

Appendix A

Revised Environmental Impact Assessment Terms of Reference



October 25, 2021 BEL 220262

Charles McConnell, MCIP, RPP Manager, Current Planning – West District Town of Oakville 1225 Trafalgar Road Oakville, ON L6H 0H3 via email: charles.mcconnell@oakville.ca

Re: Revised Terms of Reference for Scoped Environmental Impact Assessment (EIA), 1300, 1316, 1326, 1342, 1350 and 1354 Bronte Road, Town of Oakville

Dear Charles:

Beacon Environmental Limited (Beacon) was retained by Bronte River Limited Partnership and Eaglewood Communities Inc. to prepare a Scoped Environmental Impact Assessment (EIA) in support of a proposal to redevelop properties located at 1300, 1316, 1326, 1342, 1350 and 1354 Bronte Road, Oakville, Ontario, herein referred to as Subject Property (**Figure 1**). The proposed redevelopment will consist of a mix of residential townhouses and detached homes.

The Subject Property is 7.47 hectares in area and is located west of Bronte Road, south of Upper Middle Road, north of the Queen Elizabeth Way and east of the Bronte Creek valley. The Subject Property supports several existing residential dwellings, outbuildings, landscaped areas (lawns, ornamental plantings and dug ponds). The Subject Property is flanked by environmentally designated lands including the Greenbelt and Bronte Creek Provincial Park which contain valleylands and woodlands. The natural heritage features and associated buffers are designated as Natural Heritage System by the Region of Halton and zoned Natural Area by the Town of Oakville. Additionally, 1350 & 1354 Bronte Road are currently designated and zoned Parkway Belt.

As the Subject Property overlaps with parts of the adjacent Regional Natural Heritage System (RNHS) and lands identified as Natural Area by the Town of Oakville, an EIA is required to assess the potential impacts of the redevelopment proposal on natural heritage features and functions. Additionally, due to proximity to the Bronte Creek valleylands, portions of the Subject Property fall within the regulation limits of Conservation Halton (CH) and are subject to CH development policies and permitting.

Because the Subject Property supports existing development and the proposed redevelopment will be confined to the limits of the existing residential properties and not encroach into any key natural heritage features, it is proposed that the EIA be scoped. Additionally, the Subject Property was previously studied in 2012-2015 as part of the Merton Tertiary Planning process to establish the current land use designations and zoning. For these reasons, it is proposed that the EIA be scoped as per the Region of Halton Environmental Impact Assessment Guidelines (2020).

Term of Reference for this Scoped EIA (dated July 9, 2021) were previously circulated to the Town, Region and CH. Comments were received from CH on October 12, 2021. Beacon has reviewed those



comments and provided our responses in a letter dated October 25, 2021. The Town of Oakville also supplied comments in their letter of October 15, 2021, however these comments pertain to servicing and stormwater. We have forwarded these on to Urbantech Consulting, the surface water engineer for this project, and understand that a representative will be following up directly with the reviewer to address the comments.

For this Scoped EIA, we have proposed the following Work Plan which has been revised to address some of CH's comments as provided in their letter of October 12, 2021. To date, comments have not been received from the Region on the EIA ToR:

Work Plan

Background Review and Agency Consultation

1. Background Review

All background information related to natural heritage resources in the vicinity of the Subject Property will be compiled and reviewed. This will include available aerial photography, available data from the Ministry of Natural Resources and Forestry (MNRF) and Conservation Halton (CH), as well as ecological work previously completed in 2013-2015 by Dance Environmental Inc. Additionally, the EIA will integrate the findings of other technical disciplines related to planning, engineering, hydrogeology, hydrology, servicing, etc. where applicable.

Because the EIA is also required to demonstrate compliance with various federal and provincial environmental legislation and regulations, as well as municipal policies and CH regulations, the EIA will include a framework outlining the which legislation, policies and regulation apply to the proposes redevelopment. Consideration will be given to the *Fisheries Act*, *Migratory Birds Convention Act*, *Species at Risk Act*, *Endangered Species Act*, Provincial Policy Statement, Greenbelt Plan, Region of Halton Official Plan, Town of Oakville Official Plan and CH Regulations under the *Conservation Authorities Act*.

Should any endangered or threatened species or habitats be confirmed through the EIA work that could be affected by the proposed development, MECP will be contacted regarding permitting and regulatory requirements.

2. Feature Staking with Agencies

The limits of woodlands and valleylands on the Subject Property were previously staked by the agencies on July 31, 2013. It is proposed that the former stakes limits be reviewed in the field with the agencies and adjusted where necessary. The proponent will arrange a site meeting and have an OLS present to survey any modified lines.

UPDATE: The Top of Slope was staked and surveyed with CH and Town on August 17, 2021 and the woodland dripline was staked with Regional staff on September 7, 2021.



Ecological Surveys and Assessments

3. Amphibian Call Surveys (three visits, April – June 2021)

The Subject Property contains a couple dug pond features that potentially support amphibian breeding functions. Depending on the number of amphibian species present and their abundance as determined during the breeding season, these could qualify as Significant Wildlife Habitat. To determine whether the ponds provide significant breeding functions for amphibians, it is proposed that calling surveys be competed in accordance with provincial Marsh Monitoring protocols. Both ponds are known to support predatory fishes, so formal egg mass surveys will not be completed.

4. Breeding Bird Surveys (two visits, May – June 2021)

The Subject Property and adjacent lands support habitat that could be utilized for breeding by certain significant bird species. To identify which species are resident on the Subject Property and adjacent lands, it is proposed that two surveys be completed during the breeding season in accordance with the standard protocols for Forest and Marsh Bird Monitoring. Should these surveys reveal the presence of threatened species (Bobolink and Eastern Meadowlark), a third survey will be completed in July. Additionally, buildings will be inspected to determine whether other listed species (i.e. Barn Swallow or Chimney Swift) are present. All species observed and breeding locations will be documented.

5. Ecological Land Classification and Flora (two visits, June and August 2021)

Ecological communities on the property, including aquatic communities, will be mapped and described according to the Ecological Land Classification (ELC) system which is the standard methodology for classifying ecosystems in southern Ontario. A checklist of all plant species observed on the Subject Property will also be compiled. The status of each species will be noted, including provincial and regional rarity, coefficients of conservatism, and invasiveness. Locations of any Regionally rare or Provincially Threatened or Endangered species will be noted.

6. Turtle Basking/Nesting Surveys (three visits, May, June and September 2021)

The two dug pond features have the potential to support overwintering habitat for turtles. Depending on the number of species present and their abundance as determined during the breeding season, these features could qualify as Significant Wildlife Habitat. To confirm the presence/absence of turtles, it is proposed that surveys will be conducted in the spring, summer and fall. Surveys will focus on the pond located at the west end of the property. During each survey, the edge of the pond / wetlands will be scanned using binoculars to detect basking turtles during the appropriate weather conditions and time of year. Species and number of individuals observed will be recorded. Surveys for snakes will not be completed. Instead, we intend to rely on survey data from previous investigations in 2013. The portions of the subject lands proposed to be developed is landscaped and does not support habitat elements consistent with significant hibernacula, so no specialized surveys for hibernacula will be completed.



7. Aquatic Habitat Assessment (June 2021)

The two pond features have potential to support fish habitat. One site visit will be conducted to assess the fish habitat within the ponds as well as determine if the ponds have a connection to Bronte Creek. Visual observation of fish within the ponds will be recorded. In addition, supplemental background data available on fish species that were used to stock the ponds will be referenced. The ponds are proposed to be removed in the future to facilitate development. For these reasons, further sampling of the ponds through electrofishing is unwarranted.

The aquatic assessment will make notes on the hydrologic connectivity of the ponds to Bronte Creek.

No water sampling of the ponds will be completed at this time. If such sampling is required in support of pond dewatering in the future, it will be completed in accordance with necessary standards at detailed design.

8. <u>Insect (Dragonflies, Damselflies and Butterflies) Survey (June-August 2021)</u>

Surveys for dragonflies, damselflies, and butterflies will be conducted over four, one-hour surveys in the summer of 2021 (for a total of four hours). The entire site will be walked such that all odonates and butterflies on the Subject Property, and on immediately adjacent lands can be observed. All odonates and butterflies seen will be recorded in the location observed on an aerial photograph of the site. Species that require closer examination for identification will be photographed or caught and examined using a hand lens.

9. Bat Exit Surveys (June 2021)

The proposed redevelopment does not encroach upon any woodland habitats that could support roosting bats, however there are structures on the property and some of these could potentially support endangered bats. It is proposed that exit surveys of these structures be completed during the breeding and rearing season (June and July) to confirm the presence/absence of bats and species present. Near sundown, two staff members, each located on opposite corners of a building, will use of specialized electronic equipment to record calls as bats exit the building. Surveys for each building will be completed twice during the survey period. This survey methodology is consistent with guidance provided in *Use of Buildings by Species at Risk Bats Survey Methodology* (MNRF 2018).

EIA Report

10. EIA Report

Beacon will prepare a Draft EIA report summarizing the findings of the background review and field investigations, an evaluation of significant features, constraints and opportunities, a description of the proposed draft plan and environmental management and mitigation measures, assessment of



conformity with applicable environmental legislation, policies and regulations as well as a statement of net impact.

The EIA report will be components and associated tables and mapping as appropriate:

- a. Introduction;
- b. Background Review;
- c. Regulatory Framework;
- d. Characterization of the Natural Environment (Methods and Findings);
- e. Evaluation of Significant Features and Functions;
- f. Analysis of Constraints & Opportunities;
- g. Description of the Proposal;
- h. Impact Assessment and Recommended Mitigation;
- i. Environmental Monitoring Framework
- j. Summary of Conformity with Regulatory Framework; and
- k. Conclusions.

The EIA report will also integrate key findings from the Functional Servicing Report being prepared by others.

Should you have any questions, please do not hesitate to contact me at (519) 835-6455. We look forward to your comments.

Prepared by:

Beacon Environmental

Ken Ursic, B.Sc., M.Sc. Principal, Senior Ecologist

CC.

Rob Thun, Sr. Planner, Town of Oakville Terry Korsiak – Korsiak Planning Scott Bland – Bronte River Limited Partnership Amber Lindsay – Eaglewood Communities Inc.

Attachments

Attachment A. Figure 1. Site Location



Attachment A





Figure 1 **Site Location**

Environmental Impact Assessment Enns Property, Oakville, Ontario

BEACON Project: 220262

ENVIRONMENTAL Last Revised: January 2021

Client: Argo Development Prepared by: DU Checked by: AC **DRAFT** Corporation 1:5,000 Inset Map:1:50,000

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Appendix B

Flora List



Appendix B

Flora List

Scientific Name	Common Name	COSEWIC	SARO	SRank ^a	Halton Status ^b	Level of Invasiveness ^c	Coefficient of Conservatism ^d	Coefficient of Wetnesse	Observed by de Gruchy Environmental 2012	Observed by Dance Environmental 2013*	Observed by Beacon Environmental 2021–2023
Acalypha rhomboidea	Common Three-seeded Mercury	-	-	S5	-	-	0	3	Х		
Acer negundo	Manitoba Maple	-	-	S5	-	1	0	0	X		Χ
Acer nigrum	Black Maple	-	-	S4?	-	-	7	3	X		
Acer platanoides	Norway Maple	-	-	SE5	-	2	0	5	X		Χ
Acer rubrum	Red Maple	-	-	S5	-	-	4	0	X		
Acer saccharinum	Silver Maple	-	-	S5	-	-	5	-3	X		Χ
Acer saccharum	Sugar Maple	-	-	S5	-	-	4	3	X		Χ
Actaea pachypoda	White Baneberry	-	-	S5	-	-	6	5	X		Χ
Actaea rubra	Red Baneberry	-	-	S5	-	-	6	3	X		Χ
Aegopodium podagraria	Goutweed	-	-	SE5	-	-	0	0	X		
Ageratina altissima	White Snakeroot	-	-	S5	-	-	5	3	X		Χ
Agrimonia gryposepala	Tall Agrimony	-	-	S5	-	-	2	3			X
Alisma subcordatum	Southern Water-plantain	-	-	S4?	-	-	1	-5	X		
Alliaria petiolata	Garlic Mustard	-	-	SE5	-	-	0	0	X		X
Allium tricoccum	Wild Leek	-	-	S4	-	-	7	3	X		X
Anemonastrum canadense	Canada Anemone	-	-	S5	-	-	3	-3			X
Anemone quinquefolia	Wood Anemone	-	-	S5	-	-	7	0	Х		Χ
Apocynum androsaemifolium	Spreading Dogbane	-	-	S5	-	-	3	5	Х		Χ
Aquilegia canadensis	Red Columbine	-	-	S5	-	-	5	3			Χ
Aralia nudicaulis	Wild Sarsaparilla	-	-	S5	-	-	4	3	X		Χ
Arctium lappa	Great Burdock	-	-	SE5	-	-	0	3	Х		Χ
Arctium minus	Common Burdock	-	-	SE5	-	-	0	3	Х		
Arisaema triphyllum	Jack-in-the-pulpit	-	-	S5	-	-	5	-3			Χ
Asclepias syriaca	Common Milkweed	-	-	S5	-	-	0	5	Х		
Athyrium filix-femina var. angustum	Northeastern Lady Fern	-	-	S5	-	-	4	0	Х		
Barbarea vulgaris	Bitter Wintercress	-	-	SE5	-	-	0	0	Х		
Berberis thunbergii	Japanese Barberry	-	-	SE5	-	3	0	3	X		
Betula alleghaniensis	Yellow Birch	-	-	S5	-	-	6	0			X
Betula papyrifera	Paper Birch	-	-	S5	-	-	2	3	X		X
Bidens tripartita	Three-parted Beggarticks	-	-	S5?	-	-	5	-3	X		
Bidens vulgata	Tall Beggarticks	-	-	S5	HU	-	5	0	X		
Borodinia canadensis	Canada Rockcress	-	-	S4?	HU	-	7	5			Х
Bromus inermis	Smooth Brome	-	-	SE5	-	4	0	5	X		Х
Cardamine sp. (presumed C. pensylvanica)	(Pennsylvania) Bittercress	-	-	S5	HU	-	6	-3			Х
Carex arctata	Drooping Woodland Sedge	-	-	S5	-	-	5	5	Х		
Carex blanda	Woodland Sedge	-	-	S5	_	-	3	0	X		
Carex cephalophora	Oval-leaved Sedge	-	_	S5	_	-	5	3	X		
Carex hystericina	Porcupine Sedge	-	_	S5	_	-	5	-5	X		X
Carex laxiflora	Loose-flowered Sedge	-	_	S5	_	_	5	0	X		
Carex pensylvanica	Pennsylvania Sedge	_	_	S5	_	_	5	5	X		Х



Scientific Name	Common Name	COSEWIC	SARO	SRanka	Halton Status ^b	Level of Invasiveness ^c	Coefficient of Conservatism ^d	Coefficient of Wetness ^e	Observed by de Gruchy Environmental 2012	Observed by Dance Environmental 2013*	Observed by Beacon Environmental 2021–2023
Carex platyphylla	Broad-leaved Sedge	-	-	S4S5	-	-	7	5	X		X
Carex radiata	Eastern Star Sedge	-	-	S5	-	-	4	0	Х		
Carex rosea	Rosy Sedge	-	-	S5	-	-	2	5			Χ
Carex scabrata	Eastern Rough Sedge	-	-	S5	-	-	8	-5			Χ
Carex vulpinoidea	Fox Sedge	-	-	S5	-	-	3	-5	X		Χ
Carpinus caroliniana	Blue-beech	-	-	S5	_	-	6	0			X
Carya cordiformis	Bitternut Hickory	-	-	S5	_	-	6	0	X		X
Carya ovata	Shagbark Hickory	-	-	S5	-	-	6	3	X		X
Catalpa speciosa	Northern Catalpa	-	-	SE1	-	-	0	3	X		
Caulophyllum giganteum	Giant Blue Cohosh	-	-	S5	Requires further review	-	5	5		Х	Х
Ceanothus americanus	New Jersey Tea	-	-	S4	-	-	7	5			Χ
Celastrus scandens	Climbing Bittersweet	-	-	S5	-	-	3	3			X
Celtis occidentalis	Common Hackberry	-	-	S4	HR	-	8	0	Х		
Cerastium fontanum	Common Mouse-ear Chickweed	-	-	SE5	-	-	0	3	X		
Chelidonium majus	Greater Celandine	-	-	SE5	-	-	0	5	X		
Circaea canadensis	Broad-leaved Enchanter's Nightshade	-	-	S5	-	-	2	3	X		Χ
Cirsium arvense	Canada Thistle	-	-	SE5	-	-	0	3	X		Χ
Cirsium vulgare	Bull Thistle	-	-	SE5	-	-	0	3		X	
Clintonia borealis	Yellow Clintonia	-	-	S5	_	-	7	0			Χ
Collinsonia canadensis	Canada Horsebalm	-	-	S4	HU	-	8	0	X		X
Convallaria majalis	European Lily-of-the-valley	-	-	SE5	-	3	0	5	, ,		X
Cornus alternifolia	Alternate-leaved Dogwood	-	-	S5	-	-	6	3	Х		X
Cornus racemosa	Grey Dogwood	_	-	S5	_	-	2	0	X		, ,
Cornus rugosa	Round-leaved Dogwood	_	-	S5	_	-	6	5	, ,		Х
Cornus sericea	Red-osier Dogwood	_	-	S5	_	_	2	-3	Х		X
Cynoglossum officinale	Common Hound's-tongue	_	-	SE5	_	-	0	5	X		~
Dactylis glomerata	Orchard Grass	_	-	SE5	_	3	0	3	X		Х
Danthonia spicata	Poverty Oatgrass	_	-	S5	_	-	5	5	X		~
Daucus carota	Wild Carrot	_	-	SE5	_	-	0	5	X		Х
Diervilla Ionicera	Northern Bush-honeysuckle	_	-	S5	_	-	5	5	X		X
Dipsacus fullonum	Common Teasel	_	_	SE5	_	_	0	3	X		
Dryopteris carthusiana	Spinulose Wood Fern	_	_	S5	_	_	5	-3	X		Х
Elymus hystrix	Bottlebrush Grass	_	_	S5	_	_	5	5	X		
Epifagus virginiana	Beechdrops	_	_	S5	-	_	6	5	X		
Elymus virginicus	Virginia Wild Rye	_	_	S5	-	_	5	-3			Х
Epipactis helleborine	Broad-leaved Helleborine	_	_	SE5	-	_	0	3	Х		
Equisetum arvense	Field Horsetail	-	-	S5	-	-	0	0	X		Х
Erigeron annuus	Annual Fleabane	-	-	S5	-	_	0	3	X		X
Erigeron philadelphicus	Philadelphia Fleabane	-	-	S5	-	_	1	-3	X		^
Erigeron pulchellus	Robin's-plantain Fleabane	-		S5	HU	_	7	3	^		Х
Euonymus alatus	Winged Euonymus	-	-	SE2	-	3	0	5	X		^
Euonymus obovatus	Running Strawberry-bush	-	-	S4	-	-	6	3	X		
Eurybia macrophylla	Large-leaved Aster	-	-	S5	-	_	5	5	X		Х
Eutrochium maculatum	Spotted Joe Pye Weed	-	<u> </u>	S5	-	-	3	-5	^		X
Eutrochium maculatum var. maculatum	Spotted Joe Pye Weed	-	-	S5	-	-	3	-5	X		Λ
Fagus grandifolia	American Beech	-	-	S4	_	_	6	3	Х		Х



