

Appendix C

Field Forms

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE: <i>Green breeze</i>	POLYGON: <i>(4)</i>	
	SURVEYOR(S): <i>ART</i>	DATE: <i>July 26, 10</i>	UTME: <i>/</i>
	START: <i>/</i> END: <i>/</i>	UTMZ: <i>/</i>	UTMN: <i>/</i>

POLYGON DESCRIPTION

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
<input checked="" type="checkbox"/> TERRESTRIAL <input type="checkbox"/> WETLAND <input type="checkbox"/> AQUATIC	<input type="checkbox"/> ORGANIC <input checked="" type="checkbox"/> MINERAL SOIL <input type="checkbox"/> PARENT MIN. <input type="checkbox"/> ACIDIC BEDRK. <input type="checkbox"/> BASIC BEDRK. <input type="checkbox"/> CARB. BEDRK.	<input type="checkbox"/> LACUSTRINE <input type="checkbox"/> RIVERINE <input type="checkbox"/> BOTTOMLAND <input type="checkbox"/> TERRACE <input type="checkbox"/> VALLEY SLOPE <input checked="" type="checkbox"/> TABLELAND <input type="checkbox"/> ROLL UPLAND <input type="checkbox"/> CLIFF <input type="checkbox"/> TALUS <input type="checkbox"/> CREVICE / CAVE <input type="checkbox"/> ALVAR <input type="checkbox"/> ROCKLAND <input type="checkbox"/> BEACH / BAR <input type="checkbox"/> SAND DUNE <input type="checkbox"/> BLUFF	<input checked="" type="checkbox"/> NATURAL <input type="checkbox"/> CULTURAL	<input type="checkbox"/> PLANKTON <input type="checkbox"/> SUBMERGED <input type="checkbox"/> FLOATING-LVD <input type="checkbox"/> GRAMINOID <input type="checkbox"/> FORB <input type="checkbox"/> LICHEN <input type="checkbox"/> BRYOPHYTE <input checked="" type="checkbox"/> DECIDUOUS <input type="checkbox"/> CONIFEROUS <input type="checkbox"/> MIXED	<input type="checkbox"/> LAKE <input type="checkbox"/> POND <input type="checkbox"/> RIVER <input type="checkbox"/> STREAM <input type="checkbox"/> MARSH <input type="checkbox"/> SWAMP <input type="checkbox"/> FEN <input type="checkbox"/> BOG <input type="checkbox"/> BARREN <input type="checkbox"/> MEADOW <input type="checkbox"/> PRAIRIE <input type="checkbox"/> THICKET <input type="checkbox"/> SAVANNAH <input type="checkbox"/> WOODLAND <input type="checkbox"/> FOREST <input type="checkbox"/> PLANTATION
SITE			COVER		
<input type="checkbox"/> OPEN WATER <input type="checkbox"/> SHALLOW WATER <input type="checkbox"/> SURFICIAL DEP. <input type="checkbox"/> BEDROCK			<input type="checkbox"/> OPEN <input type="checkbox"/> SHRUB <input checked="" type="checkbox"/> TREED		

STAND DESCRIPTION:

LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1 CANOPY	2	4	<i>FRAAMER > ACESALU > FAGGRAN > QUEMACR</i>
2 SUB-CANOPY	3	3	<i>FRAAMER > ACESALU > ULMAMER</i>
3 UNDERSTOREY	4	3	<i>PRUJLRO</i>
4 GRD. LAYER	5	3	<i>RHURADI > En. night shade</i>

HT CODES: 1 = >25 m 2 = 10<HT. 25 m 3 = 2<HT. 10 m 4 = 1<HT. 2 m 5 = 0.5<HT. 1 m 6 = 0.2<HT. 0.5 m 7 = HT<0.2 m
CVR CODES: 0 = NONE 1 = 0% < CVR, 10% 2 = 10 < CVR, 25% 3 = 25 < CVR, 60% 4 = CVR > 60%

