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GHD ref: 11217236

28 July 2022

Patrick Gaudreault
Land Development Project Manager
Richcraft
2280 St. Laurent Blvd. Suite 201
Ottawa, ON, K1G 4K1

**Re: Trailsedge Phase 5
Tree Conservation Report**

Dear Mr. Gaudreault

1. Introduction

GHD (formerly Niblett Environmental Associates Inc. (NEA)) was retained by Richcraft to complete an Integrated Environmental Review Statement (IERS) to fulfill the City of Ottawa's requirements for the draft plan of subdivision application for Phase 5 and an EIS report for that phase in 2020.

As part of our field work an assessment of the tree stands on site was conducted to prepare a Tree Conservation Report. This was completed as part of the field work for the original Community Design Plan and for the EIS. Individual trees across the entire site were not documented or assessed individually but as stands and ELC communities.

The Environmental Impact Statement was completed by GHD in August, 2020. The submission of the development applications included this Environmental Impact Statement as per the Consolidated City of Ottawa Official Plan (s. 4.7.8).

The following excerpt was taken from the executive summary of the EIS report.

A Natural Environment Existing Conditions Report was prepared by GHD for the East Urban Community (EUC) lands that fall within an area requiring a Community Design Plan (CDP) prior to development. Natural environmental surveys and background research were conducted by NEA (now GHD Limited) over multiple site assessments to inventory vegetation, birds, mammals, reptiles, amphibians, fish and their habitat in 2012 and 2013. Additional surveys were conducted in 2017, 2018 and 2019 on bats, reptiles and butternut.

The study area was generally flat with mostly former agricultural fields that have regenerated in early successional species. A majority of the site was fields, with swamp and woodland pockets (Appendix D). A rock barren was identified south of Innes Park Woods.

This report follows the City of Ottawa Tree Conservation Report Guidelines. The intention of this report is to determine what woody vegetation should be retained and protected on site. In the paragraphs below, we have outlined the background and project description, field methodology and findings.

This report should be read in conjunction with the 2020 EIS report that includes ELC community descriptions, mapping and plant lists. Excerpts from that report are included in this document as well as mapping showing the existing pre-construction conditions and the post-construction preservation areas and tree stands to be removed.

2. Methodology

Where the density of trees with a DBH > 10 cm was high, they were grouped and described as a whole. The vegetation communities were described for the EIS using the appropriate provincial methods (Ecological Land Classification (ELC)). The detailed mapping is shown on Figure 1.1.

Individual trees were not assessed as the work was done as part of the ELC mapping.

In addition to the TCR field work, the results from the Butternut inventory are included herein.

Any butternuts would have been identified, flagged and assessed according to the provincial guidelines. There were no butternuts present within the Phase 5 area.

Nomenclature used in this report follows the Southern Ontario Plant List (Bradley, 2007) for both common and scientific names which are based on Newmaster et al. (1998). Authorities for scientific names are given in Newmaster et al. (1998).

3. Existing Conditions

The site currently consists mostly of previously farmed areas in various stages of mid-succession. Buckthorn (European and glossy) was scattered throughout the property in large dense clumps, individual specimens and regenerating young stands. This occurred within the rock barren, CUM and no code areas, as well as within the FOD communities. Within the FOD communities identified were numerous young ash saplings and aspen saplings generally with a dbh of less than 5 cm. Evidence of emerald ash borer affecting even these young ash trees was evident throughout the site.

Community 2 Fresh-Moist Elm Lowland Deciduous Forest (ELC Code: FOD7-1)

This community was identified just on the northern limits of the subject property south of the Canadian Tire parking lot and was approximately 5 ha in size. American elm (*Ulmus americana*) dominated this woodlot pocket and was quite young in nature. Green ash (*Fraxinus pennsylvanica* var. *subintegerrima*) was also found interspersed with the American elm however was less abundant. The ground species contained a lot of the same species as Community 1, additional species found included grass-leaved goldenrod (*Euthamia graminifolia*), heal-all (*Prunella vulgaris* ssp. *lanceolata*), poverty grass (*Aristida dichotoma*), purple-stemmed aster (*Symphotrichum puniceum*), scotch thistle (*Onopordum acanthium*) and slender-leaved agalinis (*Agalinis tenuifolia*).