Scientific Name	Common Name	COSEWIC	SARO	SRank ^a	Halton Status ^b	Level of Invasiveness ^c	Coefficient of Conservatism ^d	Coefficient of Wetness ^e	Observed by de Gruchy Environmental 2012	Observed by Dance Environmental 2013*	Observed by Beacon Environmental 2021–2023
Fragaria vesca ssp. americana	American Woodland Strawberry	-	-	S5	-	-	4	3	X		
Fraxinus americana	White Ash	-	-	S4	-	-	4	3	X		
Fraxinus nigra	Black Ash	END	END	S3	-	-	7	-3			X
Fraxinus pennsylvanica	Green Ash	-	-	S4	-	-	3	-3	Х		X
Galium aparine	Common Bedstraw	-	-	S5	-	-	4	3			Х
Galium boreale	Northern Bedstraw	-	-	S5	HU	-	7	0			Х
Geranium maculatum	Spotted Geranium	-	_	S5	-	-	6	3	Х		
Geranium robertianum	Herb-Robert	-	-	S5	-	-	2	3	X		Х
Geum canadense	Canada Avens	-	-	S5	_	-	3	0	X		
Geum urbanum	Wood Avens	_	_	SE3	_	-	0	5	X		Х
Gleditsia triacanthos	Honey Locust	_	-	S2?	_	_	8	0	X		
Glyceria striata	Fowl Mannagrass	_	-	S5	_	_	3	-5	X		Х
Hamamelis virginiana	American Witch-hazel	-	-	S4S5	_	-	6	3	X		X
Hemerocallis fulva	Orange Daylily	-	_	SE5	_	4	0	5	^		X
Hepatica americana	Round-lobed Hepatica	-	-	S5	HU	-	6	5	X		
Hesperis matronalis	Dame's Rocket	-		SE5	-	1	0	3	X		
Impatiens capensis	Spotted Jewelweed	-	<u>-</u>	S5	_	-	4	-3	X		X
Impatiens caperisis Impatiens pallida	Pale Jewelweed	-	<u>-</u>	S4	-	-	7	-3	X		
Juglans cinerea	Butternut	END	END	S2?		1	6	3	X		X
	Black Walnut	1		S4?	-	-	5	3	X		X
Juglans nigra	English Walnut	-	-	SE1	-	-	0	5	X		^
Juglans regia		-	-	S5	-	-	0	-3			V
Juncus dudleyi	Dudley's Rush	-	-		-	-	1 1		X		X
Juncus effusus	Soft Rush	-	-	S5	-	-	4	-5	V		X
Juncus effusus ssp. solutus	Soft Rush	-	-	S5?	-	-	4	-5	X		
Juniperus virginiana	Eastern Red Cedar	-	-	S5	-	-	4	3	X		
Lactuca serriola	Prickly Lettuce	-	-	SE5	-	-	0	3	X		
Lapsana communis	Common Nipplewort	-	-	SE5	-	5	0	3			X
Larix laricina	Tamarack	-	-	S5	-	-	7	-3	X		
Leersia virginica	White Cutgrass	-	-	S4	-	-	6	-3			X
Lemna minor	Small Duckweed	-	-	S5?	-	-	5	-5	X		X
Leonurus cardiaca ssp. cardiaca	Common Motherwort	-	-	SE5	-	-	0	5	X		X
Leucanthemum vulgare	Oxeye Daisy	-	-	SE5	-	4	0	5	X		
Ligustrum vulgare	European Privet	-	-	SE5	-	-	0	3	X		
Lolium perenne	Perennial Ryegrass	-	-	SE4	-	-	0	3	X		
Lonicera canadensis	Canada Fly Honeysuckle	-	-	S5	-	-	6	3			X
Lonicera dioica	Limber Honeysuckle	-	-	S5	-	-	5	3			X
Lonicera tatarica	Tatarian Honeysuckle	-	-	SE5	-	1	0	3	X		
Luzula acuminata	Hairy Woodrush	-	-	S5	HU	-	6	3	X		
Luzula multiflora	Many-flowered Woodrush	-		S5	HU	-	6	3			X
Luzula multiflora ssp. multiflora	Many-flowered Woodrush	-	-	S5	HU	-	6	3	X		
Lycopus europaeus	European Water-horehound	-		SE5	-	-	0	-5	X		
Lysimachia borealis	Northern Starflower	-		S5	-	-	6	0	X		
Lysimachia ciliata	Fringed Yellow Loosestrife	-	-	S5	-	-	4	-3	X		
Lythrum salicaria	Purple Loosestrife	-	-	SE5	-	1	0	-5	X		
Maianthemum canadense	Wild Lily-of-the-valley	-	-	S5	-	-	5	3	X		X
Maianthemum racemosum	Large False Solomon's Seal	-	-	S5	-	-	4	3	X		Х
Maianthemum stellatum	Star-flowered False Solomon's Seal	-	-	S5	-	-	6	0			X
Malus baccata	Siberian Crabapple	-	-	SE1	-	-	0	5	Х		
Malus pumila	Common Apple	_	_	SE4	_	-	0	5	X		Х



Scientific Name	Common Name	COSEWIC	SARO	SRank ^a	Halton Status ^b	Level of Invasiveness ^c	Coefficient of Conservatism ^d	Coefficient of Wetness ^e	Observed by de Gruchy Environmental 2012	Observed by Dance Environmental 2013*	Observed by Beacon Environmental 2021–2023
Matricaria discoidea	Pineappleweed	-	-	SE5	-	-	0	3	X		
Matteuccia struthiopteris	Ostrich Fern	-	-	S5	-	-	5	0			Х
Matteuccia struthiopteris var. pensylvanica	Ostrich Fern	-	-	S5	-	-	5	0	Х		
Mentha canadensis	Canada Mint	-	-	S5	-	-	3	-3	X		
Micranthes virginiensis	Early Saxifrage	-	-	S5	HU	-	7	3	X		
Morus alba	White Mulberry	-	-	SE5	-	1	0	0	X		
Myrica gale	Sweet Gale	-	-	S5	HR	-	6	-5	X		Х
Myriophyllum spicatum	Eurasian Water-milfoil	-	-	SE5	-	1	0	-5	X		Х
Nabalus altissimus	Tall Rattlesnakeroot	-	_	S5	-	-	5	3			X
Nasturtium microphyllum	Small-leaved Watercress	_	_	SE5	_	5	0	-5	Х		7.
Nepeta cataria	Catnip	_	-	SE5	_	4	0	3	,	Х	
Nuphar variegata	Variegated Pond-lily	_	_	S5	HU	-	7	-5	Х	, , , , , , , , , , , , , , , , , , ,	
Nymphaea odorata	Fragrant Water-lily	_	_	S5	HU	_	5	-5			Х
Onoclea sensibilis	Sensitive Fern	-	-	S5	-	_	4	-3	X		^
Ostrya virginiana	Eastern Hop-hornbeam	_	_	S5	_	_	4	3	X		Х
Oxalis stricta	Upright Yellow Wood-sorrel	_	_	S5	_	_	0	3	X		X
Parthenocissus vitacea	Thicket Creeper	_	_	S5	_	_	4	3	X		Λ
Patis racemosa	Black-seed Ricegrass	_	_	S4	_	_	7	5	Λ		Х
Phalaris arundinacea	Reed Canarygrass	_	_	S5	_	5	0	-3	X		X
Phragmites australis	Common Reed	_	_	S4?	_	1	0	-3	X		X
Phragmites australis ssp. australis	European Reed	-	-	SE5	-	-	0	-3	, <u>, , , , , , , , , , , , , , , , , , </u>		X
Phryma leptostachya	Lopseed	-		S4S5	-	_	6	3			X
Picea abies	Norway Spruce		_	SE3		_	0	5	X		X
Picea glauca	White Spruce	-	-	S 5	HU - native sites only (not introduced)	-	6	3	Х		Х
Picea pungens	Blue Spruce	-	-	SE1	-	-	0	3	X		
Pilea pumila	Dwarf Clearweed	-	-	S5	-	-	5	-3	X		
Pilosella caespitosa	Meadow Hawkweed	-	-	SE5	-	-	0	5			X
Pinus nigra	Austrian Pine	-	-	SE3	-	-	0	5			X
Pinus strobus	Eastern White Pine	-	-	S5	-	-	4	3	X		X
Plantago major	Common Plantain	-	-	SE5	-	-	0	3	X		
Platanus occidentalis	Sycamore	-	-	S4	HR	-	8	-3	X		X
Poa alsodes	Grove Bluegrass	-	-	S4	HU	-	7	0			X
Poa compressa	Canada Bluegrass	-	-	SE5	-	-	0	3	X		
Poa pratensis	Kentucky Bluegrass	-	-	S5	-	2	0	3			X
Poa pratensis ssp. pratensis	Kentucky Bluegrass	-	-	SE5	-	2	0	3	X		
Podophyllum peltatum	May-apple	-	-	S5	-	-	5	3	X		X
Polygonatum pubescens	Hairy Solomon's Seal	-	-	S5	-	-	5	5	X		X
Polygonum aviculare	Prostrate Knotweed	-	-	S4?	-	-	0	3	X		
Pontederia cordata	Pickerelweed	-	-	S5	-	-	7	-5	X		X
Populus deltoides ssp. deltoides	Eastern Cottonwood	-	-	S5	-	-	4	0	X		X
Populus grandidentata	Large-toothed Aspen	-	-	S5	-	-	5	3	X		X
Populus x canadensis	Carolina poplar	-	-	SNA	-	4	0		X		
Potamogeton crispus	Curly-leaved Pondweed	-	-	SE5	-	-	0	-5	Х		
Potentilla simplex	Old-field Cinquefoil	-	-	S5	HU	-	3	3			X
Prunella vulgaris ssp. lanceolata	Lance-leaved Self-heal	-	-	S5	-	-	0	0			X



Scientific Name	Common Name	COSEWIC	SARO	SRank ^a	Halton Status ^b	Level of Invasiveness ^c	Coefficient of Conservatism ^d	Coefficient of Wetnesse	Observed by de Gruchy Environmental 2012	Observed by Dance Environmental 2013*	Observed by Beacon Environmental 2021–2023
Prunus avium	Sweet Cherry	-	-	SE4	-	5	0	5	X		
Prunus serotina	Black Cherry	-	-	S5	-	-	3	3	X		Χ
Prunus virginiana	Chokecherry	-	-	S5	_	-	2	3	Х		
Prunus virginiana var. virginiana	Chokecherry	-	-	S5	_	-	2	3			Χ
Pteridium aquilinum	Bracken Fern	-	-	S5	-	-	2	3	X		
Pyrus communis	Common Pear	-	-	SE4	-	-	0	5	X		
Quercus alba	White Oak	-	-	S5	_	-	6	3	Х		Χ
Quercus macrocarpa	Bur Oak	-	-	S5	_	-	5	3	Х		
Quercus rubra	Northern Red Oak	-	-	S5	_	-	6	3	Х		Χ
Quercus velutina	Black Oak	-	-	S4	HU	-	8	5	Х		
Ranunculus abortivus	Kidney-leaved Buttercup	-	-	S5	-	-	2	0	Х		Х
Ranunculus acris	Common Buttercup	-	-	SE5	-	-	0	0	Х		Х
Rhamnus cathartica	European Buckthorn	-	-	SE5	-	1	0	0	Х		Χ
Rhus typhina	Staghorn Sumac	-	-	S5	-	-	1	3	Х		Χ
Ribes cynosbati	Eastern Prickly Gooseberry	-	-	S5	-	-	4	3	X		
Ribes rubrum	European Red Currant	-	-	SE5	-	-	0	5	Х		
Robinia pseudoacacia	Black Locust	-	-	SE5	-	2	0	3	X		Χ
Rosa multiflora	Multiflora Rose	-	-	SE5	-	1	0	3	X		X
Rosa rubiginosa	Sweetbriar Rose	-	-	SE4	-	-	0	3	X		
Rubus allegheniensis	Allegheny Blackberry	_	-	S5	_	_	2	3	7.		Х
Rubus canadensis	Canada Blackberry	_	-	S5	_	_	2	5	Х		
Rubus idaeus ssp. strigosus	North American Red Raspberry	_	-	S5	_	_	2	3	X		Х
Rubus occidentalis	Black Raspberry	_	-	S5	_	_	2	5	X		X
Rubus odoratus	Purple-flowering Raspberry	_	-	S5	_	_	3	5	X		X
Rudbeckia hirta	Black-eyed Susan	_	-	S5	_	_	0	3	X		X
Rumex crispus	Curled Dock	_	-	SE5	_	_	0	0	X		X
Salix bebbiana	Bebb's Willow	_	-	S5	_	_	4	-3	X		
Salix discolor	Pussy Willow	_	-	S5	_	_	3	-3	X		
Salix x fragilis	(Salix alba X Salix euxina)	_	-	SNA	_	_	0	0	,		Х
Salix x sepulcralis	(Salix alba X Salix babylonica)	_	-	SNA	_	_	0	-3	Х		
Sambucus racemosa	Red Elderberry	_	-	S5	_	5	5	3			X
Sassafras albidum	Sassafras	_	-	S4	HU	-	6	3	Х		
Scirpus atrovirens	Dark-green Bulrush	_		S5	-	_	3	-5	X		Х
Smilax herbacea	Herbaceous Carrionflower	_	_	S4?	_	_	5	0	X		X
Solanum dulcamara	Bittersweet Nightshade	_		SE5	_	3	0	0	X		
Solidago altissima var. altissima	Eastern Tall Goldenrod	_	_	S5	_	<u>-</u>	1	3	X		X
Solidago caesia	Blue-stemmed Goldenrod	_	_	S5	_	_	5	3	X		X
Solidago canadensis var.							1	3			
canadensis	Canada Goldenrod	-	-	S5	-	-	'	3	X		
Solidago flexicaulis	Zigzag Goldenrod	-	-	S5	-	-	6	3	X		Χ
Solidago patula	Spreading Goldenrod	-		S4	HU	-	8	-5			Χ
Sorbus aucuparia	European Mountain-ash	-	-	SE4	-	4	0	5	X		
Spiraea x vanhouttei	(Spiraea cantoniensis X Spiraea trilobata)	-	-	SNA	-	-	0	5	X		
Symphoricarpos albus	Thin-leaved Snowberry	-	-	S5	-	-	7	3	X		X
Symphyotrichum cordifolium	Heart-leaved Aster	-	-	S5	-	-	5	5	X		Χ
Symphyotrichum lanceolatum ssp. lanceolatum	Eastern Panicled Aster	-	-	S5	-	-	3	-3	Х		X
Symphyotrichum lateriflorum var. lateriflorum	Calico Aster	-	-	S5	-	-	3	0	Х		



Scientific Name	Common Name	COSEWIC	SARO	SRank ^a	Halton Status ^b	Level of Invasiveness ^c	Coefficient of Conservatism ^d	Coefficient of Wetnesse	Observed by de Gruchy Environmental 2012	Observed by Dance Environmental 2013*	Observed by Beacon Environmental 2021–2023
Symphyotrichum laeve	Smooth Aster	-	-	S5	-	-	7	3			Χ
Symphyotrichum novae-angliae	New England Aster	-	-	S5	-	-	2	-3	X		Χ
Syringa vulgaris	Common Lilac	-	-	SE5	-	2	0	5	X		
Taenidia integerrima	Yellow Pimpernel	-	-	S4	HU	-	9	5	X		Χ
Taraxacum officinale	Common Dandelion	=	=	SE5	-	-	0	3	X		Χ
Taxus canadensis	Canada Yew	-	-	S4	-	-	7	3	X		
Thalictrum dioicum	Early Meadow-rue	-	-	S5	-	-	6	3	X		Χ
Thuja occidentalis	Eastern White Cedar	-	-	S5	-	-	4	-3	X		Χ
Tilia americana	Basswood	-	-	S5	-	-	4	3	Х		Х
Toxicodendron radicans var. rydbergii	Western Poison Ivy	-	-	S5	-	-	2	0	Х		Х
Trifolium hybridum	Alsike Clover	-	-	SE5	-	-	0	3			Χ
Trillium erectum	Red Trillium	-	-	S5	-	-	6	3	Х	X	
Trillium grandiflorum	White Trillium	-	-	S5	-	-	5	3	Х		Χ
Tsuga canadensis	Eastern Hemlock	-	-	S5	-	-	7	3	Х		Χ
Tussilago farfara	Coltsfoot	-	-	SE5	-	-	0	3	X		X
Typha angustifolia	Narrow-leaved Cattail	-	-	SE5	-	5	0	-5	Х		Χ
Typha latifolia	Broad-leaved Cattail	-	-	S5	-	-	1	-5	X		X
Ulmus americana	White Elm	-	-	S5	-	-	3	-3	X		
Verbascum thapsus	Common Mullein	-	-	SE5	-	-	0	5			X
Verbena urticifolia	White Vervain	-	-	S5	-	-	4	0	X		
Veronica officinalis	Common Speedwell	-	-	SE5	-	-	0	5	X		
Viburnum acerifolium	Maple-leaved Viburnum	-	-	S5	-	-	6	5	X		X
Viburnum lentago	Nannyberry	-	-	S5	-	-	4	0	X		
Viburnum opulus	Cranberry Viburnum	-	-	S5	-	4	5	-3	Х		
Viburnum opulus ssp. trilobum	Highbush Cranberry	-	-	S5	-	-	5	-3	Х		
Vicia cracca	Tufted Vetch	-	-	SE5	-	-	0	5	Х		Χ
Vinca minor	Lesser Periwinkle	-	-	SE5	-	2	0	5			Χ
Vincetoxicum rossicum	European Swallowwort	-	-	SE5	-	-	0	5	Х		
Viola sororia	Woolly Blue Violet	-	-	S5	-	-	4	0			Χ
Vitis aestivalis	Summer Grape	-	-	S4	HU	-	7	3	Х		Χ
Vitis riparia	Riverbank Grape	-	-	S5	-	-	0	0	Х		Х

a – S-Rank (from Natural Heritage Information Centre) for breeding status: S1 (Extremely Rare), S2 (Very Rare), S3 (Rare to Uncommon) (S4 (Common), S5 (Very Common) SNA (Not applicable...'because the species is not a suitable target for conservation activities'; includes non-native species)

b – Halton Region Status, NAI 2006

c - Invasiveness Legend taken from CH Landscaping Guidelines 2010

^{1.} Excludes all other species and dominates sites indefinitely

^{2.} Highly invasive, dominates niches or does not spread rapidly

^{3.} Moderately invasive, locally dominant

^{4.} Competitive once established

^{5.} Potentially invasive/more information required

d,e - Oldham, M.J., W.D. Bakowsky, and D.A. Sutherland. 1995. Floristic Quality Assessment System for Southern Ontario. Natural Heritage Information Centre, Ontario ministry of Natural Resources, Peterborough, Ontario, Canada.

^{* -} only lists species not observed during 2012 field work, data on other noted species not available.