STAND COMPOSITION: BA:

SIZE CLASS ANALYSIS:

0	< 10	A	10 - 24	0	25 - 50	R	> 50
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STANDING SNAGS:

0	< 10	0	10 - 24	R	25 - 50	N	> 50
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DEADFALL / LOGS:

A	< 10	0	10 - 24	0	25 - 50	R	> 50
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ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE:

	PIONEER	YOUNG	MID-AGE	X	MATURE		OLD GROWTH
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SOIL ANALYSIS:

TEXTURE: DEPTH TO MOTTLES / GLEY *g =* *G =*
MOISTURE: DEPTH OF ORGANICS: (cm)
HOMOGENEOUS / VARIABLE DEPTH TO BEDROCK: (cm)

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS: CODE: */*
COMMUNITY SERIES: CODE: */*
ECOSITE: CODE: */*
VEGETATION TYPE: CODE: *FOD4-2*
white oak deciduous forest
INCLUSION CODE:
COMPLEX CODE:

Notes:

- evidence of shallow sand padding
- very similar to (2) with more sugar maple and less hickory.

ELC PLANT SPECIES LIST	SITE: <i>Green breeze</i>
	POLYGON: <i>(4)</i>
	DATE: <i>July 26, 10</i>
	SURVEYOR(S): <i>ART</i>

LAYERS: 1 = CANOPY > 10m 2 = SUB-CANOPY 3 = UNDERSTOREY 4 = GROUND (GRD.) LAYER

ABUNDANCE CODES: R = RARE O = OCCASIONAL A = ABUNDANT D = DOMINANT

SPECIES CODE	LAYER				COLL.	SPECIES CODE	LAYER				COLL.
	1	2	3	4			1	2	3	4	
<i>FRAAMER</i>	A					<i>ASTICLI</i>				R	
<i>FAGGRAN</i>	0					<i>Tall goldenrod</i>				0	
<i>ULMAMER</i>	0					<i>W. carrot</i>				0	
<i>QUEMACR</i>	0					<i>Co. burdock</i>				0	
<i>ACESALU</i>	0					<i>Teasel</i>				0	
<i>TLLAMER</i>	0					<i>Head-ail</i>				0	
<i>PRUJLRO</i>	0					<i>Virginia knotweed</i>				A	
<i>CARPUPT</i>	0					<i>Agrimony</i>				0	
						<i>En. nightshade</i>				A	
						<i>Wh. aster</i>				0	
						<i>Jack-in-the-pulpit</i>				0	
						<i>Carex rostrata</i>				0	
						<i>Gar. mustard</i>				0	
						<i>Wood sorrel</i>				0	
						<i>May apple</i>				0	
						<i>Wh. lily of the valley</i>				0	
						<i>Dutchman's pipe</i>				0	
						<i>Serotinus</i>				0	
						<i>W. geranium</i>				0	
						<i>Regel's</i>				R	
<i>Eng. hawthorn</i>	0										
<i>RHACATII</i>	0										
<i>LINBENZ</i>	0										
<i>Cockspur</i>	0										
<i>PARINSE</i>	0										
<i>RUBIDAE</i>	0										
<i>RHURADI</i>	A										
<i>PRUJLRO</i>	A										



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Hedgerow Survey Form

Project Number 160960567 Project Name: Green brook

Date / Time: July 26, 2010 11:30-16:00 Field Personnel: A. Taylor

Weather Conditions:	Temp: <u>29°C</u>	Wind: <u>2</u>	Cloud: <u>5%</u>	PPT: <u>/</u>	PPT in last 24 hrs: <u>/</u>
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Hedgerow #: A1

	HT	WD	CVR	Composition:
Canopy	<u>1-2</u>	<u>1m</u>	<u>20%</u>	<u>Buckhorn, ash - dead / dying due to strays</u>
Understorey	<u>.5</u>	<u>1m</u>	<u>80%</u>	<u>Grassy veg, bare patches.</u>
Notes: <u>Trees cleared and hedgerow spray w herbicide. Forcible attempt to</u> <u>4 fresh stump present</u> <u>remove this hedgerow</u>				

