Stantec Consulting Ltd.
70-1 Southgate Drive
Guelph, Ontario, Canada
N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

Wildlife Habitat Assessment

Project Number: 160960577

Project Name: Samsung

Date / Time: 30-Sept-2010

Field Personnel: Melissa Straus

Weather Conditions:	Temp:	Wind:	Cloud:	PPT:	PPT in last 24 hrs:
	13°C	2	100%	none	none

Reptile Hibernacula Features i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)

Does the site contain potential reptile hibernacula features? ☐ Yes ☒ No (if yes, describe details in Table 1).

Bat Hibernacula Features i.e. karst topography, abandoned mines or caves

Does the site contain potential bat hibernacula features? ☐ Yes ☒ No (if yes, describe details in Table 1).

Table 1: Potential bat/reptile hibernacula features identified on site

UTM	Feature type	Photo #	Description	Species observed using feature

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.e. AMRO/VO BLJA/VO HAWA/VO RBWO/OB YBSA/VO SOSP/OB NOFL/OB WBNU/OB GCKI/OB AMRO/OB POWO/OB CEDW/OB HAWO/VO NOCA/OB NOHA/OB BCCH/OB WTSP/VO	Deer - TK Raccoon - TK, HO, OB Grey Squirrel OB			

Feature 42

Woodland Assessment- *complete 1 assessment for each woodland*

Woodlot # (indicate on map) : A

Approximate age of stand 40-50 years

Are large (i.e. >40cmDBH and >25m tall) **trees present** ☒ Yes ☐ No
If yes, approximate # present or % of stand ~5%; Mostly in ELC #4; Large Queen
Location in stand (i.e throughout, in west side only, in FOD2-6 only etc..) _____

Are snags present? ☒ Yes ☐ No
If yes provide characterization of number present, height and DBH of snags and indicate if they contain loose bark: ① 1m, 15cm, no ② 20m, 25cm, no ③ 15cm, 20cm, yes, ~10 trees/ha throughout but heavier in Be dominate areas (i.e, #4) 45cm; no loose bark; 25m Overall: snags average 20-35cm DBH; hts 2 - 20m; loose bark on some

Trees with cavities present? ☐ No ☐ Rare ☒ Occasional ☐ Abundant
If present:

	Height ranges of tree	Range of Tree DBH	Range of Cavity Heights	Cavity sizes (approx. diameter)
Snags (no loose bark)	3-8m	40cm	0-7	hollow - med
(snag)	1-2m	30cm	0-2	hollow, small
live trees w dens	25m	25-30	0	hollow

Presence of large stick nests (i.e. raptor nests)? ☐ Yes ☒ No
If yes, UTM and describe tree type, height and position in tree, size of nest, species present

Evidence of disturbance? (i.e logging, roads, paths, ATV use, trails) ☒ Yes ☐ No
If yes, describe just @ edges some debris, some light trails, evidence of old logging

Seeps/ springs present? ☐ Yes ☒ No If yes,

Seep/Spring #	UTM	Description	Surrounding Habitat

Vernal Pools Present? ☐ Yes ☒ No If yes,

#	Location	Depth of water	Size of pool (diameter)	Presence of emergent/submergent veg?	Presence of shrubs, logs at pond edge
1	599362 4748230	<5cm	3x5m	none	none

FOD6-5

Feature 42

Woodland Assessment- *complete 1 assessment for each woodland* 30-Sept-2016

Woodlot # (indicate on map) : B

Approximate age of stand 35 years

Are large (i.e. >40cmDBH and >25m tall) **trees present** ☐ Yes ☒ No
If yes, approximate # present or % of stand _____
Location in stand (i.e throughout, in west side only, in FOD2-6 only etc..) _____

Are snags present? ☒ Yes ☐ No
If yes provide characterization of number present, height and DBH of snags and indicate if they contain loose bark. 2m↑ to 20m↑, FAGGRAN mostly, loosebark on some

Trees with cavities present? ☐ No ☐ Rare ☒ Occasional ☐ Abundant
If present:

	Height ranges of tree	Range of Tree DBH	Range of Cavity Heights	Cavity sizes (approx. diameter)
	2↑-20m↑	10cm - 35cm	0-10	large (dens) - Small Bcclt holes

Presence of large stick nests (i.e. raptor nests)? ☐ Yes ☒ No
If yes, UTM and describe tree type, height and position in tree, size of nest, species present

Evidence of disturbance? (i.e logging, roads, paths, ATV use, trails) ☒ Yes ☐ No
If yes, describe light trail

Seeps/ springs present? ☐ Yes ☒ No If yes,

Seep/Spring #	UTM	Description	Surrounding Habitat

Vernal Pools Present? ☐ Yes ☒ No If yes,

#	Location	Depth of water	Size of pool (diameter)	Presence of emergent/submergent veg?	Presence of shrubs, logs at pond edge

Stantec	Stantec Consulting Ltd. 70-1 Southgate Drive Guelph, Ontario, Canada N1G 4P5 Tel: (519) 836-6050 Fax: (519) 836-2493	**Wildlife Habitat Assessment**

Project Number			Project Name:		
Date / Time:			Field Personnel:		
Weather Conditions:	Temp:	Wind:	Cloud:	PPT:	PPT in last 24 hrs:

Reptile Hibernacula Features i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)

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Bat Hibernacula Features i.e. karst topography, abandoned mines or caves

Does the site contain potential bat hibernacula features? ☐ Yes ☐ No (if yes, describe details in Table 1).

Table 1: Potential bat/reptile hibernacula features identified on site

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Birds	Mammals	Herps	Butterflies / Dragonflies	Other
i.e. AMRO/VO				

ELC COMMUNITY DESCRIPTION & CLASSIFICATION

SITE: Samsung		POLYGON: #1	
SURVEYOR(S): MS	DATE: 30-Sept-2010	UTMZ:	UTME:
START: 09:45	END: 11:00		UTMN:

POLYGON DESCRIPTION

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
☒ TERRESTRIAL ☐ WETLAND ☐ AQUATIC	☐ ORGANIC ☒ MINERAL SOIL ☐ PARENT MIN. ☐ ACIDIC BEDRK. ☐ BASIC BEDRK. ☐ CARB. BEDRK.	☐ LACUSTRINE ☐ RIVERINE ☐ BOTTOMLAND ☐ TERRACE ☐ VALLEY SLOPE ☒ TABLELAND ☐ ROLL. UPLAND ☐ CLIFF ☐ TALUS ☐ CREVICE / CAVE ☐ ALVAR ☐ ROCKLAND ☐ BEACH / BAR ☐ SAND DUNE ☐ BLUFF	☒ NATURAL ☐ CULTURAL	☐ PLANKTON ☐ SUBMERGED ☐ FLOATING-LVD. ☐ GRAMINOID ☐ FORB ☐ LICHEN ☐ BRYOPHYTE ☐ DECIDUOUS ☐ CONIFEROUS ☒ MIXED	☐ LAKE ☐ POND ☐ RIVER ☐ STREAM ☐ MARSH ☐ SWAMP ☐ FEN ☐ BOG ☐ BARREN ☐ MEADOW ☐ PRAIRIE ☐ THICKET ☐ SAVANNAH ☐ WOODLAND ☐ FOREST ☒ PLANTATION

SITE	COVER
☐ OPEN WATER ☐ SHALLOW WATER ☒ SURFICIAL DEP. ☐ BEDROCK	☐ OPEN ☐ SHRUB ☒ TREED

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	2	4	PINSTRO > PICABI(?) > FRAPENN
2	SUB-CANOPY			
3	UNDERSTOREY			
4	GRD. LAYER	5-7	4	Goldenrod > [illegible]

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:	A	< 10	O	10 - 24	N	25 - 50	N	> 50
STANDING SNAGS:	N	< 10	N	10 - 24	N	25 - 50	N	> 50
DEADFALL / LOGS:	N	< 10	N	10 - 24	N	25 - 50	N	> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :		PIONEER	☒	YOUNG		MID-AGE		MATURE		OLD GROWTH

SOIL ANALYSIS:

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

COMMUNITYCLASSIFICATION:

COMMUNITY CLASS: Cultural	CODE: CU
COMMUNITY SERIES: Cultural Plantation	CODE: CUP
ECOSITE: Mixed Plantation	CODE: CUP3
VEGETATION TYPE: White Pine - Norway/White Spruce * Tree Farm Plantation	CODE: CUP3-12*
INCLUSION	CODE:
COMPLEX	CODE:

Notes:

Pic

Feature 42

ELC PLANT SPECIES LIST

SITE:	Samsung
POLYGON:	#1 - Field Map 8
DATE:	30-Sept-2010
SURVEYOR(S):	Melissa Straus

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 1	2	3	4	COLL.	SPECIES CODE	LAYER 1	2	3	4	COLL.
PICGLAU	O	—				Teasel				O	
FRAAMER	OA	—				~~Aster~~				A	
PICABIE	A	—				Flat top White Aster				A	
PINSTRO	A	—				Wild Carrot				A	
QUERUBR	R	—				Birds Foot Trefoil				O	
						Reed Canary Grass				O	
						Scirpus sp				R	
RUBIDEA		—	O	—		Goldenrod sp.		—	—	A	

ELC
COMMUNITY DESCRIPTION & CLASSIFICATION

SITE:		POLYGON:	
SURVEYOR(S):	DATE:	UTME:	
START:	END	UTMZ:	UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

LAYER		HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY			
2	SUB-CANOPY			
3	UNDERSTOREY			
4	GRD. LAYER			

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:		< 10		10 - 24		25 - 50		> 50
STANDING SNAGS:		< 10		10 - 24		25 - 50		> 50
DEADFALL / LOGS:		< 10		10 - 24		25 - 50		> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :		PIONEER		YOUNG		MID-AGE		MATURE		OLD GROWTH

SOIL ANALYSIS:

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

COMMUNITYCLASSIFICATION:

COMMUNITY CLASS:	CODE:
COMMUNITY SERIES:	CODE:
ECOSITE:	CODE:
VEGETATION TYPE:	CODE:
INCLUSION	CODE:
COMPLEX	CODE:

Notes:

ELC
PLANT SPECIES LIST

SITE:	
POLYGON:	
DATE:	
SURVEYOR(S):	

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 1	LAYER 2	LAYER 3	LAYER 4	COLL.	SPECIES CODE	LAYER 1	LAYER 2	LAYER 3	LAYER 4	COLL.

Feature 42

ELC — COMMUNITY DESCRIPTION & CLASSIFICATION

SITE: Samsung | POLYGON: 2
SURVEYOR(S): MS | DATE: 30-Sept-2010 | UTME:
START: | END | UTMZ: | UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	1	4	ACERUB = CARLAT > FAGGRAN
2	SUB-CANOPY	2	4	Shag = FAGGRAN < ACERUB
3	UNDERSTOREY	3-4	4	ACESACS < FAGGRAN
4	GRD. LAYER	5-7	3	ASTMACC > 10 sp. > Poison Ivy

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:	A	< 10	O	10 - 24	O	25 - 50	R	> 50
STANDING SNAGS:	R	< 10	O	10 - 24	O	25 - 50	R	> 50
DEADFALL / LOGS:	R	< 10	A	10 - 24	O	25 - 50	R	> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE:		PIONEER		YOUNG	X	MID-AGE		MATURE		OLD GROWTH

~ logging 30's

SOIL ANALYSIS:

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

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS:	Forest	CODE: FO
COMMUNITY SERIES:	Deciduous Forest	CODE: FOD
ECOSITE:	Fresh-Moist Oak-Maple-Hickory	CODE: FOD9
VEGETATION TYPE:	F-M Shagbark Hickory Dec. Forest	CODE: FOD9-4
INCLUSION	Swamp Maple Mineral	CODE: SWD 3-3
COMPLEX	Deciduous Swamp	CODE:

Notes:

Pic 1568

ELC — PLANT SPECIES LIST

SITE: Samsung
POLYGON: 2 - Field Map 8
DATE: 30-Sept-2010
SURVEYOR(S): Melissa Straus

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

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

dense understory

many tree sp. in canopy - lots of CARLAT

Inclusion (I) on map

SPECIES CODE	LAYER 1	2	3	4	COLL.
Shag Hickory	O	R	R	R	
FAGGRAN	O	R	—	—	
OSTVIRG	-	-	O		
ACESACS	O				
FRAMMER	R				
TILAME	R				
PRAPENN	R				
ACERUBR	O	O	R	-	
ACEFREE	R	R	—		
QUEBICO	R	R	—		
FRANIGR	R	R	R	-	
QUERUBR	O	R	—		
ULMAMER	-	R	R		
QUEALBA	R	—			
Hawthorn	—	—	R	-	
Blue Beech	—	—	R	-	
FRAPURG	—	—	—	O	
PRUVIRG	—	—	R	R	

SPECIES CODE	LAYER 1	2	3	4	COLL.
Christmas Fern	—	—	—	R	
[illegible]	—	—	—	O	
Round L. Hepatica	—	—	—	R	
Virginia Creeper	—	—	—	R	
Rose-twisted Stalk	—	—	—	R	
Hog Peanut				R	
Wood Nettle				R	
Poison Ivy				O	
Beech Drops				R	
Sensitive Fern				R	
Water Hemlock				R	
Violasp.	—	—	—	O	
Buttercup sp.	—	—	—	O	

Inc.

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE:		POLYGON:	
	SURVEYOR(S):	DATE:		UTME:
	START:	END:	UTMZ:	UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY			
2	SUB-CANOPY			
3	UNDERSTOREY			
4	GRD. LAYER			

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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:		< 10		10 - 24		25 - 50		> 50	
STANDING SNAGS:		< 10		10 - 24		25 - 50		> 50	
DEADFALL / LOGS:		< 10		10 - 24		25 - 50		> 50	

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :		PIONEER		YOUNG		MID-AGE		MATURE		OLD GROWTH

SOIL ANALYSIS:

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

COMMUNITYCLASSIFICATION:

COMMUNITY CLASS:	CODE:
COMMUNITY SERIES:	CODE:
ECOSITE:	CODE:
VEGETATION TYPE:	CODE:
INCLUSION	CODE:
COMPLEX	CODE:

Notes:

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

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 1	LAYER 2	LAYER 3	LAYER 4	COLL.	SPECIES CODE	LAYER 1	LAYER 2	LAYER 3	LAYER 4	COLL.

Feature 42

ELC — COMMUNITY DESCRIPTION & CLASSIFICATION

SITE: Samsung | POLYGON: 3
SURVEYOR(S): MS | DATE: 30-Sept-2010 | UTME:
START: | END | UTMZ: | UTMN:

POLYGON DESCRIPTION

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
☒ TERRESTRIAL ☐ WETLAND ☐ AQUATIC	☐ ORGANIC ☒ MINERAL SOIL ☐ PARENT MIN. ☐ ACIDIC BEDRK. ☐ BASIC BEDRK. ☐ CARB. BEDRK.	☐ LACUSTRINE ☐ RIVERINE ☐ BOTTOMLAND ☐ TERRACE ☐ VALLEY SLOPE ☐ TABLELAND ☐ ROLL. UPLAND ☐ CLIFF ☐ TALUS ☐ CREVICE / CAVE ☐ ALVAR ☐ ROCKLAND ☐ BEACH / BAR ☐ SAND DUNE ☐ BLUFF	☒ NATURAL ☐ CULTURAL	☐ PLANKTON ☐ SUBMERGED ☐ FLOATING-LVD. ☐ GRAMINOID ☐ FORB ☐ LICHEN ☐ BRYOPHYTE ☒ DECIDUOUS ☐ CONIFEROUS ☐ MIXED	☐ LAKE ☐ POND ☐ RIVER ☐ STREAM ☐ MARSH ☐ SWAMP ☐ FEN ☐ BOG ☐ BARREN ☐ MEADOW ☐ PRAIRIE ☐ THICKET ☐ SAVANNAH ☐ WOODLAND ☒ FOREST ☐ PLANTATION

SITE	COVER
☐ OPEN WATER ☐ SHALLOW WATER ☒ SURFICIAL DEP. ☐ BEDROCK	☐ OPEN ☐ SHRUB ☒ TREED

more open understory lowland maple dominated - same as 8.

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	1	4	ACEFREE >> ACERUBR >> QUERUBR
2	SUB-CANOPY	2	4	ACEFREE > FRAMEN > PRAPENN
3	UNDERSTOREY	3-4	3	OSTVIRG
4	GRD. LAYER	5-7	4	ASTERACEAE > Poison Ivy < Buttercup

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:	O	< 10	A	10 - 24	O	25 - 50	R	> 50
STANDING SNAGS:	N	< 10	R	10 - 24	R	25 - 50	N	> 50
DEADFALL / LOGS:	O	< 10	O	10 - 24	R	25 - 50	N	> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :		PIONEER		YOUNG	X	MID-AGE		MATURE		OLD GROWTH

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: SW
COMMUNITY SERIES:		CODE: SWP
ECOSITE:		CODE: SWD3
VEGETATION TYPE:	Swamp Maple Mineral Dec. Swamp	CODE: SWD33
INCLUSION		CODE:
COMPLEX		CODE:

Notes:

ELC — PLANT SPECIES LIST

SITE: Samsung
POLYGON: 3 - Field Map 8.
DATE: 30-Sept-2010
SURVEYOR(S): MS

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 1	2	3	4	COLL.
QUERUBR	O	-	-	R	
ACERUBR	O	O	R	R	
TILAME	R	R	R	R	
ACESACS	R	-	R	-	
ACEFREE	D	O	R	-	
FAGGRAN	R	R	O	-	
OSTVIRG	-	-	O	-	
CAROVATY	R	-	-	R	
FRAPENN	R	R	R	-	
QUERUBR	R				
Red Raspberry	-	-	-	R	
Virginia Creeper	-	-	-	R	
FRAVIRG	-	-	-	O	
RUBPUBE	-	-	-	O	

SPECIES CODE	LAYER 1	2	3	4	COLL.
ASTERACEAE				A	
Christmas Fern				R	
Poison Ivy				O	
Buttercup sp				O	

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE:		POLYGON:	
	SURVEYOR(S):	DATE:		UTME:
	START:	END:	UTMZ:	UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY			
2	SUB-CANOPY			
3	UNDERSTOREY			
4	GRD. LAYER			

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:		< 10		10 - 24		25 - 50		> 50
STANDING SNAGS:		< 10		10 - 24		25 - 50		> 50
DEADFALL / LOGS:		< 10		10 - 24		25 - 50		> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :		PIONEER		YOUNG		MID-AGE		MATURE		OLD GROWTH

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:
☐ INCLUSION	CODE:
☐ COMPLEX	CODE:

Notes:

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

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 1	LAYER 2	LAYER 3	LAYER 4	COLL.	SPECIES CODE	LAYER 1	LAYER 2	LAYER 3	LAYER 4	COLL.

ELC COMMUNITY DESCRIPTION & CLASSIFICATION

SITE: Samsung		POLYGON: 4	
SURVEYOR(S): MS	DATE: 30 Sept-2010	UTMZ:	UTME:
START:	END:		UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	1	4	FAGGRAN > ACESACS > FRAAMER
2	SUB-CANOPY	2	4	FAGGRAN > ~~ACESACS~~ ACESACS = ACERUBR
3	UNDERSTOREY	3-4	4	FAGGRAN > OSTVIRG
4	GRD. LAYER	5-7	3	ASTMAC > Poison Ivy

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:	A	< 10	O	10 - 24	O	25 - 50	R	> 50
STANDING SNAGS:	N	< 10	O	10 - 24	O	25 - 50	R	> 50
DEADFALL / LOGS:	O	< 10	A	10 - 24	O	25 - 50	R	> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE:		PIONEER		YOUNG		MID-AGE	X	MATURE		OLD GROWTH

SOIL ANALYSIS:

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

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS:	Forest	CODE: FOD
COMMUNITY SERIES:	Deciduous Forest	CODE: FOD
ECOSITE:	Dry-Fresh Decid. Forest	CODE: FOD4
VEGETATION TYPE:	D-F Beech Deciduous Forest	CODE: FOD4-1
INCLUSION	Silver Maple Mineral Deciduous Swamp	CODE: SWD3-2
COMPLEX		CODE:

Notes:

Pic 1569

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ELC PLANT SPECIES LIST

SITE:	Samsung
POLYGON:	4
DATE:	30-Sept-2010
SURVEYOR(S):	Melissa Straus

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 1	2	3	4	COLL.	SPECIES CODE	LAYER 1	2	3	4	COLL.
FAGGRAN	A	A	D	O		Beech Drops	—	—		R	
ACESACS	O	R	R	R		ASTMAC	—	—		O	
FRAAME	O	R	R	O		Poison Ivy	—	—		O	(I)
Shag Hickory	R	—	—	R		Spotted Touch-me-not	—	—		R	
ACERUBR	O	R	R	R							
QUERUBR	R	—	—	R							
FRAPENN	R	—	—								
TILAMER	R	R	R	R							
ACESAAC	R	—									
Virginia Creeper				R							
OSTVIRG		—	O	O							
Blue Beech		—	R	-		Buttercup sp.				O	

ELC COMMUNITY DESCRIPTION & CLASSIFICATION

SITE:		POLYGON:	
SURVEYOR(S):	DATE:		UTME:
START:	END	UTMZ:	UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; ≈ ABOUT EQUAL TO)
1	CANOPY			
2	SUB-CANOPY			
3	UNDERSTOREY			
4	GRD. LAYER			

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:		< 10		10 - 24		25 - 50		> 50
STANDING SNAGS:		< 10		10 - 24		25 - 50		> 50
DEADFALL / LOGS:		< 10		10 - 24		25 - 50		> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :		PIONEER		YOUNG		MID-AGE		MATURE		OLD GROWTH

SOIL ANALYSIS:

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

COMMUNITYCLASSIFICATION:

COMMUNITY CLASS:	CODE:
COMMUNITY SERIES:	CODE:
ECOSITE:	CODE:
VEGETATION TYPE:	CODE:
INCLUSION	CODE:
COMPLEX	CODE:

Notes:

ELC PLANT SPECIES LIST

SITE:	
POLYGON:	
DATE:	
SURVEYOR(S):	

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 1	LAYER 2	LAYER 3	LAYER 4	COLL.	SPECIES CODE	LAYER 1	LAYER 2	LAYER 3	LAYER 4	COLL.

Feature 42

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE: Samsung		POLYGON: #5	
	SURVEYOR(S): MS	DATE: 30-Sept-2010	UTMZ:	UTME:
	START:	END:		UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	1	4	ACESACS > FAGGRAN > FRAAME
2	SUB-CANOPY	2	4	ACESACS > FAGGRAN > ACERUB
3	UNDERSTOREY	3-4	4	OSTVIRG > FAGGRAN
4	GRD. LAYER	5-7	3	ASTMACR

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:	A	< 10	O	10 - 24	O	25 - 50	R	> 50
STANDING SNAGS:	R	< 10	O	10 - 24	R	25 - 50	R	> 50
DEADFALL / LOGS:	O	< 10	O	10 - 24	R	25 - 50	N	> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :		PIONEER		YOUNG	☒	MID-AGE		MATURE		OLD GROWTH

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: FO
COMMUNITY SERIES:	CODE: FOD
ECOSITE: E-M Sugar Maple Dec. Forest	CODE: FOD5
VEGETATION TYPE: Some parts Be dom or Mh + Be E-M Sugar Maple-Hardwood Deciduous Forest	CODE: FOD5-5
INCLUSION	CODE:
COMPLEX	CODE:

Notes: Some Parts Be dominated (mostly) or Mh + Be, some have more Or

ELC PLANT SPECIES LIST	SITE: Samsung
	POLYGON: #5
	DATE: 30-Sept-2010
	SURVEYOR(S): Melissa Straus

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 1	2	3	4	COLL.	SPECIES CODE	LAYER 1	2	3	4	COLL.
ACESACS	O	O	O	R		ASTMACR				O	
QUERUBR	O	R	R	-		Christmas Fern				R	
FAGGRAN	O	O	O	R		Sensitive Fern				R	
CAROVAT	O	O	R	R		Beech Drops				R	
FRAAMER	O	O	R	R		ZigZag Goldenrod				R	
OSTVIRG	-	O	O	R		Rose Twisted Stalk				R	
TILAMER	R	R	R	R		[illegible]				R	
ACERUBR	O	O	R	R		Wood Nettle				R	
ACEFREE	[illegible]										
VIBACER				R							
RUBIDEA			R								

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE:		POLYGON:	
	SURVEYOR(S):	DATE:		UTME:
	START:	END:	UTMZ:	UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

LAYER		HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY			
2	SUB-CANOPY			
3	UNDERSTOREY			
4	GRD. LAYER			

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:		< 10		10 - 24		25 - 50		> 50
STANDING SNAGS:		< 10		10 - 24		25 - 50		> 50
DEADFALL / LOGS:		< 10		10 - 24		25 - 50		> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :		PIONEER		YOUNG		MID-AGE		MATURE		OLD GROWTH

SOIL ANALYSIS:

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

COMMUNITYCLASSIFICATION:

COMMUNITY CLASS:	CODE:
COMMUNITY SERIES:	CODE:
ECOSITE:	CODE:
VEGETATION TYPE:	CODE:
INCLUSION	CODE:
COMPLEX	CODE:

Notes:

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

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 1	LAYER 2	LAYER 3	LAYER 4	COLL.	SPECIES CODE	LAYER 1	LAYER 2	LAYER 3	LAYER 4	COLL.

Page .... of ....

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ELC — COMMUNITY DESCRIPTION & CLASSIFICATION

SITE: Samsung | POLYGON: 6
SURVEYOR(S): MS | DATE: 30-Sept-2010 | UTME:
START: | END | UTMZ: | UTMN:

POLYGON DESCRIPTION

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
☐ TERRESTRIAL ☐ WETLAND ☐ AQUATIC	☐ ORGANIC ☐ MINERAL SOIL ☐ PARENT MIN. ☐ ACIDIC BEDRK. ☐ BASIC BEDRK. ☐ CARB. BEDRK.	☐ LACUSTRINE ☐ RIVERINE ☐ BOTTOMLAND ☐ TERRACE ☐ VALLEY SLOPE ☐ TABLELAND ☐ ROLL. UPLAND ☐ CLIFF ☐ TALUS ☐ CREVICE / CAVE ☐ ALVAR ☐ ROCKLAND ☐ BEACH / BAR ☐ SAND DUNE ☐ BLUFF	☑ NATURAL ☐ CULTURAL	☐ PLANKTON ☐ SUBMERGED ☐ FLOATING-LVD. ☐ GRAMINOID ☐ FORB ☐ LICHEN ☐ BRYOPHYTE ☐ DECIDUOUS ☐ CONIFEROUS ☐ MIXED	☐ LAKE ☐ POND ☐ RIVER ☐ STREAM ☐ MARSH ☐ SWAMP ☐ FEN ☐ BOG ☐ BARREN ☐ MEADOW ☐ PRAIRIE ☐ THICKET ☐ SAVANNAH ☐ WOODLAND ☐ FOREST ☐ PLANTATION

SITE
☐ OPEN WATER
☐ SHALLOW WATER
☐ SURFICIAL DEP.
☐ BEDROCK

COVER
☐ OPEN
☐ SHRUB
☐ TREED

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	1	4	ACERUBR > ACESACS > FAGGRAN > CAROVAT
2	SUB-CANOPY	2	4	ACERUBR > ACESACS > CAROVAT
3	UNDERSTOREY	3-4	4	FAGGRAN > ACESACS
4	GRD. LAYER	5-7	3	ASTMACER

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:	A	< 10	O	10 - 24	O	25 - 50	R	> 50
STANDING SNAGS:	N	< 10	O	10 - 24	R	25 - 50	R	> 50
DEADFALL / LOGS:	O	< 10	O	10 - 24	R	25 - 50	R	> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :		PIONEER		YOUNG	X	MID-AGE		MATURE		OLD GROWTH

SOIL ANALYSIS:

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

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS:	Forest	CODE: FO
COMMUNITY SERIES:	Dec. Forest	CODE: FOD
ECOSITE: F-M	Sugar Maple Dec. Forest	CODE: FOD8
VEGETATION TYPE:	F-M Sugar Maple - Hardwood Dec. Forest	CODE: FOD6-5
INCLUSION		CODE:
COMPLEX		CODE:

Notes: Some patches of Bedominated.. Less Hs than 2; but otherwise same tmisle Mr some Mh

PLANT SPECIES LIST

SITE: Samsung
POLYGON: 6
DATE: 30-Sept-2010
SURVEYOR(S): Melissa Straus

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 1	2	3	4	COLL.
See Polygon #2					
Same species comp.					
exclude QUEALBA					
CAROVAT	O	R	R	R	
FAGGRAN	O	R	A	R	
ACERUBR	O	R	R	R	
ACESACS	O	R	R	R	
OSTVIRG	—		O	R	

SPECIES CODE	LAYER 1	2	3	4	COLL.
Beech Drops				R	
ASTMACER				O	
Hog Peanut				R	
GERROBE				R	

ELC — COMMUNITY DESCRIPTION & CLASSIFICATION

SITE: Samsung		POLYGON: 7	
SURVEYOR(S): MS	DATE: 30-Sept-2010	UTME:	
START:	END	UTMZ:	UTMN:

POLYGON DESCRIPTION

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
☒ TERRESTRIAL	☐ ORGANIC	☐ LACUSTRINE	☒ NATURAL	☐ PLANKTON	☐ LAKE
☐ WETLAND	☒ MINERAL SOIL	☐ RIVERINE	☐ CULTURAL	☐ SUBMERGED	☐ POND
☐ AQUATIC	☐ PARENT MIN.	☐ BOTTOMLAND		☐ FLOATING-LVD.	☐ RIVER
	☐ ACIDIC BEDRK.	☐ TERRACE		☐ GRAMINOID	☐ STREAM
	☐ BASIC BEDRK.	☐ VALLEY SLOPE		☐ FORB	☐ MARSH
	☐ CARB. BEDRK.	☐ TABLELAND		☐ LICHEN	☐ SWAMP
		☐ ROLL. UPLAND		☐ BRYOPHYTE	☐ FEN
		☐ CLIFF		☒ DECIDUOUS	☐ BOG
		☐ TALUS		☐ CONIFEROUS	☐ BARREN
		☐ CREVICE / CAVE		☐ MIXED	☐ MEADOW
		☐ ALVAR			☐ PRAIRIE
		☐ ROCKLAND			☐ THICKET
		☐ BEACH / BAR			☐ SAVANNAH
		☐ SAND DUNE			☐ WOODLAND
		☐ BLUFF			☒ FOREST
					☐ PLANTATION

SITE	COVER
☐ OPEN WATER	☐ OPEN
☐ SHALLOW WATER	☐ SHRUB
☐ SURFICIAL DEP.	☒ TREED
☐ BEDROCK	

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	1	4	ACEFREE > FRAPENN > CAROVAT
2	SUB-CANOPY	2	4	Same as canopy
3	UNDERSTOREY	3-4	3	ULMAMER
4	GRD. LAYER	5-7	3	Poison Ivy >> Wood Nettle

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:	R	< 10	O	10 - 24	O	25 - 50	R	> 50
STANDING SNAGS:		< 10		10 - 24		25 - 50		> 50
DEADFALL / LOGS:		< 10		10 - 24		25 - 50		> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE:		PIONEER		YOUNG	X	MID-AGE		MATURE		OLD GROWTH

SOIL ANALYSIS:

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

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS: Swamp		CODE: SW
COMMUNITY SERIES: Dec. Swamp		CODE: SWD
ECOSITE: Maple Mineral Dec. Swamp		CODE: SWD3
VEGETATION TYPE: Swamp Maple Mineral Dec. Swamp		CODE: SWD3-3
	INCLUSION	CODE:
	COMPLEX	CODE:

Notes: Along creek bed

ELC — PLANT SPECIES LIST

SITE: Samsung	
POLYGON: 7	
DATE: 30-Sept-2010	
SURVEYOR(S): Melissa Straus	

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 1	2	3	4	COLL.
ACEFREE	O	O	-	7	
CAROVAT	O	R	-	O	
FRAPENN	O	O	-	O	
ULMAMER	-	-	R	-	

SPECIES CODE	LAYER 1	2	3	4	COLL.
Poison Ivy	-	-	-	R	
Wood Nettle	-	-	-	R	
Christmas Fern	-	-	-	R	
Sensitive Fern	-	-	-	R	

Feature 42

ELC — COMMUNITY DESCRIPTION & CLASSIFICATION

SITE: Samsung | POLYGON: 10
SURVEYOR(S): MS | DATE: 30-Sept-2010
START: | END: | UTMZ: | UTME: | UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	1	4	ACESACS > FAGGRAN > CAROVAT
2	SUB-CANOPY	2	4	See above
3	UNDERSTOREY	3-4	4	ACESACS = FAGGRAN > OSTVIRG
4	GRD. LAYER	5-7	3	FRAAMER > Poison Ivy

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:	A	< 10	O	10 - 24	O	25 - 50	R	> 50
STANDING SNAGS:	N	< 10	O	10 - 24	R	25 - 50	N	> 50
DEADFALL / LOGS:	O	< 10	O	10 - 24	R	25 - 50	R	> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE:		PIONEER		YOUNG	X	MID-AGE		MATURE		OLD GROWTH

SOIL ANALYSIS:

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

COMMUNITY CLASSIFICATION:

		CODE:
COMMUNITY CLASS:		FO
COMMUNITY SERIES:		FOO
ECOSITE:		FOO5
VEGETATION TYPE:		FOO5-2
INCLUSION		CODE:
COMPLEX		CODE:

Notes:

ELC — PLANT SPECIES LIST

SITE: Samsung
POLYGON: 10
DATE: 30-Sept-2010
SURVEYOR(S): Melissa Straus

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 1	2	3	4	COLL.
FAGGRAN	O	O	O	O	
ACESACS	D	O	O	O	
CAROVAT	R	R	R	R	
QUERUBR	R	—			
FRAPEN	R	—			
BARCORD	R	—			
FRAAMER	R	—		O	
OSTVIRG	—		O	O	
ACENEGR	—	R	R	—	
PRUSERO				R	
Poison Ivy				O	
RUBALLE			R	R	
Blue Bead			R		
PRUVIRG	—		O	—	
Virginia Creeper		—	—	R	

SPECIES CODE	LAYER 1	2	3	4	COLL.
GERROBE		—		R	
Wood Nettle		—		R	
Buttercup sp.		—	—	O	

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE:		POLYGON:	
	SURVEYOR(S):	DATE:		UTME:
	START:	END	UTMZ:	UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY			
2	SUB-CANOPY			
3	UNDERSTOREY			
4	GRD. LAYER			

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:		< 10		10 - 24		25 - 50		> 50	
STANDING SNAGS:		< 10		10 - 24		25 - 50		> 50	
DEADFALL / LOGS:		< 10		10 - 24		25 - 50		> 50	

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :		PIONEER		YOUNG		MID-AGE		MATURE		OLD GROWTH

SOIL ANALYSIS:

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

COMMUNITYCLASSIFICATION:

COMMUNITY CLASS:		CODE:
COMMUNITY SERIES:		CODE:
ECOSITE:		CODE:
VEGETATION TYPE:		CODE:
	INCLUSION	CODE:
	COMPLEX	CODE:

Notes:

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

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	

[redacted]

GAW oct-14-2010

581856
1=SWD3
2=FOD5-3

581857
1=FOD5-8
2=SWD4-6*

September 2010
160960577

Legend

- Project Location
- Proposed Turbine Location
- Proposed Access Road
- Proposed Collector Line
- ROW Installation Zone
- 120m Investigation Zone
- Elexco Aquired Agreements
- Government Lands
- UDI Lands
- Road
- Railway
- Abandoned Railway
- Transmission Line (OBM)
- Deer Wintering Area
- Provincially Significant Wetland
- Non-Provincially Significant Wetland
- Watercourse (OBM)
- Waterbody

Area of Natural and Scientific Interest (ANSI)

- Life Science, Provincially Significant
- Earth Science, Provincially Significant
- Earth Science, Regionally Significant

ORIGINAL
Don't Throw out

Notes

1. Coordinate System: UTM NAD 83 - Zone 17 (N).
2. Data Sources: Ontario Ministry of Natural Resources © Queens Printer Ontario, 2009; © GREP, 2010; © Samsung, 2010.
3. Image Source: © First Base Solutions, 2010 - Imagery Date: Spring 2006; **LIDAR IMAGERY SOURCE???**

Client/Project

SAMSUNG C&T
GRAND RENEWABLE ENERGY PARK

Figure No.

FIELD MAP 13

Title

PROJECT LOCATION MAP

Stantec

Stantec Consulting Ltd.
70-1 Southgate Drive
Guelph, Ontario, Canada
N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

Wildlife Habitat Assessment

Feature 49
Turbine 581857

Project Number: 161010646

Project Name: Samsung

Date / Time: Oct. 14. 2010

Field Personnel: GAW

Weather Conditions:	Temp:	Wind:	Cloud:	PPT:	PPT in last 24 hrs:
	10°	2	100%	Showers	RAIN

Reptile Hibernacula Features i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)

Does the site contain potential reptile hibernacula features? ☐ Yes ☒ No (if yes, describe details in Table 1).

Bat Hibernacula Features i.e. karst topography, abandoned mines or caves

Does the site contain potential bat hibernacula features? ☐ Yes ☒ No (if yes, describe details in Table 1).

Table 1: Potential bat/reptile hibernacula features identified on site

UTM	Feature type	Photo #	Description	Species observed using feature

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.e. AMRO/VO BLJA	deer - TK			

Woodland Assessment- *complete 1 assessment for each woodland*

Woodlot # (indicate on map) : Only one

Approximate age of stand Mid-age – Mature

Are large (i.e. >40cmDBH and >25m tall) **trees present** ☒ Yes ☐ No
If yes, approximate # present or % of stand < 5% of stand
Location in stand (i.e throughout, in west side only, in FOD2-6 only etc..) throughout FOD

Are snags present? ☒ Yes ☐ No
If yes provide characterization of number present, height and DBH of snags and indicate if they contain loose bark. very few FRAPENN ~20cm DBH, no loose bark

Trees with cavities present? ☒ No ☐ Rare ☐ Occasional ☐ Abundant
If present:

	Height ranges of tree	Range of Tree DBH	Range of Cavity Heights	Cavity sizes (approx. diameter)

BAT MAT ROOST? Nope.

Presence of large stick nests (i.e. raptor nests)? ☐ Yes ☒ No
If yes, UTM and describe tree type, height and position in tree, size of nest, species present

Evidence of disturbance? (i.e logging, roads, paths, ATV use, trails) ☒ Yes ☐ No
If yes, describe one ATV trail

Seeps/ springs present? ☐ Yes ☒ No If yes,

Seep/Spring #	UTM	Description	Surrounding Habitat

Vernal Pools Present? ☒ Yes ☐ No If yes,

#	Location	Depth of water	Size of pool (diameter)	Presence of emergent/submergent veg?	Presence of shrubs, logs at pond edge
	small SWD	none	15m	yes	yes

161010646

ELC — COMMUNITY DESCRIPTION & CLASSIFICATION

SITE: Turbine 58185		POLYGON: (1)	
SURVEYOR(S): GAW	DATE: Oct. 14. 10	UTME:	
START:	END	UTMZ:	UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	2	4	ACESASA >> FRAAMER ≥ QUERUBR
2	SUB-CANOPY	3	4	" > OSTVIRG = FAGGRAN
3	UNDERSTOREY	4-5	4	"
4	GRD. LAYER	6-7	4	" l.l. aster Rubus

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:	A	< 10	A	10 - 24	A	25 - 50	R	> 50
STANDING SNAGS:	O	< 10	R	10 - 24	R	25 - 50	/	> 50
DEADFALL / LOGS:	A	< 10	O	10 - 24	R	25 - 50	/	> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE:	☐ PIONEER	☐ YOUNG	☐ MID-AGE	☒ MATURE	☐ OLD GROWTH

SOIL ANALYSIS:

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

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS: Forest	CODE:	FO
COMMUNITY SERIES: Deciduous Forest	CODE:	FOD
ECOSITE: D-F Sugar Maple Deciduous Forest	CODE:	FOD5
VEGETATION TYPE: Dry-fresh Sugar Maple - White Ash Dec. Forest	CODE:	FOD5-8
☐ INCLUSION	CODE:	
☐ COMPLEX	CODE:	

Notes:

ELC — PLANT SPECIES LIST

SITE: Feature 49	
POLYGON:	
DATE:	
SURVEYOR(S):	

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 1	2	3	4	COLL.
ACESASA	D	A	A	A	
QUERUBR	O	O			
TILAMER	O	O	O		
FAGGRAN	O	A	A		
~~FRAAMER~~	O	O	O	O	
OSTVIRG		A	A		
ACERUBR		O	O		
blue beech		O	O		
PRUVIVI			O		
CORFO·RA				O	
RHACATH				O	
RUBOCCI				O	
RUBIDAE				O	
ROSMULT				R	

SPECIES CODE	LAYER 1	2	3	4	COLL.
l.l. aster				A	
AstLATE				O	
Carex sp.				O	
DRYCART				O	
GLYSTRI				O	
PREALBA				O	
hog peanut				R	
VEROFFI				O	
SOLCANA				O	
beech drops				O	
BOTSIMP				O	
swt. cecily				O	
GERMACU				O	
VITRIPA				O	

ELC COMMUNITY DESCRIPTION & CLASSIFICATION

SITE:		POLYGON: (2)	
SURVEYOR(S):		DATE:	UTME:
START:	END	UTMZ:	UTMN:

POLYGON DESCRIPTION

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
☐ TERRESTRIAL ☑ WETLAND ☐ AQUATIC	☐ ORGANIC ☑ MINERAL SOIL ☐ PARENT MIN. ☐ ACIDIC BEDRK. ☐ BASIC BEDRK. ☐ CARB. BEDRK.	☐ LACUSTRINE ☐ RIVERINE ☐ BOTTOMLAND ☐ TERRACE ☐ VALLEY SLOPE ☐ TABLELAND ☑ ROLL. UPLAND ☐ CLIFF ☐ TALUS ☐ CREVICE / CAVE ☐ ALVAR ☐ ROCKLAND ☐ BEACH / BAR ☐ SAND DUNE ☐ BLUFF	☑ NATURAL ☐ CULTURAL	☐ PLANKTON ☐ SUBMERGED ☐ FLOATING-LVD. ☐ GRAMINOID ☐ FORB ☐ LICHEN ☐ BRYOPHYTE ☑ DECIDUOUS ☐ CONIFEROUS ☐ MIXED	☐ LAKE ☐ POND ☐ RIVER ☐ STREAM ☐ MARSH ☑ SWAMP ☐ FEN ☐ BOG ☐ BARREN ☐ MEADOW ☐ PRAIRIE ☐ THICKET ☐ SAVANNAH ☐ WOODLAND ☐ FOREST ☐ PLANTATION

SITE

☐ OPEN WATER
☐ SHALLOW WATER
☑ SURFICIAL DEP.
☐ BEDROCK

COVER

☐ OPEN
☐ SHRUB
☑ TREED

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	2	4	ACEFREE ≥ FRAPENN
2	SUB-CANOPY	3	4	" " = TILAMER
3	UNDERSTOREY	4-5	3	CORSTOL
4	GRD. LAYER	6-7	4	grasses, sedges, RHURA.NE

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:	A	< 10	A	10 - 24	O	25 - 50	/	> 50
STANDING SNAGS:	O	< 10	R	10 - 24	/	25 - 50	/	> 50
DEADFALL / LOGS:	A	< 10	A	10 - 24	/	25 - 50	/	> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :		PIONEER		YOUNG	X	MID-AGE	X	MATURE		OLD GROWTH

SOIL ANALYSIS:

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

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS: Swamp	CODE: SW
COMMUNITY SERIES: Deciduous Swamp	CODE: SWD
ECOSITE: Mineral Deciduous Swamp	CODE: SWD4
VEGETATION TYPE: Green Ash - Swamp Maple Mineral Dec. Swamp	CODE: SWD4-6*
☐ INCLUSION	CODE:
☐ COMPLEX	CODE:

Notes: Very small.