Appendix C

Breeding Bird List



Appendix C

Bird List

				Status						# Breeding Pairs/
Common Name	Scientific Name	National Species at Risk COSEWIC ^a	Species at Risk in Ontario Listing ^b	Provincial breeding season SRANK ^c	Area- sensitive (OMNR) ^d	Halton Region Rarity ^e	Dance Environmental Bird Observations 2012 ^f	Dance Environmental Bird Observations 2013 ⁹	Dance Environmental Bird Observations 2014, 2015 h	Territories Observed by Beacon Environmental 2021
Great Blue Heron	Ardea herodias			S4		С		X	X*	
Canada Goose	Branta canadensis			S5		Α				1
Hooded Merganser	Lophodytes cucullatus			S5		HU				1
Cooper's Hawk	Accipiter cooperi			S4	Α	HU		X		
Red-tailed Hawk	Buteo jamaicensis			S5		С	X		X	
Killdeer	Charadrius vociferus			S5		С		X	X*	1
Spotted Sandpiper	Actitis macularia			S5		С			X	
Ring-billed Gull	Larus delawarensis			S5		А			X	
Mourning Dove	Zenaida macroura			S5		Α	X	X	X	1
Belted Kingfisher	Ceryle alcyon			S4		С			X	
Red-bellied Woodpecker	Melanerpes carolinus			S4		HU	Х		Х	
Downy Woodpecker	Picoides pubescens			S5		С	X		X	
Hairy Woodpecker	Picoides villosus			S5	Α	С	X	X	X	
Northern Flicker	Colaptes auratus			S4		С	X	X	X	
Eastern Wood- Pewee	Contopus virens	SC	SC	S4		С	X*		Х	1
Great Crested Flycatcher	Myiarchus crinitus			S4		С	X		Х	2
Eastern Kingbird	Tyrannus tyrannus			S4		С	X*		X	
Purple Martin	Progne subis			S4		HU			X	
Tree Swallow	Tachycineta bicolor			S4		Α			X	
Barn Swallow	Hirundo rustica	THR	THR	S4		С		X	X*	
Blue Jay	Cyanocitta cristata			S5		Α	X	X	X	2
American Crow	Corvus brachyrhynchos			S5		Α		X	X	
Black-capped Chickadee	Poecile atricapillus			S5		.A	Х	X	X	1
White-breasted Nuthatch	Sitta carolinensis			S5	А	С	Х		Х	1
Brown Creeper	Certhia americana			S5	Α	HU	X			
House Wren	Troglodytes aedon			S5		С	X			2
Golden-crowned Kinglet	Regulus satrapa			S5		HR	Х			
Eastern Bluebird	Sialia sialis			S5		HU	X			
Wood Thrush	Hylocichla mustelina	THR	SC	S4		С	X			
American Robin	Turdus migratorius			S5		Α	X	X	X	6
Gray Catbird	Dumetella carolinensis			S4		С	X	X	X	1
Cedar Waxwing	Bombycilla cedrorum			S5		С	X	X	X	
European Starling	Sturnus vulgaris			SE		A	X	X	X	4
Red-eyed Vireo	Vireo olivaceus			S5		А	X	X	X	



				Status						# Breeding Pairs/
Common Name	Scientific Name	National Species at Risk COSEWIC ^a	Species at Risk in Ontario Listing ^b	Provincial breeding season SRANK ^c	Area- sensitive (OMNR) ^d	Halton Region Rarity ^e	Dance Environmental Bird Observations 2012 ^f	Dance Environmental Bird Observations 2013 ^g	Dance Environmental Bird Observations 2014, 2015 ^h	Territories Observed by Beacon Environmental 2021
Yellow Warbler	Setophaga petechia			S5		С		X	X*	
Common Yellowthroat	Geothlyphis trichas			S5		С		X	X*	1
Scarlet Tanager	Piranga olivacea			S4	Α	С	X*			
Northern Cardinal	Cardinalis cardinalis			S5		С	X	X	X	3
Rose-breasted Grosbeak	Pheucticus Iudovicianus			S4		С			Х	
Indigo Bunting	Passerina cyanea			S4		С		X	X	
Chipping Sparrow	Spizella passerina			S5		С	X	X	X	
Field Sparrow	Spizella pusilla			S4		С		X	X*	
Savannah Sparrow	Passerculus sandwichensis			S4	Α	А		X		
Song Sparrow	Melospiza melodia			S5		Α	X	X	X	2
Dark-eyed Junco	Junco hyemalis			S5		С	X			
Red-winged Blackbird	Agelaius phoeniceus			S4		Α	X	X	X	5
Common Grackle	Quiscalus quiscula			S5		Α		X	X	2
Brown-headed Cowbird	Molothrus ater			S4		А		Х	Х	1
Baltimore Oriole	Icterus galbula			S4		С	X		X	3
House Finch	Haemorhous mexicanus			SNA		Α	X			
American Goldfinch	Spinus tristis			S5		Α	X	X	X	1
House Sparrow	Passer domesticus			SNA		Α				2

- # = Maximum number of breeding pairs recorded on subject property
- a COSEWIC = Committee on the Status of Endangered Wildlife in Canada: END = Endangered, THR = Threatened, SC = Special Concern
- b 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
- c SRANK (from Natural Heritage Information Centre) for breeding status if: S1 (Critically Imperiled), S2 (Imperiled), S3 (Vulnerable), S4 (Apparently Secure) SNA (Not applicable...'because the species is not a suitable target for conservation activities'; includes non-native species)
- d Ontario Ministry of Natural Resources (OMNR). 2000. Significant Wildlife Habitat Technical Guide (Appendix G). 151 p plus appendices.
- e Halton Natural Areas Inventory 2006: Volume 2 Species Checklists (ISBN 0-9732488-7-4). A-Abundant, C-Common, HR-Regionally uncommon, HU-Regionally uncommon.
- f Surveys conducted on Subject Property and on adjacent Bronte Provincial Park lands. * species observed on Bronte Provincial Park lands.
- **g** Surveys conducted on adjacent Bronte Provincial Park lands.
- h Surveys conducted on Subject Property and on adjacent Bronte Provincial Park lands. * species observed on Bronte Provincial Park lands.



Appendix D

Species at Risk Screening and MECP Correspondence

From: Martin, Christopher (MECP)

To: <u>Anna Cunningham</u>

Subject: RE: Species at Risk Screening for 1300, 1316, 1326, 1342, 1350 and 1354 Bronte Road, Town of Oakville, Region

of Halton

Date: April 12, 2021 2:08:57 PM

Attachments: Client Guide to Preliminary Screening-May 2019.pdf

Hi Anna.

Thank you for your information request in support of Lot 31, Concession 1 development in the Town of Oakville. I have knowledge of records for the following species at risk on or within ~1 km of the subject properties:

Eastern flowering dogwood

Butternut

American ginseng

Monarch

Mottled Duskywing

Silver shiner (Bronte Creek)

American eel (Bronte Creek)

Snapping turtle

Wood turtle

Eastern hog-nosed snake

Barn swallow

Bank swallow

Short-eared owl

Peregrine Falcon

Eastern wood-pewee

Olive-sided flycatcher

Wood thrush

Chimney swift

Bobolink

Eastern meadowlark

Yellow-breasted chat

Tri-colored bat

Little brown myotis

Given the habitat of the study area, other species at risk may also be present. Many areas in Ontario have never been surveyed and new plant and animal species records are still being discovered for many localities. Please see the attached guide for a list of publicly available information sources of species at risk information.

Some species at risk information is highly sensitive (e.g. American ginseng) and is not intended for any person or project unrelated to this undertaking. Please do not include any specific locational information in reports that will be available for the public record.

I encourage you to report species at risk observations to NHIC (Report rare species

(animals and plants) | Ontario.ca), E-bird and/or iNaturalist as appropriate.

Regards,

Chris

Christopher Martin, A/Management Biologist

Permissions and Compliance Section | Species at Risk Branch | Land and Water Division Ministry of the Environment, Conservation and Parks Christopher.Martin@ontario.ca | (705) 313-3928

From: Anna Cunningham

Sent: March 10, 2021 2:53 PM

To: Martin, Christopher (MECP) < Christopher.Martin@ontario.ca>

Cc: Kenneth Ursic < <u>kursic@beaconenviro.com</u>>

Subject: Species at Risk Screening for 1300, 1316, 1326, 1342, 1350 and 1354 Bronte Road, Town of

Oakville, Region of Halton

Good afternoon Chris,

Beacon Environmental Limited (Beacon) was retained by Argo Development Corporation to provide input into an Environmental Impact Report for the development of Lot 31, Concession 1 North of Dundas Street, Town of Oakville, Region of Halton (hereto referred as the subject properties). Please refer to the attached figure for the exact location of the subject properties.

It would be helpful if you could assist in screening and assessing for all possible species at risk (SAR) on the subject properties and adjacent lands.

Thank you in advance for any guidance you can provide,

Anna Cunningham, B.Sc. (Hons.) / Ecologist
BEACON ENVIRONMENTAL

373 Woolwich Street, Guelph, ON N1H 3W4 T) 519.826.0419 x32 C) 905.767.1720 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.



Appendix D

Table D2: Species At Risk Screening

			Statu	S			Potentially	Potentially Suitable	
Taxonomy	Species	ESA	SARA	COSEWIC	Preferred Habitat ^{1, 2}	Known Species Range ^{1, 2}	Suitable Habitat Present within the Subject Lands	Habitat Present outside of Subject Lands	Likelihood of Presence (Based on Field Surveys)
Reptiles	Wood Turtle Glyptemys insculpta	END	THR Schedule 1	THR	Historically, the Wood Turtle was known as "old red leg" owing to the orange or brick-red colour of its legs. A mid-sized turtle, the Wood Turtle reaches its full size of 20-24 cm long around the age of 20. The Wood Turtle prefers clear rivers, streams or creeks with a slight current and sandy or gravelly bottom. It spends more time on land and the shores of watercourses than other native Ontario turtles. Wooded areas are essential habitat for the Wood Turtle, but they are found in other habitats, such as wet meadows, swamps and fields. Wood Turtles overwinter on stream bottoms.	In Ontario, Wood Turtles have been found in three separate regions of the province. Studies are underway to determine more accurately the size and extent of these populations and threats they're facing. The Wood Turtle is found in isolated patches from Nova Scotia and New Brunswick south to Virginia, and west through southern Quebec and Ontario to Minnesota and northeastern lowa.	No.	Yes Bronte Creek may provide suitable habitat	_
Reptiles	Eastern Hog- nosed Snake Heterodon platirhinos	THR	THR Schedule 1	THR	The Eastern Hog-nosed Snake specializes in hunting and eating toads, and usually only occurs where toads can be found. Eastern Hog-nosed Snakes prefer sandy, well-drained habitats such as beaches and dry forests where they can lay their eggs and hibernate. They use their up-turned snout to dig burrows below the frost line in the sand where eggs are deposited.	The Eastern Hog-nosed Snake is only found in eastern North America, with about ten per cent of its range occurring in Canada. The Canadian population is limited to Ontario where it can be found in two areas: The Carolinian Region and Great Lakes-St. Lawrence Region.	No.	Yes Bronte Creek Provincial Park may provide suitable habitat	-
Reptiles	Snapping Turtle Chelydra serpentina	SC	SC Schedule 1	SC	Snapping Turtles spend most of their lives in water. They prefer shallow waters so they can hide under the soft mud and leaf litter, with only their noses exposed to the surface to breathe. During the nesting season, from early to mid summer, females travel overland in search of a suitable nesting site, usually gravelly or sandy areas along streams. Snapping Turtles often take advantage of man-made structures for nest sites, including roads (especially gravel shoulders), dams and aggregate pits.	The Snapping Turtle's range extends from Ecuador to Canada. In Canada this turtle can be found from Saskatchewan to Nova Scotia. It is primarily limited to the southern part of Ontario. The Snapping Turtle's range is contracting.	Yes Artificial ponds	No Bronte Creek (outside study area) may provide suitable habitat	Very Low — No individuals observed during field surveys between 2012 and 2021
Plants	American Ginseng Panax quinquefolius	END	END Schedule 1	END	In Ontario, American Ginseng typically grows in rich, moist, but well-drained, and relatively mature, deciduous woods dominated by Sugar Maple (Acer saccharum), White Ash (Fraxinus americana) and American Basswood (Tilia americana). It usually grows in deep, nutrient rich soil over limestone or marble bedrock.	American Ginseng ranges from Louisiana and Georgia north to New England and Minnesota. In Canada, it is found in southwestern Quebec and southern Ontario.	Yes Forested habitat	Yes Forested habitat	Very Low — No individuals observed during field surveys between 2012 and 2021
Plants	Butternut Juglans cinerea	END	END Schedule 1	END	In Ontario, Butternut usually grows alone or in small groups in deciduous forests. It prefers moist, well-drained soil and is often found along streams. It is also found on well-drained gravel sites and rarely on dry rocky soil. This species does not do well in the	Butternut can be found throughout central and eastern North America. In Canada, Butternut occurs in Ontario, Quebec and New Brunswick. In Ontario, this species is found throughout the southwest, north to the Bruce Peninsula, and south of the Canadian Shield.	Yes	Yes	Present — See Kuntz Forestry Report



			Statu	s			Potentially	Potentially Suitable	
Taxonomy	Species	ESA	SARA	COSEWIC	Preferred Habitat ^{1, 2}	Known Species Range ^{1, 2}	Suitable Habitat Present within the Subject Lands	Habitat Present outside of Subject Lands	Likelihood of Presence (Based on Field Surveys)
					shade, and often grows in sunny openings and near forest edges.				
Plants	Black Ask Fraxinus nigra	END	No Status	THR	Black Ash is predominantly a wetland species found in swamps, floodplains and fens.	Black Ash occurs from western Newfoundland to southeastern Manitoba and North Dakota, ranging southward to Iowa, Illinois, Virginia and Delaware. Black Ash's range extends farther north than any other ash and approximately 51% of the species' global range is within Canada.	Yes	Yes	Present (Adjacent Lands) — Two dead/dying specimens were observed in ELC Unit 12 associated with a seep on the alluvial fan
Plants	Eastern Flowering Dogwood Cornus florida	END	END Schedule 1	END	Eastern Flowering Dogwood grows under taller trees in mid-age to mature deciduous or mixed forests. It most commonly grows on floodplains, slopes, bluffs and in ravines, and is also sometimes found along roadsides and fencerows.	In Canada, it can only be found in southern Ontario in the Carolinian Zone (the small area of Ontario southwest of Toronto to Sarnia down to the shores of Lake Erie).	Yes Forested habitat	Yes Forested habitat	Very Low — No individuals observed during field surveys between 2012 and 2021
Mammals	Little Brown Myotis (Bat) <i>Myotis</i> <i>lucifugus</i>	END	END Schedule 1	END	Bats are nocturnal. During the day they roost in trees and buildings. They often select attics, abandoned buildings and barns for summer colonies where they can raise their young. Bats can squeeze through very tiny spaces (as small as six millimetres across) and this is how they access many roosting areas. Little brown bats hibernate from October or November to March or April, most often in caves or abandoned mines that are humid and remain above freezing. This species can typically be associated with any community where suitable roosting (i.e. caviety trees, houses, abandoned buildings, barns, etc.) habitat is available.	The Little Brown Myotis is widespread in southern Ontario and found as far north as Moose Factory and Favourable Lake. Outside Ontario, this bat is found across Canada (except in Nunavut) and most of the United States.	Yes Forested habitat	Yes Forested habitat	Assumed — Habitat assessment required
Mammals	Northern Myotis (Bat) Myotis septentrionali s	END	END Schedule 1	END	Northern Myotis bats are associated with boreal forests, choosing to roost under loose bark and in the cavities of trees. These bats hibernate from October or November to March or April, most often in caves or abandoned mines.	The Northern Myotis is found throughout forested areas in southern Ontario, to the north shore of Lake Superior and occasionally as far north as Moosonee, and west to Lake Nipigon.	Yes Forested habitat	Yes Forested habitat	Moderate — Species detected in open areas adjacent to forested habitat
Mammals	Tricoloured Bat Perimyotis subflavus	END	END Schedule 1	END	Tricoloured Bat inhabits a variety of forested communities, and will roost older forests and barns (or other structures). Foraging habitats include areas over water and streams. They hibernate in cave where they typically roost independently rather than in groups.	Tricoloured Bat is found in southern Ontario, where its northern limit is in proximity to Sudbury. Due to its rarity, their distribution is scattered.	Yes Forested habitat	Yes Forested habitat	Assumed — Habitat assessment required
Insects	Monarch Danaus plexippus	SC	SC Schedule 1	END	Throughout their life cycle, Monarchs use three different types of habitat. Only the caterpillars feed on milkweed plants and are confined to meadows and open areas where milkweed grows. Adult butterflies can be found in more diverse habitats where they feed on nectar from a variety of wildflowers.	The Monarch's range extends from Central America to southern Canada. In Canada, Monarchs are most abundant in southern Ontario and Quebec where milkweed plants and breeding habitat are widespread. During late summer and fall, Monarchs from Ontario migrate to central Mexico where they spend the winter months. During migration, groups of Monarchs numbering in the thousands can be	No.	Yes Bronte Creek Provincial Park may provide suitable habitat	-



			Statu	S			Potentially	Potentially Suitable	
Taxonomy	Species	ESA	SARA	COSEWIC	Preferred Habitat ^{1, 2}	Known Species Range ^{1, 2}	Suitable Habitat Present within the Subject Lands	Habitat Present outside of Subject Lands	Likelihood of Presence (Based on Field Surveys)
						seen along the north shores of Lake Ontario and Lake Erie.			
Insects	Mottled Duskying <i>Erynnis</i> <i>martialis</i>	END	END Schedule 1	END	In southern Ontario, the Mottled Duskywing requires the host plant called New Jersey Tea (<i>Ceanothus americanus</i>) to carry out its life cycle. These plants can be found in dry, well-drained soils or alvar habitat in oak and pine woodland, roadsides, riverbanks, shady hillsides and tall grass prairies.	This species is distributed into two populations in Canada: the Great Lakes Plain Population (southern Ontario and historically Quebec) and the Borel Population (southern Manitoba).	No.	Yes Bronte Creek Provincial Park may provide suitable habitat	-
Fish	American Eel Anguilla rostrata	END	No Status	THR	Over the course of its life, the American Eel can be found in both salt and fresh water. In fact, some scientists consider the American Eel to have the broadest diversity of habitats of any fish species in the world.	The American Eel starts life in the Sargasso Sea in the North Atlantic Ocean and migrates along the east coast of North America. In Canada, it is found in fresh water and salt water areas that are accessible from the Atlantic Ocean. This area extends from Niagara Falls in the Great Lakes up to the mid-Labrador coast. In Ontario, American Eels can be found as far inland as Algonquin Park. Once the eels mature (10-25 years) they return to the Sargasso Sea to spawn.	No.	No Bronte Creek may provide suitable habitat; however it is not mapped as such by DFO	
Fish	Silver Shiner Notropis photogenis	THR	SC Schedule 3	Threatened	Silver shiners prefer moderate to large size streams with swift currents that are free of weeds and have clean gravel or boulder bottoms. They live in schools and feed on crustaceans and adult flies that fall in the water or fly just above the surface. In June or July, they spawn by scattering their eggs over gravel riffles.	The Silver Shiner range includes east-central North America throughout the Ohio and Tennessee River drainage basins. In Ontario, it is found in the Thames and Grand Rivers, and in Bronte Creek and Sixteen Mile Creek, which flow into Lake Ontario.	No.	Yes Bronte Creek is mapped as critical habitat by DFO	_
Birds	Yellow- breasted Chat Icteria virens	END	SC Schedule 1	END	The Yellow-breasted Chat lives in thickets and scrub, especially locations where clearings have become overgrown. These birds spend their winters in coastal marshes.	In Canada, it lives in southern British Columbia, the Prairies, and southwestern Ontario, where it is concentrated in Point Pelee National Park and Pelee Island in Lake Erie.	No.	Yes Bronte Creek Provincial Park may provide suitable habitat	-
Birds	Bank Swallow <i>Riparia</i> <i>riparia</i>	THR	THR Schedule 1	THR	Bank Swallows nest in burrows in natural and human-made settings where there are vertical faces in silt and sand deposits. Many nests are on banks of rivers and lakes, but they are also found in active sand and gravel pits or former ones where the banks remain suitable. The birds breed in colonies ranging from several to a few thousand pairs.	The Bank Swallow is found all across southern Ontario, with sparser populations scattered across northern Ontario. The largest populations are found along the Lake Erie and Lake Ontario shorelines, and the Saugeen River (which flows into Lake Huron).	No.	No — Open Bluff on valley slope is almost exclusively Queenston shale	Very Low — No individuals observed during field surveys between 2012 and 2021
Birds	Barn Swallow Hirundo rustica	SC	THR Schedule 1	SC	Barn Swallows often live in close association with humans, building their cup-shaped mud nests almost exclusively on human-made structures such as open barns, under bridges and in culverts. The species is attracted to open structures that include ledges where they can build their nests, which are often reused from year to year. They prefer unpainted, rough-cut wood, since the mud does not adhere as well to smooth surfaces.	The Barn Swallow may be found throughout southern Ontario and can range as far north as Hudson Bay, wherever suitable locations for nests exist.	Suitable foraging habitat only — Open areas	Suitable foraging habitat only — Open areas	Moderate — Single individuals observed over ELC Units 5 and 10a by Dance Environmental between 2013 and 2015