Community 5 Fresh-Moist White Elm Lowland Deciduous Forest (ELC Code: FOD 7-1)

On the central portions of the property just north of the hydro cut (Community 14) a mid-aged white elm deciduous forest existed 2.2 ha in size. Dbh ranged from 4-22 cm dbh. Several shrub species existed in the understory including species such as hawthorn (*Crataegus* spp.) and nannyberry (*Viburnum lentago*). Herbaceous species included calico aster, common milkweed, cow parsnip (*Heracleum lanatum*) and tall goldenrod (*Solidago altissima*).

Community 6 Fresh-Moist Poplar Deciduous Forest (ELC Code: FOD8-1)

Community 6 (6.7 ha in size) was identified adjacent Community 5 and was dominated by trembling aspen (*Populus tremuloides*), with some American elm and white ash (*Fraxinus americana*) interspersed. This woodlot was part of the fragmented Navan Rd at Pagé Rd UNA. Dbh of trees in this community were larger with 10-18 cm average for both ash and elm specimens. This mid aged

woodlot contained ground species such as tall buttercup (*Ranunculus acris*), upland white aster (*Solidago ptarmicoides*), Virginia creeper (*Parthenocissus inserta*) and yellow avens (*Geum aleppicum*).



Community 8: Dry-Fresh Sugar Maple-White Ash Deciduous Forest (ELC Code: FOD5-8)

Community 8 (approximately 1.3 ha in size) was identified as UNA # 87 Innes Park Woods and is designated within the City of Ottawa Official Plan as an Urban Natural Feature. Different from the remainder of the property this community was situated on a slight incline. Rock underlay the southern portion of the woodlot connecting to the open rock barren (Community 7). This woodlot contained the most mature trees species in the study area dominated by sugar maple (*Acer saccharum*) and white ash. A large variety of other tree species were also present including American basswood, American elm, apple (*Malus domestica*), bitternut hickory (*Carya cordiformis*), black cherry (*Prunus serotina*) and bur oak (*Quercus macrocarpa*).

The woodland is outside of the developable area and Phase 5.



Photo 5 & 6: Sugar maple/ash woodlot (Photo date: September 25th, 2013).

Community 13 Dry-Fresh Oak Red Maple Deciduous Forest (ELC Code: FOD2-1)

This forest community (approximately 4.1 ha in size) straddled the western boundary of the subject lands and was part of the fragmented Navan Rd at Pagé Rd UNA (known as UNF in OP) was dominated by oak and red maple and was found on the western side of the drainage ditch. A variety of young and mid-aged tree species were observed in this woodlot including species such as American basswood, butternut, red maple (*Acer rubrum*), red oak (*Quercus rubra*), white ash and white spruce (*Picea glauca*). Trees ranged from 2-10 cm dbh in the understory to 15-30 cm for the canopy trees. Largest tree was a red oak measuring 34 cm dbh. Shrubs identified under the canopy included beaked hazel (*Corylus cornuta*), dwarf raspberry (*Rubus pubescens*), glossy buckthorn (*Rhamnus frangula*) and narrowleaved meadowsweet (*Spiraea alba*). Groundcover species observed included Canada enchanter's nightshade (*Circaea lutetiana* L. ssp. *canadensis*), heart-leaved aster (*Symphotrichum cordifolium*), marginal wood-fern (*Dryopteris marginalis*) and Pennsylvania sedge (*Carex pennsylvanica*).