ELC PLANT SPECIES LIST

SITE:
POLYGON:
DATE:
SURVEYOR(S):

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 1	2	3	4	COLL.
ACEFREE	A	A			
FRAPENN	A	A			
ULMAMER	O	O			
TILAMER	O	O			
QUERUBR	R				
ACESASA	R	O	O		
CORFORA				O	
ROSMULT				R	
RHACATH				O	
Crataegus sp				O	
CORSTOL			A	A	
Spicebush			R		
SAMCANA				R	
PRUVI.VI				O	
RUBOCCI				O	

SPECIES CODE	LAYER 1	2	3	4	COLL.
GEUCANA				O	
FRAVESC				O	
Carex sp				A	
Viola sp				O	
URTDIOI				O	
LAPCANA				O	
IMPCAPE				O	
GLYSTRI				O	
LYCUNIF				O	
RHURA.NE				O	
Grass sp.				O	

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70-1 Southgate Drive
Guelph, Ontario, Canada
N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

Wildlife Habitat Assessment

Feature 49
Turbine 581856

Project Number: 161010646

Project Name: Samsung

Date / Time: Oct 14. 2010

Field Personnel: GAW

Weather Conditions:	Temp:	Wind:	Cloud:	PPT:	PPT in last 24 hrs:
	10°	2	100%	showers	Rain

Reptile Hibernacula Features i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)

Does the site contain potential reptile hibernacula features? ☐ Yes ☒ No (if yes, describe details in Table 1).

Bat Hibernacula Features i.e. karst topography, abandoned mines or caves

Does the site contain potential bat hibernacula features? ☐ Yes ☒ No (if yes, describe details in Table 1).

Table 1: Potential bat/reptile hibernacula features identified on site

UTM	Feature type	Photo #	Description	Species observed using feature

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.e. AMRO/VO BCCH AMCR	Deer – TK			

Woodland Assessment- *complete 1 assessment for each woodland*

Woodlot # (indicate on map) : only one

Approximate age of stand midage - mature

Are large (i.e. >40cmDBH and >25m tall) **trees present** ☒ Yes ☐ No
If yes, approximate # present or % of stand <5%
Location in stand (i.e throughout, in west side only, in FOD2-6 only etc..) throughout

Are snags present? ☒ Yes ☐ No
If yes provide characterization of number present, height and DBH of snags and indicate if they contain loose bark. Very few, ~20 cm DBH, no loose bark

Trees with cavities present? ☐ No ☒ Rare ☐ Occasional ☐ Abundant
If present:

	Height ranges of tree	Range of Tree DBH	Range of Cavity Heights	Cavity sizes (approx. diameter)
	10-20m	25-30cm	4-6m	medium

Bat Mat Roost? No

Presence of large stick nests (i.e. raptor nests)? ☐ Yes ☒ No
If yes, UTM and describe tree type, height and position in tree, size of nest, species present

Evidence of disturbance? (i.e logging, roads, paths, ATV use, trails) ☒ Yes ☐ No
If yes, describe ATV trails (2)

Seeps/ springs present? ☐ Yes ☒ No If yes,

Seep/Spring #	UTM	Description	Surrounding Habitat

Vernal Pools Present? ☒ Yes ☐ No If yes,

#	Location	Depth of water	Size of pool (diameter)	Presence of emergent/submergent veg?	Presence of shrubs, logs at pond edge
	SWD	none	variable	yes	yes

161010646

ELC — COMMUNITY DESCRIPTION & CLASSIFICATION

SITE: Turbine 581856	POLYGON: (1)	
SURVEYOR(S): GAW	DATE: Oct. 14. 10	UTME:
START:	END:	UTMZ: / UTMN:

POLYGON DESCRIPTION

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
☐ TERRESTRIAL ☑ WETLAND ☐ AQUATIC	☐ ORGANIC ☑ MINERAL SOIL ☐ PARENT MIN. ☐ ACIDIC BEDRK. ☐ BASIC BEDRK. ☐ CARB. BEDRK.	☐ LACUSTRINE ☐ RIVERINE ☐ BOTTOMLAND ☐ TERRACE ☐ VALLEY SLOPE ☐ TABLELAND ☑ ROLL. UPLAND ☐ CLIFF ☐ TALUS ☐ CREVICE / CAVE ☐ ALVAR ☐ ROCKLAND ☐ BEACH / BAR ☐ SAND DUNE ☐ BLUFF	☑ NATURAL ☐ CULTURAL	☐ PLANKTON ☐ SUBMERGED ☐ FLOATING-LVD. ☐ GRAMINOID ☐ FORB ☐ LICHEN ☐ BRYOPHYTE ☑ DECIDUOUS ☐ CONIFEROUS ☐ MIXED	☐ LAKE ☐ POND ☐ RIVER ☐ STREAM ☐ MARSH ☑ SWAMP ☐ FEN ☐ BOG ☐ BARREN ☐ MEADOW ☐ PRAIRIE ☐ THICKET ☐ SAVANNAH ☐ WOODLAND ☐ FOREST ☐ PLANTATION

SITE
☐ OPEN WATER
☐ SHALLOW WATER
☑ SURFICIAL DEP.
☐ BEDROCK

COVER
☐ OPEN
☐ SHRUB
☑ TREED

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	2	4	ACERUBR >> FRAPENN = ACESASA
2	SUB-CANOPY	3	4	" >> ACESASA
3	UNDERSTOREY	4-5	4	" " = blue beech
4	GRD. LAYER	6-7	3	FRAPENN Carex

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:	A	< 10	A	10 - 24	O	25 - 50	/	> 50
STANDING SNAGS:	R	< 10	R	10 - 24	R	25 - 50	/	> 50
DEADFALL / LOGS:	A	< 10	O	10 - 24	R	25 - 50	/	> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE:		PIONEER		YOUNG	X	MID-AGE		MATURE		OLD GROWTH

SOIL ANALYSIS:

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

COMMUNITY CLASSIFICATION:

		CODE:
COMMUNITY CLASS:	Swamp	SW
COMMUNITY SERIES:	Deciduous Swamp	SWD
ECOSITE:	Maple Mineral Dec. Swamp	SWD3
VEGETATION TYPE:	red maple mineral Deciduous Swamp	SWD3-1
INCLUSION		CODE:
COMPLEX		CODE:

Notes:

ELC — PLANT SPECIES LIST

SITE: Feature 49
POLYGON:
DATE:
SURVEYOR(S):

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 1	2	3	4	COLL.
ACERUBR	D	A	A		
FRAPENN	O	O	O	A	
TILAMER	O	O			
ACESASA	O	O	O		
PINSTRO	R				
QUERUBR	R				
blue beech			O		
RIBAMER				O	
RUBIDAE				O	

SPECIES CODE	LAYER 1	2	3	4	COLL.
mitrewort				O	
l.l. aster				O	
Ranunculus sp				O	
GLYSTRI				O	
SOLRUGO				O	
DRYCART				O	
LAPCANA				O	
delic. Sol. seal				O	X
LIGVULG				O	
CARINTU				A	
SMIHISP				O	
MAICANA				O	
PREALBA				O	
ASTLATE				O	
ONOSENS				O	
LYCUNIF				O	
IMPCAPE				O	
IRIVERS				O	
BIDFRON				O	
marsh fern				O	
URTDIOI				O	

ELC — COMMUNITY DESCRIPTION & CLASSIFICATION

SITE:		POLYGON: (2)	
SURVEYOR(S):	DATE:	UTME:	
START:	END	UTMZ:	UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	2	4	ACESASA > QUERUBR = ACERUBR
2	SUB-CANOPY	3	4	" > OSTVIRG
3	UNDERSTOREY	4-5	4	" > FRAPENN
4	GRD. LAYER	6-7	3	l.l.aster, FRAPENN RHURA·NE GERMACU

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:	A	< 10	A	10 - 24	O	25 - 50	R	> 50
STANDING SNAGS:	R	< 10	R	10 - 24	R	25 - 50	/	> 50
DEADFALL / LOGS:	A	< 10	O	10 - 24	R	25 - 50	/	> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

Very large QUEALBA

COMM. AGE :		PIONEER		YOUNG	X	MID-AGE		MATURE		OLD GROWTH

SOIL ANALYSIS:

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

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS: Forest	CODE:	FO
COMMUNITY SERIES: Deciduous Forest	CODE:	FOD
ECOSITE: D-F Sugar Maple Dec. Forest	CODE:	FOD5
VEGETATION TYPE: Dry-fresh Sugar Maple-Oak Dec. Forest	CODE:	FOD5-3
INCLUSION	CODE:	
COMPLEX	CODE:	

Notes: Small area of Phragmites in Ag. field.

ELC — PLANT SPECIES LIST

SITE:	
POLYGON:	
DATE:	
SURVEYOR(S):	

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 1	2	3	4	COLL.
ACESASA	D	A	A	O	
ACERUBR	A	A			
QUERUBR	A	O			
TILAMER	O	O	O		
shagbark	O				
bitternut	O				
FAGGRAN	O	O			
FRAPENN	O	O	O	O	
OSTVIRG		O	O		
QUEALBA	R				one V. large
PRUSERO				O	
blue beech		O	O		
highbush cran				R	
RUBIDAE				O	
PRUVI·VI				O	

SPECIES CODE	LAYER 1	2	3	4	COLL.
l.l.aster				A	
RHURA·NE				O	
OXASTRI				O	
PREALBA				O	
ASTLATE				O	
GERMACU				O	
EUOOBOV				O	

W:\active\160960577\drawing\GIS\MXD\NaturalHeritageAssessment\160960577_DRAFT_ELCsV5_WindFarm_20101214_PW.mxd - 12/15/2010 @ 11:17:08 AM

December 2010
160960577

Legend

- Proposed Turbine Location
- 120m Zone of Investigation
- ROW Installation Zone
- ELC Communities
- Access Road
- Overhead Collector Line
- Underground Collector Line
- Substation Property
- Road
- Transmission Line (OBM)
- Provincially Significant Wetland
- Non-Provincially Significant Wetland
- Watercourse (OBM)
- Waterbody

Forest Communities (FO)
FOM2-2- Dry-fresh White Pine – Sugar Maple Mixed Forest
FOD- Deciduous Forest
FOD2-1- Dry-fresh Oak – Red Maple Deciduous Forest
FOD2-2- Dry-fresh Oak – Hickory Deciduous Forest
FOD2-4- Dry-fresh Oak – Hardwood Deciduous Forest
FOD3-1- Dry-fresh Poplar Deciduous Forest
FOD4-1- Dry-fresh Beech Deciduous Forest
FOD4-2- Dry-fresh White Ash Deciduous Forest
FOD5-1- Dry-fresh Sugar Maple Deciduous Forest
FOD5-2- Dry-fresh Sugar Maple – Beech Deciduous Forest
FOD5-3- Dry-fresh Sugar Maple – Oak Deciduous Forest
FOD5-8- Dry-fresh Sugar Maple – White Ash Deciduous Forest
FOD5-11*- Dry-fresh Sugar Maple – Oak – Beech Deciduous Forest
FOD5-12*- Dry-fresh Sugar Maple – Hickory – Beech Deciduous Forest
FOD6-1- Fresh-moist Sugar Maple – Lowland Ash Deciduous Forest
FOD6-5- Fresh-moist Sugar Maple – Hardwood Deciduous Forest
FOD6-6*- Fresh-moist Sugar Maple – Hickory Deciduous Forest
FOD7-1- Fresh-moist White Elm Lowkind Deciduous Forest
FOD7-2- Fresh-moist Ash Lowland Deciduous Forest
FOD9-1- Fresh-moist Oak – Sugar Maple Deciduous Forest
FOD9-4- Fresh-moist Shagbark Hickory Deciduous Forest
FOD9-6*- Fresh-moist Red Oak – Shagbark Hickory Deciduous Forest

Swamp Communities (SW)
SWD1-1- Swamp White Oak Mineral Deciduous Swamp
SWD2-2- Green Ash Mineral Deciduous Swamp
SWD2-3*- Ash – Hardwood Mineral Deciduous Swamp
SWD2-4*- Green Ash – Red Maple Mineral Deciduous Swamp
SWD3-1- Red Maple Mineral Deciduous Swamp
SWD3-2- Silver Maple Mineral Deciduous Swamp
SWD3-5*- Swamp Maple - Green Ash Mineral Deciduous Swamp
SWD4-1- Willow Mineral Deciduous Swamp
SWD4-2- White Elm Mineral Deciduous Swamp
SWD3-3- Swamp Maple Mineral Deciduous Swamp
SWD4-6*- Green Ash – Swamp Maple Mineral Deciduous Swamp
SWT- Thicket Swamp
SWT2-4- Buttonbush Mineral Thicket Swamp
SWT2-5- Red Osier Dogwood Mineral Thicket Swamp
SWT2-8- Silky Dogwood Mineral Thicket Swamp
SWT2-9- Gray Dogwood Mineral Thicket Swamp
SWT2-13*- Willow – Dogwood Mineral Thicket Swamp
SWT2-14*- Winterberry – Buttonbush Mineral Thicket Swamp
SWT2-15*- Red Maple Mineral Thicket Swamp
SWT3-7- Winterberry Organic Thicket Swamp

Marsh Communities (MA)
MAM2-2- Reed Canary Grass Mineral Meadow Marsh
MAM2-10- Forb Mineral Meadow Marsh
MAM2-11*- Forb – Graminoid Mineral Meadow Marsh
MAS2-1- Cattail Mineral Shallow Marsh
MAS2-8- Rice Cut-grass Mineral Shallow Marsh

Cultural Communities (CU)
CUM1- Mineral Cultural Meadow
CUT1-7- European Buckthorn – Sweet Cherry Cultural thicket
CUW1-3*- Ash – Sumac Mineral Cultural Woodland
CUW1-4*- Green Ash Mineral Cultural Woodland
CUW1-5*- Maple-Ash Cultural Woodland
CUW1-6*- Green Ash Cultural Woodland
CUW1-7*- Red maple Mineral Cultural Woodland
CUP3-12*- White Pine – White/Norway Spruce Coniferous Plantation
CUP3-13*- White Spruce Coniferous Plantation

D- Disturbed
R- Residential

White Pine Cultural

Notes

1. Coordinate System: UTM NAD 83 - Zone 17 (N).
2. Data Sources: Ontario Ministry of Natural Resources © Queens Printer Ontario, 2009; © Samsung, 2010.
3. Image Source: © Grand River Conservation Authority, 2010 - Imagery Date: Spring 2006; LIDAR IMAGERY SOURCE???
4. Produced using the Version 5 site plan produced by Stantec updated on Dec 13.

Client/Project
SAMSUNG C&T
GRAND RENEWABLE ENERGY PARK

Figure No.
TILE 11 DRAFT

Title
ELC VEGETATION COMMUNITIES

Stantec

ELC COMMUNITY DESCRIPTION / CLASSIFICATION	SITE:		POLYGON:	
	SURVEYOR(S):	DATE:		UTME:
	START:	END	UTMZ:	UTMN:

POLYGON DESCRIPTION

SYSTEM	SUBSTRATE	LANDFORM / LANDFORM FEATURE	HISTORY	VEGETATION TYPE	COMMUNITY
☐ TERRESTRIAL ☐ WETLAND ☐ AQUATIC	☐ ORGANIC ☐ MINERAL SOIL ☐ PARENT MIN. ☐ ACIDIC BEDRK. ☐ BASIC BEDRK. ☐ CARB. BEDRK.	☐ LACUSTRINE ☐ RIVERINE ☐ BOTTOMLAND ☐ TERRACE ☐ VALLEY SLOPE ☐ TABLELAND ☐ ROLL. UPLAND ☐ CLIFF ☐ TALUS ☐ CREVICE / CAVE ☐ ALVAR ☐ ROCKLAND ☐ BEACH / BAR ☐ SAND DUNE ☐ BLUFF	☐ NATURAL ☐ CULTURAL	☐ PLANKTON ☐ SUBMERGED ☐ FLOATING-LVD. ☐ GRAMINOID ☐ FORB ☐ LICHEN ☐ BRYOPHYTE ☐ DECIDUOUS ☐ CONIFEROUS ☐ MIXED	☐ LAKE ☐ POND ☐ RIVER ☐ STREAM ☐ MARSH ☐ SWAMP ☐ FEN ☐ BOG ☐ BARREN ☐ MEADOW ☐ PRAIRIE ☐ THICKET ☐ SAVANNAH ☐ WOODLAND ☐ FOREST ☐ PLANTATION

SITE	COVER
☐ OPEN WATER ☐ SHALLOW WATER ☐ SURFICIAL DEP. ☐ BEDROCK	☐ OPEN ☐ SHRUB ☐ TREED

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	1	4	FAGGRAN = ACESACS
2	SUB-CANOPY	2	4	" > "
3	UNDERSTOREY	3	4	FAGGRAN, OSTVIRG
4	GRD. LAYER			

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:		< 10		10 - 24		25 - 50	N	> 50
STANDING SNAGS:	R	< 10	O	10 - 24	R	25 - 50	N	> 50
DEADFALL / LOGS:		~~< 10~~		~~10 - 24~~		~~25 - 50~~		~~> 50~~

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :		PIONEER		YOUNG		MID-AGE	X	MATURE		OLD GROWTH

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:	Sugar - Maple - Beech Decid Forest	CODE: FODS-2
INCLUSION		CODE:
COMPLEX		CODE:

Notes:

Feature #3

ELC PLANT SPECIES LIST	SITE: Samsang
	POLYGON: 11-14
	DATE: 22-Dec-2010
	SURVEYOR(S): M. Straus

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

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

SPECIES	LAYER					
	1	2	3	4		
FAGGRAN	D					
FRAPENN	R	R	—			
CARDVAT	—	R	—			
ACESACS	D					

SPECIES	LAYER					
	1	2	3	4		

Feature 44

ELC COMMUNITY DESCRIPTION CLASSIFICATION	SITE:		POLYGON:	
	SURVEYOR(S):		DATE:	UTME:
	START:	END		UTMZ: UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	2	2-3	Poplar (patch) >> Red cedar
2	SUB-CANOPY	3		
3	UNDERSTOREY	4	3	Cornus
4	GRD. LAYER			

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:	A < 10	O 10 - 24	N 25 - 50	N > 50	
STANDING SNAGS:	N < 10	N 10 - 24	N 25 - 50	N > 50	
DEADFALL / LOGS:	< 10	10 - 24	25 - 50	> 50	

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :	PIONEER	YOUNG	MID-AGE	MATURE	OLD GROWTH
		X			

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:	Red Cedar Cultural Woodland	CODE: CUW1-1
INCLUSION		CODE:
COMPLEX		CODE:

Notes: Pic 1926

ELC COMMUNITY SPECIES LIST	SITE: Samsung
	POLYGON: 11-13
	DATE: 22-Dec-2010
	SURVEYOR(S): M. Straus

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

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

SPECIES	1	2	3	4	COVER
Poplar	O				scattered
Red Cedar	O				
Cornus			D		
FRAPENN	O				

SPECIES	1	2	3	4	COVER
Cum sp.					
goldenrods					
Aster					

Feature 43

ELC — COMMUNITY DESCRIPTION & CLASSIFICATION

SITE:		POLYGON:	
SURVEYOR(S):		DATE:	UTME:
START:	END	UTMZ:	UTMN:

POLYGON DESCRIPTION

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
☐ TERRESTRIAL ☐ WETLAND ☐ AQUATIC	☐ ORGANIC ☐ MINERAL SOIL ☐ PARENT MIN. ☐ ACIDIC BEDRK. ☐ BASIC BEDRK. ☐ CARB. BEDRK.	☐ LACUSTRINE ☐ RIVERINE ☐ BOTTOMLAND ☐ TERRACE ☐ VALLEY SLOPE ☐ TABLELAND ☐ ROLL. UPLAND ☐ CLIFF ☐ TALUS ☐ CREVICE / CAVE ☐ ALVAR ☐ ROCKLAND ☐ BEACH / BAR ☐ SAND DUNE ☐ BLUFF	☐ NATURAL ☐ CULTURAL	☐ PLANKTON ☐ SUBMERGED ☐ FLOATING-LVD. ☐ GRAMINOID ☐ FORB ☐ LICHEN ☐ BRYOPHYTE ☐ DECIDUOUS ☐ CONIFEROUS ☐ MIXED	☐ LAKE ☐ POND ☐ RIVER ☐ STREAM ☐ MARSH ☐ SWAMP ☐ FEN ☐ BOG ☐ BARREN ☐ MEADOW ☐ PRAIRIE ☐ THICKET ☐ SAVANNAH ☐ WOODLAND ☐ FOREST ☐ PLANTATION

SITE

☐ OPEN WATER
☐ SHALLOW WATER
☐ SURFICIAL DEP.
☐ BEDROCK

COVER

☐ OPEN
☐ SHRUB
☐ TREED

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	1	4	FRAPENN OR ACEFREE
2	SUB-CANOPY	2	4	"
3	UNDERSTOREY			
4	GRD. LAYER			

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:	- < 10	O 10 - 24	O 25 - 50	N > 50
STANDING SNAGS:	< 10	10 - 24	25 - 50	> 50
DEADFALL / LOGS:	< 10	10 - 24	25 - 50	> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :	PIONEER	YOUNG	MID-AGE	MATURE	OLD GROWTH
			X		

SOIL ANALYSIS:

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

COMMUNITY CLASSIFICATION:

	CODE:
COMMUNITY CLASS:	
COMMUNITY SERIES:	
ECOSITE:	
VEGETATION TYPE: Deciduous Swamp	SWD
INCLUSION	
COMPLEX	

Notes: Can't see well enough to determine if 2-2 or 3-3.

ELC — PLANT SPECIES LIST

SITE: Samsung
POLYGON: 11-15
DATE: 20-Dec-2010
SURVEYOR(S): M. Straus

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 1	2	3	4	COLL.
FRAPENN					
ACEFREE					

SPECIES CODE	LAYER 1	2	3	4	COLL.

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE:		POLYGON:	
	SURVEYOR(S):	DATE:		UTME:
	START:	END	UTMZ:	UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY			
2	SUB-CANOPY			
3	UNDERSTOREY			
4	GRD. LAYER			

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:		< 10		10 - 24		25 - 50		> 50
STANDING SNAGS:		< 10		10 - 24		25 - 50		> 50
DEADFALL / LOGS:		< 10		10 - 24		25 - 50		> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :		PIONEER		YOUNG		MID-AGE		MATURE		OLD GROWTH

SOIL ANALYSIS:

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

COMMUNITYCLASSIFICATION:

COMMUNITY CLASS:	CODE:
COMMUNITY SERIES:	CODE:
ECOSITE:	CODE:
VEGETATION TYPE:	CODE:

	INCLUSION		CODE:
	COMPLEX		CODE:

Notes:

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

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 1	LAYER 2	LAYER 3	LAYER 4	COLL.	SPECIES CODE	LAYER 1	LAYER 2	LAYER 3	LAYER 4	COLL.

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December 2010
160960577

Legend

- Proposed Turbine Location
- 120m Zone of Investigation
- ROW Installation Zone
- ELC Communities
- Access Road
- Overhead Collector Line
- Underground Collector Line
- Substation Property
- Road
- Transmission Line (OBM)
- Provincially Significant Wetland
- Non-Provincially Significant Wetland
- Watercourse (OBM)
- Waterbody

Forest Communities (FO)
FOM2-2- Dry-fresh White Pine – Sugar Maple Mixed Forest
FOD- Deciduous Forest
FOD2-1- Dry-fresh Oak – Red Maple Deciduous Forest
FOD2-2- Dry-fresh Oak – Hickory Deciduous Forest
FOD2-4- Dry-fresh Oak – Hardwood Deciduous Forest
FOD3-1- Dry-fresh Poplar Deciduous Forest
FOD4-1- Dry-fresh Beech Deciduous Forest
FOD4-2- Dry-fresh White Ash Deciduous Forest
FOD5-1- Dry-fresh Sugar Maple Deciduous Forest
FOD5-2- Dry-fresh Sugar Maple – Beech Deciduous Forest
FOD5-3- Dry-fresh Sugar Maple – Oak Deciduous Forest
FOD5-8- Dry-fresh Sugar Maple – White Ash Deciduous Forest
FOD5-11*- Dry-fresh Sugar Maple – Oak – Beech Deciduous Forest
FOD5-12*- Dry-fresh Sugar Maple – Hickory – Beech Deciduous Forest
FOD6-1- Fresh-moist Sugar Maple – Lowland Ash Deciduous Forest
FOD6-5- Fresh-moist Sugar Maple – Hardwood Deciduous Forest
FOD6-6*- Fresh-moist Sugar Maple – Hickory Deciduous Forest
FOD7-1- Fresh-moist White Elm Lowkind Deciduous Forest
FOD7-2- Fresh-moist Ash Lowland Deciduous Forest
FOD9-1- Fresh-moist Oak – Sugar Maple Deciduous Forest
FOD9-4- Fresh-moist Shagbark Hickory Deciduous Forest
FOD9-6*- Fresh-moist Red Oak – Shagbark Hickory Deciduous Forest

Swamp Communities (SW)
SWD1-1- Swamp White Oak Mineral Deciduous Swamp
SWD2-2- Green Ash Mineral Deciduous Swamp
SWD2-3*- Ash – Hardwood Mineral Deciduous Swamp
SWD2-4*- Green Ash – Red Maple Mineral Deciduous Swamp
SWD3-1- Red Maple Mineral Deciduous Swamp
SWD3-2- Silver Maple Mineral Deciduous Swamp
SWD3-5*- Swamp Maple - Green Ash Mineral Deciduous Swamp
SWD4-1- Willow Mineral Deciduous Swamp
SWD4-2- White Elm Mineral Deciduous Swamp
SWD3-3- Swamp Maple Mineral Deciduous Swamp
SWD4-6*- Green Ash – Swamp Maple Mineral Deciduous Swamp
SWT- Thicket Swamp
SWT2-4- Buttonbush Mineral Thicket Swamp
SWT2-5- Red Osier Dogwood Mineral Thicket Swamp
SWT2-8- Silky Dogwood Mineral Thicket Swamp
SWT2-9- Gray Dogwood Mineral Thicket Swamp
SWT2-13*- Willow – Dogwood Mineral Thicket Swamp
SWT2-14*- Winterberry – Buttonbush Mineral Thicket Swamp
SWT2-15*- Red Maple Mineral Thicket Swamp
SWT3-7- Winterberry Organic Thicket Swamp

Marsh Communities (MA)
MAM2-2- Reed Canary Grass Mineral Meadow Marsh
MAM2-10- Forb Mineral Meadow Marsh
MAM2-11*- Forb – Graminoid Mineral Meadow Marsh
MAS2-1- Cattail Mineral Shallow Marsh
MAS2-8- Rice Cut-grass Mineral Shallow Marsh

Cultural Communities (CU)
CUM1- Mineral Cultural Meadow
CUT1-7- European Buckthorn – Sweet Cherry Cultural thicket
CUW1-3*- Ash – Sumac Mineral Cultural Woodland
CUW1-4*- Green Ash Mineral Cultural Woodland
CUW1-5*- Maple-Ash Cultural Woodland
CUW1-6*- Green Ash Cultural Woodland
CUW1-7*- Red maple Mineral Cultural Woodland
CUP3-12*- White Pine – White/Norway Spruce Coniferous Plantation
CUP3-13*- White Spruce Coniferous Plantation

D- Disturbed
R- Residential

Notes

1. Coordinate System: UTM NAD 83 - Zone 17 (N).
2. Data Sources: Ontario Ministry of Natural Resources © Queens Printer Ontario, 2009; © Samsung, 2010.
3. Image Source: © Grand River Conservation Authority, 2010 - Imagery Date: Spring 2006; LIDAR IMAGERY SOURCE???
4. Produced using the Version 5 site plan produced by Stantec updated on Dec 13.

Client/Project
SAMSUNG C&T
GRAND RENEWABLE ENERGY PARK

Figure No.
TILE 11

DRAFT

Title
ELC VEGETATION COMMUNITIES

Stantec

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE:		POLYGON:	
	SURVEYOR(S):	DATE:		UTME:
	START:	END	UTMZ:	UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	2	2-3	Poplar (patch) > Red Cedar
2	SUB-CANOPY	3		
3	UNDERSTOREY	4	3	Cornus
4	GRD. LAYER			

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:	A	< 10	O	10 - 24	N	25 - 50	M	> 50
STANDING SNAGS:	N	< 10	N	10 - 24	N	25 - 50	N	> 50
DEADFALL / LOGS:	N	< 10	N	10 - 24	N	25 - 50	N	> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :		PIONEER	✓	YOUNG		MID-AGE		MATURE		OLD GROWTH

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: Red Cedar Cultural Woodland		CODE: CUW1-1
☐ INCLUSION		CODE:
☐ COMPLEX		CODE:

Notes: Pic 1926

Feature 44

ELC PLANT SPECIES LIST	SITE: Samsung
	POLYGON: 11-13
	DATE: 22-Dec-2010
	SURVEYOR(S): M. Straus

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

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

PLANT SPECIES	LAYER				COMMENTS
	1	2	3	4	
Poplar sp.	O				Cum sp.
Red Cedar	O				scattered goldenrods
Cornus			D		Asters
FRAPENN	O				

ELC COMMUNITY DESCRIPTION CLASSIFICATION	SITE:	POLYGON:	
	SURVEYOR(S):	DATE:	UTME:
	START: END	UTMZ:	UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	1	4	FAGGRAN = ACESACS
2	SUB-CANOPY	2	4	FAGGRAN > ACESACS
3	UNDERSTOREY	3	4	FAGGRAN, OSTVIRG
4	GRD. LAYER			

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:		< 10		10 - 24		25 - 50	N	> 50
STANDING SNAGS:	R	< 10	O	10 - 24	R	25 - 50	N	> 50
DEADFALL / LOGS:	~~N~~ R	< 10	~~R~~ O	10 - 24	~~R~~ A	25 - 50	~~N~~ A	> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :		PIONEER		YOUNG		MID-AGE	X	MATURE		OLD GROWTH

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: Sugar - Maple - Beech Decid Forest	CODE: FODS-2
INCLUSION	CODE:
COMPLEX	CODE:

Notes:

Feature 43

ELC PLANT SPECIES LIST	SITE: Samsang
	POLYGON: 11-14
	DATE: 22-Dec-2010
	SURVEYOR(S): M. Straus

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

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

SPECIES NAME	LAYER				SOIL	
	1	2	3	4	S	A
FAGGRAN	D					
FRADENN	R	R	—			
CARCOR	A	R	—			
ACESACS	O					

ELC COMMUNITY DESCRIPTION & CLASSIFICATION

ELC COMMUNITY DESCRIPTION & CLASSIFICATION			
SITE:		POLYGON:	
SURVEYOR(S):	DATE:		UTME:
START:	END:	UTMZ:	UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY			
2	SUB-CANOPY			
3	UNDERSTOREY	4	2	Cornus
4	GRD. LAYER	5-7	4	Reed-canary grass >> asters

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:	O	< 10	R	10 - 24	N	25 - 50	N	> 50
STANDING SNAGS:		< 10		10 - 24		25 - 50		> 50
DEADFALL / LOGS:		< 10		10 - 24		25 - 50		> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :	X	PIONEER		YOUNG		MID-AGE		MATURE		OLD GROWTH

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: Reed-canary grass Meadow Marsh	CODE: MAM2-2
INCLUSION	CODE:
COMPLEX	CODE:

Notes:

Feature 44

ELC PLANT SPECIES LIST

SITE:	Samsup
POLYGON:	11-12
DATE:	22-Apr-2010
SURVEYOR(S):	M. Straus

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 1	LAYER 2	LAYER 3	LAYER 4	COLL.
Cornus			O		
Reed c grass				D	
Asters				O	

Page .... of ....

ELC — COMMUNITY DESCRIPTION & CLASSIFICATION

SITE:			POLYGON:	
SURVEYOR(S):		DATE:		UTME:
START:	END		UTMZ:	UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	1	3	FRAPENN
2	SUB-CANOPY	2	"	
3	UNDERSTOREY	3-4	4	Cornus, RHACATH, Hawthorn
4	GRD. LAYER			Rubus

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:	A	< 10	O	10 - 24	O	25 - 50	R	> 50
STANDING SNAGS:		< 10		10 - 24		25 - 50		> 50
DEADFALL / LOGS:		< 10		10 - 24		25 - 50		> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :		PIONEER	X	YOUNG	X	MID-AGE		MATURE		OLD GROWTH

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:	Green Ash Cultural Woodland	CODE: CUW1-4*
INCLUSION		CODE:
COMPLEX		CODE:

Notes:

Shrubby under growth - CUW

Feature 43

ELC — PLANT SPECIES LIST

SITE: Samsung

POLYGON: 11-11

DATE: 21-Dec-2010

SURVEYOR(S): M. Straus

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 1	2	3	4	COLL.
FRAPENN	O				
CORSER			O		
RHACATH			O		
Prickly Ash			O		
Stag Sumac			R		
Rubus			A		

SPECIES CODE	LAYER 1	2	3	4	COLL.

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December 2010
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Legend

- Proposed Turbine Location
- 120m Zone of Investigation
- ROW Installation Zone
- ELC Communities
- Access Road
- Overhead Collector Line
- Underground Collector Line
- Substation Property
- Road
- Transmission Line (OBM)
- Provincially Significant Wetland
- Non-Provincially Significant Wetland
- Watercourse (OBM)
- Waterbody

Forest Communities (FO)
FOM2-2- Dry-fresh White Pine – Sugar Maple Mixed Forest
FOD- Deciduous Forest
FOD2-1- Dry-fresh Oak – Red Maple Deciduous Forest
FOD2-2- Dry-fresh Oak – Hickory Deciduous Forest
FOD2-4- Dry-fresh Oak – Hardwood Deciduous Forest
FOD3-1- Dry-fresh Poplar Deciduous Forest
FOD4-1- Dry-fresh Beech Deciduous Forest
FOD4-2- Dry-fresh White Ash Deciduous Forest
FOD5-1- Dry-fresh Sugar Maple Deciduous Forest
FOD5-2- Dry-fresh Sugar Maple – Beech Deciduous Forest
FOD5-3- Dry-fresh Sugar Maple – Oak Deciduous Forest
FOD5-8- Dry-fresh Sugar Maple – White Ash Deciduous Forest
FOD5-11*- Dry-fresh Sugar Maple – Oak – Beech Deciduous Forest
FOD5-12*- Dry-fresh Sugar Maple – Hickory – Beech Deciduous Forest
FOD6-1- Fresh-moist Sugar Maple – Lowland Ash Deciduous Forest
FOD6-5- Fresh-moist Sugar Maple – Hardwood Deciduous Forest
FOD6-6*- Fresh-moist Sugar Maple – Hickory Deciduous Forest
FOD7-1- Fresh-moist White Elm Lowkind Deciduous Forest
FOD7-2- Fresh-moist Ash Lowland Deciduous Forest
FOD9-1- Fresh-moist Oak – Sugar Maple Deciduous Forest
FOD9-4- Fresh-moist Shagbark Hickory Deciduous Forest
FOD9-6*- Fresh-moist Red Oak – Shagbark Hickory Deciduous Forest

Swamp Communities (SW)
SWD1-1- Swamp White Oak Mineral Deciduous Swamp
SWD2-2- Green Ash Mineral Deciduous Swamp
SWD2-3*- Ash – Hardwood Mineral Deciduous Swamp
SWD2-4*- Green Ash – Red Maple Mineral Deciduous Swamp
SWD3-1- Red Maple Mineral Deciduous Swamp
SWD3-2- Silver Maple Mineral Deciduous Swamp
SWD3-5*- Swamp Maple - Green Ash Mineral Deciduous Swamp
SWD4-1- Willow Mineral Deciduous Swamp
SWD4-2- White Elm Mineral Deciduous Swamp
SWD3-3- Swamp Maple Mineral Deciduous Swamp
SWD4-6*- Green Ash – Swamp Maple Mineral Deciduous Swamp
SWT- Thicket Swamp
SWT2-4- Buttonbush Mineral Thicket Swamp
SWT2-5- Red Osier Dogwood Mineral Thicket Swamp
SWT2-8- Silky Dogwood Mineral Thicket Swamp
SWT2-9- Gray Dogwood Mineral Thicket Swamp
SWT2-13*- Willow – Dogwood Mineral Thicket Swamp
SWT2-14*- Winterberry – Buttonbush Mineral Thicket Swamp
SWT2-15*- Red Maple Mineral Thicket Swamp
SWT3-7- Winterberry Organic Thicket Swamp

Marsh Communities (MA)
MAM2-2- Reed Canary Grass Mineral Meadow Marsh
MAM2-10- Forb Mineral Meadow Marsh
MAM2-11*- Forb – Graminoid Mineral Meadow Marsh
MAS2-1- Cattail Mineral Shallow Marsh
MAS2-8- Rice Cut-grass Mineral Shallow Marsh

Cultural Communities (CU)
CUM1- Mineral Cultural Meadow
CUT1-7- European Buckthorn – Sweet Cherry Cultural thicket
CUW1-3*- Ash – Sumac Mineral Cultural Woodland
CUW1-4*- Green Ash Mineral Cultural Woodland
CUW1-5*- Maple-Ash Cultural Woodland
CUW1-6*- Green Ash Cultural Woodland
CUW1-7*- Red maple Mineral Cultural Woodland
CUP3-12*- White Pine – White/Norway Spruce Coniferous Plantation
CUP3-13*- White Spruce Coniferous Plantation

D- Disturbed
R- Residential

Stantec

Notes

1. Coordinate System: UTM NAD 83 - Zone 17 (N).
2. Data Sources: Ontario Ministry of Natural Resources © Queens Printer Ontario, 2009; © Samsung, 2010.
3. Image Source: © Grand River Conservation Authority, 2010 - Imagery Date: Spring 2006; LIDAR IMAGERY SOURCE???
4. Produced using the Version 5 site plan produced by Stantec updated on Dec 13.

Client/Project

SAMSUNG C&T
GRAND RENEWABLE ENERGY PARK

Figure No.

TILE 11 DRAFT

Title

ELC VEGETATION COMMUNITIES

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE:		POLYGON:
	SURVEYOR(S):	DATE	UTME:
	START: / END	UTMZ:	UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	1-2	3	FRAPENN
2	SUB-CANOPY	2	2	
3	UNDERSTOREY	3-4	4	Cornus, RHACATH, Hawthorn
4	GRD. LAYER			Rubus

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:	A	< 10	O	10 - 24	O	25 - 50	R	> 50
STANDING SNAGS:	~~ ~~	~~< 10~~	→	10 - 24		25 - 50		> 50
DEADFALL / LOGS:	~~ ~~	~~< 10~~		10 - 24		25 - 50		> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :		PIONEER	X	YOUNG	X	MID-AGE		MATURE		OLD GROWTH

SOIL ANALYSIS:

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

COMMUNITYCLASSIFICATION:

COMMUNITY CLASS:	CODE:
COMMUNITY SERIES:	CODE:
ECOSITE:	CODE:
VEGETATION TYPE: Green Ash Cultural Woodland	CODE: CUW1-4*
INCLUSION	CODE:
COMPLEX	CODE:

Notes:

Shrubby under growth - CUW

Feature 43

ELC PLANT SPECIES LIST	SITE: Samsung
	POLYGON: 11-11
	DATE: 21-Dec-2010
	SURVEYOR(S): M. Straus

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 1	2	3	4	COLL.
FRAPENN	O				
CORRACE			O		
RHACATH			O		
Prickly Ash			O		
Stag Sumac			R		
Rubus			A		

SPECIES CODE	LAYER 1	2	3	4	COLL.

Page .... of ....

ELC — COMMUNITY DESCRIPTION & CLASSIFICATION

SITE:		POLYGON:	
SURVEYOR(S):	DATE:		UTME:
START:	END	UTMZ:	UTMN:

POLYGON DESCRIPTION

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
☐ TERRESTRIAL ☐ WETLAND ☐ AQUATIC	☐ ORGANIC ☐ MINERAL SOIL ☐ PARENT MIN. ☐ ACIDIC BEDRK. ☐ BASIC BEDRK. ☐ CARB. BEDRK.	☐ LACUSTRINE ☐ RIVERINE ☐ BOTTOMLAND ☐ TERRACE ☐ VALLEY SLOPE ☐ TABLELAND ☐ ROLL. UPLAND ☐ CLIFF ☐ TALUS ☐ CREVICE / CAVE ☐ ALVAR ☐ ROCKLAND ☐ BEACH / BAR ☐ SAND DUNE ☐ BLUFF	☐ NATURAL ☐ CULTURAL	☐ PLANKTON ☐ SUBMERGED ☐ FLOATING-LVD. ☐ GRAMINOID ☐ FORB ☐ LICHEN ☐ BRYOPHYTE ☐ DECIDUOUS ☐ CONIFEROUS ☐ MIXED	☐ LAKE ☐ POND ☐ RIVER ☐ STREAM ☐ MARSH ☐ SWAMP ☐ FEN ☐ BOG ☐ BARREN ☐ MEADOW ☐ PRAIRIE ☐ THICKET ☐ SAVANNAH ☐ WOODLAND ☐ FOREST ☐ PLANTATION

SITE

☐ OPEN WATER
☐ SHALLOW WATER
☐ SURFICIAL DEP.
☐ BEDROCK

COVER

☐ OPEN
☐ SHRUB
☐ TREED

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY			
2	SUB-CANOPY			
3	UNDERSTOREY	4	2	Cornus
4	GRD. LAYER	5-7	4	Reed-canary grass >> asters

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:	O	< 10	R	10 - 24	M	25 - 50	N	> 50
STANDING SNAGS:		< 10		10 - 24		25 - 50		> 50
DEADFALL / LOGS:		< 10		10 - 24		25 - 50		> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :		PIONEER		YOUNG		MID-AGE		MATURE		OLD GROWTH
	X									

SOIL ANALYSIS:

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

COMMUNITYCLASSIFICATION:

COMMUNITY CLASS:		CODE:
COMMUNITY SERIES:		CODE:
ECOSITE:		CODE:
VEGETATION TYPE: Reed-canary grass Meadow Marsh		CODE: MAM22
INCLUSION		CODE:
COMPLEX		CODE:

Notes:

Feature 44

ELC — PLANT SPECIES LIST

SITE:	Samsup
POLYGON:	11 - 12
DATE:	22-Dec-2010
SURVEYOR(S):	M. Straus

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 1	2	3	4	COLL.
Cornus			O		

SPECIES CODE	LAYER 1	2	3	4	COLL.
Reed-c gra				D	
Asters				O	

ELC COMMUNITY DESCRIPTION & CLASSIFICATION

SITE:		POLYGON:	
SURVEYOR(S):		DATE:	UTME:
START:	END	UTMZ:	UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	2	D	PINSTRO > FRAPENN
2	SUB-CANOPY			
3	UNDERSTOREY			
4	GRD. LAYER	S-7	4	CUM sp.

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:	O	< 10	D	10 - 24	A	25 - 50	A	> 50
STANDING SNAGS:		~~< 10~~		10 - 24		25 - 50		> 50
DEADFALL / LOGS:		~~< 10~~		10 - 24		25 - 50		> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :	X	PIONEER	X	YOUNG		MID-AGE		MATURE		OLD GROWTH

SOIL ANALYSIS:

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

COMMUNITYCLASSIFICATION:

COMMUNITY CLASS:		CODE:
COMMUNITY SERIES:		CODE:
ECOSITE:		CODE:
VEGETATION TYPE:	White Pine Cultural Woodland	CODE: CUW1-6
INCLUSION		CODE:
COMPLEX		CODE:

Notes:

Feature 45

ELC PLANT SPECIES LIST

SITE:	Samsung
POLYGON:	11-9
DATE:	21-Dec-2010
SURVEYOR(S):	M. Straus

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 1	2	3	4	COLL.
FRAPENN	O				
PINSTRO	O				

SPECIES CODE	LAYER 1	2	3	4	COLL.
CUM sp.					
asters				A	
goldenrods				A	

Feature 45

ELC — COMMUNITY DESCRIPTION & CLASSIFICATION

SITE:		POLYGON:	
SURVEYOR(S):		DATE:	UTME:
START:	END	UTMZ:	UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY			
2	SUB-CANOPY	3	3	Stag Sumac
3	UNDERSTOREY	4	4	CORRACT
4	GRD. LAYER	5-7	4	Aster, goldenrod

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:		< 10		10 - 24		25 - 50	> 50
STANDING SNAGS:		< 10		10 - 24		25 - 50	> 50
DEADFALL / LOGS:		< 10		10 - 24		25 - 50	> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :		PIONEER		YOUNG		MID-AGE		MATURE		OLD GROWTH

SOIL ANALYSIS:

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

COMMUNITYCLASSIFICATION:

COMMUNITY CLASS:		CODE:
COMMUNITY SERIES:		CODE:
ECOSITE:		CODE:
VEGETATION TYPE: Gray Dogwood Cultural Thicket		CODE: CUT1-3
INCLUSION		CODE:
COMPLEX		CODE:

Notes: Gray Dogwood Cultural Thicket

10b = Sumac ONLY - all dense cover CUT1&4 - Sumac Cultural Thicket

Staghorn Sumac Cultural Woodland.