Hedgerow #: H2a - close to woodlot

	HT	WD	CVR	Composition:
Canopy	<u>6-7m</u>	<u>4m</u>	<u>35%</u>	<u>walnut, QUERCUS, ULMUS</u>
Understorey	<u>2m</u>	<u>2m</u>	<u>15%</u>	<u>red raspberry, CORACE</u>
Notes: <u>Dense grassy ground cover</u>				

Hedgerow #: H2b - further from woodlot

	HT	WD	CVR	Composition:
Canopy	<u>6m</u>	<u>4m</u>	<u>5%</u>	<u>FRAXINUS - single tree</u>
Understorey	<u>1.5m</u>	<u>2m</u>	<u>95%</u>	<u>Grassy veg w weedy forbs</u>
Notes:				

Hedgerow #: H3

	HT	WD	CVR	Composition:
Canopy	<u>1-2m</u>	<u>2m</u>	<u>90%</u>	<u>walnut saplings, CORACE</u>
Understorey	<u>1.5m</u>	<u>2m</u>	<u>85%</u>	<u>Grasses, goldenrods, grape.</u>
Notes:				

Hedgerow #: H4

	HT	WD	CVR	Composition:
Canopy	<u>1-2</u>	<u>2m</u>	<u>5%</u>	<u>RHACATH</u>
Understorey	<u>.5</u>	<u>2m</u>	<u>95%</u>	<u>Grassy veg.</u>
Notes: <u>- Parcel of cedar parts, buried concrete drain found to</u> <u>north of study area.</u>				

Hedgerow #: H5 / on each side of road

	HT	WD	CVR	Composition:
Canopy	<u>1-2m</u>	<u>5m</u>	<u>5%</u>	<u>RHACATH</u>
Understorey	<u>.2</u>	<u>5m</u>	<u>95%</u>	<u>mown grass</u>
Notes: <u>Roadside vegetation</u>				

Quality Control: This form is complete (✓) & legible (✓).

Signature: [Signature]
(Field Personnel)

Signature: [Signature]
(Project Manager)



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Hedgerow Survey Form

Project Number 160960567 Project Name: Greenbreeze
Date / Time: July 26, 2010 11:30-16:00 Field Personnel: A. Taylor

Weather Conditions:	Temp: <u>29°C</u>	Wind: <u>2</u>	Cloud: <u>50%</u>	PPT: <u> </u>	PPT in last 24 hrs: <u> </u>
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Hedgerow #: H6 on each side of road

	HT	WD	CVR	Composition:
Canopy	<u>.2</u>	<u>5m</u>	<u>95%</u>	<u>mown grass.</u>
Understorey				
Notes: <u>Road side vegetation</u>				

Hedgerow #: H7

	HT	WD	CVR	Composition:
Canopy	<u>5m</u>	<u>4m</u>	<u>3%</u>	<u>ULMAMPER</u>
Understorey	<u>2m</u>	<u>2m</u>	<u>10%</u>	<u>Hawthorns / apple and BERRBERE</u>
Notes: <u>Grassy ground vegetation</u>				

Hedgerow #: H8

	HT	WD	CVR	Composition:
Canopy	<u>1-2</u>	<u>1m</u>	<u>3%</u>	<u>RHACATA</u>
Understorey	<u>2</u>	<u>1m</u>	<u>90%</u>	<u>Grasses</u>
Notes: <u>few cedar fence posts</u>				

Hedgerow #:

	HT	WD	CVR	Composition:
Canopy				
Understorey				
Notes:				

Hedgerow #:

	HT	WD	CVR	Composition:
Canopy				
Understorey				
Notes:				

Hedgerow #:

	HT	WD	CVR	Composition:
Canopy				
Understorey				
Notes:				

Quality Control: This form is complete (✓) & legible (✓).

