it is not feasible to direct clean water from the proposed development to the adjacent wetlands. Full mitigation from a hydrological perspective may not be feasible and achievable mitigation measures are to be determined through the detailed design of the road. TRCA noted a clean water collector is being included in the detailed designed for the road south of the project limits for drainage within the road right-of-way. During the detailed design of the road, it will be reviewed if this infrastructure can be extended north to Dersan Street with potential outlets to the wetland on the IO lands;

TRCA PE Response (October 2022): In order to obtain a permit the following needs to be addressed:

- Mitigation for the PSW and woodland feature remaining west of the development should be addressed at this stage of the process (though water balance risk evaluation/assessment and SWM design) as the road has not been built yet and mitigation measures need to be considered for interim and ultimate conditions to satisfy mitigating hydrological changes to the PSWs.
- The proposed mitigations and recommendation regarding unevaluated PSW/woodlands should also inform the road design with alternatives such as culverts underneath the road to allow for flow conveyance directed back to the features.

TRCA PE Response November 1, 2022- After further review, the clean water pipe discussed above collects drainage and re-directs the flows to a tributary in Urfe Creek within the cemetery lands downgradient as such it is no longer a requirement to re-direct drainage from the development lands.

It was agreed that there are no restoration/enhancement opportunities for the proposed development. An edge management plan for the road will be provided as part of the detailed design for the road;

TRCA PE Response (October 2022): Restoration and low impact development opportunities (e.g., grassy swales, linear wetlands, infiltration trenches, rain gardens etc.) and can be explored on the site to offset impacts, promote infiltration, and water quality treatment.

TRCA PE Response November 1, 2022- TRCA recommends that LID technologies are considered as directed from the MESP to support increased infiltration on-site.

- The requirement for a feature water balance risk evaluation to be confirmed by TRCA following internal discussions. It was identified that this has not been a requirement for any other development applications in the area and it will be difficult to accurately complete given that any impacts on the wetland by the recent urbanization of the planning area cannot be accurately accounted for.

TRCA PE Response (October 2022): A wetland water balance risk evaluations needs to be carried out to determine feature-base water balance requirements that will appropriately assess impacts and determined required suitable mitigations through the site design. The EIS and supportive assessment should address the impacts of the proposed development to the adjacent feature ecologically and hydrologically with appropriate mitigation proposed which could include clean water collector and/or culvert placement to ensure the PSW continues to be hydrologically fed in the post-construction scenario as per the pre-construction conditions.

TRCA PE Response November 1, 2022 – Given the role of the clean water collector pipe and the drainage on site based on the MESP, it's our understanding that re-direction of flows would not replicate pre-development conditions or the need for a feature based water balance risk evaluation; however, it would need to be confirmed in the site specific EIS and in consultation with the FSR that there is no hydrological connectivity based on the existing condition to the adjacent wetlands and that the potential to impact, both long-term and short-term, on groundwater recharge and discharge will not occur through the proposed development. Alternatively, mitigation measures should be provided as appropriate. Further, on-site infiltration should be explored and incorporated into the mitigated development scenario as per the Duffin's Heights MESP, where appropriate.

Kind Regards,

Stephanie Dore, RPP, MCIP

Senior Planner

Development Planning and Permits | Development and Engineering Services

T: [\(437\) 880-2469](tel:4378802469)

E: stephanie.dore@trca.ca

A: [101 Exchange Avenue, Vaughan, ON, L4K 5R6](https://www.trca.ca) | [trca.ca](https://www.trca.ca)



From: Jesse Campbell <jcampbell@beaconenviro.com>
Sent: Thursday, October 20, 2022 3:53 PM
To: Catalina Herrera <Catalina.Herrera@trca.ca>
Cc: Stephanie Dore <Stephanie.Worron@trca.ca>; Jamie Milnes <Jamie.Milnes@trca.ca>; Shauna Fernandes <Shauna.Fernandes@trca.ca>; Adam Layton <alayton@evansplanning.com>; Matthew Howard <mh@iconhomes.com>; Steve Brown (sb@iconhomes.com) <sb@iconhomes.com>; jackgreenberg@greenberglawyers.ca; Kristi Quinn <kquinn@beaconenviro.com>
Subject: RE: 2660, 2670 & 2680 Brock Road, City of Pickering - Terms of Reference for Environmental Impact Study

Hi Catalina,

Further to the comments you provided, the project team would like to meet to discuss.

Can you please provide some dates and times that staff are available?

Thank you,

Jesse Campbell, B.Sc., Cert. Eco. Restoration / Ecologist, ISA Certified Arborist

BEACON ENVIRONMENTAL

305 Reid Street, Peterborough, ON K9J 3R2

T) 705.243.7251 x402 C) 905.375.9514

www.beaconenviro.com

To protect our staff, families, clients and the greater community all Beacon staff are working remotely. We will continue to provide timely communications *via* email and telephone and are committed to providing the highest level of service possible during this challenging time.

From: Catalina Herrera <Catalina.Herrera@trca.ca>
Sent: October 18, 2022 12:56 PM
To: Jesse Campbell <jcampbell@beaconenviro.com>
Cc: Stephanie Dore <Stephanie.Worron@trca.ca>; Jamie Milnes <Jamie.Milnes@trca.ca>; Shauna Fernandes <Shauna.Fernandes@trca.ca>
Subject: RE: 2660, 2670 & 2680 Brock Road, City of Pickering - Terms of Reference for Environmental Impact Study

Hi Jesse,

I hope you are doing well. It was nice to virtually meet you in our most recent meeting. I sincerely apologize for the delayed response, as it required consultation with various internal teams.

Please see PE response to the below items in [purple text](#).

If you want to discuss any of the items below, lets schedule a time to chat this week or early next week. Please let me know.

Thanks,

Catalina

Catalina Herrera, B.Sc., M.Sc (she/her)

Ecologist,
Planning Ecology | Policy Planning

T: _____

E: catalina.herrera@trca.ca

A: [101 Exchange Avenue, Vaughan, ON, L4K 5R6](#) | trca.ca



From: Jesse Campbell <jcampbell@beaconenviro.com>

Sent: Tuesday, September 27, 2022 12:16 PM

To: Stephanie Dore <Stephanie.Worron@trca.ca>

Cc: Adam Layton <alayton@evansplanning.com>; jackgreenberg@greenberglawyers.ca; Steve Brown (sb@iconhomes.com) <sb@iconhomes.com>

Subject: RE: 2660, 2670 & 2680 Brock Road, City of Pickering - Terms of Reference for Environmental Impact Study

Hi Stephanie,

Thank you for taking the time to meet a few weeks ago to discuss the comments provided on the Terms of Reference for the EIS. Please see the below summary of the the discussion points:

- The focus of the discussion was on the development east of the road alignment. It was acknowledged that any impacts west of the road right-of-way are still being determined and subject to the detailed design of the road;
[TRCA PE Response \(October 2022\):](#) After internal discussion within TRCA and with the City, it was determined that the proposed road needs to be considered in conjunction with the proposed development in way of cumulative effect impacts, given that both works are not independent of the other. Consideration and recommendations for mitigation measures should take into account the proposed road when addressing issues associated with feature base water balance risk evaluation/assessment and SWM.

The extent of the natural features on site are valid as documented, as per the executed compensation agreement. No additional site visits or staking with TRCA are required for the subject lands. Additional work may be required once the extent of grading is determined for the road if it extends outside the road right-of-way;

TRCA PE Response (October 2022): Correct and the above recommendation should be included in the EIS.

- A environmental constraints figure/map is not required, it is understood that the proposed development will result in feature removal as per the approved development limits;
TRCA PE Response (October 2022): Though there will be feature removal within the subject site, there remains other key natural heritage features (significant woodland) and key hydrologic features (PSWs) adjacent to the subject site. It is important to have a comprehensive picture of all constraints in one figure to inform direct, indirect, and cumulative impacts. Staff notes that the development limits have been approved through the compensation document.

- The EIS will summarize all the studies/approvals/agreements completed to date;

TRCA PE Response (October 2022): Excellent thank you.

- Mitigation measures for the wetland remaining west of the road are limited due to the future public road providing a barrier from the proposed development. As the proposed development is separated from the remaining features by a road, it is not feasible to direct clean water from the proposed development to the adjacent wetlands. Full mitigation from a hydrological perspective may not be feasible and achievable mitigation measures are to be determined through the detailed design of the road. TRCA noted a clean water collector is being included in the detailed designed for the road south of the project limits for drainage within the road right-of-way. During the detailed design of the road, it will be reviewed if this infrastructure can be extended north to Dersan Street with potential outlets to the wetland on the IO lands;

TRCA PE Response (October 2022): In order to obtain a permit the following needs to be addressed:

- Mitigation for the PSW and woodland feature remaining west of the development should be addressed at this stage of the process (though water balance risk evaluation/assessment and SWM design) as the road has not been built yet and mitigation measures need to be considered for interim and ultimate conditions to satisfy mitigating hydrological changes to the PSWs.
- The proposed mitigations and recommendation regarding PSW/woodlands should also inform the road design with alternatives such as culverts underneath the road to allow for flow conveyance directed back to the features.
- It was agreed that there are no restoration/enhancement opportunities for the proposed development. An edge management plan for the road will be provided as part of the detailed design for the road;
TRCA PE Response (October 2022): Restoration and low impact development opportunities (e.g., grassy swales, linear wetlands, infiltration trenches, rain gardens etc) and can be explored on the site to offset impacts, promote infiltration, and water quality treatment.
- The requirement for a feature water balance risk evaluation to be confirmed by TRCA following internal discussions. It was identified that this has not been a requirement for any other development applications in the area and it will be difficult to accurately complete given

that any impacts on the wetland by the recent urbanization of the planning area cannot be accurately accounted for.

