I	CONIFERS	1	2	3	4	5	6	I	TREES and SHRUBS	1	2	3	4	5	6	I	GRAMINOIDS	1	2	3	4	5	6
	Abies balsamea							+	Rosa multiflora								Agrostis gigantea						
	Juniperus communis								Rosa								Agrostis stolonifera						
	Juniperus virginiana								Rubus allegheniensis		X						Agropyron repens						
	Larix laricina								Rubus idaeus								Alopecuris						
	Picea abies								Rubus occidentalis	X		X					Bromus inermis	X		X	X		
	Picea glauca								Rubus odoratus								Calamagrostis canadensis						
	Pinus resinosa								Rubus pubescens								Carex arctata						
	Pinus strobus								Salix alba								Carex aurea						
	Pinus sylvestris								Salix amygdaloides								Carex bebbii						
	Thuja occidentalis	X		X					Salix bebbiana		X						Carex blanda						
	Tsuga canadensis							+	Salix discolor								Carex gracillima						
									Salix eriocephala								Carex granularis						
									Salix exigua								Carex hystericina						
									Salix lucida		X						Carex pensylvanica						
									Salix petiolaris								Carex radiata						
	TREES and SHRUBS							+	Salix purpurea								Carex retrorsa						
	Acer negundo								Salix x rubens								Carex stipata						
	Acer rubrum							+	Salix								Carex stricta						
	Acer saccharinum								Sambucus canadensis	X	X						Carex vulpinoidea		X				
	Acer saccharum					X			Sambucus racemosa								Carex comosa		X				
	Acer spicatum								Sorbus aucuparia								Carex						
	Alnus rugosa								Spiraea alba								Carex						
	Amelanchier								Syringa vulgaris								Carex						
	Berberis thunbergii							+	Tilia americana								Carex						
	Betula alleghaniensis								Ulmus americana	X				X			Carex						
	Betula papyrifera								Ulmus								Carex						
	Carpinus caroliniana								Vaccinium								Carex						
	Carya cordiformis								Viburnum lentago								Carex						
	Celastrus scandens								Viburnum opulus								Cyperus						
	Cornus alternifolia								Viburnum								Cyperus						
	Cornus amomum								Vitis riparia	X				X			Dactylis glomerata	X		X	X		
	Cornus rugosa																Danthonia spicata						
	Cornus stolonifera	X	X	X					Elaeagnus angustifolia	X		X	X				Echinochloa crus-galli						
	Corylus cornuta																Eleocharis erythropoda						
	Crataegus monogyna																Eleocharis						
	Crataegus punctata																Elymus virginicus						
	Crataegus sp.			X													Elymus repens					X	
	Crataegus																Festuca arundinacea						
	Diervilla lonicera																Glyceria striata						
	Fagus grandifolia					X											Glyceria						
	Fraxinus americana	X															Juncus dudleyi						
	Fraxinus nigra								FERNS								Juncus effusus		X				
	Fraxinus pennsylvanica								Adiantum pedatum								Juncus tenuis						
	Ilex verticillata								Athyrium filix-femina								Juncus						
	Juglans cinerea								Botrychium multifidum								Juncus						
	Juglans nigra								Botrychium virginianum								Leersia oryzoides		X				
	Lonicera morrowi								Cystopteris bulbifera								Muhlenbergia						
	Lonicera tatarica								Dryopteris carthusiana								Oryzopsis asperifolia						
	Lonicera								Dryopteris cristata								Panicum						
	Malus pumila	X		X	X				Dryopteris marginalis								Panicum						
	Ostrya virginiana					X			Dryopteris								Phalaris arundinacea		X				
	Parthenocissus inserta					X			Equisetum arvense								Phleum pratense	X		X			
	Populus balsamifera								Equisetum hyemale								Phragmites australis						
	Populus grandidentata								Equisetum variegatum								Poa compressus						
	Populus tremuloides					X			Equisetum pratense		X						Poa pratensis						
	Populus								Gymnocarpium dryopteris								Poa palustris		X				
	Prunus pensylvanica								Lycopodium digitatum								Scirpus atrovirens						
	Prunus serotina								Lycopodium obscurum								Scirpus cyperinus						
	Prunus virginiana			X		X			Lycopodium								Scirpus validus		X				
	Prunus cerasus	X		X		X			Lycopodium								Scirpus						
	Quercus macrocarpa								Matteucia struthiopteris								Scirpus						
	Quercus rubra								Onoclea sensibilis								Setaria						
	Quercus								Osmunda cinnamomia								Sparganium						
	Rhamnus cathartica	X				X			Osmunda regalis								Typha angustifolia						
	Rhus radicans								Polystichum acrostichoides								Typha latifolia		X				
	Rhus typhina								Pteridium aquilinum								Typha Xglauca						
	Ribes americana								Thelypteris palustris														
	Ribes cynosbati																						
	Ribes x rubrum																						
	Robinia pseudo-acacia																						
	Ribes triste					X																	

ELC WILDLIFE	SITE: BLW 480	
	POLYGON: 1-3 (all)	
	DATE: Aug. 17/11	
	SURVEYORS: SAM	
	START TIME: 1036h	END TIME: 1341h

TEMP (°C): 26	CLOUD (10th): 7	WIND: 1-2	PRECIPITATION: nil
CONDITIONS: light overcast, warm			

POTENTIAL WILDLIFE HABITAT:

	VERNAL POOLS		SNAGS
	HIBERNACULA		FALLEN LOGS

SPECIES LIST:

TY	SP. CODE	EV	NOTES	#	TY	SP. CODE	EV	NOTES	#
B	SOSP								
B	TRES								
B	BARS								
B	RTHU								
B	EAKI								
B	AMCR								
B	BOWR								
B	GRCA								

FAUNAL TYPE CODES (TY):

B = BIRD M = MAMMAL H = HERPETOFAUNA L = LEPIDOPTERA F = FISH O = OTHER

EVIDENCE CODES (EV):

BREEDING BIRD - POSSIBLE:

SH = SUITABLE HABITAT SM = SINGING MALE

BREEDING BIRD - PROBABLE:

T = TERRITORY D = DISPLAY P = PAIR
A = ANXIETY BEHAVIOUR N = NEST BUILDING V = VISITING NEST

BREEDING BIRD - CONFIRMED:

DD = DISTRACTION NU = USED NEST FY = FLEDGED YOUNG
NE = EGGS NY = YOUNG FS = FOOD/FECAL SACK
AE = NEST ENTRY

OTHER WILDLIFE EVIDENCE:

OB = OBSERVED VO = VOCALIZATION CA = CARCASS
DP = DISTINCTIVE PARTS HO = HOUSE/DEN FY = EGGS/YOUNG
TK = TRACKS FE = FEEDING EVIDENCI SC = SCAT
SI = OTHER SIGNS (specify)

Bluewater Feature: 480_BLW1524 (GE 16)
480_BLW1499

(Properties that contain Features with a 125m from Collection lines and 171.5m from Turbines)

0 25 50 100 Meters

August 29, 2017

Roads
Access/Collection Line
Collection Buffer (125m)
Turbine Buffer (171.5m)
Collection/Feature Intersect
Turbine Buffer/Feature Intersect
Property Fabric
Bluewater Wind Energy Centre

PRE-SURVEY COMMENT: ~~complete as GE 16~~

ELC Community Description and Classification	Site: 480_BLW1524		Polygon:	
	Surveyor(s): KMWSTN	Date: Sept 1/11	Time start: 17:30 finish:	
	UTMZ:	UTMZ: 447650	UTMN: 4813950	

Polygon Description

System	Substrate	Topographic Feature	Plant Form	Community
☒ Terrestrial	☐ Organic	☐ Lacustrine	☐ Plankton	☐ Lake
☐ Wetland	☐ Mineral Soil	☐ Riverine	☐ Submerged	☐ Pond
☐ Aquatic	☐ Parent Min.	☐ Bottomland	☐ Floating-LVD.	☐ River
Site	☐ Acidic Bedrk	☐ Terrace	☐ Graminoid	☐ Stream
☐ Open Water	☐ Basic Bedrk	☐ Valley Slope	☐ Forb	☐ Marsh
☐ Shallow Water	☐ Carb. Bedrk	☐ Tableland	☐ Lichen	☐ Swamp
☒ Surficial Dep.		☒ Roll. Upland	☐ Bryophyte	☐ Fen
☐ Bedrock		☐ Cliff	☒ Deciduous	☐ Bog
History		☐ Talus	☐ Coniferous	☐ Barren
☒ Natural		☐ Crevice/Cave	☐ Mixed	☐ Meadow
☒ Cultural		☐ Alvar		☐ Prairie
Cover		☐ Rockland		☐ Thicket
☐ Open		☐ Beach / Bar		☐ Savannah
☐ Shrub		☐ Sand Dune		☐ Woodland
☒ Treed		☐ Bluff		☒ Forest
				☐ Plantation

Stand Description

Layer	HT	CVR	Species in Order of Decreasing Dominance (up to 4 sp) (>> Much Greater Than; > Greater Than; = About Equal To)
1	2	4	Acesach - Prulavu - Prusero - Fraamer
2	3	3	Acesach > Malpum - Crataegus
3	2	2	Prusero Corale
4	6	2	Corfile - Alnetu Prusero

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

Stand Composition:	Size Class Analysis:	<10	10-24	25-50	>50
	Standing Snags:	<10	10-24	25-50	>50
BA:	Deadfall / Logs:	<10	10-24	25-50	>50

Size Class Analysis: A (<10), A (10-24), O (25-50), ☐ (>50)
Standing Snags: A (<10), A (10-24), ☐ (25-50), ☐ (>50)
Deadfall / Logs: A (<10), O (10-24), ☐ (25-50), ☐ (>50)

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

Com. Age:	☐ Pioneer	☐ Young	☒ Mid-Age	☐ Mature	☐ Old Growth

Ecosite:		Code:	
Vegetation Type:		Code:	FOD5-7
Inclusion:	SANDBAR willow inclusion	Code:	CUT1e
Complex:		Code:	

Community Profile Diagram/Comments

Disturbed Forest, perhaps history of livestock grazing
Rather young co-dominant Sugar Maple - Cherry - Ash mostly small (< 15cm dbh) occasional to trees

Notes:

Tree Tally by Species

Prism Factor	2

Species	Tally 1	Tally 2	Tally 3	Tally 4	Total	Rel. Avg.
Total						100
Basal Area (BA)						
Dead						

Soils Ontario and ELC Soils Description

						Summary
Site Metrics	Pit/Auger #					
	UTM	Zone				Moisture Regime
		Easting				
		Northing				
	Slope	Position				
		Aspect	West			Drainage
		Percent	3			
		Slope Length				
Depth to...	Mottles					Effective Texture (Indicate below)
	Gley					
	Water Table					
	Carbonates					
	Bedrock					

Soil Horizon Description										
	1	Depth from zero	20	% CF		% CF		% CF		% CF
		Texture	dark brown loam							
	2	Depth from zero		% CF		% CF		% CF		% CF
		Texture								
	3	Depth from zero		% CF		% CF		% CF		% CF
		Texture								
	4	Depth from zero		% CF		% CF		% CF		% CF
		Texture								
		% Surface Stone/Rock								
	Moisture Regime									
	Drainage									

VASCULAR PLANT CHECKSHEET

Location: Blue water 480
Date: Sept 1 /2011
Observer: J. Kamstra
Job Number:

DICOT HERBS	1	2	3	4	5	6
Achillea millefolia						
Actaea pachypoda						
Actaea rubra						
Agalinus						
Agrimonia gryposepala	X					
Alliaria petiolaris	X					
Amaranthus retroflexus						
Ambrosia artemissifolia						
Amphicarpaea bracteata						
Anaphalis margaritacea						
Anemone						
Anemone canadensis						
Anemone virginiana						
Antennaria neglecta						
Apocynum androsaemifolium						
Apocynum cannabinum						
Aquilegia canadensis						
Aralia nudicaulis						
Arctium minus	X					
Artemisia						
Asarum canadense						
Asclepias incarnata						
Asclepias syriaca						
Aster						
Aster cordifolius						
Aster ericoides						
Aster lanceolatus						
Aster lateriflorus	X					
Aster macrophyllus						
Aster novae-angliae						
Aster puniceus						
Barbarea vulgaris						
Bidens cernua						
Bidens frondosa						
Boehmeria cylindrica						
Caltha palustris						
Calystegia sepium						
Cardamine diphylla						
Cardamine						
Caulophyllum thalictroides	X					
Cerastium fontanum						
Ceratophyllum demersum						
Chelidonium majus						
Chenopodium album						
Chrysanth. leucanthemum						
Cichorium intybus						
Cicuta						
Circaea lutetiana	X					
Cirsium arvense						
Cirsium vulgare						
Clematis virginiana						
Clintonia borealis						
Conyza canadensis						
Coronilla varia						
Cynanchum rossicum						
Cynoglossum officinale						
Daucus carota						
Desmodium canadense						
Dianthus armeria						
Dipsacus fullonum						
Echinosystis lobata						
Echium vulgare						
Epilobium						
Epilobium ciliatum						
Epilobium hirsutum						
Epilobium parviflorum						
Euthorbia vulgar	X					

	1	2	3	4	5	6
Erigeron annuus						
Erigeron philadelphicus						
Erigeron strigosus						
Erysimum chieranthoides						
Eupatorium maculatum						
Eupatorium perfoliatum						
Eupatorium rugosum						
Euphorbia						
Euthamia graminifolia						
Fragaria virginiana	X					
Fragaria vesca	X					
Galeopsis tetrahit						
Galium						
Galium						
Galium palustre						
Galium triflorum						
Geranium maculatum						
Geranium robertianum	X					
Geum aleppicum						
Geum canadense	X					
Geum						
Glecoma hederacea						
Hepatica acutiloba						
Hesperis matronalis						
Hieracium aurantiacum						
Hieracium caespitosum						
Hieracium						
Hydrophyllum virginianum	X					
Hypericum perforatum						
Impatiens capensis						
Inula helenium						
Lactuca						
Laportea canadensis						
Lapsana communis						
Leonurus cardiaca						
Lepidium						
Linaria vulgaris						
Ultrospermum officinale						
Lobelia						
Lobelia inflata						
Lotus corniculatus						
Lycopus americanus						
Lycopus						
Lysimachia ciliata						
Lythrum salicaria						
Medicago lupulina						
Medicago sativum						
Melilotus alba						
Mentha arvensis						
Mimulus ringens						
Mimulus ringens						
Mitella diphylla						
Monarda fistulosa						
Myosotis						
Nasturtium officinale						
Nepeta cataria						
Nuphar variegatum						
Nymphaea odorata						
Oenothera biennis						
Osmorhiza						
Oxalis stricta						
Phyrma leptostachya						
Physalis heterophylla						

	1	2	3	4	5	6
Plantago lanceolata						
Plantago major						
Plantago rugelii						
Podophyllum peltatum						
Polygonum						
Polygonum						
Polygonum						
Polygonum lapathifolium						
Polygonum persicaria						
Potentilla						
Potentilla norvegica						
Potentilla recta						
Prenanthes alba						
Prunella vulgaris						
Pyrola elliptica						
Ranunculus						
Ranunculus abortivus						
Ranunculus acris						
Rudbeckia hirta						
Rumex acetosella						
Rumex crispus						
Rumex						
Sanguinaria canadensis	X					
Sanicula marilandica						
Saponaria officinalis						
Satureja vulgaris						
Scutellaria galericulata						
Silene vulgaris						
Sium suave						
Solanum dulcamara	X					
Solidago						
Solidago altissima						
Solidago caesia						
Solidago canadensis						
Solidago flexicaulis						
Solidago gigantea						
Solidago nemoralis						
Solidago rugosa						
Sonchus arvensis						
Sonchus asper						
Stellaria						
Taraxacum vulgare						
Taraxacum officinale						
Thalictrum dioicum						
Thalictrum pubescens						
Tiarella cordifolia						
Tragopogon pratensis						
Trientalis borealis						
Trifolium						
Trifolium pratense						
Trifolium repens						
Tussilago farfara						
Urtica dioica						
Utricularia vulgaris						
Verbascum thapsus						
Verbena hastata						
Verbena urticifolia						
Veronica						
Veronica officinalis						
Vicia cracca						
Vicia tetrasperma						
Viola						
Viola						
Viola pubescens			X			
Viola sororia			X			

MONOCOT HERBS	1	2	3	4	5	6
Alisma plantago-aquatica						
Allium tricoccum						
Allium						
Arisaema triphyllum						
Asparagus officinalis						
Calla palustris						
Clintonia borealis						
Convallaria majus						
Cypripedium calceolus						
Elodea canadensis						
Epipactis helleborine						
Erythronium americanum						
Hemerocallis fulva						
Iris versicolor						
Lemna minor						
Lemna trisulca						
Lilium						
Maianthemum canadense						
Maianthemum racemosa						
Maianthemum stellata						
Platanthera						
Pontederia cordata						
Polygonatum pubescens						
Potamogeton crispus						
Potamogeton pectinatus						
Potamogeton						
Potamogeton						
Potamogeton						
Sagittaria latifolia						
Sisyrinchim montanum						
Smilax herbacea						
Spiranthes cernua						
Spirodela polyrhiza						
Streptopus roseus						
Trillium erectum						
Trillium grandiflorum						
Uvularia grandiflora						

SITE LOCATIONS

1: Woodlot 480 on BLW 1524
2:
3:
4:
5:
6:

I	CONIFERS	1	2	3	4	5	6
	Abies balsamea						
	Juniperus communis						
	Juniperus virginiana						
	Larix laricina						
	Picea abies						
	Picea glauca						
	Pinus resinosa						
	Pinus strobus						
	Pinus sylvestris						
	Thuja occidentalis						
	Tsuga canadensis						
	TREES and SHRUBS						
	Acer negundo						
	Acer rubrum						
	Acer saccharinum						
	Acer saccharum	X					
	Acer spicatum						
	Alnus rugosa						
	Amelanchier						
	Berberis thunbergii						
	Betula alleghaniensis						
	Betula papyrifera						
	Carpinus caroliniana						
	Carya cordiformis						
	Celastrus scandens						
	Cornus alternifolia	X					
	Cornus amomum						
	Cornus rugosa						
	Cornus stolonifera	X					
	Corylus cornuta						
	Crataegus monogyna	X					
	Crataegus punctata						
	Crataegus sp.	X					
	Crataegus macrosperma	X					
	Diervilla lonicera						
	Fagus grandifolia	X					
	Fraxinus americana	X					
	Fraxinus nigra						
	Fraxinus pennsylvanica						
	Ilex verticillata						
	Juglans cinerea						
	Juglans nigra	X					
	Lonicera morrowi						
	Lonicera tatarica						
	Lonicera						
	Malus pumila	X					
	Ostrya virginiana						
	Parthenocissus inserta						
	Populus balsamifera						
	Populus grandidentata						
	Populus tremuloides						
	Populus deltoides	X					
	Prunus pensylvanica						
	Prunus serotina	X					
	Prunus virginiana	X					
	Prunus avium	X					
	Quercus macrocarpa						
	Quercus rubra						
	Quercus						
	Rhamnus cathartica	X					
	Rhus radicans	X					
	Rhus typhina						
	Ribes americana						
	Ribes cynosbati	X					
	~~Ribes-x-rubrum~~						
	Robinia pseudo-acacia						

I	TREES and SHRUBS	1	2	3	4	5	6
+	Rosa multiflora	X					
	Rosa						
	Rubus allegheniensis						
	Rubus idaeus	X					
	Rubus occidentalis						
	Rubus odoratus						
	Rubus pubescens						
	Salix alba						
	Salix amygdaloides	X					
	Salix bebbiana						
+	Salix discolor						
	Salix eriocephala						
	Salix exigua	X					
	Salix lucida						
	Salix petiolaris						
+	Salix purpurea						
	Salix x rubens						
+	Salix						
	Sambucus canadensis						
	Sambucus racemosa						
	Sorbus aucuparia						
	Spiraea alba						
	Syringa vulgaris						
+	Tilia americana	X					
	Ulmus americana	X					
	Ulmus						
	Vaccinium						
	Viburnum lentago						
	Viburnum opulus						
	Viburnum						
	Vitis riparia	X					
	FERNS						
	Adiantum pedatum						
	Athyrium filix-femina						
	Botrychium multifidum						
	Botrychium virginianum						
	Cystopteris bulbifera						
	Dryopteris carthusiana						
	Dryopteris cristata						
	Dryopteris marginalis						
	Dryopteris						
	Equisetum arvense						
	Equisetum hyemale						
	Equisetum variegatum						
	Equisetum						
	Gymnocarpium dryoperis						
	Lycopodium digitatum						
	Lycopodium obscurum						
	Lycopodium						
	Lycopodium						
	Matteucia struthiopteris						
	Onoclea sensiblis						
	Osmunda cinnamonia						
	Osmunda regalis						
	Polystichum acrostichoides						
	Pteridium aquilinum						
	Thelypteris palustris						

I	GRAMINOIDS	1	2	3	4	5	6
	Agrostis gigantea						
	Agrostis stolonifera						
	Agropyron repens						
	Alopecuris						
	Bromus inermis						
	Calamagrostis canadensis						
	Carex arctata						
	Carex aurea						
	Carex bebbii						
	Carex blanda						
	Carex gracillima	X					
	Carex granularis						
	Carex hystericina						
	Carex pensylvanica						
	Carex radiata						
	Carex retrorsa						
	Carex stipata						
	Carex stricta						
	Carex vulpinoidea						
	Carex platyphyll	X					
	Carex						
	Carex						
	Carex						
	Carex						
	Carex						
	Carex						
	Carex						
	Carex						
	Cyperus						
	Cyperus						
	Dactylis glomerata						
	Danthonia spicata						
	Echinochloa crus-galli						
	Eleocharis erythropoda						
	Eleocharis						
	Elymus virginicus						
	~~Elymus~~						
	Festuca arundinacea						
	Glyceria striata						
	Glyceria						
	Juncus dudleyi						
	Juncus effusus						
	Juncus tenuis						
	Juncus						
	Juncus						
	Leersia oryzoides						
	Muhlenbergia						
	Oryzopsis asperifolia						
	Panicum						
	Panicum						
	Phalaris arundinacea	X					
	Phleum pratense						
	Phragmites australis						
	Poa compressa						
	Poa pratensis						
	Poa						
	Scirpus atrovirens						
	Scirpus cyperinus						
	Scirpus validus						
	Scirpus						
	Scirpus						
	Setaria						
	Sparganium						
	Typha angustifolia						
	Typha latifolia						
	Typha Xglauca						

ELC WILDLIFE	SITE: Bluewater 480 at BLW 1524	
	POLYGON:	
	DATE: Sept 1 / 2014	
	SURVEYORS: JA	
	START TIME: 17:30	END TIME:

TEMP (°C): 27	CLOUD (10th): 1	WIND: 0	PRECIPITATION:
CONDITIONS:			

POTENTIAL WILDLIFE HABITAT:

	VERNAL POOLS		SNAGS
	HIBERNACULA		FALLEN LOGS

SPECIES LIST:

TY	SP. CODE	EV	NOTES	#	TY	SP. CODE	EV	NOTES	#
M	E. chipmunk	VO							
B	MODO	OB							
B	AMRO	VO							
B	AMCR	VO							
B	HOWR	VO							
B	GRCA	VO							
B	FISP	OB							
B	LEFL	OB							
H	Spring Peeper	VO							

FAUNAL TYPE CODES (TY):

B = BIRD M = MAMMAL H = HERPETOFAUNA L = LEPIDOPTERA F = FISH O = OTHER

EVIDENCE CODES (EV):

BREEDING BIRD - POSSIBLE:

SH = SUITABLE HABITAT SM = SINGING MALE

BREEDING BIRD - PROBABLE:

T = TERRITORY D = DISPLAY P = PAIR
A = ANXIETY BEHAVIOUR N = NEST BUILDING V = VISITING NEST

BREEDING BIRD - CONFIRMED:

DD = DISTRACTION NU = USED NEST FY = FLEDGED YOUNG
NE = EGGS NY = YOUNG FS = FOOD/FECAL SACK
AE = NEST ENTRY

OTHER WILDLIFE EVIDENCE:

OB = OBSERVED VO = VOCALIZATION CA = CARCASS
DP = DISTINCTIVE PARTS HO = HOUSE/DEN FY = EGGS/YOUNG
TK = TRACKS FE = FEEDING EVIDENCI SC = SCAT
SI = OTHER SIGNS (specify)

Bluewater Feature: 480_BLW1499

(Properties that contain Features within 125m from Collection lines and 171.5m from Turbines)

0 25 50 100 Meters

August 29, 2011

Roads
Access/Collection Line
Collector Buffer (125m)
Turbine Buffer (171.5m)
Collection Feature Intersect
Turbine Buffer Feature Intersect
Property Fabric
Bluewater Wind Energy Centre

PRE-SURVEY COMMENT: [redacted] wp# 323 Roadside ASA

ELC Community Description and Classification	Site: 480_BLW1499		Polygon: 1	
	Surveyor(s): SAM	Date: Oct 6/11	Time start: 12 40h finish: 13 15h	
	UTMZ: 17	UTMZ: 447324	UTMN: 4813647	

Polygon Description

System	Substrate	Topographic Feature	Plant Form	Community
☒ Terrestrial	☐ Organic	☐ Lacustrine	☐ Plankton	☐ Lake
☐ Wetland	☒ Mineral Soil	☐ Riverine	☐ Submerged	☐ Pond
☐ Aquatic	☐ Parent Min.	☐ Bottomland	☐ Floating-LVD.	☐ River
Site	☐ Acidic Bedrk	☐ Terrace	☒ Graminoid	☐ Stream
☐ Open Water	☐ Basic Bedrk	☐ Valley Slope	☐ Forb	☐ Marsh
☐ Shallow Water	☐ Carb. Bedrk	☐ Tableland	☐ Lichen	☐ Swamp
☒ Surficial Dep.		☒ Roll. Upland	☐ Bryophyte	☐ Fen
☐ Bedrock		☐ Cliff	☐ Deciduous	☐ Bog
History		☐ Talus	☐ Coniferous	☐ Barren
☐ Natural		☐ Crevice/Cave	☐ Mixed	☒ Meadow
☒ Cultural		☐ Alvar		☐ Prairie
Cover		☐ Rockland		☐ Thicket
☒ Open		☐ Beach / Bar		☐ Savannah
☐ Shrub		☐ Sand Dune		☐ Woodland
☐ Treed		☐ Bluff		☐ Forest
				☐ Plantation

Stand Description

Layer	HT	CVR	Species in Order of Decreasing Dominance (up to 4 sp) (>> Much Greater Than; > Greater Than; = About Equal To)
1	3	1	Ew >> Manitoba Maple
2	4	4	Tall Goldenrod > Panicled Aster > New England Aster
3	5-4	4	Smooth Brome >> Grass-leaved Goldenrod > Frost Aster
4	5	2+1	Juneberry >> Canada Thistle > Common Milkweed

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

Stand Composition:	Size Class Analysis:		<10		10-24		25-50		>50
	Standing Snags:		<10		10-24		25-50		>50
BA: N/A	Deadfall / Logs:		<10		10-24		25-50		>50

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

Com. Age:	☐ Pioneer	☒ Young	☐ Mid-Age	☐ Mature	☐ Old Growth

Ecosite:	Mineral Cultural Meadow Ecosite	Code:	CUM 1
Vegetation Type:	Dry-Moist old Field Meadow Type	Code:	CUM1-1
Inclusion:	/	Code:	/
Complex:		Code:	/

Community Profile Diagram/Comments

Notes:

Tree Tally by Species

Prism Factor: 2

Species	Tally 1	Tally 2	Tally 3	Tally 4	Total	Rel. Avg.
N/A						
Total						100
Basal Area (BA)						
Dead						

Soils Ontario and ELC Soils Description

						Summary
Site Metrics	Pit/Auger #					
	UTM	Zone				Moisture Regime
		Easting	N/A			
		Northing				
		Position				
	Slope	Aspect				Drainage
		Percent				
		Slope Length				
Depth to...	Mottles					Effective Texture (Indicate below)
	Gley					
	Water Table					
	Carbonates					
	Bedrock					

Soil Horizon Description										
	1	Depth from zero		% CF		% CF		% CF		% CF
		Texture								
	2	Depth from zero		% CF		% CF		% CF		% CF
		Texture								
	3	Depth from zero		% CF		% CF		% CF		% CF
		Texture								
	4	Depth from zero		% CF		% CF		% CF		% CF
		Texture								
		% Surface Stone/Rock								
	Moisture Regime									
	Drainage									

ASA- Roadside

VASCULAR PLANT CHECKSHEET

Location: 480-BLW 1499

Observer: SAM

Date: Oct. 6/11

Job Number:

DICOT HERBS	1	2	3	4	5	6
Achillea millefolia						
Actaea pachypoda						
Actaea rubra						
Agalinus						
Agrimonia gryposepala						
Alliaria petiolaris						
Amaranthus retroflexus						
Ambrosia artemissiifolia						
Amphicarpaea bracteata						
Anaphalis margaritacea						
Anemone						
Anemone canadensis						
Anemone virginiana						
Antennaria neglecta						
Apocynum androsaemifolium						
Apocynum cannabinum						
Aquilegia canadensis						
Aralia nudicaulis						
Arctium minus						
Artemisia						
Asarum canadense						
Asclepias incarnata						
Asclepias syriaca	X					
Aster puniceus	X					
Aster cordifolius						
Aster ericoides						
Aster lanceolatus	X					
Aster lateriflorus						
Aster macrophyllus						
Aster novae-angliae	X					
Aster puniceus						
Barbarea vulgaris						
Bidens cernua						
Bidens frondosa	X					
Boehmeria cylindrica						
Caltha palustris						
Calystegia sepium						
Cardamine diphylla						
Cardamine						
Caulophyllum thalictroides						
Cerastium fontanum						
Ceratophyllum demersum						
Chelidonium majus						
Chenopodium album						
Chrysanth. leucanthemum						
Cichorium intybus						
Cicuta						
Circaea lutetiana						
Cirsium arvense	X					
Cirsium vulgare						
Clematis virginiana						
Clintonia borealis						
Conyza canadensis						
Coronilla varia						
Cynanchum rossicum						
Cynoglossum officinale						
Daucus carota	X					
Desmodium canadense						
Dianthus armeria						
Dipsacus fullonum	X					
Echinosyctis lobata						
Echium vulgare						
Epilobium						
Epilobium ciliatum						
Epilobium hirsutum						
Epilobium parviflorum						

	1	2	3	4	5	6
Erigeron annuus						
Erigeron philadelphicus						
Erigeron strigosus						
Erysimum chierantholdes						
Eupatorium maculatum						
Eupatorium perfoliatum						
Eupatorium rugosum						
Euphorbia						
Euthamia graminifolia	X					
Fragaria virginiana						
Fragaria vesca						
Galeopsis tetrahit						
Galium						
Galium						
Galium palustre						
Galium triflorum						
Geranium maculatum						
Geranium robertianum						
Geum aleppicum						
Geum canadense						
Geum						
Glecoma hederacea						
Hepatica acutiloba						
Hesperis matronalis						
Hieracium aurantiacum						
Hieracium caespitosum						
Hieracium						
Hydrophyllum virginianum						
Hypericum perforatum						
Impatiens capensis	X					
Inula helenium						
Lactuca						
Laportea canadensis						
Lapsana communis						
Leonurus cardiaca						
Lepidium						
Linaria vulgaris						
Lithospermum officinale						
Lobelia						
Lobelia inflata						
Lotus corniculatus						
Lycopus americanus						
Lycopus						
Lysimachia ciliata						
Lythrum salicaria						
Medicago lupulina						
Medicago sativum						
Melilotus alba						
Mentha arvensis						
Mimulus ringens						
Mimulus ringens						
Mitella diphylla						
Monarda fistulosa						
Myosotis						
Nasturtium officinale						
Nepeta cataria						
Nuphar variegatum						
Nymphaea odorata						
Oenothera biennis						
Osmorhiza						
Oxalis stricta						
Phyrma leptostachya						
Physalis heterophylla						

	1	2	3	4	5	6
Plantago lanceolata						
Plantago major						
Plantago rugelii						
Podophyllum peltatum						
Polygonum						
Polygonum						
Polygonum						
Polygonum lapathifolium						
Polygonum persicaria						
Potentilla						
Potentilla norvegica						
Potentilla recta						
Prenanthes alba						
Prunella vulgaris						
Pyrola elliptica						
Ranunculus						
Ranunculus abortivus						
Ranunculus acris						
Rudbeckia hirta						
Rumex acetosella						
Rumex crispus						
Rumex						
Sanguinaria canadensis						
Sanicula marilandica						
Saponaria officinalis						
Satureja vulgaris						
Scutellaria galericulata						
Silene vulgaris						
Sium suave						
Solanum dulcamara						
Solidago						
Solidago altissima	X					
Solidago caesia						
Solidago canadensis	X					
Solidago flexicaulis						
Solidago gigantea						
Solidago nemoralis						
Solidago rugosa						
Sonchus arvensis						
Sonchus asper						
Stellaria						
Tanacetum vulgare						
Taraxacum officinale						
Thalictrum dioicum						
Thalictrum pubescens						
Tiarella cordifolia						
Tragopogon pratensis						
Trientalis borealis						
Trifolium						
Trifolium pratense						
Trifolium repens						
Tussilago farfara	X					
Urtica dioica						
Utricularia vulgaris						
Verbascum thapsus						
Verbena hastata	X					
Verbena urticifolia						
Veronica						
Veronica officinalis						
Viola cracca						
Viola tetraspema						
Viola						
Viola						
Viola pubescens						
Viola sororia						

MONOCOT HERBS	1	2	3	4	5	6
Alisma plantago-aquatica						
Allium tricoccum						
Allium						
Arisaema triphyllum						
Asparagus officinalis						
Calla palustris						
Clintonia borealis						
Convallaria majus						
Cypripedium calceolus						
Elodea canadensis						
Epipactis helleborine						
Erythronium americanum						
Hemerocallis fulva						
Iris versicolor						
Lemna minor						
Lemna trisulca						
Lilium						
Maianthemum canadense						
Maianthemum racemosa						
Maianthemum stellata						
Platanthera						
Pontederia cordata						
Polygonatum pubescens						
Potamogeton crispus						
Potamogeton pectinatus						
Potamogeton						
Potamogeton						
Potamogeton						
Sagittaria latifolia						
Sisyrinchim montanum						
Smilax herbacea						
Spiranthes cernua						
Spirodela polyrhiza						
Streptopus roseus						
Trillium erectum						
Trillium grandiflorum						
Uvularia grandiflora						

SITE LOCATIONS

1: 1

2:

3:

4:

5:

6:

T	CONIFERS	1	2	3	4	5	6	T	TREES and SHRUBS	1	2	3	4	5	6	T	GRAMINOIDS	1	2	3	4	5	6
	Abies balsamea							+	Rosa multiflora								Agrostis gigantea						
	Juniperus communis								Rosa								Agrostis stolonifera						
	Juniperus virginiana								Rubus allegheniensis								Agropyron repens						
	Larix laricina								Rubus idaeus								Alopecuris						
	Picea abies								Rubus occidentalis								Bromus inermis	X					
	Picea glauca								Rubus odoratus								Calamagrostis canadensis						
	Pinus resinosa								Rubus pubescens								Carex arctata						
	Pinus strobus								Salix alba								Carex aurea						
	Pinus sylvestris								Salix amygdaloides								Carex bebbii						
	Thuja occidentalis								Salix bebbiana	X							Carex blanda						
	Tsuga canadensis							+	Salix discolor								Carex gracillima						
									Salix eriocephala								Carex granularis						
									Salix exigua								Carex hystericina						
									Salix lucida								Carex pensylvanica						
									Salix petiolaris								Carex radiata						
	TREES and SHRUBS							+	Salix purpurea								Carex retrorsa						
	Acer negundo	X							Salix x rubens	X							Carex stipata						
	Acer rubrum							+	Salix								Carex stricta						
	Acer saccharinum								Sambucus canadensis								Carex vulpinoidea						
	Acer saccharum								Sambucus racemosa								Carex						
	Acer spicatum								Sorbus aucuparia								Carex						
	Alnus rugosa								Spiraea alba								Carex						
	Amelanchier								Syringa vulgaris								Carex						
	Berberis thunbergii							+	Tilia americana								Carex						
	Betula alleghaniensis								Ulmus americana	X							Carex						
	Betula papyrifera								Ulmus								Carex						
	Carpinus caroliniana								Vaccinium								Carex						
	Carya cordiformis								Viburnum lentago								Carex						
	Celastrus scandens								Viburnum opulus								Cyperus						
	Cornus alternifolia								Viburnum								Cyperus						
	Cornus amomum								Vitis riparia								Dactylis glomerata	X					
	Cornus rugosa																Danthonia spicata						
	Cornus stolonifera	X															Echinochloa crus-galli						
	Corylus cornuta																Eleocharis erythropoda						
	Crataegus monogyna																Eleocharis						
	Crataegus punctata																Elymus virginicus						
	Crataegus sp.																Elymus						
	Crataegus																Festuca arundinacea						
	Diervilla lonicera																Glyceria striata						
	Fagus grandifolia																Glyceria						
	Fraxinus americana																Juncus dudleyi						
	Fraxinus nigra								FERNS								Juncus effusus						
	Fraxinus pennsylvanica								Adiantum pedatum								Juncus tenuis						
	Ilex verticillata								Athyrium filix-femina								Juncus						
	Juglans cinerea								Botrychium multifidum								Juncus						
	Juglans nigra								Botrychium virginianum								Leersia oryzoides	X					
	Lonicera morrowi								Cystopteris bulbifera								Muhlenbergia						
	Lonicera tatarica								Dryopteris carthusiana								Oryzopsis asperifolia						
	Lonicera								Dryopteris cristata								Panicum						
	Malus pumila								Dryopteris marginalis								Panicum						
	Ostrya virginiana								Dryopteris								Phalaris arundinacea						
	Parthenocissus inserta								Equisetum arvense								Phleum pratense						
	Populus balsamifera								Equisetum hyemale								Phragmites australis						
	Populus grandidentata								Equisetum variegatum								Poa compressus						
	Populus tremuloides								Equisetum								Poa pratensis						
	Populus								Gymnocarpium dryopteris								Poa						
	Prunus pensylvanica								Lycopodium digitatum								Scirpus atrovirens	X					
	Prunus serotina								Lycopodium obscurum								Scirpus cyperinus						
	Prunus virginiana								Lycopodium								Scirpus validus	X					
	Prunus								Lycopodium								Scirpus						
	Quercus macrocarpa								Matteucia struthiopteris								Scirpus						
	Quercus rubra								Onoclea sensibilis								Setaria						
	Quercus								Osmunda cinnamomia								Sparganium						
	Rhamnus cathartica								Osmunda regalis								Typha angustifolia						
	Rhus radicans								Polystichum acrostichoides								Typha latifolia	X					
	Rhus typhina								Pteridium aquilinum								Typha Xglauca						
	Ribes americana								Thelypteris palustris														
	Ribes cynosbati																						
	Ribes x rubrum																						
	Robinia pseudo-acacia																						

ELC	SITE: 450 - BLW 1499	
	POLYGON: D	
	DATE: Oct-6/11	
WILDLIFE	SURVEYORS: SAM	
	START TIME:	END TIME:

TEMP (°C): 20	CLOUD (10th): /	WIND: 1	PRECIPITATION: nil
CONDITIONS: beautiful fall day			

POTENTIAL WILDLIFE HABITAT:

	VERNAL POOLS	✓	SNAGS
	HIBERNACULA		FALLEN LOGS

SPECIES LIST:

TY	SP. CODE	EV	NOTES	#	TY	SP. CODE	EV	NOTES	#
B	AMGO	VO		2					
B	BLJA	VO		1					
L	Monarch	OB	feedingorg	1					
B	AMCR	OB	NE Aster	3					

FAUNAL TYPE CODES (TY):

B = BIRD M = MAMMAL H = HERPETOFAUNA L = LEPIDOPTERA F = FISH O = OTHER

EVIDENCE CODES (EV):

BREEDING BIRD - POSSIBLE:

SH = SUITABLE HABITAT SM = SINGING MALE

BREEDING BIRD - PROBABLE:

T = TERRITORY D = DISPLAY P = PAIR
A = ANXIETY BEHAVIOUR N = NEST BUILDING V = VISITING NEST

BREEDING BIRD - CONFIRMED:

DD = DISTRACTION NU = USED NEST FY = FLEDGED YOUNG
NE = EGGS NY = YOUNG FS = FOOD/FECAL SACK
AE = NEST ENTRY

OTHER WILDLIFE EVIDENCE:

OB = OBSERVED VO = VOCALIZATION CA = CARCASS
DP = DISTINCTIVE PARTS HO = HOUSE/DEN FY = EGGS/YOUNG
TK = TRACKS FE = FEEDING EVIDENCI SC = SCAT
SI = OTHER SIGNS (specify)

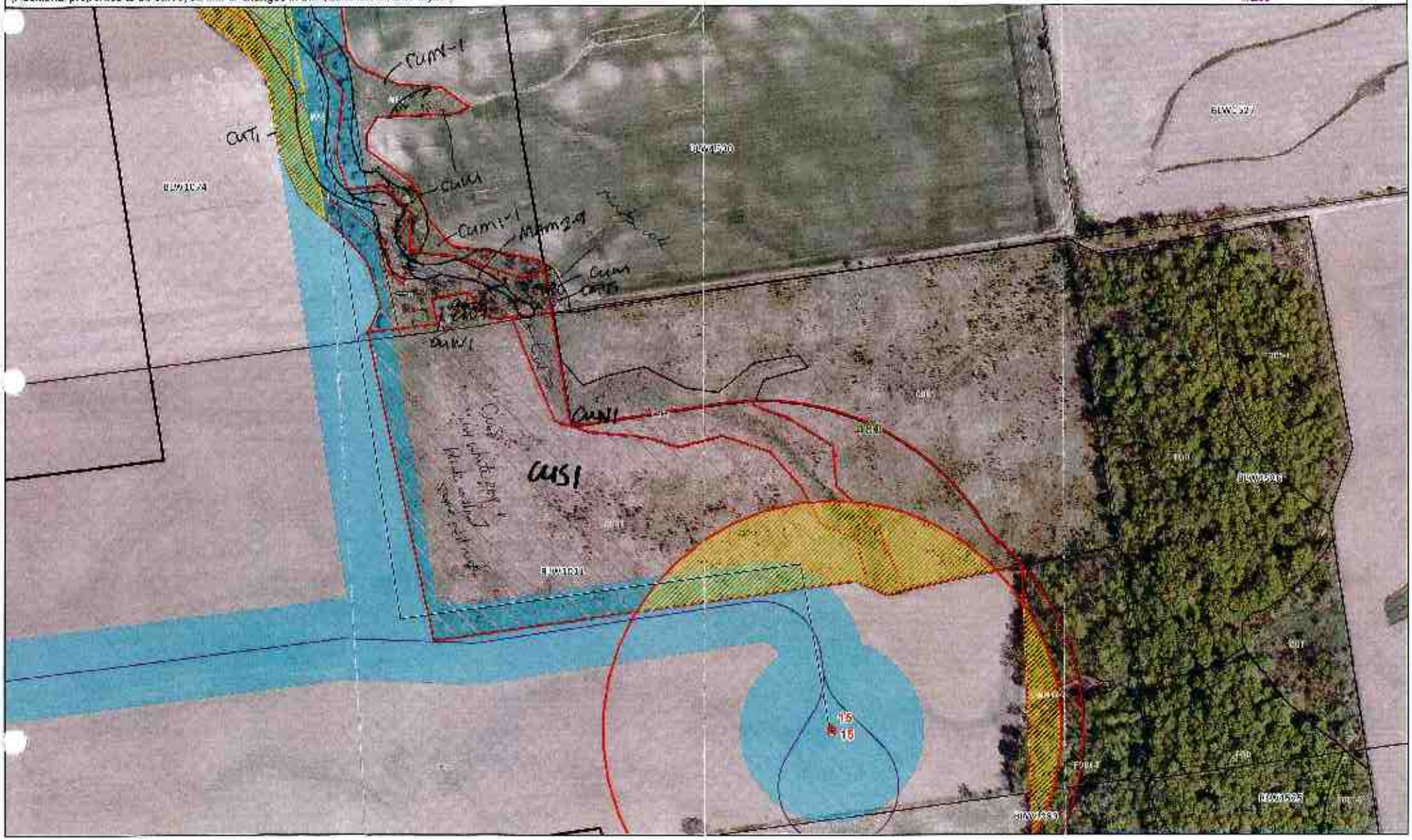
Bluewater Feature: 480_BLW1011/1500

(Additional properties to be surveyed due to changes in the Collection & Road layout)

0 30 60 120 Meters

October 17, 2011

Roads
Access/Collection Line
Survey to be Completed
Turbine Buffer (171.0m)
LLC Survey Completed
Turbine Buffer/Feature Intersect
Property Fabric
Bluewater Wind Energy Centre



ELC
Community Description and Classification

Site: Blw 480_1011		Polygon:	
Surveyor(s): SD + TS	Date: Oct 19, 2011	Time start: / finish:	
UTMZ:	UTMZ:	UTMN:	

Polygon Description

System	Substrate	Topographic Feature	Plant Form	Community
☑ Terrestrial	☐ Organic	☐ Lacustrine	☐ Plankton	☐ Lake
☐ Wetland	☑ Mineral Soil	☐ Riverine	☐ Submerged	☐ Pond
☐ Aquatic	☐ Parent Min.	☐ Bottomland	☐ Floating-LVD.	☐ River
Site	☐ Acidic Bedrk	☐ Terrace	☐ Graminoid	☐ Stream
☐ Open Water	☐ Basic Bedrk	☐ Valley Slope	☑ Forb	☐ Marsh
☐ Shallow Water	☐ Carb. Bedrk	☐ Tableland	☐ Lichen	☐ Swamp
☑ Surficial Dep.		☑ Roll. Upland	☐ Bryophyte	☐ Fen
☐ Bedrock		☐ Cliff	☐ Deciduous	☐ Bog
History		☐ Talus	☐ Coniferous	☐ Barren
☐ Natural		☐ Crevice/Cave	☑ Mixed	☐ Meadow
☑ Cultural		☐ Alvar		☐ Prairie
Cover		☐ Rockland		☐ Thicket
☑ Open		☐ Beach / Bar		☑ Savannah
☐ Shrub		☐ Sand Dune		☐ Woodland
☐ Treed		☐ Bluff		☐ Forest
				☐ Plantation

Stand Description

Layer	HT	CVR	Species in Order of Decreasing Dominance (up to 4 sp) (>> Much Greater Than; > Greater Than; = About Equal To)
1	3	2	White Pine = Black Walnut > White elm > White oak
2			
3			
4	5	4	Aster sp. = Solidago sp.