			Statu	s			Potentially	Potentially Suitable	
Taxonomy	Species	ESA	SARA	COSEWIC	Preferred Habitat ^{1, 2}	Known Species Range ^{1, 2}	Suitable Habitat Present within the Subject Lands	Habitat Present outside of Subject Lands	Likelihood of Presence (Based on Field Surveys)
Birds	Bobolink Dolichonyx oryzivorus	THR	THR Schedule 1	THR	Historically, Bobolinks lived in North American tallgrass prairie and other open meadows. With the clearing of native prairies, Bobolinks moved to living in hayfields. Bobolinks often build their small nests on the ground in dense grasses. Both parents usually tend to their young, sometimes with a third Bobolink helping.	The Bobolink breeds across North America. In Ontario, it is widely distributed throughout most of the province south of the boreal forest, although it may be found in the north where suitable habitat exists.	No.	Yes Bronte Creek Provincial Park may provide suitable habitat in grassland restoration areas	-
Birds	Chimney Swift Chaetura pelagica	THR	THR Schedule 1	THR	Before European settlement Chimney Swifts mainly nested on cave walls and in hollow trees or tree cavities in old growth forests. Today, they are more likely to be found in and around urban settlements where they nest and roost (rest or sleep) in chimneys and other manmade structures. They also tend to stay close to water as this is where the flying insects they eat congregate.	The Chimney Swift breeds in eastern North America, possibly as far north as southern Newfoundland. In Ontario, it is most widely distributed in the Carolinian zone in the south and southwest of the province, but has been detected throughout most of the province south of the 49th parallel. It winters in northwestern South America.	Yes Chimneys in existing buildings	Yes Slopes of Bronte Creek valley that demonstrate old growth forest characteristics	Very Low — No individuals observed during targetted surveys in 2021
Birds	Eastern Meadowlark Sturnella magna	THR	THR Schedule 1	THR	Eastern Meadowlarks breed primarily in moderately tall grasslands, such as pastures and hayfields, but are also found in alfalfa fields, weedy borders of croplands, roadsides, orchards, airports, shrubby overgrown fields, or other open areas. Small trees, shrubs or fence posts are used as elevated song perches.	In Ontario, the Eastern Meadowlark is primarily found south of the Canadian Shield but it also inhabits the Lake Nipissing, Timiskaming and Lake of the Woods areas.	No.	Yes Bronte Creek Provincial Park may provide suitable habitat in grassland restoration areas	-
Birds	Eastern Wood-Pewee Contopus virens	SC	SC Schedule 1	SC	The Eastern Wood-pewee lives in the mid-canopy layer of forest clearings and edges of deciduous and mixed forests. It is most abundant in intermediate-age mature forest stands with little understory vegetation.	The eastern wood-pewee is found across most of southern and central Ontario, and in northern Ontario as far north as Red Lake, Lake Nipigon and Timmins.	Yes Forested habitat	Yes Forested habitat	Moderate — Observed in forested communities
Birds	Olive-sided flycatcher Contopus cooperi	SC	THR Schedule 1	SC	The Olive-sided Flycatcher is most often found along natural forest edges and openings. It will use forests that have been logged or burned, if there are ample tall snags and trees to use for foraging perches. Olive-sided Flycatchers' breeding habitat usually consists of coniferous or mixed forest adjacent to rivers or wetlands. In Ontario, Olive-sided Flycatchers commonly nest in conifers such as White and Black Spruce, Jack Pine and Balsam Fir.	The Olive-sided Flycatcher has a broad breeding range across Canada and the western and northeastern United States. Just over half the range is found in Canada, where it breeds in every province and territory except Nunavut. Its breeding population is most dense along the west coast from southern British Columbia to California. In Ontario, it is widely distributed throughout the central and northern areas of the province.	No.	No.	-
Birds	Peregrine Falcon Falco peregrinus	SC	SC Schedule 1	No Status	Peregrine Falcons usually nest on tall, steep cliff ledges close to large bodies of water. Although most people associate Peregrine Falcons with rugged wilderness, some of these birds have adapted well to city life. Urban peregrines raise their young on ledges of tall buildings, even in busy downtown areas. Cities offer peregrines a good year-round supply of pigeons and starlings to feed on.	Although Peregrine Falcons now nest in and around Toronto and several other southern Ontario cities, the majority of Ontario's breeding population is found around Lake Superior in northwestern Ontario.	No.	No. Cliffs not present	-



			Status				Potentially	Potentially Suitable		
Taxonomy	Species	ESA	SARA	COSEWIC	Preferred Habitat ^{1, 2}	Known Species Range ^{1, 2}	Suitable Habitat Present within the Subject Lands	Habitat Present outside of Subject Lands	Likelihood of Presence (Based on Field Surveys)	
Birds	Short-eared Owl Asio flammeus	SC	SC Scheudle 1	SC	The Short-eared Owl lives in open areas such as grasslands, marshes and tundra where it nests on the ground and hunts for small mammals, especially voles.	The Short-eared Owl has a world-wide distribution, and in North America its range extends from the tundra south to the central United States. In Ontario, the species has a scattered distribution, found along the James Bay and Hudson Bay coastlines, along the Ottawa River in eastern Ontario, in the far west of the Rainy River District, and elsewhere in southern Ontario, at places such as Wolfe and Amherst Islands near Kingston. Most northern populations are migratory, moving southward in the winter.	No.	Yes Bronte Creek Provincial Park may provide suitable habitat in grassland restoration areas	Very Low — No individuals observed during targetted owl surveys by Dance Environmental between 2012 and 2015	
Birds	Wood Thrush Hylocichla mustelina	SC	THR Schedule 1	SC	The Wood Thrush lives in mature deciduous and mixed (conifer-deciduous) forests. They seek moist stands of trees with well-developed undergrowth and tall trees for singing perches. These birds prefer large forests, but will also use smaller stands of trees. They build their nests in living saplings, trees or shrubs, usually in sugar maple or American beech.	The wood thrush is found all across southern Ontario. It is also found, but less common, along the north shore of Lake Huron, as far west as the southeastern tip of Lake Superior. There is a very small population near Lake of the Woods in northwestern Ontario, and there have been scattered sightings in the mixed forest of northern Ontario.	Yes Forested habitat	Yes Forested habitat	Moderate — Observed in ELC Unit 1 by Dance Environmental in 2013	

Glossary

ESA - Extripated - a species that no longer exists in the wild in Ontario but still occurs elsewhere.

SARA - Extripated - a wildlife species that no longer exists in the wild in Canada, but exists elsewhere in the wild.

ESA - Endangered - a species facing imminent extinction or extirpation in Ontario which is a candidate for regulation under Ontario's Endangered Species Act.

SARA - Endangered - a wildlife species that is facing imminent extirpation or extinction.

ESA - Threatened - a species that is at risk of becoming endangered in Ontario if limiting factors are not reversed.

SARA - Threatened - a wildlife species that is likely to become endangered if nothing is done to reverse the factors leading to its extirpation or extinction.

ESA - Special Concern (formerly Vulnerable) - a species with characteristics that make it sensitive to human activities or natural events.

SARA - Special Concern - a wildlife species that may become a threatened or an endangered species because of a combination of biological characteristics and identified threats.

Ontario Ministry of Natural Resources and Forestry

Endangered Species Act

Species at Risk Act (Federal)

Schedule 1

The official list of species that are classified as extirpated, endangered, threatened, and of special concern.

Schedule

Species listed in Schedule 2 are species that had been designated as endangered or threatened, and have yet to be re-assessed by COSEWIC using revised criteria. Once these species have been re-assessed, they may be considered for inclusion in Schedule 1. Schedule 3

Species listed in Schedule 3 are species that had been designated as special concern, and have yet to be re-assessed by COSEWIC using revised criteria. Once these species have been re-assessed, they may be considered for inclusion in Schedule 1. Committee on the Stauts of Endangerd Wildlife in Canada - a committee of experts that assesses and designates which wild species are in some danger of disappearing from Canada.

References

- 1. Species at Risk. Ontario Ministry of Natural Resources and Forestry. http://www.mnr.gov.on.ca/en/Business/Species/index.html. © Queens Printer For Ontario, 2013.
- 2. Species at Risk Status Reports. Committed on the Status of Endangered Wildlife in Canada. Ottawa. http://www.sararegistry.gc.ca/search/advSearch/Results_e.cfm?stype=doc&docID=18.



Appendix E

SWH Analysis



Appendix E

Table E1. Significant Wildlife Habitat (SWH) Evaluation for the Subject Property and Adjacent Lands

Wildlife Habitat Category and Associated Species ¹	SWH Criteria for Ecoregion 7E ¹	Applicability of SWH Criteria	Potential SWH (Subject Property)	Potential SWH (Adjacent Lands) ²
Seasonal Concentration Areas				
Waterfowl Stopover and Staging Areas (Terrestrial) American Black Duck Northern Pintail Gadwall Blue-winged Teal Green-winged Teal American Wigeon Northern Shoveler Tundra Swan Waterfowl Stopover and Staging Areas	Suitable Habitat • Fields with sheet water during Spring (mid-March to May) Suggested Criteria • Studies carried out and verified presence of an annual concentration of any listed species	 No suitable habitat or associated species present on the Subject Property or adjacent lands. No known records for significant waterfowl stopover on Subject Property or adjacent lands. 	NO	Unlikely
(Aquatic) Canada Goose Cackling Goose Snow Goose American Black Duck Northern Pintail Northern Shoveler American Wigeon Gadwall Green-winged Teal Blue-winged Teal Hooded Merganser Common Merganser Lesser Scaup Greater Scaup Long-tailed duck Surf Scoter White-winged Scoter Black Scoter Ring-necked duck Common Goldeneye Bufflehead Redhead Ruddy Duck Red-breasted Merganser Brant Canvasback	 Suitable Habitat Ponds, marshes, lakes, bays, coastal inlets, and watercourses used during migration Sewage treatment ponds and storm water ponds do not qualify as SWH, however a reservoir managed as a large wetland or pond/lake does qualify These habitats have an abundant food supply (mostly aquatic invertebrates and vegetation in shallow water) Suggested Criteria Studies carried out and verified presence of: Aggregations of 100 or more of listed species for 7 days, results in > 700 waterfowl use days Areas with annual staging of ruddy ducks, canvasbacks, and redheads are SWH Wetland area and shorelines associated with sites identified within the Significant Wildlife Habitat Technical Guide (SWHTG) (MNRF 2000) Appendix K are SWH 	 While many of the species in this category have been noted from the Subject Property (see Appendix C), the numbers of individuals observed are too low to meet the SWH criteria. Additionally, the extent of staging and stopover habitat is too small to support the large numbers required to meet the criteria. No known records for significant waterfowl stopover on Subject Property or adjacent lands. 	NO	Unlikely
Shorebird Migratory Stopover Area Hudsonian Godwit Black-bellied Plover American Golden-Plover Semipalmated Plover	Suitable Habitat • Shorelines of lakes, rivers and wetlands, including beach areas, bars and seasonally flooded, muddy and un-vegetated shoreline habitats	Only Spotted-Sandpiper (<i>Actitis macularius</i>) has been recorded on lands adjacent to the Subject Property (Dance Environmental 2013) during bird surveys. The	NO	Unlikely



Wildlife Habitat Category and Associated Species ¹	SWH Criteria for Ecoregion 7E ¹	Applicability of SWH Criteria	Potential SWH (Subject Property)	Potential SWH (Adjacent Lands) ²
Solitary Sandpiper Spotted Sandpiper Semipalmated Sandpiper Pectoral Sandpiper White-rumped Sandpiper Baird's Sandpiper Least Sandpiper Purple Sandpiper Stilt Sandpiper Stilt Sandpiper Short-billed Dowitcher Red-necked Phalarope Whimbrel Ruddy Turnstone Sanderling Dunlin	 Great Lakes coastal shorelines, including groynes and other forms of armour rock lakeshores, are extremely important for migratory shorebirds in May to mid-June and early July to October. Sewage treatment ponds and storm water ponds do not qualify as a SWH Suggested Criteria Presence of 3 or more of listed species and > 1000 shorebird use days during spring or fall migration period. (shorebird use days are the accumulated number of shorebirds counted per day over the course of the fall or spring migration period) Whimbrel stop briefly (<24hrs) during spring migration, any site with >100 Whimbrel used for 3 years or more is significant The area of significant shorebird habitat includes the mapped ELC shoreline ecosites plus a 100 m radius area 	Subject Property does not support sufficient numbers of individuals and suitable habitat is limited. No known records for significant waterfowl stopover on Subject Property or adjacent lands.		
Raptor Wintering Area Rough-legged Hawk Red-tailed Hawk Northern Harrier American Kestrel Snowy Owl Short-eared Owl Bald Eagle	 Suitable Habitat The habitat provides a combination of fields and woodlands that provide roosting, foraging and resting habitats for wintering raptors Raptor wintering (hawk/owl) sites need to be > 20 ha with a combination of forest and upland Suggested Criteria Studies confirm the use of these habitats by: One or more Short-eared Owls or; One or more Bald Eagles or at least 10 individuals and two listed hawk/owl species To be significant a site must be used regularly (3 in 5 years) for a minimum of 20 days by the above number of birds The habitat area for an Eagle winter site is the shoreline forest ecosites directly adjacent to the prime hunting area 	 Red-tailed Hawk (<i>Buteo jamaicensis</i>) has been recorded on the Subject Property (Dance Environmental 2012, 2014 & 2015). However, this species occurred in small numbers and suitable habitat is not present (and will not be present in the future), so it is not considered potential SWH. Adjacent Lands According the to <i>Significant Wildlife Technical Guide</i> (MNRF 2000), preferred raptor wintering sites are those that are least disturbed and within rural landscapes rather than urban areas. While Bronte Creek Provincial Park adjacent to the Subject Property supports suitable habitat, the Subject Property and much of the adjacent lands are urbanized and support existing or new developments. Although this habitat type is possible, it has not been confirmed through our field surveys or background review. 	NO	Possible — Bronte Creek P.P. meadow and woodland
Bat Hibernacula Big Brown Bat	 Suitable Habitat Hibernacula may be found in caves, mine shafts, underground foundations and Karsts. Suggested Criteria All sites with confirmed hibernating bats are SWH The area includes 200m radius around the entrance of the hibernaculum for most development types and for wind farms 	No suitable habitat is present on or adjacent to the Subject Property.	NO	Unknown — Bluff inaccessible
Bat Maternity Colonies Big Brown Bat Silver-haired Bat	 Suitable Habitat Maternity colonies can be found in tree cavities, vegetation and often in buildings (buildings are not considered to be SWH) Maternity colonies located in mature deciduous or mixed forest stands with >10/ha large diameter (>25cm dbh) wildlife trees Female bats prefer wildlife tree (snags) in early stages of decay, class 1-3 or class 1 or 2 Silver-haired Bats prefer older mixed or deciduous forest and form maternity colonies in tree cavities and small hollows. Older forest areas with at least 21 snags/ha are preferred 	 As established in the approved ToR, surveys of bat habitat were scoped to identify potential habitat regulated under the <i>Endangered Species Act</i>, in the buildings on the developed portion of the Subject Property, rather than SWH. Potential SWH habitat may exists within the forested communities associated with the Subject Property and adjacent lands. Big Brown Bat were identified on the 	Likely — Forest only	Likely — Forest only



Wildlife Habitat Category and Associated Species ¹	SWH Criteria for Ecoregion 7E ¹	Applicability of SWH Criteria	Potential SWH (Subject Property)	Potential SWH (Adjacent Lands) ²
	Suggested Criteria • Maternity colonies with confirmed use by; - >10 Big Brown Bats - >5 Adult Female Silver-haired Bats - The area of the habitat includes the entire woodland or the forest stand ELC Ecosite or an Ecoelement containing the maternity colonies	Subject Property; however, these observations were not associated with a known roost. For the purposed of this EIA, it is assumed that SWH is present.		
Turtle Wintering Areas Midland Painted Turtle Northern Map Turtle Snapping Turtle	 Suitable Habitat For most turtles, wintering areas are in the same general area as their core habitat. Water has to be deep enough not to freeze and have soft mud substrates Over-wintering sites are permanent water bodies, large wetlands, and bogs or fens with adequate Dissolved Oxygen Man-made ponds such as sewage lagoons or storm water ponds should not be considered SWH Suggested Criteria Presence of 5 over-wintering Midland Painted Turtles is significant One or more Northern Map Turtle or Snapping Turtle over-wintering within a wetland is significant The mapped ELC ecosite area with the over wintering turtles is the SWH. If the hibernation site is within a stream or river, the deep-water pool where the turtles are over wintering is the SWH 	 One Midland Painted Turtle (<i>Chrysemys picta marginata</i>) was observed in 2015 by Dance Environmental basking in the large artificial pond on the Subject Property. Since the species occurred in small numbers, and has not been observed in subsequent studies, the Subject Property is not considered potential SWH. Adjacent Lands No suitable ponds in the adjacent lands are known to occur. 	NO	Unlikely
Reptile Hibernaculum Eastern Gartersnake Northern Watersnake Northern Red-bellied Snake Northern Brownsnake Smooth Green Snake Northern Ring-necked Snake Milksnake Eastern Ribbonsnake	 Suitable Habitat For snakes, hibernation takes place in sites located below frost lines in burrows, rock crevices and other natural locations The existence of features that go below frost line; such as rock piles or slopes, old stone fences, and abandoned crumbling foundations assist in identifying Candidate SWH Areas of broken and fissured rock are particularly valuable since they provide access to subterranean sites below the frost Wetlands can also be important over-wintering habitat in conifer or shrub swamps and swales, poor fens, or depressions in bedrock terrain with sparse trees or shrubs with sphagnum moss or sedge hummock ground cover Suggested Criteria Studies confirming: Presence of snake hibernacula used by a minimum of five individuals of a snake sp. or; individuals of two or more snake spp. Congregations of a minimum of five individuals of a snake sp. or; individuals of two or more snake spp. near potential hibernacula (e.g., foundation or rocky slope) on sunny warm days in spring 	 Subject Property No suitable habitat is present on the Subject Property as no burrows, rock crevices, old foundations or rocky slopes have been identified on the Subject Property. Dance Environmental (2013) noted nine Eastern Gartersnake (<i>Thamnophis sirtalis</i>) and one Northern Brownsnake (<i>Storeria dekayi</i>) at the perimeter of the Subject Property in 2013. Even though more than 5 snakes have been identified in association with the Bronte Creek valleylands, no potential SWH hibernacula areas have been identified on the Subject Property. Adjacent Lands The observation noted above by Dance Environmental (2013) may indicate the presence of this SWH along the valley slope. Suitable surveys of the open and vegetated bluff would be required to confirm. 	NO	Likely — Valley Slope only
Colonially-Nesting Bird Breeding Habitat (Bank and Cliff) Cliff Swallow Northern Rough-winged Swallow (this species is not colonial but can be found in Cliff Swallow colonies)	 Suitable Habitat Any site or areas with exposed soil banks, undisturbed or naturally eroding that is not a licensed/permitted aggregate area Does not include man-made structures (bridges or buildings) or recently (2 years) disturbed soil areas, such as berms, embankments, soil or aggregate stockpiles Does not include a licensed/permitted Mineral Aggregate Operation Suggested Criteria 	 Subject Property No suitable, natural habitat for colonial-nesting birds (bank and cliff) is present on the Subject Property. Neither Cliff Swallow or Northern Rough-winged Swallow has been observed on or adjacent to the Subject Property by Beacon or Dance. Adjacent Lands 	NO	Unlikely



Wildlife Habitat Category and Associated Species ¹	SWH Criteria for Ecoregion 7E ¹	Applicability of SWH Criteria	Potential SWH (Subject Property)	Potential SWH (Adjacent Lands) ²
	 Studies confirming: Presence of 1 or more nesting sites with 8 or more cliff swallow pairs or 50 bank swallow and/or rough-winged swallow pairs during the breeding season A colony identified as SWH will include a 50m radius habitat area from the peripheral nests 	 Potentially suitable habitat is present along the Bronte Creek Valleylands, and there are eBird records of these species in the east side of Bronte Creek Provincial Park. However, the exact location of any nesting colonies is not documented in eBird. No nests were observed on the open bluff in the adjacent valleyland 		
Colonially-Nesting Bird Breeding Habitat (Tree/Shrubs) Great Blue Heron Black-crowned Night-Heron Great Egret Green Heron Colonially-Nesting Bird Breeding Habitat (Ground) Herring Gull Great Black-backed Gull Little Gull Ring-billed Gull Common Tern Caspian Tern Brewer's Blackbird	Suitable Habitat Nests in live or dead standing trees in wetlands, lakes, islands, and peninsulas. Shrubs and occasionally emergent vegetation may also be used Most nests in trees are 11 to 15 m from ground, near the top of the tree Suggested Criteria Studies confirming: Presence of 2 or more active nests of Great Blue Heron or other listed species The habitat extends from the edge of the colony and a minimum 300m radius or extent of the forest ecosite containing the colony or any island <15.0 ha with a colony is the SWH Suitable Habitat Nesting colonies of gulls and terns are on islands or peninsulas associated with open water or in marshy areas Brewer's Blackbird colonies are found loosely on the ground in or in low bushes in close proximity to streams and irrigation ditches within farmlands Suggested Criteria Studies confirming: Presence of >25 active nests for Herring Gulls or Ring-billed Gulls, >5 active nests for Common Tern or >2 active nests for Caspian Tern Any active nesting colony of one or more Little Gull, and Great Black-backed Gull is significant	 No suitable habitat for colonial-nesting birds (trees and shrubs) was identified through background review or field surveys on the Subject Property or adjacent lands. No wildlife concentration areas were identified through background review of the Subject Property and adjacent lands. One SWH indicator species was noted during breeding bird surveys in 2013, 2014 and 2015. Great Blue Heron (<i>Ardea herodias</i>) was observed on the adjacent lands (Bronte Creek Provincial Park) by Dance Environmental. This species was not observed breeding, and therefore this area is not considered potential SWH. No suitable habitat is present on the Subject Property or adjacent lands. No SWH indicator species were noted nesting during breeding bird surveys in 2012, 2013, 2014, 2015 or 2021. 	NO	Unlikely
Migratory Butterfly Stopover Areas Painted Lady Red Admiral Monarch	 Presence of 5 or more pairs for Brewer's Blackbird The edge of the colony and a minimum 150m area of habitat, or the extent of the ELC ecosites containing the colony or any island <3.0ha with a colony is the SWH Suitable Habitat A butterfly stopover area will be a minimum of 10 ha in size with a combination of field and forest habitat present, and will be located within 5 km of Lake Ontario or Lake Erie The habitat is typically a combination of field and forest, and provides the butterflies with a location to rest prior to their long migration south The habitat should not be disturbed, fields/meadows with an abundance of preferred nectar plants and woodland edge providing shelter are requirements for this habitat Staging areas usually provide protection from the elements and are often spits of land or areas with the shortest Suggested Criteria 	 Subject Property Only four Monarch individuals were observed on the Subject Property in August. Suitable stopover habitat is not present on the Subject Property as the open areas are comprised of maintained lawn. Adjacent Lands The open fields to the north of the Subject Property that are within Bronte Creek Provincial Park support > 10 ha of open meadow habitat with adjacent woodlands and 	NO	Likely — Bronte Creek P.P. meadow



