Environmental Impact Study (EIS) & Tree Conservation Report

CARLETON/LANARK STREET SUBDIVISION

Part of Lot 1, Concession 7,

Carleton Place

County of Lanark

February 6, 2023

Prepared By:



BCH Environmental Consulting Inc. 20373 Bethune Street, South Lancaster, On KOC 2CO



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1.0. Introduction

As requested by Inverness HomesInc, an Environmental Impact Study (EIS) was completed to assess the environmental impacts of the proposed creation of the Townline Road Subdivision located in Carleton Place, Ontario (Appendix A, and Figure 1). The project will include development of approximately 199 residential units (mixture of semi-detached, 3-unit townhomes, 4-unit townhomes, 6-unit townhomes and a high density residential block; Appendix A).

As shown in Appendix A, the existing right of way of Carleton Street and Lanark Street will be extended beyond the existing developed area. The lots along the existing portion of Carleton and Lanark Street have been previously developed by other land owners and are occupied by detached residential houses. These streets will be extended to the limit of development as shown in Appendix A.

1.1. Site Context

The entire property parcel is approximately 6.42 ha in size and the legal land description is Part of Lot 1, Concession 7, Carleton Place, County of Lanark. The area to be developed under the current undertaking has been previously cleared, and the majority of the Site has been stripped of soil and some portions are currently occupied by road base construction materials and bedrock. BCH is not aware of the date that tree clearing was undertaken, but it appears tree removal was conducted sometime within the last (approximately) ten (10) years. Due to the previous clearing of the Site and soil stripping, little natural vegetative cover remains on Site and tree cover is limited to 41 trees (>20cm) remaining along the property lines.

Bedrock blasting will be required in some areas to allow for installation of underground services. The Site will be serviced with municipal water, sewer, and sanitation. Stormwater will be conveyed to new stormwater management pond.

The lands to be developed will be referred to as the subject lands.

As noted, the subject lands have been previously cleared with no significant natural vegetative cover remaining at the time of BCH's site visit. Additionally, there were no watercourses, wetlands, or fish habitat identified within the subject lands. Significant woodland has been identified within the 120m adjacent lands.

The PPS states that site development and alteration shall not be permitted in significant woodlands in Ecoregion 6E unless it has been demonstrated that there will be no negative impacts on the natural features or their ecological functions.

No portion of the subject lands appears to be within one of the Mississippi Valley Conservation Authority regulated areas.



2.0. Methodology

This report is prepared in accordance with the Official Plan for the Lanark County (2012) with guidance from the Natural Heritage Reference Manual (OMNR, 2010). This EIS includes an assessment of the identified and potential environmental constraints and the potential for Species at Risk.

This EIS will provide the methodology to mitigate, as required, negative impacts on significant features and functions. Potential Species at Risk in the general area were identified from Ministry of Natural Resources and Forestry databases, the Department of Fisheries and Ocean databases, the Ontario Breeding Bird Atlas, Ontario Reptile and Amphibian Atlas, iNaturalist and the Global Biodiversity Information Facility.

Colour aerial photography was used to assess the natural environment features in the general vicinity of the proposed building.

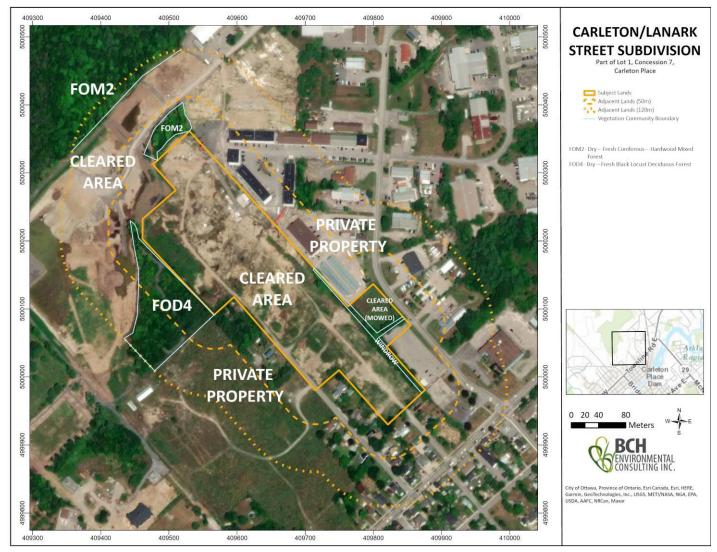
A field survey of the subject and adjacent lands was completed by BCH Environmental (S.St.Pierre/C. Fontaine) on May 3, 2022 from 1100h to 1330h (air temperature was 14°C, with a light air and overcast skies).