Community 16 Fresh-Moist Ash Lowland Deciduous Forest (ELC Code: FOD7-2)

This community was identified as a series of fingers found along the western edge of the study area boundary and covered an area of approximately 4.8 ha. These linear features were dominated by white ash and contained other deciduous tree species such as American elm, apple, green ash (*Fraxinus pennsylvanica* var. *subintegerrima*), Norway maple (*Acer platanoides*), red maple and trembling aspen. Dbh of trees averaged 4-12 cm with some larger specimens of aspen and green ash in the 13-18 cm dbh range. Shrubs identified in the understory included tartarian honeysuckle (*Lonicera tatarica*), choke cherry (*Prunus virginiana*), green alder (*Alnus veridis* ssp. *Crispa terrill*) and glossy buckthorn. The ground species were identified as awl-fruited sedge (*Carex stipata*), Canada bluejoint grass (*Calamagrostis canadensis*), cleavers (*Galium aparine*), common strawberry (*Fragaria virginiana*) and common yarrow (*Achillea millefolium*).



Community 19 Dry-Fresh Sugar Maple-Ironwood Deciduous Forest (ELC Code: FOD5-4)

This community was identified on the south-western borders of the study area and was approximately 2.3 ha in size. This community was identified as the Navan Road at Pagé Road UNA #97 and was designated under the City of Ottawa Official Plan as an Urban Natural Feature. The remnants are located adjacent to the stormwater pond and are part of the stormwater block. Tree dbh ranged from 11-34 cm dbh. This community used to be a lot larger based on the boundary Evaluated in 2003. Now a long narrow remnant of the forest this community was dominated by mature sugar maple and ironwood. Shrub and herbaceous species identified in the understory included common juniper (*Juniperus communis*), prickly gooseberry (*Ribes cynosbati*), skunk currant (*Ribes glandulosum*), smooth gooseberry (*Ribes hirtellum*) and red currant (*Ribes rubrum*). Ground species included shinleaf (*Pyrola elliptica*), indian pipe (*Monotropa uniflora*), starflower (*Trientalis borealis*), ditch stonecrop (*Penthorum sedoides*) and foam flower (*Tiarella cordifolia*).



Photo 18: Sugar Maple, Ironwood Forest (Photo date: May 29th, 2014).

4. Tree Conservation

The site was part of the East Urban Community, Community Design Plan process previously with a mix of commercial/industrial, residential and mixed uses proposed. Four previous phases of the Trailsedge development have been approved and were subject of an EIS report, fisheries compensation and IESR , including most recently Phase 4 to the south.

The EIS for Phase 5 is currently under review by the City of Ottawa and the conservation authority. The report concluded: *The proposed development will not result in negative impacts on the identified natural heritage features or their functions, provided the measures described in Sections 5 and 7 are implemented.*

Phase 5 of the development includes extensive grading and uses that require removal of much of the vegetation, including trees on this site to construct.

Preservation of the tree stands identified and the recommendation re removal or preservation is found in the following table:

Table 1. Tree conservation recommendation

Community Name	Remove or retain	Rationale
2-FOD7-1	Remove	Located within future employment lands, with grading and large buildings in future. 2.17 ha
5-FOD7-1	Remove	Located within park block. With active uses/programming, retaining individual specimen trees may only be possible on edges. 1.17 ha
6-FOD8-1 (east)	Remove	With subdivision lot layout area and park block. 3.81 ha
6-FOD8-1 (southwest)	Partially remove	Woodland community is within stormwater block mostly, small eastern edge is in development envelope is to be removed. 0.1 ha
8-FOD5-8 (park block-south)	Remove	Located within park block. With active uses/programming retaining individual may be possible on edges. 0.72 ha
8-FOD5-8 (Innes Park Woods)	Remove	Located within Innes Park Woods completely outside of development envelope. To be preserved including buffer. .
13-FOD2-1	Retained	Woodland community is within stormwater block mostly, small eastern edge is in development envelope is to be removed
16- FOD7-2	Retained	Woodland extends onto Site but most located to west. On site it is within the development envelope for subdivision 0.8 ha
19-FOD5-4	Mostly Retained	Woodland community is within stormwater block mostly, small eastern edge is in development envelope to be removed.