Wildlife Habitat Category and Associated Species ¹	SWH Criteria for Ecoregion 7E ¹	Applicability of SWH Criteria	Potential SWH (Subject Property)	Potential SWH (Adjacent Lands) ²
	 The presence of Monarch Use Days (MUD) during fall migration (Aug/Oct). MUD is based on the number of days a site is used by Monarchs, multiplied by the number of individuals using the site. Numbers of butterflies can range from 100-500/day - significant variation can occur between years and multiple years of sampling should occur MUD of >5000 or >3000 with the presence of Painted Ladies or Red Admirals is to be considered significant 	 could potentially support this SWH category, however surveys would need to be completed to confirm MUDs. MUD assessment was not included in the approved ToR. For the purpose of this EIA, it is assumed that the SWH is present on adjacent meadow habitat in Bronte Creek Provincial Park. 		
Landbird Migratory Stopover Areas All migratory songbirds	 Suitable Habitat Woodlots >5 ha in size and within 5 km of Lake Ontario and Lake Erie If woodlands are rare in an area of shoreline, woodland fragments 2 ha to 5ha can be considered for this habitat If multiple woodlands are located along the shoreline those Woodlands <2 km from Lake Erie or Ontario are more significant Sites have a variety of habitats; forest, grassland and wetland complexes The largest sites are more significant Woodlots and forest fragments are important habitats to migrating birds, these features located along the shore and located within 5km of Lake Ontario are Candidate SWH Suggested Criteria Studies confirm: Use of the woodlot by >200 birds/day and with >35 species with at least 10 bird spp. recorded on at least 5 different survey dates This abundance and diversity of migrant bird species is considered above average and significant 	Suitable habitat is present as the Subject Property is within 5km of Lake Ontario and woodlands on the property are >5 ha. There is a deciduous forest located south of the Subject Property (Bronte Creek Valleylands) that could also provide landbird migratory stopover area. This deciduous forest is large for the area and should be considered potential SWH.	YES — Woodland only	Likely — Woodland only
Deer Winter Congregation Areas White-tailed Deer	 Woodlots >100 ha in size or if large woodlots are rare in a planning area woodlots >50 ha Deer movement during winter in Ecoregion 7E are not constrained by snow depth, however deer will annually congregate in large numbers in suitable woodlands Large woodlots > 100 ha and up to 1500 ha are known to be used annually by densities of deer that range from 0.1-1.5 deer/ha Woodlots with high densities of deer due to artificial feeding are not significant Suggested Criteria Studies confirm: Deer management is an MNR responsibility, deer winter congregation areas considered significant will be mapped by MNRF Use of the woodlot by white-tailed deer will be determined by MNR, all woodlots exceeding the area criteria are significant, unless determined not to be significant by MNRF 	No suitable habitat identified on the Subject Property or adjacent lands by the MNRF.	NO	Unlikely
Rare Vegetation Communities				-
Cliffs and Talus Slopes	 A Cliff is vertical to near vertical bedrock >3m in height A Talus Slope is rock rubble at the base of a cliff made up of coarse rocky debris Most cliff and talus slopes occur along the Niagara Escarpment Suggested Criteria 	 Neither Cliff nor Talus were identified on Subject Property or adjacent lands. No talus observed at base of the Open Bluff on adjacent lands 	NO	Unlikely



Wildlife Habitat Category and Associated Species ¹	SWH Criteria for Ecoregion 7E ¹	Applicability of SWH Criteria	Potential SWH (Subject Property)	Potential SWH (Adjacent Lands) ²
	ELC Communities: TAO, TAS, TAT, CLO, CLS or CLT			
	 Sand Barrens typically are exposed sand, generally sparsely vegetated and caused by lack of moisture, periodic fires and erosion 	 Vegetation community not present on Subject Property or adjacent lands. 		
	 Usually located within other types of natural habitat such as forest or savannah Vegetation can vary from patchy and barren to tree covered but less than 60% 			
Sand Barren	Suggested Criteria		NO	NO
	A sand barren area >0.5 ha in size			
	ELC Communities: SBO1, SBS1, SBT1			
	Site must not be dominated by exotic or introduced species (<50% vegetative cover exotics)			
	 An alvar is typically a level, mostly unfractured calcareous bedrock feature with a mosaic of rock pavements and bedrock overlain by a thin veneer of soil 			
	The hydrology of alvars is complex, with alternating periods of inundation and drought			
	 Vegetation cover varies from sparse lichen-moss associations to grasslands and shrublands and comprising a number of characteristic or indicator plant 			
	 Undisturbed alvars can be phyto- and zoogeographically diverse, supporting many uncommon or are relict plant and animal species. 	eographically diverse, supporting many uncommon		
	Vegetation cover varies from patchy to barren with a less than 60% tree cover	Vegetation community not present on Subject Property or adjacent lands.	NO	
Alvar	Suggested Criteria			NO
Alvai	An Alvar site > 0.5 ha in size			NO
	 Alvar is particularly rare in ecoregion 7E where the only known sites are found in the wester islands of Lake Erie 			
	• Five indicator species specific to alvars within Ecoregion 7E: 1) Carex crawei 2) Panicum philadelphicum 3) Eleocharis compressa 4) Scutellaria parvula 5) Trichostema brachiatum			
	• Field studies identify four of the five Alvar indicator species within ELC communities: ALO1, ALS1, ALT1, FOC1, FOC2, CUM2, CUS2, CUT2-1, CUW2			
	Site must not be dominated by exotic or introduced species (<50% vegetative cover exotics)			
	The Alvar must be in excellent condition and fit in with surrounding landscape with few conflicting land uses			
	 Old-growth forests are characterized by heavy mortality or turnover of over-storey trees resulting in a mosaic of gaps that encourage development of a multi-layered canopy and an abundance of snags and downed woody debris. 			
	Suggested Criteria			
Old Growth Forest	Woodland area is >0.5 ha	Vegetation community not present on Subject Property or adjacent lands.	NO	NO
	 If dominant trees species of the ecosite are >140 years old, then stand is SWH The-forested area containing the old growth characteristics will have experienced no 			
	recognizable forestry activities (cut stumps will not be present)			
	The area of forest ecosites combined or an eco-element within an ecosite that contain the old growth characteristics is the SWH			
Savannah	A Savannah is a tallgrass prairie habitat that has tree cover between 25 – 60%	 Vegetation community not present on Subject Property or adjacent lands. 	NO	NO



Wildlife Habitat Category and Associated Species ¹	SWH Criteria for Ecoregion 7E ¹	Applicability of SWH Criteria	Potential SWH (Subject Property)	Potential SWH (Adjacent Lands) ²
	 In ecoregion 7E, known Tallgrass Prairie and savannah remnants are scattered between Lake Huron and Lake Erie, near Lake St. Clair, north of and along the Lake Erie shoreline, in Brantford and in the Toronto area (north of Lake Ontario) 			
	Suggested Criteria			
	 No minimum size to site. Site must be restored or a natural site. Remnant sites such as railway right of ways are not considered to be SWH 			
	 Field studies confirm one or more of the Prairie indicator species listed in Appendix N should be present. Note: Prairie plant spp. list from Ecoregion 7E should be used 			
	Site must not be dominated by exotic or introduced species (<50% vegetative cover exotics)			
	A Tallgrass Prairie has ground cover dominated by prairie grasses. An open Tallgrass Prairie habitat has < 25% tree cover			
	 In ecoregion 7E, known Tallgrass Prairie and savannah remnants are scattered between Lake Huron and Lake Erie, near Lake St. Clair, north of and along the Lake Erie shoreline, in Brantford and in the Toronto area (north of Lake Ontario) 	Vegetation community not present on Subject Property.		Likely —
Tallamana Duninia	Suggested Criteria	incanum var. incanum), a prairie indicator species, within	NO	Bronte Creek P.P. Prairie
Tallgrass Prairie	 No minimum size to site. Site must be restored or a natural site. Remnant sites such as railway right of ways are not considered to be SWH 		NO	Restoration Areas only
	ELC communities TPO1, TPO2	the 1 km grid		
	 Field studies confirm one or more of the Prairie indicator species listed in Appendix N in SWHTG (MNRF 2000) should be present 	G		
	Site must not be dominated by exotic or introduced species (<50% vegetative cover exotics)			
	 Provincially Rare S1, S2 and S3 vegetation communities are listed in Appendix M of the SWHTG (MNRF 2000) 			
Other Rare Vegetation Communities	 Rare Vegetation Communities may include beaches, fens, forest, marsh, barrens, dunes and swamps 	No rare vegetation communities present on Subject	NO	Unlikely
Other Kare Vegetation Communities	 ELC Ecosite codes that have the potential to be a rare ELC Vegetation Type as outlined in SWHTG (MNRF 2000) Appendix M 	Property or adjacent lands.	NO	Officery
On a delicated the Mark Control	The MNRF/NHIC will have up to date listing for rare vegetation communities			
Specialized Habitat for Species	Suitable Habitat			
Waterfowl Nesting Area American Black Duck	 A waterfowl nesting area extends 120 m from a wetland (> 0.5 ha) or a wetland (> 0.5 ha) with small wetlands (< 0.5ha) within 120m or a cluster of 3 or more small (< 0.5 ha) wetlands within 120 m of each individual wetland where waterfowl nesting is known to occur 			
Northern Pintail Northern Shoveler Gadwall	 Upland areas should be at least 120m wide so that predators such as racoons, skunks, and foxes have difficulty finding nests 	 No suitable habitat is present on the Subject Property or adjacent lands. One SWH indicator species was noted during breeding 		
Blue-winged Teal Green-winged Teal Wood Duck	Suggested Criteria Studies confirmed: Presence of 3 or more pasting pairs for listed species excluding Mallards, or presence of 10 or	bird surveys in 2021, Hooded Merganser (<i>Lophodytes cucllatus</i>). Since this species occurred in small numbers (1 individual recorded) and habitat is not present, it is not	NO	Unlikely
Hooded Merganser Mallard	 Presence of 3 or more nesting pairs for listed species excluding Mallards, or presence of 10 or more nesting pairs for listed species including Mallards Any active nesting site of an American Black Duck is considered significant 	considered potential SWH.		
	Wood Ducks and Hooded Mergansers utilize large diameter trees (>40 cm dbh) in woodlands for cavity nest sites			



Wildlife Habitat Category and Associated Species ¹	SWH Criteria for Ecoregion 7E ¹	Applicability of SWH Criteria	Potential SWH (Subject Property)	Potential SWH (Adjacent Lands) ²
Bald Eagle and Osprey Nesting, Foraging and Perching Habitat	 Nests are associated with lakes, ponds, rivers or wetlands along forested shorelines, islands, or on structures over water Osprey nests are usually at the top a tree whereas Bald Eagle nests are typically in super canopy trees in a notch within the tree's canopy Nests located on man-made objects are not to be included as SWH (e.g. telephone poles and constructed nesting platforms) Suggested Criteria Studies confirm the use of these nests by: One or more active Osprey or Bald Eagle nests in an area Some species have more than one nest in a given area and priority is given to the primary nest with alternate nests included within the area of the SWH For an Osprey, the active nest and a 300 m radius around the nest or the contiguous woodland stand is the SWH, maintaining undisturbed shorelines with large trees within this area is important For a Bald Eagle the active nest and a 400-800 m radius around the nest is the SWH. Area of the habitat from 400-800m is dependent on site lines from the nest to the development and inclusion of perching and foraging habitat To be significant a site must be used annually. When found inactive, the site must be known to be inactive for >3 years or suspected of not being used for >5 years before being considered not significant 		NO	Unlikely
Woodland Raptor Nesting Habitat Northern Goshawk Cooper's Hawk Sharp-shinned Hawk Red-shouldered Hawk Barred Owl Broad-winged Hawk	 Suitable Habitat All natural or conifer plantation woodland/forest stands combined >30ha or with >4 ha of interior habitat. Interior habitat determined with a 200 m buffer Stick nests found in a variety of intermediate-aged to mature conifer, deciduous or mixed forests within tops or crotches of trees. Species such as Coopers hawk nest along forest edges sometimes on peninsulas or small off-shore island In disturbed sites, nests may be used again, or a new nest will be in close proximity to old nest Suggested Criteria Studies confirm: Presence of 1 or more active nests from species list is considered significant Red-shouldered Hawk and Northern Goshawk – a 400m radius around the nest or 28 ha of suitable habitat is the SWH. (the 28-ha habitat area would be applied where optimal habitat is irregularly shaped around the nest) Barred Owl – a 200m radius around the nest is the SWH Broad-winged Hawk and Coopers Hawk, – a 100m radius around the nest is the SWH Sharp-Shinned Hawk – a 50m radius around the nest is the SWH 	 Potentially suitable habitat for this SWH category does exist within the woodlands on the Subject Property and adjacent lands. No indicator species were observed on the Subject Property or adjacent lands during 2021 surveys. A Cooper's Hawk nest was noted in the adjacent Cultural Plantation (ELC Unit 9) by Dance Environmental in 2013; however, nests have not been observed in subsequent years and surveys. 	NO	Possible — Woodland only
Turtle Nesting Areas Midland Painted Turtle Northern Map Turtle Snapping Turtle	 Snarp-Sninned Hawk – a 50m radius around the nest is the SWH Suitable Habitat Best nesting habitat for turtles are close to water and away from roads and sites less prone to loss of eggs by predation from skunks, raccoons or other animals For an area to function as a turtle-nesting area, it must provide sand and gravel that turtles are able to dig in and are located in open, sunny areas Nesting areas on the sides of municipal or provincial road embankments and shoulders are not SWH 	Minimal suitable habitat on Subject Property and adjacent	NO	Possible — Bronte Creek banks only



Wildlife Habitat Category and Associated Species ¹	SWH Criteria for Ecoregion 7E ¹	Applicability of SWH Criteria	Potential SWH (Subject Property)	Potential SWH (Adjacent Lands) ²
	 Sand and gravel beaches adjacent to undisturbed shallow weedy areas of marshes, lakes, and rivers are most frequently used Suggested Criteria Studies confirm: Presence of 5 or more nesting Midland Painted Turtles One or more Northern Map Turtle or Snapping Turtle nesting The area or collection of sites within an area of exposed mineral soils where the turtles nest, plus a radius of 30-100m around the nesting area dependant on slope, riparian vegetation and adjacent land use is the SWH Travel routes from wetland to nesting area are to be considered within the SWH 	 One Midland Painted Turtle (<i>Chrysemys picta marginata</i>) was observed in 2015 by Dance Environmental. No other turtles have been observed. Since the indicator species occurred in small numbers, the Subject Property is not considered potential SWH. Adjacent Lands If sandy alluvial deposits are present at the base of the Bronte Creek Valley, suitable habitat may be present on adjacent lands. 		
Seeps and Springs Wild Turkey Ruffed Grouse Spruce Grouse White-tailed Deer Salamander spp.	Suitable Habitat Any forested area (with <25% meadow/field/pasture) within the headwaters of a stream or river system (could contain a seep or spring - areas where ground water comes to the surface) Seeps and springs are important feeding and drinking areas especially in the winter will typically support a variety of plant and animal species The protection of the recharge area considering the slope, vegetation, height of trees and groundwater condition need to be considered in delineation the habitat Suggested Criteria Studies confirm: Presence of a site with 2 or more seeps/springs should be considered SWH The area of an ELC forest ecosite containing the seeps/springs is the SWH	No natural springs are present on the Subject Property, and none are known to occur in the adjacent lands. Seeps have been observed on the adjacent lands. ELC Unit 12 (Bronte Creek Valley) Three seeps were identified around lower portions of the Bronte Creek Tributary (BCT-1) and adjacent valley slope. One seep was observed in mid-slope, west of the BCT-1. A second seep was observed on the alluvial fan at the base of BCT-1. A third, major seep was observed in the watershed east of BCT-1, and flowing into Bronte Creek by a separate drainage feature at the limit of the Study Area. DS Consultants have noted the presence of a major sand aquifer that naturally discharges along the Bronte Creek Valley. DS Consultants have noted in their Hydrogeolocial Investigation report, dated March 2023, that these seeps are connected to a regionally expansive sand unit. Artificial Ponds The ponds are not within forested areas and are therefore not SWH Iron staining observed at the ponds on the Subject Property is consistent with shallow interflow (DS Consultants 2023b). The Significant Wildlife Technical Guide – Appendix Q (OMNR 2000) notes that seeps or springs found in relatively undisturbed areas are generally more significant than those found in areas disturbed by human activities. For the reasons noted above, it is Beacon's opinion that they should not be considered as SWH for seeps or springs.	NO	Confirmed Seeps — ELC Unit 12
Amphibian Breeding Habitat (Woodland) Eastern Newt Blue-spotted Salamander	Suitable Habitat • Presence of a wetland, pond, or woodland pool within or adjacent (within 120m) to a woodland (no minimum size)	Two artificial ponds within 120 m of a woodland are present on the Subject Property.	NO	Unlikely



