

Figure 22

Bornish Wind Energy Centre Generalized Wildlife Habitat - T-Line



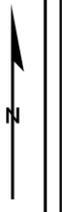
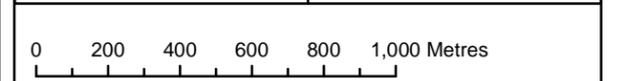
Legend

- Project Area (120m)
- Generalized Mitigation Habitat
- Project Location
- Turbine
- Access Road
- Transmission Line
- Collector System
- Staging Area
- Interconnection Facilities
- Substation
- Existing Transmission Line
- Primary Road
- Secondary Road
- Railroad
- Intermittent Watercourse
- Permanent Watercourse
- Waterbody



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Project: 1231 Date: March 30, 2012	NAD83 - UTM Zone 17 Scale: 1:20,000 (11x17")
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9.6 Summary of Wildlife Habitat

During the detailed site investigation of the Bornish Wind Energy Centre, NRSI biologists have examined natural features within the project area for the presence of significant wildlife habitats. All the specific candidate habitats that require individual evaluation of significance surveys have been specifically identified below, including unique identifiers, distance to project location, and composition, function, and attributes of each feature, can be found in Table 16. This includes a total of 23 individual candidate habitats, which have been mapped in Figures 13 to 17.

Table 16. Summary of Wildlife Habitat within the Bornish Wind Energy Centre Project Area

Feature ID	Size (ha)	Composition	Attributes	Functions	Criteria Rationale	Distance to Project Location	Figure	EOS Required (Y/N/Generalized)
RWA 002 Raptor Wintering Area	62.4	23.5ha of OAGM2 adjacent to FODM5-6 Dry-fresh sugar maple – basswood deciduous forest	FODM5-6 Dominated by sugar maple and basswood and containing white ash and American beech	May provide roosting, foraging, winter cover and feeding for wintering raptors.	Candidate field (>15 ha) and combination with woodland is >20 ha	WT - 73 AR - >0.1 OL - > 120 UL - >0.1 SI - > 120	13, 15	Yes
BMA 002 Bat Maternity Colony	11.0	FODM5-8 Dry-fresh sugar maple – white ash deciduous forest	Dominated by sugar maple and white ash and containing: American beech and basswood	May provide roosting habitat and shelter for raising young.	Suitable number of snags to provide candidate habitat	WT – 42 AR – 92 OL – >120 UL – 4 SI- >120	13,14	Yes
BMA 003 Bat Maternity Colony	30.6	FODM5-8 Dry-Fresh Sugar Maple – White Ash Deciduous Forest	Dominated by sugar maple and containing white ash and American beech	May provide roosting habitat and shelter for raising young.	Suitable number of snags to provide candidate habitat	WT – 44 AR – 7 OL – >120 UL – >0.1 SI- >120	14	Yes
BMA 008 Bat Maternity Colony	11.7	FODM7-1 Fresh white elm lowland deciduous forest	Dominated by white elm, silver maple and green ash	May provide roosting habitat and shelter for raising young.	Suitable number of snags to provide candidate habitat	WT – 57 AR – >0.1 OL – >120 UL – >0.1 SI- >120	16	Yes
BMA 009 Bat Maternity Colony	37.2	FODM4-2 Dry-fresh white ash deciduous woodland	Dominated by white ash and containing: sugar maple, basswood and shagbark hickory	May provide roosting habitat and shelter for raising young.	Suitable number of snags to provide candidate habitat	WT – 49 AR – 5 OL – >120 UL – 5 SI- >120	16	Yes
BMA 010 Bat Maternity Colony	<1	FODM4-2 Dry-fresh white ash-hardwood deciduous forest	Dominated by white ash, red elm and containing European buckthorn	May provide roosting habitat and shelter for raising young.	Suitable number of snags to provide candidate habitat	WT – 76 AR – 5 OL – >120 UL – 5 SI- >120	13	Yes
BMA 011	1.1	FODM4-2	Dominated by	May provide roosting	Suitable number	WT – 48	13	Yes

Feature ID	Size (ha)	Composition	Attributes	Functions	Criteria Rationale	Distance to Project Location	Figure	EOS Required (Y/N/Generalized)
Bat Maternity Colony		Dry-fresh white ash-hardwood deciduous forest,	white ash and containing white elm, shagbark hickory, sugar maple and basswood	habitat and shelter for raising young.	of snags to provide candidate habitat	AR – 0.4 OL –>120 UL – 0.4 SI- >120		
BMA 012 Bat Maternity Colony	38.9	FODM5-6 Dry-fresh sugar maple – basswood deciduous forest	Dominated by sugar maple and basswood and containing: white ash and American beech	May provide roosting habitat and shelter for raising young.	Suitable number of snags to provide candidate habitat	WT – 93 AR – 4 OL – >120 UL – >0.1 SI- >120	13,15	Yes
BMA 013 Bat Maternity Colony	18.2	FODM5-2 Dry-fresh sugar maple-beech deciduous forest	Dominated by sugar maple and American beech	May provide roosting habitat and shelter for raising young.	Suitable number of snags to provide candidate habitat	WT – 48 AR – 82 OL – >120 UL – 82 SI- >120	14,17	Yes
BMA 016 Bat Maternity Colony	4.3	FODM5-8 Dry-fresh sugar maple-white ash deciduous forest	Dominated by sugar maple and white ash and containing basswood and shagbark hickory	May provide roosting habitat and shelter for raising young.	Suitable number of snags to provide candidate habitat	WT – 63 AR – 14 OL – 90 UL – 14 SI- >120	14,17	Yes
BMA 017 Bat Maternity Colony	21.0	FODM4-2 Fresh white ash-hardwood deciduous forest	Dominated by white ash and containing sugar maple, shagbark hickory) and red oak	May provide roosting habitat and shelter for raising young.	Suitable number of snags to provide candidate habitat	WT – 21 AR – 11 OL – 9 UL – 11 SI- >120	14	Yes
AWO 001 Amphibian Breeding Habitat (Woodland)	4.8	4.6 ha of WODM5-2 Moist elm deciduous woodland with two <1 ha SAF_1-3 duckweed floating-leaved shallow aquatic ecosite	Dominated by white elm and containing: shagbark hickory, basswood; one aquatic site dominated by swamp beggar	May be used for egg laying, breeding and feeding habitat.	No studies completed to date; presumed significant; if no significant habitat (vernal pools) observed in spring 2012	WT – 88 AR – 10 OL – >120 UL – 10 SI- >120	16	Yes

Feature ID	Size (ha)	Composition	Attributes	Functions	Criteria Rationale	Distance to Project Location	Figure	EOS Required (Y/N/Generalized)
			ticks and lesser duckweed; second aquatic site dominated by slender willow, rice cut grass, cocklebur species, lesser duckweed and green ash		no studies will be conducted and no significance of habitat			
AWO 002 Amphibian Breeding Habitat (Woodland)	39.0	38.9 ha of FODM5-6 Dry-fresh sugar maple – basswood deciduous forest with a <1 ha open water pond	Dominated by <i>Acer saccharum</i> (sugar maple) and <i>Tilia americana</i> (basswood) and containing: <i>Ulmus americana</i> (white ash), <i>Fagus grandifolia</i> (American beech)	May be used for egg laying, breeding and feeding habitat.	No studies completed to date; presumed significant; if no significant habitat (vernal pools) observed in spring 2012 no studies will be conducted and no significance of habitat	WT – 93 AR – 4 OL – >120 UL – >0.1 SI – >120	13,15	Yes
AWO 003 Amphibian Breeding Habitat (Woodland)	15.2	15.1 ha of WODM4-3 Dry-fresh sugar maple deciduous woodland with a <1 ha open water pond	Dominated by sugar maple and containing white ash, American beech and hop hornbeam	May be used for egg laying, breeding and feeding habitat.	No studies completed to date; presumed significant; if no significant habitat (vernal pools) observed in spring 2012 no studies will be conducted and no significance of habitat	WT – 100 AR – 6 OL – 35 UL – 6 SI – >120	14,16,17	Yes

Legend

WT: Wind Turbine
AR: Access Road

OL: Overhead Line
UL: Underground Line
SI: Supporting Infrastructure

10.0 Summary of Site Investigation

A summary of natural features and wildlife habitat from the site investigation phase of the project can be found below in Table 17. This summary includes: woodlands, wetlands, valleylands, species of conservation concern and significant wildlife habitat, some of which will be carried forward to the evaluation of significance, as noted in the table. Table 18 outlines differences to the summary of the Records Review report, while Table 19 outlines differences to candidate significant wildlife habitat identified in the Records Review report.