5. Landscaping Planting

It is noted that the overall plan does not include tree compensation. However the plan does include the plantings of native trees and shrubs within the Innes Park Woods buffer zone, where applicable. This concept plan is being developed.

6. Mitigation Measures

- A permit for the removal of trees that are 10 cm or larger in diameter is required from the City of Ottawa.
- No tree cutting to occur during breeding bird season and bat maternity season (April 15th to September 30)

Mitigation Measures for Trees to be Retained

- For trees adjacent to but not within the development envelope, in the park block and the retained portion of Community 6-FOD8-1 (southwest-SWM block) , the critical root zones (CRZ) should be protected. The CRZ is defined by the City as 10x the DBH of the trunk of the closest trees to the work area. An arborist or biologist will be on site during this work and will show the contractor where they should establish their setbacks.
- No machinery maintenance or refueling or stockpiling will be permitted within 5 m of the outer edge of the tree hoarding fencing.
- Exhaust fumes from all equipment will be directed away from the canopy of the trees to be retained.
- If roots of trees, on adjacent lands become exposed during site alterations, they will be buried immediately with soil or covered with filter cloth or woodchips and kept moist until the roots can be buried permanently.
- Any roots that must be cut will be cut cleanly to allow for healing.
- The removal of trees is to occur between October 1 and April 14th. This is to avoid both the active bat season and the breeding bird season (see timing and measures from above).
 - For the park block retention of trees within the park block is recommended where possible. As the park will be conveyed to the City, the recommendation is made so that tree screening of the snow dump or other specimen trees may include retaining existing trees, where feasible.
 - For FOD8-1 (southwest-SWM block) the following measures are recommended:
 - Survey the development envelope line and limit of clearing on the ground before tree cutting
 - Clearly delineate that line with snow fencing/hoarding fencing and signage, so foresters cut the correct area and limit of clearing line.
 - Typical tree measures such as clean root cuts, limbing rather than removing entire tree and measures to limit damage to retained trees from heavy equipment.
 - All above mitigation measures
 - For Innes Park Woods, the entire woodland up to the dripline is being preserved. The extension of Frank Bender Street and the final design may require excavation, grading or tree limbing along the western edge of the road. All of the above measures are to be employed.

7. Conclusion

The development of this Site with the grading and uses proposed limits the opportunities to retain or conserve trees within the building envelope. Two woodlands are propose for protection and mitigation measures have been provided to protect the health of those retained trees and communities.

Regards

A handwritten signature in blue ink, appearing to read "C. Ellingwood".