TRCA PE Response (October 2022): A wetland water balance risk evaluations needs to be carried out to determine feature-base water balance requirements that will appropriately assess impacts and determined required suitable mitigations through the site design. The EIS and supportive assessment should address the impacts of the proposed development to the adjacent feature ecologically and hydrologically with appropriate mitigation proposed which could include clean water collector and/or culvert placement to ensure the PSW continues to be hydrologically fed in the post-construction scenario as per the pre-construction conditions.

Can you please advise if it has been confirmed that a feature based water balance risk evaluation is not required. [Please see above responses.](#)

Sincerely,

Sincerely,

Jesse Campbell, B.Sc., Cert. Eco. Restoration / Ecologist, ISA Certified Arborist

BEACON ENVIRONMENTAL

305 Reid Street, Peterborough, ON K9J 3R2

T) 705.243.7251 x402 C) 905.375.9514

www.beaconenviro.com

To protect our staff, families, clients and the greater community all Beacon staff are working remotely. We will continue to provide timely communications *via* email and telephone and are committed to providing the highest level of service possible during this challenging time.

From: Stephanie Dore <Stephanie.Worron@trca.ca>

Sent: August 24, 2022 11:06 AM

To: Jesse Campbell <jjcampbell@beaconenviro.com>

Subject: RE: 2660, 2670 & 2680 Brock Road, City of Pickering - Terms of Reference for Environmental Impact Study

Good Morning Jesse,

No problem at all.

10:30am on Monday works for us. I will send along a meeting invite for you shortly.

Kind Regards,

Stephanie Dore, RPP, MCIP

Senior Planner

Development Planning and Permits | Development and Engineering Services

T: [\(437\) 880-2469](tel:4378802469)
E: stephanie.dore@trca.ca
A: [101 Exchange Avenue, Vaughan, ON, L4K 5R6](https://www.trca.ca/101-Exchange-Avenue-Vaughan-ON-L4K-5R6) | [trca.ca](https://www.trca.ca)



From: Jesse Campbell <jcampbell@beaconenviro.com>
Sent: Wednesday, August 24, 2022 8:53 AM
To: Stephanie Dore <Stephanie.Worron@trca.ca>
Subject: RE: 2660, 2670 & 2680 Brock Road, City of Pickering - Terms of Reference for Environmental Impact Study

Hi Stephanie,

Hope your summer is going well!

Could we please have a call to discuss these comments as they don't appear to reflect the previous correspondence on the file as it relates to the scope of the EIS provided by Vanessa Aubrey back in 2019 (see attached) or the compensation agreement that has been executed for this project.

Please let me know if any of the following dates and times work for you:

Thursday, August 25th: 12-1, 2-3

Friday, August 26th: 9-4

Monday, August 29th: 9-2

Thanks!

Jesse Campbell, B.Sc., Cert. Eco. Restoration / Senior Ecologist, ISA Certified Arborist

BEACON ENVIRONMENTAL

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www.beaconenviro.com

To protect our staff, families, clients and the greater community all Beacon staff are working remotely. We will continue to provide timely communications *via* email and telephone and are committed to providing the highest level of service possible during this challenging time.

From: Stephanie Dore <Stephanie.Worron@trca.ca>
Sent: Friday, August 12, 2022 11:57 AM
To: Jesse Campbell <jcampbell@beaconenviro.com>
Subject: RE: 2660, 2670 & 2680 Brock Road, City of Pickering - Terms of Reference for Environmental Impact Study

Hi Jesse,

Please find the Ecology comments pertaining to the ToR for 2660,2670, and 2680 Brock Road attached for you below:

Thank you for the circulation of the proposed Terms of Reference (TOR) by Beacon Consulting (July, 2022). Generally, the proposed scoped ToR is acceptable subject to the addition of the following:

Background information review

- Please ensure that the background information include review of ecological data available (e.g: Breeding bird atlas, amphibian atlas etc.).
- Undertake a Species at Risk screening with MECP and inventory under the *Endangered Species Act*, 2007 and assess for potential habitat. Additional species-specific surveys may be required if SAR habitat is present, please contact the Ministry of Environment, Conservation and Parks (MECP) for further direction. Include any relevant correspondence with the MECP as an appendix.
- Assess for Significant Wildlife Habitat as per the Significant Wildlife Habitat Criteria Schedules for Ecoregion 6E (MNRF, January 2015).

Field Assessments

- Ensure a botanical survey is carried out and a vascular plant list is provided in addition to the ELC;
- Please confirm the features staked with given dates, TRCA may need to determine and/ or confirm the limits of the natural heritage features on site. If a wetland staking is required, the exercise should be undertaken at the appropriate flowering season with TRCA (generally between early summer and late fall).

Impact Assessment

- Identify and provide detailed descriptions of natural features, key natural heritage features and key hydrologic features in the study area, their function, and connectivity to the broader natural heritage system that they are within. Determine the significance of these natural heritage features and hydrologic features; include a characterization of wetland habitat (form/function) including hydrology (A TRCA feature water balance risk evaluation should be undertaken).
- Map all natural heritage features (KHNFs & KHFs), vegetation communities and other environmental features (watercourses, wetlands, areas of groundwater discharge, significant woodland and/or wildlife habitat etc.) and/or other environmental constraints on a current high quality ortho-air photo and show their setbacks / Minimum Vegetation Protection Zones. TRCA will also require an environmental constraints map demonstrating that the proposed development and associated site alteration works are entirely outside of environmental constraints (this can be part of the NHE or a stand alone plan).
- Provide an assessment of the potential environmental impacts (direct/indirect) posed by the proposed development on the natural heritage feature(s) form and/or function both

ecological and hydrological; Determine if drainage on the proposed development may impact on the wetland receiving flows.

- Demonstrate suitable measures to avoid, minimize, and/or mitigate potential impact to features adjacent to the proposed development. Appropriate justification should be provided for any compensation considerations.
- Provide details for restoration and enhancement opportunities.
- A policy conformity exercise should be undertaken for all applicable provincial, municipal and TRCA policies.

Thank you,

Stephanie Dore, RPP, MCIP

Senior Planner

Development Planning and Permits | Development and Engineering Services

T: [\(437\) 880-2469](tel:4378802469)

E: stephanie.dore@trca.ca

A: [101 Exchange Avenue, Vaughan, ON, L4K 5R6](https://www.trca.ca) | [trca.ca](https://www.trca.ca)



From: Jesse Campbell <jcampbell@beaconenviro.com>

Sent: Friday, July 29, 2022 5:04 PM

To: Stephanie Dore <Stephanie.Worron@trca.ca>

Cc: Adam Layton <alayton@evansplanning.com>; jackgreenberg@greenberglawyers.ca; Steve Brown (sb@iconhomes.com) <sb@iconhomes.com>

Subject: 2660, 2670 & 2680 Brock Road, City of Pickering - Terms of Reference for Environmental Impact Study

Hi Stephanie,

Further to the on-going correspondence on this file, Beacon is preparing an Environmental Impact Study for the proposed development of the properties noted above.

Please find attached a Terms of Reference for the EIS.

Sincerely,

Jesse Campbell (formerly Harnden), B.Sc., Cert. Eco. Restoration / Senior Ecologist, ISA Certified Arborist

BEACON ENVIRONMENTAL

305 Reid Street, Peterborough, ON K9J 3R2

T) 705.243.7251 x402 C) 905.375.9514

www.beaconenviro.com

Please note I will be on vacation from August 1st to 5th inclusive.

To protect our staff, families, clients and the greater community all Beacon staff are working remotely. We will continue to provide timely communications *via* email and telephone and are committed to providing the highest level of service possible during this challenging time.