Table 17. Summary of Natural Features and Wildlife Habitat Site Investigation for the Bornish Wind Energy Centre

Feature ID	Distance to Closest Turbine (from blade tip)	Distance to Other Project Infrastructure	EOS Required (Y/N/Generalized)
WOD-001 Woodland	>120	5	Yes
WOD-002 Woodland	78	6	Yes
WOD-003 Woodland	42	6	Yes
WOD-004 Woodland	56	>0.1	Yes
WOD-006 Woodland	93	Overlapping	Yes
WOD-007 Woodland	49	5	Yes
WOD-008 Woodland	44	Overlapping	Yes
WOD-009 Woodland	42	4	Yes
WOD-010 Woodland	55	>0.1	Yes
WOD-012/WOD 021 Woodland	47	92	Yes
WOD-013 Woodland	>120	28	Yes
WOD-014 Woodland	57	>0.1	Yes
WOD-015 Woodland	76	5	Yes
WOD-016	48	0.4	Yes
WOD-018 Woodland	40	7	Yes
WOD-020 Woodland	>120	110	Yes
WOD-022 Woodland	48	82	Yes
WOD-023 Woodland	63	14	Yes
WOD-024 Woodland	21	9	Yes

Feature ID	Distance to Closest Turbine (from blade tip)	Distance to Other Project Infrastructure	EOS Required (Y/N/Generalized)
WOD-025 Woodland	>120	35	Yes
WOD-027 Woodland	>120	6	Yes
WOD-028 Woodland	90	6	Yes
WOD-029 Woodland	82	2	Yes
WOD-030 Woodland	89	73	Yes
WOD-031 Woodland	70	64	Yes
WOD-038 Woodland	>120	72	Yes
WOD-039 Woodland	>120	37	Yes
WOD-045 Woodland	>120	15	Yes
WOD-046 Woodland	>120	12	Yes
WOD-047 Woodland	>120	20	Yes
WOD-048 Woodland	>120	5	Yes
WOD-050 Woodland	>120	3	Yes
WOD-051 Woodland	>120	51	Yes
WOD-052 Woodland	>120	10	Yes
WOD-053 Woodland	>120	15	Yes
WET-002 Wetland	A: >120	A: 91	Yes
WET-002 Wetland	B: 45	B: 12	Yes
WET-002 Wetland	C: 109	C: 24	Yes
WET-003 Wetland	100	6	Yes
WET-008 Wetland	>120	92	Yes
WET-010 Wetland	55	>0.1	Yes
WET-014 Wetland	70	5	Yes
WET-018 Wetland	115	50	Yes
WET-025 Wetland	>120	35	Yes
WET-030 Wetland	88	>120	Yes
VAL- 004 Valleyland	56	>0.1	Yes
VAL-047 Valleyland	>120	20	Yes
RWA 002	>120	>0.1	Yes

Feature ID	Distance to Closest Turbine (from blade tip)	Distance to Other Project Infrastructure	EOS Required (Y/N/Generalized)
Raptor Wintering Area			
BMA 002 Bat Maternity Colony	42	4	Yes
BMA 003 Bat Maternity Colony	44	>0.1	Yes
BMA 008 Bat Maternity Colony	57	>0.1	Yes
BMA 009 Bat Maternity Colony	49	5	Yes
BMA 010 Bat Maternity Colony	76	5	Yes
BMA 011 Bat Maternity Colony	48	0.4	Yes
BMA 012 Bat Maternity Colony	93	>0.1	Yes
BMA 013 Bat Maternity Colony	48	82	Yes
BMA 016 Bat Maternity Colony	63	14	Yes
BMA 017 Bat Maternity Colony	21	9	Yes
AWO 001 Amphibian Breeding Habitat (Woodland)	88	10	Yes
AWO 002 Amphibian Breeding Habitat (Woodland)	93	>0.1	Yes
AWO 003 Amphibian Breeding Habitat (Woodland)	100	6	Yes
Bat Maternity Colony	>120	N/A	Generalized
Snake Hibernaculum	>120	<120 to UL	Generalized
Amphibian Breeding Habitat (Woodland)	N/A	>120 to AR	Generalized
SCC: Woodland Vole	N/A	N/A	Generalized
SCC: Carey's Sedge	N/A	N/A	Generalized
SCC: Awnless Wild Rye	N/A	N/A	Generalized
SCC: Yellow Stargrass	N/A	N/A	Generalized
SCC: Winged Loosestrife	N/A	N/A	Generalized
SCC: Slim-flowered Muhly	N/A	N/A	Generalized
SCC: Woodland Bulrush	N/A	N/A	Generalized
SCC: Blue-ringed Dancer	N/A	N/A	Generalized
SCC: Double-striped Bluet	N/A	N/A	Generalized
SCC: Pronghorn Clubtail	N/A	N/A	Generalized

Table 18. Summary of Records Review Corrections

Criteria	Result	Corrections Based on Site Investigation
1. Within 120m of a Provincial Park or Conservation Reserve	The Bornish Wind Energy Centre is not located within 120 m of a Provincial Park or Conservation Reserve.	No changes
2. In a Natural Feature	The results of this records review indicate that project components (i.e. disturbance area, cabling, access roads etc.) of the Bornish Wind Energy Centre overlap with 9 woodlands. Based on review of air photos, these woodlands are expected to consist of deciduous forest with vegetation associations that are representative of this region of southwestern Ontario. The extent to which project locations overlap with natural areas is variable and will be further examined and addressed in the site investigation phase of the project.	Yes, two woodlands will be overlapped by project components.
3. Within 50m of a ANSI-ES	No ANSI-ES is located within 50m of the project location	No changes
4. Within 120m of a Natural Feature		
a) ANSI-LS	No ANSI-LS is located within 120m of the project location.	No changes
b) Coastal Wetland	No coastal wetlands are located within 120m of the project location.	No changes
c) Northern Wetland	No northern wetlands are found within 120m of the project location.	No changes
d) Southern Wetland	Three southern wetlands within designated Environmentally Significant Areas have been identified within 120m of the project location. Wetlands may also be located within woodland boundaries.	Yes, ten wetland communities are located within the project area.
e) Valleyland	No known valleylands are located within 120m of the project location.	Yes, two valleylands are located within the project area.
f) Wildlife Habitat	<p>40 woodlands are located within 120m of the project location which could potentially provide several types of Significant Wildlife Habitat (SWH).</p> <p>Other natural features such as naturalized drainage ditches and hedgerows have been identified within 120 m of the project location and could also provide SWH. These features will be surveyed to determine if they are used as animal movement corridors or provide habitat for species of conservation concern.</p> <p>Several species of conservation concern were identified as potentially occurring within the Bornish project area. Candidate habitats for these species will be investigated for potential Significant Wildlife Habitat.</p>	<p>Yes, 35 woodlands are located within the project area.</p> <p>Wildlife habitat and species of conservation concern are addressed in Table 19.</p>

	All of these wildlife habitats should be examined during the site investigation phase and/or the evaluation of significance phase of this project to identify other habitat features and identify the significance of each natural feature.	
g) Woodland	40 woodlands are located within 120m of the project location, including 9 that may overlap with the project location. Basemapping indicate these wooded areas range in size from <1 ha to 137.2 ha. These woodlands are expected to be primarily dominated by mid-aged to mature deciduous tree species; however woodlands, treed plantations, or occasional coniferous woodlands may also be present within 120 m of the project location.	Yes, 35 woodlands are located within the project area.