Chris Ellingwood
Senior Biologist

705-931-3929
chris.ellingwood@ghd.com

Appendix A

Figure 1.1 Natural Heritage Features and ELC communities

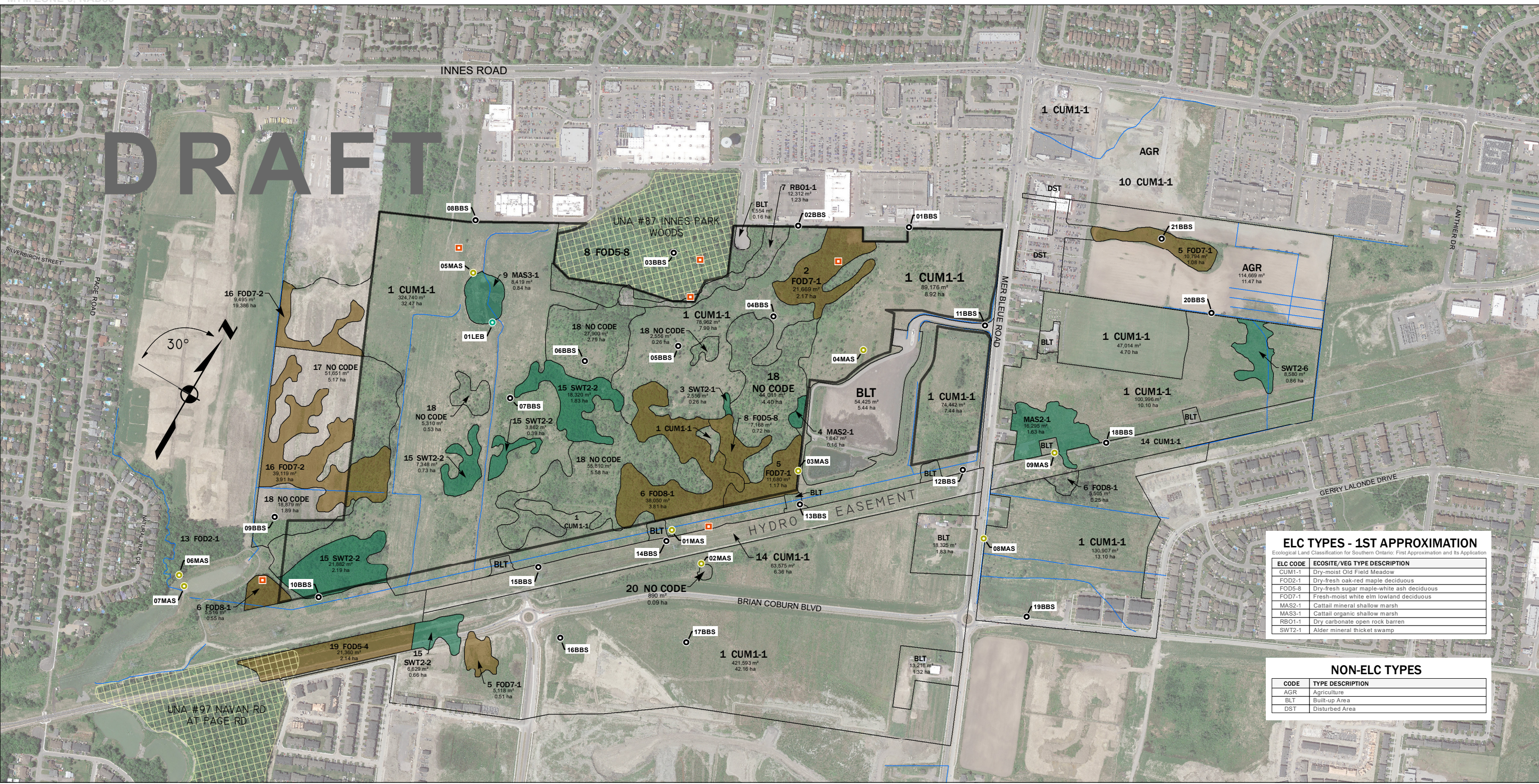


FIGURE 1.1 - NATURAL FEATURES, VEGETATION COMMUNITIES, SURVEYS & CONSTRAINTS

ELC TYPES - 1ST APPROXIMATION	
Ecological Land Classification for Southern Ontario: First Approximation and Its Application	
ELC CODE	ECOSITE/VEG TYPE DESCRIPTION
CUM1-1	Dry-moist Old Field Meadow
FOD2-1	Dry-fresh oak-red maple deciduous
FOD5-8	Fresh-fresh sugar maple-white ash deciduous
FOD7-1	Fresh-moist white elm lowland deciduous
MAS2-1	Cattail mineral shallow marsh
MAS3-1	Cattail organic shallow marsh
RBO1-1	Dry carbonate open rock barren
SWT2-1	Alder mineral thicket swamp

NON-ELC TYPES	
CODE	TYPE DESCRIPTION
AGR	Agriculture
BLT	Built-up Area
DST	Disturbed Area

LEGEND	
	Breeding Bird Survey
	Modified Marsh Monitoring Amphibian Survey
	Least Bittern Survey
	SAR Observance
	Development Area Limit (Annis, O'Sullivan, Vollebakk Ltd.)
	Watercourse
	Urban Natural Area, UNA (City of Ottawa)
	Vegetation Community
	Forest Community
	Wetland Community

LABELS	
1,045 m ²	Area (meters squared)
0.45 ha	Area (hectares)
01BBS	Breeding Bird Survey Label
01MAS	Marsh Monitoring Amphibian Survey Label
01LEB	Least Bittern Survey Label



REVISION & WORK HISTORY				
REV	BY	DATE	DESCRIPTION	REQUEST
rev-0	W.P.	2017-04-17	Initial map creation.	K.R.
rev-1	W.P.	2020-10-27	Make current. Amendments to labeling, vegetation, symbology. New development boundary.	C.E.
rev-2	W.P.	2020-11-23	Phase 5 labeling.	C.E.