Appendix B

Breeding Birds List

Appendix B

Breeding Birds List

Common Name	Scientific Name	Status						# Breeding Pairs/ Territories	
		National Species at Risk COSEWICa	Species at Risk in Ontario Listing a	Provincial breeding season SRANK b	TRCA Status d	Regional Status	Area-sensitive (OMNR)c	Location 1	Location 2
Mourning Dove	<i>Zenaida macroura</i>			S5	L5				1
Downy Woodpecker	<i>Dryobates pubescens</i>			S5	L5			1	
Hairy Woodpecker	<i>Dryobates villosus</i>			S5	L4		A	1	
Eastern Phoebe	<i>Sayornis phoebe</i>			S5	L5			1	
Tree Swallow	<i>Tachycineta bicolor</i>			S4	L4			1	
American Crow	<i>Corvus brachyrhynchos</i>			S5	L5				1
Black-capped Chickadee	<i>Poecile atricapillus</i>			S5	L5			1	
House Wren	<i>Troglodytes aedon</i>			S5	L5			1	
American Robin	<i>Turdus migratorius</i>			S5	L5			2	1
Gray Catbird	<i>Dumetella carolinensis</i>			S4	L4			1	
Cedar Waxwing	<i>Bombycilla cedrorum</i>			S5	L5				1
European Starling	<i>Sturnus vulgaris</i>			SE	L+			5	1
Black-throated Green Warbler	<i>Setophaga virens</i>			S5	L3		A	1	
Pine Warbler	<i>Setophaga pinus</i>			S5	L4		A	1	
American Redstart	<i>Setophaga ruticilla</i>			S5	L4		A	1	
Northern Cardinal	<i>Cardinalis cardinalis</i>			S5	L5			2	
Song Sparrow	<i>Melospiza melodia</i>			S5	L5			2	2
Brown-headed Cowbird	<i>Molothrus ater</i>			S4	L5			1	
Baltimore Oriole	<i>Icterus galbula</i>			S4	L5			1	1
American Goldfinch	<i>Spinus tristis</i>			S5	L5			3	1
House Sparrow	<i>Passer domesticus</i>			SNA	L+			1	

Field Work Conducted On: June 5 and 19, 2018 (Location 1), June 3, 2019 (Location 2)

Location 1 - Southern Parcel
 Location 2 - Northern Parcel

Number of Species: 21
 Number of (provincial and national) Species at Risk: 0
 Number of S1 to S3 Species: 0
 Number of TRCA L1, L2 and L3 Species (Species of Concern): 1 (Black-throated Green Warbler)
 Number of Area-sensitive Species: 4 (Hairy Woodpecker, Black-throated Green Warbler, Pine Warbler and American Redstart)

Location 1
 Number of Species: 18
 Number of (provincial and national) Species at Risk: 0
 Number of S1 to S3 Species: 0
 Number of TRCA L1, L2 and L3 Species (Species of Concern): 1 (Black-throated Green Warbler)
 Number of Area-sensitive Species: 4 (Hairy Woodpecker, Black-throated Green Warbler, Pine Warbler and American Redstart)

Location 2
 Number of Species: 8
 Number of (provincial and national) Species at Risk: 0

Number of S1 to S3 Species: 0
Number of TRCA L1, L2 and L3 Species (Species of Concern): 0
Number of Area-sensitive Species: 0

KEY

a COSEWIC = Committee on the Status of Endangered Wildlife in Canada

a Species at Risk in Ontario List (as applies to ESA) as designated by COSSARO (Committee on the Status of Species at Risk in Ontario)

END = Endangered, THR = Threatened, SC = Special Concern

^b SRANK (from Natural Heritage Information Centre) for breeding status if:

S1 (Critically Imperiled), S2 (Imperiled), S3 (Vulnerable), S4 (Apparently Secure), S5 (Secure)

SNA (Not applicable... 'because the species is not a suitable target for conservation activities'; includes non-native species)

c Ontario Ministry of Natural Resources (OMNR). 2000. Significant Wildlife Habitat Technical Guide (Appendix G). 151 p plus appendices.

d Toronto and Region Conservation Authority L rank (Dec 2018):

L1 to L3 Regional species of concern from highest to lowest; L4 Urban concern; L5 Secure through region; L+ Non-native

Appendix C

Plant List

Appendix C

Vascular Plant List

Scientific Name	Common Name	COSEWIC	SARO	SRank	Rank (TRCA April 2019)	DURHAM (Varga 2005)	Nat Status
<i>Acer negundo</i>	Manitoba Maple			S5	L+?		N
<i>Acer platanoides</i>	Norway Maple			SE5	L+		I
<i>Acer x freemanii</i>	(<i>Acer rubrum</i> X <i>Acer saccharinum</i>)			SNA	L4		N
<i>Rhus typhina</i>	Staghorn Sumac			S5	L5		N
<i>Daucus carota</i>	Wild Carrot			SE5	L+		I
<i>Asclepias syriaca</i>	Common Milkweed			S5	L5		N
<i>Vincetoxicum rossicum</i>	European Swallowwort			SE5	L+		I
<i>Arisaema triphyllum</i>	Jack-in-the-pulpit			S5	L5		N
<i>Achillea millefolium</i>	Common Yarrow			SE5?	L+		I
<i>Ambrosia artemisiifolia</i>	Common Ragweed			S5	L5		N
<i>Arctium minus</i>	Common Burdock			SE5	L+		I
<i>Bidens frondosa</i>	Devil's Beggarticks			S5	L5		N
<i>Cichorium intybus</i>	Wild Chicory			SE5	L+		I
<i>Cirsium arvense</i>	Canada Thistle			SE5	L+		I
<i>Cirsium vulgare</i>	Bull Thistle			SE5	L+		I
<i>Erigeron canadensis</i>	Canada Horseweed			S5	L5		N
<i>Erigeron philadelphicus</i>	Philadelphia Fleabane			S5			N
<i>Euthamia graminifolia</i>	Grass-leaved Goldenrod			S5	L5		N
<i>Leucanthemum vulgare</i>	Oxeye Daisy			SE5	L+		I
<i>Solidago altissima</i> var. <i>altissima</i>	Eastern Tall Goldenrod			S5			N
<i>Solidago canadensis</i>	Canada Goldenrod			S5		U	N
<i>Solidago nemoralis</i> ssp. <i>decemflora</i>	Prairie Grey-stemmed Goldenrod			S1S2			N
<i>Sonchus arvensis</i> ssp. <i>arvensis</i>	Glandular Sow-thistle			SE5	L+		I

Scientific Name	Common Name	COSEWIC	SARO	SRank	Rank (TRCA April 2019)	DURHAM (Varga 2005)	Nat Status
<i>Symphotrichum cordifolium</i>	Heart-leaved Aster			S5	L5		N
<i>Symphotrichum lanceolatum</i> ssp. <i>lanceolatum</i>	Eastern Panicked Aster			S5	L5		N
<i>Symphotrichum lateriflorum</i>	Calico Aster			S5			N
<i>Taraxacum officinale</i>	Common Dandelion			SE5	L+		I
<i>Tripleurospermum maritimum</i>	Seaside Chamomile			S3			N
<i>Tussilago farfara</i>	Coltsfoot			SE5	L+		I
<i>Impatiens capensis</i>	Spotted Jewelweed			S5	L5		N
<i>Podophyllum peltatum</i>	May-apple			S5	L5		N
<i>Betula papyrifera</i>	Paper Birch			S5	L4		N
<i>Hackelia virginiana</i>	Virginia Stickseed			S5	L5	R4	N
<i>Hesperis matronalis</i>	Dame's Rocket			SE5	L+		I
<i>Lonicera tatarica</i>	Tatarian Honeysuckle			SE5	L+		I
<i>Chenopodium album</i>	Common Lamb's-quarters			SE5	L+		I
<i>Hypericum perforatum</i>	Common St. John's-wort			SE5	L+		I
<i>Convolvulus arvensis</i>	Field Bindweed			SE5	L+		I
<i>Cornus sericea</i>	Red-osier Dogwood			S5	L5		N
<i>Echinocystis lobata</i>	Wild Cucumber			S5	L5		N
<i>Juniperus virginiana</i>	Eastern Red Cedar			S5	L5		N
<i>Thuja occidentalis</i>	Eastern White Cedar			S5	L5		N
<i>Scirpus atrovirens</i>	Dark-green Bulrush			S5	L5		N
<i>Scirpus cyperinus</i>	Common Woolly Bulrush			S5	L4		N
<i>Matteuccia struthiopteris</i>	Ostrich Fern			S5			N
<i>Onoclea sensibilis</i>	Sensitive Fern			S5	L5		N
<i>Equisetum arvense</i>	Field Horsetail			S5	L5		N
<i>Lotus corniculatus</i>	Garden Bird's-foot Trefoil			SE5	L+		I
<i>Medicago lupulina</i>	Black Medick			SE5	L+		I
<i>Melilotus albus</i>	White Sweet-clover			SE5	L+		I
<i>Securigera varia</i>	Purple Crown-vetch			SE5	L+		I
<i>Trifolium pratense</i>	Red Clover			SE5	L+		I
<i>Vicia cracca</i>	Tufted Vetch			SE5	L+		I