ELC — PLANT SPECIES LIST

SITE: Samsung

POLYGON: 11-10

DATE: 21-Dec-2010.

SURVEYOR(S): McStraus.

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 1	2	3	4	COLL.
Staghorn Sumac		O			D-(b)
CORRACT			D		

SPECIES CODE	LAYER 1	2	3	4	COLL.

Page ..... of .....

WOODC

605290 606290 607290 608290 609290

4751292 4750292

REGIONAL ROAD 20

HALDIMAND ROAD 20

OLD HINES ROAD

AIKENS ROAD

HALDIMAND-NORFOLK TOWNLINE ROAD

RAINHAM ROAD

0 150 300 m

1:12,000

October 2010
160960577

W:\active\160960577\drawing\GIS\MXD\Natural\Heritage\AssessmentFieldMaps\160960577_FIELDMAP_ProjectLocation_Mapbook_V2Oct13_20101014_DH.mxd - 10/14/2010 @ 3:15:10 PM

Legend

- Project Location
- Proposed Turbine Location V2 Oct 08
- 120m Investigation Zone V2 Oct 13
- Substation Property
- Proposed Collector Line V2 Sept 30
- Proposed Access Road V2 Oct 13
- ROW Installation Zone V2 Oct 13
- Elexco Aquired Agreements
- Government Lands
- UDI Lands
- Road
- Railway
- Abandoned Railway
- Transmission Line (OBM)
- Deer Wintering Area
- Provincially Significant Wetland
- Non-Provincially Significant Wetland
- Watercourse (OBM)
- Waterbody

Area of Natural and Scientific Interest (ANSI)

- Life Science, Provincially Significant
- Earth Science, Provincially Significant
- Earth Science, Regionally Significant

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Notes

1. Coordinate System: UTM NAD 83 - Zone 17 (N).
2. Data Sources: Ontario Ministry of Natural Resources © Queens Printer Ontario, 2009; © GREP, 2010; © Samsung, 2010.
3. Image Source: © First Base Solutions, 2010 - Imagery Date: Spring 2006; LIDAR IMAGERY SOURCE???
4. Produced using the Version 2 site plan provided by Samsung issued on October 13, 2010

Client/Project

SAMSUNG C&T
GRAND RENEWABLE ENERGY PARK

Figure No.

FIELD MAP 13

Title

PROJECT LOCATION MAP

Stantec Consulting Ltd.
70-1 Southgate Drive
Guelph, Ontario, Canada
N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

Wildlife Habitat Assessment

Project Number: 160960577

Project Name: Samsung

Date / Time: 28-Oct-2010 @ 9:30am

Field Personnel: M. Straus

Weather Conditions:	Temp:	Wind:	Cloud:	PPT:	PPT in last 24 hrs:
	8°	6	80-100%	none-	none

Reptile Hibernacula Features i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)

Does the site contain potential reptile hibernacula features? ☐ Yes ☒ No (if yes, describe details in Table 1).

Bat Hibernacula Features i.e. karst topography, abandoned mines or caves

Does the site contain potential bat hibernacula features? ☐ Yes ☒ No (if yes, describe details in Table 1).

Table 1: Potential bat/reptile hibernacula features identified on site

UTM	Feature type	Photo #	Description	Species observed using feature

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.e. AMRO/VO SOSP-OB, HAWO-OB OEGR-OB, RTHA-OB WTSP-OB, JUNC-OB HOLA-OB, EAST-OB BCCH-OB, AMCR-OB BCKI-OB, TUVU-OB AMRO-OB, DOWO-OB AMRO-OB, WBNU-OB AMRO-OB, AMWO-OB MOMO-OB	Deer - Bed, TL, OB x2 Raccoon - SC			

Woodland Assessment- *complete 1 assessment for each woodland*

Woodlot # (indicate on map) : _____

Approximate age of stand _____

Are large (i.e. >40cmDBH and >25m tall) **trees present** ☐ Yes ☐ No
If yes, approximate # present or % of stand _____
Location in stand (i.e throughout, in west side only, in FOD2-6 only etc..) _____

Are snags present? ☐ Yes ☐ No
If yes provide characterization of number present, height and DBH of snags and indicate if they contain loose bark.

Trees with cavities present? ☐ No ☐ Rare ☐ Occasional ☐ Abundant
If present:

	Height ranges of tree	Range of Tree DBH	Range of Cavity Heights	Cavity sizes (approx. diameter)

Presence of large stick nests (i.e. raptor nests)? ☐ Yes ☐ No
If yes, UTM and describe tree type, height and position in tree, size of nest, species present

_____

Evidence of disturbance? (i.e logging, roads, paths, ATV use, trails) ☐ Yes ☐ No
If yes, describe _____

Seeps/ springs present? ☐ Yes ☐ No If yes,

Seep/Spring #	UTM	Description	Surrounding Habitat

Vernal Pools Present? ☐ Yes ☐ No If yes,

#	Location	Depth of water	Size of pool (diameter)	Presence of emergent/submergent veg?	Presence of shrub logs at pond edge

Feature 47

Woodland Assessment- *complete 1 assessment for each woodland*

Woodlot # (indicate on map) : C

Approximate age of stand 60-80 years 28-Oct-2010

Are large (i.e. >40cmDBH and >25m tall) **trees present** ☐ Yes ☒ No
If yes, approximate # present or % of stand _____
Location in stand (i.e throughout, in west side only, in FOD2-6 only etc..) _____

Are snags present? ☒ Yes ☐ No
If yes provide characterization of number present, height and DBH of snags and indicate if they contain loose bark. no loose bark - 25cm ↑ 12m, ~2/ha.

Trees with cavities present? ☐ No ☒ Rare ☐ Occasional ☐ Abundant
If present:

	Height ranges of tree	Range of Tree DBH	Range of Cavity Heights	Cavity sizes (approx. diameter)
snag live Pw	2m 25m	15cm 25	2 4-5	small small

Presence of large stick nests (i.e. raptor nests)? ☐ Yes ☒ No
If yes, UTM and describe tree type, height and position in tree, size of nest, species present

Evidence of disturbance? (i.e logging, roads, paths, ATV use, trails) ☒ Yes ☐ No
If yes, describe few paths, firewood cutting

Seeps/ springs present? ☐ Yes ☒ No If yes,

Seep/Spring #	UTM	Description	Surrounding Habitat

Vernal Pools Present? ☒ Yes ☐ No If yes,

#	Location	Depth of water	Size of pool (diameter)	Presence of emergent/submergent veg?	Presence of shrubs, logs at pond edge
1	606953. 4751765	10-15cm	10m ③	CORNUS, SPIREA →	
2	606921. 4751360	<5cm	2m ①	none	none
3	606934. 4751479	<5cm	6m ②	SamCANA	none
4	607013. 4751446	15-25cm	20m ④	cornus	no

Feature 47.

ELC — COMMUNITY DESCRIPTION & CLASSIFICATION

SITE: 160960577	POLYGON: (1)	
SURVEYOR(S):	DATE:	UTME:
START: 14:42 END	UTMZ:	UTMN:

POLYGON DESCRIPTION

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
☐ TERRESTRIAL ☐ WETLAND ☐ AQUATIC	☐ ORGANIC ☐ MINERAL SOIL ☐ PARENT MIN. ☐ ACIDIC BEDRK. ☐ BASIC BEDRK. ☐ CARB. BEDRK.	☐ LACUSTRINE ☐ RIVERINE ☐ BOTTOMLAND ☐ TERRACE ☐ VALLEY SLOPE ☐ TABLELAND ☐ ROLL UPLAND ☐ CLIFF ☐ TALUS ☐ CREVICE / CAVE ☐ ALVAR ☐ ROCKLAND ☐ BEACH / BAR ☐ SAND DUNE ☐ BLUFF	☒ NATURAL ☒ CULTURAL	☐ PLANKTON ☐ SUBMERGED ☐ FLOATING-LVD. ☐ GRAMINOID ☐ FORB ☐ LICHEN ☐ BRYOPHYTE ☐ DECIDUOUS ☐ CONIFEROUS ☐ MIXED	☐ LAKE ☐ POND ☐ RIVER ☐ STREAM ☐ MARSH ☐ SWAMP ☐ FEN ☐ BOG ☐ BARREN ☐ MEADOW ☐ PRAIRIE ☐ THICKET ☐ SAVANNAH ☐ WOODLAND ☐ FOREST ☐ PLANTATION

SITE

☐ OPEN WATER
☐ SHALLOW WATER
☐ SURFICIAL DEP.
☐ BEDROCK

COVER

☐ OPEN
☐ SHRUB
☐ TREED

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	2	3	FRAPENN
2	SUB-CANOPY	3	4	"
3	UNDERSTOREY	4	4	CORRACE > CORSTOL > Hawthorn = RHACATH
4	GRD. LAYER	S-T	4	Canary Grass

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:	A	< 10	O	10 - 24	R	25 - 50	N	> 50
STANDING SNAGS:	N	< 10	R	10 - 24	N	25 - 50	N	> 50
DEADFALL / LOGS:	R	< 10	R	10 - 24	N	25 - 50	N	> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :		PIONEER	X	YOUNG		MID-AGE		MATURE		OLD GROWTH

SOIL ANALYSIS:

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

COMMUNITYCLASSIFICATION:

COMMUNITY CLASS:		CODE:
COMMUNITY SERIES:		CODE:
ECOSITE:		CODE:
VEGETATION TYPE:	Green Ash Mineral Deciduous Swamp	CODE: SWD2-2
INCLUSION	Grey Dogwood Mix Thicket Swamp	CODE: SWT2-9
COMPLEX		CODE:

Notes: Pic# 1836 1837 - /b = more open grass SWT2-16 Pic 1842 = inclusion

SWD 1-4?

ELC — PLANT SPECIES LIST

SITE: Samsung
POLYGON: 1
DATE: 28-Oct-2016
SURVEYOR(S): M Straus

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 1	2	3	4	COLL.
FRAPENN	O	O	R	R	
ULMAMER	R				
RHACATHE			O		
CORSTOL			O		
Hawthorn			O		
CORRACE			O		

SPECIES CODE	LAYER 1	2	3	4	COLL.
Canary Grass				A	
ASTER sp.				O	
Viburnum				R	

Feature 47

ELC — COMMUNITY DESCRIPTION & CLASSIFICATION

SITE: 1609160577 | POLYGON: (2)
SURVEYOR(S): | DATE: | UTME:
START: 15:00 | END: 15:30 | UTMZ: | UTMN:

POLYGON DESCRIPTION

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
☐ TERRESTRIAL ☐ WETLAND ☐ AQUATIC	☐ ORGANIC ☐ MINERAL SOIL ☐ PARENT MIN. ☐ ACIDIC BEDRK. ☐ BASIC BEDRK. ☐ CARB. BEDRK.	☐ LACUSTRINE ☐ RIVERINE ☐ BOTTOMLAND ☐ TERRACE ☐ VALLEY SLOPE ☐ TABLELAND ☐ ROLL. UPLAND ☐ CLIFF ☐ TALUS ☐ CREVICE / CAVE ☐ ALVAR ☐ ROCKLAND ☐ BEACH / BAR ☐ SAND DUNE ☐ BLUFF	☐ NATURAL ☐ CULTURAL	☐ PLANKTON ☐ SUBMERGED ☐ FLOATING-LVD. ☐ GRAMINOID ☐ FORB ☐ LICHEN ☐ BRYOPHYTE ☒ DECIDUOUS ☐ CONIFEROUS ☐ MIXED	☐ LAKE ☐ POND ☐ RIVER ☐ STREAM ☐ MARSH ☐ SWAMP ☐ FEN ☐ BOG ☐ BARREN ☐ MEADOW ☐ PRAIRIE ☐ THICKET ☐ SAVANNAH ☐ WOODLAND ☒ FOREST ☐ PLANTATION

SITE
☐ OPEN WATER
☐ SHALLOW WATER
☐ SURFICIAL DEP.
☐ BEDROCK

COVER
☐ OPEN
☐ SHRUB
☒ TREED

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	1	4	ACESACS > FAGGRAN > QUERUBR
2	SUB-CANOPY	2	4	FAGGRAN > FRAXINUS sp.
3	UNDERSTOREY	3	4	FAGGRAN
4	GRD. LAYER	57	-	-

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:	A	< 10	O	10 - 24	O	25 - 50	R	> 50
STANDING SNAGS:	N	< 10	R	10 - 24	R	25 - 50	N	> 50
DEADFALL / LOGS:	O	< 10	R	10 - 24	R	25 - 50	N	> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :		PIONEER		YOUNG	/	MID-AGE	X	MATURE		OLD GROWTH

SOIL ANALYSIS:

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

COMMUNITY CLASSIFICATION:

		CODE:
COMMUNITY CLASS:		
COMMUNITY SERIES:		
ECOSITE:		
VEGETATION TYPE:	F-M Sugar Maple - Hardwood Decid. Forest	FOD6-3
INCLUSION		
COMPLEX		

Notes: Pic 1838 - Many vernal pools - Largest - see Pic 1839 + 1841

ELC — PLANT SPECIES LIST

SITE: Samsung
POLYGON: 2
DATE: 28-Oct-2010
SURVEYOR(S): M. STRAUS

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 1	2	3	4	COLL.
QUERUBRS	R				
ACESACS	O	O	R	R	
CAROVAT	R	R			
QUEALBA	R				
FRAPENM ER	R	R			
FAGGRAN	O	A	A	O	
FRAPENN		R			
OSTVIRG			R		
PINSTRO	R				
CARCAR			R		
RUBBALL				R	
SPIALBA			R		
CORRACE			R		

SPECIES CODE	LAYER 1	2	3	4	COLL.
IMPCAPE				R	
Christmas Fern				R	
ASTMACR				R	
Beech Drops				R	
IRISP				R	
Viola sp.				R	

Feature 47

ELC — COMMUNITY DESCRIPTION & CLASSIFICATION

SITE:		POLYGON: 3	
SURVEYOR(S):		DATE:	UTME:
START:	END	UTMZ:	UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY			
2	SUB-CANOPY			
3	UNDERSTOREY	4	2	CORNUS (edge)
4	GRD. LAYER	5-7	4	Reed Canary Grass

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:	O < 10	N 10 - 24	N 25 - 50	N > 50
STANDING SNAGS:	N < 10	N 10 - 24	N 25 - 50	N > 50
DEADFALL / LOGS:	N < 10	N 10 - 24	N 25 - 50	N > 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :	X PIONEER	YOUNG	MID-AGE	MATURE	OLD GROWTH

SOIL ANALYSIS:

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

COMMUNITY CLASSIFICATION:

	CODE:
COMMUNITY CLASS:	
COMMUNITY SERIES:	
ECOSITE:	
VEGETATION TYPE: Reed-canary grass Mineral Meadow Marsh	MAM2-2
INCLUSION	CODE:
COMPLEX	CODE:

Notes: P.c#1840 - MAM + thicket edge

ELC — PLANT SPECIES LIST

SITE: Samsung	
POLYGON: 3	
DATE: 28-Oct-2010	
SURVEYOR(S): M. Straus	

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 1	2	3	4	COLL.
CORRACE			O		
CORORBI			R		

SPECIES CODE	LAYER 1	2	3	4	COLL.
Canary grass				D	
Goldenrod				R	

Feature 47

ELC — COMMUNITY DESCRIPTION & CLASSIFICATION

SITE: 16096057 | POLYGON: 4

SURVEYOR(S): | DATE: | UTME: 607066

START: 15:45 | END: 16:00 | UTMZ: 17 | UTMN: 4751424

POLYGON DESCRIPTION

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
☐ TERRESTRIAL	☐ ORGANIC	☐ LACUSTRINE	☑ NATURAL	☐ PLANKTON	☐ LAKE
☒ WETLAND	☒ MINERAL SOIL	☐ RIVERINE	☐ CULTURAL	☐ SUBMERGED	☐ POND
☐ AQUATIC	☐ PARENT MIN.	☐ BOTTOMLAND		☐ FLOATING-LVD.	☐ RIVER
	☐ ACIDIC BEDRK.	☐ TERRACE		☐ GRAMINOID	☐ STREAM
	☐ BASIC BEDRK.	☐ VALLEY SLOPE		☐ FORB	☐ MARSH
	☐ CARB. BEDRK.	☒ TABLELAND		☐ LICHEN	☒ SWAMP
		☐ ROLL. UPLAND		☐ BRYOPHYTE	☐ FEN
		☐ CLIFF		☒ DECIDUOUS	☐ BOG
		☐ TALUS		☐ CONIFEROUS	☐ BARREN
		☐ CREVICE / CAVE		☐ MIXED	☐ MEADOW
		☐ ALVAR			☐ PRAIRIE
		☐ ROCKLAND			☐ THICKET
		☐ BEACH / BAR			☐ SAVANNAH
		☐ SAND DUNE			☐ WOODLAND
		☐ BLUFF			☐ FOREST
					☐ PLANTATION

SITE

☐ OPEN WATER
☐ SHALLOW WATER
☒ SURFICIAL DEP.
☐ BEDROCK

COVER

☐ OPEN
☐ SHRUB
☒ TREED

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	2	4	ACERUBE
2	SUB-CANOPY	3	0	
3	UNDERSTOREY	4	4	CORRACE
4	GRD. LAYER	5.7	4	Iris sp.

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:	O	< 10	O	10 - 24	R	25 - 50	R	> 50
STANDING SNAGS:	N	< 10	R	10 - 24	R	25 - 50	N	> 50
DEADFALL / LOGS:	R	< 10	N	10 - 24	N	25 - 50	N	> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :		PIONEER		YOUNG	X	MID-AGE		MATURE		OLD GROWTH

SOIL ANALYSIS:

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

COMMUNITY CLASSIFICATION:

		CODE:
COMMUNITY CLASS:		
COMMUNITY SERIES:		
ECOSITE:		
VEGETATION TYPE: Swamp Maple Mineral Deciduous Swamp		CODE: SWD3-3
INCLUSION		CODE:
COMPLEX		CODE:

Notes: PIC 18/01 - standing H2O.

ELC — PLANT SPECIES LIST

SITE: Sunsume
POLYGON: 4
DATE: 26-Oct-2010
SURVEYOR(S): M. Straus

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 1	2	3	4	COLL.
ACERUBE	O	O	O	R	
CORRACE			O	O	
RUBIDEA				O	
SAMCANA			R		

SPECIES CODE	LAYER 1	2	3	4	COLL.
WoodFern sp				R	
Iris sp.				O	

606000 607000 608000 609000 610000

4751000

4750000

REGIONAL ROAD 20

HALDIMAND ROAD 20

OLD HWY 3 ROAD

AIKENS ROAD

RAINHAM ROAD

581826 581837 581833 581821 581856 581857

F1 F2 F3 F4

0 200 400 m

1:12,000

606000 607000 608000 609000 610000

W:\active\60960577\drawings\GIS\MXD\NaturalHeritageAssessment\FieldMaps\60960577_FIELDMAP_ProjectLocation_Mapbook_20100921_PW.mxd - 9/22/2010 @ 12:15:19 PM

September 2010
160960577

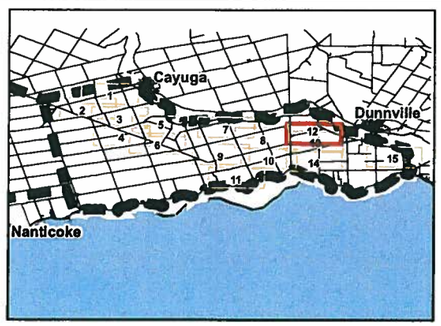
Legend

- Project Location
- Proposed Turbine Location
- Proposed Access Road
- Proposed Collector Line
- ROW Installation Zone
- 120m Investigation Zone
- Elexco Aquired Agreements
- Government Lands
- UDI Lands
- Road
- Railway
- Abandoned Railway
- Transmission Line (OBM)
- Deer Wintering Area
- Provincially Significant Wetland
- Non-Provincially Significant Wetland
- Watercourse (OBM)
- Waterbody

Area of Natural and Scientific Interest (ANSI)

- Life Science, Provincially Significant
- Earth Science, Provincially Significant
- Earth Science, Regionally Significant

Stantec



Notes

1. Coordinate System: UTM NAD 83 - Zone 17 (N).
2. Data Sources: Ontario Ministry of Natural Resources © Queens Printer Ontario, 2009; © GREP, 2010; © Samsung, 2010.
3. Image Source: © First Base Solutions, 2010 - Imagery Date: Spring 2006; **LIDAR IMAGERY SOURCE???**

Client/Project

SAMSUNG C&T
GRAND RENEWABLE ENERGY PARK

Figure No.

FIELD MAP 12

Title

PROJECT LOCATION MAP

No feature

Woodland Assessment- *complete 1 assessment for each woodland*

Woodlot # (indicate on map) : 1

Approximate age of stand 30 yrs.

Are large (i.e. >40cmDBH and >25m tall) **trees present** ☐ Yes ☒ No
If yes, approximate # present or % of stand _____
Location in stand (i.e throughout, in west side only, in FOD2-6 only etc..) _____

Are snags present? ☒ Yes ☐ No
If yes provide characterization of number present, height and DBH of snags and indicate if they contain loose bark. 6 snags - 10m tall / 10-15cm DBH

Potential Bat Maternity Roost : Contains large, mature (i.e. >80 year old) snags or trees (living or dead) containing medium to large cavities ☐ Yes ☒ No (if yes, describe details in Table 1).

Trees with cavities present? ☒ No ☐ Rare ☐ Occasional ☐ Abundant
If present:

	Height ranges of tree	Range of Tree DBH	Range of Cavity Heights	Cavity sizes small: small birds, medium= large woodpeckers, large= mammals Hollow?

Presence of large stick nests (i.e. raptor nests)? ☐ Yes ☒ No
If yes, UTM and describe tree type, height and position in tree, size of nest, species present

_____

Evidence of disturbance? (i.e logging, roads, paths, ATV use, trails) ☐ Yes ☒ No
If yes, describe _____

Seeps/ springs present? ☐ Yes ☒ No If yes,

Seep/Spring #	UTM	Description	Surrounding Habitat

Vernal Pools Present? ☐ Yes ☒ No If yes,

#	Location	Depth of water	Size of pool (diameter)	Presence of emergent/submergent veg?	Presence of shrubs, logs at pond edge

Stantec Consulting Ltd.
70-1 Southgate Drive
Guelph, Ontario, Canada
N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

Wildlife Habitat Assessment

Project Number: 160960577

Project Name: GREP

Date / Time: Sept 28, 2010 7:30-10:30

Field Personnel: D. Taylor

Weather Conditions:	Temp:	Wind:	Cloud:	PPT:	PPT in last 24 hrs:
	16°C	2	100%	Rain	Rain

Location (i.e. turbine #s/description: 581865

Reptile Hibernacula Features i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows) Does the site contain potential reptile hibernacula features? ☐ Yes ☑ No (if yes, describe details in Table 1).

Bat Hibernacula Features i.e. karst topography, abandoned mines or caves

Does the site contain potential bat hibernacula features? ☐ Yes ☒ No (if yes, describe details in Table 1).

Table 1: Potential bat/reptile hibernacula features identified on site

UTM	Feature type	Photo #	Description	Species observed using feature

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.e. AMRO/VO				

Feature 47

Woodland Assessment- *complete 1 assessment for each woodland*

Woodlot # (indicate on map) : 2

Approximate age of stand 80 yrs.

Are large (i.e. >40cmDBH and >25m tall) **trees present** ☒ Yes ☐ No
If yes, approximate # present or % of stand <5%
Location in stand (i.e throughout, in west side only, in FOD2-6 only etc..) throughout

Are snags present? ☒ Yes ☐ No
If yes provide characterization of number present, height and DBH of snags and indicate if they contain loose bark. 30-40 snags spread throughout
↳ 10-45cm DBH / 10-20m high

Potential Bat Maternity Roost : Contains large, mature (i.e. >80 year old) snags or trees (living or dead) containing medium to large cavities ☐ Yes ☒ No (if yes, describe details in Table 1).

Trees with cavities present? ☐ No ☒ Rare ☐ Occasional ☐ Abundant
If present:

	Height ranges of tree	Range of Tree DBH	Range of Cavity Heights	Cavity sizes small: small birds, medium= large woodpeckers, large= mammals Hollow?
3 observed	20-25	20-50	15-20	2 small 1 medium.

Presence of large stick nests (i.e. raptor nests)? ☐ Yes ☒ No
If yes, UTM and describe tree type, height and position in tree, size of nest, species present

Evidence of disturbance? (i.e logging, roads, paths, ATV use, trails) ☒ Yes ☐ No
If yes, describe Trails

Seeps/ springs present? ☐ Yes ☒ No If yes,

Seep/Spring #	UTM	Description	Surrounding Habitat

Vernal Pools Present? ☐ Yes ☒ No If yes,

#	Location	Depth of water	Size of pool (diameter)	Presence of emergent/submergent veg?	Presence of shrubs, logs at pond edge

Woodland Assessment- *complete 1 assessment for each woodland*

Woodlot # (indicate on map) : 4

Approximate age of stand 30 yrs

Are large (i.e. >40cmDBH and >25m tall) **trees present** ☐ Yes ☒ No
If yes, approximate # present or % of stand _____
Location in stand (i.e throughout, in west side only, in FOD2-6 only etc..) _____

Are snags present? ☒ Yes ☐ No
If yes provide characterization of number present, height and DBH of snags and indicate if they contain loose bark. 3 snags - 10m high / 20cm DBH

Potential Bat Maternity Roost : Contains large, mature (i.e. >80 year old) snags or trees (living or dead) containing medium to large cavities ☐ Yes ☒ No (if yes, describe details in Table 1).

Trees with cavities present? ☒ No ☐ Rare ☐ Occasional ☐ Abundant
If present:

	Height ranges of tree	Range of Tree DBH	Range of Cavity Heights	Cavity sizes small: small birds, medium= large woodpeckers, large= mammals Hollow?

Presence of large stick nests (i.e. raptor nests)? ☐ Yes ☒ No
If yes, UTM and describe tree type, height and position in tree, size of nest, species present

_____

Evidence of disturbance? (i.e logging, roads, paths, ATV use, trails) ☐ Yes ☒ No
If yes, describe _____

Seeps/ springs present? ☐ Yes ☒ No If yes,

Seep/Spring #	UTM	Description	Surrounding Habitat

Vernal Pools Present? ☐ Yes ☒ No If yes,

#	Location	Depth of water	Size of pool (diameter)	Presence of emergent/submergent veg?	Presence of shrubs, logs at pond edge

ELC COMMUNITY DESCRIPTION & CLASSIFICATION

SITE: GRBP		POLYGON: 1	
SURVEYOR(S): ART	DATE: Sept 28, 2010	UTME:	
START:	END:	UTMZ:	UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	2	2	ULMAMER = Hawthorn > RHACATH
2	SUB-CANOPY	4	3	CORRACE >> VITRIPA
3	UNDERSTOREY	5	4	reed canary = goldenrod, asters
4	GRD. LAYER			

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:	O	< 10	O	10 - 24	N	25 - 50	N	> 50
STANDING SNAGS:	R	< 10	O	10 - 24		25 - 50	/	> 50
DEADFALL / LOGS:	O	< 10	R	10 - 24		25 - 50		> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE:	[ ] PIONEER	[x] YOUNG	[ ] MID-AGE	[ ] MATURE	[ ] OLD GROWTH

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: Cultural woodland	CODE: CUW1-A
INCLUSION	CODE:
COMPLEX	CODE:

Notes: 6 snags - 10m 10-15 DBH -creek through middle

No feature ?

ELC PLANT SPECIES LIST

SITE:	GRBP
POLYGON:	1
DATE:	Sept 28, 2010
SURVEYOR(S):	ART

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	1	2	3	4	COLL.	SPECIES CODE	1	2	3	4	COLL.
apple						teasel					
FRAAMER						Can goldenrod					
CORRACE						Coltsfoot					
VITRIPA						NE aster					
RHACATH						Burdock					
red rasp						G ragweed					
SALFRAG						w carrot					
ULMAMER						reed Canary					
ACESASA											
Hawthorn											

ELC — COMMUNITY DESCRIPTION & CLASSIFICATION

SITE: GREP | POLYGON: F1
SURVEYOR(S): ART | DATE: Sept 28, 2015 | UTME:
START: | END: | UTMZ: | UTMN:

POLYGON DESCRIPTION

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
☒ TERRESTRIAL	☐ ORGANIC	☐ LACUSTRINE	☐ NATURAL	☐ PLANKTON	☐ LAKE
☐ WETLAND	☒ MINERAL SOIL	☐ RIVERINE	☒ CULTURAL	☐ SUBMERGED	☐ POND
☐ AQUATIC	☐ PARENT MIN.	☐ BOTTOMLAND		☐ FLOATING-LVD.	☐ RIVER
	☐ ACIDIC BEDRK.	☐ TERRACE		☐ GRAMINOID	☐ STREAM
	☐ BASIC BEDRK.	☐ VALLEY SLOPE		☐ FORB	☐ MARSH
	☐ CARB. BEDRK.	☒ TABLELAND		☐ LICHEN	☐ SWAMP
		☐ ROLL. UPLAND		☐ BRYOPHYTE	☐ FEN
		☐ CLIFF		☐ DECIDUOUS	☐ BOG
		☐ TALUS		☐ CONIFEROUS	☐ BARREN
		☐ CREVICE / CAVE		☐ MIXED	☐ MEADOW
		☐ ALVAR			☐ PRAIRIE
		☐ ROCKLAND			☐ THICKET
		☐ BEACH / BAR			☐ SAVANNAH
		☐ SAND DUNE			☐ WOODLAND
		☐ BLUFF			☐ FOREST
					☐ PLANTATION

SITE	COVER
☐ OPEN WATER	☐ OPEN
☐ SHALLOW WATER	☐ SHRUB
☒ SURFICIAL DEP.	☐ TREED
☐ BEDROCK	

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	5	4	alfalfa >> grasses
2	SUB-CANOPY			
3	UNDERSTOREY			
4	GRD. LAYER			

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:	< 10	10 - 24	25 - 50	☒ > 50
STANDING SNAGS:	☒ < 10	10 - 24	25 - 50	> 50
DEADFALL / LOGS:	☒ < 10	10 - 24	25 - 50	> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE:	PIONEER	YOUNG	MID-AGE	MATURE	OLD GROWTH
	☐	☐	☐	☐	☐

SOIL ANALYSIS:

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

COMMUNITY CLASSIFICATION:

	CODE:
COMMUNITY CLASS:	
COMMUNITY SERIES:	
ECOSITE:	
VEGETATION TYPE: Hay	CODE: Hay
☐ INCLUSION	CODE:
☐ COMPLEX	CODE:

Notes:

No feature

ELC — PLANT SPECIES LIST

SITE: GREP
POLYGON: F1
DATE: Sept 28, 2015
SURVEYOR(S): ART

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 1	2	3	4	COLL.
alfalfa					
timothy					
bluegrass					
white clover					
red clover					

SPECIES CODE	LAYER 1	2	3	4	COLL.

Feature 47

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE: GRBP		POLYGON: 2
	SURVEYOR(S): ART	DATE: Sept 28, 2010	UTME:
	START:	END	UTMZ:	UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	1-2	4	ACBJAJA > FRAAMER = FAGGRAN > others
2	SUB-CANOPY	2-4	3	FAGGRAN > FRAAMER
3	UNDERSTOREY	5-6	3	Carex pen < forbs
4	GRD. LAYER			

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:	A < 10	A 10 - 24	O 25 - 50	R > 50	
STANDING SNAGS:	R < 10	O 10 - 24	R 25 - 50	N > 50	
DEADFALL / LOGS:	O < 10	O 10 - 24	R 25 - 50	N > 50	

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE:	PIONEER	YOUNG	MID-AGE	[X] MATURE	OLD GROWTH

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: Sugar Maple – Hardwood Deciduous Forest	CODE: FODB-5
INCLUSION	CODE:
COMPLEX	CODE:

Notes:
- Creek

ELC PLANT SPECIES LIST	SITE: GRBP
	POLYGON: 2
	DATE: Sept 28, 2010
	SURVEYOR(S): ART

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	1	2	3	4	COLL.	SPECIES CODE	1	2	3	4	COLL.
FRAAMER						calico aster					
ACBSASA						wild geranium					
CARQUAT						4-leaved ?					X
QUERUBR						? aster					
ULMAMER						Strawberry					
OSTVIRG						carex pen.					
FAGGRAN						wi avens					
TILAMER						Can. goldenrod					
PINSTRO						SS Bedstraw					
PRUSERO						viola sp.					
						dame rocket					
						clearweed					
						w. lily of the valley					
						Beechdrops					
						yellow avens					
						? all					
						w. lily of the valley					
Black Berry											
VITRIPA											
blueberry					X						
rosa multiflora											
CORRACE											
red rasp											
Hawthorn											
RHACATH											

Page .... of ....

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE: GREP		POLYGON: H1	
	SURVEYOR(S): ART	DATE: Sept 28 2010	UTME: —	
	START: —	END:	UTMZ: —	UTMN: —

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	4	1	RHACATA > CORRACO
2	SUB-CANOPY	5	4	reed cang > forbs
3	UNDERSTOREY			
4	GRD. LAYER			

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:	R	< 10	|	10 - 24	|	25 - 50	|	> 50
STANDING SNAGS:	N	< 10	|	10 - 24	|	25 - 50	|	> 50
DEADFALL / LOGS:	N	< 10		10 - 24		25 - 50		> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :		PIONEER	X	YOUNG		MID-AGE		MATURE		OLD GROWTH

SOIL ANALYSIS:

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

COMMUNITYCLASSIFICATION:

COMMUNITY CLASS:	CODE:
COMMUNITY SERIES:	CODE:
ECOSITE:	CODE:
VEGETATION TYPE: Hedge row	CODE: H1
INCLUSION	CODE:
COMPLEX	CODE:

Notes: - creek

No feature

ELC PLANT SPECIES LIST	SITE: GREP
	POLYGON: H2
	DATE: Sept 28, 2010
	SURVEYOR(S): ART

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 1	2	3	4	COLL.	SPECIES CODE	LAYER 1	2	3	4	COLL.
wi carrot											
reed canary											
E. milkweed											
Can goldenrod											
G ragweed											
Cultivated oats											
NE aster											
wheat grass											
burdock											
Can thistle											
timothy											
bull thistle											
blue vervain											
CORRACO											
RHACATH											
E primrose											
red top											

ELC COMMUNITY DESCRIPTION & CLASSIFICATION

SITE: GRBP		POLYGON: 3	
SURVEYOR(S): ART	DATE: Sept 28, 2010	UTMZ:	UTME:
START:	END:		UTMN:

POLYGON DESCRIPTION

SYSTEM: ☒ TERRESTRIAL ☒ WETLAND ☐ AQUATIC

SUBSTRATE: ☐ ORGANIC ☒ MINERAL SOIL ☐ PARENT MIN. ☐ ACIDIC BEDRK. ☐ BASIC BEDRK. ☐ CARB. BEDRK.

TOPOGRAPHIC FEATURE: ☐ LACUSTRINE ☐ RIVERINE ☐ BOTTOMLAND ☐ TERRACE ☐ VALLEY SLOPE ☒ TABLELAND ☐ ROLL. UPLAND ☐ CLIFF ☐ TALUS ☐ CREVICE / CAVE ☐ ALVAR ☐ ROCKLAND ☐ BEACH / BAR ☐ SAND DUNE ☐ BLUFF

HISTORY: ☐ NATURAL ☒ CULTURAL

PLANT FORM: ☐ PLANKTON ☐ SUBMERGED ☐ FLOATING-LVD. ☒ GRAMINOID ☐ FORB ☐ LICHEN ☐ BRYOPHYTE ☐ DECIDUOUS ☐ CONIFEROUS ☐ MIXED

COMMUNITY: ☐ LAKE ☐ POND ☐ RIVER ☐ STREAM ☒ MARSH ☐ SWAMP ☐ FEN ☐ BOG ☐ BARREN ☒ MEADOW ☐ PRAIRIE ☐ THICKET ☐ SAVANNAH ☐ WOODLAND ☐ FOREST ☐ PLANTATION

SITE: ☐ OPEN WATER ☐ SHALLOW WATER ☒ SURFICIAL DEP. ☐ BEDROCK

COVER: ☒ OPEN ☐ SHRUB ☐ TREED

STAND DESCRIPTION:

LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1 CANOPY	5	4	Reed Canary >> Forbs
2 SUB-CANOPY			
3 UNDERSTOREY			
4 GRD. LAYER			

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:	< 10	10 - 24	25 - 50	> 50
STANDING SNAGS:	< 10	10 - 24	25 - 50	> 50
DEADFALL / LOGS:	< 10	10 - 24	25 - 50	> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE: ☐ PIONEER ☒ YOUNG ☐ MID-AGE ☐ MATURE ☐ OLD GROWTH

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: Reed Canary Meadow Marsh	CODE: MAM 2-2
INCLUSION	CODE:
COMPLEX	CODE:

Notes:

Feature 47

ELC PLANT SPECIES LIST

SITE: GRBP

POLYGON: 3

DATE: Sept 28, 2010

SURVEYOR(S): ART

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 1	2	3	4	COLL.	SPECIES CODE	LAYER 1	2	3	4	COLL.
Reed Canary											
Jewelweed											
Bl. vervain											
Bagganvetch											
NE Aster											

No feature

ELC — COMMUNITY DESCRIPTION & CLASSIFICATION

SITE: CROP	POLYGON: P2		
SURVEYOR(S): ART	DATE: Sept 28, 2010	UTME:	
START:	END	UTMZ:	UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	6	4	Grass > clover
2	SUB-CANOPY			
3	UNDERSTOREY			
4	GRD. LAYER			

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:		< 10		10 - 24		25 - 50		> 50	
STANDING SNAGS:		< 10		10 - 24		25 - 50		> 50	
DEADFALL / LOGS:		< 10		10 - 24		25 - 50		> 50	

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE:		PIONEER		YOUNG		MID-AGE		MATURE		OLD GROWTH

SOIL ANALYSIS:

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

COMMUNITYCLASSIFICATION:

COMMUNITY CLASS:		CODE:
COMMUNITY SERIES:		CODE:
ECOSITE:		CODE:
VEGETATION TYPE:	Hay	CODE: Hay
INCLUSION		CODE:
COMPLEX		CODE:

Notes:

ELC — PLANT SPECIES LIST

SITE: CROP	
POLYGON: P2	
DATE: Sept 28, 2010	
SURVEYOR(S): ART	

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 1	2	3	4	COLL.	SPECIES CODE	LAYER 1	2	3	4	COLL.
White clover											
Red clover											
Wild carrot											
Smartweed											
Timothy											
Dandelion											

ELC — COMMUNITY DESCRIPTION & CLASSIFICATION

SITE: GRBP	POLYGON: 1-2-3		
SURVEYOR(S): ART	DATE: Sept 28, 2010	UTME:	
START:	END	UTMZ:	UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	6	9	Grasses > forbs
2	SUB-CANOPY			
3	UNDERSTOREY			
4	GRD. LAYER			

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:	☐ < 10	☐ 10 - 24	☐ 25 - 50	☐ > 50	
STANDING SNAGS:	☐ < 10	☐ 10 - 24	☐ 25 - 50	☐ > 50	
DEADFALL / LOGS:	☐ < 10	☐ 10 - 24	☐ 25 - 50	☐ > 50	

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE:	☐ PIONEER	☐ YOUNG	☐ MID-AGE	☐ MATURE	☐ OLD GROWTH

SOIL ANALYSIS:

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

COMMUNITYCLASSIFICATION:

COMMUNITY CLASS:		CODE:
COMMUNITY SERIES:		CODE:
ECOSITE:		CODE:
VEGETATION TYPE: Pasture		CODE: Pasture
☐ INCLUSION		CODE:
☐ COMPLEX		CODE:

Notes:

ELC — PLANT SPECIES LIST

SITE: GRBP	
POLYGON: #3	No feature
DATE: Sept 28, 2010	
SURVEYOR(S): ART	

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 1	2	3	4	COLL.
Red Clover					
w. Carrot					
Bird foot ✓	tree for 1				
Timothy					
Chicory					
w. clover					

SPECIES CODE	LAYER 1	2	3	4	COLL.

Page ..... of .....

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE: GRBP		POLYGON: F4	
	SURVEYOR(S): ART	DATE: Sept 28, 2010	UTME:	
	START:	END:	UTMZ:	UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	5	4	Soya
2	SUB-CANOPY			
3	UNDERSTOREY			
4	GRD. LAYER			

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:		< 10		10 - 24		25 - 50		> 50
STANDING SNAGS:		< 10		10 - 24		25 - 50		> 50
DEADFALL / LOGS:		< 10		10 - 24		25 - 50		> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE:		PIONEER		YOUNG		MID-AGE		MATURE		OLD GROWTH

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:	Soya	CODE: Soya
INCLUSION		CODE:
COMPLEX		CODE:

Notes:

ELC PLANT SPECIES LIST	SITE: GREP
	POLYGON: F4
	DATE: Sept 28, 2010
	SURVEYOR(S): ART

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 1	2	3	4	COLL.	SPECIES CODE	LAYER 1	2	3	4	COLL.