Wildlife Habitat Category and Associated Species ¹	SWH Criteria for Ecoregion 7E ¹	Applicability of SWH Criteria	Potential SWH (Subject Property)	Potential SWH (Adjacent Lands) ²
Spotted Salamander Gray Treefrog Spring Peeper Western Chorus Frog Wood Frog	 Some small wetlands may not be mapped and may be important breeding pools for amphibians Woodlands with permanent ponds or those containing water in most years until mid-July are more likely to be used as breeding habitat Suggested Criteria Studies confirm; Presence of breeding population of 1 or more of the listed salamander species or 2 or more of 	No significant breeding populations (call codes of 3, or more than 20 individuals observed) have been noted on or adjacent to the Subject Property.		
	the listed frog species with at least 20 individuals (adults, juveniles, eggs/larval masses) or 2 or more of the listed frog species with Call Level Codes of 3			
Amphibian Breeding Habitat (Wetland) Eastern Newt American Toad Spotted Salamander Four-toed Salamander Blue-spotted Salamander Gray Treefrog Western Chorus Frog Northern Leopard Frog Pickerel Frog Green Frog Mink Frog Bullfrog	 Suitable Habitat Wetlands >500 m² (about 25 m diameter) supporting high species diversity are significant Some small or ephemeral habitats may not be identified on MNRF mapping and could be important amphibian breeding habitats Presence of shrubs and logs increase significance of pond for some amphibian species because of available structure for calling, foraging, escape and concealment from predators Bullfrogs require permanent water bodies with abundant emergent vegetation. Suggested Criteria Studies confirm: Presence of breeding population of 1 or more of the listed newt/salamander species or 2 or more of the listed frog or toad species and with at least 20 individuals (adults, juveniles, eggs/larval masses) or 2 or more of the listed frog species with Call Level Codes of 3 The ELC ecosite wetland area and the shoreline are the SWH 	 Two artificial ponds are associated with the Subject Property. No significant breeding populations (call codes of 3. or more than 20 individuals observed) have been noted on or adjacent to the Subject Property. 	NO	Unlikely
Woodland Area-Sensitive Bird Breeding Habitat Yellow-bellied Sapsucker Red-breasted Nuthatch Veery Blue-headed Vireo Northern Parula Black-throated Green Warbler Blackburnian Warbler Black-throated Blue Warbler Ovenbird Scarlet Tanager Winter Wren Pileated Woodpecker Cerulean Warbler	Suitable Habitat Habitats where interior forest breeding birds are breeding Typically large mature (>60 yrs old) forest stands or woodlots >30 ha Interior forest habitat is at least 200 m from forest edge habitat Suggested Criteria Studies confirm: Presence of nesting or breeding pairs of 3 or more of the listed wildlife species. Any site with breeding Cerulean Warblers or Canada Warblers is to be considered SWH	 Potentially suitable habitat is present on the Subject Property or adjacent lands. No SWH indicator species were noted during breeding bird surveys in 2021. Field studies for adjacent lands in 2012 noted the presence of one indicator species, Scarlet Tanager (<i>Piranga olivacea</i>). Since these species were noted in small numbers, the Subject Property and adjacent lands are not considered potential SWH. The Phase 2 EIS for the Merton Tertiary Plan identified records of area-sensitive species in the Fourteen Mile Creek valley and the forested portions of the Bronte Creek valleylands as candidate SWH. 	NO	Candidate SWH as per the Merton Tertiary Plan
Habitat for Species of Conservation Conce Marsh Bird Breeding Habitat American Bittern Virginia Rail Sora Common Moorhen	Suitable Habitat Nesting occurs in wetlands All wetland habitat is to be considered as long as there is shallow water with emergent aquatic vegetation present	 Negligible marsh habitat is present in Subject Property and adjacent lands. No SWH indicator species were noted during breeding bird surveys in 2021. Previous field studies for the Subject Property and adjacent lands did not note the 	NO	Unlikely



Wildlife Habitat Category and Associated Species ¹	SWH Criteria for Ecoregion 7E ¹	Applicability of SWH Criteria	Potential SWH (Subject Property)	Potential SWH (Adjacent Lands) ²
Pied-billed Grebe Marsh Wren Sedge Wren Common Loon Green Heron	 For Green Heron, habitat is at the edge of water such as sluggish streams, ponds and marshes sheltered by shrubs and trees. Less frequently, it may be found in upland shrubs or forest a considerable distance from water Suggested Criteria 	have been noted, the Subject Property and adjacent lands are not considered potential SWH.	, ,,	
Trumpeter Swan	Studies confirm:			
Black Tern Yellow Rail	 Presence of 5 or more nesting pairs of Sedge Wren or Marsh Wren or breeding by any combination of 4 or more of the listed species 			
	 Note: any wetland with breeding of 1 or more Trumpeter Swans, Black Terns or Yellow Rail is SWH 			
	Area of the ELC ecosite is the SWH			
	Suitable Habitat			
	 Large grassland areas (includes natural and cultural fields and meadows) >30 ha Grasslands not Class 1 or 2 agricultural lands, and not being actively used for farming (i.e. no row cropping or intensive hay or livestock pasturing in the last 5 years) 	 Subject Property The Subject Property does not support significant communities of grassland birds nor grassland species. 		
Open Country Bird Breeding Habitat Upland Sandpiper	 Grassland sites considered significant should have a history of longevity, either abandoned fields, mature hayfields and pasturelands that are at least 5 years or older 	Adjacent Lands		Possible —
Grasshopper Sparrow Vesper Sparrow Northern Harrier Savannah Sparrow Short-eared Owl	The Indicator bird species are area sensitive requiring larger grassland areas than the common grassland species	Bronte Creek Provincial Park includes old field and prairie restoration areas that may be suitable habitat.	NO	Within meadow/prairie
	Suggested Criteria Field Studies confirm:	 Savannah Sparrow (Passerculus sandwichensis) was the only indicator species recorded breeding on the adjacent Bronte Creek Provincial Park (BCPP) lands in 2013 by 		only
	Presence of nesting or breeding of 2 or more of the listed species	Dance Environmental. Further studies on BCPP lands		
	A field with 1 or more breeding Short-eared Owls is to be considered SWH.	would be required to confirm.		
	The area of SWH is the contiguous ELC ecosite field areas			
Shrub/Early Successional Bird Breeding Habitat	Large natural field areas succeeding to shrub and thicket habitats >10ha ^{Clxiv} in size. Shrub land or early successional fields, not class 1 or 2 agricultural lands, not being actively used for farming (i.e. no row-cropping, haying or live-stock pasturing in the last 5 years)			
Indicator Species: Brown Thrasher Clay-coloured Sparrow	 Shrub thicket habitats (>10 ha) are most likely to support and sustain a diversity of these species 			
<u>Common Species:</u> Field Sparrow	 Shrub and thicket habitat sites considered significant should have a history of longevity, either abandoned fields or pasturelands. 	 No shrub/thicket habitat present in Subject Property and adjacent lands. No indicator species have been recorded on the Subject Property or adjacent lands. Due to minimal habitat and 	NO	Unlikely
Black-billed Cuckoo Eastern Towhee Willow Flycatcher	Suggested Criteria Field Studies confirm:	lack of indicator species, it is not considered potential SWH.		
Special Concern: Yellow-breasted	 Presence of nesting or breeding of 1 of the indicator species and at least 2 of the common species 			
Chat Golden-winged Warbler	A habitat with breeding Yellow-breasted Chat or Golden-winged Warbler is to be considered as Significant Wildlife Habitat			
	The area of the SWH is the contiguous ELC ecosite field/thicket area			
Terrestrial Crayfish Chimney or Digger Crayfish (Fallicambarus fodiens)	 Suitable Habitat Wet meadow and edges of shallow marshes (no minimum size) identified should be surveyed for terrestrial crayfish 	 No suitable habitat is limited to the artificial ponds on the Subject Property. No suitable habitat was observed on adjacent lands. 	NO	NO



Wildlife Habitat Category and Associated Species ¹	SWH Criteria for Ecoregion 7E ¹	Applicability of SWH Criteria	Potential SWH (Subject Property)	Potential SWH (Adjacent Lands) ²
Devil Crawfish or Meadow Crayfish (Cambarus diogenes)	 Constructs burrows in marshes, mudflats, meadows; the ground can't be too moist Can often be found far from water Both species are a semi-terrestrial burrower which spends most of its life within burrows consisting of a network of tunnels; usually the soil is not too moist so that the tunnel is well formed Suggested Criteria Studies Confirm: Presence of 1 or more individuals of species listed or their chimneys (burrows) in suitable marsh meadow or terrestrial sites Area of ELC Ecosite polygon is the SWH 	No Terrestrial Crayfish were observed during targeted surveys be Dance on the Subject Property. Therefore, this site is not considered to be potential SWH.		
Special Concern and Rare Wildlife Species	 All Special Concern and Provincially Rare (S1-S3, SH) plant and animal species When an element occurrence is identified within a 1 or 10 km grid for a Special Concern or provincially rare species Linking candidate habitat on the site needs to be completed to ELC Ecosites Suggested Criteria Studies confirm: Assessment/inventory of the site for the identified special concern or rare species needs to be completed during the time of year when the species is present or easily identifiable Habitat form and function needs to be assessed from the assessment of ELC vegetation types and an area of significant habitat that protects the rare or special concern species identified The area of the habitat to the finest ELC scale that protects the habitat form and function is the SWH; this must be delineated through detailed field studies The habitat needs be easily mapped and cover an important life stage component for a species (e.g. specific nesting habitat or foraging habitat) 	Other	Possible — Forest only	Likely — Woodland and Old Field on BCPP lands
Animal Movement Corridors Amphibian Movement Corridors Eastern Newt American Toad Spotted Salamander Four-toed Salamander Blue-spotted Salamander Gray Treefrog Western Chorus Frog	 Animal movement corridors should only be identified as SWH where a confirmed or Candidate SWH has been identified by MNRF or the planning authority Movement corridors between breeding habitat and summer habitat Movement corridors must be considered when amphibian breeding habitat is confirmed as SWH Field Studies must be conducted at the time of year when species are expected to be migrating or entering breeding sites 	 Amphibian breeding habitat has not been confirmed by MNRF or the planning authority on the Subject Property or adjacent lands. No Amphibian Breeding Habitat has been identified on 	NO	NO



Wildlife Habitat Category and Associated Species ¹	SWH Criteria for Ecoregion 7E ¹	Applicability of SWH Criteria	Potential SWH (Subject Property)	Potential SWH (Adjacent Lands) ²
Northern Leopard Frog Pickerel Frog Green Frog	 Corridors should consist of native vegetation, with several layers of vegetation Corridors unbroken by roads, waterways or bodies, and undeveloped areas are most significant 			
Mink Frog Bullfrog	 Corridors should be at least 15 m of vegetation on both sides of waterway or be up to 200 m wide of woodland habitat and with gaps <20 m 			
	 Shorter corridors are more significant than longer corridors, however amphibians must be able to get to and from their summer and breeding habitat 			

Adapted from the listed species and habitat criteria provided in the Significant Wildlife Habitat Criteria Schedules for Ecoregion 7E (MNRF 2015) but updated to reflect any relevant changes in species status. For example, Tri-coloured Bat (Perimyotis subflavus) is now listed as Threatened so needs to be addressed under the Endangered Species Act and not under SWH.

Table E2. Evaluation of Presence of Double-Striped Bluet (Enallagma basidens) as per SWHTG, Appendix Q

Criteria for Identification of Species/Habitats of Conservation Concern	Suggested Guidelines for Evaluation of Habitats of Species of Conservation Concern	Applicability of SWH Guidelines
Degree of rarity of species found at site	 Habitats of the rarest species are more significant than those of less rare species. For example, habitats for species ranked S1 and S2 should be considered more significant than habitats for species ranked S3. Species ranked as vulnerable by the OMNR should also be considered significant. Less rare species and their habitats in the planning area may be deemed species of conservation concern by the municipality based on such factors as the number of known occurrences, total extent of remaining habitat, degree of threat or risk to habitat, and/or local interest in a particular species. If a species' habitat is to be protected, sufficient area (based on the species' known requirements) should be retained to ensure a viable and sustainable population. 	 Subnationally listed as S3 Not deemed a species of conservation concern by the Town of Oakville or Region of Halton Existing habitat at the larger pond is insufficient for population viability, due to predation by the abundance of large predatory fish. The smaller pond is poor habitat as few odonates were observed there.
Documented significant decline in a species and/or its critical habitat	 The habitat for species experiencing the greatest declines is most significant. The habitat for declining species that has the lowest representation in the planning area is more significant. Those habitats that provide the best opportunity for the long-term sustainability of the declining species are most significant (e.g., large well-protected sites; sites that best meet the species' habitat requirements; sites with good connections to other similar habitats). 	 Little is known about both the population trajectory in North America and the distribution within the Region. As described above, existing habitat on the Subject Property is insufficient for population viability.
Species whose range is solely or primarily found in Ontario (i.e., provincial responsibility)	 Habitat for those species with the poorest representation within the planning area is more significant. These species and their habitats are significant even if well represented in the planning area, due to high provincial responsibility for their protection. Those habitats that provide the best opportunities for the long-term sustainability of the target species are most significant (e.g., large well protected sites; sites that best meet the species' habitat requirements; sites with good connections to other similar habitats). 	 Ontario is the northern range limit of the species. This species is more abundant in the United States, and ranked Apparently Secure (S4) to Secure (S5) from Pennsylvania to North Carolina As such, there is little provincial responsibility for this species As described above, existing habitat on the Subject Property is insufficient for population viability.
Condition of existing habitat at site	 Sites that provide habitat that best meets the survival requirements of the target species and that also include a natural buffer zone are most significant (i.e. most likely to sustain species/population over the long term). Sites that contain the fewest non-native species of potential threat to the target species are significant. Undisturbed or least-disturbed habitats (e.g., no/few deleterious impacts from roads, human activities) are significant. Sites capable of producing a large number of individuals of a single species of conservation concern are significant. Highly diverse sites that support one or more species of conservation concern are most significant. 	 As described above, the large pond (where most individuals were observed) contains an abundance of predatory fish, limiting the viability of this population. No buffer is present around the large pond; the pond is surrounded by lawn. Notwithstanding that the pond is artificial, it is frequently disturbed by human recreational use and alteration, including fish stocking, fishing, ornamental plants, etc.

² Due to constraints of private property access and hazards of working around slopes, field studies in adjacent lands were limited in scope. Screening for SWH on adjacent lands has therefore been conducted with a precautionary approach.



Criteria for Identification of Species/Habitats of Conservation Concern	Suggested Guidelines for Evaluation of Habitats of Species of Conservation Concern	Applicability of SWH Guidelines
		 Only seven (7) individuals were observed on the Subject Property No other species of conservation concern were associated with the ponds on the Subject Property.
Size of species population at site	 Habitats supporting large populations of a several species of conservation concern are most significant. Habitat supporting large populations of a single species is significant. 	 No other species of conservation concern were associated with the ponds on the Subject Property. Only seven (7) individuals were observed on the Subject Property
Size and location of habitat	 Large sites supporting large populations of several species of conservation concern are most significant. Large sites are generally more significant than most comparable but smaller sites. Sites large enough to ensure long-term support and viability of species of conservation concern are significant. Sites with large areas of suitable habitat that are also connected to other potentially suitable habitat and/or natural areas are most significant. 	 The pond is relatively small, supporting only one species of conservation concern. As described above, the large pond (where most individuals were observed) contains an abundance of predatory fish, limiting the viability of this population. Potentially suitable habitat is approximately 1 km away at the Bronte Green wildlife pond or the Deerfield Golf Club ponds.
Potential for long-term protection of the habitat	 Habitats that provide the best opportunity for long-term protection are usually more significant than similar habitats with little opportunity for protection or facing an uncertain future due to potential threats (e.g., habitat found in a large natural area vs. an isolated site close to an expanding residential development). Habitats threatened with degradation or loss are more significant than similar, but currently unthreatened habitats, if they can be protected. Habitats of species currently experiencing severe population declines in Ontario (e.g., grassland bird species) due to habitat loss are most significant. Habitats of species currently experiencing significant population declines in the municipality are significant. 	 As noted above, the pond is not conducive to population viability and is frequently disturbed by human use. This habitat is neither contiguous nor consistent with the habitats of Bronte Creek Provincial Park. As noted above, the population trend is unknown.
Representation of species/habitat within the municipality	 Poorly represented habitats for species of conservation concern are significant. Habitats that could be lost or severely degraded and cannot be replaced by similar habitats in the planning area, are highly significant. 	 This species is under sampled within the municipality and its abundance is poorly studied. Similarly, the habitat of this species is poorly understood within the municipality.
Evidence of use of the habitat	Sites with documented traditional use by species are most significant.	 Not observed during previous odonate surveys between 2012 and 2015 by Dance Environmental.
Species of particular interest to the planning authority (e.g., the CAC may recommend certain species such as indicator species)	Sites providing the best examples of habitat that will ensure the long-term sustainability of the species are significant.	 Not deemed a species of conservation concern by the Town of Oakville or Region of Halton As noted above, the existing ponds are artificial, highly disturbed, and not conducive to population viability.



Appendix F

Conceptual Trails and Woodland Restoration Plan







Appendix G

Field Sheets

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	BASIC BEDRK	CLIFF		DECIDUOUS	BOG BARREN
SITE	CARB. BEDRK	CREVICE / CAVE	COVER	MIXED	☐ MEADOW ☐ PRAIRIE
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11	CODES:	SITION:	3 2= 10 <h F 1= 0% <</h 	7 35 m 3 = 2 <ht 10m<="" td=""><td>1 4×1<+T;2m 5;= R · 25% 3=25 < C1</td><td>VR < 80% 4- CVR > 604</td><td>*</td></ht>	1 4×1<+T;2m 5;= R · 25% 3=25 < C1	VR < 80% 4- CVR > 604	*
51	CODES: /R CODES TAND COMPO	SITION:	3 2= 10 <h F 1= 0% <</h 	7 65 m 3 = 2 <ht 10="" m<br="">CVR 10% 2= 10 < CV</ht>	R . 25% 3-25 < C	VR - 80% 4- CVR > 604	BA:
51	CODES: VR CODES TAND COMPO: ZE CLASS AN TANDING SNA	SITION: ALYSIS GS:	3 2= 10 <h F 1= 0% <</h 	CVR 10% 2= 10 < CI	10 - 24	25 - 50 25 - 50	BA: > 50
51	CODES: /R CODES TAND COMPO	SITION: ALYSIS GS: GS:	3 2= 10 <h F 1= 0% <</h 	< 10 < 10 < 10 < 10	10 - 24 10 - 24	25 - 50 25 - 50 25 - 50	BA: > 50
51	CODES: //R CODES TAND COMPO: ZE CLASS AN: TANDING SNA EADFALL / LO BUNDANCE COD	SITION: ALYSIS GS: GS:	3 2= 10 <h F 1= 0% <</h 	< 10 < 10 < 10 N = NONE R 100 R 2 = 10 < C1	10 - 24 10 - 24	25 - 50 25 - 50 25 - 50	BA: > 50 > 50 > 50 > 50 > 50 > 50 > 50 > 10 > 10 >
51	CODES: /R CODES TAND COMPO: ZE CLASS AN TANDING SNA EADFALL / LO	SITION: ALYSIS GS: GS:	2 = 10 < d	< 10 < 10 < 10 N = NONE R 100 R 2 = 10 < C1	10 - 24 10 - 24 10 - 24 = RARE 0 =	25 - 50 25 - 50 25 - 50 0CCASIONAL A =	BA: > 50 > 50 > 50 > 50 > 50 > 50 > 50 > 10 > 10 >
51 51 51 51 51 51 51 51 51 51 51 51 51 5	CODES: //R CODES TAND COMPOS ZE CLASS AN TANDING SNA EADFALL / LO BUNDANCE COD OMM. AGE .	SITION: ALYSIS GS: GS: ES:	2=10<+ E 1=0% <	< 10 < 10 < 10	10 - 24 10 - 24 10 - 24 10 - 24 RARE 0 =	25 - 50 25 - 50 25 - 50 0CCASIONAL A =	BA: > 50 > 50 > 50 OLD GROWTH
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SI S	CODES: //R CODES //R CODES TAND COMPOS ZE CLASS AN TANDING SNA EADFALL / LO BUNDANGE COD OMM. AGE OIL ANALYS EXTURE: OISTURE: OMMUNITY CL OMMUNITY CL OMMUNITY SE COSITE:	SITION: ALYSIS GS: GS: ES: IS: IS: YPE:	PIONEEF	< 10	10 - 24 10 - 24 10 - 24 10 - 24 10 - 24 10 - 24 The state of the state	25 - 50 25 - 50 25 - 50 25 - 50 0CCASIONAL A = MATURE g = CODE: CODE: CODE:	BA: > 50 > 50 > 50 > 50 OLD GROWTH G= (cm

 ELC	SITE:	
	POLYGON:	
PLANT SPECIES	DATE:	
LIST	SURVEYOR(S):	

SPECIES CODE	_LA	YER	COLT.	SPECIES CODE CO	ÆL.
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DESCRIPTION & CLASSIFICATION	START		END	U	UTMZ	UTMN-
OLYGON DES	CRIPT	ION			2000	
SYSTEM		TRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
SITE SOPEN WATER SHALLOW WATER SURFICIAL DEP. BEDROCK	☐ PARE ☐ ACIDI	RAL SOIL	LACUSTRINE RIVERINE BOTTOMIAND TERRACE JVALLEY SLOPE TABLELAND ROLL, UPLAND CLIFF TALUS CREVICE / CAVE TALUS CREVI	COVER DOPEN SHRUB	D PLANKTON SLEMERGED FLOATING-LVD GRAMINOID FORB LICHEN BRYOPHYTE DECIDUOUS CONIFEROUS	ALÁKE POND RIVER STREAM MARSH SWAMP SEN BOG BARREN MEADOW PRAIRIE THICKET SAVANNAH WOODLAND POREST PLANTATION
LAYER 1 CANOPY 2 SUB-CANOPY 3 UNDERSTORES 4 GRD. LAYER HT CODES:	нт	CVR	(>> MUCH GREA	TER THAN: > GR	0.5 <ht 1="" 6="0.2<H</th" m=""><th>1.05 m 7 = HT<02 m</th></ht>	1.05 m 7 = HT<02 m
STAND COMPO	SITION					BA:
SIZE CLASS AN	ALYSIS	:	< 10	10-24	25 - 50	> 50
STANDING SNA	GS:		< 10	10-24	25 - 50	> 50
DEADFALL / LO			< 10 N = NONE R	= BARE 0=		ABUNDANT
COMM. AGE.		PIONEE	YOUNG	MID-AGE	MATURE	OLD GROWTH
SOIL ANALYS	SIS:		-	TTLES / GLEY	g =	G=
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COMMUNITY C	CLASS				CODE:	2
COMMUNITY S	ERIES:				CODE:	
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VEGETATION T	YPE:		, 3 1.	Λ. Γ	CODE	DAD
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ELC	SITE:	
1	POLYGON:	
PLANT SPECIES	DATE:	
LIST	SURVEYOR(S):	