CONTACT: Will Pridham / GIS Specialist	PROJECT NO: CA-PET-11217236	RECENT DATE: 2020-11-23	MTM ZONE 9
EMAIL: will.pridham@ghd.com	PROJECT: Trail's Edge East - Phase 5	CLIENT: Richcraft Homes	

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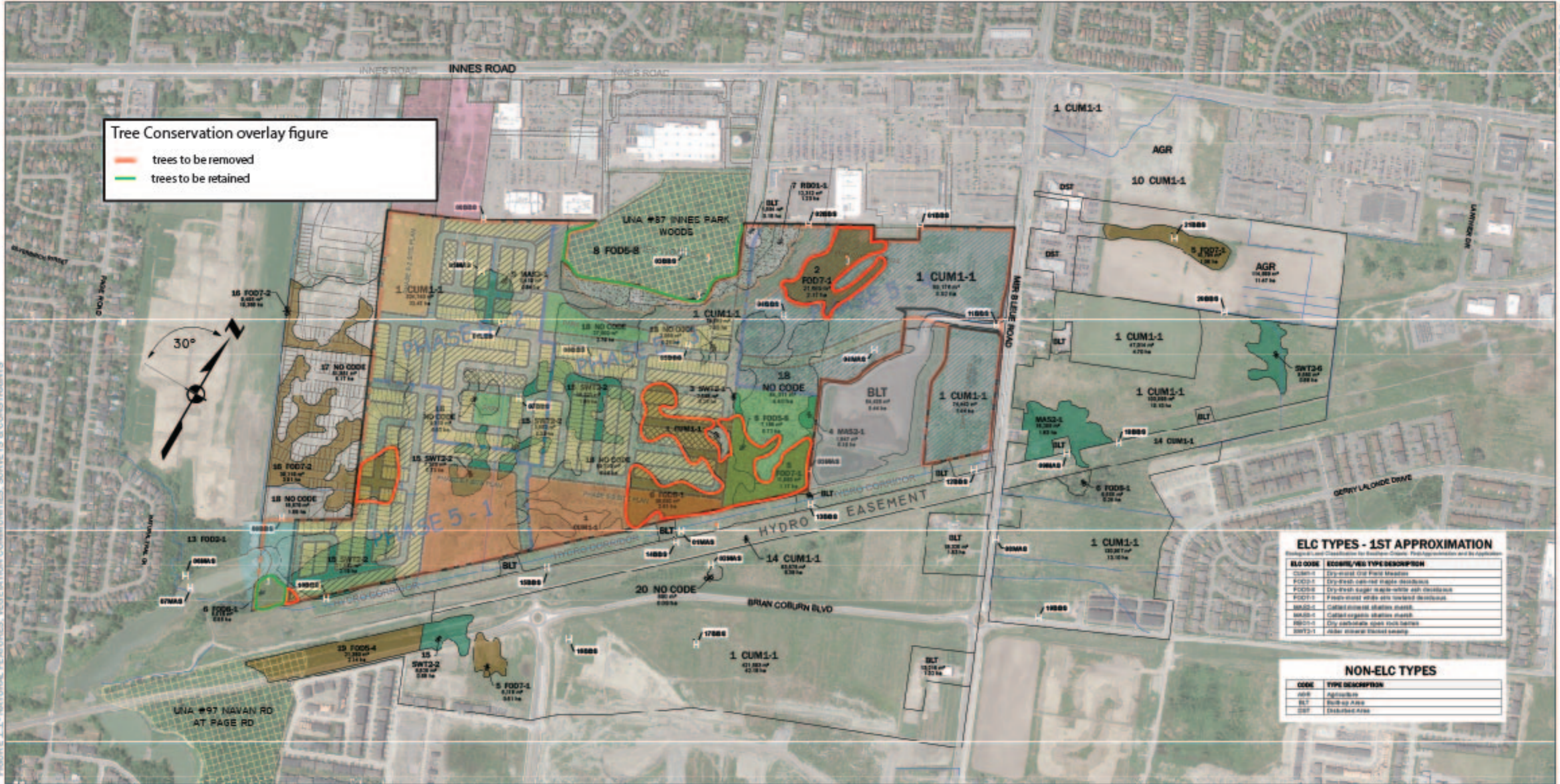
FIGURE 1.1 - NATURAL FEATURES, VEGETATION COMMUNITIES, SURVEYS & CONSTRAINTS