Table 19. Corrections to Summary of Significant Wildlife Habitats Identified during the Records Review

Wildlife Habitat Type	Present Within 120m of Project Location	Present Within Project Location	Site Investigation Required (Y/N)	Status Based on Site Investigation
Seasonal Concentration Areas				
Winter Deer Yards	No	No	No	N/A
Colonial-Nesting Bird Breeding Habitat (swallows)	Unknown	Unknown	Yes	Not carried forward
Colonial-Nesting Bird Breeding Habitat (tree/shrub)	Unknown	Unknown	Yes	Not carried forward
Colonial-Nesting Bird Breeding Habitat (ground)	Unknown	Unknown	Yes	Not carried forward
Waterfowl Stopover and Staging Areas (terrestrial)	Unknown	Unknown	Yes	Not carried forward
Waterfowl Stopover and Staging Areas (aquatic)	Unknown	Unknown	Yes	Not carried forward
Waterfowl Nesting Habitat	Unknown	Unknown	Yes	Not carried forward
Shorebird Migratory Stopover Areas	N/A	N/A	No	Not carried forward
Landbird (including songbird) Migratory Stopover Areas	N/A	N/A	No	N/A
Raptor Winter Feeding and Roosting Areas	Unknown	Unknown	Yes	Carried forward
Wild Turkey Winter Range	N/A	N/A	No	N/A
Turkey Vulture Summer Roosting Areas	N/A	N/A	No	N/A
Reptile Hibernacula (snakes)	Unknown	Unknown	Yes	Carried forward as generalized habitat

Wildlife Habitat Type	Present Within 120m of Project Location	Present Within Project Location	Site Investigation Required (Y/N)	Status Based on Site Investigation
Bat Hibernacula	Unknown	Unknown	Yes	Not carried forward
Bat Maternity Colonies	Unknown	Unknown	Yes	Carried forward
Amphibian Breeding Habitat (woodland)	Unknown	Unknown	Yes	Carried forward
Amphibian Breeding Habitat (wetland)	Unknown	Unknown	Yes	Not carried forward
Migratory Butterfly Stopover Areas	N/A	N/A	No	N/A
Rare Vegetation Communities and Specialized Wildlife Habitat				
Alvars	Unknown	Unknown	Yes	Not carried forward
Tall-grass Prairies	Unknown	Unknown	Yes	Not carried forward
Savannahs	Unknown	Unknown	Yes	Not carried forward
Rare Forest Types	Unknown	Unknown	Yes	Not carried forward
Talus Slopes	Unknown	Unknown	Yes	Not carried forward
Rock Barrens	Unknown	Unknown	Yes	Not carried forward
Sand Barrens	Unknown	Unknown	Yes	Not carried forward
Great Lakes Dunes	N/A	N/A	No	N/A
Forests Providing High Diversity of Habitats	N/A	N/A	No	N/A
Old-growth or Mature Forest Stands	Unknown	Unknown	Yes	Not carried forward
Foraging Areas with Abundant Mast	N/A	N/A	No	N/A
Turtle Nesting Habitat	Unknown	Unknown	Yes	Not carried forward
Turtle-Over-wintering Habitat	Unknown	Unknown	Yes	Not carried forward
Woodland Raptor Nesting Habitat	Unknown	Unknown	Yes	Not carried forward
Osprey Nesting/Bald Eagle, Foraging, and Perching Habitat	Unknown	Unknown	Yes	Not carried forward
Moose Calving Areas	N/A	N/A	No	N/A
Moose Aquatic Feeding Zone	N/A	N/A	No	N/A
Mineral Licks	N/A	N/A	No	N/A
Mink, Otter, Marten, and Fisher Denning Sites	Unknown	Unknown	Yes (Mink only)	Not carried forward
Highly Diverse Areas	N/A	N/A	No	N/A
Cliffs	No	No	No	N/A
Seeps and Springs	Unknown	Unknown	Yes	Not carried forward
Amphibian Movement Corridors	Unknown	Unknown	Yes	Carried forward
Habitats of Species of Conservation Concern				

Wildlife Habitat Type	Present Within 120m of Project Location	Present Within Project Location	Site Investigation Required (Y/N)	Status Based on Site Investigation
Marsh Bird Breeding Habitat	Unknown	Unknown	Yes	Not carried forward
Woodland Area Sensitive Breeding Birds	Unknown	Unknown	Yes	Not carried forward
Open Country Breeding Bird Habitat	Unknown	Unknown	Yes	Not carried forward
Shrub/Early Successional Bird Breeding Habitat	Unknown	Unknown	Yes	Not carried forward
Terrestrial Crayfish	Unknown	Unknown	Yes	Not carried forward
Habitat for Special Concern Species	Unknown	Unknown	Yes	Carried forward
Habitat for S1-S3, and SH (Possibly Extirpated Historically) Species and Communities	Unknown	Unknown	Yes	Carried forward

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Appendix I
Site Investigation Field Notes and Maps

NATURAL RESOURCE SOLUTIONS INC

Modified ELC Community Description

Page 1 of 4

Site: 1231-Bornish
 Polygon: W00 001
 UTM: 17T 0439577 4776093
 Date: Aug. 19/11 Time: 10:15
 Surveyor(s): Charlotte M. Keillin P
 Weather: 23°C, sunny, 0% c.c. Wind 1, no precip.

Community Classification

Vegetation Type: F00M5-6 Dry-fresh sugar maple basswood deciduous forest
 Inclusion:
 Complex:

Polygon Description

System	Substrate	Topo Feature	Community
<input checked="" type="checkbox"/> Terrestrial	Organic	Lacustrine	Talus
<input type="checkbox"/> Wetland	<input checked="" type="checkbox"/> Mineral Soil	Riverine	Crevise/Cave
<input type="checkbox"/> Aquatic	Parent Min.	Bottomland	Alvar
	Acidic Bedrock	Terrace	Rockland
	Basic Bedrock	Valley Slope	Beach/Bar
<input checked="" type="checkbox"/> Natural	Carb. Bedrock	Tableland	Sand Dune
<input type="checkbox"/> Cultural		<input checked="" type="checkbox"/> Roll. Upland	Bluff
		Cliff	

Cover	Open Water	Plant Form
<input type="checkbox"/> Open	Shallow Water	Plankton
<input type="checkbox"/> Shrub	<input checked="" type="checkbox"/> Surficial Dep.	Submerged
<input checked="" type="checkbox"/> Treed	Bedrock	Floating-Lvd.
		Graminoid
		Forb
		Lichen
		Bryophyte
		<input checked="" type="checkbox"/> Deciduous
		Coniferous
		Mixed

Stand Description

Layer	HT	Cover	Species
* Super-canopy	-	-	-
1 Canopy	2	4	Sugar maple > basswood > w. elm > w. ash
2 Sub-canopy	3	3	Sugar maple > basswood > w. elm > w. ash
3 Understorey	4	2	Sugar maple > w. ash > w. elm
4 Groundcover	6	2	Sugar maple > poison ivy > w. ash

HT Codes: 1: >25m 2: 25-10m 3: 10-2m 4: 2-1m 5: 1-0.5m 6: 0.5-0.2m 7: <0.2m

Cover Codes: 0:none 1: 0-10% 2: 10-25 3: 25-60% 4: >60%

Size Class Analysis	A < 10	A 10-24	A 25-50	A > 50
Snags	0	0	0	0
Deadfall/Logs	0	0	0	0

Abundance Codes: N: None R: Rare O: Occasional A: Abundant

Community Age	Pioneer	Young	<input checked="" type="checkbox"/> Mid-age	Mature	Old Growth
---------------	---------	-------	---	--------	------------

NATURAL RESOURCE SOLUTIONS INC

Modified ELC Community Description

Page 2 of 4

PLANT SPECIES LIST

Site: 1231 Bornish
 Polygon: W00 001
 UTM: 17T 0439577 4776093
 Date: Aug. 19/11 Time: 10:15
 Surveyor(s): Charlotte M. Keillin P
 Weather: 23°C, sunny, 0% c.c., wind 1, no precip.