W:\active\160960577\drawing\GIS\MXD\NaturalHeritageAssessment\160960577_DRAFT_ELCsV5_WindFarm_20101214_PW.mxd - 12/15/2010 @ 11:25:22 AM

December 2010
160960577

Legend

- Proposed Turbine Location
- 120m Zone of Investigation
- ROW Installation Zone
- ELC Communities
- Access Road
- Overhead Collector Line
- Underground Collector Line
- Substation Property
- Road
- Transmission Line (OBM)
- Provincially Significant Wetland
- Non-Provincially Significant Wetland
- Watercourse (OBM)
- Waterbody

Forest Communities (FO)
FOM2-2- Dry-fresh White Pine – Sugar Maple Mixed Forest
FOD- Deciduous Forest
FOD2-1- Dry-fresh Oak – Red Maple Deciduous Forest
FOD2-2- Dry-fresh Oak – Hickory Deciduous Forest
FOD2-4- Dry-fresh Oak – Hardwood Deciduous Forest
FOD3-1- Dry-fresh Poplar Deciduous Forest
FOD4-1- Dry-fresh Beech Deciduous Forest
FOD4-2- Dry-fresh White Ash Deciduous Forest
FOD5-1- Dry-fresh Sugar Maple Deciduous Forest
FOD5-2- Dry-fresh Sugar Maple – Beech Deciduous Forest
FOD5-3- Dry-fresh Sugar Maple – Oak Deciduous Forest
FOD5-8- Dry-fresh Sugar Maple – White Ash Deciduous Forest
FOD5-11*- Dry-fresh Sugar Maple – Oak – Beech Deciduous Forest
FOD5-12*- Dry-fresh Sugar Maple – Hickory – Beech Deciduous Forest
FOD6-1- Fresh-moist Sugar Maple – Lowland Ash Deciduous Forest
FOD6-5- Fresh-moist Sugar Maple – Hardwood Deciduous Forest
FOD6-6*- Fresh-moist Sugar Maple – Hickory Deciduous Forest
FOD7-1- Fresh-moist White Elm Lowkind Deciduous Forest
FOD7-2- Fresh-moist Ash Lowland Deciduous Forest
FOD9-1- Fresh-moist Oak – Sugar Maple Deciduous Forest
FOD9-4- Fresh-moist Shagbark Hickory Deciduous Forest
FOD9-6*- Fresh-moist Red Oak – Shagbark Hickory Deciduous Forest

Swamp Communities (SW)
SWD1-1- Swamp White Oak Mineral Deciduous Swamp
SWD2-2- Green Ash Mineral Deciduous Swamp
SWD2-3*- Ash – Hardwood Mineral Deciduous Swamp
SWD2-4*- Green Ash – Red Maple Mineral Deciduous Swamp
SWD3-1- Red Maple Mineral Deciduous Swamp
SWD3-2- Silver Maple Mineral Deciduous Swamp
SWD3-5*- Swamp Maple - Green Ash Mineral Deciduous Swamp
SWD4-1- Willow Mineral Deciduous Swamp
SWD4-2- White Elm Mineral Deciduous Swamp
SWD3-3- Swamp Maple Mineral Deciduous Swamp
SWD4-6*- Green Ash – Swamp Maple Mineral Deciduous Swamp
SWT- Thicket Swamp
SWT2-4- Buttonbush Mineral Thicket Swamp
SWT2-5- Red Osier Dogwood Mineral Thicket Swamp
SWT2-8- Silky Dogwood Mineral Thicket Swamp
SWT2-9- Gray Dogwood Mineral Thicket Swamp
SWT2-13*- Willow – Dogwood Mineral Thicket Swamp
SWT2-14*- Winterberry – Buttonbush Mineral Thicket Swamp
SWT2-15*- Red Maple Mineral Thicket Swamp
SWT3-7- Winterberry Organic Thicket Swamp

Marsh Communities (MA)
MAM2-2- Reed Canary Grass Mineral Meadow Marsh
MAM2-10- Forb Mineral Meadow Marsh
MAM2-11*- Forb – Graminoid Mineral Meadow Marsh
MAS2-1- Cattail Mineral Shallow Marsh
MAS2-8- Rice Cut-grass Mineral Shallow Marsh

Cultural Communities (CU)
CUM1- Mineral Cultural Meadow
CUT1-7- European Buckthorn – Sweet Cherry Cultural thicket
CUW1-3*- Ash – Sumac Mineral Cultural Woodland
CUW1-4*- Green Ash Mineral Cultural Woodland
CUW1-5*- Maple-Ash Cultural Woodland
CUW1-6*- Green Ash Cultural Woodland
CUW1-7*- Red maple Mineral Cultural Woodland
CUP3-12*- White Pine – White/Norway Spruce Coniferous Plantation
CUP3-13*- White Spruce Coniferous Plantation

D- Disturbed
R- Residential

Notes

1. Coordinate System: UTM NAD 83 - Zone 17 (N).
2. Data Sources: Ontario Ministry of Natural Resources © Queens Printer Ontario, 2009; © Samsung, 2010.
3. Image Source: © Grand River Conservation Authority, 2010 - Imagery Date: Spring 2006; **LIDAR IMAGERY SOURCE???**
4. Produced using the Version 5 site plan produced by Stantec updated on Dec 13.

Client/Project
SAMSUNG C&T
GRAND RENEWABLE ENERGY PARK

Figure No.
TILE 13 **DRAFT**

Title
ELC VEGETATION COMMUNITIES

Stantec

Stantec Consulting Ltd.
70-1 Southgate Drive
Guelph, Ontario, Canada
N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

Wildlife Habitat Assessment

Project Number: 160960577

Project Name: Samsung

Date / Time: 22-Dec-2010

Field Personnel: Melissa Straus

Weather Conditions:	Temp:	Wind:	Cloud:	PPT:	PPT in last 24 hrs:
	-5°--1°C	0	50%	none	none

Reptile Hibernacula Features i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)

Does the site contain potential reptile hibernacula features? ☐ Yes ☐ No (if yes, describe details in Table 1).

Bat Hibernacula Features i.e. karst topography, abandoned mines or caves

Does the site contain potential bat hibernacula features? ☐ Yes ☐ No (if yes, describe details in Table 1).

Table 1: Potential bat/reptile hibernacula features identified on site

UTM	Feature type	Photo #	Description	Species observed using feature

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.e. AMRO/VO BWA SNBU HOSP				

Driving survey
8:00AM - 4:00PM

Woodland Assessment- *complete 1 assessment for each woodland*

Woodlot # (indicate on map) : _____

Approximate age of stand _____

Are large (i.e. >40cmDBH and >25m tall) **trees present** ☐ Yes ☐ No
If yes, approximate # present or % of stand _____
Location in stand (i.e throughout, in west side only, in FOD2-6 only etc..) _____

Are snags present? ☐ Yes ☐ No
If yes provide characterization of number present, height and DBH of snags and indicate if they contain loose bark.

Trees with cavities present? ☐ No ☐ Rare ☐ Occasional ☐ Abundant
If present:

	Height ranges of tree	Range of Tree DBH	Range of Cavity Heights	Cavity sizes (approx. diameter)

Presence of large stick nests (i.e. raptor nests)? ☐ Yes ☐ No
If yes, UTM and describe tree type, height and position in tree, size of nest, species present

_____

Evidence of disturbance? (i.e logging, roads, paths, ATV use, trails) ☐ Yes ☐ No
If yes, describe _____

Seeps/ springs present? ☐ Yes ☐ No If yes,

Seep/Spring #	UTM	Description	Surrounding Habitat

Vernal Pools Present? ☐ Yes ☐ No If yes,

#	Location	Depth of water	Size of pool (diameter)	Presence of emergent/submergent veg?	Presence of shrub logs at pond edge

No feature

ELC COMMUNITY DESCRIPTION & CLASSIFICATION

SITE:		POLYGON:		
SURVEYOR(S):	DATE:		UTME:	
START:	END	UTMZ:	UTMN:	

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	2	2	Poplar
2	SUB-CANOPY	3	2	Hawthorn
3	UNDERSTOREY	4	4	Gray Dogwood
4	GRD. LAYER	5-7		

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:	A	< 10	R	10 - 24	N	25 - 50	N	> 50
STANDING SNAGS:		< 10		10 - 24		25 - 50		> 50
DEADFALL / LOGS:		< 10		10 - 24		25 - 50		> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE:		PIONEER	X	YOUNG		MID-AGE		MATURE		OLD GROWTH

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: Gray Dogwood cultural thicket		CODE: CUT1-4
INCLUSION		CODE:
COMPLEX		CODE:

Notes:
Pic 1916 - lb: Cornus dominant
(in R.C. grass - lowland g.c.
Pic 1916

ELC PLANT SPECIES LIST

SITE: Samsung
POLYGON: 13-10
DATE: 21-Dec-2010
SURVEYOR(S): M. Straus

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 1	2	3	4	COLL.
Poplar	R				
FRAPENN					
Red Cedar					
Hawthorn					
Gray Dogwood			D		

SPECIES CODE	LAYER 1	2	3	4	COLL.
Cum sp.					
Asters					
Goldenrods					
Reed Canary grass				D in lb.	

Page ...... of ......

Feature 48

ELC COMMUNITY DESCRIPTION & CLASSIFICATION

SITE: | POLYGON: | SURVEYOR(S): | DATE: | UTME: | START: | END | UTMZ: | UTMN:

POLYGON DESCRIPTION

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
☐ TERRESTRIAL ☐ WETLAND ☐ AQUATIC	☐ ORGANIC ☐ MINERAL SOIL ☐ PARENT MIN. ☐ ACIDIC BEDRK. ☐ BASIC BEDRK. ☐ CARB. BEDRK.	☐ LACUSTRINE ☐ RIVERINE ☐ BOTTOMLAND ☐ TERRACE ☐ VALLEY SLOPE ☐ TABLELAND ☐ ROLL. UPLAND ☐ CLIFF ☐ TALUS ☐ CREVICE / CAVE ☐ ALVAR ☐ ROCKLAND ☐ BEACH / BAR ☐ SAND DUNE ☐ BLUFF	☐ NATURAL ☐ CULTURAL	☐ PLANKTON ☐ SUBMERGED ☐ FLOATING-LVD. ☐ GRAMINOID ☐ FORB ☐ LICHEN ☐ BRYOPHYTE ☐ DECIDUOUS ☐ CONIFEROUS ☐ MIXED	☐ LAKE ☐ POND ☐ RIVER ☐ STREAM ☐ MARSH ☐ SWAMP ☐ FEN ☐ BOG ☐ BARREN ☐ MEADOW ☐ PRAIRIE ☐ THICKET ☐ SAVANNAH ☐ WOODLAND ☐ FOREST ☐ PLANTATION

SITE
☐ OPEN WATER
☐ SHALLOW WATER
☐ SURFICIAL DEP.
☐ BEDROCK

COVER
☐ OPEN
☐ SHRUB
☐ TREED

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	1	4	QUERUBR > FRAPENN
2	SUB-CANOPY	2	4	FRAPENN > CARLOVAT
3	UNDERSTOREY	3		
4	GRD. LAYER			

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

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :		PIONEER		YOUNG		MID-AGE		MATURE		OLD GROWTH

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:	Fresh-moist Red Oak - Sugar Maple Hickory FOD9-6*	CODE:
☐ INCLUSION	Dec. Plant	CODE:
☐ COMPLEX		CODE:

Notes:

ELC PLANT SPECIES LIST

SITE: Samsung
POLYGON: 13-2
DATE: 21 Dec - 2010
SURVEYOR(S): M. Straus

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 1	2	3	4	COLL.
CARLOVAT	R				
PINSTRO	O				
FRAPENN	O				
QUERUBR	O				
CORRACE			O		

SPECIES CODE	LAYER 1	2	3	4	COLL.

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE:		POLYGON:	
	SURVEYOR(S):	DATE:		UTME:
	START:	END	UTMZ:	UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	3.	3	PINSTRO
2	SUB-CANOPY			
3	UNDERSTOREY			
4	GRD. LAYER			

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:		< 10		10 - 24		25 - 50		> 50
STANDING SNAGS:		< 10		10 - 24		25 - 50		> 50
DEADFALL / LOGS:		< 10		10 - 24		25 - 50		> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE:		PIONEER	X	YOUNG		MID-AGE		MATURE		OLD GROWTH

SOIL ANALYSIS:

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

COMMUNITYCLASSIFICATION:

COMMUNITY CLASS:	CODE:
COMMUNITY SERIES:	CODE:
ECOSITE:	CODE:
VEGETATION TYPE: White Pine Coniferous Plantation	CODE: CUP3-2
INCLUSION	CODE:
COMPLEX	CODE:

Notes: 10-15 years old. 5 to 7 m.

No feature

ELC PLANT SPECIES LIST	
SITE:	Samsung.
POLYGON:	13-3
DATE:	01-Dec-2010
SURVEYOR(S):	M. Strauss

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 1	2	3	4	COLL.	SPECIES CODE	LAYER 1	2	3	4	COLL.
PINSTRO	D										

Page .... of ....

ELC
COMMUNITY DESCRIPTION & CLASSIFICATION

SITE:		POLYGON:	
SURVEYOR(S):	DATE:		UTME:
START:	END	UTMZ:	UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY			
2	SUB-CANOPY			
3	UNDERSTOREY			
4	GRD. LAYER			

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:		< 10		10 - 24		25 - 50		> 50
STANDING SNAGS:		< 10		10 - 24		25 - 50		> 50
DEADFALL / LOGS:		< 10		10 - 24		25 - 50		> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :		PIONEER		YOUNG		MID-AGE		MATURE		OLD GROWTH

SOIL ANALYSIS:

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

COMMUNITYCLASSIFICATION:

COMMUNITY CLASS:		CODE:
COMMUNITY SERIES:		CODE:
ECOSITE:		CODE:
VEGETATION TYPE:		CODE:
INCLUSION		CODE:
COMPLEX		CODE:

Notes:

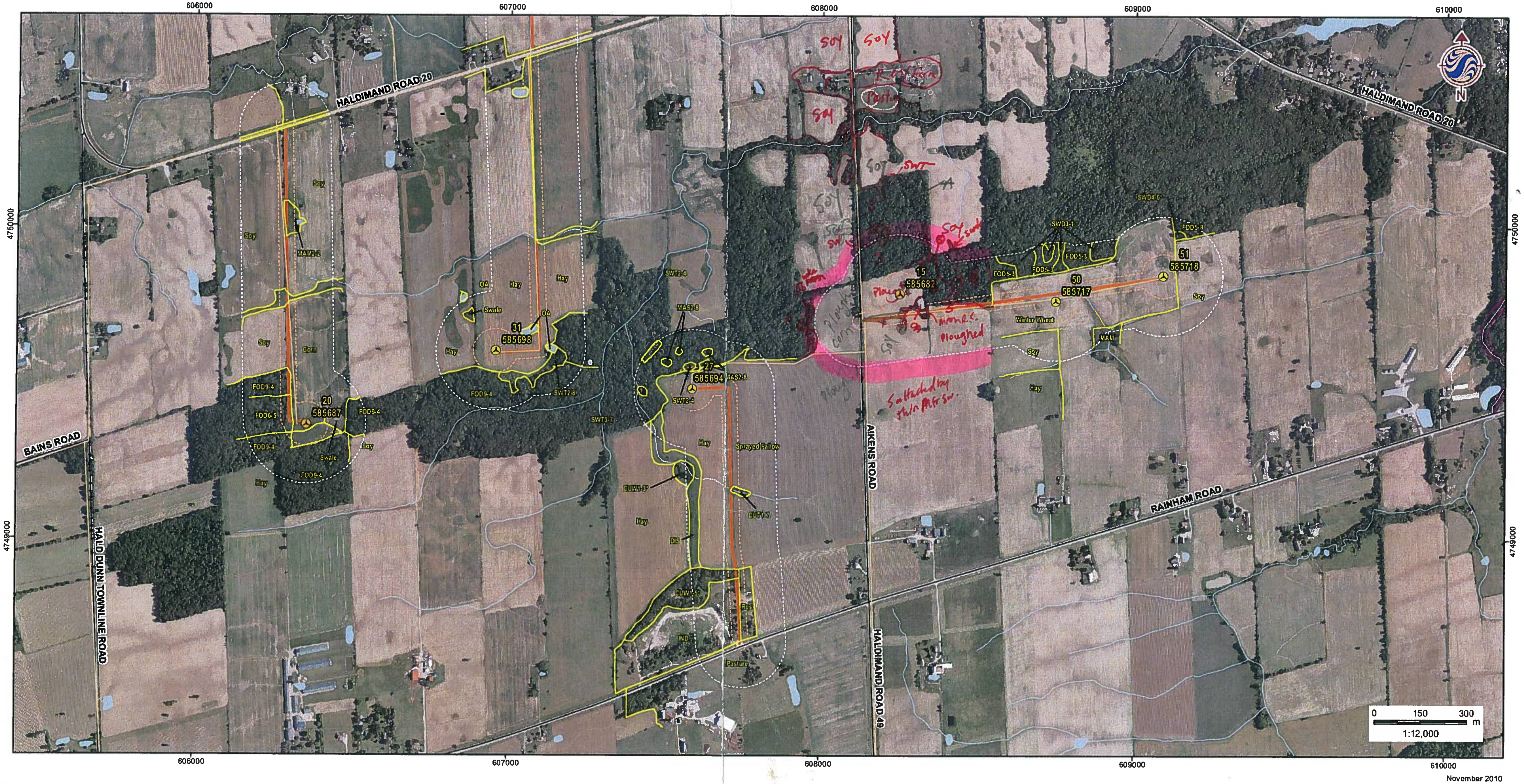
ELC
PLANT SPECIES LIST

SITE:	
POLYGON:	
DATE:	
SURVEYOR(S):	

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 1	LAYER 2	LAYER 3	LAYER 4	COLL.	SPECIES CODE	LAYER 1	LAYER 2	LAYER 3	LAYER 4	COLL.



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November 2010
160960577

Legend

- 120m Investigation Zone (V3)
- Proposed Turbine Location (V3)
- Access Road Centre Line (V3)
- Proposed Collector Line (V2 Sept 30)
- ROW Installation Zone (V3)
- Substation Property
- Road
- Transmission Line (OBM)
- ELC Communities
- Provincially Significant Wetland
- Non-Provincially Significant Wetland
- Watercourse (OBM)
- Waterbody

Forest Communities (FO)
FOM2-2- Dry-fresh White Pine – Sugar Maple Mixed Forest
FOD2-1- Dry-fresh Oak – Red Maple Deciduous Forest
FOD2-2- Dry-fresh Oak – Hickory Deciduous Forest
FOD2-4- Dry-fresh Oak – Hardwood Deciduous Forest
FOD3-1- Dry-fresh Poplar Deciduous Forest
FOD4-1- Dry-fresh Beech Deciduous Forest
FOD4-2- Dry-fresh White Ash Deciduous Forest
FOD5- Dry-fresh Sugar Maple Deciduous Forest
FOD5-2- Dry-fresh Sugar Maple – Beech Deciduous Forest
FOD5-3- Dry-fresh Sugar Maple – Oak Deciduous Forest
FOD5-8- Dry-fresh Sugar Maple – White Ash Deciduous Forest
FOD5-11*- Dry-fresh Sugar Maple – Oak – Beech Deciduous Forest
FOD5-12*- Dry-fresh Sugar Maple – Hickory – Beech Deciduous Forest
FOD6-1- Fresh-moist Sugar Maple – Lowland Ash Deciduous Forest
FOD6-5- Fresh-moist Sugar Maple – Hardwood Deciduous Forest
FOD6-6*- Fresh-moist Sugar Maple – Hickory Deciduous Forest
FOD7-2- Fresh-moist Ash Lowland Deciduous Forest
FOD9-1- Fresh-moist Oak – Sugar Maple Deciduous Forest
FOD9-4- Fresh-moist Shagbark Hickory Deciduous Forest
FOD9-6*- Fresh-moist Red Oak – Shagbark Hickory Deciduous Forest

Swamp Communities (SW)
SWD2-2- Green Ash Mineral Deciduous Swamp
SWD2-3*- Ash – Hardwood Mineral Deciduous Swamp
SWD2-4*- Green Ash – Red Maple Mineral Deciduous Swamp
SWD3-1- Red Maple Mineral Deciduous Swamp
SWD3-3- Swamp Maple Mineral Deciduous Swamp
SWD4-6*- Green Ash – Swamp Maple Mineral Deciduous Swamp
SWT2-4- Buttonbush Mineral Thicket Swamp
SWT2-5- Red Osier Dogwood Mineral Thicket Swamp
SWT2-8- Silky Dogwood Mineral Thicket Swamp
SWT2-13*- Willow – Dogwood Mineral Thicket Swamp
SWT2-14*- Winterberry – Buttonbush Mineral Thicket Swamp
SWT2-15*- Red Maple Mineral Thicket Swamp
SWT3-7- Winterberry Organic Thicket Swamp

Marsh Communities (MA)
MAM2-2- Reed Canary Grass Mineral Meadow Marsh
MAM2-10- Forb Mineral Meadow Marsh
MAM2-11*- Forb – Graminoid Mineral Meadow Marsh
MAS2-1- Cattail Mineral Shallow Marsh
MAS2-8- Rice Cut-grass Mineral Shallow Marsh

Cultural Communities (CU)
CUM1- Mineral Cultural Meadow
CUT1-7- European Buckthorn – Sweet Cherry Cultural thicket
CUW1-3*- Ash – Sumac Mineral Cultural Woodland
CUW1-4*- Green Ash Mineral Cultural Woodland
CUW1-5*- Norway Maple Mineral Cultural Woodland
CUW1-6*- White Elm Cultural Woodland
CUW1-7*- Red maple Mineral Cultural Woodland
CUP3-12*- White Pine – White/Norway Spruce Coniferous Plantation
CUP3-13*- White Spruce Coniferous Plantation

RBW0

Notes

1. Coordinate System: UTM NAD 83 - Zone 17 (N).
2. Data Sources: Ontario Ministry of Natural Resources © Queens Printer Ontario, 2009; © Samsung, 2010.
3. Image Source: © Grand River Conservation Authority. 2010 - Imagery Date: Spring 2006; LIDAR IMAGERY SOURCE???
4. Produced using the Version 3 site plan provided by Samsung issued on October 18, 2010

Client/Project
SAMSUNG C&T
GRAND RENEWABLE ENERGY PARK

Figure No.
DRAFT TILE 14

Title
ELC VEGETATION COMMUNITIES

Stantec

Stantec Consulting Ltd.
70-1 Southgate Drive
Guelph, Ontario, Canada
N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

Wildlife Habitat Assessment

Project Number: 160960577

Project Name: Samsung Wind + Solar

Date / Time: 0-Dec-2010 10:30-17:00

Field Personnel: Melissa Strauss

Weather Conditions:	Temp: -2°C	Wind: 4	Cloud: 80%	PPT: Snow	PPT in last 24 hrs: Snow

Reptile Hibernacula Features i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)

Does the site contain potential reptile hibernacula features? ☐ Yes ☒ No (if yes, describe details in Table 1).

Bat Hibernacula Features i.e. karst topography, abandoned mines or caves

Does the site contain potential bat hibernacula features? ☐ Yes ☒ No (if yes, describe details in Table 1).

Table 1: Potential bat/reptile hibernacula features identified on site

UTM	Feature type	Photo #	Description	Species observed using feature

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.e. AMRO/VO BOCH / OB GCKI / OB Tree sparrow / OB RBWO / OB AMCR / OB DOWO / VO	Eastern Cottontail - OB Deer - TK Racoon - TK			

RB [illegible] / OB

Feature 49

Woodland Assessment- *complete 1 assessment for each woodland*

Woodlot # (indicate on map) : Turbine 85682 (A)

Approximate age of stand 60-80 years

Are large (i.e. >40cmDBH and >25m tall) **trees present** ☐ Yes ☒ No
If yes, approximate # present or % of stand ____________
Location in stand (i.e throughout, in west side only, in FOD2-6 only etc..) ____________

Are snags present? ☒ Yes ☐ No
If yes provide characterization of number present, height and DBH of snags and indicate if they contain loose bark.
① no loose bark, 20cm DBH, ↑8m, / ② 35cm ↑ 6-8m no loose /

Trees with cavities present? ☐ No ☐ Rare ☒ Occasional ☐ Abundant
If present:

	Height ranges of tree	Range of Tree DBH	Range of Cavity Heights	Cavity sizes (approx. diameter)
①	20m	30	8	small
Snags - ②	18m	35-40	8-18	small-med
③ Live	25	45	15m - 18m	med-large
Snag ④	10m	50	8m	hollow no bark
⑤ x2	1-3m	25-30	1-2	small

Presence of large stick nests (i.e. raptor nests)? ☐ Yes ☒ No
If yes, UTM and describe tree type, height and position in tree, size of nest, species present
____

Evidence of disturbance? (i.e logging, roads, paths, ATV use, trails) ☒ Yes ☐ No
If yes, describe some old logging

Seeps/ springs present? ☐ Yes ☒ No If yes,

Seep/Spring #	UTM	Description	Surrounding Habitat

Vernal Pools Present? ☒ Yes ☐ No If yes,

#	Location	Depth of water	Size of pool (diameter)	Presence of emergent/submergent veg?	Presence of shrub logs at pond edge
1	608159. 4750048	10 cm	10m	no	logs ✓ veg - no
2	608207. 4750009	5cm	25m	no	logs in yes

ELC COMMUNITY DESCRIPTION & CLASSIFICATION

SITE:		POLYGON:	
SURVEYOR(S):	DATE:		UTME:
START:	END	UTMZ:	UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	2	4	ULMAMER
2	SUB-CANOPY	3	4	ULMAMER > Apple
3	UNDERSTOREY	4	4	CORRACE > RHACATH
4	GRD. LAYER	5-7	4	Canary grass

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:	A	< 10	O	10 - 24	R	25 - 50	N	> 50
STANDING SNAGS:	N	< 10	R	10 - 24	N	25 - 50	N	> 50
DEADFALL / LOGS:	N	< 10	R	10 - 24	R	25 - 50	N	> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :		PIONEER		YOUNG	X	MID-AGE		MATURE		OLD GROWTH

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: Fresh - moist White Elm Lowland Dec. For	CODE: FOD7-1 ✓
INCLUSION	CODE:
COMPLEX	CODE:

Notes: Pic 1881-82 - Bottomland Elm or CUW stream feature

Feature 49+51 (Wind)

ELC PLANT SPECIES LIST

SITE: Samsung
POLYGON: (1)
DATE: 2-Dec-2010
SURVEYOR(S): M. Straus

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 1	2	3	4	COLL.
ULMAMER	D				
QUEALBA	R				
Apple		R			
Vitis sp.				O	
CORRACE			O		
RHACATH			O		

SPECIES CODE	LAYER 1	2	3	4	COLL.
Red Canary Grass				O	
Goldenrod sp.				R	

Feature 49

ELC COMMUNITY DESCRIPTION & CLASSIFICATION

SITE:		POLYGON:
SURVEYOR(S):	DATE	UTME
START:	END	UTMZ:	UTMN

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	1	4	ACESACS > FAGGRAN TILAMER
2	SUB-CANOPY	2	4	FAGGRAN ACESACS
3	UNDERSTOREY	3	4	FAGGRAN > OSTVIRG < ACESACS [> CORODBLE (inclusions)
4	GRD. LAYER	4		

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:	A	< 10	A	10 - 24	O	25 - 50	R	> 50
STANDING SNAGS:	N	< 10	O	10 - 24	O	25 - 50	N	> 50
DEADFALL / LOGS:	O	< 10	O	10 - 24	O	25 - 50	R	> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE:		PIONEER		YOUNG	X	MID-AGE		MATURE		OLD GROWTH

SOIL ANALYSIS:

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

COMMUNITYCLASSIFICATION:

COMMUNITY CLASS:	CODE:
COMMUNITY SERIES:	CODE:
ECOSITE:	CODE:
VEGETATION TYPE: Dry-fresh Sugar Maple-Beech Dec Forest	CODE: FOD5-2 ✓
INCLUSION Silky Dogwood Mineral Thicket Sw	CODE: SWT2-8 ✓
~~COMPLEX~~ Inclusion Willow Mineral Dec. Swamp	CODE: SWD4-1 ✓

Notes:
Pic 1854 - SWT - Silky Dogwood
1855 - Swamp - Kirkaly Reed canary grass - less dense
1856 - willow swamp
Rolling Fairly moist
1857 - FOD

ELC PLANT SPECIES LIST

SITE:	Samsung
POLYGON:	3
DATE:	2-Dec-2010
SURVEYOR(S):	M. Straus

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 1	2	3	4	COLL.
FAGGRAN	O	O	O	-	
QUEALBA	R	—			
PINSTRO	R	—			edge
ACESACS	O	O	O	-	
CAROVAT	R				
ACERUBR	R				
QUERUBR	R				
TILAMER	R	O			
OSTVIRG			O		
CARCARO			R		

SPECIES CODE	LAYER 1	2	3	4	COLL.
Beechdrops				O	
Reed Canarygrass				R	localized

Page .... of ....

ELC — COMMUNITY DESCRIPTION & CLASSIFICATION

SITE:		POLYGON:	
SURVEYOR(S):		DATE:	UTME:
START:	END	UTMZ:	UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	1	4	ACER SACC +
2	SUB-CANOPY	2	4	"
3	UNDERSTOREY	3	4	"
4	GRD. LAYER			

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:	O	< 10	O	10 - 24	A	25 - 50	N	> 50
STANDING SNAGS:	N	< 10	O	10 - 24	R	25 - 50	N	> 50
DEADFALL / LOGS:	R	< 10	O	10 - 24	O	25 - 50	N	> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :		PIONEER		YOUNG	X	MID-AGE		MATURE		OLD GROWTH

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: Swamp Mode Mineral Deciduous Swamp	CODE: SWD 5-3 ✓
INCLUSION	CODE:
COMPLEX	CODE:

Notes: Pic 1859-1860

ELC — PLANT SPECIES LIST

Feature 49

SITE: Samsung	
POLYGON: 4	
DATE: 2-Dec 2010	
SURVEYOR(S): M. Straus.	

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 1	2	3	4	COLL.
ACER SACC	O				
ACER RUB					
TILIAMER	R				
RUBALL			R		

SPECIES CODE	LAYER 1	2	3	4	COLL.
Dead Forbs -					
poss Impatiens				O	
Sedge Sp.				O	
Fern Sp.				O	
Aster Sp.				O	

ELC COMMUNITY DESCRIPTION & CLASSIFICATION

SITE:		POLYGON:	
SURVEYOR(S):	DATE:		UTME:
START:	END	UTMZ:	UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	1	3	ULMAMER = ~~[illegible]~~
2	SUB-CANOPY	2	2	ULMAMER = ALEFREE
3	UNDERSTOREY	3	2	CORRACE
4	GRD. LAYER	5-7	4	Reed Canary Grass.

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:	O	< 10	O	10 - 24	R	25 - 50	N	> 50
STANDING SNAGS:	N	< 10	R	10 - 24	N	25 - 50	N	> 50
DEADFALL / LOGS:	N	< 10	O	10 - 24	R	25 - 50	N	> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :		PIONEER	☒	YOUNG		MID-AGE		MATURE		OLD GROWTH

SOIL ANALYSIS:

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

COMMUNITYCLASSIFICATION:

COMMUNITY CLASS:	CODE:
COMMUNITY SERIES:	CODE:
ECOSITE:	CODE:
VEGETATION TYPE: White Elm Mineral Deciduous Swamp	CODE: SWD 4-2 ✓
INCLUSION	CODE:
COMPLEX	CODE:

Notes: - Open Mam = Ea
- Easwamp + Mtr along creek.

Pic 1861

Fairly open
Sh - R but has >25%
cover.

Feature 49

ELC PLANT SPECIES LIST

SITE:	Samsung
POLYGON:	5
DATE:	2-Dec+2010
SURVEYOR(S):	M. Strauss

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 1	2	3	4	COLL.	SPECIES CODE	LAYER 1	2	3	4	COLL.
ULMAMER	O	O				ReedCanary				A	
ALEFREE	O	O									
CORRACE			O								

Page .... of ....

ELC — COMMUNITY DESCRIPTION & CLASSIFICATION

SITE:		POLYGON:	
SURVEYOR(S):		DATE:	UTME:
START:	END	UTMZ:	UTMN:

POLYGON DESCRIPTION

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
☐ TERRESTRIAL ☐ WETLAND ☐ AQUATIC	☐ ORGANIC ☐ MINERAL SOIL ☐ PARENT MIN. ☐ ACIDIC BEDRK. ☐ BASIC BEDRK. ☐ CARB. BEDRK.	☐ LACUSTRINE ☐ RIVERINE ☐ BOTTOMLAND ☐ TERRACE ☐ VALLEY SLOPE ☐ TABLELAND ☐ ROLL. UPLAND ☐ CLIFF ☐ TALUS ☐ CREVICE / CAVE ☐ ALVAR ☐ ROCKLAND ☐ BEACH / BAR ☐ SAND DUNE ☐ BLUFF	☐ NATURAL ☐ CULTURAL	☐ PLANKTON ☐ SUBMERGED ☐ FLOATING-LVD. ☐ GRAMINOID ☐ FORB ☐ LICHEN ☐ BRYOPHYTE ☐ DECIDUOUS ☐ CONIFEROUS ☐ MIXED	☐ LAKE ☐ POND ☐ RIVER ☐ STREAM ☐ MARSH ☐ SWAMP ☐ FEN ☐ BOG ☐ BARREN ☐ MEADOW ☐ PRAIRIE ☐ THICKET ☐ SAVANNAH ☐ WOODLAND ☐ FOREST ☐ PLANTATION

SITE

☐ OPEN WATER
☐ SHALLOW WATER
☐ SURFICIAL DEP.
☐ BEDROCK

COVER

☐ OPEN
☐ SHRUB
☐ TREED

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	1	4	ACESACS > FAGGRAN & CARLOVAT
2	SUB-CANOPY	2	4	
3	UNDERSTOREY	3	4	OSTVIRG > CARCARD > 3 ⊙
4	GRD. LAYER			

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:	A	< 10	S	10 - 24	O	25 - 50	R	> 50
STANDING SNAGS:	N	< 10	R	10 - 24	N	25 - 50	N	> 50
DEADFALL / LOGS:	O	< 10	O	10 - 24	O	25 - 50	N	> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :		PIONEER		YOUNG		MID-AGE		MATURE		OLD GROWTH

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: Fresh-moist Sugar Maple-Hardwood	CODE: FOD6-5 rev
INCLUSION: Decid. Forest	CODE:
COMPLEX:	CODE:

Notes: FOD9-4 in some parts
Maple Sugar + other hardwoods

Feature 49

ELC — PLANT SPECIES LIST

SITE: Samsung	
POLYGON: 6	
DATE: 2-Dec-2010	
SURVEYOR(S): M. Straw,	

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 1	2	3	4	COLL.
CARLOVAT	O				
ACERUBR	O				
ACESACS.	O				
FAGGRAN	O				
QUERUBR	R				
TILAMER		R			
OSTVIRG			O		
CARCARD			R		

SPECIES CODE	LAYER 1	2	3	4	COLL.
Carex sp.				D	

606000 607000 608000 609000 610000

4750000

4749000

HALDIMAND ROAD 20

BAINS ROAD

HALDIMAND TOWNLINE ROAD

HALDIMAND ROAD 49

RAINHAM ROAD

MIKENS ROAD

581826 581837 581833 581821 581856 581857

581856
1=SWD3-
2=FOD5-3

581857
1=FOD5-8
2=SWD4-6*

GAW Oct-14-2010

winter wheat

Soy

Hay

boundary in notes

120

0 200 400 m
1:12,000

606000 607000 608000 609000 610000

September 2010
160960577

W:\active\160960577\drawing\GIS\MXD\NaturalHeritageAssessment\FieldMaps\60960577_FIELDMAP_ProjectLocation_Mapbook_20100921_PW.mxd - 9/22/2010 @ 12:15:19 PM

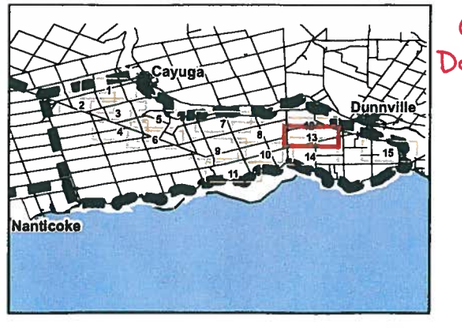
Legend

- Project Location
- Proposed Turbine Location
- Proposed Access Road
- Proposed Collector Line
- ROW Installation Zone
- 120m Investigation Zone
- Elexco Aquired Agreements
- Government Lands
- UDI Lands
- Road
- Railway
- Abandoned Railway
- Transmission Line (OBM)
- Deer Wintering Area
- Provincially Significant Wetland
- Non-Provincially Significant Wetland
- Watercourse (OBM)
- Waterbody

Area of Natural and Scientific Interest (ANSI)

- Life Science, Provincially Significant
- Earth Science, Provincially Significant
- Earth Science, Regionally Significant

Stantec



ORIGINAL
Don't Throw out

Notes

1. Coordinate System: UTM NAD 83 - Zone 17 (N).
2. Data Sources: Ontario Ministry of Natural Resources © Queens Printer Ontario, 2009; © GREP, 2010; © Samsung, 2010.
3. Image Source: © First Base Solutions, 2010 - Imagery Date: Spring 2006; **LIDAR IMAGERY SOURCE???**

Client/Project

SAMSUNG C&T
GRAND RENEWABLE ENERGY PARK

Figure No.

FIELD MAP 13

Title

PROJECT LOCATION MAP

ELC — COMMUNITY DESCRIPTION & CLASSIFICATION

SITE: 161010646		POLYGON: 1	
SURVEYOR(S): GAW	DATE: Oct 14. 2010	UTME:	
START:	END	UTMZ:	UTMN:

POLYGON DESCRIPTION

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
☐ TERRESTRIAL ☒ WETLAND ☐ AQUATIC	☐ ORGANIC ☒ MINERAL SOIL ☐ PARENT MIN. ☐ ACIDIC BEDRK. ☐ BASIC BEDRK. ☐ CARB. BEDRK.	☐ LACUSTRINE ☐ RIVERINE ☐ BOTTOMLAND ☐ TERRACE ☐ VALLEY SLOPE ☒ TABLELAND ☐ ROLL. UPLAND ☐ CLIFF ☐ TALUS ☐ CREVICE / CAVE ☐ ALVAR ☐ ROCKLAND ☐ BEACH / BAR ☐ SAND DUNE ☐ BLUFF	☒ NATURAL ☐ CULTURAL	☐ PLANKTON ☐ SUBMERGED ☐ FLOATING-LVD. ☒ GRAMINOID ☐ FORB ☐ LICHEN ☐ BRYOPHYTE ☐ DECIDUOUS ☐ CONIFEROUS ☐ MIXED	☐ LAKE ☐ POND ☐ RIVER ☐ STREAM ☒ MARSH ☐ SWAMP ☐ FEN ☐ BOG ☐ BARREN ☐ MEADOW ☐ PRAIRIE ☐ THICKET ☐ SAVANNAH ☐ WOODLAND ☐ FOREST ☐ PLANTATION

SITE

☐ OPEN WATER
☐ SHALLOW WATER
☒ SURFICIAL DEP.
☐ BEDROCK

COVER

☒ OPEN
☐ SHRUB
☐ TREED

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	4	4	Common reed = reed canary
2	SUB-CANOPY	5	4	"
3	UNDERSTOREY	6-7	4	"
4	GRD. LAYER			

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:	R	< 10	R	10 - 24	/	25 - 50	/ > 50
STANDING SNAGS:	/	< 10	/	10 - 24	/	25 - 50	/ > 50
DEADFALL / LOGS:	/	< 10	/	10 - 24	/	25 - 50	/ > 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :		PIONEER	X	YOUNG		MID-AGE		MATURE		OLD GROWTH

SOIL ANALYSIS:

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

COMMUNITYCLASSIFICATION:

COMMUNITY CLASS: Marsh	CODE: MA
COMMUNITY SERIES: Meadow Marsh	CODE: MAM
ECOSITE: Mineral Meadow Marsh	CODE: MAM2
VEGETATION TYPE:	CODE:
☐ INCLUSION	CODE:
☐ COMPLEX	CODE:

Notes:

ELC — PLANT SPECIES LIST

SITE: Feature 50	
POLYGON: Turbine 581856	
DATE:	
SURVEYOR(S):	

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 1	2	3	4	COLL.
Common Reed	A	A	A		
Reed Canary	A	A	A		
ULMAMER	R				Super Canopy
CORSTOL		O			

SPECIES CODE	LAYER 1	2	3	4	COLL.

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE:		POLYGON:	
	SURVEYOR(S):	DATE:		UTME:
	START:	END	UTMZ:	UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY			
2	SUB-CANOPY			
3	UNDERSTOREY			
4	GRD. LAYER			

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:		< 10		10 - 24		25 - 50		> 50
STANDING SNAGS:		< 10		10 - 24		25 - 50		> 50
DEADFALL / LOGS:		< 10		10 - 24		25 - 50		> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :		PIONEER		YOUNG		MID-AGE		MATURE		OLD GROWTH

SOIL ANALYSIS:

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

COMMUNITYCLASSIFICATION:

COMMUNITY CLASS:	CODE:
COMMUNITY SERIES:	CODE:
ECOSITE:	CODE:
VEGETATION TYPE:	CODE:
☐ INCLUSION	CODE:
☐ COMPLEX	CODE:

Notes:

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

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 1	LAYER 2	LAYER 3	LAYER 4	COLL.	SPECIES CODE	LAYER 1	LAYER 2	LAYER 3	LAYER 4	COLL.

606000 607000 608000 609000 610000

4750000

4749000

HALDIMAND ROAD 20

BAINS ROAD

HALDIMAND-NORFOLK TOWNLINE ROAD

AIKENS ROAD

RAINHAM ROAD

HALDIMAND ROAD 49

N

0 150 300 m

1:12,000

November 2010

160960577

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Legend

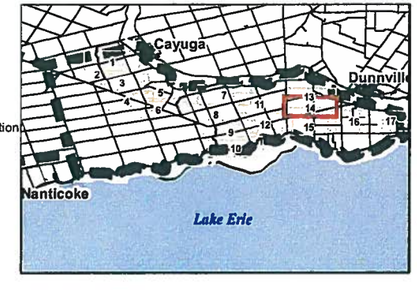
- 120m Investigation Zone (V3)
- Proposed Turbine Location (V3)
- Access Road Centre Line (V3)
- Proposed Collector Line (V2 Sept 30)
- ROW Installation Zone (V3)
- Substation Property
- Road
- Transmission Line (OBM)
- ELC Communities
- Provincially Significant Wetland
- Non-Provincially Significant Wetland
- Watercourse (OBM)
- Waterbody

Forest Communities (FO)
FOM2-2- Dry-fresh White Pine – Sugar Maple Mixed Forest
FOD2-1- Dry-fresh Oak – Red Maple Deciduous Forest
FOD2-2- Dry-fresh Oak – Hickory Deciduous Forest
FOD2-4- Dry-fresh Oak – Hardwood Deciduous Forest
FOD3-1- Dry-fresh Poplar Deciduous Forest
FOD4-1- Dry-fresh Beech Deciduous Forest
FOD4-2- Dry-fresh White Ash Deciduous Forest
FOD5- Dry-fresh Sugar Maple Deciduous Forest
FOD5-2- Dry-fresh Sugar Maple – Beech Deciduous Forest
FOD5-3- Dry-fresh Sugar Maple – Oak Deciduous Forest
FOD5-8- Dry-fresh Sugar Maple – White Ash Deciduous Forest
FOD5-11*- Dry-fresh Sugar Maple – Oak – Beech Deciduous Forest
FOD5-12*- Dry-fresh Sugar Maple – Hickory – Beech Deciduous Forest
FOD6-1- Fresh-moist Sugar Maple – Lowland Ash Deciduous Forest
FOD6-5- Fresh-moist Sugar Maple – Hardwood Deciduous Forest
FOD6-6*- Fresh-moist Sugar Maple – Hickory Deciduous Forest
FOD7-2- Fresh-moist Ash Lowland Deciduous Forest
FOD9-1- Fresh-moist Oak – Sugar Maple Deciduous Forest
FOD9-4- Fresh-moist Shagbark Hickory Deciduous Forest
FOD9-6*- Fresh-moist Red Oak – Shagbark Hickory Deciduous Forest

Swamp Communities (SW)
SWD2-2- Green Ash Mineral Deciduous Swamp
SWD2-3*- Ash – Hardwood Mineral Deciduous Swamp
SWD2-4*- Green Ash – Red Maple Mineral Deciduous Swamp
SWD3-1- Red Maple Mineral Deciduous Swamp
SWD3-3- Swamp Maple Mineral Deciduous Swamp
SWD4-6*- Green Ash – Swamp Maple Mineral Deciduous Swamp
SWT2-4- Buttonbush Mineral Thicket Swamp
SWT2-5- Red Osier Dogwood Mineral Thicket Swamp
SWT2-8- Silky Dogwood Mineral Thicket Swamp
SWT2-13*- Willow – Dogwood Mineral Thicket Swamp
SWT2-14*- Winterberry – Buttonbush Mineral Thicket Swamp
SWT2-15*- Red Maple Mineral Thicket Swamp
SWT3-7- Winterberry Organic Thicket Swamp

Marsh Communities (MA)
MAM2-2- Reed Canary Grass Mineral Meadow Marsh
MAM2-10- Forb Mineral Meadow Marsh
MAM2-11*- Forb – Graminoid Mineral Meadow Marsh
MAS2-1- Cattail Mineral Shallow Marsh
MAS2-8- Rice Cut-grass Mineral Shallow Marsh

Cultural Communities (CU)
CUM1- Mineral Cultural Meadow
CUT1-7- European Buckthorn – Sweet Cherry Cultural thicket
CUW1-3*- Ash – Sumac Mineral Cultural Woodland
CUW1-4*- Green Ash Mineral Cultural Woodland
CUW1-5*- Norway Maple Mineral Cultural Woodland
CUW1-6*- White Elm Cultural Woodland
CUW1-7*- Red maple Mineral Cultural Woodland
CUP3-12*- White Pine – White/Norway Spruce Coniferous Plantation
CUP3-13*- White Spruce Coniferous Plantation



Notes

1. Coordinate System: UTM NAD 83 - Zone 17 (N).
2. Data Sources: Ontario Ministry of Natural Resources © Queens Printer Ontario, 2009; © Samsung, 2010.
3. Image Source: © Grand River Conservation Authority, 2010 - Imagery Date: Spring 2006; **LIDAR IMAGERY SOURCE???**
4. Produced using the Version 3 site plan provided by Samsung issued on October 18, 2010

Client/Project
SAMSUNG C&T
GRAND RENEWABLE ENERGY PARK

Figure No.
DRAFT TILE 14

Title
ELC VEGETATION COMMUNITIES

Stantec

Feature 49+51 (Wind.)