The area was extensively walked and surveyed for significant natural areas, potential species at risk and their associated habitat.

Observed plants were recorded for each individual community, the plants utilized in the descriptions are the most abundant specimens observed. A complete observed species list is provided in Appendix B. Plants that could not be identified in the field were collected for a more detailed examination. Nomenclature used in this report follows the Southern Ontario Vascular Plant List (Bradley, 2013) which aligns with the Integrated Taxonomic Information System (ITIS).



FIGURE 1: SUBJECT LANDS



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3.0. Field Surveys

A butternut survey was conducted along with a search for cavity trees by systematically moving through the subject lands (discussed in section 4.3 and 4.4). Vegetation communities are described in section 3.1.

3.1. Existing Conditions

As noted, the subject lands have been previously cleared. 41 trees with a DBH of 20cm and over remain on the subject land along the south eastern property lines. Within the adjacent lands there were forests (to the north and west) and a trail just north of the north western property line with planted pine seedlings. The remainder of the adjacent lands consisted of residential and commercial properties.

3.1.1. Cleared Area

This area makes up the bulk of the subject lands and portions of the adjacent lands. The entirety of the area has been cleared, soil stockpiling was noted within the north western side, and some portions have been stripped of soils down to bedrock. Vegetation has semi re-established in the portions that still contained soil. These areas were similar to a cultural meadow dominated by grasses followed by goldenrods, wild carrot, and clovers. The occasional balsam poplar, black locust, wild red raspberry, and black raspberry were noted (maximum 2m tall). Within the south eastern side a portion of this area has been regularly mowed. A windrow was present along the south eastern edge of the property, this windrow consisted of 41 trees with a DBH of 20cm and over (sugar maple, Freemans maple, Manitoba maple, white cedar, black cherry, American elm, bitternut hickory, bur oak and apple ; 8-12m tall, Average DBH 20-30cm). See sections 7.0 for further discussion.



Photo 1: Cleared Area (May 3, 2022).





Photo 2: Cleared Area (May 3, 2022).



Photo 3: Cleared Area – Mowed Area (May 3, 2022).





Photo 4: Soil Stockpiles (May 3, 2022).



Photo 5: Windrow (May 3, 2022).



3.1.2. Dry – Fresh Coniferous – Hardwood Mixed Forest (FOM2)

This community was present within the northern portion of the adjacent lands approximately 100m away from the subject lands. The tree composition provided 100% cover and consisted of a mix of deciduous and coniferous trees. The average tree diameter was 10-20cm with a couple of larger trees scattered throughout (DBH 35-40cm). The sub-canopy (6m tall; 70% cover) was dominated equally by red oak and sugar maple followed by eastern hemlock, balsam poplar, and trembling aspen. The canopy (8-10m tall; 20% cover) consisted equally of white pine, red oak, eastern hemlock, and sugar maple. The understory (1-4m tall; 20% cover) consisted of ironwood, white ash, white cedar, eastern hemlock, American basswood, and honeysuckle. The ground layer provided 75% cover and included grasses, trout-lily, and white trillium. A tiny remnant clump of this forest is present immediately north of the subject lands, this area has been severed from the main forest by clearing activities. Trails are present within this forest.



Photo 6: Dry – Fresh Coniferous – Hardwood Mixed Forest (May 3, 2022).





Photo 7: Dry – Fresh Coniferous – Hardwood Mixed Forest – Remnant Patch (May 3, 2022).