Layers: 1=canopy 2=sub-canopy 3=understorey 4=ground layer

Abundance Codes: R=rare O=occasional A=abundant D=dominant

Species	Layer				Sample	Species	Layer				Sample
	1	2	3	4			1	2	3	4	
Bur Oak						Poison ivy					O
W. Elm	O	O	O			Sensitive fern					R
Basswood	O	O				Jack-in-the-pulpit					R
Maple	R					False Solomon's seal					R
Eur. Buckhorn	R	R				San. lacewood					R
Sugar Maple	A	A	A	O		Virginia creeper					R
Am. Beech	O					Canada Anemone					O
Black Maple			R			Zigzag goldenrod					R
W. Ash	R	R	O	O		Xmas. carn.					R
Blue beech	R	R				Tritium sp.					R
Shank bark birch	R	R				Sedge sp.					R
Tranbling Aspen	R	R	R			grass sp.					R
						MOSS sp.					R
						fall goldenrod					R
						Queen Anne's lace					R
						Riverbank clover					R
						Teasel					R
						Dandelion					R

Wildlife and Other Notes

Canada Anemone

Wildlife Observation Form
NATURAL RESOURCE SOLUTIONS INC.

Page 3 of 4

Site: 1231 Barish
 Polygon: W00-001
 UTM: 17T 0439577 4776093 EW 214m
 Date: Aug 19, 2011 Time: 10:15
 Surveyor(s): CM, KNP
 Weather: 23°C, 0% cloud cover, wind speed 2 from SW

Species Observed					Check for Wildlife Habitat that may be associated with an observation				
TY	Species	EV	Notes	#	TY	Species	EV	Notes	#
B	Northern Flicker	VO		1					
B	Crows	VO		4					
B	Red-eyed vireo	VO		2					
H		OB	Pic 100-0976	1					
M	chipmunk	OB	-0977	1					

Faunal Type Codes (TY)

B=Bird M=Mammal H=Herpetofauna L=Lepidoptera F=Fish D=Dragonfly or Damselfly

Evidence Codes (EV)

Breeding Birds

SH- Suitable Habitat
 SM- Singing Male
 T- Territory
 A- Anxiently Behavior
 D- Courtship Display
 N- Nest Building
 P- Pair
 V- Visiting Nest
 DD- Distraction Display
 NE- Nest with Eggs
 AE-Adult entering nest
 NU- Used nest
 FY- Fledged Young
 FS- Food/Fecal Sac

Other Wildlife

OB- Observed
 DP- Distinctive Parts
 TK- Tracks
 VO- Vocalization
 HO- House/Den
 FE- Feeding Evidence
 CA- Carcass/Bones
 FY- Eggs or young
 SC- Scat
 SI- Other Signs (Specify)

Wildlife Habitat Form
NATURAL RESOURCE SOLUTIONS INC.

Page 4 of 4

Site: 1231 Barish
 Polygon: W00-001
 UTM: 17T 0439577 4776093 EW 214m
 Date: Aug 19, 2011 Time: 10:15
 Surveyor(s): CM, KNP
 Weather: 23°C, 0% cloud cover, wind speed 2 from SW

Wildlife Habitat (Check all that apply AND record UTM / mark on map)
 Habitats and Habitat Features are independent of wildlife observations

Habitat Type	Habitat Features
<input checked="" type="checkbox"/> Deciduous Forest	Birds
<input type="checkbox"/> Mixed Forest	<input type="checkbox"/> Spring Flooded Field
<input type="checkbox"/> Coniferous Forest	<input type="checkbox"/> Stick Nest (Raptors, Herons)
<input type="checkbox"/> Marsh	<input type="checkbox"/> Snag (Raptors, Herons)
<input checked="" type="checkbox"/> Swamp	<input type="checkbox"/> Tree Cavity Nest (Ducks)
<input type="checkbox"/> Bog	<input type="checkbox"/> Seep/Spring (Turkeys/Grouse)
<input type="checkbox"/> Fen	<input type="checkbox"/> Cliffs/Banks
<input type="checkbox"/> Water	Bats
(Shallow & Open)	<input type="checkbox"/> Cave Entrance
<input type="checkbox"/> Meadow	<input type="checkbox"/> Mine Shaft
<input type="checkbox"/> Tallgrass Prairie	<input checked="" type="checkbox"/> Snag (>20cm DBH)
<input type="checkbox"/> Thicket	Mink/Otter/Fisher/Marten
<input type="checkbox"/> Savannah	<input type="checkbox"/> Snag
<input type="checkbox"/> Woodland	<input type="checkbox"/> Burrow
<input type="checkbox"/> Valley	<input type="checkbox"/> Den
(Describe Below)	<input type="checkbox"/> Tree Cavity
<input type="checkbox"/> Headwater Area	<input type="checkbox"/> Fallen Log
(check for Seeps/Springs)	Deer/Moose
	<input type="checkbox"/> Seep/Spring
	<input type="checkbox"/> Mineral Lick
	Snakes
	<input type="checkbox"/> Burrow
	<input type="checkbox"/> Fallen Rotting Log
	<input type="checkbox"/> Old Well
	<input type="checkbox"/> Rock Pile/Stone Wall
	<input type="checkbox"/> Organics Pile
	<input checked="" type="checkbox"/> Log Pile
	<input type="checkbox"/> Karst
	<input type="checkbox"/> Broken/Fissured Rock
	<input type="checkbox"/> Old Foundation
	<input type="checkbox"/> Old Bridge/Concrete Culvert
	Amphibians and Turtles
	<input type="checkbox"/> Vernal Pool/Woodland Pond (Amphibian Breeding)
	<input type="checkbox"/> Sand (Turtle Nesting)
	<input type="checkbox"/> Fine/Sandy Gravel (Turtle Nesting)
	Invertebrates
	<input type="checkbox"/> Crayfish Chimney

For every Habitat Type or Habitat Feature, record UTM below (for each occurrence) or mark on map

Habitat Feature:	UTM	Description
Log piles -	several throughout	W00-001 pic # 100-0973
Snag 7.20m dbh	pic # 100-0974, -0975	30cm dbh, a tree trunk, not sign

Describe Valley (depth, geomorphological traits):

Additional Details:

veg: Jack-in-the-pulpit, false Solomon's seal, trillium, garlic mustard, PI, villy, cranes
 Trees: Am Beech, Basswood, sugar maple, Black cherry

map 1
- near turbine 1
NW corner

- no notice required

W00
001



Image © 2011 First Base Solutions
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©2010 Google

Imagery Date: 3/31/2006 2002

43°08'06.60" N 81°44'34.16" W elev 677 ft

Eye alt 1382 ft

NATURAL RESOURCE SOLUTIONS INC

Modified ELC Community Description

NATURAL RESOURCE SOLUTIONS INC

Modified ELC Community Description

Site: 1231 BORNISH
 Polygon: W00 002
 UTM: 17T 0442658 4772031
 Date: Aug 19/11 Time: 11:15
 Surveyor(s): Charlotte M. Kaitlin P
 Weather: 26°C, Sunny, 59% c.c., wind 2, no precip.

Site: 1231 BORNISH
 Polygon: W00 002
 UTM: 17T 0442658 4772031
 Date: Aug 19/11 Time: 11:15
 Surveyor(s): Charlotte M. Kaitlin P
 Weather: 26°C, Sunny, 59% c.c., wind 2, no precip.