Signature: [Signature]
(Field Personnel)

Signature: [Signature]
(Project Manager)



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Wildlife Habitat and Incidental Wildlife Observation Form

Project Number 160960567 Project Name: Greenbreeze
Date / Time: July 26, 2010 11:30-16:00 Field Personnel: A. Taylor

Weather Conditions:	Temp: <u>29°C</u>	Wind: <u>2</u>	Cloud: <u>5%</u>	PPT: <u>/</u>	PPT in last 24 hrs: <u>/</u>
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SWD3-3 / FOD4-2 woodlot.
Wildlife Habitat
List specific microhabitats present (snags, logs, hibernacula, vernal pools etc.) and what community they were encountered in (use ELC code where applicable).
↳ but heavy rain within last 3 days

- Ponds of shallow (10cm) standing water in SWD3-3, but not tadpoles present
- evidence of shallow canal pooling in FOD4-2
↳ likely habitat of early breeding amphibians
- few standing snags. Limited potential for bat maternity colonies
↳ most cleared out by logging

Incidental Species Observations
List species and type of observation:
(TK = track, SC = scat, VO = vocalization, OB = observed, DP = distinctive parts, FE = feeding evidence, CA = carcass, FY = eggs, nest, HO = house/den, SI = other sign)

Birds	Mammals	Herps	Butterflies / Dragonflies	Other
<i>i.e. AMRO/VO</i> SOSP INBU AMGO KILL } in field SPBA } next to } woodlot NohA WBAU TUVU - oaked				

Quality Control: This form is complete (✓) & legible (✓).
Signature: A. Taylor (Field Personnel) Signature: [Signature] (Project Manager)



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Wildlife Habitat and Incidental Wildlife Observation Form

Project Number 160960567 Project Name: Green breeze

Date / Time: July 26, 2010 11:30-16:00 Field Personnel: A. Taylor

Weather Conditions:	Temp: <u>29°C</u>	Wind: <u>2</u>	Cloud: <u>50%</u>	PPT: <u>/</u>	PPT in last 24 hrs: <u>/</u>
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FOD 4-2 / FOD 7-4 woodlot

Wildlife Habitat

List specific microhabitats present (snags, logs, hibernacula, vernal pools etc.) and what community they were encountered in (use ELC code where applicable).

- Evidence of vernal pooling in FOD 4-2; likely breeding habitat for early breeding amphibians
- Few standing snags; most old trees cleared out by logging. Little potential for maturity roosts.

Incidental Species Observations

List species and type of observation:

(TK = track, SC = scat, VO = vocalization, OB = observed, DP = distinctive parts, FE = feeding evidence, CA = carcass, FY = eggs, nest, HO = house/den, SI = other sign)

Birds	Mammals	Herps	Butterflies / Dragonflies	Other
<i>i.e. AMRO/VO</i> HOWR EAWP AMGO BCJA BCCH SOSP IALBO GRCA TRES SPSA - in field		GRIF-VO		

Quality Control: This form is complete (✓) & legible (✓).

Signature: A. Taylor
(Field Personnel)

Signature: [Signature]
(Project Manager)



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Wildlife Habitat and Incidental Wildlife Observation Form

Project Number 160960567 Project Name: Green breeze
Date / Time: July 26, 2010 11:30-16:00 Field Personnel: A. Taylor

Weather Conditions:	Temp: <u>29°C</u>	Wind: <u>2</u>	Cloud: <u>5%</u>	PPT: <u>/</u>	PPT in last 24 hrs: <u>/</u>
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FOD9-4

Wildlife Habitat

List specific microhabitats present (snags, logs, hibernacula, vernal pools etc.) and what community they were encountered in (use ELC code where applicable).