Scientific Name	Common Name	COSEWIC	SARO	SRank	Rank (TRCA April 2019)	DURHAM (Varga 2005)	Nat Status
<i>Quercus rubra</i>	Northern Red Oak			S5	L4		N
<i>Hydrangea paniculata</i>	Panicled Hydrangea			SE1			I
<i>Juglans cinerea</i>	Butternut	END	END	S2?	L3		N
<i>Juglans nigra</i>	Black Walnut			S4?	L5	U	N
<i>Leonurus cardiaca</i>	Common Motherwort			SE5			I
<i>Lycopus americanus</i>	American Water-horehound			S5	L4		N
<i>Prunella vulgaris ssp. lanceolata</i>	Lance-leaved Self-heal			S5	L5		N
<i>Lythrum salicaria</i>	Purple Loosestrife			SE5	L+		I
<i>Fraxinus pennsylvanica</i>	Red Ash			S4	L5		N
<i>Syringa vulgaris</i>	Common Lilac			SE5	L+		I
<i>Circaea canadensis ssp. canadensis</i>	Canada Enchanter's Nightshade			S5	L5		N
<i>Epilobium ciliatum ssp. glandulosum</i>	Glandular Willowherb			SU			N
<i>Oenothera biennis</i>	Common Evening-primrose			S5	L5		N
<i>Oxalis stricta</i>	Upright Yellow Wood-sorrel			S5	L5		N
<i>Larix laricina</i>	Tamarack			S5	L3		N
<i>Picea abies</i>	Norway Spruce			SE3	L+		I
<i>Picea glauca</i>	White Spruce			S5	L3		N
<i>Picea pungens</i>	Blue Spruce			SE1	L+		I
<i>Pinus strobus</i>	Eastern White Pine			S5	L4		N
<i>Pinus sylvestris</i>	Scots Pine			SE5	L+		I
<i>Plantago major</i>	Common Plantain			SE5	L+		I
<i>Bromus inermis</i>	Smooth Brome			SE5	L+		I
<i>Dactylis glomerata</i>	Orchard Grass			SE5	L+		I
<i>Echinochloa crus-galli</i>	Large Barnyard Grass			SE5	L+		I
<i>Festuca rubra ssp. rubra</i>	Red Fescue			SE5	L+		I
<i>Phalaris arundinacea</i>	Reed Canarygrass			S5	L+?		N
<i>Poa compressa</i>	Canada Bluegrass			SE5	L+		I
<i>Poa pratensis ssp. pratensis</i>	Kentucky Bluegrass			SE5	L+		I
<i>Setaria faberi</i>	Giant Foxtail			SE4	L+		I

Scientific Name	Common Name	COSEWIC	SARO	SRank	Rank (TRCA April 2019)	DURHAM (Varga 2005)	Nat Status
<i>Persicaria lapathifolia</i>	Pale Smartweed			S5	L5		N
<i>Rumex crispus</i>	Curled Dock			SE5	L+		I
<i>Ranunculus acris</i>	Common Buttercup			SE5	L+		I
<i>Rhamnus cathartica</i>	European Buckthorn			SE5	L+		I
<i>Amelanchier arborea</i>	Downy Serviceberry			S5	L4		N
<i>Crataegus mollis</i>	Downy Hawthorn			S4S5	L+?		N
<i>Crataegus monogyna</i>	English Hawthorn			SE4	L+		I
<i>Geum aleppicum</i>	Yellow Avens			S5	L5		N
<i>Malus pumila</i>	Common Apple			SE4	L+		I
<i>Potentilla recta</i>	Sulphur Cinquefoil			SE5	L+		I
<i>Prunus avium</i>	Sweet Cherry			SE4	L+		I
<i>Prunus serotina</i>	Black Cherry			S5	L5		N
<i>Prunus virginiana var. virginiana</i>	Chokecherry			S5	L5		N
<i>Rosa multiflora</i>	Multiflora Rose			SE5	L+		I
<i>Rubus idaeus ssp. strigosus</i>	North American Red Raspberry			S5	L5		N
<i>Rubus occidentalis</i>	Black Raspberry			S5	L5		N
<i>Populus tremuloides</i>	Trembling Aspen			S5	L5		N
<i>Populus x canadensis</i>	(<i>Populus deltoides</i> X <i>Populus nigra</i>)			SNA	L+		I
<i>Salix x fragilis</i>	(<i>Salix alba</i> X <i>Salix euxina</i>)			SNA	L+		I
<i>Verbascum lychnitis</i>	White Mullein			SE1	L+		I
<i>Veronica agrestis</i>	Field Speedwell			SE1			I
<i>Tilia americana</i>	Basswood			S5	L5		N
<i>Typha angustifolia</i>	Narrow-leaved Cattail			SE5	L+		I
<i>Ulmus americana</i>	White Elm			S5	L5		N
<i>Urtica dioica ssp. dioica</i>	European Stinging Nettle			SE2	L+		I
<i>Verbena urticifolia</i>	White Vervain			S5	L5		N
<i>Viola canadensis</i>	Canada Violet			S5	L3		N
<i>Parthenocissus quinquefolia</i>	Virginia Creeper			S4?	L5		N
<i>Vitis riparia</i>	Riverbank Grape			S5	L5		N

Appendix D

Endangered and Threatened Species

Appendix D

Endangered and Threatened Species Which May Occur on Subject Properties

Species	ESA ¹ Status	SARA ² Status	COSEWIC ³ Status	Habitat Present on the Subject Properties
Northern Myotis (Bat) <i>Myotis septentrionalis</i>	Endangered	Endangered Schedule 1	Endangered	Suitable habitat is present on property. Seasonal studies confirmed this species is not present (Section 4.5.1).
Little Brown Myotis (Bat) <i>Myotis lucifugus</i>	Endangered	Endangered Schedule 1	Endangered	Suitable habitat is present on property. Seasonal studies confirmed this species is not present (Section 4.5.1).
Eastern Small-footed Myotis (Bat) <i>Myotis leibii</i>	Endangered	No Status	No Status	Suitable habitat is present on property. Seasonal studies confirmed this species is not present (Section 4.5.1).
Tri-colored Bat <i>Perimyotis subflavus</i>	Endangered	Endangered Schedule 1	Endangered	Suitable habitat is present on property. Seasonal studies confirmed this species is not present (Section 4.5.1).
Butternut <i>Juglans cinerea</i>	Endangered	Endangered Schedule 1	Endangered	Six trees were recorded on the subject property (Section 4.5.2).
Red Mulberry <i>Morus rubra</i>	Endangered	Endangered Schedule 1	Endangered	Suitable habitat is present on property. Seasonal studies confirmed this species is not present.
Redside Dace <i>Clinostomus elongatus</i>	Endangered	Endangered	Endangered	No suitable habitat present on the subject property.
American Eel <i>Anguilla rostrata</i>	Endangered	No Status	Threatened	No suitable habitat present on the subject property.
Acadian Flycatcher <i>Empidonax virens</i>	Endangered	Endangered Schedule 1	Endangered	Suitable habitat is present on property. Seasonal studies confirmed this species is not present.
Yellow-breasted Chat <i>Icteria virens</i>	Endangered	Endangered Schedule 1	Endangered	Suitable habitat is present on property. Seasonal studies confirmed this species is not present.
Eastern Meadowlark <i>Sturnella magna</i>	Threatened	Threatened Schedule 1	Threatened	Suitable habitat is present on property. Seasonal studies confirmed this species is not present.

Species	ESA ¹ Status	SARA ² Status	COSEWIC ³ Status	Habitat Present on the Subject Properties
Bobolink <i>Dolichonyx oryzivorus</i>	Threatened	Threatened Schedule 1	Threatened	Suitable habitat is present on property. Seasonal studies confirmed this species is not present.
Chimney Swift <i>Chaetura pelagica</i>	Threatened	Threatened Schedule 1	Threatened	No suitable habitat present on the subject property.
Bank Swallow <i>Riparia riparia</i>	Threatened	Threatened Schedule 1	Threatened	No suitable habitat present on the subject property.
Barn Swallow <i>Hirundo rustica</i>	Threatened	Threatened Schedule 1	Special Concern	No suitable habitat present on the subject property.
Least Bittern <i>Ixobrychus exilis</i>	Threatened	Threatened Schedule 1	Threatened	No suitable habitat present on the subject property.
Blanding's Turtle <i>Emydoidea blandingii</i>	Threatened	Threatened Schedule 1	Endangered	No suitable habitat present on the subject property.

1- ESA – Endangered Species Act

2- SARA – Species at Risk Act

3- COSEWIC – Committee on the Status of Endangered Wildlife in Canada

Appendix E

MNRF Correspondence

From: [Kowalyk, Bohdan \(MNRF\)](#)
To: [Jesse Harnden](#); [Bobak, Eva \(MNRF\)](#)
Cc: [Kristi Quinn](#); [Adam Layton](#)
Subject: RE: 2680 Brock Road, Pickering - Butternut
Date: Friday, November 23, 2018 10:10:28 AM

Ok, if tree #4 is a hybrid then the provincial interest appears to have been addressed for this group of trees.

Regards,

Bohdan Kowalyk, R.P.F.