Community Classification

Vegetation Type: W00MS-2 Fresh-moist c/m deciduous woodland
 Inclusion: A Duckweed floating-leaved shallow aquatic SAF-1-3
 Complex: B Duckweed floating-leaved shallow aquatic SAF-1-3
 C Red maple (+ Green Ash) Mineral deciduous swamp SWDM3-1

Layers: 1=canopy 2=sub-canopy 3=understorey 4=ground layer

Abundance Codes: R=rare O=occasional A=abundant D=dominant

Polygon Description

System	Substrate	Topo Feature	Community
<input checked="" type="checkbox"/> Terrestrial	Organic	Lacustrine	Lake
<input checked="" type="checkbox"/> Wetland	<input checked="" type="checkbox"/> Mineral Soil	Riverine	Pond
<input type="checkbox"/> Aquatic	Parent Min.	<input checked="" type="checkbox"/> Bottomland	River
	Acidic Bedrock	Terrace	Stream
	Basic Bedrock	Valley Slope	Marsh
History	Carb. Bedrock	Tableland	<input checked="" type="checkbox"/> Swamp
<input checked="" type="checkbox"/> Natural		Roll. Upland	Fen
<input type="checkbox"/> Cultural		Cliff	Bog
	Site		
Cover	Open Water	Plant Form	
<input type="checkbox"/> Open	Shallow Water	Plankton	Coniferous
<input type="checkbox"/> Shrub	<input checked="" type="checkbox"/> Surficial Dep.	Submerged	Mixed
<input checked="" type="checkbox"/> Treed	Bedrock	Floating-Lvd.	
		Graminoid	<input checked="" type="checkbox"/> Deciduous

Species	Layer				Sample
	1	2	3	4	
Common apple	R				
Shagbark hickory	O	O	R	R	
W. ash	R	R	O	O	
Basswood	O	O	O	O	
Willow sp.	R				
Eur. Buckthorn	R	R			
Am. beech	R	R	R		
W. elm	O	O	R		
Sugar maple	R	R			
Barren Strawberry					O
Herb Robert					R
Tall goldenrod					O
Wild red raspberry				R	
Carex sp.					O
Choke cherry				R	
maple					R
Virginia creeper					O
violet sp.					R
Swamp milkweed					R
Spotted cowweed					R
poison ivy					O
goldenrod sp.					O
Rhubarb					R

Stand Description

Layer	HT	Cover	Species
* Super-canopy	-	-	-
1 Canopy	2	3	w. elm > shagbark hickory = basswood
2 Sub-canopy	3	2	w. elm > basswood > shagbark hickory
3 Understorey	4	2	w. ash > basswood > w. elm > raspberry
4 Groundcover	6	4	w. ash > basswood > strawberries > carex sp. > poison ivy

HT Codes: 1: >25m 2: 25-10m 3: 10-2m 4: 2-1m 5: 1-0.5m 6: 0.5-0.2m 7: <0.2m

Cover Codes: 0: none 1: 0-10% 2: 10-25 3: 25-60% 4: >60%

Size Class Analysis	O < 10	R 10-24	O 25-50	R > 50
Snags	O < 10	O 10-24	R 25-50	R > 50
Deadfall/Logs	O < 10	R 10-24	R 25-50	R > 50

Abundance Codes: N: None R: Rare O: Occasional A: Abundant

Community Age: Pioneer Young Mid-age Mature Old Growth

Wildlife and Other Notes

- small pond inclusion, < 0.5 metre max. deep with duckweed cover

Wildlife Observation Form
NATURAL RESOURCE SOLUTIONS INC.

Site: 1231- Barnish
 Polygon: WOD-002
 UTM: 17T 0442658 4772031 Elev: 249m
 Date: 19 Aug, 2011 Time: 1115
 Surveyor(s): CM, KNP
 Weather: 26°C, 0% cloud cover, windspeed 2 from SW

Species Observed					Check for Wildlife Habitat that may be associated with an observation				
TY	Species	EV	Notes	#	TY	Species	EV	Notes	#
L	Cabbag Wink	OB	near edge	2					
L	Pearl Creek	OB		2					
B	Parula	VO		1					
H	Song Sparrow	NO		1					
M	dear	TK	set of tracks	1					
M	raccoon	TK	set of tracks	1					
H	Green Frog	OB		1					

- Faunal Type Codes (TY)**
 B=Bird M=Mammal H=Herpetofauna L=Lepidoptera F=Fish D=Dragonfly or Damselfly
- Evidence Codes (EV)**
Breeding Birds
 SH- Suitable Habitat
 SM- Singing Male
 T- Territory
 A- Anxiety Behavior
 D- Courtship Display
 N- Nest Building
 P- Pair
 V- Visiting Nest
 DD- Distraction Display
 NE- Nest with Eggs
 AE-Adult entering nest
 NU- Used nest
 FY- Fledged Young
 FS- Food/Fecal Sac
- Other Wildlife**
 OB- Observed
 DP- Distinctive Parts
 TK- Tracks
 VO- Vocalization
 HO- House/Den
 FE- Feeding Evidence
 CA- Carcass/Bones
 FY- Eggs or young
 SC- Scat
 SI- Other Signs (Specify)

Wildlife Habitat Form
NATURAL RESOURCE SOLUTIONS INC.

Site: 1231- Barnish
 Polygon: WOD-002
 UTM: 17T 0442658 4772031 Elev: 249m
 Date: 19 Aug, 2011 Time: 1115
 Surveyor(s): CM, KNP
 Weather: 26°C, 0% cloud cover, windspeed 2 from SW

Wildlife Habitat (Check all that apply AND record UTM / mark on map)
Habitats and Habitat Features are independent of wildlife observations

Habitat Type	Habitat Features	
<input type="checkbox"/> Deciduous Forest	Birds	Snakes
<input type="checkbox"/> Mixed Forest	<input type="checkbox"/> Spring Flooded Field	<input type="checkbox"/> Burrow
<input type="checkbox"/> Coniferous Forest	<input type="checkbox"/> Stick Nest (Raptors, Herons)	<input checked="" type="checkbox"/> Fallen Rotting Log
<input type="checkbox"/> Marsh	<input type="checkbox"/> Snag (Raptors, Herons)	<input type="checkbox"/> Old Well
<input type="checkbox"/> Swamp	<input type="checkbox"/> Tree Cavity Nest (Ducks)	<input type="checkbox"/> Rock Pile/Stone Wall
<input type="checkbox"/> Bog	<input type="checkbox"/> Seep/Spring (Turkeys/Grouse)	<input type="checkbox"/> Organics Pile
<input type="checkbox"/> Fen	<input type="checkbox"/> Cliffs/Banks	<input type="checkbox"/> Log Pile
<input type="checkbox"/> Water	Bats	<input type="checkbox"/> Karst
<input type="checkbox"/> (Shallow & Open)	<input type="checkbox"/> Cave Entrance	<input type="checkbox"/> Broken/Fissured Rock
<input type="checkbox"/> Meadow	<input type="checkbox"/> Mine Shaft	<input type="checkbox"/> Old Foundation
<input type="checkbox"/> Tallgrass Prairie	<input checked="" type="checkbox"/> Snag (>20cm DBH)	<input type="checkbox"/> Old Bridge/Concrete Culvert
<input type="checkbox"/> Thicket	Mink/Otter/Fisher/Marten	Amphibians and Turtles
<input type="checkbox"/> Savannah	<input type="checkbox"/> Snag	<input type="checkbox"/> Vernal Pool/Woodland Pond (Amphibian Breeding)
<input type="checkbox"/> Woodland	<input type="checkbox"/> Burrow	<input type="checkbox"/> Sand (Turtle Nesting)
<input type="checkbox"/> Valley	<input type="checkbox"/> Den	<input type="checkbox"/> Fine/Sandy Gravel (Turtle Nesting)
<input type="checkbox"/> (Describe Below)	<input type="checkbox"/> Tree Cavity	
<input type="checkbox"/> Headwater Area <small>(check for Seeps/Springs)</small>	<input type="checkbox"/> Fallen Log	Invertebrates
	Deer/Moose	<input type="checkbox"/> Crayfish Chimney
	<input type="checkbox"/> Seep/Spring	
	<input type="checkbox"/> Mineral Lick	

For every Habitat Type or Habitat Feature, record UTM below (for each occurrence) or mark on map

Habitat Feature:	UTM	Description
Open water pond	17T 0442661 4771950	15x100-0978 ~ 12m x 6m
Rock pile	17T 0442661 4771979	11.5m x 1m
Snag >20dbh	Several around site	none significant habitat
Fallen rotting logs	scattered throughout	none significant habitat

Describe Valley (depth, geomorphological traits):

Additional Details:

map 4 ✓
south of
turbine
38

No
notice
required

WOD
002

Wetland
Evaluation
Map

1231
WOD-002



Image © 2011 First Base Solutions
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© 2010 Google

Imagery Date: 3/31/2006 2002

43°05'55.37" N 81°42'22.69" W elev 818 ft

Eye alt 2218 ft



NATURAL RESOURCE SOLUTIONS INC.