HT Codes: 7 <0.2m 6 >0.2-0.5m 5 >0.5-1m 4 >1-2m 3 >2-8m 2 >6-25m 1 >25m
CVR Codes: 0 = none 1 0% - 10% 2 10 - 25% 3 25 - 60% 4 > 60%

Stand Composition:	Size Class Analysis:		<10		10-24		25-50		>50
	Standing Snags:	O	<10		10-24		25-50		>50
BA:	Deadfall / Logs:	N	<10		10-24		25-50		>50

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

Com. Age:	✓ Pioneer	✓ Young	Mid-Age	Mature	Old Growth

Ecosite:	Mineral Cultural Woodland Ecosite	Code:	CUS2
Vegetation Type:		Code:	
Inclusion:		Code:	
Complex:		Code:	

Community Profile Diagram/Comments

Note tree cover 15-20%
- Inclusion of CUW1 along watercourse - dominated by ht walnut + white elm

Notes:

Tree Tally by Species

Prism Factor: 2

Species	Tally 1	Tally 2	Tally 3	Tally 4	Total	Rel. Avg.
Black Walnut	*					
Total	1					100
Basal Area (BA)	2					
Dead						

Soils Ontario and ELC Soils Description

						Summary
Site Metrics		Pit/Auger #				
	UTM	Zone				Moisture Regime
		Easting				
		Northing				
	Slope	Position				
		Aspect				Drainage
		Percent				
		Slope Length				
Depth to...		Mottles				
		Gley				Effective Texture (indicate below)
		Water Table				
		Carbonates				
		Bedrock				

Soil Horizon Description										
	1	Depth from zero		% CF		% CF		% CF		% CF
		Texture								
	2	Depth from zero		% CF		% CF		% CF		% CF
		Texture								
	3	Depth from zero		% CF		% CF		% CF		% CF
		Texture								
	4	Depth from zero		% CF		% CF		% CF		% CF
		Texture								
		% Surface Stone/Rock								
	Moisture Regime									
	Drainage									

VASCULAR PLANT CHECKSHEET

Location: B/W 480

Date: oct 19, 201

Observer: SD + TS

Job Number:

DICOT HERBS	1	2	3	4	5	6
Achillea millefolia						
Acnea pachypoda						
Actaea rubra						
Agalinus						
Agrimonia gryposepala						
Alliaria petiolaris						
Amaranthus retroflexus						
Ambrosia artemisiifolia						
Amphicarpaea bracteata						
Anaphalis margaritacea						
Anemone						
Anemone canadensis						
Anemone virginiana						
Antennaria neglecta						
Apocynum androsaemifolium						
Apocynum cannabinum						
Aquilegia canadensis						
Aralia nudicaulis						
Arisaema triphyllum	✓					
Artemisia						
Asarum canadense						
Asclepias incarnata						
Asclepias syriaca						
Aster sp.	✓					
Aster cordifolius						
Aster ericoides						
Aster lanceolatus						
Aster lateriflorus						
Aster macrophyllus						
Aster novae-angliae						
Aster puniceus						
Barbarea vulgaris						
Bidens cernua						
Bidens frondosa						
Boehmeria cylindrica						
Calla palustris						
Calystegia sepium						
Cardamine diphylla						
Cardamine						
Caulophyllum thalictroides						
Cerastium fontanum						
Ceratophyllum demersum						
Chaerophyllum tainturieri						
Chenopodium album						
Chrysanthemum leucanthemum						
Cichorium intybus	✓					
Cicuta						
Circaea lutetiana						
Cirsium arvense						
Cirsium vulgare						
Clematis virginiana						
Clintonia borealis						
Conyza canadensis						
Coronilla varia						
Cynanchum rossicum						
Cynoglossum officinale						
Daucus carota	✓					
Desmodium canadense						
Dianthus armeria						
Dipsacus fullonum						
Echinocystis lobata						
Echium vulgare						
Epilobium						
Epilobium ciliatum						
Epilobium hirsutum						
Epilobium parviflorum						

	1	2	3	4	5	6
Erigeron annuus						
Erigeron philadelphicus						
Erigeron strigosus						
Erysimum chieranthoides						
Eupatorium maculatum						
Eupatorium perfoliatum						
Eupatorium rugosum						
Euphorbia						
Euthamia graminifolia						
Fragaria virginiana						
Fragaria vesca						
Galeopsis tetrahit						
Galium						
Galium						
Galium aparine						
Galium triflorum						
Geranium maculatum						
Geranium robertianum						
Geum aleppicum						
Geum canadense						
Geum						
Glechoma hederacea						
Hepatica acutiloba						
Hesperis matronalis						
Hieracium aurantiacum						
Hieracium caespitosum						
Hieracium						
Hydrophyllum virginianum						
Hypericum perforatum						
Impatiens capensis						
Inula helenium						
Lactuca						
Laportea canadensis						
Lapsana communis						
Leonurus cardiaca						
Lepidium						
Linaria vulgaris						
Lithospermum officinale						
Lobelia						
Lobelia inflata						
Lotus corniculatus						
Lycopus americanus						
Lycopus						
Lysimachia ciliata						
Lythrum salicaria						
Medicago lupulina						
Medicago sativum						
Melilotus alba						
Mentha arvensis						
Mimulus ringens						
Mimulus ringens						
Mitella diphylla						
Monarda fistulosa						
Myosotis						
Nasturtium officinale						
Nepeta cataria						
Nuphar variegatum						
Nymphaea odorata						
Oenothera biennis						
Osmorhiza						
Oxalis stricta						
Phryma leptostachya						
Physalis heterophylla						

	1	2	3	4	5	6
Plantago lanceolata						
Plantago major						
Plantago rugelii						
Podophyllum peltatum						
Polygonum						
Polygonum						
Polygonum						
Polygonum lapathifolium						
Polygonum persicaria						
Potentilla						
Potentilla norvegica						
Potentilla recta						
Prenanthes alba						
Prunella vulgaris						
Pyrola elliptica						
Ranunculus						
Ranunculus abortivus						
Ranunculus acris						
Rudbeckia hirta						
Rumex acetosella						
Rumex crispus						
Rumex						
Sanguinaria canadensis						
Sanicula marilandica						
Saponaria officinalis						
Saturejа vulgaris						
Scutellaria galericulata						
Silene vulgaris						
Sium suave						
Solanum dulcamara						
Solidago						
Solidago altissima						
Solidago caesia						
Solidago canadensis	✓					
Solidago flexicaulis						
Solidago gigantea						
Solidago nemoralis						
Solidago rugosa						
Sonchus arvensis						
Sonchus asper						
Stellaria						
Tanacetum vulgare						
Taraxacum officinale	✓					
Thalictrum dioicum						
Thalictrum pubescens						
Tiarella cordifolia						
Tragopogon pratensis						
Trientalis borealis						
Trifolium						
Trifolium pratense	✓					
Trifolium repens						
Tussilago farfara						
Urtica dioica						
Utricularia vulgaris						
Verbascum thapsus						
Verbena hastata						
Verbena urticifolia						
Veronica						
Veronica officinalis						
Vicia cracca						
Vicia tetrasperma						
Viola						
Viola						
Viola pubescens						
Viola sororia						

MONOCOT HERBS	1	2	3	4	5	6
Alisma plantago-aquatica						
Allium tricoccum						
Allium						
Arisaema triphyllum						
Asparagus officinalis						
Calla palustris						
Clintonia borealis						
Convallaria majus						
Cypripedium calceolus						
Elodea canadensis						
Epipactis helleborine						
Erythronium americanum						
Hemerocallis fulva						
Iris versicolor						
Lemna minor						
Lemna trisulca						
Lilium						
Maianthemum canadense						
Maianthemum racemosa						
Maianthemum stellata						
Platanthera						
Pontederia cordata						
Polygonatum pubescens						
Potamogeton crispus						
Potamogeton pectinatus						
Potamogeton						
Potamogeton						
Potamogeton						
Sagittaria latifolia						
Sparganium montanum						
Smilax herbacea						
Spiranthes cernua						
Spirodela polyrhiza						
Streptopus roseus						
Trillium erectum						
Trillium grandiflorum						
Uvularia grandiflora						

SITE LOCATIONS

1: CNS

2:

3:

4:

5:

6:

I	CONIFERS	1	2	3	4	5	6
	Abies balsamea						
	Juniperus communis						
	Juniperus virginiana						
	Larix laricina						
	Picea abies						
	Picea glauca						
	Pinus resinosa						
	Pinus strobus	✓					
	Pinus sylvestris						
	Thuja occidentalis						
	Tsuga canadensis						
	TREES and SHRUBS						
	Acer negundo						
	Acer rubrum						
	Acer saccharinum						
	Acer saccharum						
	Acer spicatum						
	Alnus rugosa						
	Amelanchier						
	Berberis thunbergii						
	Betula alleghaniensis						
	Betula papyrifera						
	Carpinus caroliniana						
	Carya cordiformis						
	Celastrus scandens						
	Cornus alternifolia						
	Cornus amomum						
	Cornus rugosa						
	Cornus stolonifera	✓					
	Corylus cornuta						
	Crataegus monogyna						
	Crataegus punctata						
	Crataegus sp.						
	Crataegus						
	Diervilla lonicera						
	Fagus grandifolia						
	Fraxinus americana						
	Fraxinus nigra						
	Fraxinus pennsylvanica						
	Ilex verticillata						
	Juglans cinerea						
	Juglans nigra	✓					
	Lonicera morrowi						
	Lonicera tatarica						
	Lonicera						
	Malus pumila	✓					
	Ostrya virginiana						
	Parthenocissus inserta						
	Populus balsamifera						
	Populus grandidentata						
	Populus tremuloides						
	Populus						
	Prunus pensylvanica						
	Prunus serotina						
	Prunus virginiana						
	Prunus						
	Quercus macrocarpa						
	Quercus rubra	✓					
	Quercus						
	Rhamnus cathartica	✓					
	Rhus radicans						
	Rhus typhina						
	Ribes americana						
	Ribes cynosbati						
	Ribes x rubrum						
	Robinia pseudo-acacia						

I	TREES and SHRUBS	1	2	3	4	5	6
+	Rosa multiflora						
	Rosa						
	Rubus allegheniensis						
	Rubus idaeus	✓					
	Rubus occidentalis						
	Rubus odoratus						
	Rubus pubescens						
	Salix alba						
	Salix amygdaloides						
	Salix bebbiana						
+	Salix discolor						
	Salix eriocephala						
	Salix exigua						
	Salix lucida						
	Salix petiolaris						
+	Salix purpurea						
	Salix x rubens						
+	Salix						
	Sambucus canadensis						
	Sambucus racemosa						
	Sorbus aucuparia						
	Spiraea alba						
	Syringa vulgaris						
+	Tilia americana						
	Ulmus americana	✓					
	Ulmus						
	Vaccinium						
	Viburnum lentago						
	Viburnum opulus						
	Viburnum						
	Vitis riparia						
	FERNS						
	Adiantum pedatum						
	Athyrium filix-femina						
	Botrychium multifidum						
	Botrychium virginianum						
	Cystopteris bulbifera						
	Dryopteris carthusiana						
	Dryopteris cristata						
	Dryopteris marginalis						
	Dryopteris						
	Equisetum arvense						
	Equisetum hyemale						
	Equisetum variegatum						
	Equisetum						
	Gymnocarpium dryopteris						
	Lycopodium digitatum						
	Lycopodium obscurum						
	Lycopodium						
	Lycopodium						
	Matteucia struthiopteris						
	Onoclea sensiblis						
	Osmunda cinnamomia						
	Osmunda regalis						
	Polystichum acrostichoides						
	Pteridium aquilinum						
	Thelypteris palustris						

I	GRAMINOIDS	1	2	3	4	5	6
	Agrostis gigantea						
	Agrostis stolonifera						
	Agropyron repens						
	Alopecuris						
	Bromus inermis						
	Calamagrostis canadensis						
	Carex arctata						
	Carex aurea						
	Carex bebbii						
	Carex blanda						
	Carex gracillima						
	Carex granularis						
	Carex hystericina						
	Carex pensylvanica						
	Carex radiata						
	Carex retrorsa						
	Carex stipata						
	Carex stricta						
	Carex vulpinoidea						
	Carex						
	Carex						
	Carex						
	Carex						
	Carex						
	Carex						
	Carex						
	Carex						
	Carex						
	Cyperus						
	Cyperus						
	Dactylis glomerata						
	Danthonia spicata						
	Echinochloa crus-galli						
	Eleocharis erythropoda						
	Eleocharis						
	Elymus virginicus						
	Elymus						
	Festuca arundinacea						
	Glyceria striata						
	Glyceria						
	Juncus dudleyi						
	Juncus effusus						
	Juncus tenuis						
	Juncus						
	Juncus						
	Leersia oryzoides						
	Muhlenbergia						
	Oryzopsis asperifolia						
	Panicum						
	Panicum						
	Phalaris arundinacea	✓					
	Phleum pratense	✓					
	Phragmites australis						
	Poa compressus						
	Poa pratensis						
	Poa						
	Scirpus atrovirens						
	Scirpus cyperinus						
	Scirpus validus						
	Scirpus						
	Scirpus						
	Setaria						
	Sparganium						
	Typha angustifolia						
	Typha latifolia						
	Typha Xglauca						

ELC	SITE: Blw 480
	POLYGON:
	DATE: oct 19, 2011
WILDLIFE	SURVEYORS: JD + TS
	START TIME: END TIME:

TEMP (°C): 17°C	CLOUD (10th): overc.	WIND: 20-40	PRECIPITATION: Rain
CONDITIONS: Cold, windy, rain			

POTENTIAL WILDLIFE HABITAT:

	VERNAL POOLS		SNAGS
	HIBERNACULA		FALLEN LOGS

SPECIES LIST:

TY	SP. CODE	EV	NOTES	#	TY	SP. CODE	EV	NOTES	#
B	Am. Robin	OB	Several						
B	Cowbird	OB	Several						
B	Am. Crow	OB	Several						
B	Bluejay	OB	Several						
B	Sparrow sp.	OB	Several						
M	meadow vole	OB	1						

FAUNAL TYPE CODES (TY):

B = BIRD M = MAMMAL H = HERPETOFAUNA L = LEPIDOPTERA F = FISH O = OTHER

EVIDENCE CODES (EV):

BREEDING BIRD - POSSIBLE:

SH = SUITABLE HABITAT SM = SINGING MALE

BREEDING BIRD - PROBABLE:

T = TERRITORY D = DISPLAY P = PAIR
A = ANXIETY BEHAVIOUR N = NEST BUILDING V = VISITING NEST

BREEDING BIRD - CONFIRMED:

DD = DISTRACTION NU = USED NEST FY = FLEDGED YOUNG
NE = EGGS NY = YOUNG FS = FOOD/FECAL SACK
AE = NEST ENTRY

OTHER WILDLIFE EVIDENCE:

OB = OBSERVED VO = VOCALIZATION CA = CARCASS
DP = DISTINCTIVE PARTS HO = HOUSE/DEN FY = EGGS/YOUNG
TK = TRACKS FE = FEEDING EVIDENCI SC = SCAT
SI = OTHER SIGNS (specify)

Bluewater Feature: 480_BLW1011

(Additional properties to be surveyed due to changes in the Collection & Road layout)

0 25 50 100 Meters

October 17, 2011

Roads
Access/Collection Line
Survey to be Completed
Turbine Buffer (171.5m)
ELC Survey Completed
Turbine Buffer/Feature Intersect
Property Parcels
Bluewater Wind Energy Centre

ELC Community Description and Classification

Site: Blw 480 | Polygon: | Surveyor(s): JD + TS | Date: oct 20, 2011 | Time start: finish: | UTMZ: 17 T | UTMZ: 446722 | UTMN: 4814218

Polygon Description

System	Substrate	Landform	Plant Form	Community
☑ Terrestrial	☐ Organic	☐ Lacustrine	☐ Plankton	☐ Lake
☐ Wetland	☑ Mineral Soil	☐ Riverine	☐ Submerged	☐ Pond
☐ Aquatic	☐ Parent Mtn.	☐ Bottomland	☐ Floating-LVD.	☐ River
Site	☐ Acidic Bedrk	☐ Terrace	☐ Graminoid	☐ Stream
☐ Open Water	☐ Basic Bedrk	☑ Valley Slope	☑ Forb	☐ Marsh
☐ Shallow Water	☐ Carb. Bedrk	☐ Tableland	☐ Lichen	☐ Swamp
☑ Surficial Dep.		☐ Roll. Upland	☐ Bryophyte	☐ Fen
☐ Bedrock		☐ Cliff	☐ Deciduous	☐ Bog
History		☐ Talus	☐ Coniferous	☐ Barren
☐ Natural		☐ Crevice/Cave	☐ Mixed	☑ Meadow
☑ Cultural		☐ Alvar		☐ Prairie
Cover		☐ Rockland		☐ Thicket
☑ Open		☐ Beach / Bar		☐ Savannah
☐ Shrub		☐ Sand Dune		☐ Woodland
☐ Treed		☐ Bluff		☐ Forest
				☐ Plantation

Stand Description

Layer	HT	CVR	Species in order of abundance (Canopy, Understory, Regeneration, Ground Layer)
1	2	1	Manitoba maple > red pine > Ash sp.
2			
3	3	1	Sumac
4	5	4	Solidago sp > Aster sp > red raspberry > Smooth Brome

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

Stand Composition	Size Class Analysis	<10	10-24	25-50	>50
	Numbers Stems	N			
BA:	Area(A) / Lower	N			

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

Oldh. Age: ☐ Pioneer ☑ Young ☐ Mid-Age ☐ Mature ☐ Old Growth

Location		Code	CUM1
Vegetation Type		Code	CUM1-1
Inclusions		Code	
Complex		Code	

Community Profile Diagram/Comments

Notes: Notes: Foundation from old Building

Tree Tally by Species

Plot: 2

Species						
TOTAL						100
PLOT TOTAL						
%						

Soils Ontario and ELC Soils Description

						Summary
Site Metrics		Pit/Auger #				
	UTM	Zone				Moisture Regime
		Easting				
		Northing				
	Slope	Position				
		Aspect				
		Percent				Drainage
		Slope Length				
Depth to...		Mottles				
		Gley				Effective Texture (indicate below)
		Water Table				
		Carbonates				
		Bedrock				

Soil Horizon Description									
	1	Depth from zero		% CF		% CF		% CF		% CF
		Texture							
	2	Depth from zero		% CF		% CF		% CF		% CF
		Texture							
	3	Depth from zero		% CF		% CF		% CF		% CF
		Texture							
	4	Depth from zero		% CF		% CF		% CF		% CF
		Texture							
		% Surface Stone/Rock							
	Moisture Regime								
	Drainage								

VASCULAR PLANT CHECKSHEET

Location: BW 480

Date: Oct 20, 2011

Observer: JD + TS

Job Number:

DICOT HERBS	1	2	3	4	5	6
Achillea millefolia						
Actaea pachypoda						
Actaea rubra						
Agalinus						
Agrimonia gryposepala						
Alliaria petiolata	✓					
Amaranthus retroflexus						
Ambrosia artemisiifolia						
Amphicarpaea bracteata						
Anaphalis margaritacea						
Anemone						
Anemone canadensis						
Anemone virginiana						
Antennaria neglecta						
Apocynum androsaemifolium						
Apocynum cannabinum						
Aquilegia canadensis						
Aralia nudicaulis						
Arctium minus						
Artemisia						
Asarum canadense						
Asclepias incarnata						
Asclepias syriaca						
Aster						
Aster cordifolius						
Aster ericoides						
Aster lanceolatus	✓					
Aster lateriflorus						
Aster macrophyllus						
Aster novae-angliae						
Aster puniceus						
Barbarea vulgaris						
Bidens cernua						
Bidens frondosa						
Boehmeria cylindrica						
Calitriche palustris						
Calystegia sepium						
Cardamine diphylla						
Cardamine						
Caulophyllum thalictroides						
Cerastium fontanum						
Ceratophyllum demersum						
Chelidonium majus						
Chenopodium album						
Chrysanth. leucanthemum						
Cichorium intybus						
Cicuta						
Circaea lutetiana						
Cirsium arvense						
Cirsium vulgare						
Clematis virginiana						
Clintonia borealis						
Conyza canadensis						
Coronilla varia						
Cynanchum rossicum						
Cynoglossum officinale						
Daucus carota						
Desmodium canadense						
Dianthus armeria						
Dipsacus fullonum						
Echinocystis lobata						
Echium vulgare						
Epilobium						
Epilobium ciliatum						
Epilobium hirsutum						
Epilobium parviflorum						

	1	2	3	4	5	6
Erigeron annuus						
Erigeron philadelphicus						
Erigeron strigosus						
Erysimum chieranthoides						
Eupatorium maculatum						
Eupatorium perfoliatum						
Eupatorium rugosum						
Euphorbia						
Eutrochia graminifolia						
Fragaria virginiana						
Fragaria vesca						
Galeopsis tetrahit						
Galium						
Galium						
Galium palustre						
Galium trifidum						
Geranium maculatum						
Geranium robertianum						
Geum aleppicum						
Geum canadense						
Geum						
Glecoma hederacea						
Hepatica acutiloba						
Hesperis matronalis						
Hieracium aurantiacum						
Hieracium caespitosum						
Hieracium						
Hydrophyllum virginianum						
Hypericum perforatum						
Impatiens capensis						
Inula helenium						
Lactuca						
Laportea canadensis						
Lapsana communis						
Leonurus cardiaca						
Lepidium						
Linaria vulgaris						
Lithospermum officinale						
Lobelia						
Lobelia inflata						
Lotus corniculatus						
Lycopus americanus						
Lycopus						
Lysimachia ciliata						
Lythrum salicaria						
Medicago lupulina	✓					
Medicago sativum						
Melilotus alba						
Mentha arvensis						
Mimulus ringens						
Mimulus ringens						
Mitella diphylla						
Monarda fistulosa						
Myosotis						
Nasturtium officinale						
Nepeta cataria						
Nuphar variegatum						
Nymphaea odorata						
Oenothera biennis						
Osmorhiza						
Oxalis stricta						
Phryma leptostachya						
Physalis heterophylla						

	1	2	3	4	5	6
Plantago lanceolata						
Plantago major						
Plantago rugelii						
Podophyllum peltatum						
Polygonum						
Polygonum						
Polygonum						
Polygonum lapathifolium						
Polygonum persicaria						
Potentilla						
Potentilla norvegica						
Potentilla recta						
Prenanthes alba						
Prunella vulgaris						
Pyrola elliptica						
Ranunculus						
Ranunculus abortivus						
Ranunculus acris						
Rudbeckia hirta						
Rumex acetosella						
Rumex crispus						
Rumex						
Sanguinaria canadensis						
Sanicula marilandica						
Saponaria officinalis						
Satureja vulgaris						
Scutellaria galericulata						
Silene vulgaris						
Sium suave						
Solanum dulcamara						
Solidago sp.		✓				
Solidago altissima						
Solidago caesia						
Solidago canadensis						
Solidago flexicaulis						
Solidago gigantea						
Solidago nemoralis						
Solidago rugosa						
Sonchus arvensis						
Sonchus asper						
Stellaria						
Taraxacum vulgare						
Taraxacum officinale		✓				
Thalictrum dioicum						
Thelypteris palustris						
Tiarella cordifolia						
Tragopogon pratensis						
Trientalis borealis						
Trifolium						
Trifolium pratense						
Trifolium repens						
Tussilago farfara						
Urtica dioica						
Utricularia vulgaris						
Verbascum thapsus						
Verbena hastata						
Verbena urticifolia						
Veronica						
Veronica officinalis						
Vicia cracca						
Vicia tetraspema						
Viola						
Viola						
Viola pubescens						
Viola sororia						
Dym-Tester		✓				

MONOCOT HERBS	1	2	3	4	5	6
Alisma plantago-aquatica						
Allium tricoccum						
Allium						
Arisaema triphyllum						
Asparagus officinalis						
Calla palustris						
Cibotorium borealis						
Convallaria majus						
Cypripedium calceolus						
Elodea canadensis						
Epipactis helleborine						
Erythronium americanum						
Hemerocallis fulva						
Iris versicolor						
Lemna minor						
Lemna trisulca						
Lilium						
Maianthemum canadense						
Maianthemum racemosa						
Maianthemum stellata						
Platanthera						
Pontederia cordata						
Polygonatum pubescens						
Potamogeton crispus						
Potamogeton pectinatus						
Potamogeton						
Potamogeton						
Potamogeton						
Sagittaria latifolia						
Sparganium monopsium						
Smilax herbacea						
Spiranthes cernua						
Spirodela polyrhiza						
Streptopus roseus						
Trillium erectum						
Trillium grandiflorum						
Uvularia grandiflora						

SITE LOCATIONS

1: _____

2: _____

3: _____

4: _____

5: _____

6: _____

I	CONIFERS	1	2	3	4	5	6
	Abies balsamea						
	Juniperus communis						
	Juniperus virginiana						
	Larix laricina						
	Picea abies						
	Picea glauca						
	Pinus resinosa	✓					
	Pinus strobus						
	Pinus sylvestris						
	Thuja occidentalis						
	Tsuga canadensis						