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE:		POLYGON:	
	SURVEYOR(S):	DATE:	UTME:	
	START:	END	UTMZ:	UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	2	4	ULMAMER
2	SUB-CANOPY	3	4	ULMAMER > Apple.
3	UNDERSTOREY	4	4	CORRACE > RHACATH
4	GRD. LAYER	5-7	4	Canary > Grass.

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:	N	< 10	O	10 - 24	R	25 - 50	M	> 50
STANDING SNAGS:	M	< 10	R	10 - 24	M	25 - 50	M	> 50
DEADFALL / LOGS:	M	< 10	R	10 - 24	R	25 - 50	M	> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :		PIONEER		YOUNG	X	MID-AGE		MATURE		OLD GROWTH

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: Fresh - moist White Elm Lowland Dec. For		CODE: FOD7-1 ✓
INCLUSION		CODE:
COMPLEX		CODE:

Notes: Pic 1851-52. - Bottomland Elm or CUW Stream feature

ELC COMMUNITY SPECIES LIST	SITE: Samsung
	POLYGON: 1
	DATE: 2-Dec-2020
	SURVEYOR(S): M. Straus

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				SPECIES CODE	LAYER			
	1	2	3	4		1	2	3	4
ULMAMER	D				Red Canary Grass.				O
QUEALBA	R				Goldenrod sp.				R
Apple.		R							
Vitis sp.				O					
CORRACE			O						
RHACATH			O						

ELC COMMUNITY DESCRIPTION CLASSIFICATION

SITE:		POLYGON:	
SURVEYOR(S):	DATE:		UTME:
START:	END:	UTMZ:	UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	1	3	ACESACS
2	SUB-CANOPY	2		—
3	UNDERSTOREY	3	4	Hauthorn
4	GRD. LAYER	5-7		? Seedlings – Hawthorn ?

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:	A	< 10	O	10 - 24	R	25 - 50	N	> 50
STANDING SNAGS:	N	< 10	N	10 - 24	N	25 - 50	N	> 50
DEADFALL / LOGS:	N	< 10	R	10 - 24	N	25 - 50	N	> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :		PIONEER	X	YOUNG		MID-AGE		MATURE		OLD GROWTH

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: Dry-fresh Sugar Maple Dec. Forest Type		CODE: FODS-1
INCLUSION		CODE:
COMPLEX		CODE:

(Feature 51)

Notes: Young Forest – Hawthorn under growth
1855

Feature 51

ELC PLANT SPECIES LIST

SITE:	Samsung
POLYGON:	2
DATE:	2 Dec-2010
SURVEYOR(S):	M. Straus

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 1	LAYER 2	LAYER 3	LAYER 4	COLL.	SPECIES CODE	LAYER 1	LAYER 2	LAYER 3	LAYER 4	COLL.
ACESACS	O	O	O	O							
ANSRO	R										
TILAMER	R										
Hawthorn			A								

Page .... of ....

Feature 51

ELC COMMUNITY DESCRIPTION & CLASSIFICATION

SITE:		POLYGON:	
SURVEYOR(S):	DATE:		UTME:
START:	END:	UTMZ:	UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1 CANOPY	1	2	ALEFREE
2 SUB-CANOPY			
3 UNDERSTOREY	4	2	CORRACE
4 GRD. LAYER			

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:	< 10	10 - 24	25 - 50	> 50
STANDING SNAGS:	< 10	10 - 24	25 - 50	> 50
DEADFALL / LOGS:	< 10	10 - 24	25 - 50	> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :	X PIONEER	YOUNG	MID-AGE	MATURE	OLD GROWTH

SOIL ANALYSIS:

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

COMMUNITYCLASSIFICATION:

COMMUNITY CLASS:	CODE:
COMMUNITY SERIES:	CODE:
ECOSITE:	CODE:
VEGETATION TYPE:	CODE: MAM
INCLUSION	CODE:
COMPLEX	CODE:

Notes: Unk. dead Forbs
Pic# 1862

ELC PLANT SPECIES LIST

SITE:	Samsung
POLYGON:	5b
DATE:	2-Dec-2010
SURVEYOR(S):	M. Strauss

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 1	2	3	4	COLL.
ALEFREE	R				
Dead Forbs					

Page .... of ....

Feature 51

ELC — COMMUNITY DESCRIPTION & CLASSIFICATION

SITE:		POLYGON:	
SURVEYOR(S):		DATE:	UTME:
START:	END	UTMZ:	UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	1	4	FRAPENN > ACERUBR
2	SUB-CANOPY	2	4	"
3	UNDERSTOREY	3	4	CORRACE
4	GRD. LAYER			

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:	A	< 10	A	10 - 24	R	25 - 50	N > 50
STANDING SNAGS:	N	< 10	R	10 - 24	N	25 - 50	N > 50
DEADFALL / LOGS:		< 10		10 - 24		25 - 50	> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :		PIONEER		YOUNG	X	MID-AGE		MATURE		OLD GROWTH

SOIL ANALYSIS:

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

COMMUNITY CLASSIFICATION:

		CODE:
COMMUNITY CLASS:		
COMMUNITY SERIES:		CODE:
ECOSITE:		CODE:
VEGETATION TYPE:	Green Ash Mineral Decid. Swamp	CODE: SWD2-7
INCLUSION		CODE:
COMPLEX		CODE:

Feature 51

Notes:

Pic 1863.

Feature 51

ELC — PLANT SPECIES LIST

SITE:	Samsung
POLYGON:	7
DATE:	2-Dec. 2010
SURVEYOR(S):	M. Straus

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 1	2	3	4	COLL.
ACERUBR	O				
FRAPENN	O				
CORRACE			O		
RUBALLE				R	

SPECIES CODE	LAYER 1	2	3	4	COLL.
Red Canary				O	

W:\active\60960577\drawing\GIS\MXD\NaturalHeritageAssessment\FieldMaps\60960577_FIELDMAP_ProjectLocation_Mapbook_20100921_PW.mxd - 9/27/2010 @ 5:35:56 PM

September 2010
160960577

Legend

- Project Location
- Proposed Turbine Location
- Proposed Access Road
- Proposed Collector Line
- ROW Installation Zone
- 120m Investigation Zone
- Elexco Aquired Agreements
- Government Lands
- UDI Lands
- Road
- Railway
- Abandoned Railway
- Transmission Line (OBM)
- Deer Wintering Area
- Provincially Significant Wetland
- Non-Provincially Significant Wetland
- Watercourse (OBM)
- Waterbody

Area of Natural and Scientific Interest (ANSI)

- Life Science, Provincially Significant
- Earth Science, Provincially Significant
- Earth Science, Regionally Significant

Notes

1. Coordinate System: UTM NAD 83 - Zone 17 (N).
2. Data Sources: Ontario Ministry of Natural Resources © Queens Printer Ontario, 2009; © GREP, 2010; © Samsung, 2010.
3. Image Source: © First Base Solutions, 2010 - Imagery Date: Spring 2006; **LIDAR IMAGERY SOURCE???**

Client/Project

SAMSUNG C&T
GRAND RENEWABLE ENERGY PARK

Figure No.

FIELD MAP 14

Title

PROJECT LOCATION MAP

Stantec

Stantec Consulting Ltd.
70-1 Southgate Drive
Guelph, Ontario, Canada
N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

Wildlife Habitat Assessment

Project Number: 160960577

Project Name: Samsung

Date / Time: 5-Oct-2010

Field Personnel: Melissa Straus

Weather Conditions:	Temp:	Wind:	Cloud:	PPT:	PPT in last 24 hrs:
	7-10°C	4-5	100%	light-heavy rain 5-10mm	none

Reptile Hibernacula Features i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)

Does the site contain potential reptile hibernacula features? ☐ Yes ☒ No (if yes, describe details in Table 1).

Bat Hibernacula Features i.e. karst topography, abandoned mines or caves

Does the site contain potential bat hibernacula features? ☐ Yes ☒ No (if yes, describe details in Table 1).

Table 1: Potential bat/reptile hibernacula features identified on site

UTM	Feature type	Photo #	Description	Species observed using feature

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.e. AMRO-VO BCCH-OB SACR-OB SOSP-OB DOWO-VO CAGO-OB RWBL-VO NOHA-OB AMRO-VO TUVU-OB	Deer-TK Coyote-SC Gray Squirrel-OB			

COYE-VO
WOTH-HO
CHKI-OB

Woodland Assessment- *complete 1 assessment for each woodland*

Woodlot # (indicate on map) : A - Feature 51

Approximate age of stand 80

Are large (i.e. >40cmDBH and >25m tall) **trees present** ☑ Yes ☐ No
If yes, approximate # present or % of stand 5% QUERCUS mostly - scattered
Location in stand (i.e throughout, in west side only, in FOD2-6 only etc..) _____

Are snags present? ☑ Yes ☐ No
If yes provide characterization of number present, height and DBH of snags and indicate if they contain loose bark. ~3trees/ha 3@ 30cm DBH, 2-3m↑, no loose bark / 1w loose bark Ea 15m↑ DBH~25cm

Trees with cavities present? ☐ No ☑ Rare ☐ Occasional ☐ Abundant
If present:

	Height ranges of tree	Range of Tree DBH	Range of Cavity Heights	Cavity sizes (approx. diameter)
	5-15m	25-35cm	5-10	small

Presence of large stick nests (i.e. raptor nests)? ☐ Yes ☑ No
If yes, UTM and describe tree type, height and position in tree, size of nest, species present So

Evidence of disturbance? (i.e logging, roads, paths, ATV use, trails) ☐ Yes ☐ No
If yes, describe some old logging, few small trails

Seeps/ springs present? ☐ Yes ☑ No If yes,

Seep/Spring #	UTM	Description	Surrounding Habitat

Vernal Pools Present? ☐ Yes ☑ No If yes,

#	Location	Depth of water	Size of pool (diameter)	Presence of emergent/submergent veg?	Presence of shrubs, logs at pond edge

5-Oct-2010

Woodland Assessment- *complete 1 assessment for each woodland*

Woodlot # (indicate on map) : B Feature 51

Approximate age of stand 80 years

Are large (i.e. >40cmDBH and >25m tall) **trees present** ☒ Yes ☐ No
If yes, approximate # present or % of stand <5%
Location in stand (i.e throughout, in west side only, in FOD2-6 only etc..) _____

Are snags present? ☒ Yes ☐ No
If yes provide characterization of number present, height and DBH of snags and indicate if they contain loose bark. ~6/ha mostly broken top, mostly without loose bark

Trees with cavities present? ☐ No ☐ Rare ☒ Occasional ☐ Abundant
If present:

	Height ranges of tree	Range of Tree DBH	Range of Cavity Heights	Cavity sizes (approx. diameter)
		15-35cm	2m-15m	small

Presence of large stick nests (i.e. raptor nests)? ☐ Yes ☐ No
If yes, UTM and describe tree type, height and position in tree, size of nest, species present

_____

Evidence of disturbance? (i.e logging, roads, paths, ATV use, trails) ☐ Yes ☐ No
If yes, describe Old logging, mud trails

Seeps/ springs present? ☐ Yes ☒ No If yes,

Seep/Spring #	UTM	Description	Surrounding Habitat

Vernal Pools Present? ☐ Yes ☒ No If yes,

#	Location	Depth of water	Size of pool (diameter)	Presence of emergent/submergent veg?	Presence of shrubs, logs at pond edge
1	607200 4749584	10-20cm	15m	no	Dogwood

Pic #1584

Woodland Assessment- *complete 1 assessment for each woodland*

Woodlot # (indicate on map) : _____

Approximate age of stand _____

Are large (i.e. >40cmDBH and >25m tall) **trees present** ☐ Yes ☐ No
If yes, approximate # present or % of stand _____
Location in stand (i.e throughout, in west side only, in FOD2-6 only etc..) _____

Are snags present? ☐ Yes ☐ No
If yes provide characterization of number present, height and DBH of snags and indicate if they contain loose bark.

Trees with cavities present? ☐ No ☐ Rare ☐ Occasional ☐ Abundant
If present:

	Height ranges of tree	Range of Tree DBH	Range of Cavity Heights	Cavity sizes (approx. diameter)

Presence of large stick nests (i.e. raptor nests)? ☐ Yes ☐ No
If yes, UTM and describe tree type, height and position in tree, size of nest, species present
_____

Evidence of disturbance? (i.e logging, roads, paths, ATV use, trails) ☐ Yes ☐ No
If yes, describe _____

Seeps/ springs present? ☐ Yes ☐ No If yes,

Seep/Spring #	UTM	Description	Surrounding Habitat

Vernal Pools Present? ☐ Yes ☐ No If yes,

#	Location	Depth of water	Size of pool (diameter)	Presence of emergent/submergent veg?	Presence of shrubs. logs at pond edge

ELC COMMUNITY DESCRIPTION & CLASSIFICATION

SITE: Samsung		POLYGON: 2	
SURVEYOR(S): MS	DATE: 5-Oct-2010	UTME:	
START: 1030	END: 11:00	UTMZ:	UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1 CANOPY	3	1	Willow sp.
2 SUB-CANOPY	\		
3 UNDERSTOREY	/	X	
4 GRD. LAYER	4-7	4	Grass >> Goldenrod > P.S. Aster

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

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE:	X	PIONEER		YOUNG		MID-AGE		MATURE		OLD GROWTH

SOIL ANALYSIS:

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

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS: Marsh	CODE: MA
COMMUNITY SERIES: Meadow Marsh	CODE: MAM
ECOSITE: Mineral Meadow Marsh	CODE: MAM2
VEGETATION TYPE: Swale Reed-canary Grass Mineral Meadow Marsh	CODE: MAM2-2
INCLUSION	CODE:
COMPLEX	CODE:

Notes: Pic1575. - Swale

1574

Feature 51

ELC PLANT SPECIES LIST

SITE:	Samsung
POLYGON:	2
DATE:	5-Oct-2010
SURVEYOR(S):	M. Straus

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 1	2	3	4	COLL.	SPECIES CODE	LAYER 1	2	3	4	COLL.
SALDISsp	R				✓	Reed Canary Grass				D	
						P. Stem Aster				O	
						Flattop W. Aster				R	
						Tall rush				R	✓
						Goldenrod sp.				O	

Feature 52

ELC — COMMUNITY DESCRIPTION & CLASSIFICATION

SITE: Samsung | POLYGON: 1
SURVEYOR(S): M. S. | DATE: 5-Oct-2010 | UTME:
START: 10:00 | END: 10:30 | UTMZ: | UTMN:

POLYGON DESCRIPTION

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
☒ TERRESTRIAL	☐ ORGANIC	☐ LACUSTRINE	☐ NATURAL	☐ PLANKTON	☐ LAKE
☐ WETLAND	☐ MINERAL SOIL	☐ RIVERINE	☒ CULTURAL	☐ SUBMERGED	☐ POND
☐ AQUATIC	☐ PARENT MIN.	☐ BOTTOMLAND		☐ FLOATING-LVD.	☐ RIVER
	☐ ACIDIC BEDRK.	☐ TERRACE		☐ GRAMINOID	☐ STREAM
	☐ BASIC BEDRK.	☐ VALLEY SLOPE		☐ FORB	☐ MARSH
	☐ CARB. BEDRK.	☐ TABLELAND		☐ LICHEN	☐ SWAMP
		☐ ROLL. UPLAND		☐ BRYOPHYTE	☐ FEN
		☐ CLIFF		☐ DECIDUOUS	☐ BOG
		☐ TALUS		☐ CONIFEROUS	☐ BARREN
		☐ CREVICE / CAVE		☐ MIXED	☐ MEADOW
		☐ ALVAR			☐ PRAIRIE
		☐ ROCKLAND			☐ THICKET
		☐ BEACH / BAR			☐ SAVANNAH
		☐ SAND DUNE			☐ WOODLAND
		☐ BLUFF			☐ FOREST
					☐ PLANTATION

SITE	COVER
☐ OPEN WATER	☒ OPEN
☐ SHALLOW WATER	☒ SHRUB
☐ SURFICIAL DEP.	☐ TREED
☐ BEDROCK	

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	3	1	Salix SP.
2	SUB-CANOPY	2-3	2	CORSTOL > RUBIDEA = Stag Sumac
3	UNDERSTOREY	—	—	
4	GRD. LAYER	4-7	4	Purple stem aster & Reed Canary Grass * Goldenrod sp

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:	O	< 10	N	10 - 24	N	25 - 50	N	> 50
STANDING SNAGS:	N	< 10	N	10 - 24	N	25 - 50	N	> 50
DEADFALL / LOGS:	N	< 10	N	10 - 24	N	25 - 50	N	> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :		PIONEER		YOUNG		MID-AGE		MATURE		OLD GROWTH
	X									

SOIL ANALYSIS:

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

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS:	Marsh	CODE: MA
COMMUNITY SERIES:	Meadow Marsh	CODE: MAM
ECOSITE:	Mineral Meadow Marsh	CODE: MAM 2
VEGETATION TYPE:	Reed-canary Grass Mineral Meadow Marsh	CODE: MAM 2-2
INCLUSION		CODE:
COMPLEX		CODE:

Pic 72, 73, 71

Notes: Multiple Deer bed locations.
Transitions from HR to SWT to cum in 85 m x w 40 wide.

ELC — PLANT SPECIES LIST

SITE: Samsung
POLYGON: #1
DATE: 5-Oct-2010
SURVEYOR(S): M. Straus

LAYERS: 1 = CANOPY > 10m 2 = SUB-CANOPY 3 = UNDERSTOREY 4 = GROUND (GRD.) LAYER
ABUNDANCE CODES: R = RARE O = OCCASIONAL A = ABUNDANT D = DOMINANT

COYE NOMA

SPECIES CODE	LAYER 1	2	3	4	COLL.
POPTREM	R	—	—		
Grape Riverbank				O	
RUBIDEA				O	
Staghorn Sumac				R	
SALIX SP.	R	—	—		
CORSTOL		O			

SPECIES CODE	LAYER 1	2	3	4	COLL.
Teasel				O	
AST Purplestem				A	
Wild Carrot				A	
B. Foot Trefoil				O	
Reed Canary Grass				A	
Flat top white Aster				R	
B					
Goldenrod sp				A	

Feature 51

ELC — COMMUNITY DESCRIPTION & CLASSIFICATION

SITE: Samsung		POLYGON: 3	
SURVEYOR(S): MS	DATE: 5-Oct-2010	UTME:	
START: 11:00	END: 12:00	UTMZ:	UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	1	4	QUERUBR > CAROVAT > FRAAMER
2	SUB-CANOPY	2	4	ACESACS < CAROVAT
3	UNDERSTOREY	3-4	4	ULMAMER > OSTVIRG > FAGGRAN > ACESACS
4	GRD. LAYER	5-7	3	ACESACS > FRAAMER

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:	C	< 10	O	10 - 24	O	25 - 50	R	> 50
STANDING SNAGS:	N	< 10	O	10 - 24	O	25 - 50	N	> 50
DEADFALL / LOGS:	N	< 10	O	10 - 24	O	25 - 50	N	> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE:		PIONEER		YOUNG		MID-AGE	X	MATURE		OLD GROWTH

SOIL ANALYSIS:

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

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS:	Forest	CODE: FO
COMMUNITY SERIES:	Deciduous Forest	CODE: FOD
ECOSITE:	F-M Oak-Maple-Hickory Dec	CODE: FOD9
VEGETATION TYPE:	Fresh-moist Shagbark Hickory Dec Forest	CODE: FOD9-6*
INCLUSION		CODE:
COMPLEX		CODE:

Notes:

ELC — PLANT SPECIES LIST

SITE:	Samsung
POLYGON:	3
DATE:	5-Oct-2010
SURVEYOR(S):	M. Straw

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 1	2	3	4	COLL.
ACEFREE	R	R	—		
CAROVAT	O	O	-	R	
QUERUBR	O	—	O	R	
TILAME	R	R	R	R	
ACESACS	O	O	O	O	
FRAAMER	O	R	R	O	
QUEMACR	R	—	—		
ACERUBR	R	R	R	R	
ULMAMER	—	—	O	-	
OSTVIRG	-	-	O	O	
FAGGRAN	R	R	O	R	
CARCARD	R	R	R	R	
FRAPENN	R	O	R	R	
FRANIGR	R	R	—		
PARTHENOCISSUS QUINQUEFOLIA	R				
CARSAROL	—	—	R		
E. Buckthorn	—	—	R		
Poison Ivy	—	—	-	R	
RUBALL	—	—	R	-	
FRAPEN	—	—	-	O	
Hawthorn sp.	—	—	R		✓
Prickly Ash	—	—	R		

SPECIES CODE	LAYER 1	2	3	4	COLL.
Sensitive Fern				R	
Mai Canad				R	
Christmas Fern				R	
Buttercup				R	

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE:		POLYGON:	
	SURVEYOR(S):	DATE:		UTME:
	START:	END	UTMZ:	UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY			
2	SUB-CANOPY			
3	UNDERSTOREY			
4	GRD. LAYER			

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:		< 10		10 - 24		25 - 50		> 50
STANDING SNAGS:		< 10		10 - 24		25 - 50		> 50
DEADFALL / LOGS:		< 10		10 - 24		25 - 50		> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :		PIONEER		YOUNG		MID-AGE		MATURE		OLD GROWTH

SOIL ANALYSIS:

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

COMMUNITYCLASSIFICATION:

COMMUNITY CLASS:	CODE:
COMMUNITY SERIES:	CODE:
ECOSITE:	CODE:
VEGETATION TYPE:	CODE:
INCLUSION	CODE:
COMPLEX	CODE:

Notes:

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

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 1	2	3	4	COLL.	SPECIES CODE	LAYER 1	2	3	4	COLL.

Page .... of ....

Feature 51

ELC — COMMUNITY DESCRIPTION & CLASSIFICATION

SITE: Samsung		POLYGON: 3 Inclusion	
SURVEYOR(S): MS	DATE: 5-Oct-2010	UTME:	
START: 11:00	END: 12:00	UTMZ:	UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	3	2	RHACATH > CARCAR = > CAROVAT
2	SUB-CANOPY	—	—	
3	UNDERSTOREY	4	4	Silky Dogwood >
4	GRD. LAYER	5-7	4	Spotted T. m. Nut

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:	A	< 10	R	10 - 24	N	25 - 50	N	> 50
STANDING SNAGS:	N	< 10	N	10 - 24	N	25 - 50	N	> 50
DEADFALL / LOGS:	N	< 10	N	10 - 24	N	25 - 50	N	> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :		PIONEER		YOUNG		MID-AGE		MATURE		OLD GROWTH

SOIL ANALYSIS:

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

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS: Swamp	CODE: SW	
COMMUNITY SERIES: Swamp Thicket	CODE: SWT	
ECOSITE: Mineral Swamp Thicket	CODE: SWT2	
VEGETATION TYPE: Silky Dogwood Mineral Swamp Thicket	CODE: SWT2-8	
INCLUSION (within Habitat #3)	CODE:	
COMPLEX	CODE:	

Notes: PZ #1576

ELC — PLANT SPECIES LIST

SITE: Samsung	
POLYGON: 3 inclusion	
DATE: 5-OCT-2010	
SURVEYOR(S):	

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 1	2	3	4	COLL.
CAROVAT	R				
RHACATH			O		
CARCAR			R		
Silky Dogwood			D		
RHACATH			A		

SPECIES CODE	LAYER 1	2	3	4	COLL.
Stinging Nettle				O	
Spotted T. m. Nut				A	
Joe Pye Weed				R	
White Flat Aster				O	
Forch Nightshade				R	

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE:		POLYGON:	
	SURVEYOR(S):	DATE:		UTME:
	START:	END	UTMZ:	UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY			
2	SUB-CANOPY			
3	UNDERSTOREY			
4	GRD. LAYER			

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:		< 10		10 - 24		25 - 50		> 50
STANDING SNAGS:		< 10		10 - 24		25 - 50		> 50
DEADFALL / LOGS:		< 10		10 - 24		25 - 50		> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :		PIONEER		YOUNG		MID-AGE		MATURE		OLD GROWTH

SOIL ANALYSIS:

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

COMMUNITYCLASSIFICATION:

COMMUNITY CLASS:	CODE:
COMMUNITY SERIES:	CODE:
ECOSITE:	CODE:
VEGETATION TYPE:	CODE:
☐ INCLUSION	CODE:
☐ COMPLEX	CODE:

Notes:

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

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 1	2	3	4	COLL.	SPECIES CODE	LAYER 1	2	3	4	COLL.

Page .... of ....

Features1

ELC — COMMUNITY DESCRIPTION & CLASSIFICATION

SITE: Samsung		POLYGON: 4	
SURVEYOR(S): MS	DATE: 5-OCT-2010	UTME:	
START: 10:00	END 13:00	UTMZ:	UTMN:

POLYGON DESCRIPTION

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
☐ TERRESTRIAL ☐ WETLAND ☐ AQUATIC	☐ ORGANIC ☐ MINERAL SOIL ☐ PARENT MIN. ☐ ACIDIC BEDRK. ☐ BASIC BEDRK. ☐ CARB. BEDRK.	☐ LACUSTRINE ☐ RIVERINE ☐ BOTTOMLAND ☐ TERRACE ☐ VALLEY SLOPE ☐ TABLELAND ☐ ROLL UPLAND ☐ CLIFF ☐ TALUS ☐ CREVICE / CAVE ☐ ALVAR ☐ ROCKLAND ☐ BEACH / BAR ☐ SAND DUNE ☐ BLUFF	☐ NATURAL ☐ CULTURAL	☐ PLANKTON ☐ SUBMERGED ☐ FLOATING-LVD. ☐ GRAMINOID ☐ FORB ☐ LICHEN ☐ BRYOPHYTE ☒ DECIDUOUS ☐ CONIFEROUS ☐ MIXED	☐ LAKE ☐ POND ☐ RIVER ☐ STREAM ☐ MARSH ☐ SWAMP ☐ FEN ☐ BOG ☐ BARREN ☐ MEADOW ☐ PRAIRIE ☐ THICKET ☐ SAVANNAH ☐ WOODLAND ☒ FOREST ☐ PLANTATION

SITE
☐ OPEN WATER ☐ SHALLOW WATER ☐ SURFICIAL DEP. ☐ BEDROCK

COVER
☐ OPEN ☐ SHRUB ☒ TREED

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	1	4	ACESACS >> CARCUAT < QUERUBR
2	SUB-CANOPY	2	4	ACESACS > CARCUAT
3	UNDERSTOREY	3-4	4	ACESACS > FAGGRAN
4	GRD. LAYER	5-7	4	ASTMACR > VIOSP

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:	A	< 10	O	10 - 24	O	25 - 50	R > 50
STANDING SNAGS:	N	< 10	O	10 - 24	O	25 - 50	N > 50
DEADFALL / LOGS:	N	< 10	O	10 - 24	O	25 - 50	N > 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :		PIONEER		YOUNG	X	MID-AGE		MATURE		OLD GROWTH

SOIL ANALYSIS:

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

COMMUNITYCLASSIFICATION:

COMMUNITY CLASS: Forest no dominant	CODE: FO	
COMMUNITY SERIES: Deciduous Forest	CODE: FOD	
ECOSITE: Fresh-moist Sugar maple Dec	CODE: FOD6	
VEGETATION TYPE: Sugar Maple - Others F-M Sugar maple - Hardwood Decid	CODE: FOD6-5	
INCLUSION	CODE:	
COMPLEX	CODE:	

Notes:

ELC — PLANT SPECIES LIST

SITE: Samsung	
POLYGON: 4	
DATE: 5-Oct-2010	
SURVEYOR(S): MS	

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 1	2	3	4	COLL.
ACESACS	D	O	A	O	
ACEPENN	R	R	R	R	
ACERUBR	R	R	R	R	
ACESAHA	—	R	R	—	
CARCUAT	R	R	—	—	
QUERUBR	R	R	—	—	
OSTVIRG	—	—	O	R	
ACERUBR	R	R	R	R	
FRAGRAN					
FRAVIRG			R		
RUBPUBE			O		
Poison Ivy			R		
SAMCANA			R		
Hawthorn			R		✓
VIBRAPE			R		

SPECIES CODE	LAYER 1	2	3	4	COLL.
Christmas Fer				R	
IMP Spotted				R	
Sting Nettle				R	
ASTMACR				O	✓
Beech Drops				R	
Viola sp				O	
Buttercup sp				R	
Goldenrod sp.				R	

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE:		POLYGON:	
	SURVEYOR(S):	DATE:		UTME:
	START:	END	UTMZ:	UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY			
2	SUB-CANOPY			
3	UNDERSTOREY			
4	GRD. LAYER			

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:		< 10		10 - 24		25 - 50		> 50
STANDING SNAGS:		< 10		10 - 24		25 - 50		> 50
DEADFALL / LOGS:		< 10		10 - 24		25 - 50		> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :		PIONEER		YOUNG		MID-AGE		MATURE		OLD GROWTH

SOIL ANALYSIS:

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

COMMUNITYCLASSIFICATION:

COMMUNITY CLASS:	CODE:
COMMUNITY SERIES:	CODE:
ECOSITE:	CODE:
VEGETATION TYPE:	CODE:
☐ INCLUSION	CODE:
☐ COMPLEX	CODE:

Notes:

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

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	

Feature 51

ELC — COMMUNITY DESCRIPTION & CLASSIFICATION

SITE: Samsung		POLYGON: 5	
SURVEYOR(S): MS	DATE: 5-Oct-2010	UTME:	
START:	END	UTMZ:	UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	1	4	CARCVAT > QUERUBR > TILAMER
2	SUB-CANOPY	2	4	CARCVAT > ACESAS
3	UNDERSTOREY	3-4	4	ACESACS > FAGGRAN > OSTVIRG
4	GRD. LAYER	5-7	3	ACESARS > FRAAMER > ASTMACR

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:	O	< 10	O	10 - 24	O	25 - 50	R	> 50
STANDING SNAGS:	N	< 10	O	10 - 24	O	25 - 50	N	> 50
DEADFALL / LOGS:	N	< 10	O	10 - 24	O	25 - 50	N	> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :		PIONEER		YOUNG		MID-AGE	X	MATURE		OLD GROWTH

SOIL ANALYSIS:

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

COMMUNITYCLASSIFICATION:

COMMUNITY CLASS:	CODE:	FO
COMMUNITY SERIES:	CODE:	FOD
ECOSITE:	CODE:	FOD9
VEGETATION TYPE: Fresh-moist Shagbark Hickory Dec. Forest	CODE:	FOD9-4
INCLUSION	CODE:	
COMPLEX	CODE:	

Notes: Same spp. comp as #3 - less oak

ELC — PLANT SPECIES LIST

SITE: Samsung	
POLYGON: 5	
DATE: 5-Oct-2010	
SURVEYOR(S): M. Straus	

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 1	2	3	4	COLL.
CARCVAT	O	O	R	R	
QUERUBR	O	R	R	R	
ACESACS	R	O	A		
FAGGRAN	R	R	O	-	
FRAPENN	O	R	R	-	
FRAAMER	R	R	—		
QUERALBA	R	—	—		
OSTVRG	—	—	O		
TILAMER	R	R	R	R	
ACERUBR	O	R	R	R	
ACEFREE	R	O	R	—	
PRUSERO	-	R	R	-	
FRANIGR	R	R	—		
RHACATH			R		
RHURADI	—	—	O		

SPECIES CODE	LAYER 1	2	3	4	COLL.
Spotted T.M. Nat				R	
Stinging Nettle				R	
ASTMACR				O	
Buttercup sp				R	

Feature 51

ELC — COMMUNITY DESCRIPTION & CLASSIFICATION

SITE: Samsung		POLYGON: 6	
SURVEYOR(S): MS	DATE: 5-Oct-2010	UTME:	
START:	END	UTMZ:	UTMN:

POLYGON DESCRIPTION

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
☐ TERRESTRIAL ☐ WETLAND ☐ AQUATIC	☐ ORGANIC ☐ MINERAL SOIL ☐ PARENT MIN. ☐ ACIDIC BEDRK. ☐ BASIC BEDRK. ☐ CARB. BEDRK.	☐ LACUSTRINE ☐ RIVERINE ☐ BOTTOMLAND ☐ TERRACE ☐ VALLEY SLOPE ☐ TABLELAND ☐ ROLL. UPLAND ☐ CLIFF ☐ TALUS ☐ CREVICE / CAVE ☐ ALVAR ☐ ROCKLAND ☐ BEACH / BAR ☐ SAND DUNE ☐ BLUFF	☐ NATURAL ☐ CULTURAL	☐ PLANKTON ☐ SUBMERGED ☐ FLOATING-LVD. ☐ GRAMINOID ☐ FORB ☐ LICHEN ☐ BRYOPHYTE ☐ DECIDUOUS ☐ CONIFEROUS ☐ MIXED	☐ LAKE ☐ POND ☐ RIVER ☐ STREAM ☐ MARSH ☐ SWAMP ☐ FEN ☐ BOG ☐ BARREN ☐ MEADOW ☐ PRAIRIE ☐ THICKET ☐ SAVANNAH ☐ WOODLAND ☐ FOREST ☐ PLANTATION

SITE

☐ OPEN WATER
☐ SHALLOW WATER
☐ SURFICIAL DEP.
☐ BEDROCK

COVER

☐ OPEN
☐ SHRUB
☐ TREED

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	2	1	CORCORD > ACERREE / < Salix sp.
2	SUB-CANOPY			
3	UNDERSTOREY	3-4	4	Silky dogwood > RHACATH
4	GRD. LAYER	5-7	4	SPIALBA > Reed Grass > IMPATIENT

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:	A	< 10	R	10 - 24	V	25 - 50	V	> 50
STANDING SNAGS:	N	< 10	O	10 - 24	V	25 - 50	N	> 50
DEADFALL / LOGS:	N	< 10	R	10 - 24	V	25 - 50	N	> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :		PIONEER		YOUNG		MID-AGE		MATURE		OLD GROWTH
	X									

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: SW
COMMUNITY SERIES:		CODE: SWT
ECOSITE:		CODE: SWT2
VEGETATION TYPE:	Silky Dogwood Shrub Mineral Thicket Swamp	CODE: SWT2-8
INCLUSION		CODE:
COMPLEX		CODE:

Notes: P1 C1579-1581
Pond - + Shrubby area + open
+ SWT

ELC — PLANT SPECIES LIST

SITE: Samsung	
POLYGON: 6	
DATE: 5-OCT-2010	
SURVEYOR(S): M. Straus	

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 1	2	3	4	COLL.
CORCARO	R	—	—		
ACERREE	R	—	—		
LONMAMER	R				
FRAPENN	R				
RHACATH	—	—	R		
Salix sp	R	—	—		
Silky Dogwood	—	—	O	A-	
SPIALBA	—	—	D	O	

SPECIES CODE	LAYER 1	2	3	4	COLL.
Spotted TM Not				O	
Reed Canary				O	
Sensitive fern				R	
Iris sp.				R	
White Flat Aster				R	
Stinging Nettle				R	
Psi. Aster				O	
Goldenrod sp					

Feature 51

ELC COMMUNITY DESCRIPTION & CLASSIFICATION

SITE: Samsung		POLYGON: 7	
SURVEYOR(S): MS	DATE: 5-Oct-2010	UTME:	
START:	END: 15:30	UTMZ:	UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	1	4	ACESACS > PINSTRO > FRAAMER
2	SUB-CANOPY	2	4	ACESACS > FRAPENN
3	UNDERSTOREY	3	4	FAGGRAN > OSTVIRG
4	GRD. LAYER	5	4	FRAAMER > ACESACS > PRUSERO

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:	A	< 10	O	10 - 24	O	25 - 50	R	> 50
STANDING SNAGS:	N	< 10	O	10 - 24	O	25 - 50	N	> 50
DEADFALL / LOGS:	N	< 10	O	10 - 24	O	25 - 50	N	> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :		PIONEER		YOUNG	X	MID-AGE		MATURE		OLD GROWTH

SOIL ANALYSIS:

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

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS: Forest	CODE: FO
COMMUNITY SERIES: Mixed Forest	CODE: FOM
ECOSITE: Dry-Fresh White Pine-Maple-Oak	CODE: FOM2
VEGETATION TYPE: Upland Mh Pine / D-F White Pine - Sugar Maple Mixed Forest	CODE: FOM2-2
INCLUSION	CODE:
COMPLEX	CODE:

Notes: Pine >25% cover; but maple still dominant.

ELC PLANT SPECIES LIST

SITE:	Samsung
POLYGON:	7
DATE:	5-Oct-2010
SURVEYOR(S):	M. Straus

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 1	2	3	4	COLL.
PINSTRO	O	—	—		
ACESACS	D	O	O	O	
ACERUBR	R	R	O	O	
FRAAMER	O	R	R	R	
FRAPENN	O	R	R	R	
FAGGRAN	—	O	O	R	
QUERUBR	R	R	R	R	
PRUSERO		—	R	R	
OSTVIRG		—	O	O	
~~ACEFT~~					
CAROVAT				R	
RUBOCCI				R	

SPECIES CODE	LAYER 1	2	3	4	COLL.
Beech Drops				R	

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE:		POLYGON:	
	SURVEYOR(S):	DATE:		UTME:
	START:	END	UTMZ:	UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

LAYER		HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY			
2	SUB-CANOPY			
3	UNDERSTOREY			
4	GRD. LAYER			

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:		< 10		10 - 24		25 - 50		> 50	
STANDING SNAGS:		< 10		10 - 24		25 - 50		> 50	
DEADFALL / LOGS:		< 10		10 - 24		25 - 50		> 50	

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :		PIONEER		YOUNG		MID-AGE		MATURE		OLD GROWTH

SOIL ANALYSIS:

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

COMMUNITYCLASSIFICATION:

COMMUNITY CLASS:		CODE:
COMMUNITY SERIES:		CODE:
ECOSITE:		CODE:
VEGETATION TYPE:		CODE:
INCLUSION		CODE:
COMPLEX		CODE:

Notes:

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

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 1	LAYER 2	LAYER 3	LAYER 4	COLL.	SPECIES CODE	LAYER 1	LAYER 2	LAYER 3	LAYER 4	COLL.

Feature 51

ELC — COMMUNITY DESCRIPTION & CLASSIFICATION

SITE: Samsung | POLYGON: Pond
SURVEYOR(S): MS | DATE: 5-Oct-2010 | UTME:
START: 1300 | END: 1800 | UTMZ: | UTMN:

POLYGON DESCRIPTION

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
☐ TERRESTRIAL	☐ ORGANIC	☐ LACUSTRINE	☐ NATURAL	☐ PLANKTON	☐ LAKE
☐ WETLAND	☐ MINERAL SOIL	☐ RIVERINE	☐ CULTURAL	☐ SUBMERGED	☒ POND
☐ AQUATIC	☐ PARENT MIN.	☐ BOTTOMLAND		☐ FLOATING-LVD.	☐ RIVER
	☐ ACIDIC BEDRK.	☐ TERRACE		☐ GRAMINOID	☐ STREAM
	☐ BASIC BEDRK.	☐ VALLEY SLOPE		☐ FORB	☐ MARSH
	☐ CARB. BEDRK.	☐ TABLELAND		☐ LICHEN	☐ SWAMP
		☐ ROLL UPLAND		☐ BRYOPHYTE	☐ FEN
		☐ CLIFF		☐ DECIDUOUS	☐ BOG
		☐ TALUS		☐ CONIFEROUS	☐ BARREN
		☐ CREVICE / CAVE		☐ MIXED	☐ MEADOW
		☐ ALVAR			☐ PRAIRIE
		☐ ROCKLAND			☐ THICKET
		☐ BEACH / BAR			☐ SAVANNAH
		☐ SAND DUNE			☐ WOODLAND
		☐ BLUFF			☐ FOREST
					☐ PLANTATION

SITE
☒ OPEN WATER
☐ SHALLOW WATER
☐ SURFICIAL DEP.
☐ BEDROCK

COVER
☒ OPEN
☐ SHRUB
☐ TREED

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY			
2	SUB-CANOPY			
3	UNDERSTOREY			
4	GRD. LAYER	4-7	4	Reed canary Grass >> goldenrod

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:	N	< 10	N	10 - 24	N	25 - 50	N > 50
STANDING SNAGS:	N	< 10	N	10 - 24	N	25 - 50	N > 50
DEADFALL / LOGS:	N	< 10	N	10 - 24	N	25 - 50	N > 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

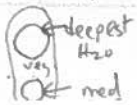
COMM. AGE :		PIONEER		YOUNG		MID-AGE		MATURE		OLD GROWTH
	X									

SOIL ANALYSIS:

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

COMMUNITY CLASSIFICATION:

		CODE:
COMMUNITY CLASS:		
COMMUNITY SERIES:		
ECOSITE:		
VEGETATION TYPE:	Par Pond(s)	OAO
INCLUSION		
COMPLEX		

Notes:
(P1) - 15m diameter - Veg buffer - Pic # 1578-1577
80m long - shape:  deepest H2O, veg, OK, med
No macrophyte or shrub cover

ELC — PLANT SPECIES LIST

SITE: Samsung
POLYGON: (A) (B) (P2) (P3) (P4) (P5)
DATE: 5-Oct-2010
SURVEYOR(S): M. Straus

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 1	2	3	4	COLL.
Reed Canary Grass				A	
Algae				O	
Goldenrod sp.				O	

P2 - Pic 1582
P3 - Pic 1583
P4 - 1585
P5 - Pic 1579

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE:		POLYGON:	
	SURVEYOR(S):	DATE:		UTME:
	START:	END	UTMZ:	UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

LAYER		HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY			
2	SUB-CANOPY			
3	UNDERSTOREY			
4	GRD. LAYER			

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:		< 10		10 - 24		25 - 50		> 50
STANDING SNAGS:		< 10		10 - 24		25 - 50		> 50
DEADFALL / LOGS:		< 10		10 - 24		25 - 50		> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :		PIONEER		YOUNG		MID-AGE		MATURE		OLD GROWTH

SOIL ANALYSIS:

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

COMMUNITYCLASSIFICATION:

COMMUNITY CLASS:	CODE:
COMMUNITY SERIES:	CODE:
ECOSITE:	CODE:
VEGETATION TYPE:	CODE:
INCLUSION	CODE:
COMPLEX	CODE:

Notes:

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

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 1	2	3	4	COLL.	SPECIES CODE	LAYER 1	2	3	4	COLL.

W:\active\160960577\drawing\GIS\MXD\NaturalHeritageAssessment\FieldMaps\160960577_FIELDMAP_ProjectLocation_Mapbook_20100921_PW.mxd - 9/27/2010 @ 5:35:56 PM

September 2010
160960577

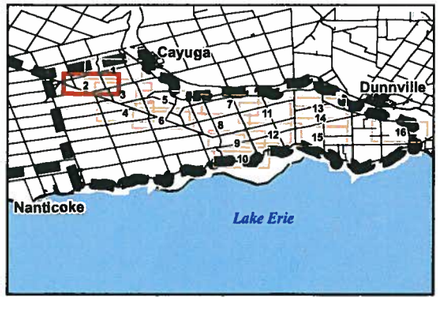
Legend

- Project Location
- Proposed Turbine Location
- Proposed Access Road
- Proposed Collector Line
- ROW Installation Zone
- 120m Investigation Zone
- Elexco Aquired Agreements
- Govemment Lands
- UDI Lands
- Road
- Railway
- Abandoned Railway
- Transmission Line (OBM)
- Deer Wintering Area
- Provincially Significant Wetland
- Non-Provincially Significant Wetland
- Watercourse (OBM)
- Waterbody

Area of Natural and Scientific Interest (ANSI)

- Life Science, Provincially Significant
- Earth Science, Provincially Significant
- Earth Science, Regionally Significant

Stantec



Notes

1. Coordinate System: UTM NAD 83 - Zone 17 (N).
2. Data Sources: Ontario Ministry of Natural Resources © Queens Printer Ontario, 2009; © GREP, 2010; © Samsung, 2010.
3. Image Source: © First Base Solutions, 2010 - Imagery Date: Spring 2006; **LIDAR IMAGERY SOURCE???**

Client/Project

SAMSUNG C&T
GRAND RENEWABLE ENERGY PARK

Figure No.