Aquatic, Terrestrial and Wetland Biologists

Wetland Vegetation Communities

Project Name: <u>Bornish</u>		Project #: <u>1231</u>	
Observer(s): <u>PWD,KNP</u>			
Date: <u>Sept. 29, 2011</u>		Time (24h): <u>15:00</u>	
Field #: <u>WOD 002 A</u>	Weather: Precipitation: <u>Light</u>	Temp (°C): <u>10</u>	
Map Code:	Wind Speed & Direction: <u>5/W</u>	Cloud %: <u>100</u>	
Wetland Type: <u>Open Water</u>	Site Type: <u>Isolated</u>	Dominant Form: <u>gc</u>	
% Open Water: <u>20</u>	ELC Code: <u>SAF-1-3</u>		
Photos: <u>0590, 0591</u>	OWES code: <u>gc m</u>		
Forms % (Circle those ≥25%)	Species (dominant species, secondary species, present species)		
h <u>Willow sp.</u>			
c			
dc, dh, ds			
ts <u>Buttonbush 5%</u>	<u>Silky Dogwood 5%</u>		
ls			
g <u>Swamp Spar Tick 25%</u>	<u>Cocklebur 5%</u> <u>Sp. Water Hemlock 1%</u> <u>Bull-bearing W.H. 1%</u> <u>Clearweed 2%</u>		
ne <u>reed canary grass 90</u>			
be			
re			
ff <u>Lesser Duckweed 15%</u>			
f			
su			
m			
Soil type: <u>cl</u>		Organic <input type="checkbox"/>	Mineral <input checked="" type="checkbox"/>
Rare Species (Local, Regional, Provincial):	Wildlife Notes: <u>Raccoon FE</u> <u>Leopard Frog</u> <u>Tadpole</u> <u>Beaver den (SW edge)</u>		
SAR observations must also include a specific UTM location.			
Forms: h=deciduous trees; c=coniferous trees; dh, dc, ds=dead trees/shrubs; ts=tall shrubs; ls=low shrubs; gc=ground cover; ne=narrow emergents; be=broad emergents; f=floating plants; ff=free-floating plants; su=submerged plants; m=mosses			
Wetland Type: S=swamp; M=marsh; B=bog; F=fen			
Site Type: L=lacustrine; P=palustrine; R=riverine; IS=isolated			
Soil type: cl=clay/loam; sl=silt/loam; l=limestone; s=sand; hm=humic/mesic; f=fibric; g=granite Organic=>60cm depth over mineral (>10cm over bedrock) Mineral=<60cm depth over mineral			



NATURAL RESOURCE SOLUTIONS INC.
Aquatic, Terrestrial and Wetland Biologists

Wetland Vegetation Communities

Project Name: Bornish Project #: 1231

Observer(s): PWD, KNP

Date: Sept. 30, 2011 Time (24h): 15:50

Field #: W0D002B Weather: Precipitation: heavy Temp (°C): 10

Map Code: Wind Speed & Direction: 5 W Cloud %: 100

Wetland Type: marsh Site Type: Palustrine Dominant Form: U

% Open Water: 25 ELC Code: SAF-1-3

Photos: 0607 OWFS Code: U

Forms % (Circle those >25%) Species (dominant species, secondary species, present species)

h gr. ash 10%

c -

dc, dh, ds -

ts red osier dogwood 5%, slender willow 15%

ls -

gc lady's thumb 15%, cocklebur

ne rice cut grass 15%

be -

re hardstem bulrush 3%

ff lesser duckweed 10%

f -

su -

m -

Soil type: cl Organic Mineral

Rare Species (Local, Regional, Provincial):

Wildlife Notes:

SAR observations must also include a specific UTM location.

Forms: h=deciduous trees; c=coniferous trees; dh, dc, ds=dead trees/shrubs; ts=tall shrubs; ls=low shrubs; gc=ground cover; ne=narrow emergents; be=broad emergents; f=floating plants; ff=free-floating plants; su=submerged plants; m=mosses

Wetland Type: S=swamp; M=marsh; B=bog; F=fen

Site Type: L=lacustrine; P=palustrine; R=riverine; IS=isolated

Soil type: cl=clay/loam; sl=silt/loam; l=limestone; s=sand; hm=humic/mesic; f=fibric; g=granite Organic=>60cm depth over mineral (>10cm over bedrock) Mineral= <60cm depth over mineral

U



NATURAL RESOURCE SOLUTIONS INC.

Aquatic, Terrestrial and Wetland Biologists

Wetland Vegetation Communities

Project Name: Barnish Project #: 1231

Observer(s): PWD, KNP

Date: Sept 30, 2011 Time (24h): 15:50

Field #: WGD 002c Weather: Precipitation: Heavy Temp (°C): 10

Map Code: Wind Speed & Direction: S/W Cloud %: 100

Wetland Type: Swamp Site Type: Isolated Dominant Form: h

% Open Water: 0 ELC Code: SCODM3-1

Photos: 0608 OWES CODE: h5

Forms % (Circle those ≥25%) Species (dominant species, secondary species, present species)

(h) Red Maple 75% Gr Ash 10%

c

dc, dh, ds

ts

ls Buttonbush 1%

gc Maple sp. 10% Sora Fern 5% Clewweed 5% Cocklebur 10% Devil Beg. Ticks 5% Reed Canary 1%

ne

be

re

ff

f

su

m

Soil type: cl Organic Mineral

Rare Species (Local, Regional, Provincial): Wildlife Notes:

SAR observations must also include a specific UTM location.

Forms: h=deciduous trees; c=coniferous trees; dh, dc, ds=dead trees/shrubs; ts=tall shrubs; ls=low shrubs; gc=ground cover; ne=narrow emergents; be=broad emergents; f=floating plants; ff=free-floating plants; su=submerged plants; m=mosses

Wetland Type: S=swamp; M=marsh; B=bog; F=fen

Site Type: L=lacustrine; P=palustrine; R=riverine; IS=isolated

Soil type: cl=clay/loam; sl=silt/loam; l=limestone; s=sand; hm=humic/mesic; f=fibric; g=granite Organic= >60cm depth over mineral (>10cm over bedrock) Mineral= <60cm depth over mineral

Site: 1231 Barnish
 Polygon: WOD-003
 UTM: 17T 0447146 4772768
 Date: 24 Aug 2011 Time: 14:40
 Surveyor(s): KNP, JRW
 Weather: 26°C, 15% cloud cover, windspeed 5 from SW

Community Classification

Vegetation Type: Dry-Fresh Sugar maple deciduous woodland WODM4-3
 Inclusion: Silver maple Mineral deciduous Swamp. SWDM3-2
 Complex:

Polygon Description

System: Terrestrial, Wetland, Aquatic
 Substrate: Organic, Mineral Soil, Parent Min., Acidic Bedrock, Basic Bedrock, Carb. Bedrock
 Topo Feature: Lacustrine, Riverine, Bottomland, Terrace, Valley Slope, Tableland, Roll. Upland, Cliff
 Community: Lake, Barren, Pond, Meadow, River, Prairie, Stream, Thicket, Marsh, Savannah, Swamp, Woodland, Fen, Forest, Bog, Plantation
 Site: Open Water, Shallow Water, Surficial Dep., Bedrock
 Plant Form: Plankton, Forb, Coniferous, Submerged, Lichen, Mixed, Floating-Lvd., Bryophyte, Graminoid, Deciduous

Stand Description

Layer	HT	Cover	Species
* Super-canopy			
1 Canopy	2	3	Sugar Maple > White Ash > Am Beech
2 Sub-canopy	3	3	Sugar maple > white Ash > Am. Beech > Hop Hornbeam
3 Understorey	4/5	4	Beech = dogwood > Sugar maple > aster sp
4 Groundcover	6/7	3	Sugar maple = white ash = aster sp. > Virginia creeper