District Planner, Aurora District, Ontario Ministry of Natural Resources and Forestry
50 Bloomington Road, Aurora, Ontario L4G 0L8
Phone: 905-713-7387; Email: Bohdan.Kowalyk@Ontario.ca

From: Jesse Harnden <jharnden@beaconenviro.com>
Sent: November-23-18 9:57 AM
To: Kowalyk, Bohdan (MNRF) <bohdan.kowalyk@ontario.ca>; Bobak, Eva (MNRF) <Eva.Bobak@ontario.ca>
Cc: Kristi Quinn <kquinn@beaconenviro.com>; Adam Layton <alayton@evansplanning.com>
Subject: 2680 Brock Road, Pickering - Butternut

Hi Bohdan,

Further to our site visit on Monday, the genetic test results just came back from the lab showing that Tree No. 4 is a hybrid. This tree was re-assessed as a Category 3 tree and it was discussed that it would require a permit for development within 25 m. It was also discussed on site that Tree No. 5 would also technically be considered a Category 3 tree but if Tree No. 4 was retained it would be protected and should a permit be sought for Tree No. 4 then Tree No. 5 was not required to be included in the permit. This tree was not genetically tested and is in an advanced state of decline with extensive decay, and has already had a large leader failure. However, as Tree No. 4 is a hybrid and not subject to the ESA I want to confirm that no further action is required for Tree No. 5 (permit or registration).

Thank you,

Jesse

From: Heather Zurbrigg <heather@fgca.net>

Sent: November 23, 2018 8:56 AM

To: Jesse Harnden

Subject: OFRI DNA testing results

Hi Jesse,

Please find attached the results for the DNA testing on the samples you sent up to OFRI from Pickering, Ontario. Hybridity was detected in the laboratory results of one of the samples.

I will send the invoicing for this separately.

thanks,
Heather

Heather Zurbrigg B.Sc (Hon)

Species Conservation and Administration Coordinator

Forest Gene Conservation Association

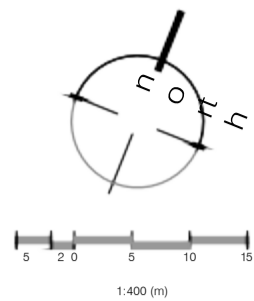
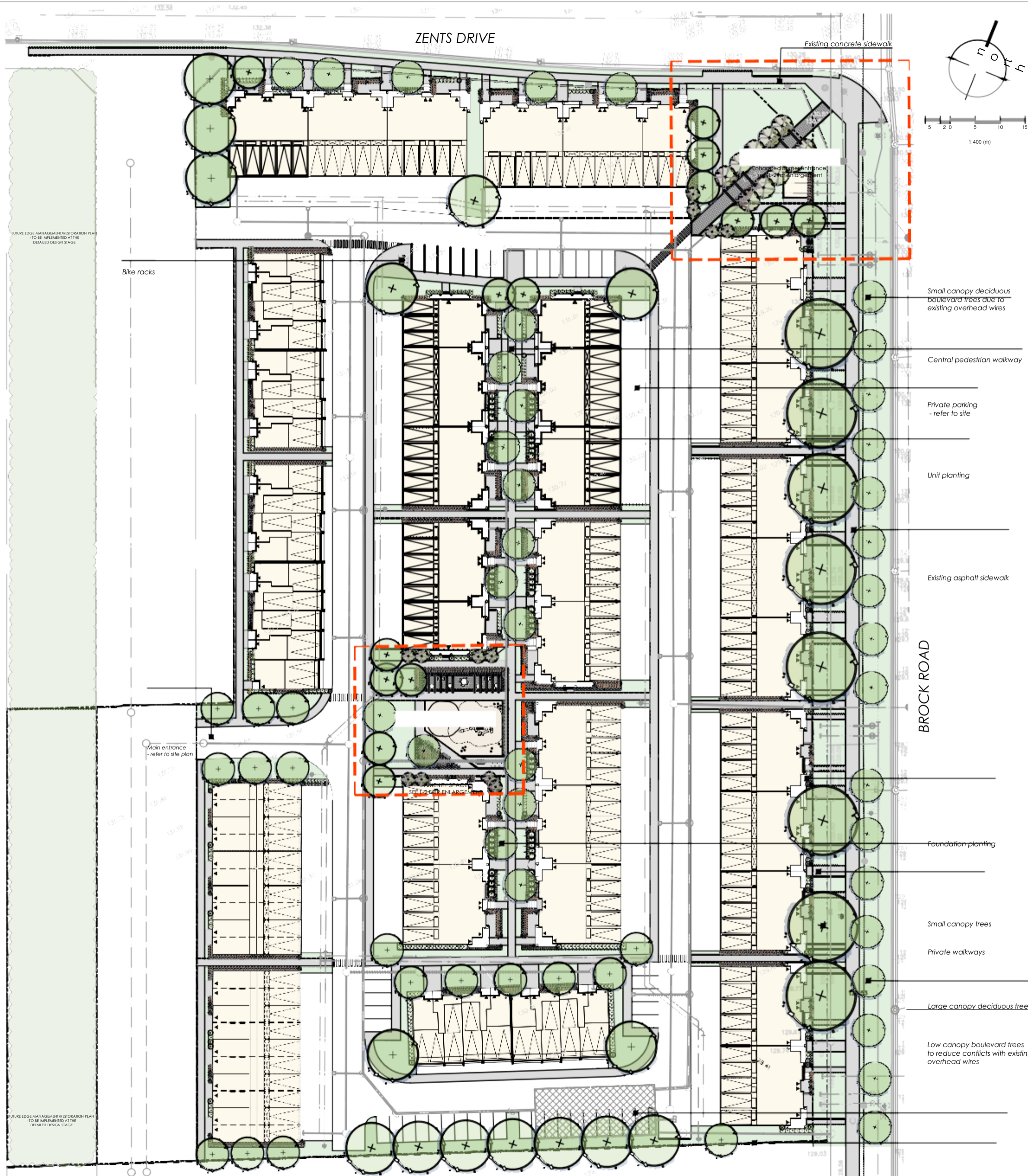
heather@fgca.net