- No evidence of standing water; likely no amphibian breeding habitat
- Managed woodlot - so few standing snags; little potential for potential bat maternity roosts

Incidental Species Observations

List species and type of observation:

(TK = track, SC = scat, VO = vocalization, OB = observed, DP = distinctive parts, FE = feeding evidence, CA = carcass, FY = eggs, nest, HO = house/den, SI = other sign)

Birds	Mammals	Herps	Butterflies / Dragonflies	Other
<i>i.e. AMRO/VO</i> SPJA - in field GRCA AMCO SOSP CCFL ENBU				

Quality Control: This form is complete (✓) & legible (✓).

Signature: [Signature]
(Field Personnel)

Signature: [Signature]
(Project Manager)

Page 3 of 3

REV: May, 07 Form 006



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Photography Log

Project Number 160960567 Project Name: Green breeze
Date / Time: July 26, 2010 11:30-16:00 Field Personnel: ART

Weather Conditions:	Temp: <u>29°C</u>	Wind: <u>2</u>	Cloud: <u>5%</u>	PPT: <u>/</u>	PPT in last 24 hrs: <u>/</u>
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Photo #:	Time:	Photo Description and Comments
1-2	11:05	Southcentral (SC) FOD 4-2
3-6	11:15	SWD 3-3
7	11:20	ISC-FOD 4-2
8-10	11:30	Edge shots of FOD 4-2 / SWD 3-3 woodlot
11	11:35	Interior of SC - FOD 4-2
12	11:40	Dried vernal pool in SC - FOD 4-2
13-15	11:50	H 2a
16	11:55	H 2b
17-19	12:20	FOD 7-4
20	12:30	Eastern (E) - FOD 4-2
21	12:35	Logging in FOD 7-4
22-25	12:45	areas of vernal pooling in E - FOD 4-2
26	12:55	Edge of E - FOD 4-2
27-29	13:00	H 3
30	13:00	Edge of FOD 7-4
31-32	13:30	Edge of FOD 9-4
33-35	13:45	Interior of FOD 9-4
36-37	13:50	H 1
38	13:55	FOD 7-4
39-40	14:00	H 1
41-43	14:40	H 7
44-47	14:55	H 4 - including pieces of potential concrete hibernoc
48-49	15:05	H 8
50-53	15:15	H 6
54-56	15:25	H 5

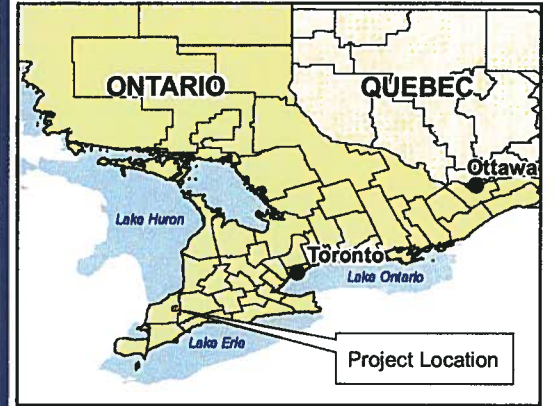
Quality Control: This form is complete (✓) & legible (✓).
Signature: anderson
(Field Personnel)

Signature: [Signature]
(Project Manager)



Legend

- Study Area
- Proposed Wind Turbine
- Road
- Road Setback (60m)
- Existing Transmission Line
- Underground Collector Line/Access Road
- Watercourse
- Waterbody
- Waterbody Watercourse Setback (30m)
- Wooded Area
- Wooded Area Setback (120m)



Notes

1. Coordinate System: UTM Zone 17 NAD 83.
2. Data Sources: Ontario Ministry of Natural Resources © Queens Printer Ontario, 2009; © Ontario Gas and Salt Resources Library, 2010.
3. Image Sources: © First Base Solutions, 2010 - Imagery Date: Spring, 2006.

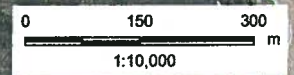


Stantec July 2010
160960567

Client/Project
ZEPHYR FARMS LIMITED
BROOKE-ALVINSTON WIND FARM

Figure No.
1.0

Title
PROJECT LOCATION & STUDY AREA



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