I	TREES and SHRUBS	1	2	3	4	5	6
	Acer negundo	✓					
	Acer rubrum						
	Acer saccharinum						
	Acer saccharum						
	Acer spicatum						
	Alnus rugosa						
	Amelanchier						
	Berberis thunbergii						
	Betula alleghaniensis						
	Betula papyrifera						
	Carpinus caroliniana						
	Carya cordiformis						
	Celastrus scandens						
	Cornus alternifolia						
	Cornus amomum						
	Cornus rugosa						
	Cornus stolonifera						
	Corylus cornuta						
	Crataegus monogyna						
	Crataegus punctata						
	Crataegus sp.						
	Crataegus						
	Diervilla lonicera						
	Fagus grandifolia						
	Fraxinus ~~americana~~ sp.	✓					
	Fraxinus nigra						
	Fraxinus pennsylvanica						
	Ilex verticillata						
	Juglans cinerea						
	Juglans nigra						
	Lonicera morrowi						
	Lonicera tatarica						
	Lonicera						
	Malus pumila						
	Ostrya virginiana						
	Parthenocissus inserta						
	Populus balsamifera						
	Populus grandidentata						
	Populus tremuloides						
	Populus						
	Prunus pensylvanica						
	Prunus serotina						
	Prunus virginiana						
	Prunus						
	Quercus macrocarpa						
	Quercus rubra						
	Quercus						
	Rhamnus cathartica	✓					
	Rhus radicans						
	Rhus typhina						
	Ribes americana						
	Ribes cynosbati						
	Ribes x rubrum						
	Robinia pseudo-acacia						
	Rhus hirta	✓					

I	TREES and SHRUBS	1	2	3	4	5	6
+	Rosa multiflora						
	Rosa						
	Rubus allegheniensis						
	Rubus idaeus	✓					
	Rubus occidentalis						
	Rubus odoratus						
	Rubus pubescens						
	Salix alba						
	Salix amygdaloides						
	Salix bebbiana						
+	Salix discolor						
	Salix eriocephala						
	Salix exigua						
	Salix lucida						
	Salix petiolaris						
+	Salix purpurea						
	Salix x rubens						
+	Salix						
	Sambucus canadensis						
	Sambucus racemosa						
	Sorbus aucuparia						
	Spiraea alba						
	Syringa vulgaris						
+	Tilia americana						
	Ulmus americana						
	Ulmus						
	Vaccinium						
	Viburnum lentago						
	Viburnum opulus						
	Viburnum						
	Vitis riparia						

I	FERNS	1	2	3	4	5	6
	Adiantum pedatum						
	Athyrium filix-femina						
	Botrychium multifidum						
	Botrychium virginianum						
	Cystopteris bulbifera						
	Dryopteris carthusiana						
	Dryopteris cristata						
	Dryopteris marginalis						
	Dryopteris						
	Equisetum arvense						
	Equisetum hyemale						
	Equisetum variegatum						
	Equisetum						
	Gymnocarpium dryopteris						
	Lycopodium digitatum						
	Lycopodium obscurum						
	Lycopodium						
	Lycopodium						
	Matteucia struthiopteris						
	Onoclea sensibilis						
	Osmunda cinnamonia						
	Osmunda regalis						
	Polystichum acrostichoides						
	Pteridium aquilinum						
	Thelypteris palustris						

I	GRAMINOIDS	1	2	3	4	5	6
	Agrostis gigantea						
	Agrostis stolonifera						
	Agropyron repens						
	Alopecuris						
	Bromus inermis	✓					
	Calamagrostis canadensis						
	Carex arctata						
	Carex aurea						
	Carex bebbii						
	Carex blanda						
	Carex gracillima						
	Carex granularis						
	Carex hystericina						
	Carex pensylvanica						
	Carex radiata						
	Carex retrorsa						
	Carex stipata						
	Carex stricta						
	Carex vulpinoidea						
	Carex						
	Carex						
	Carex						
	Carex						
	Carex						
	Carex						
	Carex						
	Carex						
	Carex						
	Cyperus						
	Cyperus						
	Dactylis glomerata						
	Danthonia spicata						
	Echinochloa crus-galli						
	Eleocharis erythropoda						
	Eleocharis						
	Elymus virginicus						
	Elymus						
	Festuca arundinacea						
	Glyceria striata						
	Glyceria						
	Juncus dudleyi						
	Juncus effusus						
	Juncus tenuis						
	Juncus						
	Juncus						
	Leersia oryzoides						
	Muhlenbergia						
	Oryzopsis asperifolia						
	Panicum						
	Panicum						
	Phalaris arundinacea	✓					
	Phleum pratense						
	Phragmites australis						
	Poa compressa						
	Poa pratensis						
	Poa						
	Scirpus atrovirens						
	Scirpus cyperinus						
	Scirpus validus						
	Scirpus						
	Scirpus						
	Setaria						
	Sparganium						
	Typha angustifolia						
	Typha latifolia						
	Typha Xglauca						

ELC WILDLIFE	SITE: RW 480	
	POLYGON:	
	DATE: oct 20, 2011	
	SURVEYORS: JDLS	
	START TIME:	END TIME:

TEMP (°C): 14°C	CLOUD (10th): overcast	WIND: 20	PRECIPITATION: Rain
CONDITIONS: Windy, Rain			

POTENTIAL WILDLIFE HABITAT:

	VERNAL POOLS		SNAGS
	HIBERNACULA		FALLEN LOGS

SPECIES LIST:

TY	SP. CODE	EV	NOTES	#	TY	SP. CODE	EV	NOTES	#

FAUNAL TYPE CODES (TY):

B = BIRD M = MAMMAL H = HERPETOFAUNA L = LEPIDOPTERA F = FISH O = OTHER

EVIDENCE CODES (EV):

BREEDING BIRD - POSSIBLE:

SH = SUITABLE HABITAT SM = SINGING MALE

BREEDING BIRD - PROBABLE:

T = TERRITORY D = DISPLAY P = PAIR
A = ANXIETY BEHAVIOUR N = NEST BUILDING V = VISITING NEST

BREEDING BIRD - CONFIRMED:

DD = DISTRACTION NU = USED NEST FY = FLEDGED YOUNG
NE = EGGS NY = YOUNG FS = FOOD/FECAL SACK
AE = NEST ENTRY

OTHER WILDLIFE EVIDENCE:

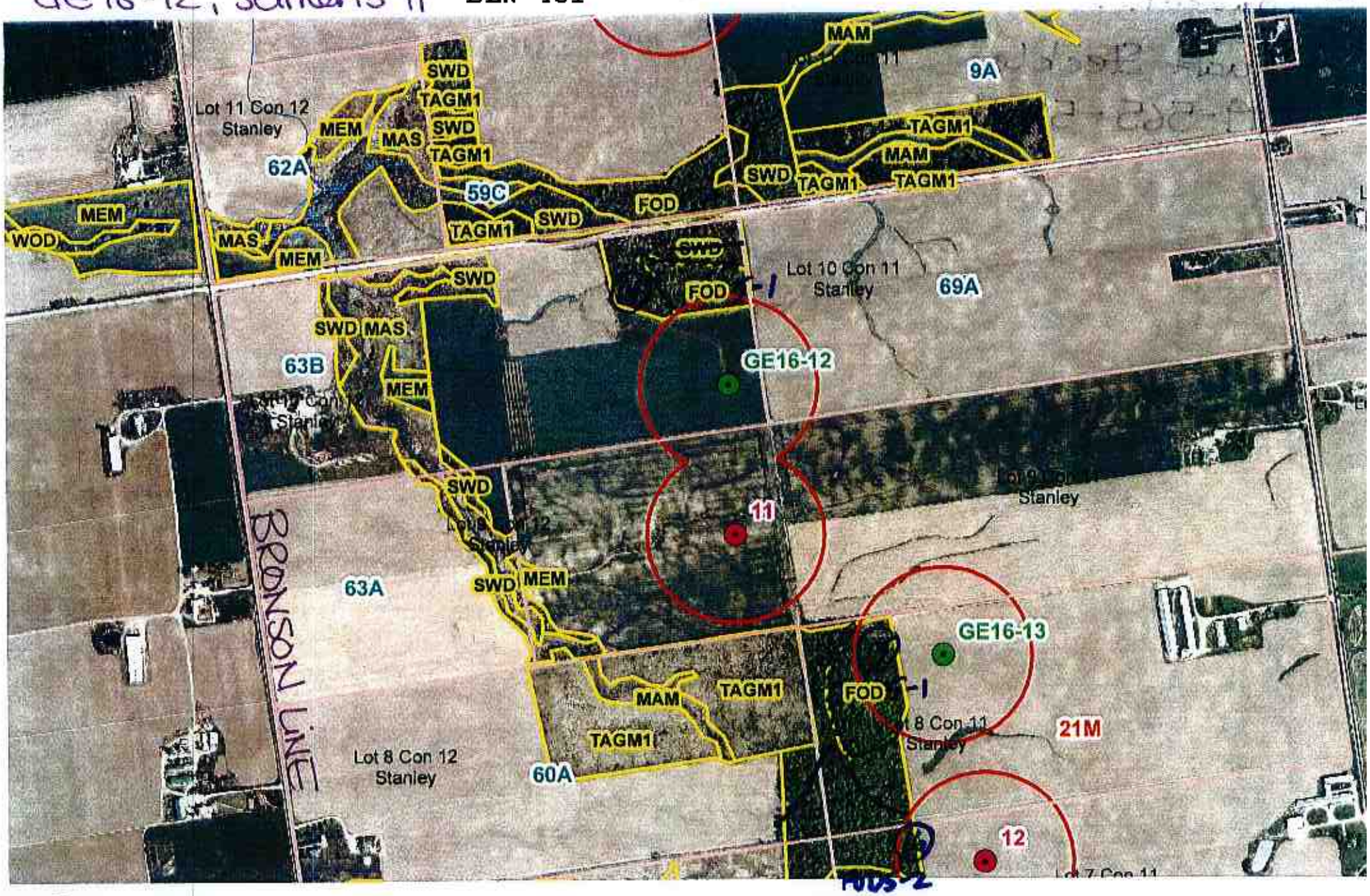
OB = OBSERVED VO = VOCALIZATION CA = CARCASS
DP = DISTINCTIVE PARTS HO = HOUSE/DEN FY = EGGS/YOUNG
TK = TRACKS FE = FEEDING EVIDENCE SC = SCAT
SI = OTHER SIGNS (specify)

Turbine ID

GE 16-12, Seimens 11

BLW-481

Blue '5 fig.



Access: via Bronson Line and property 63B.

COPY 1 of 2

481

ELC Community Description and Classification

Site: BLW-481		Polygon: 14	
Surveyor(s): DJ	Date:	Time start:	
		finish: 1349	
UTMZ:	UTMZ:	UTMN:	

Polygon Description

System	Substrate	Topographic Feature	Plant Form	Community
☒ Terrestrial	☐ Organic	☐ Lacustrine	☐ Plankton	☐ Lake
☐ Wetland	☒ Mineral Soil	☐ Riverine	☐ Submerged	☐ Pond
☐ Aquatic	☐ Parent Min.	☐ Bottomland	☐ Floating-LVD.	☐ River
Site	☐ Acidic Bedrk	☐ Terrace	☐ Graminoid	☐ Stream
☐ Open Water	☐ Basic Bedrk	☐ Valley Slope	☐ Forb	☐ Marsh
☐ Shallow Water	☐ Carb. Bedrk	☒ Tableland	☐ Lichen	☐ Swamp
☒ Surficial Dep.		☐ Roll. Upland	☐ Bryophyte	☐ Fen
☐ Bedrock		☐ Cliff	☒ Deciduous	☐ Bog
History		☐ Talus	☐ Coniferous	☐ Barren
☒ Natural		☐ Crevice/Cave	☐ Mixed	☐ Meadow
☐ Cultural		☐ Alvar		☐ Prairie
Cover		☐ Rockland		☐ Thicket
☐ Open		☐ Beach / Bar		☐ Savannah
☐ Shrub		☐ Sand Dune		☐ Woodland
☒ Treed		☐ Bluff		☒ Forest
				☐ Plantation

Stand Description

Layer	HT	CVR	Species In Order of Decreasing Dominance (up to 4 sp) (>> Much Greater Than; > Greater Than; = About Equal To)
1	1	2,3	ACESACC > FRAAMER
2	2	3	PRUVIRG
3	3	2	SAMRACE
4	6	4	ERYAMER > GEUCANA = VIOPUBE

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

Stand Composition:	Size Class Analysis:	<10	10-24	25-50	>50
		O	R	N	N
BA:	Standing Snags:	R	N	N	N
	Deadfall / Logs:	R	N	N	N