website: fgca.net

613-301-4654

Appendix F

Landscape Plans



Complementary colours planting



Flowering trees



Winter interest planting



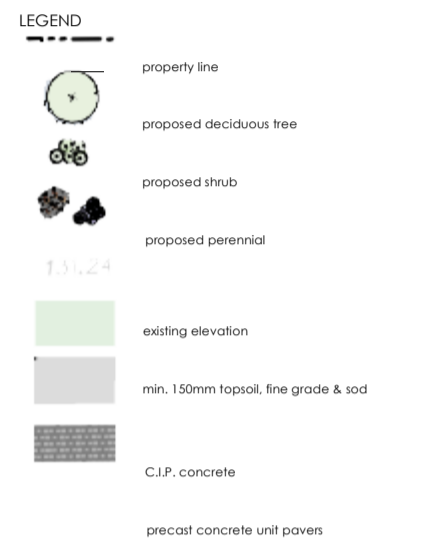
Bike racks



Central townhouse walkway



Townhouse street frontage



NOT FOR CONSTRUCTION
ISSUED FOR REVIEW & COMMENTS ONLY

REVISIONS/ SUBMISSIONS

#	DATE	DESCRIPTION
1	2022-10-04	



CLIENT
Icon Homes

MUNICIPALITY
City of Pickering

PROJECT
Zents Drive and Brock Road North

MUNICIPAL FILE NUMBER

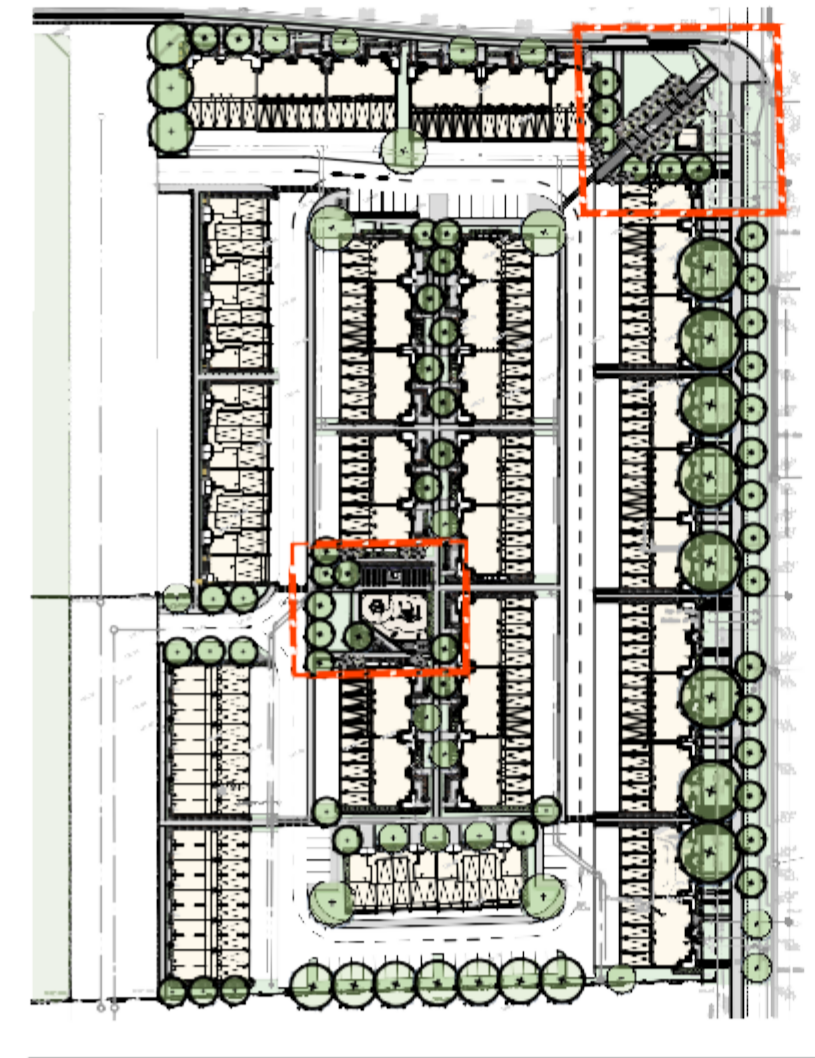
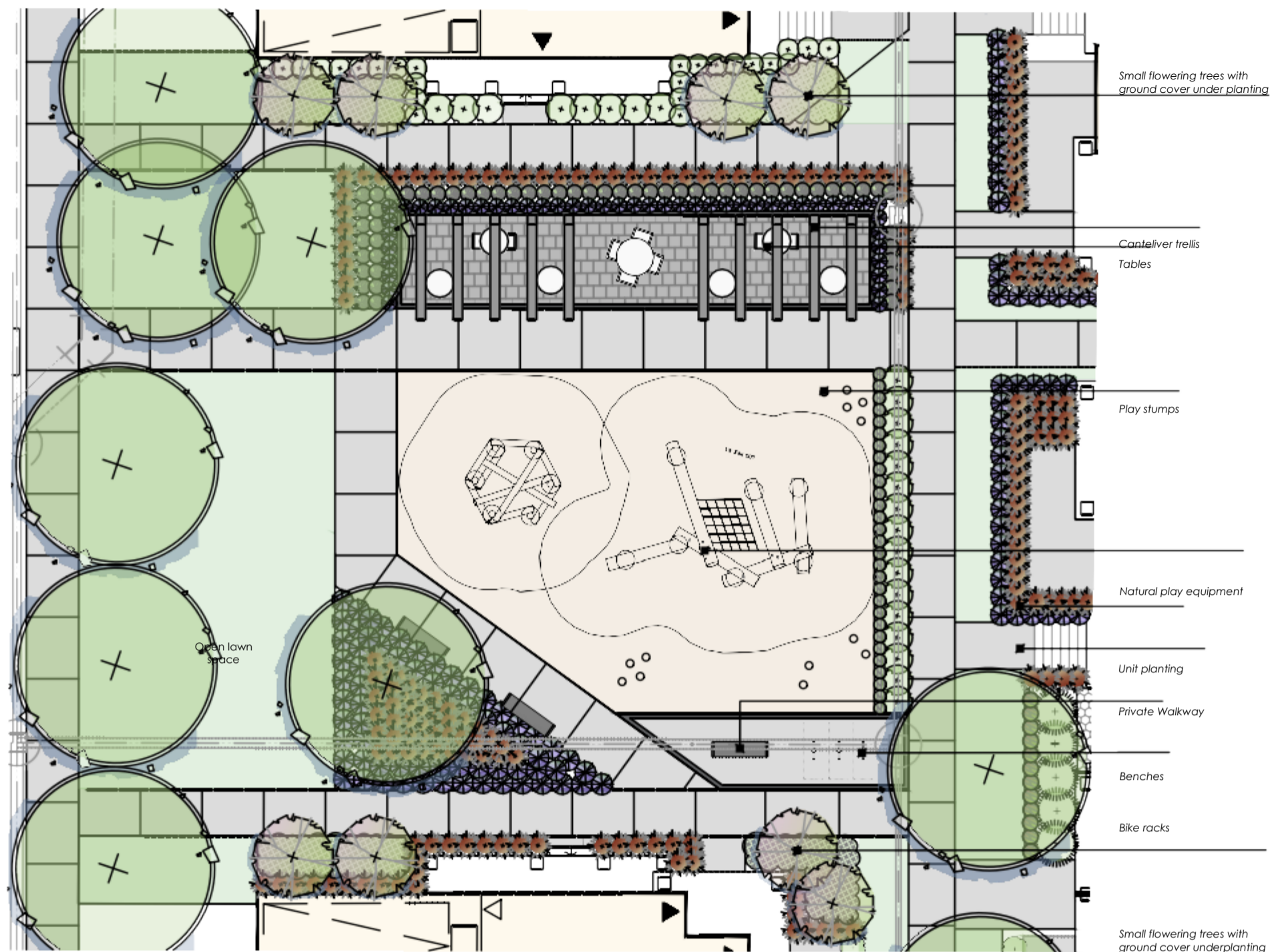
erground SWM tank
- refer to civil drawings

Wood privacy fence

Boulevard trees and sidewalk

adesso design inc.
landscape architecture

218 Locke Street South, 2nd Floor
Hamilton, ON L8P 4B4
t. 905.526.8876
www.adessodesigninc.ca



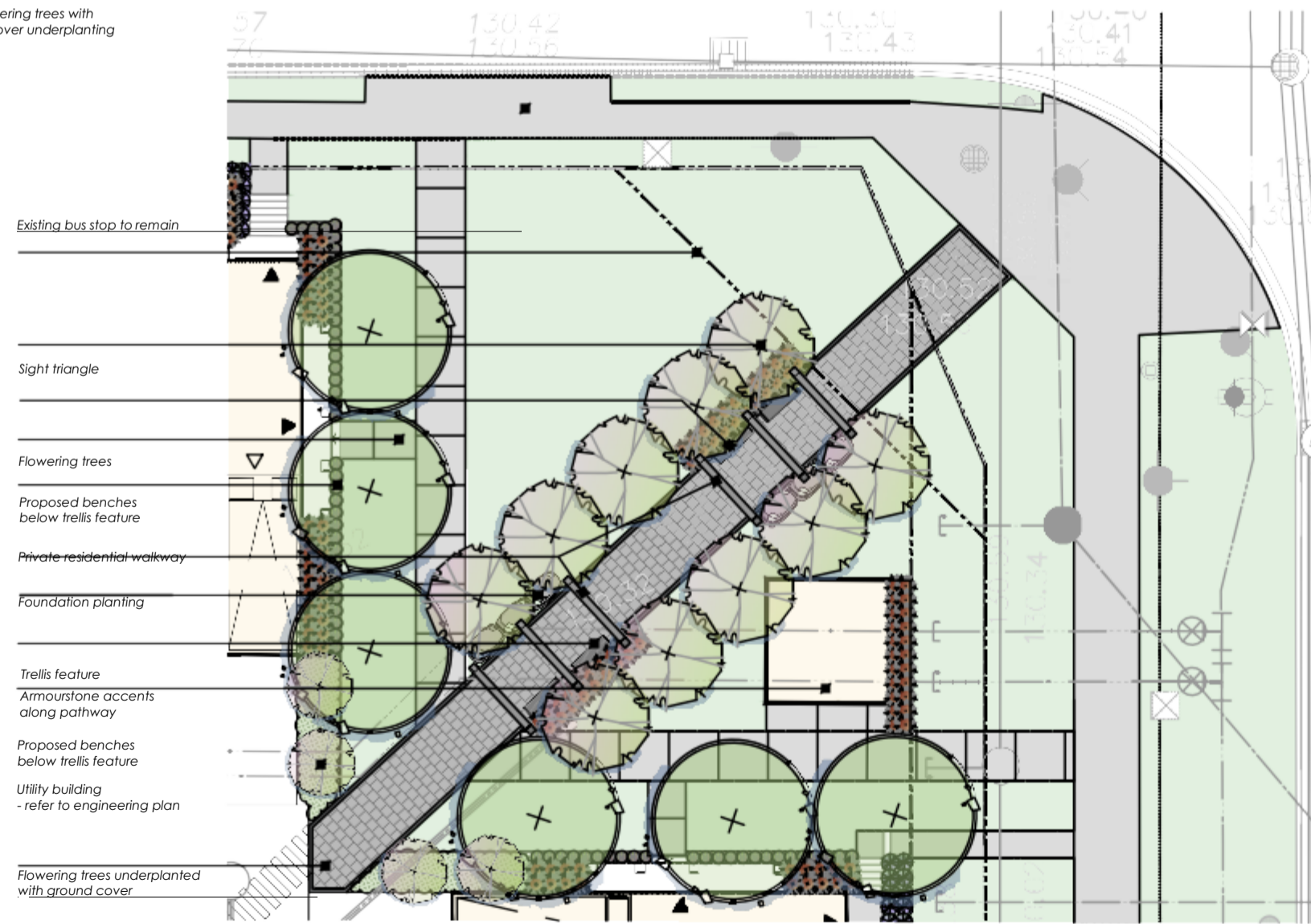
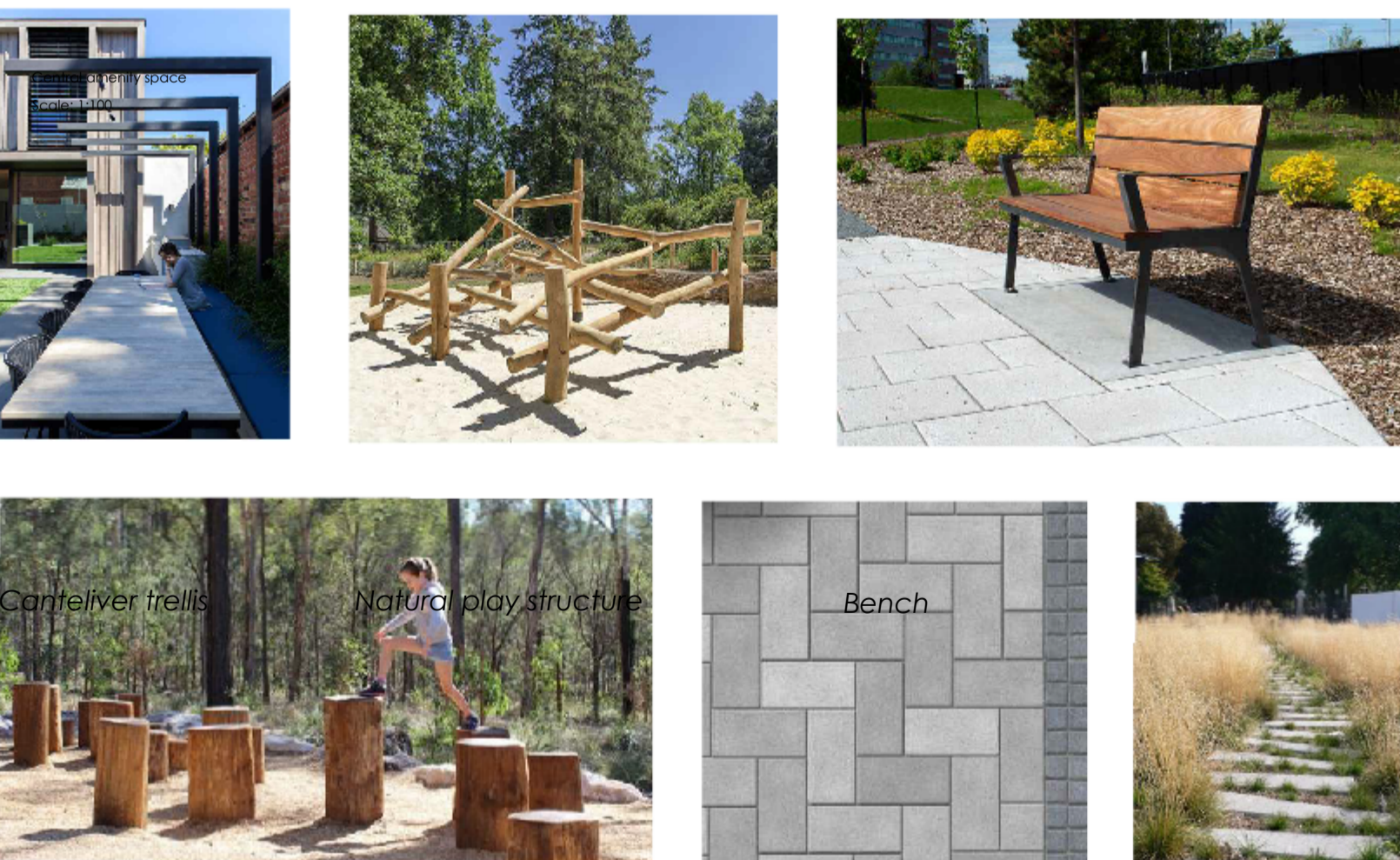
KEY MAP
N.T.S.