HT Codes: 1:>25m 2:25-10m 3:10-2m 4:2-1m 5:1-0.5m 6:0.5-0.2m 7:<0.2m
 Cover Codes: 0:none 1:0-10% 2:10-25 3:25-60% 4:>60%

Size Class Analysis	< 10	A 10-24	O 25-50	> 50
Snags	R < 10	R 10-24	N 25-50	N > 50
Deadfall/Logs	R < 10	R 10-24	R 25-50	N > 50

Abundance Codes: N: None R: Rare O: Occasional A: Abundant

Community Age: Pioneer Young Mid-age Mature Old Growth

PLANT SPECIES LIST

Site: 1231 Barnish
 Polygon: WOD-003
 UTM: 17T 0447146 4772768
 Date: 24 Aug 2011 Time: 14:40
 Surveyor(s): JRW, KNP
 Weather: 26°C, 15% cloud cover, windspeed 5 from SW

Layers: 1=canopy 2=sub-canopy 3=understorey 4=ground layer

Abundance Codes: R=rare O=occasional A=abundant D=dominant

Species	Layer				Sample	Species	Layer				Sample
	1	2	3	4			1	2	3	4	
White Ash	O	O	O	O		false Solomon's seal				R	
Am Beech	O	O	O	R		Sedge sp.				O	
Hop Hornbeam		O	R			wild strawberry				O	
sugar maple	O	O	O	O		poison ivy				R	
Basswood		R				Solidago sp.				O	
Shagbark hickory	R	R				Yellow Avens				R	
silver maple	O					Bittersweet ^{night shade}				O	
Black cherry	R					aster sp.				O	
						herb robert				R	
						Wood sorrel				R	
						Blood root				R	
						garlic mustard				R	
						cat's foot				R	
						Curled dock				R	
						green amaranth				R	
						sensitive fern				R	
						Nettle sp.				R	
dogwood sp.			O			Virginia creeper				O	
						ladies thumb				R	
						Enchanter's nightshade				R	

Other Notes (Landowner Contact, General Notes, etc.)

enchanter's nightshade

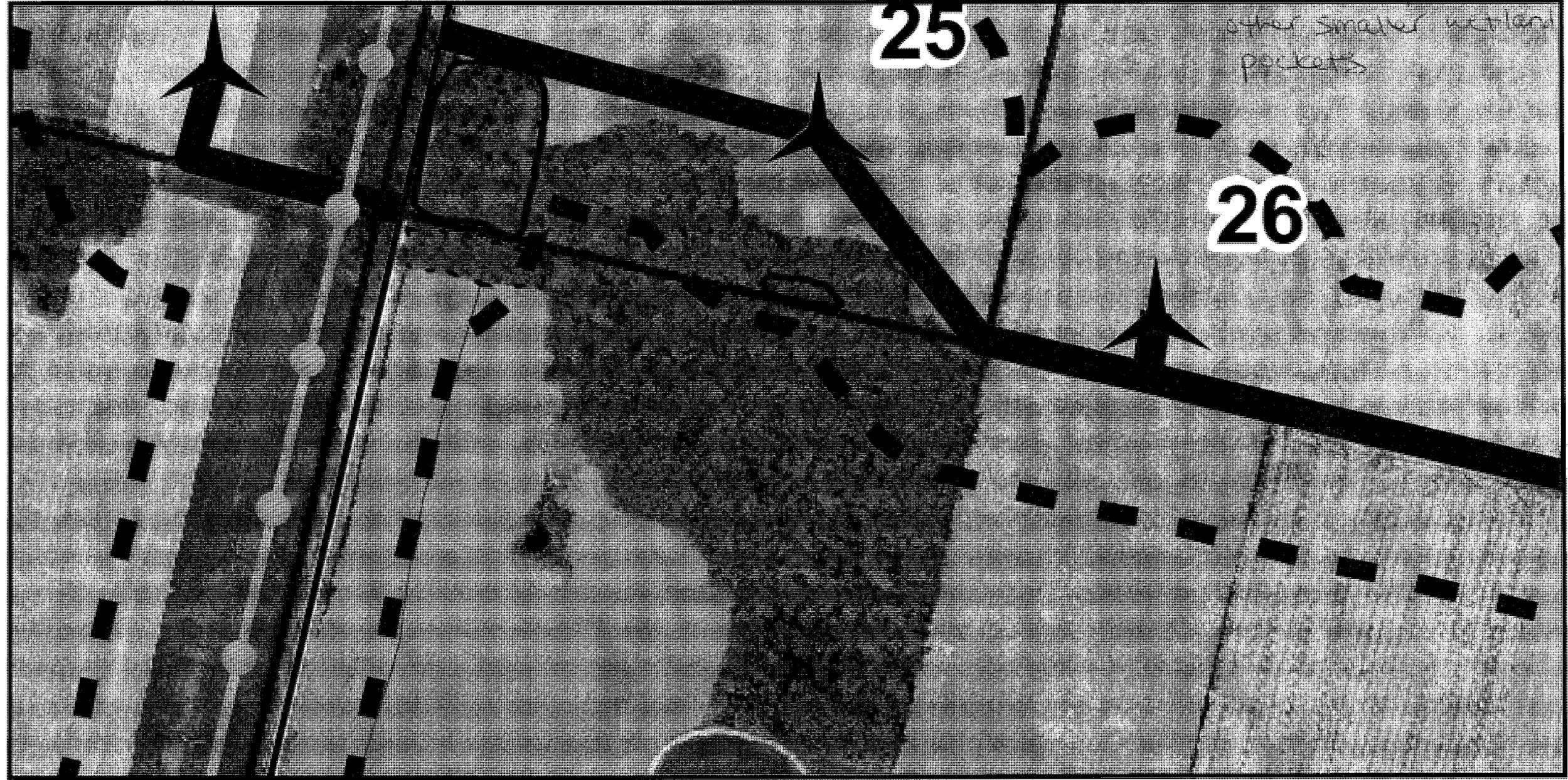
1231 Bornish
WOD-003

Wetland evaluation map.

Sept 30, 2011

No inlets or outlets; wetland occurring in depression in the landscape with

other smaller wetland pockets



No property access to this area but it is visible from the road and is representative of the same wetland community.



NATURAL RESOURCE SOLUTIONS INC.

Aquatic, Terrestrial and Wetland Biologists

Wetland Vegetation Communities

Project Name: Barnish Project #: 1231

Observer(s): PWD, KNP

Date: Sept 30, 2011 Time (24h): 14:00

Field #: W0D-003 Weather: Precipitation: Heavy Temp (°C): 10

Map Code: Wind Speed & Direction: S/W Cloud %: 100

Wetland Type: Swamp Site Type: Palustrine Dominant Form: h

% Open Water: 0 ELC Code: SWDM 3-2

Photos: OWES code: h5

Forms % (Circle those >25%) Species (dominant species, secondary species, present species)

h Silver Maple 30% Green Ash 10%

c —

dc, dh, ds —

ts —

ls Buttanbush <1%

gc Vig. Creeper 10% Sens. Fern 5% Royal Fern 1% Cleanweed 10%

ne —

be —

re —

ff —

f —

su —

m —

Soil type: cl Organic Mineral

Rare Species (Local, Regional, Provincial): Wildlife Notes:

SAR observations must also include a specific UTM location.

Forms: h=deciduous trees; c=coniferous trees; dh, dc, ds=dead trees/shrubs; ts=tall shrubs; ls=low shrubs; gc=ground cover; ne=narrow emergents; be=broad emergents; f=floating plants; ff=free-floating plants; su=submerged plants; m=mosses

Wetland Type: S=swamp; M=marsh; B=bog; F=fen

Site Type: L=lacustrine; P=palustrine; R=riverine; IS=isolated

Soil type: cl=clay/loam; sl=silt/loam; l=limestone; s=sand; hm=humic/mesic; f=fibric; g=granite Organic= >60cm depth over mineral (>10cm over bedrock) Mineral= <60cm depth over mineral

Wildlife Observation Form
NATURAL RESOURCE SOLUTIONS INC.