3.1.3. Dry – Fresh Black Locust Deciduous Forest (FOD4)

This community was present within the eastern adjacent lands along the property line. The tree composition provided 100% cover and consisted of deciduous trees. The canopy was dominant and the average tree diameter was 5-15cm, with the occasional larger tree scattered throughout. The canopy (10m tall; 75% cover) was dominated by black locust with the occasional maple. The sub-canopy (6m tall; 60% cover) consisted of common buckthorn which was more than apple, which was more than hawthorn. The understory (1-2m tall; 20% cover) consisted of black locust, common buckthorn, and tartarian honeysuckle. The ground layer provided 20% cover and included trout lily and grasses.





Photo 8: Dry – Fresh Black Locust Deciduous Forest (May 3, 2022).

4.0. Potential Species at Risk

The Make a Map: Natural Heritage online database (OMNRF) was reviewed on April 12, 2022. This database provides sightings of provincially tracked species including Threatened and Endangered species covered by the 2008 Endangered Species Act in 1 km squares across most of Ontario. No information was located for the subject lands. A search was conducted on the adjacent lands (18VQ999, 18VQ998, 18VQ1099, and 18VQ1098). The following species were identified for these squares:

- Eastern Musk Turtle (Special Concern)
- Snapping Turtle (Special Concern)
- Blanding's Turtle (Threatened)
- Eastern Meadowlark (Threatened)
- Bobolink (Threatened)
- Canada Warbler (Special Concern)
- Least Bittern (Threatened)
- Butternut (Endangered)



The Ontario Breeding Bird Atlas provides a searchable database in the form of a 10km square grid. A query revealed the following Species at Risk and species of special concern identified within the 10km square that encompasses the site and adjacent lands (18VQ09):

- Chimney Swift (Threatened)
- Eastern Wood-Pewee (Special Concern)
- Barn Swallow (Threatened)
- Wood Thrush (Special Concern)
- Bobolink (Threatened)
- Eastern Meadowlark (Threatened)

Similar to the Ontario Breeding Bird Atlas, the Ontario Reptile and Amphibian Atlas provides a searchable database in the form of a 10km square grid. A query revealed the following species of special concern was identified within the 10km square that encompasses the subject lands and adjacent lands (18VQ09):

- Snapping Turtle (Special Concern)
- Blanding's Turtle (Threatened)
- Eastern Musk Turtle (Special Concern)

iNaturalist and the Global Biodiversity Information Facility provides a searchable database. A query revealed no results in the vicinity of the Subject Lands.

The Department of Fisheries and Oceans provide species at risk sightings via their online map tool. A query found no results in the vicinity of the site.

In addition to the above potential Species at Risk, other endangered and threatened species may potentially occur in the general area:

- Little Brown Myotis (Endangered)
- Northern Myotis (Endangered)
- Tri-coloured Bat (Endangered)

4.1. Turtles and Reptiles

Snapping turtles, and Eastern musk turtle are all designated as special concern under the Ontario Endangered Species Act (ESA). The habitat of species of special concern is not regulated under the Ontario ESA. Blanding's turtles have been designated as threatened and their habitat is provincially regulated.

Blanding's turtles are often observed within clear water eutrophic wetlands and have a strong site fidelity but may use several connected water bodies during the active season. Blanding's turtle was identified as occurring within the 1km search area. Suitable turtle habitat was not identified within the subject lands or adjacent lands. The closest turtle habitat is the Mississippi River located 350m from the subject lands.

No direct impacts on turtles are anticipated, indirect impacts on these species as a result of the proposed development can be mitigated provided the mitigation measures in this report are implemented.



4.2. Birds

Canada Warbler, Eastern wood-pewee, wood thrush are designated special concern under the Ontario Endangered Species Act (ESA). The habitat of species of special concern is not regulated under the Ontario ESA. All three are forest dwelling birds, this habitat is not present within the subject lands.