KEY MAP - N.T.S.



LEGEND

- property line
- proposed deciduous tree
- proposed shrub
- proposed perennial
- existing elevation
- min. 150mm topsoil, fine grade & sod
- C.I.P. concrete
- precast concrete unit pavers



Central unit paved walkway with coloured

Play

stumps

NOT FOR CONSTRUCTION
ISSUED FOR REVIEW & COMMENTS ONLY

REVISIONS/ SUBMISSIONS

#	DATE	DESCRIPTION
1	2022-10-04	Final Revision

STAMP



CLIENT
Icon Homes
MUNICIPALITY
City of Pickering

PROJECT
Zents Drive and Brock Road North

MUNICIPAL FILE NUMBER

SHEET
Landscape Plan
Amenity Spaces

concrete banding

Unit paved
walkway

Mass
planting

Enhanced corner entrance
Scale: 1: 150

ade
sso
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218 Locke Street South, 2nd
Floor

1.905.526.8876
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Appendix G

Executed Compensation Agreement for TRCA Regulated Lands

This Agreement made this *jj* day of **Au."1'.1...Sl**, 20*22*

BETWEEN:

THE BROCK ZENTS PARTNERSHIP

("Owner")

and

TORONTO AND REGION CONSERVATION AUTHORITY

("TRCA")

WHEREAS the Owner is the owner or leaseholder of the lands and premises generally outlined on Schedule 'A' attached hereto, and more specifically described as PINS 26383-0795, 26383-0791, 26383-3346, 26383-0034, ("Lands");

AND WHEREAS the Owner proposes to develop the Lands for a residential development consisting of the extension of a new public right of way (Four Seasons Lane), as well as the construction of a residential development of mixed condominium tenure consisting of approximately 170 five-plex townhouses, and 25 three-storey rear loaded townhouses as described in Schedule "B".

AND WHEREAS there is 0.95 ha of Thicket Swamp (SWT2-5), Forest (FOMA), and Cultural Thicket (CUTI) and Meadow as shown in the solid light blue and blue hatched areas on Schedule "C" (collectively being wetland together with the 30 meter buffer) will be lost (collectively the "TRCA Regulated Area") if the Lands are developed by the Owner.

AND WHEREAS it has been agreed upon by the City of Pickering and TRCA through Duffin Heights Environmental Servicing Plan review process (2008), that the aforesaid natural feature loss for this development may be compensated for elsewhere;

AND WHEREAS pursuant to TRCA's Guideline for Determining Ecosystem Compensation restoration of the aforesaid 0.95 ha of wetland and 30 meter buffer was determined to be appropriate compensation as outlined in this agreement.

NOW THEREFORE the parties agree as follows:

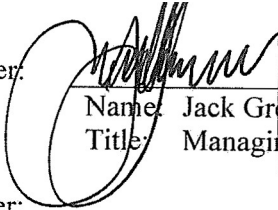
1. Owner shall provide a one-time cash payment to TRCA in the sum of Eighty-Four Thousand Canadian Dollars (CAD \$84,000.00), inclusive of a 5% Compensation Program Management fee, and exempt from HST, for the purposes of off-site compensation to replace the loss of the aforesaid natural feature structure for the TRCA Regulated Area.
2. The amount in paragraph 1 shall be paid to TRCA prior to the earlier of 1 month after the issuance of an invoice or the issuance of a permit under the Conservation Authorities Act for development within a regulated area and interference with a wetland in order that the Owners may begin construction on the Lands.
3. TRCA shall use the payment made under paragraph 1, CAD \$84,000.00, for the following purposes:

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- (a) the ability to install, monitor and maintain ecosystem restoration on public lands identified as the Brock N01th Lands in the City of Pickering (the "Project");
 - (b) to create any necessary access routes for and to implement the project on public lands; and,
 - (c) to maintain such access routes for the project, including replacement, through a five-year monitoring period following the restoration works; and
 - (d) to apply any amounts not used to accomplish the above Project following the end of the five-year monitoring period to any other ecological restoration projects within the City of Pickering. TRCA will use its best effort to ensure the project is located near the original areas of disturbance.
4. No project shall occur on the Owner's lands unless written notice for this request has been made and accepted by the Owner.
 5. Payment under this agreement shall not discharge the Owner in respect of any other conditions unrelated to the aforesaid compensation imposed by TRCA with respect to the proposed development.
 6. Upon receipt of the funds referred to in paragraph I, TRCA staff shall process the pennit application in accordance with delegated authority.
 7. This Agreement constitutes the entire agreement between the parties and may not be modified except by amendment duly executed by the parties.
 8. The patties hereto will at any time and from time to time hereafter upon the reasonable request of any other pa,ty (and at the requesting party's expense) do, execute and perfonn all such acts, assurances, documents and deeds as may be necessary or desirable to carry out the full intent and purpose of this Agreement.
 9. This Agreement and all the provisions hereof shall ensure to the benefit of, and be binding upon, the parties hereto, their respective successors and assigns and every reference herein to a patty hereto shall extend to and include such party's successors and assigns, as if specifically nained.
 10. The Owner acknowledges and agrees that this Agreement is subject to the Municipal Freedom of Information and Protection of Privacy Act, or any successor or similar act to which TRCA is subject.
 11. This Agreement may be executed in two or more counterparts, each of which when so executed and delivered to the other parties (which delivery may be made by facsimile or other electronic transmission) shall be an original, but all of which together shall constitute one and the same instrument.

IN WITNESS WHEREOF the parties have executed this Agreement as of the date above written.