FIELD MAP 2

Title

PROJECT LOCATION MAP

Stantec Consulting Ltd.
70-1 Southgate Drive
Guelph, Ontario, Canada
N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

Wildlife Habitat Assessment

Project Number: 160960577

Project Name: Samsung

Date / Time: 09-Sept-2010

Field Personnel: Melissa Straus

Weather Conditions:	Temp:	Wind:	Cloud:	PPT:	PPT in last 24 hrs:
	13°	1	40%	AM Fog	Heavy rain

Reptile Hibernacula Features i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)

Does the site contain potential reptile hibernacula features? ☐ Yes ☒ No (if yes, describe details in Table 1).

Bat Hibernacula Features i.e. karst topography, abandoned mines or caves

Does the site contain potential bat hibernacula features? ☐ Yes ☒ No (if yes, describe details in Table 1).

Table 1: Potential bat/reptile hibernacula features identified on site

UTM	Feature type	Photo #	Description	Species observed using feature

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.e. AMRO/VO HOLA/OB SASP/VO KILL/OB COYE-VO GHOW-VO RBWO-VO BLJA-VO RBGO-VO				Pic 1556 - Giant Silkworm Caterpillar

29-Sept-2010

Woodland Assessment- *complete 1 assessment for each woodland*

Woodlot # (indicate on map): B - Feature 5

Approximate age of stand 25 years

Are large (i.e. >40cmDBH and >25m tall) **trees present** ☒ Yes ☐ No
If yes, approximate # present or % of stand <1%
Location in stand (i.e throughout, in west side only, in FOD2-6 only etc..) Not in 1

Are snags present? ☒ Yes ☐ No
If yes provide characterization of number present, height and DBH of snags and indicate if they contain loose bark.
Eg, loose bark; 2m T, ~30cm dbh / 20cm T, 3m; no bark; ~5 per/ha

Trees with cavities present? ☐ No ☒ Rare ☒ Occasional ☐ Abundant
If present:

	Height ranges of tree	Range of Tree DBH	Range of Cavity Heights	Cavity sizes (approx. diameter)
also snag →	2m-15m - 18m	30cm - 40cm	1-15 15m	med large

Presence of large stick nests (i.e. raptor nests)? ☐ Yes ☒ No
If yes, UTM and describe tree type, height and position in tree, size of nest, species present

Evidence of disturbance? (i.e logging, roads, paths, ATV use, trails) ☒ Yes ☐ No
If yes, describe Cattle grazing, heavy. No understory in area in Pink

Seeps/ springs present? ☐ Yes ☒ No If yes,

Seep/Spring #	UTM	Description	Surrounding Habitat

Vernal Pools Present? ☐ Yes ☒ No If yes,

#	Location	Depth of water	Size of pool (diameter)	Presence of emergent/submergent veg?	Presence of shrubs, logs at pond edge

Woodland Assessment- *complete 1 assessment for each woodland*

Woodlot # (indicate on map) : _____

Approximate age of stand _____

Are large (i.e. >40cmDBH and >25m tall) **trees present** ☐ Yes ☐ No
If yes, approximate # present or % of stand _____
Location in stand (i.e throughout, in west side only, in FOD2-6 only etc..) _____

Are snags present? ☐ Yes ☐ No
If yes provide characterization of number present, height and DBH of snags and indicate if they contain loose bark.

Trees with cavities present? ☐ No ☐ Rare ☐ Occasional ☐ Abundant
If present:

	Height ranges of tree	Range of Tree DBH	Range of Cavity Heights	Cavity sizes (approx. diameter)

Presence of large stick nests (i.e. raptor nests)? ☐ Yes ☐ No
If yes, UTM and describe tree type, height and position in tree, size of nest, species present
_____

Evidence of disturbance? (i.e logging, roads, paths, ATV use, trails) ☐ Yes ☐ No
If yes, describe _____

Seeps/ springs present? ☐ Yes ☐ No If yes,

Seep/Spring #	UTM	Description	Surrounding Habitat

Vernal Pools Present? ☐ Yes ☐ No If yes,

#	Location	Depth of water	Size of pool (diameter)	Presence of emergent/submergent veg?	Presence of shrubs logs at pond edge

ELC — COMMUNITY DESCRIPTION & CLASSIFICATION

SITE: Samsung		POLYGON: B1	
SURVEYOR(S): MS	DATE: 29-Sept-2010	UTME:	
START:	END	UTMZ:	UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	2	3	ACERUBR < FRAPENN > QUEMACR
2	SUB-CANOPY	3	3	ULMAMER
3	UNDERSTOREY	3	3	CARCARO < OSTVIRG
4	GRD. LAYER	5-7	4	Grass > Boneset

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:	P	< 10	A	10 - 24	R	25 - 50	N	> 50
STANDING SNAGS:	N	< 10	R	10 - 24	R	25 - 50	N	> 50
DEADFALL / LOGS:	N	< 10	R	10 - 24	N	25 - 50	N	> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :		PIONEER	☒	YOUNG		MID-AGE		MATURE		OLD GROWTH

SOIL ANALYSIS:

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

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS: Swamp		CODE: SW
COMMUNITY SERIES: Deciduous Swamp		CODE: SWD
ECOSITE: Ash Mineral Deciduous Swamp		CODE: SWD2
VEGETATION TYPE: Green Ash Mineral Dec. Swamp		CODE: SWD2-2
INCLUSION		CODE:
COMPLEX		CODE:

Notes: Heavily grazed - but grassy understory

Pic 1567

Feature 5

ELC — PLANT SPECIES LIST

SITE: Samsung	
POLYGON: B-1	
DATE: 29-Sept-2010	
SURVEYOR(S): MS	

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 1	2	3	4	COLL.
ACERUBR	R				
ULMAMER	-	O	O	-	
CARCAR	R	-	-	-	
ACEFREE	O	R		-	
FRAPENN	O	O	O	-	
QUERUBR	R	-	-	-	
QUEMACR	O	R	R	-	
QUEBICO	R	-	-	-	
BARCARO	-	R	-		
OSTVIRG	-	O	O		

SPECIES CODE	LAYER 1	2	3	4	COLL.	
Flat-topped White Aster	-	-		O		
Sensitive Fern	-	-		R		
Boneset	-	-		O		— Eupatorium perfoliatum
LYCUNI				R		
Viola sp.				O		

ELC WILDLIFE

SITE:	
POLYGON:	
DATE:	
SURVEYOR(S):	
START TIME:	END TIME:

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

POTENTIAL WILDLIFE HABITAT:

	VERNAL POOLS		SNAGS
	HIBERNACULA		FALLEN LOGS

SPECIES LIST:

Field

TY	SP. CODE	EV	NOTES	#	TY	SP. CODE	EV	NOTES	#
B	EABL	OB							
B	TUVU	OB							
M	Deer	TK							
B	CAGO	OB							

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/FAECAL SACK
AE = NEST ENTRY

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

Stantec
Stantec Consulting Ltd.
361 Southgate Drive
Guelph, Ontario, Canada
N1G 3M5
Tel: (519) 836-6050
Fax: (519) 836-2493

Photography Log

Project Number ____________ Project Name: ____________

Date / Time: ____________ Field Personnel: ____________

Weather Conditions:	Temp:	Wind:	Cloud:	PPT:	PPT in last 24 hrs:

Photo #:	Time:	Photo Description and Comments

ELC COMMUNITY DESCRIPTION & CLASSIFICATION

SITE: Samsung		POLYGON: B-2	
SURVEYOR(S): M.S	DATE: 29-Sept-2010		UTME:
START:	END	UTMZ:	UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	1	4	ACESAGSK > FRAPENN > CAROVAT
2	SUB-CANOPY	2	4	ACESAGS > FAGGRAN > FRAPENN
3	UNDERSTOREY	3-4	4	OSTVIRG
4	GRD. LAYER	5-7	3	OSTVIRG > FRAPENN

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:

		< 10		10 - 24		25 - 50		> 50
SIZE CLASS ANALYSIS:	A	< 10	O	10 - 24	O	25 - 50	R	> 50
STANDING SNAGS:	N	< 10	O	10 - 24	R	25 - 50	R	> 50
DEADFALL / LOGS:	R	< 10	O	10 - 24	R	25 - 50	N	> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :		PIONEER		YOUNG	X	MID-AGE		MATURE		OLD GROWTH

SOIL ANALYSIS:

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

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS: Forest	CODE:	FO
COMMUNITY SERIES: Deciduous Forest	CODE:	FOD
ECOSITE: F-M: Sugar Maple Deciduous Forest	CODE:	FOD6
VEGETATION TYPE: Fresh-Moist Sugar Maple-Hardwood	CODE:	FOD6-5
☐ INCLUSION	CODE:	
☐ COMPLEX	CODE:	

Notes: From property boundary

Pic 15 ????

Feature 5

ELC PLANT SPECIES LIST

SITE:	Samsung
POLYGON:	B-2
DATE:	29-Sept-2010
SURVEYOR(S):	M. Straus

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 1	LAYER 2	LAYER 3	LAYER 4	COLL.
FAGGRAN	-	R	A	-	
Shag Hickory	O	R	R	-	
ACESACS	O	O	R	R	
FRAPENN	O	R	R	O	
TILAMER	-	R	O	R	
PRUSERO	-	-	R	R	
QUEALBA	R	-	-		
QUERUBR	R	-	-		
ACERUBR	O	-	-		
OSTVIRG	-	O	R		

SPECIES CODE	LAYER 1	LAYER 2	LAYER 3	LAYER 4	COLL.
Christmas Fern	-	-	-	R	
Viola sp				O	

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE:		POLYGON:	
	SURVEYOR(S):	DATE:		UTME:
	START:	END:	UTMZ:	UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

LAYER		HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY			
2	SUB-CANOPY			
3	UNDERSTOREY			
4	GRD. LAYER			

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:		< 10		10 - 24		25 - 50		> 50
STANDING SNAGS:		< 10		10 - 24		25 - 50		> 50
DEADFALL / LOGS:		< 10		10 - 24		25 - 50		> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :		PIONEER		YOUNG		MID-AGE		MATURE		OLD GROWTH

SOIL ANALYSIS:

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

COMMUNITYCLASSIFICATION:

COMMUNITY CLASS:	CODE:
COMMUNITY SERIES:	CODE:
ECOSITE:	CODE:
VEGETATION TYPE:	CODE:
☐ INCLUSION	CODE:
☐ COMPLEX	CODE:

Notes:

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

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 1	LAYER 2	LAYER 3	LAYER 4	COLL.	SPECIES CODE	LAYER 1	LAYER 2	LAYER 3	LAYER 4	COLL.

Feature 5

ELC COMMUNITY DESCRIPTION & CLASSIFICATION

SITE: Samsung		POLYGON: B3	
SURVEYOR(S): MS	DATE: 29-Sept-2010		UTME:
START:	END:	UTMZ:	UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	1	4	ACEFREE > ACERUB > CAROUAT
2	SUB-CANOPY	2	4	ACEFREE > CAROUAT
3	UNDERSTOREY	3-4	4	ULMAMER
4	GRD. LAYER	5-7	3	RUBPUBE

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:		< 10	O	10 - 24	O	25 - 50	R	> 50
STANDING SNAGS:	N	< 10	O	10 - 24	R	25 - 50	R	> 50
DEADFALL / LOGS:	O	< 10	O	10 - 24	R	25 - 50	R	> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :		PIONEER		YOUNG	X	MID-AGE		MATURE		OLD GROWTH

SOIL ANALYSIS:

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

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS: Swamp	CODE: SW
COMMUNITY SERIES: Deciduous Swamp	CODE: SWD
ECOSITE: Maple Mineral Dec. Swamp	CODE: SWD3
VEGETATION TYPE: Swamp Maple Mineral Deciduous Swamp	CODE: SWD 3-3
INCLUSION	CODE:
COMPLEX	CODE:

Notes: From property boundary (a)

ELC PLANT SPECIES LIST

SITE:	Samsung
POLYGON:	B3
DATE:	29-Sept-2010
SURVEYOR(S):	M. Straus

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 1	2	3	4	COLL.	SPECIES CODE	LAYER 1	2	3	4	COLL.
ACEFREE	D	D	R								
ULMAMER	-	O	O	-		Couldn't					
CAROUAT	R	O	R	R		see very far					
ACERUBR	O	O	R	-		into [illegible]					
RUBPUBE				O		Sedge sp				O	

ELC
COMMUNITY DESCRIPTION & CLASSIFICATION

SITE:		POLYGON:	
SURVEYOR(S):	DATE:		UTME:
START:	END	UTMZ:	UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY			
2	SUB-CANOPY			
3	UNDERSTOREY			
4	GRD. LAYER			

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:		< 10		10 - 24		25 - 50		> 50
STANDING SNAGS:		< 10		10 - 24		25 - 50		> 50
DEADFALL / LOGS:		< 10		10 - 24		25 - 50		> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :		PIONEER		YOUNG		MID-AGE		MATURE		OLD GROWTH

SOIL ANALYSIS:

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

COMMUNITYCLASSIFICATION:

COMMUNITY CLASS:	CODE:
COMMUNITY SERIES:	CODE:
ECOSITE:	CODE:
VEGETATION TYPE:	CODE:
☐ INCLUSION	CODE:
☐ COMPLEX	CODE:

Notes:

ELC
PLANT SPECIES LIST

SITE:	
POLYGON:	
DATE:	
SURVEYOR(S):	

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 1	LAYER 2	LAYER 3	LAYER 4	COLL.	SPECIES CODE	LAYER 1	LAYER 2	LAYER 3	LAYER 4	COLL.

Feature 5

ELC — COMMUNITY DESCRIPTION & CLASSIFICATION

SITE: Samsung		POLYGON: B4	
SURVEYOR(S): MS	DATE: 29-Sept-2010	UTME:	
START:	END	UTMZ:	UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	1	4	ACEFREE > Shag Hickory > QUEMACR
2	SUB-CANOPY	2	4	ACERUB > Shag Hickory
3	UNDERSTOREY	3-4	4	OSTVIRG
4	GRD. LAYER	5-7	3	Viola sp.

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:	R	< 10	A	10 - 24	O	25 - 50	N	> 50
STANDING SNAGS:	N	< 10	R	10 - 24	R	25 - 50	N	> 50
DEADFALL / LOGS:	R	< 10	O	10 - 24	R	25 - 50	N	> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :		PIONEER		YOUNG	X	MID-AGE		MATURE		OLD GROWTH

SOIL ANALYSIS:

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

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS:	Swamp	CODE: SW
COMMUNITY SERIES:	Dec. Swamp	CODE: SWD
ECOSITE:	Maple Mineral Dec. Swamp	CODE: SWD3
VEGETATION TYPE:	Swamp Maple Mineral Dec. Swamp	CODE: SWD3-3
INCLUSION	Marsh	CODE:
COMPLEX		CODE:

Notes: (b)

ELC — PLANT SPECIES LIST

SITE: Samsung	
POLYGON: B4	
DATE: 29-Sept-2010	
SURVEYOR(S): M. Straus	

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 1	2	3	4	COLL.
ACEFREE	O	O	R	-	
QUEBICOL	R	R	-		
Shag Hickory	O	O	R	-	
ACERUB	O	O	R	-	
QUEMACR	R	R	-		
OSTVIRG	-	O	O	-	
FAGGRAN	-	R	R	-	
Bitter Hickory	-	R	-		
TI					
Hogpeanut				R	

SPECIES CODE	LAYER 1	2	3	4	COLL.
Flat-topped White Aster				R	
Grass sp.				O	
Sedge sp.				O	
Viola sp.				O	

Feature 5

ELC — COMMUNITY DESCRIPTION & CLASSIFICATION

SITE: Samsung | POLYGON: B5
SURVEYOR(S): MS | DATE: 29-Sept-2010 | UTME:
START: | END: | UTMZ: | UTMN:

POLYGON DESCRIPTION

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
☐ TERRESTRIAL ☐ WETLAND ☐ AQUATIC	☐ ORGANIC ☐ MINERAL SOIL ☐ PARENT MIN. ☐ ACIDIC BEDRK. ☐ BASIC BEDRK. ☐ CARB. BEDRK.	☐ LACUSTRINE ☐ RIVERINE ☐ BOTTOMLAND ☐ TERRACE ☐ VALLEY SLOPE ☐ TABLELAND ☐ ROLL. UPLAND ☐ CLIFF ☐ TALUS ☐ CREVICE / CAVE ☐ ALVAR ☐ ROCKLAND ☐ BEACH / BAR ☐ SAND DUNE ☐ BLUFF	☐ NATURAL ☐ CULTURAL	☐ PLANKTON ☐ SUBMERGED ☐ FLOATING-LVD. ☐ GRAMINOID ☐ FORB ☐ LICHEN ☐ BRYOPHYTE ☐ DECIDUOUS ☐ CONIFEROUS ☐ MIXED	☐ LAKE ☒ POND ☐ RIVER ☐ STREAM ☐ MARSH ☐ SWAMP ☐ FEN ☐ BOG ☐ BARREN ☐ MEADOW ☐ PRAIRIE ☐ THICKET ☐ SAVANNAH ☐ WOODLAND ☐ FOREST ☐ PLANTATION

SITE
☐ OPEN WATER
☐ SHALLOW WATER
☐ SURFICIAL DEP.
☐ BEDROCK

COVER
☒ OPEN
☐ SHRUB
☐ TREED

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY			Pond ~ 10m radius
2	SUB-CANOPY			Depth ~ 0.5m;
3	UNDERSTOREY			Cows use it. CAGO + KILL using
4	GRD. LAYER			

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: ~ grass | BA:

SIZE CLASS ANALYSIS:	< 10	10 - 24	25 - 50	> 50
STANDING SNAGS:	< 10	10 - 24	25 - 50	> 50
DEADFALL / LOGS:	< 10	10 - 24	25 - 50	> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE:	PIONEER	YOUNG	MID-AGE	MATURE	OLD GROWTH

SOIL ANALYSIS:

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

COMMUNITY CLASSIFICATION:

		CODE:
COMMUNITY CLASS:		
COMMUNITY SERIES:		
ECOSITE:		
VEGETATION TYPE:	Pond (cattle)	OA
INCLUSION		
COMPLEX		

Notes:

PLC 1565.

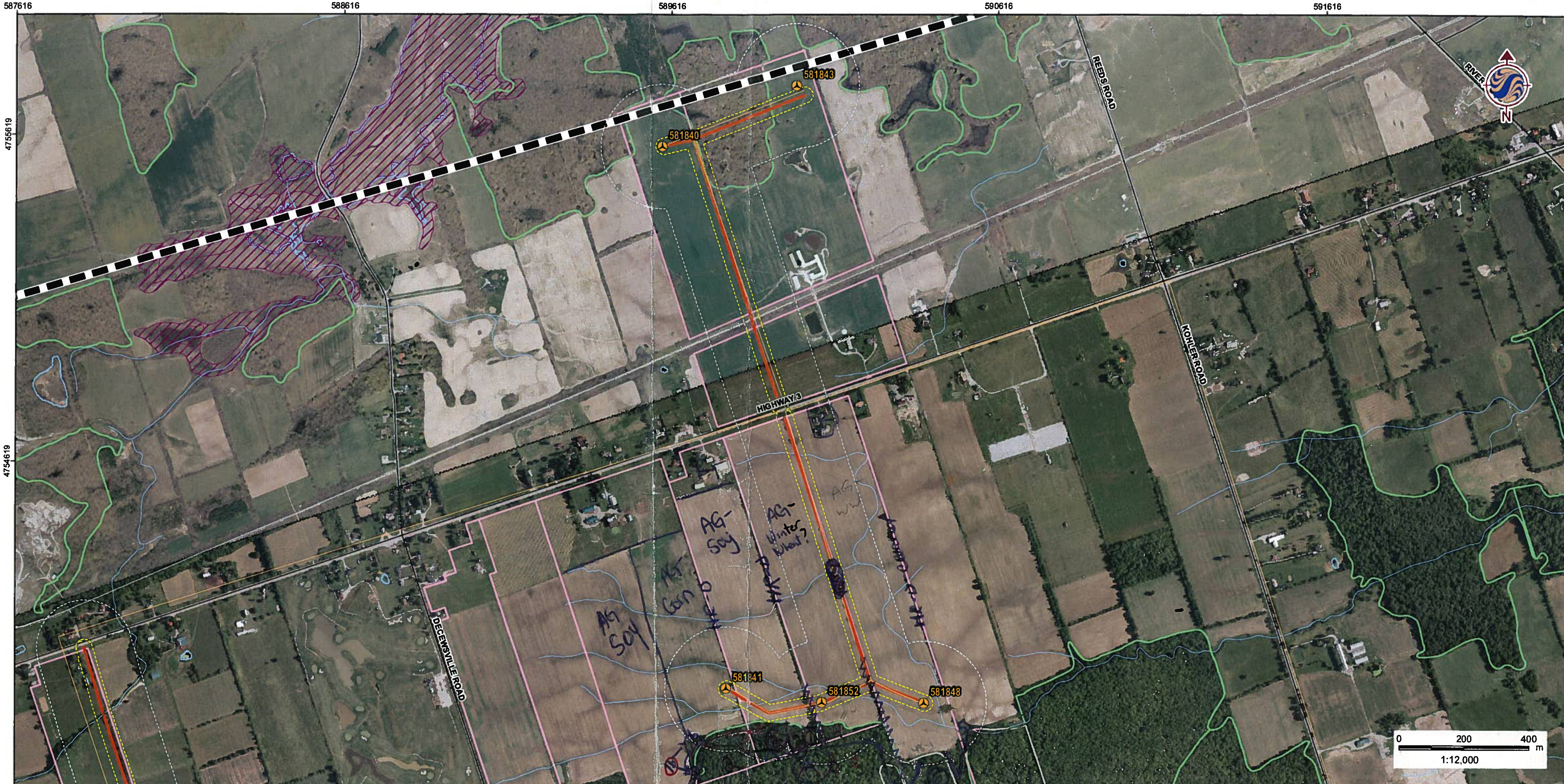
ELC — PLANT SPECIES LIST

SITE: Samsung
POLYGON: B5
DATE: 29-Sept-2010
SURVEYOR(S):

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 1	2	3	4	COLL.
no bank veg			O		

SPECIES CODE	LAYER 1	2	3	4	COLL.
Grass on bank	D				
No edge or submerged veg			O		



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September 2010
160960577

Legend

- Project Location
- Proposed Turbine Location
- Proposed Access Road
- Proposed Collector Line
- ROW Installation Zone
- 120m Investigation Zone
- Elexco Aquired Agreements
- Government Lands
- UDI Lands
- Road
- Railway
- Abandoned Railway
- Transmission Line (OBM)
- Deer Wintering Area
- Provincially Significant Wetland
- Non-Provincially Significant Wetland
- Watercourse (OBM)
- Waterbody

Area of Natural and Scientific Interest (ANSI)

- Life Science, Provincially Significant
- Earth Science, Provincially Significant
- Earth Science, Regionally Significant

Stantec

Notes

1. Coordinate System: UTM NAD 83 - Zone 17 (N).
2. Data Sources: Ontario Ministry of Natural Resources © Queens Printer Ontario, 2009; © GREP, 2010; © Samsung, 2010.
3. Image Source: © First Base Solutions, 2010 - Imagery Date: Spring 2006; LIDAR IMAGERY SOURCE???

Client/Project
SAMSUNG C&T
GRAND RENEWABLE ENERGY PARK

Figure No.
FIELD MAP 1

Title
PROJECT LOCATION MAP

Stantec Consulting Ltd.
70-1 Southgate Drive
Guelph, Ontario, Canada
N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

Wildlife Habitat Assessment

Project Number: 160960577

Project Name: Samsung

Date / Time: 09-Sept-2010

Field Personnel: Melissa Straus

Weather Conditions:	Temp:	Wind:	Cloud:	PPT:	PPT in last 24 hrs:
	13°	1	40%	Any Fog	Heavy rain

Reptile Hibernacula Features i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)

Does the site contain potential reptile hibernacula features? ☐ Yes ☒ No (if yes, describe details in Table 1).

Bat Hibernacula Features i.e. karst topography, abandoned mines or caves

Does the site contain potential bat hibernacula features? ☐ Yes ☒ No (if yes, describe details in Table 1).

Table 1: Potential bat/reptile hibernacula features identified on site

UTM	Feature type	Photo #	Description	Species observed using feature

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.e. AMRO/VO HOLA/OB SOSP/VO KILL/OB COYE-VO GHOW-VO RTHA-VO AMRO-VO Ag field RBWO-VO BLJA-VO HAWO-VO RBGR-VO				Pic 1556 - giant Orb-spider

Feature 7

Woodland Assessment- *complete 1 assessment for each woodland*

Woodlot # (indicate on map) : A for turbines 58,41, 52, 48.

Approximate age of stand ~40 years

Are large (i.e. >40cmDBH and >25m tall) **trees present** ☐ Yes ☒ No
If yes, approximate # present or % of stand <1%
Location in stand (i.e throughout, in west side only, in FOD2-6 only etc..) Throughout -

Are snags present? ☒ Yes ☐ No
If yes provide characterization of number present, height and DBH of snags and indicate if they contain loose bark. Ⓐ- 30cm DBH, loose bark, ↑22m; Ⓑ 35cm DBH, loose bark, ↑20m; Ⓒ Ⓓ Ⓔ Ag - ↑4-18m, DBH=20cm No Ⓐ - Elm - ↑20m; 30cm DBH; Ⓕ- 45cm, ↑25m No

OVERALL 20-30cm DBH 4-20m tall some loose bark
18m↑, 30cm dbh no loose bark

Trees with cavities present? ☐ No ☐ Rare ☒ Occasional ☐ Abundant
If present:

	Height ranges of tree	Range of Tree DBH	Range of Cavity Heights	Cavity sizes (approx. diameter)
Snag → Ⓒ Soft maple	4m	25cm	2-4m	Small, large
SBHickory	22m	35cm	1m	large/hollow
Snag → FAGGRAN	15m	35cm	8m	large
Be	8m	25cm	1.5m - 8	Small-medium
Snag → Be	15m	30cm	10-15m	Med.

Presence of large stick nests (i.e. raptor nests)? ☐ Yes ☒ No
If yes, UTM and describe tree type, height and position in tree, size of nest, species present

Evidence of disturbance? (i.e logging, roads, paths, ATV use, trails) ☐ Yes ☒ No
If yes, describe

Seeps/ springs present? ☐ Yes ☒ No If yes,

Seep/Spring #	UTM	Description	Surrounding Habitat

Vernal Pools Present? ☐ Yes ☒ No If yes,

#	Location	Depth of water	Size of pool (diameter)	Presence of emergent/submergent veg?	Presence of shrubs, logs at pond edge

Feature 7

ELC — COMMUNITY DESCRIPTION & CLASSIFICATION

SITE: Samsung | POLYGON: #1
SURVEYOR(S): MS | DATE: 29-Sept-2010 | UTME:
START: 9:00 | END: 10:00 | UTMZ: | UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	3	1	ACERUBR = ACEFRE = QUEMACR
2	SUB-CANOPY	4	3	Silky dogwood > ulmamer > ACEFREE > SPIALBA
3	UNDERSTOREY	5	4	Aster sp. = goldenrod > Rubus
4	GRD. LAYER	6-7	4	Sedge sp. > grass sp. >> Sensitive Fern

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:	O	< 10	N	10 - 24	N	25 - 50	N	> 50
STANDING SNAGS:	N	< 10	N	10 - 24	N	25 - 50	N	> 50
DEADFALL / LOGS:	N	< 10	N	10 - 24	N	25 - 50	N	> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :	[X]	PIONEER	[ ]	YOUNG	[ ]	MID-AGE	[ ]	MATURE	[ ]	OLD GROWTH

SOIL ANALYSIS:

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

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS: Swamp	CODE:	SW
COMMUNITY SERIES: Swamp Thicket	CODE:	SWT
ECOSITE:	CODE:	SWT2
VEGETATION TYPE: Silky Dogwood Mineral Thicket Swamp	CODE:	SWT2-8
[ ] INCLUSION	CODE:	
[ ] COMPLEX	CODE:	

Notes: Hb - Had Hawthorn

Pic1555

ELC — PLANT SPECIES LIST

SITE: Samsung
POLYGON: #1
DATE: 29-Sept-2010
SURVEYOR(S): MS

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 1	2	3	4	COLL.
ACERUBR	R	R	—		
FRAAMER	—	—	R	—	
QUERUBR	—	R	—		
ULMAMER	—	—	R	—	
QUEMACR	R	R	—		
QUE Swamp wh.	—	R	—		
ACEFREE	R	R	O	—	
Hawthorn	—	R	—		
RUBPUBE	—	—	R	—	
River Grape	—	—	R	—	
RUBIDEA	—	—	R	—	
SPIALBA	—	—	O	—	
Silky Dogwood	—	—	A	—	
FRAVIRG	—	—	—	O/A	

SPECIES CODE	LAYER 1	2	3	4	COLL.
Teasel				R	
Purple stem Aster				O	
Water Parsnip				R	
Sensitive Fern				O	
Spotted touch me not				R	
Flat topped white Aster				A	
Cornus sp.				A	
Sedge sp.				A	
Goldenrod sp.				A	

Page ..... of .....

ELC WILDLIFE	
SITE:	
POLYGON:	
DATE:	
SURVEYOR(S):	
START TIME:	END TIME:

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

POTENTIAL WILDLIFE HABITAT:

X	VERNAL POOLS	X	SNAGS
X	HIBERNACULA	X	FALLEN LOGS

SPECIES LIST:

TY	SP. CODE	EV	NOTES	#	TY	SP. CODE	EV	NOTES	#
B	RBWO	A							
B	HAWO	SH							

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/FAECAL SACK
AE = NEST ENTRY

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

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Photography Log

Project Number ____________ Project Name: ____________

Date / Time: ____________ Field Personnel: ____________

Weather Conditions:	Temp:	Wind:	Cloud:	PPT:	PPT in last 24 hrs:

Photo #:	Time:	Photo Description and Comments
1555		

ELC COMMUNITY DESCRIPTION & CLASSIFICATION

SITE: Samsung		POLYGON: #2	
SURVEYOR(S): MS	DATE: 29-Sept-2010	UTME:	
START: 11:00	END: 12:00	UTMZ:	UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	1	4	ACERUBR >> QUERUBR
2	SUB-CANOPY	2	4	ACERUBR >> TILAME
3	UNDERSTOREY	3-4	4	ACERUBR > OSTVIRG > Blue Beech
4	GRD. LAYER	6-7	3	ASTLAT > Poison Ivy

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:	A	< 10	A	10 - 24	O	25 - 50	R	> 50
STANDING SNAGS:	N	< 10	O	10 - 24	R	25 - 50	R	> 50
DEADFALL / LOGS:	N	< 10	R	10 - 24	O	25 - 50	R	> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :		PIONEER		YOUNG	X	MID-AGE		MATURE		OLD GROWTH

SOIL ANALYSIS:

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

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS: Swamp	CODE:	SW
COMMUNITY SERIES: Deciduous Swamp	CODE:	SWD
ECOSITE: Maple Mineral Dec. SW.	CODE:	SWD3
VEGETATION TYPE: Red Maple Mineral Dec. Swamp	CODE:	SWD3-1
[ ] INCLUSION	CODE:	
[ ] COMPLEX	CODE:	

Notes: Still swamp - but not as much swampy
Pic 1559 ground veg.

Feature 7

ELC PLANT SPECIES LIST

SITE: Samsung	
POLYGON: #2	
DATE: 29-Sept-2010	
SURVEYOR(S): MS.	

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 1	2	3	4	COLL.
ACERUBR	D	D	—		
CALAMMER	—	O	·		
TILAMER	R	R	—		
QUERUBR	R	R	—		
CAROVATA	R	—	—		
OSTVIRG	-	O	O	-	
ACESACS	R	—	—		
FRAPENN	R	R	R	-	
PAGGRAN	O	R	—		
PRUVIRG	—	—	R	-	
Barberry			R		
Poison Ivy	—	—	—	R	
Hawthorn	—	—	R	-	
Blue beech	—	—	O	-	
Spicebush	—	—	R	-	

SPECIES CODE	LAYER 1	2	3	4	COLL.
Large leaf Aster				O	
Hog peanut				R	
White Aster (Flat top)				R	
Buttercup sp				O	

ELC
WILDLIFE

SITE:	
POLYGON:	
DATE:	
SURVEYOR(S):	
START TIME:	END TIME:

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

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/FAECAL SACK
AE = NEST ENTRY

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

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Photography Log

Project Number ____________ Project Name: ____________

Date / Time: ____________ Field Personnel: ____________

Weather Conditions:	Temp:	Wind:	Cloud:	PPT:	PPT in last 24 hrs:

Photo #:	Time:	Photo Description and Comments

ELC — COMMUNITY DESCRIPTION & CLASSIFICATION

SITE: Samsung		POLYGON: 3	
SURVEYOR(S): MS	DATE: 29-Sept-2010	UTME:	
START: 09:45	END	UTMZ:	UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	1	4	ACERUBR > CARCAR = FRANIGR
2	SUB-CANOPY	2	4	ACERUBR >> ULMAMER
3	UNDERSTOREY	3-4	4	ULMAMER > Bluebeech
4	GRD. LAYER	5-7	4	RUBPUBE >> Sensitive Fern

HT CODES: 1 = >25 m 2 = 10-<25 m 3 = 2-<10 m 4 = 1-<2 m 5 = 0.5-<1 m 6 = 0.2-<0.5 m 7 = <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:	R < 10	O 10 - 24	A 25 - 50	R > 50
STANDING SNAGS:	R < 10	O 10 - 24	R 25 - 50	R > 50
DEADFALL / LOGS:	N < 10	R 10 - 24	R 25 - 50	R > 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :		PIONEER		YOUNG	☒	MID-AGE		MATURE		OLD GROWTH

SOIL ANALYSIS:

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

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS: MF- Swamp		CODE: SW
COMMUNITY SERIES: Deciduous Swamp		CODE: SWD
ECOSITE: Maple Mineral Dec. Swamp		CODE: SWD3
VEGETATION TYPE: Swamp Maple Mineral Dec. Swamp		CODE: SWD3-3
INCLUSION	Be upland	CODE: FOD4-1
COMPLEX		CODE:

Notes:

Pic 1558

Feature 7

ELC — PLANT SPECIES LIST

SITE: Samsung

POLYGON: #3

DATE: 29-Sept-2010

SURVEYOR(S): MS

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 1	2	3	4	COLL.
ACEFREE	D	D	-	-	
ULMAMER	-	R	A	-	
ACESACS	R				
QUERUBR	R	-	-		
CARCAR	R	R-O	-		
ACERUBR	O	O	-		
TILAMER	R	-	R		
FRANIGR	R	R-O			
CARCAR	-	R	-		
*FAGGRAN	R	—			*
Hawthorn			R		
FRAVESC	—	—		R	
RUBIDEA	—	—		R	
Poison Ivy	—	—		O	
CARCAR	—	R	-		
RUBPUBE	—	—		O	
Spicebush	—	R	-		

SPECIES CODE	LAYER 1	2	3	4	COLL.
Spotted Jewelweed	—	—		R	
Wood Nettle	—	—		R	
Spinulose Wood Fern	—	—		O	
Sensitive Fern	—	—		O	
Beechdrops	—	—		R	*
Sedge sp.					
Flat-top Aster				R	
Photo # 1557				R	- Pedunculose alba
Viola sp.				O	
Buttercup sp.				O	

*=inclusion

ELC WILDLIFE	
SITE:	
POLYGON:	
DATE:	
SURVEYOR(S):	
START TIME:	END TIME:

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

POTENTIAL WILDLIFE HABITAT:

X	VERNAL POOLS	✓	SNAGS
X	HIBERNACULA	✓	FALLEN LOGS

SPECIES LIST:

TY	SP. CODE	EV	NOTES	#	TY	SP. CODE	EV	NOTES	#
B	AMRO	A							
B	RBWO	A							
B	BLJA	SH							

FAUNAL TYPE CODES (TY):
B = BIRD M = MAMMAL H = HERPETOFAUNA L = LEPIDOPTERA F = FISH O = OTHER

EVIDENCE CODES (EV):

BREEDING BIRD - POSSIBLE:
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BREEDING BIRD - CONFIRMED:
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Fax: (519) 836-2493

Photography Log

Project Number ______ Project Name: ______

Date / Time: ______ Field Personnel: ______

Weather Conditions:	Temp:	Wind:	Cloud:	PPT:	PPT in last 24 hrs:

Photo #:	Time:	Photo Description and Comments

Feature 7

ELC — COMMUNITY DESCRIPTION & CLASSIFICATION

SITE: Samsung		POLYGON: 4	
SURVEYOR(S): MS	DATE: 29-Sept-2010	UTME:	
START:	END	UTMZ:	UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	1	4	ACERRUB >> ACESACC
2	SUB-CANOPY	2	4	ACERRUB > ULMAMER
3	UNDERSTOREY	3-4	4	ULMAMER
4	GRD. LAYER	3-7	4	RUBPUBE

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:	R < 10	O 10 - 24	A 25 - 50	R > 50
STANDING SNAGS:	R < 10	O 10 - 24	R 25 - 50	R > 50
DEADFALL / LOGS:	A < 10	R 10 - 24	R 25 - 50	R > 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE:	PIONEER	YOUNG	X MID-AGE	MATURE	OLD GROWTH

SOIL ANALYSIS:

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

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS: Swamp		CODE: SW
COMMUNITY SERIES: Deciduous Swamp		CODE: SWD
ECOSITE: Maple Mineral Dec. Swamp		CODE: SWD3
VEGETATION TYPE: Swamp Maple Mineral Dec. Swamp		CODE: SWD3-3
INCLUSION		CODE:
COMPLEX		CODE:

Notes:

ELC — PLANT SPECIES LIST

SITE: Samsung
POLYGON: 4
DATE: 29-Sept-2010
SURVEYOR(S): M. Straus

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 1	2	3	4	COLL.
Same sp. Composition as #3					
no Beech upland					
QUEMACR	R				

SPECIES CODE	LAYER 1	2	3	4	COLL.
exclude Aster, photo# 1557					

ELC
COMMUNITY DESCRIPTION & CLASSIFICATION

SITE:		POLYGON:	
SURVEYOR(S):	DATE:		UTME:
START:	END	UTMZ:	UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

LAYER		HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY			
2	SUB-CANOPY			
3	UNDERSTOREY			
4	GRD. LAYER			

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:		< 10		10 - 24		25 - 50		> 50
STANDING SNAGS:		< 10		10 - 24		25 - 50		> 50
DEADFALL / LOGS:		< 10		10 - 24		25 - 50		> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :		PIONEER		YOUNG		MID-AGE		MATURE		OLD GROWTH

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:
INCLUSION		CODE:
COMPLEX		CODE:

Notes:

ELC
PLANT SPECIES LIST

SITE:	
POLYGON:	
DATE:	
SURVEYOR(S):	

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 1	LAYER 2	LAYER 3	LAYER 4	COLL.	SPECIES CODE	LAYER 1	LAYER 2	LAYER 3	LAYER 4	COLL.