Least bittern, chimney swift, barn swallow, bobolink, and eastern meadowlark are designated as threatened under the Ontario Endangered Species Act (ESA). Least bittern require emergent marshes (usually cattail) with stable water levels and interspersed areas of open water for breeding (COSEWIC 2009a). This habitat is not present within the subject lands or adjacent lands. Chimney swift are aerial foragers, associated with water where insects are abundant and urban and rural areas where chimneys are available for nesting and roosting (COSEWIC 2007). No suitable chimneys were observed for this species use. Barn swallow nest sites are commonly found along the interior or exterior of building structures, under bridges and wharves, and in road culverts (Heagy et al. 2014.). No barn swallow, or barn swallow nests were observed, nor were any nesting structures present within the subject lands. Bobolink and eastern meadowlark are associated with native and non-native larger grassland habitats such as hayfields (COSEWIC 2010, and COSEWIC 2011). No hayfields or other suitable habitat were identified in the area that would meet the needs or size requirements of these birds. The total size of the area within the subject lands that still has some soil and where it is beginning to resemble a cultural meadow is approximately 2.2ha which is less than the minimum five hectares of suitable meadow habitat identified for successful bobolink or eastern meadowlark nesting in the general habitat descriptions.

4.3. Mammals

Little brown Myotis, northern Myotis, and tri-coloured bat are designated endangered under the Ontario Endangered Species Act (ESA). All three species overwinter in hibernacula. Maternity colonies are established by females in the summer, often in buildings, or large-diameter trees with suitable cavities (COSEWIC 2013b). No caves, bedrock fissures, mining shafts, abandoned buildings, or other features which may function as bat hibernacula habitat were noted within the subject lands. No suitable cavity trees that may be used by bats were observed within the subject lands.

4.4. Vegetation

Butternut (designated as endangered by the ESA) tends to reach greatest abundance in rich well-drained mesic loams in floodplains, streambanks, terraces and ravine slopes, but can occur in a wide range of other situations (COSEWIC 2017). No butternut were located during a detailed survey of the subject lands and adjacent lands (50m).

4.5. Species at Risk Summary

In summary, based on the habitat present within the subject lands, no Species at Risk are anticipated to be present. The most likely Species at Risk would be butternut (none found). Any potential indirect impacts on any species as a result of the proposed development can be mitigated provided the mitigation measures in this report are properly implemented.



5.0. Significant Woodland

OMNRF has identified the forest within the adjacent lands as significant woodland (see section 3.1.2, 3.1.3 for description). As noted the subject lands have been previously cleared, therefore any works prescribed within these lands will have no negative impacts on the surrounding forests. Indirect impacts on these woodland as a result of the proposed development can be mitigated provided the mitigation measures in this report are properly implemented.

6.0. Significant Wildlife Habitat

The potential for significant wildlife habitat was assessed using the guidance in OMNR (2010) and MNRF (2015). Potential components which may lead to a designation of significant wildlife habitat include seasonal concentration areas of animals, rare vegetation communities or specialized habitat for wildlife, habitat for species of conservation concern, and animal movement corridors. No rare vegetative communities, raptor overwintering sites, old growth forest, valley, or caves were located within the subject or adjacent lands.

There was nothing regarding the characteristic within the subject lands to warrant significance. Prescribed mitigation measures in section 8.0 will limit the potential for indirect impacts.

7.0. Tree Conservation and Protection

Town of Carleton Place official plan stipulates tree planting and tree preservation will occur so that all areas of the town are provided with a sufficient number of trees to maintain a high standard of amenity and appearance. Where new development will result in the loss of existing wooded areas, a condition of development approval will require that the lost trees be replaced at a 1 to 3 ratio (1 new tree for every 3 trees). The replacement ratios will only apply to the removal of trees having a minimum caliper of 20cm or more. The new trees will be planted within the boundary of the proposed development to the greatest extent possible with the remaining trees to be planted in public parks or on publicly owned lands as directed by the Town.