THE BROCK ZENTS PARTNERSHIP

Per: 
Name: Jack Greenberg
Title: Managing Partner

Per: _____
Name:
Title:

I/We have authority to bind the Corporation

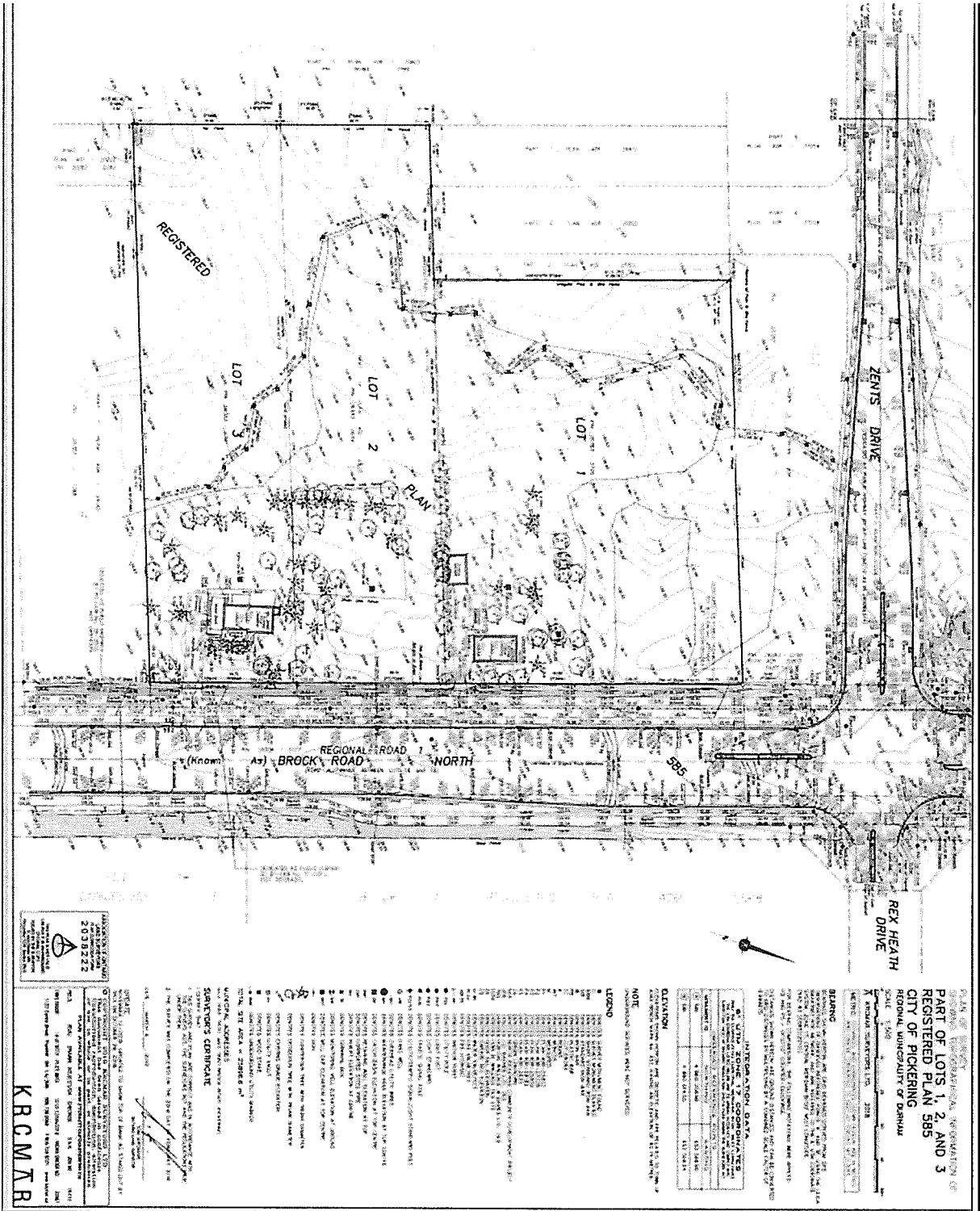
TORONTO AND REGION
CONSERVATION AUTHORITY

Per: 
Name: Michael Tolensky
Title: Chief Financial and Operating Officer

I have authority to bind the Corporation

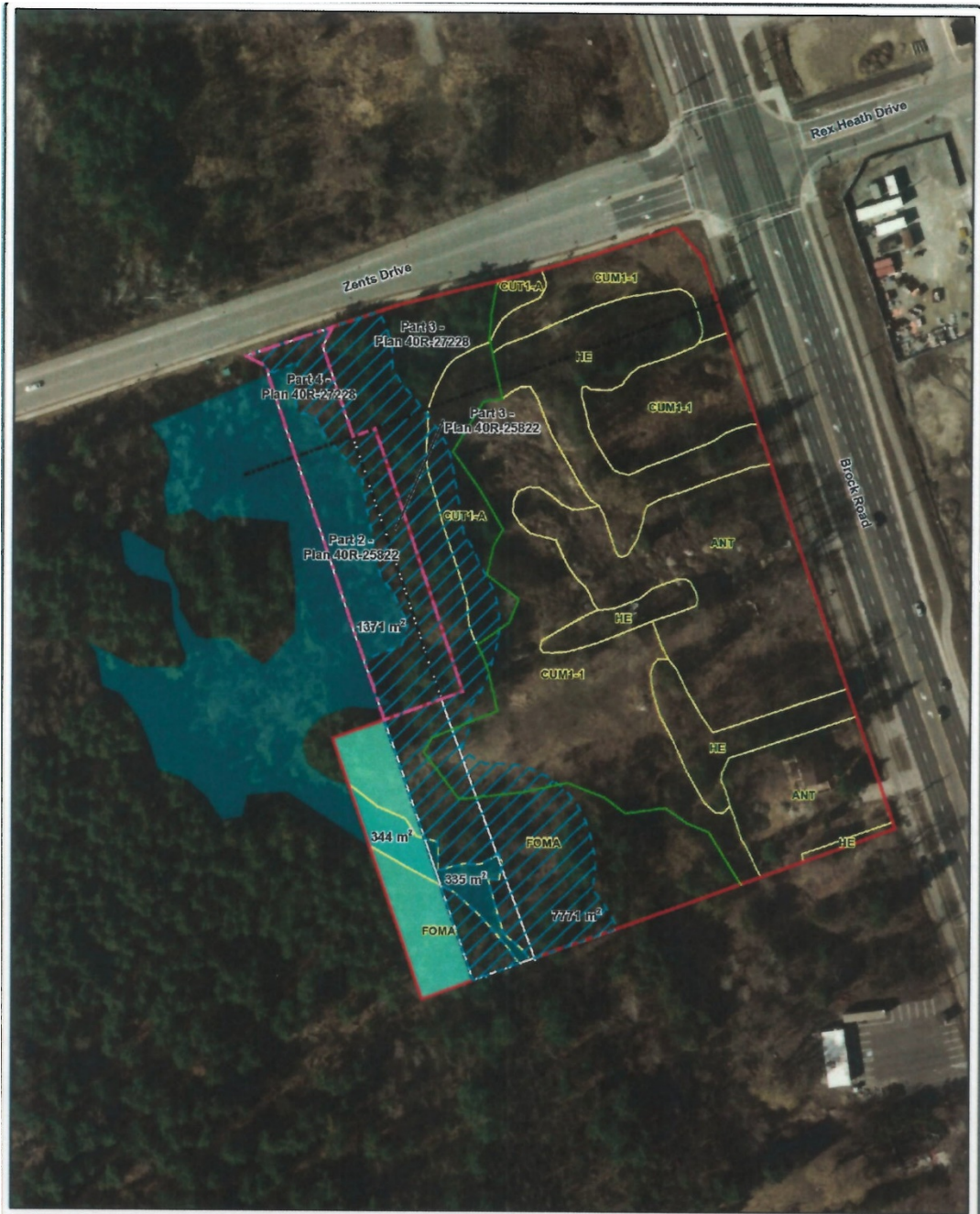
Schedule A - Subject Lands

2660, 2670, 2680 Brock Road, City of Pickering



[Handwritten signature]

Schedule C - Air Photo of Area to be Removed



Legend

- D Subject Property
- a. = 101 ards
- Development Umrts
- Future Road Allowance
- Slaked Drip line (TRCA 2018)
- ELC Communities
- EP Lands to be Conveyed to Public ONnership
- wetland (Beacon 2018)
- 1.0 m Yellow band ... 30 m

Code	Vegetal Community
UT1-A	Wetland Communities
SWT2-5	Red-Osier Dogwood Marsh / Shrub Swam
FOMA	Fresh-Moist Old Field Meadow
UM1-1	Dry-Moist Old Field Meadow
UT1-A	Mineral Cultural Thicket - Common Buckthorn
IE	Hedgerow
ANT	Anthropogenic

Natural Feature Compensation Figure 1

2660,2670,2680 Brock Road EIS & TIPP		
BEACON ENVIRONMENTAL		
Client: The Brocks Agents Planner,hip		Project: 218091 Last Revised: May 2021
1:1,200	25	50 m
Client: The Brocks Agents Planner,hip		Prepared by: JG Checked by: M
Date: 10/10/2020		By: JG Checked by: M