Trail's Edge North - Phase 5
City of Ottawa
Rideau Valley Conservation Authority (RVCA)

SCALE
1 cm : 85 meters
1 inch : 708 feet

Appendix B

Figure 2.1 Tree conservation areas and tree removal



Tree Conservation overlay figure

- orange trees to be removed
- green trees to be retained

ELC TYPES - 1ST APPROXIMATION
Biological Land Classification for Southern Ontario: First Approximation and its Application

ELC CODE	ECOSYSTEM TYPE DESCRIPTION
CUM1-1	Dry-wet Old Field Meadow
FOOD-1	Dry-fresh sugar maple deciduous
FOOD-6	Dry-fresh sugar maple-white ash deciduous
FOOD-7	Fresh-moist white ash-torward deciduous
MASS-1	Cattail emergent shallow marsh
MASS-2	Cattail emergent shallow marsh
MASS-3	Cattail emergent shallow marsh
MASS-4	Dry herbaceous open rock barrens
SWT2-1	Alder-tamarack flooded swamp

NON-ELC TYPES

CODE	TYPE DESCRIPTION
AGR	Agriculture
BLT	Build-up Area
DST	Disturbed Area

LEGEND

- Breeding Bird Survey
- Modified Marsh Monitoring Amphibian Survey
- Least Bittern Survey
- SAR Observance
- Developed Area Limit (Annis, O'Sullivan, Volkovits U.S.)
- Watercourse

Urban Natural Area, UNA (City of Ottawa)

- Vegetation Community
- Forest Community
- Wetland Community

LABELS

- 1,045 m² Area (meters squared)
- 0.45 ha Area (hectares)
- 01BDS Breeding Bird Survey Label
- 01MAS Marsh Monitoring Amphibian Survey Label
- 01LEB Least Bittern Survey Label

CITATIONS

- Compton-Heagy et al. (2010)
- 1981-10: Draft Plan of Habitats Areas, Ottawa, Vol 10, 201
- 1981-10: Draft Plan of Habitats Areas, Ottawa, Vol 10, 201
- 1981-10: Draft Plan of Habitats Areas, Ottawa, Vol 10, 201



REVISION & WORK HISTORY

REV	BY	DATE	DESCRIPTION	REQUIRE
REV-1	WSP	2017-05-17	Initial map creation	C.E.
REV-2	WSP	2020-10-27	Map update: Amendments to existing vegetation, hydrology, new development boundary	C.E.
REV-3	WSP	2020-11-23	Phase 5 mapping	C.E.

PROJECT INFO

PROJECT NO: CA-PET-11217238
 REVISIONS: 2020-11-23
 CLIENT: Rideau Valley Conservation Authority (RVCA)
 PROJECT: Trail's Edge East - Phase 5
 DRAWN: Richard H. Hynes

MTM ZONE 9

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FIGURE 2.1 - NATURAL FEATURES, VEGETATION COMMUNITIES, SURVEYS & TREE CONSERVATION

Trail's Edge North - Phase 5
City of Ottawa
Rideau Valley Conservation Authority (RVCA)

SCALE
1 cm : 85 meters
0 inch : 700 feet