Within the subject lands there is 41 trees with a DBH of 20cm and over (Appendix C). All of the trees present will be required to be removed for grading purposes. The proponent will plant a minimum of 14 trees to replace those lost. The trees the adjacent woodlands will be protected by measures outlined in sections 9.

8.0. Development Constraints and Cumulative Impacts

As demonstrated, development constraints are limited to tree protection measures which are outlined in section 9.

The previously completed clearing of the subject lands has contributed to the cumulative loss of natural habitat from suburban/urban development, however, because the subject lands are cleared, the remaining development phases are not likely to contribute significantly to cumulative impacts.



FIGURE 2: ENVIRONMENTAL CONSTRAINTS





9.0. Recommendations and Conclusion

This study's recommendations are intended to mitigate potential negative impacts due to the proposed development and should be implemented through a development agreement between the owners and the municipality in order to control development of the site. Properly implemented controls within this agreement are deemed sufficient to mitigate the potential impacts of the proposed development on the adjacent woodland and retained trees.

- 1- Erect a fence at the critical root zone (CRZ) of retained trees (see Appendix C), and at a distance of 3.5m from any adjacent forest or forest patch.
- 2- Do not place any material or equipment within the fenced area.
- 3- Do not attach any signs, notices, or posters to any tree.
- 4- Do not raise or lower the existing grade within the CRZ of retained trees/forest.
- 5- Do not damage the root system, trunk, or branches of retained trees.
- 6- Ensure that exhaust fumes from all equipment are not directed towards any tree's canopy.
- 7- The proponent will plant at a minimum 14 native trees which will be incorporated into the landscaping plan.
- 8- To protect breeding birds, no tree or shrub removal should occur between May 1st and July 31st, unless a breeding bird survey is completed by a qualified biologist within five days of the woody vegetation removal and identifies no nesting activity.
- 9- If vegetation damage occurs to trees on adjacent properties or those designated for tree retention, an arborist should review any damage to determine the best course of action to restore the original vegetative functions.
- 10- A potential impact on the adjacent lands associated with the number of units proposed for the development is an increase in human and pet intrusions into these forested areas. Fencing along private property lines will help to minimize the impact on adjacent lands;
- 11- In areas adjacent to the woodlot tree line where blasting is required, consideration should be given to pre-shearing the rock to create a crack between the trees' critical root zone perimeter and the blasting work, and the ground around the trees adjacent to blast areas should be moistened to increase soil adhesion and assist in retaining root-soil contacts during blasting.
- 12- Groundwater in trenches will be pumped into a filter mechanism, such as a trap made up of geotextile filters and straw, prior to release to the environment.
- 13- Bulkhead barriers will be installed at the nearest downstream manhole in each sewer which connects to an existing downstream sewer. These bulkheads will trap any sediment carrying flows, thus preventing any construction-related contamination of existing sewers.
- 14- Seepage barriers will be constructed in any temporary drainage ditches.
- 15- Construction vehicles will leave the site at designated locations. Exits will consist of a bed of granular material, in order to minimize the tracking of mud off-site.
- 16- Any stockpiled material will be properly managed to prevent these materials from entering the sewer systems. The stockpiles as well as equipment fuelling and maintenance areas will be located a minimum of 30 meters from conveyance routes.



- 17- Until rear yards will be sodded or until streets are asphalted and curbed, all catch basins and manholes will be constructed with a geotextile filter fabric installed between the structure frame and cover.
- 18- Location and details of proposed sediment and erosion control features will be developed prior to construction. A spills action plan will also be developed to prevent impacts from spills during the construction phase.
- 19- There will be no use of herbicides in clearing of vegetation.
- 20- Municipal by-laws and provincial regulations for noise will be followed.
- 21- To discourage wildlife from entering the work areas during construction, the site should be kept clear of food wastes and other garbage. Proper drainage should be provided to avoid accumulation of standing water, which could attract amphibians, birds, and other wildlife to the work areas.

To conclude this EIS, it is the professional opinion of the author that with proper implementation and maintenance of the mitigation measures (see above), the proposed development will not negatively impact the adjacent woodland, retained trees, or any habitat of species at risk.