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DESCRIPTION &	START	END		UTMZ	UTMN ⁻
	COUDTION		71922		
SYSTEM	SUBSTRATE	TOPOGRAPHIC	HISTORY	PLANT FORM	COMMUNITY
31312	0000	FEATURE			
TERRESTRIAL	CRGANIC	LACUSTRINE RIVERINE	NATURAL	☐ PLANKTON ☐ SUBMERGED	POND
WETLAND	MINERAL SOIL	BOTTOMLAND TERRACE	CULTURAL	GRAMINOID	STREAM
AQUATIC	PARENT MIN	VALLEY SLOPE		FORB	MARSH SWAMP
	ACIDIC BEDRK	ROLL UPLAND		BRYOPHYTE	FEN BOG
	BASIC BEDRK	D CLIFF D TALUS	********************************	CONFEROUS	BARREN
SITE	CARB. BEDRK	CREVICE / CAVE	COVER	MIXED	☐ MEADOW ☐ PRAIRIE
7		POCKLAND	□ OPEN		SAVANNAH
OPEN WATER		SAND DUNE	SHRUB		O WOODLAND
SURFICIAL DEP.	5	BLUFF	TREED		PLANTATION
J BEDROOM					The same of the sa
TAND DESCR	RIPTION:		200		
- 714		SPECIES	IN ORDER OF	DECREASING DO	MINANCE BOUT EQUAL TO)
LAYER	HT CVR	MUCH GREA	a Sol	1/1	esusa
CANOPY	111	TICA BAR	LI- IN	may to	es is in
2 SUB-CANOPY	'	177			
3 UNDERSTORE		0.0		1	0
4 GRD. LAYER	52	alle	2 and	te tar	off Sola
HT CODES:	1 = >25 m 2 = 10 <h< th=""><th>25 m 3 = 2<+1 10 m</th><th>1 4 = 1<ht-2m 5="</th"><th>0.5<ht 1="" 6="0.2<H<br" m="">VR < 50% 4= CVR > 60</ht></th><th>1.05 m 7 = HT<02 m</th></ht-2m></th></h<>	25 m 3 = 2<+1 10 m	1 4 = 1 <ht-2m 5="</th"><th>0.5<ht 1="" 6="0.2<H<br" m="">VR < 50% 4= CVR > 60</ht></th><th>1.05 m 7 = HT<02 m</th></ht-2m>	0.5 <ht 1="" 6="0.2<H<br" m="">VR < 50% 4= CVR > 60</ht>	1.05 m 7 = HT<02 m
CVR CODES	9= NONE 1= 0% <	CVR - 10% 2# 10 < C	VA . 25% 3= 23 . C	WAY SOME STOCKED OF	
STAND COMPO	SITION:				BA:
SIZE CLASS AN	ALYSIS:	< 10	10 - 24	25 - 50	> 50
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STANDING SNA		< 10	10 - 24		> 50
DEADFALL / LC	CONTRACTOR OF THE PARTY OF THE	II I			ABUNDANT
ABUNDANCE COL	ES:			Commence of the Commence of th	H OLD
COMM. AGE.	PIONEER	YOUNG	MID-AGE	MATURE	GROWTH
SOIL ANALYS	SIS:	1			G=
TEXTURE:			TTLES / GLEY	g =	(cm)
MOISTURE:		DEPTH OF OR			(cm)
HOMOGENEOL	S / VARIABLE	DEPTH TO BE	DROCK:		
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PLANT SPECIES	DATE:	
LIST	SURVEYOR(S):	

ABUNDANCE CODES	5: R=RARE U	1 = UCCASIONA	A = ABUNDAN	LAYER	
	LAYER	COH	SPECIES CODE		COLL.
SPECIES CODE	1 2 3 4	COLL	THE STATE	1 2 3	*
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DESCRIPTION & CLASSIFICATION	START		END		UTMZ	UTMN ⁻
OLYGON DE	SCRIPT	TION				
SYSTEM		TRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
TERRESTRIAL	□ cRG	ANIC	LACUSTRINE	NATURAL	☐ PLANKTON ☐ SUBMERGED	□ LAKE □ POND
WETLAND	MINE	RAL SOIL	BOTTOMLAND	CULTURAL	FLOATING-LVD	RIVER STREAM
AQUATIC	☐ PARE	NIM THE	TERRACE VALLEY SLOPE		FORB	MARSH SWAMP
	☐ ACID	C BEDRK	TABLELAND		☐ BRYOPHYTE	FEN
	☐ BASK	C BEDRK	DCLIFF		DECIDUOUS	☐ BOG ☐ BARREN
SITE	CAR!	8. BEDRK	CREVICE / CAVE	COVER	MIXED	☐ MEADOW ☐ PRAIRIE ☐ THICKET
JOPEN WATER	7		BEACH / BAR	□ OPEN		SAVANNAH
SHALLOW WATER			SAND DUNE	SHRUB		- WOODLAND
BEDROCK			_ b.s	TREED		PLANTATION
STAND DESC	RIPTIO	N:				
		CVR	SPECIES	IN ORDER OF	DECREASING DO REATER THAN; = AB	MINANCE OUT EQUAL TO)
LAYER	нт	CAL	(35 MUCH GREA	TER TIAN, FO		
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2 SUB-CANOPY	-	-				
3 UNDERSTORE	Y					
UT CODEC.	4 = 276				= 1 5cHT 1 m 6 = 32 <h< th=""><th>7.05 m 7 = HT<32 m</th></h<>	7.05 m 7 = HT<32 m
CVR CODES	D= NON	E 1= 0% <	T-25 m 3 = 2 <hi-10: CVR > 10% 2= 10 < C</hi-10: 	m 4=1 <ht<2m 5:<br="">VR < 25% 3=25 < 0</ht<2m>	= 0.5 <ht 1="" 6="0.2<H<br" m="">cvR < 80% 4= CvR > 60</ht>	7.05 m 7 = HT<32 m
CVR CODES	SITION	E 1= 0% <	OVR > 10% 2= 10 < 0	VR - 25% 3= 25 < C	VR - 80% 4= CVR > 60	BA:
CVR CODES	SITION	E 1= 0% <	7 25m 3 = 2cH1 10 CVR 10% 2= 10 < C	m 4 = 1 <ht₂2 5="" :<br="" m="">√R ⋅ 25% 3 = 25 < 0</ht₂2>	VR - 80% 4= CVR > 60	BA: > 50
HT CODES: CVR CODES STAND COMPO SIZE CLASS AN	SITION	E 1= 0% <	OVR > 10% 2= 10 < 0	VR - 25% 3= 25 < C	4 25 - 50	BA: > 50 > 50
CVR CODES STAND COMPO SIZE CLASS AN	SENCH DISTION NALYSIS AGS:	E 1= 0% <	< 10 < 10 < 10	10 - 2·	4 25 - 50 4 25 - 50 4 25 - 50	BA: > 50 > 50 > 50
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CVR CODES STAND COMPO SIZE CLASS AN STANDING SNA DEADFALL / LC	SENON DISTION NALYSIS AGS: DGS:	E 1= 0% <	< 10 < 10 < 10 < 10 N = NONE F	10 - 2·	4 25 - 50 4 25 - 50 4 25 - 50 6 OCCASIONAL A =	BA: > 50 > 50 > 50
STAND COMPO SIZE CLASS AN STANDING SNA DEADFALL / LO ABUNDANCE COI COMM. AGE	DESITION NALYSIS AGS: DGS: DES:	E 1= 0% <	< 10 < 10 < 10 < 10 N = NONE F	10 - 24 10 - 24 10 - 24 10 - 20 10 - 20	4 25 - 50 4 25 - 50 4 25 - 50 6 OCCASIONAL A =	BA: > 50 > 50 > 50 > 50 > 50 > 50 > 50 > 50 > 50 > 50 > 50 > 50 > 50 > 50 > 50 > 50 > 50 > 50 > 50 > 50 > 50 > 50 > 50
STAND COMPO SIZE CLASS AN STANDING SN/ DEADFALL / LC ABUNDANCE COI COMM. AGE	DESITION NALYSIS AGS: DGS: DES:	E 1= 0% <	< 10 < 10 < 10 N = NONE R YOUNG	10 - 24 10 - 24 10 - 24 10 - 20 10 - 20	4 25 - 50 4 25 - 50 4 25 - 50 6 OCCASIONAL A=	BA: > 50 > 50 > 50 > 50 > 50 > 50 > 50 > 50 > 50 > 50 > 50 > 50 > 50 > 50 > 50 > 50 > 50 > 50 > 50 > 50 > 50 > 50 > 50
STAND COMPO SIZE CLASS AN STANDING SN/ DEADFALL / LC ABUNDANCE COI COMM. AGE. SOIL ANALYS	DESITION NALYSIS AGS: DGS: DES:	E 1= 0% <	< 10 < 10 < 10 N = NONE R YOUNG	10 - 24 10 - 24	4 25 - 50 4 25 - 50 4 25 - 50 6 OCCASIONAL A=	> 50 > 50 > 50 > 50 > DLD GROWTH
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STAND COMPO SIZE CLASS AN STANDING SN/ DEADFALL / LO ABUNDANCE COI COMM. AGE. SOIL ANALYS TEXTURE: HOMOGENEO	SENCE SITION NALYSIS AGS: DES: DES: US / VA	PIONEE	< 10 < 10 < 10 < 10 N = NONE R YOUNG DEPTH TO MO DEPTH TO BE	10 - 24 10 - 2	4 25 - 50 4 25 - 50 4 25 - 50 6 OCCASIONAL A=	BA: > 50 > 50 > 50 > 50
STAND COMPO SIZE CLASS AN STANDING SN/ DEADFALL / LC ABUNDANCE COI COMM. AGE. SOIL ANALYS TEXTURE: MOISTURE:	SITION NALYSIS AGS: DGS: DES: DES: US / VA	PIONEE	< 10 < 10 < 10 < 10 N = NONE R YOUNG DEPTH TO MO DEPTH OF OF DEPTH TO BE	10 - 2: 10 - 2: 10 - 2: 10 - 2: 10 - 2: MID-AGE OTTLES / GLEY RGANICS:	4 25 - 50 4 25 - 50 4 25 - 50 CODE:	BA: > 50 > 50 > 50 > 50
STAND COMPO SIZE CLASS AN STANDING SNA DEADFALL / LO ABUNDANCE COI COMM. AGE. SOIL ANALY: TEXTURE: MOISTURE: HOMOGENEOI	SITION NALYSIS AGS: DGS: DES: DES: US / VA	PIONEE	< 10 < 10 < 10 < 10 N = NONE R YOUNG DEPTH TO MO DEPTH TO BE	10 - 2: 10 - 2: 10 - 2: 10 - 2: 10 - 2: MID-AGE OTTLES / GLEY RGANICS:	4 25 - 50 4 25 - 50 4 25 - 50 6 OCCASIONAL A = MATURE	BA: > 50 > 50 > 50 > 50
STAND COMPO SIZE CLASS AN STANDING SNA DEADFALL / LC ABUNDANCE COL COMM. AGE. SOIL ANALYS TEXTURE: MOISTURE: HOMOGENEOU COMMUNITY COMMUNITY	SITION NALYSIS AGS: DGS: DES: DES: US / VA	PIONEE	< 10 < 10 < 10 < 10 N = NONE R YOUNG DEPTH TO MO DEPTH OF OF DEPTH TO BE	10 - 2: 10 - 2: 10 - 2: 10 - 2: 10 - 2: MID-AGE OTTLES / GLEY RGANICS:	4 25 - 50 4 25 - 50 4 25 - 50 CODE:	BA: > 50 > 50 > 50 > 50
STAND COMPO SIZE CLASS AN STANDING SN/ DEADFALL / LG ABUNDANCE COI COMM. AGE. SOIL ANALY: TEXTURE: HOMOGENEOI COMMUNITY COMMUNITY COMMUNITY S	SITION NALYSIS AGS: DGS: DES: DES: CLASS: SERIES:	PIONEE	< 10 < 10 < 10 < 10 N = NONE R YOUNG DEPTH TO MO DEPTH OF OF DEPTH TO BE	10 - 2: 10 - 2: 10 - 2: 10 - 2: 10 - 2: MID-AGE OTTLES / GLEY RGANICS:	4 25 - 50 4 25 - 50 4 25 - 50 6 OCCASIONAL A = MATURE	BA: > 50 > 50 > 50 > 50
STAND COMPO SIZE CLASS AN STANDING SNA DEADFALL / LC ABUNDANCE COM COMM. AGE. SOIL ANALYS TEXTURE: MOISTURE: HOMOGENEOU COMMUNITY COMMUNITY COMMUNITY SECOSITE:	SITION NALYSIS AGS: DGS: DES: DES: CLASS: SERIES:	PIONEE	< 10 < 10 < 10 < 10 N = NONE R YOUNG DEPTH TO MO DEPTH OF OF DEPTH TO BE	10 - 2: 10 - 2: 10 - 2: 10 - 2: 10 - 2: MID-AGE OTTLES / GLEY RGANICS:	4 25 - 50 4 25 - 50 6 0CCASIONAL A= MATURE CODE: CODE: CODE:	BA: > 50 > 50 > 50 > 50

ELC	SITE:	
. 11-1-1	POLYGON:	
SPECIES	DATE:	
LIST	SURVEYOR(S):	

BUNDANCE CODES: R	YER		SPECIES CODE LAYER COLL
SPECIES CODE	3 4	GOLT.	SPEED OUS THAT 3 4
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COMMUNITY DESCRIPTION &		Trun	No.	lutmz	UTMN:
CLASSIFICATION	START	END	7 a 2% a a 37		
OLYGON DES	SCRIPTION			PLANT FORM	COMMUNITY
SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY		
TERRESTRIAL WETLAND	ORGANIC MINERAL SOIL	LACUSTRINE RIVERINE BOTTOMIAND TERRACE	SCULTURAL	PLANKTON SUBMERGED FLOATING-LVO GRAMINOID	LAKE POND RIVER STREAM
AQUATIC	☐ PARENT MIN ☐ ACIDIC BEDRK	TABLELAND ROLL UPLAND		☐ FORB ☐ LICHEN ☐ BRYOPHYTE ☐ DECIDUOUS	☐ MARSH ☐ SWAMP ☐ FEN ☐ BOG
SITE	BASIC BEDRK	CLIFF TALUS CREVICE / CAVE ALVAR	COVER	O MIXED	BARREN MEADOW PRAIRIE THICKET
OPEN WATER SHALLOW WATER USURFICIAL DEP. BEDROCK		☐ ROCKLAND ☐ BEACH / BAR ☐ SAND DUNE ☐ BLUFF	OPEN SHRUB TREED		SAVANNAH WOODLAND FOREST VALANTATION
STAND DESC	RIPTION:				DANIANCE
LAYER	HT ÇYR	SPECIES	IN ORDER OF	DECREASING DORESTER THAN; = AI	BOUT EQUAL TO)
1 CANOPY	24	Throw	Picasi	e Kraver	Jugury
2 SUB-CANOPY	23	(range	1	- 1 -	1
3 UNDERSTORE	Y 4 2	ryouth	. WALD	000000000000000000000000000000000000000	- Custon
	0	[/ // A A	. / /	Dunse	S966/1
4 GRD. LAYER		allpun	9 44 16hTc2m 5	1) 0-00-04
HT CODES: CVR CODES	1 = >25 m 2 = 10<		m 44 1 <ht-2 5<="" m="" td=""><td>1</td><td>7.05 m 7 = HT<02 m</td></ht-2>	1	7.05 m 7 = HT<02 m
HT CODES:	1 = >25 m 2 = 10< 0= NONE 1= 0% <	T 25 m 3 + 2 <ht 10<="" td=""><td></td><td>= 0.56HT 1m 6 = 0.24</td><td>ता 95 m 7 = Hर्र 32 m 0% BA:</td></ht>		= 0.56HT 1m 6 = 0.24	ता 95 m 7 = Hर्र 32 m 0% BA:
HT CODES: CVR CODES	1 = >25 m 2 = 104 0= NONE 1= 0% <	47:25 m 3 + 2×H7:10 ccvR > 10% 2= 10 < 0		= 0.59HT 1m 6 = 0.24 CVR - 80% 4- CVR > 6	BA: >50
HT CODES: CVR CODES STAND COMPO	1 = >25 m 2 = 104 pm NONE 1= 0% 4	COVR > 10% 2= 10 < 0	CVR V25% 3=25 < 0	4 25 - 50	BA: >50
HT CODES: CVR CODES STAND COMPO SIZE CLASS A STANDING SN	DSITION:	< 10	D 10-2	4 25 - 50 4 25 - 50	BA: > 50 > 50 > 50
HT CODES: CVR CODES STAND COMPO	DSITION: NALYSIS: AGS: OGS:	< 10	D 10-2	4 25 - 50 4 25 - 50 4 25 - 50 4 25 - 50	BA: > 50
HT CODES: CVR CODES STAND COMPO SIZE CLASS A STANDING SN DEADFALL / L	DSITION: NALYSIS: AGS: OGS:	CVR - 10% 2 = 10 < 0 CVR - 10% 2 = 10 < 0 O < 10 O < 10 N = NONE	D 10-2	4 25 - 50 4 25 - 50 4 25 - 50 4 25 - 50	BA: > 50 > 50 > 50
HT CODES: CVR CODES STAND COMPO SIZE CLASS A STANDING SN DEADFALL / L ABUNDANCE CO COMM. AGE	DSITION: NALYSIS: NAGS: OGS: DDES:	CVR - 10% 2 = 10 < 0 CVR - 10% 2 = 10 < 0 O < 10 O < 10 N = NONE	10 - 2 10 - 2 10 - 2 R = RARE 0	4 25 - 50 4 25 - 50 4 25 - 50 4 25 - 50	BA: > 50
HT CODES: CVR CODES STAND COMPO SIZE CLASS A STANDING SN DEADFALL / L ABUNDANCE CO COMM. AGE SOIL ANALY	DSITION: NALYSIS: NAGS: OGS: DDES:	COVR 5 10% 2 = 10 < 0 COVR 5 10 COVR 5	10 - 2 10 - 2 10 - 2 R = RARE 0	4 25 - 50 4 25 - 50 4 25 - 50 4 25 - 50 4 27 - 50 5 - 50 6 - 50 6 - 50 7	BA: Day Day
HT CODES: CVR CODES STAND COMPO SIZE CLASS A STANDING SN DEADFALL / L ABUNDANCE CO COMM. AGE SOIL ANALY TEXTURE:	DSITION: NALYSIS: NAGS: OGS: DDES:	COVR 5 10% 2 = 10 < 0 COVR 5 10 COVR 5	0 10 - 2 10 - 2 10 - 2 10 - 2 10 - 2 MID-AGI	4 25 - 50 4 25 - 50 4 25 - 50 4 25 - 50 4 25 - 50 4 27 - 50 5 - 50 6 - 50 6 - 50 7 - 5	BA: Day Day
HT CODES: CVR CODES STAND COMPO SIZE CLASS A STANDING SN DEADFALL / L ABUNDANCE CO COMM. AGE . SOIL ANALY TEXTURE: MOISTURE:	DSITION: NALYSIS: NACS: OGS: PIONES (SIS:	< 10	10 - 2 10 - 2 10 - 2 10 - 2 10 - 2 10 - 2 MID-AGI OTTLES/GLEY	4 25 - 50 4 25 - 50 4 25 - 50 4 25 - 50 4 25 - 50 4 27 - 50 5 - 50 6 - 50 6 - 50 7 - 5	BA: Day Day
STAND COMPOSIZE CLASS A STANDING SN DEADFALL / L ABUNDANCE COMM. AGE. SOIL ANALY TEXTURE: HOMOGENEC	DISTION: NALYSIS: NAGS: OGS: DES: PIONE VARIABLE	COVR 5 10% 2 = 10 < 0 COVR 5 10	10 - 2 10 - 2 10 - 2 10 - 2 10 - 2 10 - 2 MID-AGI OTTLES/GLEY	4 25 - 50 4 25 - 50 4 25 - 50 4 25 - 50 4 MATURE	BA: Day Day
HT CODES: CVR CODES STAND COMPO SIZE CLASS A STANDING SN DEADFALL / L ABUNDANCE CO COMM. AGE . SOIL ANALY TEXTURE: MOISTURE: HOMOGENEC COMMUNITY	DISTION: NALYSIS: NALYSIS: PIONE PIONE YCLASSIFICA CLASS:	COVR 5 10% 2 = 10 < 0 COVR 5 10	10 - 2 10 - 2 10 - 2 10 - 2 10 - 2 10 - 2 MID-AGI OTTLES/GLEY	4 25 - 50 4 25 - 50 4 25 - 50 4 25 - 50 4 25 - 50 4 25 - 50 4 25 - 50 6 OCCASIONAL A E MATURE	BA: DA DA DA
STAND COMPOSIZE CLASS A STANDING SN DEADFALL / L ABUNDANCE COMM. AGE. SOIL ANALY TEXTURE: MOISTURE: HOMOGENEC	DISTION: NALYSIS: NALYSIS: PIONE PIONE YCLASSIFICA CLASS:	COVR - 10% 2 = 10 < 0 COVR - 10% 2 = 10 < 0	10 - 2 10 - 2 10 - 2 10 - 2 10 - 2 10 - 2 MID-AGI OTTLES/GLEY	25 - 50 4 25 - 50 4 25 - 50 4 25 - 50 4 25 - 50 4 25 - 50 CCASIONAL A WATURE	BA:
HT CODES: CVR CODES STAND COMPO SIZE CLASS A STANDING SN DEADFALL / L ABUNDANCE CO COMM. AGE . SOIL ANALY TEXTURE: MOISTURE: HOMOGENEC COMMUNITY	DISTION: NALYSIS: NALYSIS: PIONE PIONE YCLASSIFICA CLASS:	COVR - 10% 2 = 10 < 0 COVR - 10% 2 = 10 < 0	10 - 2 10 - 2 10 - 2 10 - 2 10 - 2 10 - 2 MID-AGI OTTLES/GLEY	25 - 50 4	BA:
HT CODES: CVR CODES STAND COMPO SIZE CLASS A STANDING SN DEADFALL / L ABUNDANCE CO COMM. AGE . SOIL ANALY TEXTURE: HOMOGENEC COMMUNITY COMMUNITY	DIS / VARIABLE YCLASSIFICA CLASS: CU SERIES: CL	COVR - 10% 2 = 10 < 0 COVR - 10% 2 = 10 < 0	10 - 2 10 - 2 10 - 2 10 - 2 10 - 2 10 - 2 MID-AGI OTTLES/GLEY	25 - 50 4	BA:
HT CODES: CVR CODES STAND COMPO SIZE CLASS A STANDING SN DEADFALL / L ABUNDANCE CO COMM. AGE . SOIL ANALY TEXTURE: MOISTURE: HOMOGENEC COMMUNITY COMMUNITY ECOSITE: VEGETATION	DIS / VARIABLE YCLASSIFICA CLASS: CU SERIES: CL	COVR - 10% 2 = 10 < 0 COVR - 10% 2 = 10 < 0	10 - 2 10 - 2 10 - 2 10 - 2 10 - 2 10 - 2 MID-AGI OTTLES/GLEY	25 - 50 4	BA:

ELC	SITE:	
	POLYGON:	
PLANT SPECIES	DATE:	
LIST	SURVEYOR(S):	

LAYER		SPECIES CODE LAYER			COLL.	
SPECIES CODE 1 2 3 6		SPECIES COLE	1 2	3.4		
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vipra			11			
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Amphibian Data Form



Visit Information

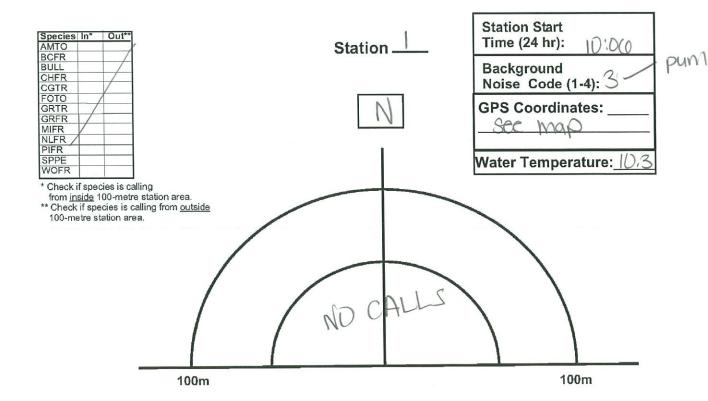
Project Name: Ens proposty	Project #:
Observer Name: GC DM	Visit #:
Date: April 5/2021	Cloud Cover (%):3DY.
Temperature (°C):	Beaufort Wind Scale (0-6):
Precipitation (check one): 🕅 None/Dry	□Damp/Haze/Fog □ Drizzle □Rain

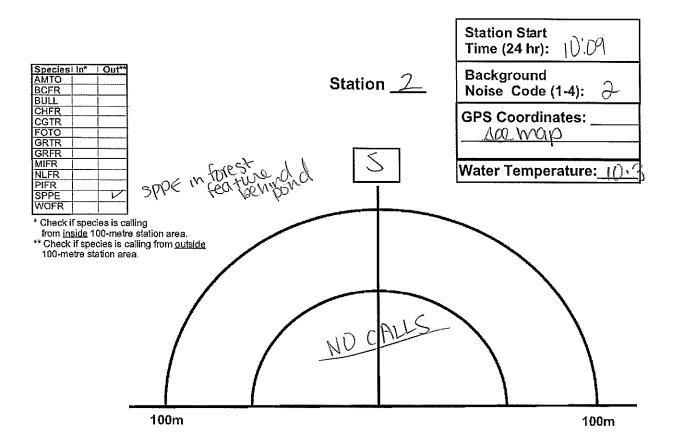
Call Level Codes

Code 1: Calls not simultaneous, number of individuals can be accurately counted.

Code 2: Some calls simultaneous, number of individuals can be reliably estimated.

Code 3: Full chorus, call continuous and overlapping, number of individuals cannot be reliably estimated.





Amphibian Species Codes

Species	Code
American Toad	AMTO
Northern (Blanchard's) Cricket Frog	BCFR
Bullfrog	BULL
Chorus Frog	CHFR
Cope's (Diploid) Gray Treefrog	CGTR
Fowler's Toad	FOTO
Gray (Tetraploid) Treefrog	GRTR
Green Frog	GRFR
Mink Frog	MIFR
Northern Leopard Frog	NLFR
Pickerel Frog	PIFR
Spring Peeper	SPPE
Wood Frog	WOFR

-	Background Noise Codes						
	index	x Description					
]	0	0 No appreciable effect (e.g., owl calling)					
	1	Slightly affecting sampling (e.g., distant traffic, dog barking, car passing)					
	2	2 Moderately affecting sampling (e.g., distant traffic, 2-5 cars passing)					
	3	Seriously affecting sampling (e.g., continuous traffic nearby, 6-10 cars passing)					
	4	Profoundly affecting sampling (e.g., continuous traffic passing, construction noise)					
	24 Hour Time						
l	1	12 Hour 24 Hour	<u>12 Hour 24 Hour</u>				
	7:00 PM 1900 10:00 PM 2200 8:00 PM 2000 11:00 PM 2300						

12:00 PM

2400

Beaufort Wind Scale

9:00 PM

2100

Number	Wind Speed		Indicators
	Km/h	Mph	
0	0-2	0-1	Calm, smoke rises vertically
1	3-5	2-3	Light air movement, smoke drifts
2	6-11	4-7	Slight breeze, wind felt on face
3	12-19	8-12	Gentle breeze, leaves and small twigs in constant motion
4*	20-30	13-18	Moderate breeze, small branches are moving, raises dust and loose paper

^{*} Winds over Beaufort 3 are unacceptable for amphibian surveys.

Amphibian Data Form



Visit Information

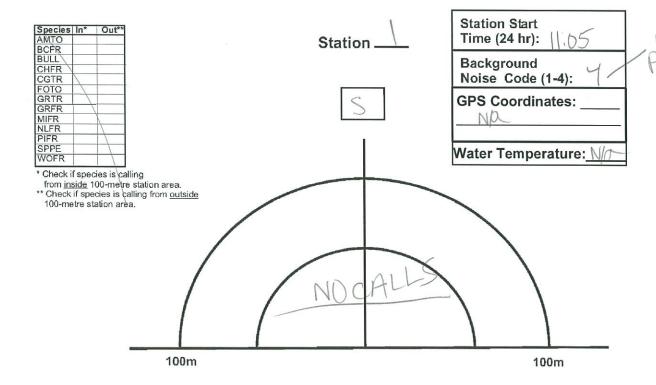
Project Name: EMS	Project #: 2000 (2
Observer Name: DW GC	Visit #:
Date: 104 25 2021	Cloud Cover (%):
Temperature (°C):	Beaufort Wind Scale (0-6):
Precipitation (check one): None/Dry	□Damp/Haze/Fog □ Drizzle □Rain

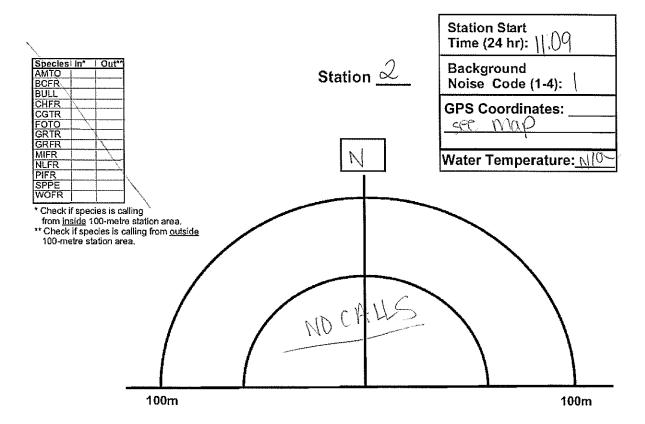
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4	Profoundly affecting sampling (e.g., continuous traffic passing, construction noise)						
	24 Hour Time						
1	12 Hour 24 Hour <u>12 Hour</u> 24 Hour						

24 Hour Time					
<u>12 Hour</u>	24 Hour	<u>12 Hour</u>	24 Hour		
7:00 PM	1900	10:00 PM	2200		
8:00 PM	2000	11:00 PM	2300		
9:00 PM	2100	12:00 PM	2400		

Beaufort Wind Scale

Number	Wind Speed		Indicators
	Km/h	Mph	
0	0-2	0-1	Calm, smoke rises vertically
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Amphibian Data Form



Visit Information

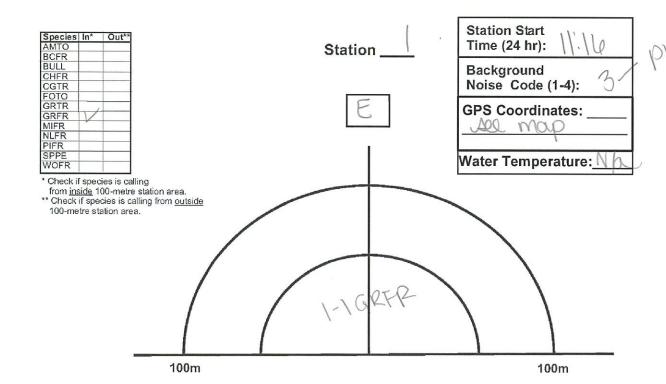
Project Name: EAS	
Observer Name: GB/GC	Visit #:
Date: 34NL 23/2	Cloud Cover (%):
Temperature (°C):	Beaufort Wind Scale (0-6):
Precipitation (check one): □∕None/Dry	□Damp/Haze/Fog □ Drizzle □Rain

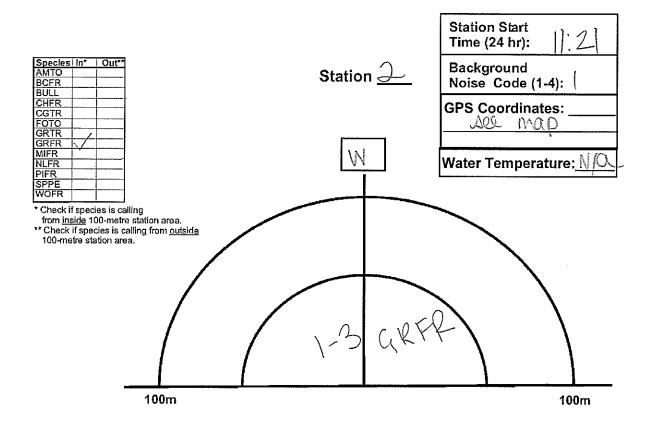
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4	Profoundly affecting sampling (e.g., continuous traffic passing, construction noise)						
24 Hour Time							
12 Hour 24 Hour 12 Hour 24 Hour							
7	:00 PM 1900	10:00 PM	2200				
_	:00 PM 2000	11:00 PM	2300				
9:00 PM 2100 12:00 PM 2400							

Beaufort Wind Scale

Number	Wind Speed		Indicators	
	Km/h	Mph		
0	0-2	0-1	Calm, smoke rises vertically	
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4*	20-30	13-18	Moderate breeze, small branches are moving, raises dust and loose paper	

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* bithernul on Enns mury -220262 site byjet with But Habitut Assessment blue flyging bye A. Conninghum 2:00pm - 4:00pm 5°C, CC 50%, Whol 1, no ppl (neidents) Ocom Maples / Oak Fast Maple 4>25: -BCCH -BLJA: - RWBL: - WTDE Cobs) - LBai Flyan Oak 725: - MINNA -DEJU All anthropogenic structures: on property were assisted for but hab tot -AMRO -CEDV. -BLSQ De .. 0

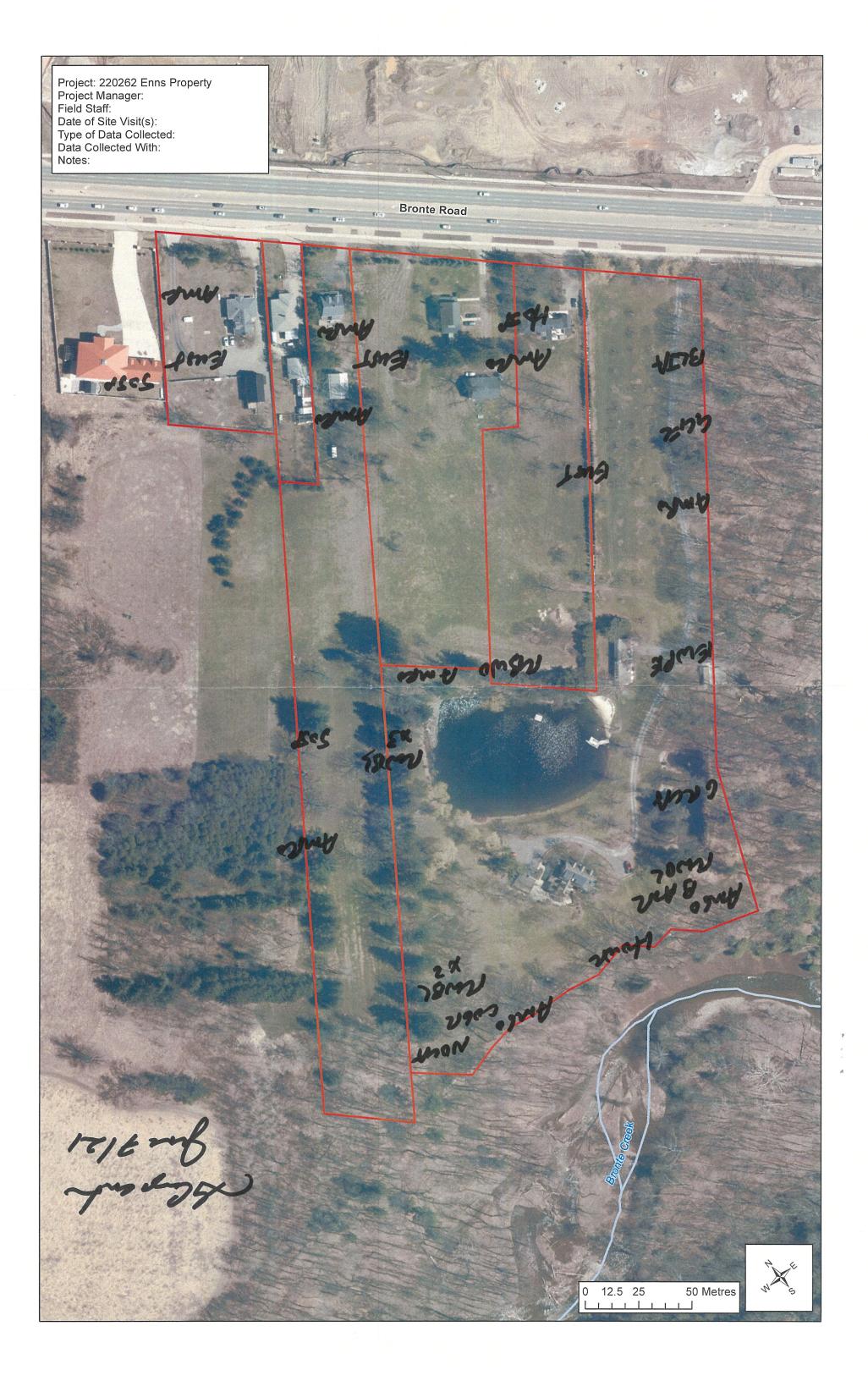
Breeding Bird Survey Summary Form

Surveyor Name: Geoff Carpenton	Date (use letters for mos.): Nay 21.121
Project Name: Enns Property Oa	Kville Project #: 220 262
Time of Survey (start and finish): $5:15-7:30$	
Weather (approx. temp., cloud cover, wind, precipitation):	75% cloud, 23°C
· light breeze	
Additional notes on birds (nests, uncertainties, unusual ob	
E. Cottontail, Gv. Squivere	<u> </u>
1	
Incidental Observations	
Anything welcome (mammals, herps, fish presence, insect	
rare plants, occurrence of fish, please also mark location o	n map. For herps, number observed. Thanks!
COER 1 BHOW 1	
AMRO 4 RWBL 3	AND THE PROPERTY OF THE PROPER
GCFL Zprs. AMGO	
BLTA 1 5057 2	
NOCA 3 Home (with	49.) 10 birds total
EUST 4 BAOR 3	
COYE 1 RBWO 1	
Becit 1 WBNU 1	
KILL 1 MODO 1	
HUWR 2 CAGO	



Breeding Bird Survey Summary Form

Surveyor Name: Geoff Carpun	ther Date (use letters for mos.): Jime 7/21
Project Name: Eurs Propert	y, Oukutlle Project #: 220762
Time of Survey (start and finish):	:15-0845
Weather (approx. temp., cloud cover, wind, p	recipitation): 22°C Sunny 10 wand
Additional notes on birds (nests, uncertainties	s, unusual observations, habitat comments etc.) :
Green Frog // nu 117 plale, Ellip,	huel bees nest in dead white Pin
• -	sence, insects, plants esp. unusual spp. etc.). For herps, rk location on map. For herps, number observed. Thanks!
1/05P - 1-2	RBWO -1
505P - Z	NOCA -1
BLJA -R	BAOR-1
EWPE -1	HOWR-1
GCFC -Z	COGR-1-2
RWBL -5	
AMRO -5-7	
Anc60 - 1	
EUST - 2-3	
JUSH	
GREAT 1	







	220	262 E	ns	Sept.	17/21
on s Dk	He II-	12pm			6
30)%. CC,	24°C	no WIN	d, nopp	
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