Site: Bornish 111E 1231 / 1230 Adelaide, WOD-048
 Polygon: WOD004
 UTM: 17T 442379 4775637
 Date: 25/08/11 Time: 9:20
 Surveyor(s): JRW, KNP
 Weather: Sunny, 20°C, CC = 60%, wind = 4

Species Observed					Check for Wildlife Habitat that may be associated with an observation				
TY	Species	EV	Notes	#	TY	Species	EV	Notes	#
B	Mourning Dove	VO		2					
M	Mouse sp	OB		1					
B	Gabfinch	VO		2					
L	Butterfly sp	OB		1					
B	Am. Robin	OB		1					
B	Great reedbird	VO		1					
L	Salisbury white	OB		1					
M	Deer	TK		1					
H	green frog	VO		1					
M	Ground S	VO	SWD	1					
B	E Woodswallow	VO		1					
B	Cedar Waxwing	OB		3					
B	Rainbow lorikeet	VO		1					

Faunal Type Codes (TY)

B=Bird M=Mammal H=Herpetofauna L=Lepidoptera F=Fish D=Dragonfly or Damselfly

Evidence Codes (EV)

Breeding Birds

- SH- Suitable Habitat
- SM- Singing Male
- T- Territory
- A- Anxious Behavior
- D- Courtship Display
- N- Nest Building
- P- Pair
- V- Visiting Nest
- DD- Distraction Display
- NE- Nest with Eggs
- AE- Adult entering nest
- NU- Used nest
- FY- Fledged Young
- FS- Food/Fecal Sac

Other Wildlife

- OB- Observed
- DP- Distinctive Parts
- TK- Tracks
- VO- Vocalization
- HO- House/Den
- FE- Feeding Evidence
- CA- Carcass/Bones
- FY- Eggs or young
- SC- Scat
- SI- Other Signs (Specify)

Wildlife Habitat Form
NATURAL RESOURCE SOLUTIONS INC.

Site: 1231 Bornish / 1230 Adelaide, WOD-048
 Polygon: WOD 004
 UTM: 17T 442379 4775637
 Date: 25/08/11 Time: 9:20
 Surveyor(s): JRW, KNP
 Weather: Sunny, 20°C, CC = 60%, Wind 4

Wildlife Habitat (Check all that apply AND record UTM / mark on map)

Habitats and Habitat Features are independent of wildlife observations

Habitat Type	Habitat Features
<input checked="" type="checkbox"/> Deciduous Forest	<input type="checkbox"/> Birds
<input type="checkbox"/> Mixed Forest	<input type="checkbox"/> Spring Flooded Field
<input type="checkbox"/> Coniferous Forest	<input type="checkbox"/> Stick Nest (Raptors, Herons)
<input type="checkbox"/> Marsh	<input type="checkbox"/> Snag (Raptors, Herons)
<input checked="" type="checkbox"/> Swamp	<input type="checkbox"/> Tree Cavity Nest (Ducks)
<input type="checkbox"/> Bog	<input type="checkbox"/> Seep/Spring (Turkeys/Grouse)
<input type="checkbox"/> Fen	<input type="checkbox"/> Cliffs/Banks
<input type="checkbox"/> Water	<input type="checkbox"/> Bats
<input type="checkbox"/> (Shallow & Open)	<input type="checkbox"/> Cave Entrance
<input type="checkbox"/> Meadow	<input type="checkbox"/> Mine Shaft
<input type="checkbox"/> Tallgrass Prairie	<input checked="" type="checkbox"/> Snag (>20cm DBH)
<input type="checkbox"/> Thicket	<input type="checkbox"/> Mink/Otter/Fisher/Marten
<input type="checkbox"/> Savannah	<input type="checkbox"/> Snag
<input type="checkbox"/> Woodland	<input type="checkbox"/> Burrow
<input checked="" type="checkbox"/> Valley	<input type="checkbox"/> Den
<input type="checkbox"/> (Describe Below)	<input type="checkbox"/> Tree Cavity
<input type="checkbox"/> Headwater Area	<input type="checkbox"/> Fallen Log
<input type="checkbox"/> (check for Seeps/Springs)	<input type="checkbox"/> Deer/Moose
<input type="checkbox"/> Valley w/	<input type="checkbox"/> Seep/Spring
<input type="checkbox"/> rice swarming	<input type="checkbox"/> Mineral Lick
<input type="checkbox"/> through	
<input type="checkbox"/> riparian swamp.	

For every Habitat Type or Habitat Feature, record UTM below (for each occurrence) or mark on map

Habitat Feature:	UTM	Description
Rock pile	17T 0442103 4776237	large cement rock/brick pile - to be investigated CM
bat snag	210m east of rock pile	- good snag in riparian & cooling bank
riparian area	17T 0442131 4776141	- moist/riparian swamp
Swamp	17T 0442288 4775941	- trunks (rice vernal pool) dried up
		- snag & cooling bank, rice to riparian field.

Describe Valley (depth, geomorphological traits):

Additional Details:

100-1296 = vernal pool
1297 = creek

**NATURAL RESOURCE SOLUTIONS INC.**

Aquatic, Terrestrial and Wetland Biologists

Wetland Vegetation Communities

Project Name: <u>Barnish / 1220 Adelaide</u> Project #: <u>1231</u>	
Observer(s): <u>PWD, KNP</u> <u>WOP-048</u>	
Date: <u>Sept 30, 2011</u>	Time (24h): <u>09:45</u>
Field #: <u>WOD004</u>	Weather: Precipitation: <u>Light</u> Temp (°C): <u>16</u>
Map Code: <u>—</u>	Wind Speed & Direction: <u>4/W</u> Cloud %: <u>100</u>
Wetland Type: <u>NOT WETLAND</u>	Site Type: <u>Riverine</u> Dominant Form: <u>Treed</u>
% Open Water: <u>0</u>	ELC Code: <u>WODM5</u>
Photos: <u>0596 - 0599</u>	
Forms % (Circle those ≥25%)	Species (dominant species, secondary species, present species)
<u>h</u>	<u>White Oak 5%</u> <u>Pinus strobus 15%</u> <u>Sugar Maple 60%</u> <u>Juglans fr. Hickory 17%</u> <u>Green Ash 10%</u> <u>Am. Beech 5%</u>
<u>c</u>	
<u>dc, dh, ds</u>	<u>White Elm 1%</u>
<u>ts</u>	<u>E. Budsucker 5%</u>
<u>ls</u>	<u>E. Budsucker 1%</u>
<u>gc</u>	<u>Panicum 15%</u> <u>Med. Robert 5%</u> <u>Cornus/Stimberry 5%</u>
<u>ne</u>	
<u>be</u>	
<u>re</u>	
<u>ff</u>	
<u>f</u>	
<u>su</u>	
<u>m</u>	
Soil type:	Organic <input type="checkbox"/> Mineral <input checked="" type="checkbox"/>
Rare Species (Local, Regional, Provincial):	Wildlife Notes: <u>Blue Jay</u>
SAR observations must also include a specific UTM location.	
Forms: h=deciduous trees; c=coniferous trees; dh, dc, ds=dead trees/shrubs; ts=tall shrubs; ls=low shrubs; gc=ground cover; ne=narrow emergents; be=broad emergents; f=floating plants; ff=free-floating plants; su=submerged plants; m=mosses	
Wetland Type: S=swamp; M=marsh; B=bog; F=fen	
Site Type: L=lacustrine; P=palustrine; R=riverine; IS=isolated	
Soil type: cl=clay/loam; sl=silt/loam; l=limestone; s=sand; hm=humic/mesic; f=fibric; g=granite Organic=>60cm depth over mineral (>10cm over bedrock) Mineral=<60cm depth over mineral	

map 5
-near
turbine
4

1485
Coldstream R.
between
Haskett Rd
& Kerwood

24 hr
notice

Brian
Masschelein
514 294-6325



WOD
-004

WOD
-004



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Imagery Date: 3/31/2006 2002

43°07'56.05" N 81°42'26.84" W elev 674 ft

Eye alt 3429 ft