Thank you for the opportunity to work with you. If you have any questions or comments please do not hesitate to contact our office.

Shaun St.Pierre, B.Sc. Biology BCH Environmental Consulting Inc.



REFERENCES

- Bradley, David J. 2013. Southern Ontario Vascular Plant Species List. Ont. Min. Natur. Resour. Science and Information Branch, Southern Sci. and Info., SIB SR-03 78p.
- COSEWIC. 2007. COSEWIC assessment and status report on the Chimney Swift Chaetura pelagica in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vii + 49 pp. (www.sararegistry.gc.ca/status/status_e.cfm).
- COSEWIC. 2010. COSEWIC assessment and status report on the Bobolink Dolichonyx oryzivorus in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vi + 42 pp. (www.sararegistry.gc.ca/status/status_e.cfm).
- COSEWIC. 2011. COSEWIC assessment and status report on the Eastern Meadowlark Sturnella magna in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. x + 40 pp. (www.sararegistry.gc.ca/status/status_e.cfm).
- COSEWIC. 2013a. COSEWIC assessment and status report on the Bank Swallow Riparia in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. ix + 48 pp. (www.registrelep-sararegistry.gc.ca/default_e.cfm).
- COSEWIC. 2013b. COSEWIC assessment and status report on the Little Brown Myotis lucifugus, Northern Myotis septentrionalis and Tri-colored Bat Perimyotis subflavus in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xxiv + 93 pp. (www.registrelep-sararegistry.gc.ca/default_e.cfm).
- COSEWIC. 2017. COSEWIC assessment and status report on the Butternut Juglans cinerea in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xiii + 74 pp. (http://www.registrelep-sararegistry.gc.ca/default.asp?lang=en&n=24F7211B-1).
- Department of Fisheries and Oceans (DFO). 2022. Aquatic Species at Risk Map Available https://www.dfompo.gc.ca/species-especes/sara-lep/map-carte/index-eng.html (Accessed April 12, 2022).
- Heagy, A., D. Badzinski, D. Bradley, M. Falconer, J. McCracken, R.A. Reid and K. Richardson. 2014. Recovery Strategy for the Barn Swallow (Hirundo rustica) in Ontario. Ontario Recovery Strategy Series. Prepared for the Ontario Ministry of Natural Resources and Forestry, Peterborough, Ontario. vii + 64 pp.

Lanark County .2012. Official Plan for Lanark County.

- Lee, H.T., W.D. Bakowsky, J. Riley, J. Bowles, M. Puddister, P. Uhlig and S. McMurray. 1998. Ecological Land Classification for Southern Ontario: First Approximation and its Application. Ontario Ministry of Natural Resources, Southcentral Science Section, Science Development and Transfer Branch. SCSS Field Guide FG-02.
- Ministry of Municipal Affairs and Housing (MMAH). 2014. Ontario Provincial Policy Statement. Issued under section 3 of the Planning Act.

Ontario Ministry of Natural Resources (OMNR). 2000. Significant wildlife habitat technical guide. 151p.



Ontario Ministry of Natural Resource (OMNR). 2013. Blanding's Turtle General Habitat Description.

- Ontario Ministry of Natural Resources (OMNR). March 2010. Natural Heritage Reference Manual for Natural Heritage Policies of the Provincial Policy Statement, 2005. Second Edition. Toronto: Queen's Printer for Ontario. 248 pp
- Ontario Ministry of Natural Resources (OMNR). 2020. Land Information Ontario. Available https://www.ontario.ca/page/land-information-ontario (Accessed April 12, 2022)
- Ontario Ministry of Natural Resources and Forestry (MNRF). 2015. Significant Wildlife Habitat Criteria Schedules For Ecoregion 6E. 38p.
- Ontario Nature. 2020. Ontario Breeding Bird Atlas. Available http://www.birdsontario.org/atlas/index.jsp (Accessed April 12, 2022)
- Ontario Nature. 2020. Ontario Reptile and Amphibian Atlas. Available https://ontarionature.org/oraa/maps/ (Accessed April 12, 2022)
- Ontario Nature, 2020. Ontario Reptile and Amphibian Atlas: a citizen science project to map the distribution of Ontario's reptiles and amphibians. Ontario Nature, Ontario. Available: https://www.ontarioinsects.org/herp; (Accessed April 12, 2022)
- Species at Risk Ontario (SARO). 2020. Species at Risk Ontario. Retrieved April 12, 2022 at http://www.ontario.ca/environment-and-energy/species-risk-ontario-list