Feature 7

ELC — COMMUNITY DESCRIPTION & CLASSIFICATION

SITE: Samsung		POLYGON: 5	
SURVEYOR(S): MS	DATE: 29-Sept-2010	UTME:	
START:	END	UTMZ:	UTMN:

POLYGON DESCRIPTION

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
☐ TERRESTRIAL ☐ WETLAND ☐ AQUATIC	☐ ORGANIC ☐ MINERAL SOIL ☐ PARENT MIN. ☐ ACIDIC BEDRK. ☐ BASIC BEDRK. ☐ CARB. BEDRK.	☐ LACUSTRINE ☐ RIVERINE ☐ BOTTOMLAND ☐ TERRACE ☐ VALLEY SLOPE ☐ TABLELAND ☐ ROLL UPLAND ☐ CLIFF ☐ TALUS ☐ CREVICE / CAVE ☐ ALVAR ☐ ROCKLAND ☐ BEACH / BAR ☐ SAND DUNE ☐ BLUFF	☐ NATURAL ☑ CULTURAL	☐ PLANKTON ☐ SUBMERGED ☐ FLOATING-LVD. ☐ GRAMINOID ☐ FORB ☐ LICHEN ☐ BRYOPHYTE ☐ DECIDUOUS ☐ CONIFEROUS ☐ MIXED	☐ LAKE ☐ POND ☐ RIVER ☐ STREAM ☐ MARSH ☐ SWAMP ☐ FEN ☐ BOG ☐ BARREN ☐ MEADOW ☐ PRAIRIE ☐ THICKET ☐ SAVANNAH ☐ WOODLAND ☐ FOREST ☐ PLANTATION

SITE

☐ OPEN WATER
☐ SHALLOW WATER
☐ SURFICIAL DEP.
☐ BEDROCK

COVER

☐ OPEN
☐ SHRUB
☐ TREED

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	2	1	ULM AMER
2	SUB-CANOPY	3-4	3	Silky Dogwood > Willow spp.
3	UNDERSTOREY	—	—	
4	GRD. LAYER	5-7	4	Reed Canary Grass

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:	< 10	10 - 24	25 - 50	> 50
STANDING SNAGS:	< 10	10 - 24	25 - 50	> 50
DEADFALL / LOGS:	< 10	10 - 24	25 - 50	> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :	PIONEER	YOUNG	MID-AGE	MATURE	OLD GROWTH

SOIL ANALYSIS:

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

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS: Swamp	CODE:	SW
COMMUNITY SERIES: Thicket Swamp	CODE:	SWT
ECOSITE: Mineral Thicket Swamp	CODE:	SWT2
VEGETATION TYPE: Silky Dogwood Mineral Thicket Swamp	CODE:	SWT2-8
INCLUSION	CODE:	
COMPLEX	CODE:	

Notes: Completely dugup for Ag drainage
Difficult to assess shrub coverage

ELC — PLANT SPECIES LIST

SITE: Samsung	
POLYGON: 5	
DATE: 29-Sept-2010	
SURVEYOR(S): M. Straus	

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 1	2	3	4	COLL.
ULM AMER	R	—	—		
ACE FREE	-	R	—		
Silky Dogwood	-	O	—		
Willow sp.	-	O	—		

SPECIES CODE	LAYER 1	2	3	4	COLL.
Reed Canary Grass	—			O	
Stinging Nettle	—			R-O	
Sensitive Fern	—			R	
Flat White Aster	—			O	
Swamp Milkweed	—			R	
Iris	—			R	

ELC WILDLIFE	SITE:	
	POLYGON:	
	DATE:	
	SURVEYOR(S):	
	START TIME:	END TIME:

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

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/FAECAL SACK
AE = NEST ENTRY

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

Stantec
Stantec Consulting Ltd.
361 Southgate Drive
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N1G 3M5
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Photography Log

Project Number____________________ Project Name: ____________________

Date / Time: ____________________ Field Personnel: ____________________

Weather Conditions:	Temp:	Wind:	Cloud:	PPT:	PPT in last 24 hrs:

Photo #:	Time:	Photo Description and Comments

ELC — COMMUNITY DESCRIPTION & CLASSIFICATION

SITE: Samsung		POLYGON: 6	
SURVEYOR(S): M.	DATE: 29-sept-2010	UTME:	
START:	END	UTMZ:	UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	1	4	ACERUBR > ACEPREE > CARCVAT
2	SUB-CANOPY	2	4	ACERUB
3	UNDERSTOREY	3-4	4	OSTVIRG > ACERUBR
4	GRD. LAYER	5-7	3	ASTMAER > RHURADI

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:

		< 10	10 - 24	25 - 50	> 50
SIZE CLASS ANALYSIS:		C	O	O	R
STANDING SNAGS:		R	O	R	R
DEADFALL / LOGS:		R	R	R	R

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :		PIONEER		YOUNG	X	MID-AGE		MATURE		OLD GROWTH

SOIL ANALYSIS:

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

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS:	Swamp	CODE: SW
COMMUNITY SERIES:	Dec. Swamp	CODE: SWD
ECOSITE:	Maple Mineral Dec. Swamp	CODE: SWD3
VEGETATION TYPE: Red Maple Mineral Dec. Swamp		CODE: SWD3-1
INCLUSION		CODE:
COMPLEX		CODE:

Notes:

Pic 1562

Feature 7

ELC — PLANT SPECIES LIST

SITE: Samsung	
POLYGON: 6	
DATE: 29-sept-2010	
SURVEYOR(S): M. Straus	

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 1	2	3	4	COLL.
ACERUBR	D	D	—		
CARCVAT	O	R	—		
QUEALBA	O	R	—		
TILAMER	R	R	—		
POAGLAN	R	—	—		
OSTVIRG	-	O	O	-	
ACEPREE	O	O	—		
QUEBICO	R	R	—		
RHURADI	—	—	—	R	
RUBALLE	—	—	-	R	
CARCARO	—	—	R	-	

SPECIES CODE	LAYER 1	2	3	4	COLL.
ASTMAER	—	—	—	O	
Cardinal Flower	—	—	—	R	
Buttercup sp				O	

ELC **WILDLIFE**	**SITE:**	
	POLYGON:	
	DATE:	
	SURVEYOR(S):	
	START TIME:	**END TIME:**

TEMP (°C):	**CLOUD (10th):**	**WIND:**	**PRECIPITATION:**
CONDITIONS:			

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

BREEDING BIRD - CONFIRMED:
- DD = DISTRACTION
- NE = EGGS
- AE = NEST ENTRY
- NU = USED NEST
- NY = YOUNG
- FY = FLEDGED YOUNG
- FS = FOOD/FAECAL SACK

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

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Tel: (519) 836-6050
Fax: (519) 836-2493

Photography Log

Project Number ____________ Project Name: ____________

Date / Time: ____________ Field Personnel: ____________

Weather Conditions:	Temp:	Wind:	Cloud:	PPT:	PPT in last 24 hrs:

Photo #:	**Time:**	**Photo Description and Comments**

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December 2010
160960577

Legend

- Proposed Turbine Location
- 120m Zone of Investigation
- ROW Installation Zone
- ELC Communities
- Access Road
- Overhead Collector Line
- Underground Collector Line
- Substation Property
- Road
- Transmission Line (OBM)
- Provincially Significant Wetland
- Non-Provincially Significant Wetland
- Watercourse (OBM)
- Waterbody

Forest Communities (FO)
FOM2-2- Dry-fresh White Pine – Sugar Maple Mixed Forest
FOD- Deciduous Forest
FOD2-1- Dry-fresh Oak – Red Maple Deciduous Forest
FOD2-2- Dry-fresh Oak – Hickory Deciduous Forest
FOD2-4- Dry-fresh Oak – Hardwood Deciduous Forest
FOD3-1- Dry-fresh Poplar Deciduous Forest
FOD4-1- Dry-fresh Beech Deciduous Forest
FOD4-2- Dry-fresh White Ash Deciduous Forest
FOD5-1- Dry-fresh Sugar Maple Deciduous Forest
FOD5-2- Dry-fresh Sugar Maple – Beech Deciduous Forest
FOD5-3- Dry-fresh Sugar Maple – Oak Deciduous Forest
FOD5-8- Dry-fresh Sugar Maple – White Ash Deciduous Forest
FOD5-11*- Dry-fresh Sugar Maple – Oak – Beech Deciduous Forest
FOD5-12*- Dry-fresh Sugar Maple – Hickory – Beech Deciduous Forest
FOD6-1- Fresh-moist Sugar Maple – Lowland Ash Deciduous Forest
FOD6-5- Fresh-moist Sugar Maple – Hardwood Deciduous Forest
FOD6-6*- Fresh-moist Sugar Maple – Hickory Deciduous Forest
FOD7-1- Fresh-moist White Elm Lowkind Deciduous Forest
FOD7-2- Fresh-moist Ash Lowland Deciduous Forest
FOD9-1- Fresh-moist Oak – Sugar Maple Deciduous Forest
FOD9-4- Fresh-moist Shagbark Hickory Deciduous Forest
FOD9-6*- Fresh-moist Red Oak – Shagbark Hickory Deciduous Forest

Swamp Communities (SW)
SWD1-1- Swamp White Oak Mineral Deciduous Swamp
SWD2-2- Green Ash Mineral Deciduous Swamp
SWD2-3*- Ash – Hardwood Mineral Deciduous Swamp
SWD2-4*- Green Ash – Red Maple Mineral Deciduous Swamp
SWD3-1- Red Maple Mineral Deciduous Swamp
SWD3-2- Silver Maple Mineral Deciduous Swamp
SWD3-5*- Swamp Maple - Green Ash Mineral Deciduous Swamp
SWD4-1- Willow Mineral Deciduous Swamp
SWD4-2- White Elm Mineral Deciduous Swamp
SWD3-3- Swamp Maple Mineral Deciduous Swamp
SWD4-6*- Green Ash – Swamp Maple Mineral Deciduous Swamp
SWT- Thicket Swamp
SWT2-4- Buttonbush Mineral Thicket Swamp
SWT2-5- Red Osier Dogwood Mineral Thicket Swamp
SWT2-8- Silky Dogwood Mineral Thicket Swamp
SWT2-9- Gray Dogwood Mineral Thicket Swamp
SWT2-13*- Willow – Dogwood Mineral Thicket Swamp
SWT2-14*- Winterberry – Buttonbush Mineral Thicket Swamp
SWT2-15*- Red Maple Mineral Thicket Swamp
SWT3-7- Winterberry Organic Thicket Swamp

Marsh Communities (MA)
MAM2-2- Reed Canary Grass Mineral Meadow Marsh
MAM2-10- Forb Mineral Meadow Marsh
MAM2-11*- Forb – Graminoid Mineral Meadow Marsh
MAS2-1- Cattail Mineral Shallow Marsh
MAS2-8- Rice Cut-grass Mineral Shallow Marsh

Cultural Communities (CU)
CUM1- Mineral Cultural Meadow
CUT1-7- European Buckthorn – Sweet Cherry Cultural thicket
CUW1-3*- Ash – Sumac Mineral Cultural Woodland
CUW1-4*- Green Ash Mineral Cultural Woodland
CUW1-5*- Maple-Ash Cultural Woodland
CUW1-6*- Green Ash Cultural Woodland
CUW1-7*- Red maple Mineral Cultural Woodland
CUP3-12*- White Pine – White/Norway Spruce Coniferous Plantation
CUP3-13*- White Spruce Coniferous Plantation

D- Disturbed
R- Residential

Notes

1. Coordinate System: UTM NAD 83 - Zone 17 (N).
2. Data Sources: Ontario Ministry of Natural Resources © Queens Printer Ontario, 2009; © Samsung, 2010.
3. Image Source: © Grand River Conservation Authority, 2010 - Imagery Date: Spring 2006; LIDAR IMAGERY SOURCE???
4. Produced using the Version 5 site plan produced by Stantec updated on Dec 13.

Client/Project
SAMSUNG C&T
GRAND RENEWABLE ENERGY PARK

Figure No.
TILE 3 DRAFT

Title
ELC VEGETATION COMMUNITIES

Stantec

Feature 7

ELC COMMUNITY DESCRIPTION & CLASSIFICATION

SITE:		POLYGON:	
SURVEYOR(S):	DATE:		UTME:
START:	END	UTMZ:	UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	1	4	QUEALBA, CAROVAT, FRAPENN, ACESACS
2	SUB-CANOPY	2	4	FAGGRAN, FRAPENN
3	UNDERSTOREY	3	4	FAGGRAN
4	GRD. LAYER			

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:	O	< 10	O	10 - 24	O	25 - 50	R	> 50
STANDING SNAGS:	—	< 10	—	10 - 24		25 - 50		> 50
DEADFALL / LOGS:	—	< 10	—	10 - 24		25 - 50		> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :		PIONEER		YOUNG		MID-AGE	X	MATURE		OLD GROWTH

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: Fresh-Moist Sugar Maple-Hardwood	CODE: FOD6-5
INCLUSION Deciduous Forest	CODE:
COMPLEX	CODE:

Notes: From edge · mix mash

ELC PLANT SPECIES LIST

SITE:	Samsung
POLYGON:	3-1
DATE:	22-Dec-2010
SURVEYOR(S):	M. Straus

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

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

PINSTRO	O	—	—	—	
QUEALBA	O	—	—	—	
CAROVAT	O	O	—		
FRAPENN	O	O	—		
FAGGRAN	R	O	O	—	

Page ...... of ......

feature 17

ELC COMMUNITY DESCRIPTION / CLASSIFICATION

SITE:		POLYGON:	
SURVEYOR(S):	DATE:		UTME:
START:	END	UTMZ:	UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	1	4	FRAPENN > ACEFREE
2	SUB-CANOPY	2	4	"
3	UNDERSTOREY	3		—
4	GRD. LAYER	5-7	4	Reedcanary grass (26)

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:		< 10		10 - 24		25 - 50		> 50
STANDING SNAGS:		~~< 10~~		10 - 24		25 - 50		> 50
DEADFALL / LOGS:		~~< 10~~		10 - 24		25 - 50		> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :		PIONEER	X	YOUNG	/	MID-AGE		MATURE		OLD GROWTH

2b

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: Green Ash Mineral Deciduous		CODE: SWD2-2
INCLUSION	Swamp	CODE:
COMPLEX		CODE:

Notes:

26 - 2nd spp is QUEMAER instead of ACEFREE + has some MAM2-2 bits. 23 ~ 50% cover in some parts

ELC PLANT SPECIES LIST	
SITE:	Samsung
POLYGON:	3-2
DATE:	22-Dec-2010
SURVEYOR(S):	M. Straus

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

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

PLANT SPECIES						
FRAPENN	D	D				
ACEFRE	O	O				
ACESACS	R				25	
FAGGRAN	R					
Poplar	R					

588487 589487 590487 591487 592487

4752865

4751865

DECEWSVILLE ROAD

IRISH LINE

LITTLE ROAD

581835

581853

581830

KOHLER ROAD

GIBSON ROAD

12 ROAD

HALDIMAND ROAD 12

HALDIMAND ROAD 20

CONCESSION 7

LINK ROAD

N

0 200 400 m

1:12,000

588487 589487 590487 591487 592487

4750865

September 2010
160960577

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Legend

- Project Location
- Proposed Turbine Location
- Proposed Access Road
- Proposed Collector Line
- ROW Installation Zone
- 120m Investigation Zone
- Elexco Aquired Agreements
- Government Lands
- UDI Lands
- Road
- Railway
- Abandoned Railway
- Transmission Line (OBM)
- Deer Wintering Area
- Provincially Significant Wetland
- Non-Provincially SIgnificant Wetland
- Watercourse (OBM)
- Waterbody

Area of Natural and Scientific Interest (ANSI)

- Life Science, Provincially Significant
- Earth Science, Provincially SIgnificant
- Earth Science, Regionally Significant

Stantec

Notes

1. Coordinate System: UTM NAD 83 - Zone 17 (N).
2. Data Sources: Ontario Ministry of Natural Resources © Queens Printer Ontario, 2009; © GREP, 2010; © Samsung, 2010.
3. Image Source: © First Base Solutions, 2010 - Imagery Date: Spring 2006; **LIDAR IMAGERY SOURCE???**

Client/Project

SAMSUNG C&T
GRAND RENEWABLE ENERGY PARK

Figure No.

FIELD MAP 3

Title

PROJECT LOCATION MAP

ELC COMMUNITY DESCRIPTION & CLASSIFICATION

SITE:		POLYGON: (7)	
SURVEYOR(S):	DATE:		UTME:
START: 1600	END 1615	UTMZ:	UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

LAYER		HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	2	1	ULMAMER
2	SUB-CANOPY	—	—	
3	UNDERSTOREY	3-4	4	Gray Dogwood > RHACATH
4	GRD. LAYER	5-7	4	Reed Canary Grass

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:	A	< 10	O	10 - 24	N	25 - 50	N	> 50
STANDING SNAGS:	N	< 10	R	10 - 24	N	25 - 50	N	> 50
DEADFALL / LOGS:	O	< 10	R	10 - 24	N	25 - 50	N	> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :		PIONEER	X	YOUNG		MID-AGE		MATURE		OLD GROWTH

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: Gray Dogwood Cultural Thicket	CODE: CUT1-4
☐ INCLUSION	CODE:
☐ COMPLEX	CODE:

Notes: From Road
Prc1684

Feature 7

ELC PLANT SPECIES LIST

SITE:	Samsung
POLYGON:	7
DATE:	12-Oct-2010
SURVEYOR(S):	M. Straus

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	1	2	3	4	COLL.
ULMAMER	R	R			
Virginia Creep			O		
Gray Dogwood			O		
Nannyberry			R		
RHA CATH			O		

SPECIES CODE	1	2	3	4	COLL.
Goldenrod sp				O	
P.S. Aster				O	
Reed Canary Grass				D	

Feature 7.

ELC COMMUNITY DESCRIPTION / CLASSIFICATION

SITE:		POLYGON:	
SURVEYOR(S):	DATE:		UTME:
START: 16:15	END 16:30	UTMZ:	UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	1	4	QUERUBR
2	SUB-CANOPY	2	4	QUERUBR
3	UNDERSTOREY	—	—	?
4	GRD. LAYER	—	—	?

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:	< 10	10 - 24	25 - 50	> 50
STANDING SNAGS:	< 10	10 - 24	25 - 50	> 50
DEADFALL / LOGS:	< 10	10 - 24	25 - 50	> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :	PIONEER	YOUNG	MID-AGE	MATURE	OLD GROWTH
				X	

SOIL ANALYSIS:

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

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS:	Forest	CODE: FO
COMMUNITY SERIES:	Deciduous Forest	CODE: FOD
ECOSITE:		CODE:
VEGETATION TYPE:		CODE: FOD
INCLUSION		CODE:
COMPLEX		CODE:

Notes:

Pic# 1655

From road - edge only visible

ELC PLANT SPECIES LIST

SITE:	Samsung
POLYGON:	8
DATE:	12-Oct-2010
SURVEYOR(S):	M. Straus

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

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

SCIENTIFIC NAME	LAYER					COMMON NAME	LAYER				
QUERUBR	D										
ACESACS	R										

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December 2010
160960577

Legend

- Proposed Turbine Location
- 120m Zone of Investigation
- ROW Installation Zone
- ELC Communities
- Access Road
- Overhead Collector Line
- Underground Collector Line
- Substation Property
- Road
- Transmission Line (OBM)
- Provincially Significant Wetland
- Non-Provincially Significant Wetland
- Watercourse (OBM)
- Waterbody

Forest Communities (FO)
FOM2-2- Dry-fresh White Pine – Sugar Maple Mixed Forest
FOD- Deciduous Forest
FOD2-1- Dry-fresh Oak – Red Maple Deciduous Forest
FOD2-2- Dry-fresh Oak – Hickory Deciduous Forest
FOD2-4- Dry-fresh Oak – Hardwood Deciduous Forest
FOD3-1- Dry-fresh Poplar Deciduous Forest
FOD4-1- Dry-fresh Beech Deciduous Forest
FOD4-2- Dry-fresh White Ash Deciduous Forest
FOD5-1- Dry-fresh Sugar Maple Deciduous Forest
FOD5-2- Dry-fresh Sugar Maple – Beech Deciduous Forest
FOD5-3- Dry-fresh Sugar Maple – Oak Deciduous Forest
FOD5-8- Dry-fresh Sugar Maple – White Ash Deciduous Forest
FOD5-11*- Dry-fresh Sugar Maple – Oak – Beech Deciduous Forest
FOD5-12*- Dry-fresh Sugar Maple – Hickory – Beech Deciduous Forest
FOD6-1- Fresh-moist Sugar Maple – Lowland Ash Deciduous Forest
FOD6-5- Fresh-moist Sugar Maple – Hardwood Deciduous Forest
FOD6-6*- Fresh-moist Sugar Maple – Hickory Deciduous Forest
FOD7-1- Fresh-moist White Elm Lowkind Deciduous Forest
FOD7-2- Fresh-moist Ash Lowland Deciduous Forest
FOD9-1- Fresh-moist Oak – Sugar Maple Deciduous Forest
FOD9-4- Fresh-moist Shagbark Hickory Deciduous Forest
FOD9-6*- Fresh-moist Red Oak – Shagbark Hickory Deciduous Forest

Swamp Communities (SW)
SWD1-1- Swamp White Oak Mineral Deciduous Swamp
SWD2-2- Green Ash Mineral Deciduous Swamp
SWD2-3*- Ash – Hardwood Mineral Deciduous Swamp
SWD2-4*- Green Ash – Red Maple Mineral Deciduous Swamp
SWD3-1- Red Maple Mineral Deciduous Swamp
SWD3-2- Silver Maple Mineral Deciduous Swamp
SWD3-5*- Swamp Maple - Green Ash Mineral Deciduous Swamp
SWD4-1- Willow Mineral Deciduous Swamp
SWD4-2- White Elm Mineral Deciduous Swamp
SWD3-3- Swamp Maple Mineral Deciduous Swamp
SWD4-8*- Green Ash – Swamp Maple Mineral Deciduous Swamp
SWT- Thicket Swamp
SWT2-4- Buttonbush Mineral Thicket Swamp
SWT2-5- Red Osier Dogwood Mineral Thicket Swamp
SWT2-8- Silky Dogwood Mineral Thicket Swamp
SWT2-9- Gray Dogwood Mineral Thicket Swamp
SWT2-13*- Willow – Dogwood Mineral Thicket Swamp
SWT2-14*- Winterberry – Buttonbush Mineral Thicket Swamp
SWT2-15*- Red Maple Mineral Thicket Swamp
SWT3-7- Winterberry Organic Thicket Swamp

Marsh Communities (MA)
MAM2-2- Reed Canary Grass Mineral Meadow Marsh
MAM2-10- Forb Mineral Meadow Marsh
MAM2-11*- Forb – Graminoid Mineral Meadow Marsh
MAS2-1- Cattail Mineral Shallow Marsh
MAS2-8- Rice Cut-grass Mineral Shallow Marsh

Cultural Communities (CU)
CUM1- Mineral Cultural Meadow
CUT1-7- European Buckthorn – Sweet Cherry Cultural thicket
CUW1-3*- Ash – Sumac Mineral Cultural Woodland
CUW1-4*- Green Ash Mineral Cultural Woodland
CUW1-5*- Maple-Ash Cultural Woodland
CUW1-6*- Green Ash Cultural Woodland
CUW1-7*- Red maple Mineral Cultural Woodland
CUP3-12*- White Pine – White/Norway Spruce Coniferous Plantation
CUP3-13*- White Spruce Coniferous Plantation

D- Disturbed
R- Residential

Notes

1. Coordinate System: UTM NAD 83 - Zone 17 (N).
2. Data Sources: Ontario Ministry of Natural Resources © Queens Printer Ontario, 2009; © Samsung, 2010.
3. Image Source: © Grand River Conservation Authority, 2010 - Imagery Date: Spring 2006; LIDAR IMAGERY SOURCE???
4. Produced using the Version 5 site plan produced by Stantec updated on Dec 13.

Client/Project
SAMSUNG C&T
GRAND RENEWABLE ENERGY PARK

Figure No.
TILE 1 DRAFT

Title
ELC VEGETATION COMMUNITIES

Stantec

Feature 8

ELC COMMUNITY DESCRIPTION & CLASSIFICATION

SITE:		POLYGON:	
SURVEYOR(S):		DATE:	UTME:
START:	END	UTMZ:	UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	1	3	Maple, Oak,
2	SUB-CANOPY	3		
3	UNDERSTOREY	4	4	CORRACE
4	GRD. LAYER			

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:	A < 10	O 10 - 24	R 25 - 50	R > 50
STANDING SNAGS:	~~< 10~~	~~10 - 24~~	25 - 50	> 50
DEADFALL / LOGS:	~~< 10~~	~~10 - 24~~	25 - 50	> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :	PIONEER	YOUNG	MID-AGE	MATURE	OLD GROWTH
		X		X	

some parts

SOIL ANALYSIS:

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

COMMUNITY CLASSIFICATION:

	CODE:
COMMUNITY CLASS:	
COMMUNITY SERIES:	
ECOSITE:	
VEGETATION TYPE: Deciduous Forest	FOD
INCLUSION	
COMPLEX	

Notes: - Has pockets of thickets - along a limestone bedrock out cropping
- Assessed from a distance
- Sparse in spots - more dense in others

ELC PLANT SPECIES LIST

SITE: Samsung
POLYGON: 1-1
DATE: 22-Dec-2010
SURVEYOR(S): M. Straus

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 1	2	3	4	COLL.
Acer sp.	O				
Quercus sp.	O				
CARNAT	R				
Salix sp.	R				
CORRACE			O		
RHACATH		O			

SPECIES CODE	LAYER 1	2	3	4	COLL.

Nofeature (near 8)

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE:		POLYGON:	
	SURVEYOR(S):	DATE:		UTME:
	START:	END	UTMZ:	UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	2	3	FRAPENN
2	SUB-CANOPY	3	3	
3	UNDERSTOREY	4	4	Cornus sp
4	GRD. LAYER	—	—	

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:		< 10		10 - 24		25 - 50		> 50
STANDING SNAGS:		< 10		10 - 24		25 - 50		> 50
DEADFALL / LOGS:		< 10		10 - 24		25 - 50		> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :		PIONEER	X	YOUNG	X	MID-AGE		MATURE		OLD GROWTH

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: Deciduous swamp		CODE: SWD
INCLUSION		CODE:
COMPLEX		CODE:

Notes: Thicket bits - Quickly Assessed from busy road

ELC PLANT SPECIES LIST	
	SITE: Samsung
	POLYGON: 1-2
	DATE: 22-Dec-2010
	SURVEYOR(S): M. Straus

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 1	2	3	4	COLL.	SPECIES CODE	LAYER 1	2	3	4	COLL.
FRAPENN	O	O	—								
Cornus sp.		O									

Page ...... of ......

ELC COMMUNITY DESCRIPTION & CLASSIFICATION

SITE:	POLYGON:	
SURVEYOR(S):	DATE:	UTME:
START: / END	UTMZ:	UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY			
2	SUB-CANOPY	3	3	Hawthorn, RHACATH
3	UNDERSTOREY	4	4	CORRACE
4	GRD. LAYER	5-7		

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:	A < 10	R 10 - 24	N 25 - 50	N > 50
STANDING SNAGS:	~~< 10~~	10 - 24	25 - 50	> 50
DEADFALL / LOGS:	~~< 10~~	10 - 24	25 - 50	> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :	☒ PIONEER	☐ YOUNG	☐ MID-AGE	☐ MATURE	☐ OLD GROWTH

SOIL ANALYSIS:

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

COMMUNITY CLASSIFICATION:

		CODE:
COMMUNITY CLASS:		
COMMUNITY SERIES:		
ECOSITE:		
VEGETATION TYPE:	Cultural Thicket	CUT
INCLUSION		
COMPLEX		

Notes: Assessed from edge of busy road

Gray Dogwood

No feature (Year 8)

ELC PLANT SPECIES LIST

SITE:	Samsung
POLYGON:	1-3
DATE:	22-Dec-2010
SURVEYOR(S):	M. Straus

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 1	2	3	4	COLL.
CORRACE			O		
RHACATH			O		
Hawthorn			O		

SPECIES CODE	LAYER 1	2	3	4	COLL.

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE:		POLYGON:	
	SURVEYOR(S):	DATE:		UTME:
	START:	END	UTMZ:	UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY			
2	SUB-CANOPY			
3	UNDERSTOREY			
4	GRD. LAYER			

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:		< 10		10 - 24		25 - 50		> 50
STANDING SNAGS:		< 10		10 - 24		25 - 50		> 50
DEADFALL / LOGS:		< 10		10 - 24		25 - 50		> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :		PIONEER		YOUNG		MID-AGE		MATURE		OLD GROWTH

SOIL ANALYSIS:

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

COMMUNITYCLASSIFICATION:

COMMUNITY CLASS:	CODE:
COMMUNITY SERIES:	CODE:
ECOSITE:	CODE:
VEGETATION TYPE:	CODE:

	INCLUSION		CODE:
	COMPLEX		CODE:

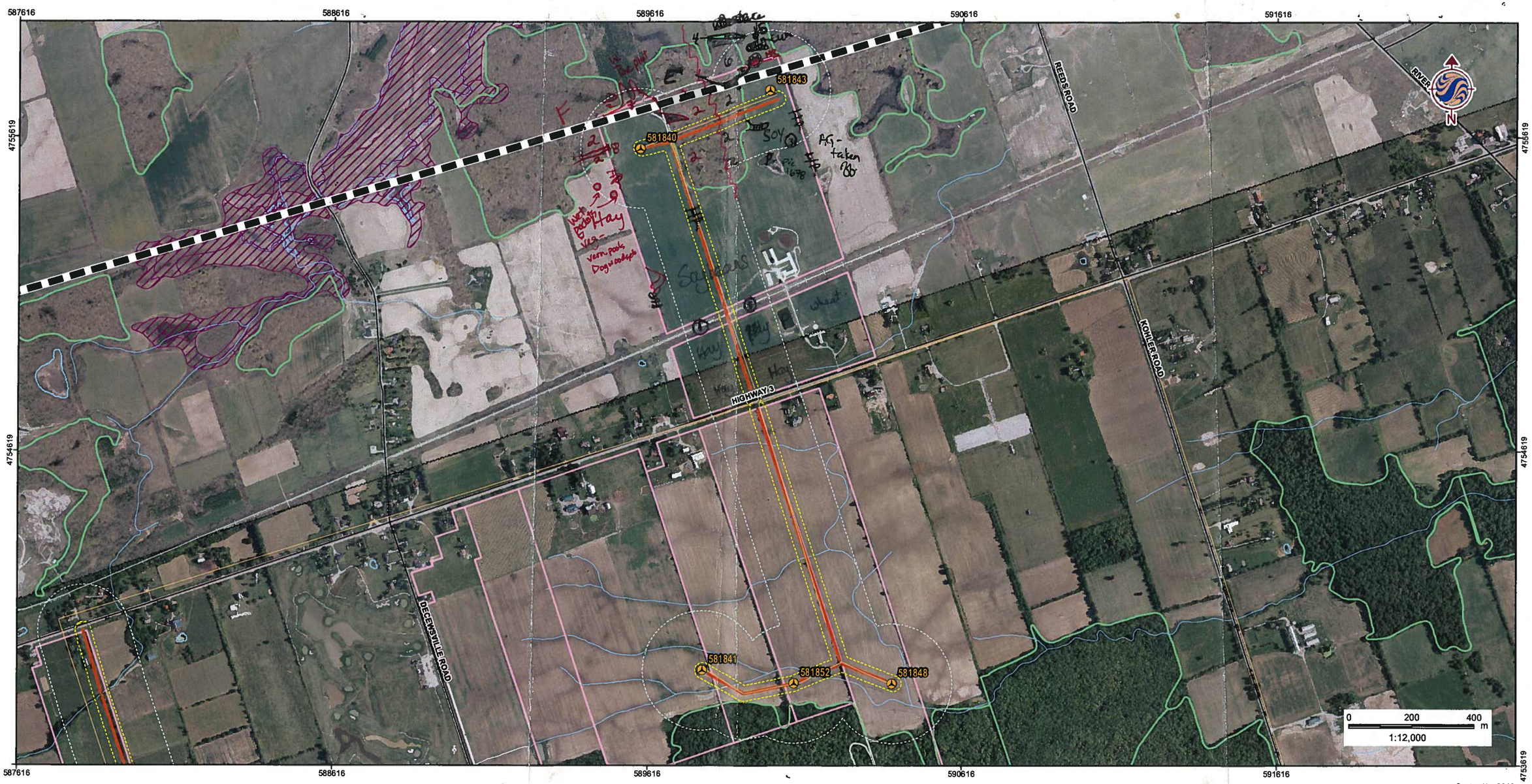
Notes:

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

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 1	LAYER 2	LAYER 3	LAYER 4	COLL.	SPECIES CODE	LAYER 1	LAYER 2	LAYER 3	LAYER 4	COLL.



W:\active\160960577\drawing\GIS\MXD\NaturalHeritage\Assessment\FieldMaps\160960577_FIELDMAP_ProjectLocation_Mapbook_20100921_PW.mxd - 9/27/2010 @ 5:35:56 PM

Legend

- Project Location
- Proposed Turbine Location
- Proposed Access Road
- Proposed Collector Line
- ROW Installation Zone
- 120m Investigation Zone
- Elexco Aquired Agreements
- Government Lands
- UDI Lands
- Road
- Railway
- Abandoned Railway
- Transmission Line (OBM)
- Deer Wintering Area
- Provincially Significant Wetland
- Non-Provincially Significant Wetland
- Watercourse (OBM)
- Waterbody

Area of Natural and Scientific Interest (ANSI)

- Life Science, Provincially Significant
- Earth Science, Provincially Significant
- Earth Science, Regionally Significant

Notes

1. Coordinate System: UTM NAD 83 - Zone 17 (N).
2. Data Sources: Ontario Ministry of Natural Resources © Queens Printer Ontario, 2009; © GREP, 2010; © Samsung, 2010.
3. Image Source: © First Base Solutions, 2010 - Imagery Date: Spring 2006; **LIDAR IMAGERY SOURCE???**

Stantec

Client/Project
SAMSUNG C&T
GRAND RENEWABLE ENERGY PARK

Figure No.
FIELD MAP 1

Title
PROJECT LOCATION MAP

September 2010
160960577

Stantec

Stantec Consulting Ltd.
70-1 Southgate Drive
Guelph, Ontario, Canada
N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

Wildlife Habitat Assessment

Project Number: 160960577

Project Name: Samsung

Date / Time: 14-Oct-2010 @11:15Am

Field Personnel: [illegible]

Weather Conditions:	Temp:	Wind:	Cloud:	PPT:	PPT in last 24 hrs:
	10°	3	100%	light rain-none	5-10mm

Reptile Hibernacula Features i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)

Does the site contain potential reptile hibernacula features? ☐ Yes ☒ No (if yes, describe details in Table 1).

Bat Hibernacula Features i.e. karst topography, abandoned mines or caves

Does the site contain potential bat hibernacula features? ☐ Yes ☒ No (if yes, describe details in Table 1).

Table 1: Potential bat/reptile hibernacula features identified on site

UTM	Feature type	Photo #	Description	Species observed using feature

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.e. AMRO/VO AMRO/OB [illegible]/OB [illegible]/OB [illegible] [illegible] BLJA/[illegible]	Eastern Cottontail - [illegible] [illegible]			

Feature 8

Woodland Assessment- *complete 1 assessment for each woodland*

Woodlot # (indicate on map) : E

Approximate age of stand 80 years

14-Oct-2010

Are large (i.e. >40cmDBH and >25m tall) **trees present** ☒ Yes ☐ No
If yes, approximate # present or % of stand <5%
Location in stand (i.e throughout, in west side only, in FOD2-6 only etc..) Scattered throughout

Are snags present? ☒ Yes ☐ No
If yes provide characterization of number present, height and DBH of snags and indicate if they contain loose bark.
Very few in 2 - more in (2) of property
Overall ~ 4/ha.

Trees with cavities present? ☐ No ☒ Rare ☐ Occasional ☐ Abundant
If present:

	Height ranges of tree	Range of Tree DBH	Range of Cavity Heights	Cavity sizes (approx. diameter)
Snag 1	10m	50cm	8m	Large
3 trees (alive)	25m	3 40-50cm	0m.	Hollow

Presence of large stick nests (i.e. raptor nests)? ☐ Yes ☒ No
If yes, UTM and describe tree type, height and position in tree, size of nest, species present

Evidence of disturbance? (i.e logging, roads, paths, ATV use, trails) ☒ Yes ☐ No
If yes, describe Light Trails, Firewood cutting

Seeps/ springs present? ☐ Yes ☒ No If yes,

Seep/Spring #	UTM	Description	Surrounding Habitat

Vernal Pools Present? ☒ Yes ☐ No If yes,

#	Location	Depth of water	Size of pool (diameter)	Presence of emergent/submergent veg?	Presence of shrubs, logs at pond edge
1	589891, 4755587	none @ present	8m	no	Few ash
2	see inclusion in 6				
3+4	See #4	0.5m?		no	Buttonbush
5	589746, 4755691	<5cm	4m	no	none
6	589793, 4755655	"	"	"	"

Feature 8

Woodland Assessment- *complete 1 assessment for each woodland* 14-Oct-2020

Woodlot # (indicate on map) : F

Approximate age of stand 50 years - only assessed from edge

Are large (i.e. >40cmDBH and >25m tall) **trees present** ☐ Yes ☒ No
If yes, approximate # present or % of stand _____
Location in stand (i.e throughout, in west side only, in FOD2-6 only etc..) _____

Are snags present? ☒ Yes ☐ No
If yes provide characterization of number present, height and DBH of snags and indicate if they contain loose bark. 2/ha - 20-30cm DBH 15-20m ↑

Trees with cavities present? ☒ No ☐ Rare ☐ Occasional ☐ Abundant
If present:

	Height ranges of tree	Range of Tree DBH	Range of Cavity Heights	Cavity sizes (approx. diameter)

Presence of large stick nests (i.e. raptor nests)? ☐ Yes ☒ No
If yes, UTM and describe tree type, height and position in tree, size of nest, species present

Evidence of disturbance? (i.e logging, roads, paths, ATV use, trails) ☐ Yes ☒ No
If yes, describe _____

Seeps/ springs present? ☐ Yes ☒ No If yes,

Seep/Spring #	UTM	Description	Surrounding Habitat

Vernal Pools Present? ☐ Yes ☐ No If yes,

#	Location	Depth of water	Size of pool (diameter)	Presence of emergent/submergent veg?	Presence of shrubs, logs at pond edge
1	see polygon #8	none present	10m x ?	Dogwood	no

ELC — COMMUNITY DESCRIPTION & CLASSIFICATION

SITE: 16Q960577	POLYGON: (1)	
SURVEYOR(S):	DATE:	UTME:
START:	END:	UTMZ: / UTMN:

POLYGON DESCRIPTION

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
☐ TERRESTRIAL ☐ WETLAND ☐ AQUATIC	☐ ORGANIC ☐ MINERAL SOIL ☐ PARENT MIN. ☐ ACIDIC BEDRK. ☐ BASIC BEDRK. ☐ CARB. BEDRK.	☐ LACUSTRINE ☐ RIVERINE ☐ BOTTOMLAND ☐ TERRACE ☐ VALLEY SLOPE ☐ TABLELAND ☐ ROLL. UPLAND ☐ CLIFF ☐ TALUS ☐ CREVICE / CAVE ☐ ALVAR ☐ ROCKLAND ☐ BEACH / BAR ☐ SAND DUNE ☐ BLUFF	☐ NATURAL ☒ CULTURAL	☐ PLANKTON ☐ SUBMERGED ☐ FLOATING-LVD. ☐ GRAMINOID ☐ FORB ☐ LICHEN ☐ BRYOPHYTE ☐ DECIDUOUS ☐ CONIFEROUS ☐ MIXED	☐ LAKE ☐ POND ☐ RIVER ☐ STREAM ☐ MARSH ☐ SWAMP ☐ FEN ☐ BOG ☐ BARREN ☐ MEADOW ☐ PRAIRIE ☐ THICKET ☐ SAVANNAH ☐ WOODLAND ☐ FOREST ☐ PLANTATION

SITE

☐ OPEN WATER
☐ SHALLOW WATER
☐ SURFICIAL DEP.
☐ BEDROCK

COVER

☐ OPEN
☐ SHRUB
☐ TREED

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY			
2	SUB-CANOPY	3	1	ULMAMER
3	UNDERSTOREY	4	4	CORNUS > RHACATH = Hawthorn
4	GRD. LAYER	5-7	4	Goldenrod > ASTLATE

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:

	< 10	10 - 24	25 - 50	> 50
SIZE CLASS ANALYSIS:	A		V	V
STANDING SNAGS:	V		V	V
DEADFALL / LOGS:	V		V	V

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE:	PIONEER	YOUNG	MID-AGE	MATURE	OLD GROWTH
	X				

SOIL ANALYSIS:

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

COMMUNITY CLASSIFICATION:

		CODE:
COMMUNITY CLASS:	Cultural	CU
COMMUNITY SERIES:	Cultural Thicket	CUT
ECOSITE:	Mineral Cultural Thicket	CUT1
VEGETATION TYPE: A Gray Dogwood Cultural Thicket		CUT1-4
INCLUSION		CODE:
COMPLEX		CODE:

Notes: Abandoned Railway -

Pic 1677

No Feature

ELC — PLANT SPECIES LIST

SITE: Samsung
POLYGON: 1
DATE: 14-Oct-2010
SURVEYOR(S): M. Straus

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 1	2	3	4	COLL.
Red Cedar	-	R	-		
ULMAMER		R			
PRUVIRG	-	R	-		
Solec sp		R	O		
Staghorn Sumac			R		
RUBALL			R		
FRAVIRG				O	
Hawthorn			O		
Gray Dogwood			A		
CORSTO			R		
RHACATH			O		
RUBIDEA			O		

SPECIES CODE	LAYER 1	2	3	4	COLL.
Wild Carrot				O	
Teasel				O	
P.S. Aster				O	
ASTLATE				O	
B.F. Trefoil				O	
Reed Canary Grass				O	
Endanter Nightshade				R	
TYPANGU				R	
Carex sp.				O	
Goldenrod sp.				A	

ELC COMMUNITY DESCRIPTION & CLASSIFICATION

SITE: 160960577 | POLYGON: (2)

SURVEYOR(S): | DATE: | UTME:

START: | END: | UTMZ: | UTMN:

POLYGON DESCRIPTION

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
☐ TERRESTRIAL ☐ WETLAND ☐ AQUATIC	☐ ORGANIC ☐ MINERAL SOIL ☐ PARENT MIN. ☐ ACIDIC BEDRK. ☐ BASIC BEDRK. ☐ CARB. BEDRK.	☐ LACUSTRINE ☐ RIVERINE ☐ BOTTOMLAND ☐ TERRACE ☐ VALLEY SLOPE ☐ TABLELAND ☐ ROLL. UPLAND ☐ CLIFF ☐ TALUS ☐ CREVICE / CAVE ☐ ALVAR ☐ ROCKLAND ☐ BEACH / BAR ☐ SAND DUNE ☐ BLUFF	☑ NATURAL ☐ CULTURAL	☐ PLANKTON ☐ SUBMERGED ☐ FLOATING-LVD. ☐ GRAMINOID ☐ FORB ☐ LICHEN ☐ BRYOPHYTE ☑ DECIDUOUS ☐ CONIFEROUS ☐ MIXED	☐ LAKE ☐ POND ☐ RIVER ☐ STREAM ☐ MARSH ☐ SWAMP ☐ FEN ☐ BOG ☐ BARREN ☐ MEADOW ☐ PRAIRIE ☐ THICKET ☐ SAVANNAH ☐ WOODLAND ☑ FOREST ☐ PLANTATION

SITE
☐ OPEN WATER
☐ SHALLOW WATER
☐ SURFICIAL DEP.
☐ BEDROCK

COVER
☐ OPEN
☐ SHRUB
☑ TREED

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	1	4	ACESACS >> FRAAMER QUERUBA
2	SUB-CANOPY	2	4	ACESACS > FAGGRAN
3	UNDERSTOREY	3-4	3	ACESACS > FAGGRAN > CARCARO
4	GRD. LAYER	5-7	3	ACES ACS > Running Strawberry

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:	O	< 10	A	10 - 24	A	25 - 50	R	> 50
STANDING SNAGS:	N	< 10	O	10 - 24	R	25 - 50	R	> 50
DEADFALL / LOGS:	R	< 10	R	10 - 24	R	25 - 50	R	> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :		PIONEER		YOUNG		MID-AGE	X	MATURE		OLD GROWTH

SOIL ANALYSIS:

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

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS:	Forest	CODE: FO
COMMUNITY SERIES:	Deciduous Forest	CODE: FOD
ECOSITE:	Dry-Fresh Sugar Maple Dec. Forest	CODE: FOD5
VEGETATION TYPE:	D-F Sugar Maple Deciduous Forest	CODE: FOD5-1
INCLUSION	Buttonbush Mineral Thicket Swamp	CODE: SWT2-4
COMPLEX	Buttonbush Mineral Thicket Swamp	CODE: SWT2-4

Notes: Pic 1679 - Veru Hillu-

Feature 8

ELC PLANT SPECIES LIST

SITE: Samsung
POLYGON: 2
DATE: 4-Oct-2010
SURVEYOR(S): M. Straus

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 1	2	3	4	COLL.
ACESACS	D	O	O	O	
PRUSERO	R	R	O	O	
QUEALBA	O	—	—	—	
FRAPENN	R	—	—		
QUERUBR	R	—		R	
FRAAMER	R	R	R	O	
FAGGRAN	R	O	O	R	
ACERUBR	R				
CARCAR	R	O	R	R	
OSTVIRG	—	—	O		
PINSTR	R	—	—		
? Shrubby Red berries			R		✓
RUBSPECT				R	
RHAURADI				R	
Smooth Rose sp			R	R	
CARCARO			O		
Prickly Gooseberry				R	
Ribes sp (nodes + stem)				R	
Maple L. Viburnum				R	
Running Straw Bud				O	
RHURADI				R	

SPECIES CODE	LAYER 1	2	3	4	COLL.
Sensitive Fern				R	
Stinging Nettle				R	
Red Baneberry				R	
Buttercup sp				A	
Viola sp				O	

Feature 8

ELC COMMUNITY DESCRIPTION & CLASSIFICATION

SITE: 1609100877		POLYGON: (3)		
SURVEYOR(S):	DATE:		UTME:	
START:	END	UTMZ:	UTMN:	

POLYGON DESCRIPTION

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
☐ TERRESTRIAL ☐ WETLAND ☐ AQUATIC	☐ ORGANIC ☐ MINERAL SOIL ☐ PARENT MIN. ☐ ACIDIC BEDRK. ☐ BASIC BEDRK. ☐ CARB. BEDRK.	☐ LACUSTRINE ☐ RIVERINE ☐ BOTTOMLAND ☐ TERRACE ☐ VALLEY SLOPE ☐ TABLELAND ☐ ROLL. UPLAND ☐ CLIFF ☐ TALUS ☐ CREVICE / CAVE ☐ ALVAR ☐ ROCKLAND ☐ BEACH / BAR ☐ SAND DUNE ☐ BLUFF	☐ NATURAL ☐ CULTURAL	☐ PLANKTON ☐ SUBMERGED ☐ FLOATING-LVD. ☐ GRAMINOID ☐ FORB ☐ LICHEN ☐ BRYOPHYTE ☐ DECIDUOUS ☐ CONIFEROUS ☐ MIXED	☐ LAKE ☐ POND ☐ RIVER ☐ STREAM ☐ MARSH ☐ SWAMP ☐ FEN ☐ BOG ☐ BARREN ☐ MEADOW ☐ PRAIRIE ☐ THICKET ☐ SAVANNAH ☐ WOODLAND ☐ FOREST ☐ PLANTATION

SITE: ☐ OPEN WATER ☐ SHALLOW WATER ☐ SURFICIAL DEP. ☐ BEDROCK

COVER: ☐ OPEN ☐ SHRUB ☐ TREED

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY			
2	SUB-CANOPY	2	2	ACER sp.
3	UNDERSTOREY	3-4	4	Buttonbush >> Redberry (inside ... @ edge)
4	GRD. LAYER	5-7	3-4	Sedges (inside) RUBIDEA (...)