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

Com. Age: ___ Pioneer ___ Young ✓ Mid-Age ___ Mature ___ Old Growth

Ecosite:	Dry-fresh sugar maple Deciduous Forest	Code:	FODS
Vegetation Type:	Dry-fresh sugar maple Deciduous Forest type	Code:	FODS-1
Inclusion:		Code:	
Complex:		Code:	

Community Profile Diagram/Comments

Notes:

Tree Tally by Species

Prism Factor: 2

Species	Tally 1	Tally 2	Tally 3	Tally 4	Total	Rel. Avg.
Total						100
Basal Area (BA)						
Dead						

Soils Ontario and ELC Soils Description

									Summary
	Pit/Auger #		1						
Site Metrics – UTM	Zone		17						Moisture Regime
	Easting		[illegible]						
	Northing		[illegible]						
Site Metrics – Slope	Position								
	Aspect		[illegible]						Drainage
	Percent		[illegible]						
	Slope Length		2						
Depth to...	Mottles		N/A						
	Gley		N/A						Effective Texture (indicate below)
	Water Table		>[illegible]						
	Carbonates		>[illegible]						
	Bedrock		>[illegible]						
Soil Horizon Description 1	Depth from zero		[illegible]	% CF		% CF		% CF	% CF
	Texture								
2	Depth from zero		[illegible]	% CF		% CF		% CF	% CF
	Texture		SL						
3	Depth from zero			% CF		% CF		% CF	% CF
	Texture								
4	Depth from zero			% CF		% CF		% CF	% CF
	Texture								
	% Surface Stone/Rock		0						
	Moisture Regime		2						
	Drainage		3						

ELC Plant Checklist

Status	Species	R	O	C	D
	TREES and SHRUBS				
	Abies balsamea				
	Acer negundo				
	Acer rubrum				
	Acer saccharinum			✓	
	Acer saccharum				
	Acer spicatum				
	Alnus rugosa				
	Amelanchier				
-	Berberis thunbergii				
	Betula alleghaniensis				
	Betula papyrifera				
	Carpinus caroliniana				
	Carya cordiformis				
	Cornus alternifolia				
	Cornus amomum				
	Cornus rugosa				
	Cornus stolonifera				
	Corylus cornuta				
	Crataegus [illegible]				
	Crataegus macracantha				
+	Crataegus monogyna				
	Crataegus submollis				
	Crataegus				
	Diervilla lonicera				
	Fagus grandifolia				
	Fraxinus americana		✓		
	Fraxinus nigra				
	Fraxinus pennsylvanica				
	Ilex verticillata				
	Juglans cinerea				
	Juglans nigra				
	Juniperus communis				
	Juniperus virginiana				
	Larix laricina				
	Lonicera				
	Lonicera canadensis				
+	Lonicera tatarica				
+	Malus pumila				
	Ostrya virginiana				
	Parthenocissus inserta				
-	Picea abies				
	Picea glauca				
	Pinus resinosa				
	Pinus strobus				
-	Pinus sylvestris				
	Populus balsamifera				
	Populus grandidentata				
	Populus tremuloides				
	Prunus pensylvanica				
	Prunus serotina		✓		
	Prunus virginiana				
	Quercus macrocarpa				
	Quercus rubra				
+	Rhamnus cathartica				
	Rhus radicans				
	Rhus typhina				
	Ribes americanum				
	Ribes cynosbati				
+	Ribes x rubrum DBK				
-	Robinia pseudo-acacia				
+	Rosa multiflora				
	Rubus idaeus ssp. strigosus				
	Rubus occidentalis				
	Rubus odoratus				
	Rubus pubescens				
	Salix bebbiana				
	Salix discolor				
	Salix petiolaris				
	Salix x rubens				
	Salix				
	Salix				
	Sambucus canadensis				
	Sambucus racemosa	✓			

Status	Species	R	O	C	D
+	Sorbus aucuparia				
	Spiraea alba				
+	Syringa vulgaris				
	Thuja occidentalis				
	Tilia americana				
	Tsuga canadensis				
	Ulmus americana				
	Ulmus				
	Viburnum lentago				
	Viburnum opulus				
	Viburnum trilobum				
	Viburnum				
	Vitis riparia				
	HERBACEOUS PLANTS				
	Achillea millefolium				
	Actaea pachypoda				
	Actaea rubra				
	Agalinus				
	Agrimonia gryposepala				
+	Alliaria petiolata		✓		
	Alisma plantago-aquatica		✓		
	Allium tricoccum				
	Ambrosia artemisiifolia				
	Anemone canadensis				
	Anemone virginiana = A. riparia				
	Anemone acutiloba				
	Apocynum androsaemifolium				
	Apocynum cannabinum				
	Aquilegia canadensis				
	Aralia nudicaulis				
-	Arctium minus				
	Arisaema triphyllum		✓		
	Asarum canadense	✓			
	Asclepias syriaca				
	Aster				
	Aster cordifolius				
	Aster ericoides				
	Aster lanceolatus				
	Aster lateriflorus				
	Aster macrophyllus	✓			
	Aster novae-angliae				
	Aster puniceus				
+	Barbarea vulgaris				
	Bidens cernua				
	Bidens frondosa				
	Caltha palustris				
	Callitriche palustris = C. verna				
	Calystegia				
	Cardamine diphylla				
	Cardamine laciniata				
	Caulophyllum thalictroides	✓			
+	Cerastium fontanum				
	Cerastium				
	Ceratophyllum demersum				
+	Chelidonium majus				
-	Chenopodium album				
	Chimaphila umbellata				
-	Chrysanthemum leucanthemum				
+	Cichorium intybus				
	Cicuta bulbifera				
	Cicuta maculata				
	Circaea lutetiana	✓			
-	Cirsium arvense				
+	Cirsium vulgare				
	Clematis virginiana				
-	Convallaria majalis				
	Cypripedium calceolus var parviflorum				
-	Daucus carota				
+	Dipsacus sylvestris				
	Echinocystis lobata				
+	Echium vulgare				
	Elodea canadensis				
	Epifagus virginiana				

Status	Species	R	O	C	D
	Epilobium angustifolium				
+	Epilobium hirsutum				
	Epilobium				
	Epipactis helleborine				
	Equisetum arvense				
	Erigeron annuus				
	Erigeron philadelphicus				
	Erigeron strigosus				
+	Erysimum cheiranthoides				
	Erythronium americanum			✓	
	Eupatorium maculatum				
	Eupatorium perfoliatum				
	Eupatorium rugosum				
-	Euphorbia cyparissias				
	Euthamia graminifolia				
	Fragaria vesca				
	Fragaria virginiana				
-	Galeopsis tetrahit				
	Galium aparine				
	Galium palustre				
	Galium triflorum				
	Galium				
	Geranium maculatum				
	Geranium robertianum				
	Geum aleppicum				
	Geum canadense		✓		
+	Hieracium				
-	Hieracium aurantiacum				
+	Hieracium caespitosum				
	Hydrophyllum canadense				
	Hydrophyllum virginianum				
-	Hypericum perforatum				
	Impatiens capensis				
+	Inula helenium				
	Iris versicolor				
+	Lactuca				
	Laportea canadensis				
	Lemna minor				
-	Linaria vulgaris				
-	Lithospermum officinale				
	Lobelia inflata				
	Lycopus americanus				
	Lysimachia ciliata				
+	Lysimachia nummularia				
+	Lythrum salicaria				
	Maianthemum canadense				
	Maianthemum racemosa				
	Maianthemum stellatum				
	Medeola virginiana				
-	Medicago lupulina				
+	Melilotus alba				
	Mentha arvensis				
	Mimulus ringens				
	Mitchella repens				
	Mitella diphylla				
	Monotropa uniflora				
-	Nasturtium officinale				
-	Nepeta cataria				
	Nuphar variegatum				
	Nymphaea odorata				
	Oenothera biennis				
-	Osmorhiza				
+	Oxalis				
	Phryma leptostachya				
-	Plantago lanceolata				
-	Plantago major				
	Podophyllum peltatum				
	Polygonatum pubescens				
	Polygonum persicaria				
	Polygonum punctatum				
	Potamogeton pectinatus				
	Potamogeton richardsonii				
+	Potentilla norvegica				
-	Potentilla recta				
+	Prunella vulgaris				

Status	Species	R	O	C	D
	Pyrola elliptica				
	Ranunculus abortivus				
-	Ranunculus acris				
	Ranunculus longirostris				
	Ranunculus recurvatus				
	Rudbeckia hirta				
	Rumex				
+	Rumex acetosella				
	Rumex crispus				
	Rumex orbiculatus				
	Sagittaria latifolia				
	Sanguinaria canadensis L.				
	Sanicula marilandica				
	Scutellaria				
+	Silene vulgaris				
	Sisyrinchium montanum				
	Sium suave				
	Smilax herbacea				
+	Solanum dulcamara				
	Solidago altissima				
	Solidago flexicaulis		✓		
	Solidago gigantea				
	Solidago				
+	Sonchus arvensis				
+	Sonchus asper				
	Spirodela polyrhiza				
+	Stellaria				
	Streptopus roseus				
-	Taraxacum officinale				
	Thalictrum dioicum				
	Thalictrum pubescens				
	Tiarella cordifolia				
-	Tragopogon pratensis				
	Trientalis borealis				
+	Trifolium hybridum				
+	Trifolium pratense				
	Trifolium				
	Trillium erectum				
	Trillium grandiflorum				
+	Tussilago farfara				
	Urtica dioica				
	Utricularia vulgaris				
	Uvularia grandiflora				
	Vaccinium				
	Verbascum thapsus				
	Verbena hastata				
	Verbena urticifolia				
	Veronica anagallis-aquatica				
+	Veronica				
+	Vicia cracca				
+	Vicia tetrasperma				
	Viola canadensis				
	Viola conspersa				
	Viola cucullata				
	Viola pubescens		✓		
	Viola sororia				
	Waldsteinia fragarioides				
	FERNS				
	Adiantum pedatum				
	Athyrium filix-femina ssp. angustum				
	Botrychium multifidum				
	Botrychium virginianum				
	Cystopteris bulbifera				
	Dryopteris carthusiana				
	Dryopteris cristata				
	Dryopteris marginalis				
	Dryopteris				
	Equisetum arvense				
	Equisetum fluviatile				
	Equisetum hyemale				
	Equisetum variegatum				
	Equisetum				
	Gymnocarpium dryopteris				
	Lycopodium annotinum				

Status	Species	R	O	C	D
	Lycopodium clavatum				
	Lycopodium digitatum				
	Lycopodium obscurum				
	Matteuccia struthiopteris				
	Onoclea sensibilis				
	Osmunda cinnamomea				
	Osmunda regalis				
	Polystichum acrostichoides				
	Pteridium aquilinum				
	Thelypteris palustris				
	GRAMINOIDS				
	Agrostis gigantea				
	Agrostis stolonifera				
	Alopecurus				
	Bromus inermis				
	Calamagrostis canadensis				
	Carex arctata				
	Carex aurea				
	Carex bebbii				
	Carex blanda				
	Carex interior				
	Carex projecta				
	Carex gracillima				
	Carex hystericina				
	Carex lacustris				
	Carex lanuginosa				
	Carex lupulina				
	Carex pensylvanica				
	Carex plantaginea				
	Carex radiata = C. rosea				
	Carex retrorsa				
	Carex siccata				
	Carex stipata				
	Carex stricta				
	Carex vulpinoidea				
	Carex				
	Carex				
	Carex				
	Carex				
	Carex				
	Cyperus				
	Cyperus				
	Dactylis glomerata				
	Eleocharis				
	Eleocharis acicularis				
	Eleocharis erythropoda				
	Elymus repens				
	Elymus				
	Festuca arundinacea				
	Festuca rubra				
	Glyceria striata				
	Glyceria				
	Juncus dudleyi				
	Juncus effusus				
	Juncus tenuis				
	Juncus				
	Juncus				
	Leersia oryzoides				
	Muhlenbergia				
	Oryzopsis asperifolia				
	Panicum				
	Panicum				
	Phalaris arundinacea				
	Phleum pratense				
	Phragmites australis				
	Poa compressa				
	Poa pratensis				
	Poa				
	Scirpus atrovirens				
	Scirpus				
	Sparganium				
	Typha angustifolia				
	Typha latifolia				
	Typha x glauca				