APPENDIX A: PLANS







APPENDIX B: OBSERVED SPECIES LIST

COMMON NAME	SCIENTIFIC NAME	SRANK	SARA	SARO	COEFF.
	• • • • • • •	S5	STATUS	STATUS	CONSERVATISM
New England Aster					2
Balsam Fir	Abies balsamea	S5			5
Eastern White Pine	Pinus strobus	S5			4
Eastern White Cedar	Thuja occidentalis	S5			4
Reed Canary Grass	Phalaris arundinacea	S5			0
Tiger Lily	Lilium lancifolium	SNA			
White Trillium	Trillium grandiflorum	S5			5
Balsam Poplar	Populus balsamifera	S5			4
Trembling Aspen	Populus tremuloides	S5			2
Bitternut Hickory	Carya cordiformis	S5			6
Black Walnut	Juglans nigra	S4?			5
Ironwood	Ostrya virginiana	S5			4
Bur Oak	Quercus macrocarpa	S5			5
American Elm	Ulmus americana	S5			3
Black Cherry	Prunus serotina	S5			3
Black Raspberry	Rubus occidentalis	S5			2
Wild Red Raspberry	Rubus idaeus ssp. strigosus	S5			2
Bird's-foot Trefoil	Lotus corniculatus	SNA			
Black Medic	Medicago lupulina	SNA			
Black Locust	Robinia pseudoacacia	SNA			
Red Clover	Trifolium pratense	SNA			
White Clover	Trifolium repens	SNA			
Common Prickly-ash	Zanthoxylum americanum	S5			3
Staghorn Sumac	Rhus hirta	S5			1
Manitoba Maple	Acer negundo	S5			0
Sugar Maple	Acer saccharum	S5			4
Freeman's Maple	Acer freemanii	SNA			
Common Buckthorn Rhamnus cathartica		SNA			
American Basswood Tilia americana var. americana		S5			4
Wild Carrot Daucus carota		SNA			
White Ash	White Ash Fraxinus americana				4
Common Milkweed	Asclepias syriaca	S5			0
Common Viper's Bugloss	Echium vulgare	SNA			
Common Mullein	Verbascum thapsus	SNA			
	1				



COMMON NAME	SCIENTIFIC NAME	SRANK	SARA STATUS	SARO STATUS	COEFF. CONSERVATISM
Common Plantain	on Plantain Plantago major				
mooth Bedstraw Galium mollugo		SNA			
Tatarian Honeysuckle	Lonicera tatarica	SNA			
Common Ragweed	Ambrosia artemisiifolia	S5			0
Common Burdock	Arctium minus	SNA			
Common Mugwort	Artemisia vulgaris	SNA			
Chicory	Cichorium intybus	SNA			
Canada Thistle	Cirsium arvense	SNA			
Common Sow-thistle	Sonchus oleraceus	SNA			
Common Dandelion	Taraxacum officinale	SNA			
Wild Leek (adjacent lands)	Allium tricoccum var. tricoccum	S4			7
Aster Sp.					
Apple Sp.					
Goldenrod Sp.					
Rose Sp.					
Hawthorn Sp.					
Grass sp.					
Fescue Sp.					
American Kestrel	Falco sparverius				
Mourning Dove	Zenaida macroura				
Downy Woodpecker	Picoides pubescens				
Pileated Woodpecker	Dryocopus pileatus				
American Crow	Corvus brachyrhynchos				
Black-capped Chickadee	Poecile atricapilla				
American Robin	Turdus migratorius				
Common Grackle	Quiscalus quiscula				
Eastern Cottontail	Sylvilagus floridanus				
Woodchuck	Marmota monax				



APPENDIX C: TREES WITHIN THE SUBJECT LANDS >20cm DBH

TREE ID	UTM NAD83	SPECIES	AVERGAE DBH (cm)	CRITICAL ROOT ZONE (m)	HEALTH	COMMENTS
1	18 T 409851 4999997	American Elm	23	2.30	Good	Multistem
2	18 T 409849 5000001	Manitoba Maple	32	3.17	Good	Multistem
3	18 T 409850 5000004	Bitternut Hickory	25	2.50	Good	
4	18 T 409848 5000006	Manitoba Maple	23	2.30	Good	
5	18 T 409847 5000007	Manitoba Maple	26	2.60	Good	
6	18 T 409843 5000017	Manitoba Maple	27	2.70	Good	
7	18 T 409837 5000021	Eastern White Cedar	39	3.90	Good	
8	18 T 409836 5000021	Eastern White Cedar	31	3.10	Good	
9	18 T 409830 5000027	Eastern White Cedar	28	2.80	Poor	Multistem
10	18 T 409828 5000030	Bur Oak	61	6.10	Good	
11	18 T 409824 5000034	Black Cherry	20	2.00	Good	
12	18 T 409822 5000036	American Elm	19	1.85	Dead	Multistem
13	18 T 409821 5000038	American Elm	20	2.00	Good	
14	18 T 409818 5000040	Apple Sp.	50	5.00	Good	
15	18 T 409817 5000040	Eastern White Cedar	31	3.10	Good	
16	18 T 409817 5000042	White Ash	26	2.60	Good	
17	18 T 409809 5000049	Eastern White Cedar	56	5.60	Good	
18	18 T 409811 5000051	American Elm	26	2.60	Good	
19	18 T 409803 5000057	White Ash	25	2.50	Good	
20	18 T 409802 5000062	Freeman Maple	55	5.50	Good	
21	18 T 409801 5000063	Eastern White Cedar	24	2.40	Good	
22	18 T 409800 5000064	Eastern White Cedar	34	3.40	Good	
23	18 T 409799 5000066	Manitoba Maple	25	2.50	Good	
24	18 T 409792 5000073	Eastern White Cedar	30	3.00	Good	Multistem
25	18 T 409790 5000077	Eastern White Cedar	26	2.60	Good	
26	18 T 409778 5000091	Eastern White Cedar	41	4.10	Good	Multistem
27	18 T 409774 5000095	Eastern White Cedar	67	6.70	Good	
28	18 T 409773 5000097	Eastern White Cedar	21	2.05	Good	Multistem
29	18 T 409762 5000103	Eastern White Cedar	29	2.93	Good	Multistem
30	18 T 409819 5000074	Manitoba Maple	20	2.00	Good	Multistem
31	18 T 409820 5000075	Manitoba Maple	24	2.40	Good	
32	18 T 409819 5000077	Manitoba Maple	22	2.20	Good	Multistem
33	18 T 409825 5000080	Manitoba Maple	20	2.00	Good	Multistem
34	18 T 409829 5000081	Manitoba Maple	24	2.42	Good	Multistem
35	18 T 409836 5000087	Manitoba Maple	22	2.20	Good	Multistem
36	18 T 409839 5000083	Manitoba Maple	26	2.60	Good	
37	18 T 409845 5000085	Manitoba Maple	20	1.93	Good	Multistem



TREE ID	UTM NAD83	SPECIES	AVERGAE DBH (cm)	CRITICAL ROOT ZONE (m)	HEALTH	COMMENTS
38	18 T 409832 5000099	White Pine	27	2.70	Good	
39	18 T 409723 5000134	Freeman Maple	31	3.10	Good	Multistem
40	18 T 409729 5000139	Freeman Maple	26	2.55	Good	Multistem
41	18 T 409718 5000149	Freeman Maple	36	3.63	Good	Multistem