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:	A	< 10	R	10 - 24	N	25 - 50	N	> 50
STANDING SNAGS:	N	< 10	R	10 - 24	N	25 - 50	N	> 50
DEADFALL / LOGS:	N	< 10	N	10 - 24	N	25 - 50	N	> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE: ✓ PIONEER ☐ YOUNG ☐ MID-AGE ☐ MATURE ☐ OLD GROWTH

SOIL ANALYSIS:

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

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS:	Swamp	CODE:	SW
COMMUNITY SERIES:	Thicket Swamp	CODE:	SWT
ECOSITE:	Mineral Thicket Swamp	CODE:	SWT2
VEGETATION TYPE:	Buttonbush Mineral Thicket Swamp	CODE:	SWT2-4
INCLUSION		CODE:	
COMPLEX		CODE:	

Notes: Pic 1684 - 1686

ELC PLANT SPECIES LIST

SITE:	Samsung
POLYGON:	3
DATE:	14-Oct-2010
SURVEYOR(S):	M. Straus

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 1	2	3	4	COLL.
ACERUBR		O	O	R	
FRASERO	—		R	—	
ACESERIE		O			
RedBerry			O		✓
SPIALBA			O		
Riverbank Grape			O		
Buttonbush			O		✓
Gray Dogwood			O		
RHACATH			O		
RUBIDEA			O		

SPECIES CODE	LAYER 1	2	3	4	COLL.
Bittersweet Nightshade				O	
S. Touch M. Not				R	
Sedge sp.				O	
ASTLATE				R	

ELC COMMUNITY DESCRIPTION & CLASSIFICATION

SITE: 160960577		POLYGON: (4)		
SURVEYOR(S):	DATE:		UTME:	
START:	END:		UTMZ:	UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1 CANOPY			
2 SUB-CANOPY	3	2	ACEFREE
3 UNDERSTOREY	4	3	Buttonbush >SPAALBA
4 GRD. LAYER	6-7	4	Stinging Nettle

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:	A	< 10	R	10 - 24	N	25 - 50	N	> 50
STANDING SNAGS:	N	< 10	N	10 - 24	N	25 - 50	N	> 50
DEADFALL / LOGS:	N	< 10	N	10 - 24	N	25 - 50	N	> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE: ☒ PIONEER ☐ YOUNG ☐ MID-AGE ☐ MATURE ☐ OLD GROWTH

SOIL ANALYSIS:

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

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS: Swamp	CODE: SW
COMMUNITY SERIES: Thicket Swamp	CODE: SWT
ECOSITE: Mineral Thicket Swamp	CODE: SWT2
VEGETATION TYPE: Buttonbush Mineral Thicket Swamp	CODE: SWT2-4
INCLUSION	CODE:
COMPLEX	CODE:

Notes: 1684 - Water c̄ Buttonbush edges

Feature 8

ELC PLANT SPECIES LIST

SITE: Samsung
POLYGON: 4
DATE: 14-Oct-2010
SURVEYOR(S): M. Straus

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	1	2	3	4	COLL.
ACEFREE		R			
VITRIPA			O		
SPAALBA		O			
Salix sp		R			
Buttonbush		D			

SPECIES CODE	1	2	3	4	COLL.
Water Hemlock				O	
Stinging Nettle				O	
Sp 4, 7, M, No?				R	

ELC COMMUNITY DESCRIPTION & CLASSIFICATION

SITE: 160960577		POLYGON: 5	
SURVEYOR(S):		DATE:	UTME:
START:	END	UTMZ:	UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY			
2	SUB-CANOPY			
3	UNDERSTOREY	3-4	1	Hawthorn
4	GRD. LAYER	5-7	4	Goldenrod sp. > Asters

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

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :		PIONEER		YOUNG		MID-AGE		MATURE		OLD GROWTH
	X									

SOIL ANALYSIS:

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

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS:	Cultural	CODE: CU
COMMUNITY SERIES:	Cultural Meadow	CODE: CUM
ECOSITE:	Mineral Cultural Meadow	CODE: CUM1
VEGETATION TYPE:	(CUM)	CODE:
INCLUSION		CODE:
COMPLEX		CODE:

Notes: Pic# 16682

Feature 8

ELC PLANT SPECIES LIST

SITE: Samsung	
POLYGON: 5	
DATE: 14-Oct-2010	
SURVEYOR(S): M. Straus	

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 1	2	3	4	COLL.
Salix sp.			R		
Hawthorn			R		

SPECIES CODE	LAYER 1	2	3	4	COLL.
Teasel				O	
P.S Aster				C	
ASTLATE				O	
Goldenrod sp.				A	

Feature 8

ELC COMMUNITY DESCRIPTION & CLASSIFICATION

SITE: 1609600877 | POLYGON: 6

SURVEYOR(S): | DATE: | UTME:

START: | END | UTMZ: | UTMN:

POLYGON DESCRIPTION

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
☐ TERRESTRIAL ☐ WETLAND ☐ AQUATIC	☐ ORGANIC ☐ MINERAL SOIL ☐ PARENT MIN. ☐ ACIDIC BEDRK. ☐ BASIC BEDRK. ☐ CARB. BEDRK.	☐ LACUSTRINE ☐ RIVERINE ☐ BOTTOMLAND ☐ TERRACE ☐ VALLEY SLOPE ☐ TABLELAND ☐ ROLL. UPLAND ☐ CLIFF ☐ TALUS ☐ CREVICE / CAVE ☐ ALVAR ☐ ROCKLAND ☐ BEACH / BAR ☐ SAND DUNE ☐ BLUFF	☐ NATURAL ☐ CULTURAL	☐ PLANKTON ☐ SUBMERGED ☐ FLOATING-LVD. ☐ GRAMINOID ☐ FORB ☐ LICHEN ☐ BRYOPHYTE ☐ DECIDUOUS ☐ CONIFEROUS ☐ MIXED	☐ LAKE ☐ POND ☐ RIVER ☐ STREAM ☐ MARSH ☐ SWAMP ☐ FEN ☐ BOG ☐ BARREN ☐ MEADOW ☐ PRAIRIE ☐ THICKET ☐ SAVANNAH ☐ WOODLAND ☐ FOREST ☐ PLANTATION

SITE	COVER
☐ OPEN WATER ☐ SHALLOW WATER ☐ SURFICIAL DEP. ☐ BEDROCK	☐ OPEN ☐ SHRUB ☐ TREED

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	1	4	CAROVAT > ACESACS > QUEALBA
2	SUB-CANOPY	2	4	ACESACS > FRAPENN
3	UNDERSTOREY	3	4	ACESACS > FRAPENN > OSTVIRG
4	GRD. LAYER	R-T	3	ACESACS > OSTVIRG > PRUSERO

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:	A	< 10	O	10 - 24	O	25 - 50	R	> 50
STANDING SNAGS:	N	< 10	R	10 - 24	R	25 - 50	R	> 50
DEADFALL / LOGS:	R	< 10	O	10 - 24	O	25 - 50	R	> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :		PIONEER		YOUNG	X	MID-AGE		MATURE		OLD GROWTH

SOIL ANALYSIS:

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

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS:	Forest	CODE: FO
COMMUNITY SERIES:	Deciduous Forest	CODE: FOD
ECOSITE:	F-M Sugar Maple Dec. Forest	CODE: FOD6
VEGETATION TYPE:	F-M Sugar Maple - Hardwood Dec. Forest	CODE: FOD6-5
INCLUSION	Reed Canary Grass Mineral Meadow Marsh	CODE: MAMM2-2
COMPLEX		CODE:

Notes: Pic1685

ELC PLANT SPECIES LIST

SITE: Samsung

POLYGON: 6

DATE: 14-Oct-2010

SURVEYOR(S): M. Straus

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 1	2	3	4	COLL.
ACESACS	O	O	A	O	
CAROVAT	O	—	—	R	
PINSTRO	R	—	—	R	
FRAPENN	R	R	R	R	
ACERUBR	R	R	R	R	
QUEALBA	O	—	—	—	
FRANIGR	—	R	—		
PRUSERO	—	—	—	O	
RUBOCCI				R	

SPECIES CODE	LAYER 1	2	3	4	COLL.
Reed canary Grass				R	Inc
Spotted Touch-Not				R	Inc
Beech Drops				R	

ELC — COMMUNITY DESCRIPTION & CLASSIFICATION

SITE: 1609605 77	POLYGON: 7	
SURVEYOR(S):	DATE:	UTME:
START:	END	UTMZ: / UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY			
2	SUB-CANOPY	2	2	POPTREM
3	UNDERSTOREY	3-4	4	Gray Dogwood
4	GRD. LAYER	5-7	4	Reed Canary Grass

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:	A < 10	R 10 - 24	M 25 - 50	M > 50
STANDING SNAGS:	M < 10	M 10 - 24	M 25 - 50	M > 50
DEADFALL / LOGS:	M < 10	M 10 - 24	M 25 - 50	M > 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE:	PIONEER	YOUNG	MID-AGE	MATURE	OLD GROWTH
	X				

SOIL ANALYSIS:

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

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS: Cultural	CODE: CU	
COMMUNITY SERIES: Cultural Thicket	CODE: CUT	
ECOSITE: Mineral Cultural Thicket	CODE: CUT1	
VEGETATION TYPE: Gray Dogwood Cultural Thicket	CODE: CUT1-4	
INCLUSION	CODE:	
COMPLEX	CODE:	

Notes:

Pic1687

Feature 8

ELC — PLANT SPECIES LIST

SITE: Samsung
POLYGON: 7
DATE: 14-Oct-2010
SURVEYOR(S): M. Straus

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 1	2	3	4	COLL.
CAREXAT	R				
POPTRE		O			
RUBSPP			O		
Shrub bud berry			R		✓
Gray Dogwood			D		

SPECIES CODE	LAYER 1	2	3	4	COLL.
Reed Canary Grass				O	
Teasel				R	

ELC COMMUNITY DESCRIPTION & CLASSIFICATION

SITE: 16046057?		POLYGON: (8)		
SURVEYOR(S):	DATE:		UTME:	
START:	END	UTMZ:	UTMN:	

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	1	4	CAROVAT > QUERMBA > FRAPENN
2	SUB-CANOPY	2	4	ACERUBR
3	UNDERSTOREY	3-4	4	ACERUBR > ACESACS
4	GRD. LAYER	5-7	4	RR Canary Grass

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:	A	< 10	O	10 - 24	O	25 - 50	N	> 50
STANDING SNAGS:	N	< 10	R	10 - 24	R	25 - 50	N	> 50
DEADFALL / LOGS:	R	< 10	O	10 - 24	R	25 - 50	N	> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :		PIONEER		YOUNG	X	MID-AGE		MATURE		OLD GROWTH

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: F-M Shagbark Hickory Dec. Forest	CODE: FOD9-4
INCLUSION	CODE:
COMPLEX	CODE:

Notes: Pic 1684 – From edge

Feature 8

ELC PLANT SPECIES LIST

SITE:	Samsung
POLYGON:	8
DATE:	14-Oct-2010
SURVEYOR(S):	M. Straus

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 1	2	3	4	COLL.
CAROVAT	O	O	–		
QUEMACRA	O	–	–		
FRAPENN	O	R	–		
ACERUBR	R	O	O	O	
ACESACS	–	–	O	R	
Gray Dogwood			O		
RUROIDEA			O		

SPECIES CODE	LAYER 1	2	3	4	COLL.
Reed Canary Grass				D	
Spotted Touch-me-Not				R	

Page .... of ....

588711 589711 590711 591711 592711

4750730

4749730

4748730

CONCESSION 7

LINK ROAD

KOHLER ROAD

HALDIMAND ROAD 12

HALDIMAND ROAD 20

CONCESSION 6

CONCESSION 5

ERIE AVENUE NORTH

581867

581831

581827

N

0 200 400 m

1:12,000

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September 2010
160960577

Legend

- Project Location
- Proposed Turbine Location
- Proposed Access Road
- Proposed Collector Line
- ROW Installation Zone
- 120m Investigation Zone
- Elexco Aquired Agreements
- Government Lands
- UDI Lands
- Road
- Railway
- Abandoned Railway
- Transmission Line (OBM)
- Deer Wintering Area
- Provincially Significant Wetland
- Non-Provincially Significant Wetland
- Watercourse (OBM)
- Waterbody

Area of Natural and Scientific Interest (ANSI)

- Life Science, Provincially Significant
- Earth Science, Provincially Significant
- Earth Science, Regionally Significant

Notes

1. Coordinate System: UTM NAD 83 - Zone 17 (N).
2. Data Sources: Ontario Ministry of Natural Resources © Queens Printer Ontario, 2009; © GREP, 2010; © Samsung, 2010.
3. Image Source: © First Base Solutions, 2010 - Imagery Date: Spring 2006; **LIDAR IMAGERY SOURCE???**

Client/Project

SAMSUNG C&T
GRAND RENEWABLE ENERGY PARK

Figure No.

FIELD MAP 4

Title

PROJECT LOCATION MAP

Stantec

Stantec Consulting Ltd.
70-1 Southgate Drive
Guelph, Ontario, Canada
N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

Wildlife Habitat Assessment

Project Number: 160960577

Project Name: Samsung

Date / Time: 12-Oct-2010 11:45 a.m.

Field Personnel: Melissa Straus

Weather Conditions:	Temp:	Wind:	Cloud:	PPT:	PPT in last 24 hrs:
	10°C	6	30%	none	Heavy Rain

Reptile Hibernacula Features i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)

Does the site contain potential reptile hibernacula features? ☐ Yes ☑ No (if yes, describe details in Table 1).

Bat Hibernacula Features i.e. karst topography, abandoned mines or caves

Does the site contain potential bat hibernacula features? ☐ Yes ☒ No (if yes, describe details in Table 1).

Table 1: Potential bat/reptile hibernacula features identified on site

UTM	Feature type	Photo #	Description	Species observed using feature

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.e. AMRO/VO	Deer - TK Raccoon - TK	GRFR - OB		

Woodland Assessment- *complete 1 assessment for each woodland*

Woodlot # (indicate on map) : C - Feature 10

Approximate age of stand 50

Are large (i.e. >40cmDBH and >25m tall) **trees present** ☐ Yes ☑ No
If yes, approximate # present or % of stand _____
Location in stand (i.e throughout, in west side only, in FOD2-6 only etc..) _____

Are snags present? ☒ Yes ☐ No
If yes provide characterization of number present, height and DBH of snags and indicate if they contain loose bark. ~~Be~~ 1 @ 3m↑ DBH = 25cm 1 @ 1.5m↑ ; 25cm DBH
~5/ha 2@ <10cm; ↑ 2m

Trees with cavities present? ☐ No ☒ Rare ☐ Occasional ☐ Abundant
If present:

	Height ranges of tree	Range of Tree DBH	Range of Cavity Heights	Cavity sizes (approx. diameter)
1	25m	~~45~~	3m	small
2	25m	30cm	5m	small

Presence of large stick nests (i.e. raptor nests)? ☐ Yes ☒ No
If yes, UTM and describe tree type, height and position in tree, size of nest, species present
_____

Evidence of disturbance? (i.e logging, roads, paths, ATV use, trails) ☐ Yes ☒ No
If yes, describe _____

Seeps/ springs present? ☐ Yes ☒ No If yes,

Seep/Spring #	UTM	Description	Surrounding Habitat

Rare

Vernal Pools Present? ☒ Yes ☐ No If yes,

#	Location	Depth of water	Size of pool (diameter)	Presence of emergent/submergent veg?	Presence of shrubs, logs at pond edge
	Lowland in forest NE edge	none @ present	~ 10m x 25m	Yes - Dogwood.	

Feature 15

Woodland Assessment- *complete 1 assessment for each woodland*

Woodlot # (indicate on map) : B

Approximate age of stand 50years

Are large (i.e. >40cmDBH and >25m tall) **trees present** ☒ Yes ☐ No
If yes, approximate # present or % of stand <1%
Location in stand (i.e throughout, in west side only, in FOD2-6 only etc..) _____

Are snags present? ☒ Yes ☐ No
If yes provide characterization of number present, height and DBH of snags and indicate if they contain loose bark. Ash Ea in Inclusion dead. ~ 8 trees, 25-35cm DBH, 10-15m ↑ all loose bark.

localized throughout ~3/ha.

Trees with cavities present? ☐ No ☒ Rare ☐ Occasional ☐ Abundant
If present:

	Height ranges of tree	Range of Tree DBH	Range of Cavity Heights	Cavity sizes (approx. diameter)
	10+m.	25cm	1-10	hollow - small
snag	3m	15cm	3	small
Be snag	4m	40cm	0-4	hollow

Presence of large stick nests (i.e. raptor nests)? ☐ Yes ☒ No
If yes, UTM and describe tree type, height and position in tree, size of nest, species present

Evidence of disturbance? (i.e logging, roads, paths, ATV use, trails) ☒ Yes ☐ No
If yes, describe Paths, ATV ing through inclusion

Seeps/ springs present? ☐ Yes ☒ No If yes,

Seep/Spring #	UTM	Description	Surrounding Habitat

Vernal Pools Present? ☒ Yes ☐ No If yes,

#	Location	Depth of water	Size of pool (diameter)	Presence of emergent/submergent veg?	Presence of shrubs, logs at pond edge
	Through #4 -	extensive	no water now.		

Feature 10

ELC COMMUNITY DESCRIPTION & CLASSIFICATION

SITE:		POLYGON:	
SURVEYOR(S):	DATE:		UTME:
START:	END	UTMZ:	UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	1	1	PINSTRO < ULMAMER
2	SUB-CANOPY	2	2	ULMAMER > FRAP
3	UNDERSTOREY	3-4	3	Silky Dogwood > Salix >> Hawthorn
4	GRD. LAYER	5-7	4	Reed Canary Grass > Sedge sp

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:	A	< 10	O	10 - 24	N	25 - 50	N	> 50
STANDING SNAGS:	N	< 10	O	10 - 24	N	25 - 50	N	> 50
DEADFALL / LOGS:	R	< 10	R	10 - 24	N	25 - 50	N	> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :		PIONEER	X	YOUNG		MID-AGE		MATURE		OLD GROWTH

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: Thicket swamp + hedgerow + more open/mushy areas	CODE:
INCLUSION	CODE:
COMPLEX	CODE:

Notes: Pic 1656 + 1657

ELC PLANT SPECIES LIST

SITE:	Samsung
POLYGON:	9
DATE:	12-Oct-2010
SURVEYOR(S):	M. Straus

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

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

ULMAMER	R	O			
PINSTRO	K	—	—		
FRAPENN	-	R	—		
QUEMACR	—	—	R		
Nannyberry			R		
Silky Dogwood			O		
RUBIDBA			O		
Salix sp.			O		
Hawthorn			O		
RHACATH			O		

Sensitive Fern				R	
Reed Canary Grass				O-A	
Spotted T. McNlots				O	
Teasel				R	
Sedge sp				O-A	
Goldenrod sp.				O	
Iris sp.				R	

ELC	SITE: Samsung	POLYGON: 10
	SURVEYOR(S):	DATE: 12-Oct-2010
	START: 16:30 END 17:30	UTME: UTMN: UTMZ:

POLYGON DESCRIPTION

SYSTEM	SUBSTRATE	HYDROGRAPHIC FEATURE	HISTORY	VEGETATION	COMMUNITY
☐ TERRESTRIAL ☐ WETLAND ☐ AQUATIC	☐ ORGANIC ☐ MINERAL SOIL ☐ PARENT MIN. ☐ ACIDIC BEDRK. ☐ BASIC BEDRK. ☐ CARB. BEDRK.	☐ LACUSTRINE ☐ RIVERINE ☐ BOTTOMLAND ☐ TERRACE ☐ VALLEY SLOPE ☐ TABLELAND ☐ ROLL. UPLAND ☐ CLIFF ☐ TALUS ☐ CREVICE / CAVE ☐ ALVAR ☐ ROCKLAND ☐ BEACH / BAR ☐ SAND DUNE ☐ BLUFF	☐ NATURAL ☐ CULTURAL	☐ PLANKTON ☐ SUBMERGED ☐ FLOATING-LVD. ☐ GRAMINOID ☐ FORB ☐ LICHEN ☐ BRYOPHYTE ☐ DECIDUOUS ☐ CONIFEROUS ☐ MIXED	☐ LAKE ☐ POND ☐ RIVER ☐ STREAM ☐ MARSH ☐ SWAMP ☐ FEN ☐ BOG ☐ BARREN ☐ MEADOW ☐ PRAIRIE ☐ THICKET ☐ SAVANNAH ☐ WOODLAND ☐ FOREST ☐ PLANTATION

SITE	
☐ OPEN WATER ☐ SHALLOW WATER ☐ SURFICIAL DEP. ☐ BEDROCK	

VEGETATION	
☐ OPEN ☐ SHRUB ☐ TREED	

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	1	4	CARLOVAT > ACERUBR > FRAPENN
2	SUB-CANOPY	2	4	CARLOVAT > ACERUBR > FAGGRAN
3	UNDERSTOREY	3-4	4	FAGGRAN > CARCARO > OSTVIRG
4	GRD. LAYER	S-7	3	FRAPENN > FRAVIRG

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:	O	< 10	A	10 - 24	O	25 - 50	N	> 50
STANDING SNAGS:	R	< 10	O	10 - 24	R	25 - 50	N	> 50
DEADFALL / LOGS:	O	< 10	O	10 - 24	O	25 - 50	N	> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :		PIONEER		YOUNG	X	MID-AGE		MATURE		OLD GROWTH

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: FOD9
VEGETATION TYPE: F-M Shagbark Hickory Decid. Fores	CODE: FOD9-4
☐ INCLUSION	CODE:
☐ COMPLEX	CODE:

Notes: PIC 1658

Feature 10

ELC PLANT SPECIES LIST	SITE: Samsung
	POLYGON: 10
	DATE: 12-Oct-2010
	SURVEYOR(S): M. Strauss

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

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

ACEFREE	R	—	—	—			Spott. TIMNST					R
ULMAMER	—	R	R	O			Sensitive Fern					R
CARLOVAT	A	O	—	O								
ACERUBR	O	O	R	R								
OSTVIRG	—	—	O	O								
FAGGRAN	—	O	O	R								
FRAPENN	O	R	—	O								
QUERUBR												
TILAMER	—	—	R	R								
QUEALBA	R	—	—	—								
Poison Ivy	—	—	—	R								
FRAVESC	—	—	—	O								
FRAVIRG	—	—	—	O								
CARCARO	—	—	O	R								
Virg. Creeper	—	—	—	R								
PRUVIRG	—	—	—	R								
Smooth Black Currant	—	—	—	R								
Gray Dogwood	—	—	R	—								

Ribes americanum

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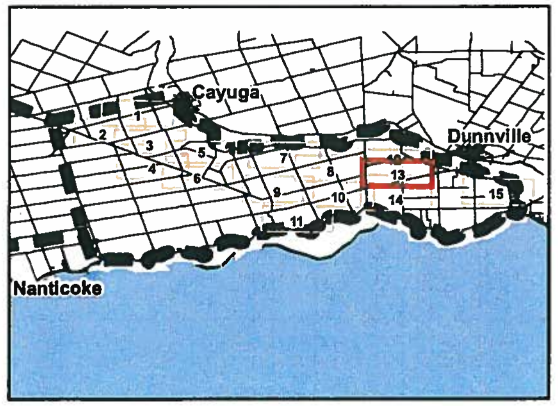
September 2010
160960577

Legend

- Project Location
- Proposed Turbine Location
- Proposed Access Road
- Proposed Collector Line
- ROW Installation Zone
- 120m Investigation Zone
- Elexco Aquired Agreements
- Government Lands
- UDI Lands
- Road
- Railway
- Abandoned Railway
- Transmission Line (OBM)
- Deer Wintering Area
- Provincially Significant Wetland
- Non-Provincially Significant Wetland
- Watercourse (OBM)
- Waterbody

Area of Natural and Scientific Interest (ANSI)

- Life Science, Provincially Significant
- Earth Science, Provincially Significant
- Earth Science, Regionally Significant



Stantec

Notes

1. Coordinate System: UTM NAD 83 - Zone 17 (N).
2. Data Sources: Ontario Ministry of Natural Resources © Queens Printer Ontario, 2009; © GREP, 2010; © Samsung, 2010.
3. Image Source: © First Base Solutions, 2010 - Imagery Date: Spring 2006; **LIDAR IMAGERY SOURCE???**

Client/Project

SAMSUNG C&T
GRAND RENEWABLE ENERGY PARK

Figure No.

FIELD MAP 13

Title

PROJECT LOCATION MAP

Feature 51

Woodland Assessment- *complete 1 assessment for each woodland*

Woodlot # (indicate on map) : 4

Approximate age of stand 80 yrs.

Are large (i.e. >40cmDBH and >25m tall) **trees present** ☒ Yes ☐ No
If yes, approximate # present or % of stand 5%
Location in stand (i.e throughout, in west side only, in FOD2-6 only etc..) throughout

Are snags present? ☒ Yes ☐ No
If yes provide characterization of number present, height and DBH of snags and indicate if they contain loose bark. approx 20 snags - 30-40cm DBH / 15-20cm high
↳ overall rare; possibly logged out
Potential Bat Maternity Roost : Contains large, mature (i.e. >80 year old) snags or trees (living or dead) containing medium to large cavities ☐ Yes ☒ No (if yes, describe details in Table 1).

Trees with cavities present? ☐ No ☒ Rare ☐ Occasional ☐ Abundant
If present:

	Height ranges of tree	Range of Tree DBH	Range of Cavity Heights	Cavity sizes small: small birds, medium= large woodpeckers, large= mammals Hollow?
	20m	40cm	15m	1 small cavity

Presence of large stick nests (i.e. raptor nests)? ☐ Yes ☒ No
If yes, UTM and describe tree type, height and position in tree, size of nest, species present

Evidence of disturbance? (i.e logging, roads, paths, ATV use, trails) ☒ Yes ☐ No
If yes, describe - logging for firewood, logging trail, channelized watercourse

Seeps/ springs present? ☐ Yes ☒ No If yes,

Seep/Spring #	UTM	Description	Surrounding Habitat

Vernal Pools Present? ☒ Yes ☐ No If yes,

#	Location	Depth of water	Size of pool (diameter)	Presence of emergent/submergent veg?	Presence of shrubs, logs at pond edge
See polygons 5, 6, 7 and 8.					

Feature 62

Woodland Assessment- *complete 1 assessment for each woodland*

Woodlot # (indicate on map) : 2

Approximate age of stand < 10yrs.

Are large (i.e. >40cmDBH and >25m tall) **trees present** ☐ Yes ☒ No
If yes, approximate # present or % of stand _____
Location in stand (i.e throughout, in west side only, in FOD2-6 only etc..) _____

Are snags present? ☐ Yes ☒ No
If yes provide characterization of number present, height and DBH of snags and indicate if they contain loose bark.

Potential Bat Maternity Roost : Contains large, mature (i.e. >80 year old) snags or trees (living or dead) containing medium to large cavities ☐ Yes ☐ No (if yes, describe details in Table 1).

Trees with cavities present? ☐ No ☑ Rare ☐ Occasional ☐ Abundant
If present:

	Height ranges of tree	Range of Tree DBH	Range of Cavity Heights	Cavity sizes small: small birds, medium= large woodpeckers, large= mammals Hollow?
	11m	35m	5-7m	5 small cavities all in same tree.

Presence of large stick nests (i.e. raptor nests)? ☐ Yes ☒ No
If yes, UTM and describe tree type, height and position in tree, size of nest, species present

Evidence of disturbance? (i.e logging, roads, paths, ATV use, trails) ☐ Yes ☒ No
If yes, describe _____

Seeps/ springs present? ☐ Yes ☒ No If yes,

Seep/Spring #	UTM	Description	Surrounding Habitat

Vernal Pools Present? ☐ Yes ☒ No If yes,

#	Location	Depth of water	Size of pool (diameter)	Presence of emergent/submergent veg?	Presence of shrubs, logs at pond edge

Feature 51

ELC COMMUNITY DESCRIPTION & CLASSIFICATION

SITE:	GREP
POLYGON:	4
SURVEYOR(S):	ART
DATE:	Sept 28, 2010
UTMZ:	
UTME:	
UTMN:	
START:	
END:	

POLYGON DESCRIPTION

SYSTEM: ☒ TERRESTRIAL ☐ WETLAND ☐ AQUATIC

SUBSTRATE: ☐ ORGANIC ☒ MINERAL SOIL ☐ PARENT MIN. ☐ ACIDIC BEDRK. ☐ BASIC BEDRK. ☐ CARB. BEDRK.

TOPOGRAPHIC FEATURE: ☐ LACUSTRINE ☐ RIVERINE ☐ BOTTOMLAND ☐ TERRACE ☐ VALLEY SLOPE ☒ TABLELAND ☐ ROLL. UPLAND ☐ CLIFF ☐ TALUS ☐ CREVICE / CAVE ☐ ALVAR ☐ ROCKLAND ☐ BEACH / BAR ☐ SAND DUNE ☐ BLUFF

HISTORY: ☒ NATURAL ☐ CULTURAL

PLANT FORM: ☐ PLANKTON ☐ SUBMERGED ☐ FLOATING-LVD. ☐ GRAMINOID ☐ FORB ☐ LICHEN ☐ BRYOPHYTE ☒ DECIDUOUS ☐ CONIFEROUS ☐ MIXED

COMMUNITY: ☐ LAKE ☐ POND ☐ RIVER ☐ STREAM ☐ MARSH ☐ SWAMP ☐ FEN ☐ BOG ☐ BARREN ☐ MEADOW ☐ PRAIRIE ☐ THICKET ☐ SAVANNAH ☐ WOODLAND ☒ FOREST ☐ PLANTATION

SITE: ☐ OPEN WATER ☒ SHALLOW WATER ☐ SURFICIAL DEP. ☐ BEDROCK

COVER: ☐ OPEN ☐ SHRUB ☒ TREED

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	1	4	ACESASA > CAROVAT = FRAAMER > QUERUBR
2	SUB-CANOPY	2	3	ACESASA > CAROVAT = QUERUBR
3	UNDERSTOREY	3-4	3	CAROVAT > FAGGRAN = CAROVAT
4	GRD. LAYER	5-6	3	Sapling > L. aster

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:	A	< 10	A	10 - 24	O	25 - 50	R	> 50
STANDING SNAGS:	O	< 10	R	10 - 24	R	25 - 50	N	> 50
DEADFALL / LOGS:	O	< 10	O	10 - 24	R	25 - 50	N	> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE: ☐ PIONEER ☐ YOUNG ☐ MID-AGE ☒ MATURE ☐ OLD GROWTH

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: Sugar Maple - Hardwood Dec Forest	CODE: FODB-5
INCLUSION	CODE:
COMPLEX	CODE:

Notes: - logged for firewood

ELC PLANT SPECIES LIST

SITE:	GREP
POLYGON:	4
DATE:	Sept 28, 2010
SURVEYOR(S):	ART

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 1	2	3	4	COLL.	SPECIES CODE	LAYER 1	2	3	4	COLL.
ACESASA						Carex pen.					
FRAAMER						BC goldenrod					
CAROVAT						wild geranium					
ULMAMER						clearweed					
OSTVIRG						w. strawberry					
QUERUBR						partridge berry					
CORRACE						L. aster					
PRUVIRG						Heal all					
TILAMER						curley					
red rasp.						E. nightshade					
serviceberry						calico aster					
ROSCARO						marginal woodfern					
Hawthorn						Can. goldenrod					
Red currant						Ocval leeb					
CARCARO						George tick					
S. W. nightingale					R	Agrimony					
FAGGRAN						christmas fern					
RHURADI						W. aster					
Bl maple											
running strawberry											
RHACATH											

Feature 62

ELC COMMUNITY DESCRIPTION & CLASSIFICATION

SITE: GREP
POLYGON: 2
SURVEYOR(S): ART
DATE: Sept 28, 2010
UTME:
UTMZ:
UTMN:
START:
END:

POLYGON DESCRIPTION

SYSTEM: ☒ TERRESTRIAL ☐ WETLAND ☐ AQUATIC

SUBSTRATE: ☐ ORGANIC ☒ MINERAL SOIL ☐ PARENT MIN. ☐ ACIDIC BEDRK. ☐ BASIC BEDRK. ☐ CARB. BEDRK.

TOPOGRAPHIC FEATURE: ☐ LACUSTRINE ☐ RIVERINE ☐ BOTTOMLAND ☐ TERRACE ☐ VALLEY SLOPE ☒ TABLELAND ☐ ROLL. UPLAND ☐ CLIFF ☐ TALUS ☐ CREVICE / CAVE ☐ ALVAR ☐ ROCKLAND ☐ BEACH / BAR ☐ SAND DUNE ☐ BLUFF

HISTORY: ☐ NATURAL ☒ CULTURAL

PLANT FORM: ☐ PLANKTON ☐ SUBMERGED ☐ FLOATING-LVD. ☐ GRAMINOID ☐ FORB ☐ LICHEN ☐ BRYOPHYTE ☒ DECIDUOUS ☐ CONIFEROUS ☐ MIXED

COMMUNITY: ☐ LAKE ☐ POND ☐ RIVER ☐ STREAM ☐ MARSH ☐ SWAMP ☐ FEN ☐ BOG ☐ BARREN ☐ MEADOW ☐ PRAIRIE ☐ THICKET ☐ SAVANNAH ☒ WOODLAND ☐ FOREST ☐ PLANTATION

SITE: ☐ OPEN WATER ☐ SHALLOW WATER ☒ SURFICIAL DEP. ☐ BEDROCK

COVER: ☐ OPEN ☐ SHRUB ☒ TREED

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	2	2	KRAAMER > FRAAMER = RHACATH
2	SUB-CANOPY	3	3	Sweet cherry > FRAAMER = RHACATH
3	UNDERSTOREY	4	3	CORRACE = RHACATH
4	GRD. LAYER	5	3	G.ldenrod /Aster > red carex

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:

		< 10		10 - 24		25 - 50		> 50
SIZE CLASS ANALYSIS:	A	< 10	R	10 - 24	O	25 - 50	/	> 50
STANDING SNAGS:	O	< 10	N	10 - 24	N	25 - 50	/	> 50
DEADFALL / LOGS:	O	< 10	N	10 - 24	N	25 - 50	/	> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE: ☐ PIONEER ☒ YOUNG ☐ MID-AGE ☐ MATURE ☐ OLD GROWTH

SOIL ANALYSIS:

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

COMMUNITY CLASSIFICATION:

	CODE
COMMUNITY CLASS:	
COMMUNITY SERIES:	
ECOSITE:	
VEGETATION TYPE: Cultural Woodland 1-3*	CUW
INCLUSION	
COMPLEX	

Notes:

ELC PLANT SPECIES LIST

SITE: GREP
POLYGON: 2
DATE: Sept 28, 2010
SURVEYOR(S): ART

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 1	2	3	4	COLL.
FRAAMER					
Sweet cherry					
RHACATH					
Red rasp.					
CORRACE					
Apple					
VITRSAR					
LABTART					
ACENAR					
ULMAMER					
V creep					
tall goldenrod					
burdock					
calico aster					
strawberry					
red carex					

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Feature 51

ELC — COMMUNITY DESCRIPTION & CLASSIFICATION

SITE: GREP | POLYGON: 5
SURVEYOR(S): ART | DATE: Sept 28, 2010 | UTME:
START: | END | UTMZ: | UTMN:

POLYGON DESCRIPTION

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
☐ TERRESTRIAL ☒ WETLAND ☐ AQUATIC	☐ ORGANIC ☒ MINERAL SOIL ☐ PARENT MIN. ☐ ACIDIC BEDRK. ☐ BASIC BEDRK. ☐ CARB. BEDRK.	☐ LACUSTRINE ☐ RIVERINE ☐ BOTTOMLAND ☐ TERRACE ☐ VALLEY SLOPE ☒ TABLELAND ☐ ROLL UPLAND ☐ CLIFF ☐ TALUS ☐ CREVICE / CAVE ☐ ALVAR ☐ ROCKLAND ☐ BEACH / BAR ☐ SAND DUNE ☐ BLUFF	☒ NATURAL ☐ CULTURAL	☐ PLANKTON ☐ SUBMERGED ☐ FLOATING-LVD. ☐ GRAMINOID ☐ FORB ☐ LICHEN ☐ BRYOPHYTE ☒ DECIDUOUS ☐ CONIFEROUS ☐ MIXED	☐ LAKE ☐ POND ☐ RIVER ☐ STREAM ☐ MARSH ☒ SWAMP ☐ FEN ☐ BOG ☐ BARREN ☐ MEADOW ☐ PRAIRIE ☒ THICKET ☐ SAVANNAH ☐ WOODLAND ☐ FOREST ☐ PLANTATION

SITE
☐ OPEN WATER
☐ SHALLOW WATER
☒ SURFICIAL DEP.
☐ BEDROCK

COVER
☐ OPEN
☒ SHRUB
☐ TREED

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	2	1	ULMAME OR = ACERUBR
2	SUB-CANOPY	4	2-3	Holly > CORSTOL
3	UNDERSTOREY	5	3	rice cut grass = blue flag
4	GRD. LAYER			

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 < 50% 4= CVR > 50%

STAND COMPOSITION: | BA:

SIZE CLASS ANALYSIS:	A	< 10	R	10 - 24	)	25 - 50	) > 50
STANDING SNAGS:	R	< 10	N	10 - 24	)	25 - 50	) > 50
DEADFALL / LOGS:	R	< 10	N	10 - 24	)	25 - 50	) > 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE:	☐ PIONEER	☐ YOUNG	☒ MID-AGE	☐ MATURE	☐ OLD GROWTH

SOIL ANALYSIS:

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

COMMUNITY CLASSIFICATION:

		CODE:
COMMUNITY CLASS:		
COMMUNITY SERIES:		
ECOSITE:		
VEGETATION TYPE:	Mixed Swamp thicket	SWTS-7
☐ INCLUSION		
☐ COMPLEX		

Notes:
GREP SPPL
- water 20 - 50cm deep.

ELC — PLANT SPECIES LIST

SITE: GREP
POLYGON: 5
DATE: Sept 28, 2010
SURVEYOR(S): ART

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 1	2	3	4	COLL.
Wintergreen					X
CORSTOL					
ACERUBR					
ULMAMER					

SPECIES CODE	LAYER 1	2	3	4	COLL.
duckweed					
sensitive fern					
blue flag					
calve. ash					
rice cut grass					
W. marsh					
Bessey's tick					
W. horehound					
wool grass					
PS willowherb					

ELC COMMUNITY DESCRIPTION & CLASSIFICATION

SITE: GREP		POLYGON: 6	
SURVEYOR(S): ART	DATE: Sept 28, 2010	UTME:	
START:	END:	UTMZ:	UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	3	4	buttonbush
2	SUB-CANOPY	5-6	1	forbs
3	UNDERSTOREY			
4	GRD. LAYER			

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:	R	< 10	/	10 - 24	/	25 - 50	/	> 50
STANDING SNAGS:	A	< 10	/	10 - 24	/	25 - 50	/	> 50
DEADFALL / LOGS:	R	< 10		10 - 24		25 - 50		> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :		PIONEER	X	YOUNG		MID-AGE		MATURE		OLD GROWTH

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: Buttonbush Thicket Swamp	CODE: SWT2-4
INCLUSION	CODE:
COMPLEX	CODE:

Notes: -vernal pool -[illegible] 5-10cm of water ↳ flow (after storm)

Feature 51

ELC PLANT SPECIES LIST

SITE:	GREP
POLYGON:	6
DATE:	Sept 28, 2010
SURVEYOR(S):	ART

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	1	2	3	4	COLL.	SPECIES CODE	1	2	3	4	COLL.
CORSTOL						jewelweed					
buttonbush						calico aster					
RHACATH						clearweed					
VITRIRR											

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Feature 51

ELC — COMMUNITY DESCRIPTION & CLASSIFICATION

SITE: GREP		POLYGON: 7	
SURVEYOR(S): ART	DATE: Sept 28, 2010	UTME:	
START:	END:	UTMZ:	UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	3	1	ACER RUBR
2	SUB-CANOPY	4	2	SPIR ALBA > sturdy rose
3	UNDERSTOREY	5	3	cut grass > fennel, leeks > other herbs
4	GRD. LAYER			

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:	O	< 10		10 - 24		25 - 50		> 50
STANDING SNAGS:	R	< 10		10 - 24		25 - 50		> 50
DEADFALL / LOGS:	R	< 10		10 - 24		25 - 50		> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE:		PIONEER	X	YOUNG		MID-AGE		MATURE		OLD GROWTH

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: Rice Cut-Grass Shallow Marsh		CODE: MAS2-8
INCLUSION		CODE:
COMPLEX		CODE:

Notes:

- vernal pool 10-50cm
- SPPE
- AMTO

ELC — PLANT SPECIES LIST

SITE: GREP	
POLYGON: 7	
DATE: Sept 28, 2010	
SURVEYOR(S): ART	

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 1	2	3	4	COLL.
wh elderberry					
SPIALBA					
ACERUBR					
CAREARC					
sw rose					

SPECIES CODE	LAYER 1	2	3	4	COLL.
Sandweed					
clearweed					
beggar ticks					
rice cut grass					
Sonchus fam					
reed canary					
Buckweed					
nightshade					
wh pond mint					

Feature 51

ELC COMMUNITY DESCRIPTION & CLASSIFICATION

SITE: GREP		POLYGON: 8	
SURVEYOR(S): ART	DATE: Sept 28, 2010		UTME: —
START: —	END: —	UTMZ: —	UTMN: —

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	3	1	ACERUBR
2	SUB-CANOPY	4	2	Holly > SPIALBA = CORRACE
3	UNDERSTOREY	5	4	rice cut > Devel weed
4	GRD. LAYER			

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:	O	< 10	/	10 - 24	/	25 - 50	/	> 50
STANDING SNAGS:	R	< 10		10 - 24		25 - 50		> 50
DEADFALL / LOGS:	R	< 10		10 - 24		25 - 50		> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :		PIONEER	X	YOUNG		MID-AGE		MATURE		OLD GROWTH

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: Rice Cut-grass shallow marsh	CODE: MAS2-8
INCLUSION	CODE:
COMPLEX	CODE:

Notes: vernal pool — 10cm deep SPPLE GRER

ELC PLANT SPECIES LIST

SITE:	GREP
POLYGON:	8
DATE:	Sept 28, 2010
SURVEYOR(S):	ART

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 1	2	3	4	COLL.	SPECIES CODE	LAYER 1	2	3	4	COLL.
Holly						Jewelweed					
ch. elderberry						rice cut grass					
CARCARO						ps willowherb					
SPIALBA						Yoorthawk					
ACERUBR											
CORRACE											

ELC — COMMUNITY DESCRIPTION & CLASSIFICATION

SITE: CREP		POLYGON: F4	
SURVEYOR(S): ART	DATE: Sept 28, 2010	UTME:	
START:	END	UTMZ:	UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	6	4	Alfalfa > grasses
2	SUB-CANOPY			
3	UNDERSTOREY			
4	GRD. LAYER			

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:		< 10		10 - 24		25 - 50		> 50	
STANDING SNAGS:		< 10		10 - 24		25 - 50		> 50	
DEADFALL / LOGS:		< 10		10 - 24		25 - 50		> 50	
ABUNDANCE CODES:	N = NONE	R = RARE	O = OCCASIONAL	A = ABUNDANT					
COMM. AGE :		PIONEER		YOUNG		MID-AGE		MATURE	OLD GROWTH

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:	Hay	CODE: HHay
INCLUSION		CODE:
COMPLEX		CODE:

Notes:

No feature

ELC — PLANT SPECIES LIST

SITE:	CREP
POLYGON:	F4
DATE:	Sept 28, 2010
SURVEYOR(S):	ART

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 1	2	3	4	COLL.
Alfalfa					
w. carrot					
timothy					
Foxtail (meadow)					
w. carrot					

SPECIES CODE	LAYER 1	2	3	4	COLL.

No feature

ELC COMMUNITY DESCRIPTION & CLASSIFICATION

SITE: GREP		POLYGON: F3	
SURVEYOR(S): ART	DATE: Sept 28, 2010	UTME: —	
START:	END	UTMZ: —	UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	2	1	PINSYLV
2	SUB-CANOPY	6	4	grasses > forbs
3	UNDERSTOREY			
4	GRD. LAYER			

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:	/	< 10	O	10 - 24	/	25 - 50	/	> 50
STANDING SNAGS:	/	< 10	/	10 - 24	/	25 - 50	/	> 50
DEADFALL / LOGS:	/	< 10	/	10 - 24	/	25 - 50	/	> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE:		PIONEER		YOUNG		MID-AGE		MATURE		OLD GROWTH

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: pasture	CODE: Pasture
INCLUSION —	CODE:
COMPLEX	CODE:

Notes:
- cluster of scot's pine

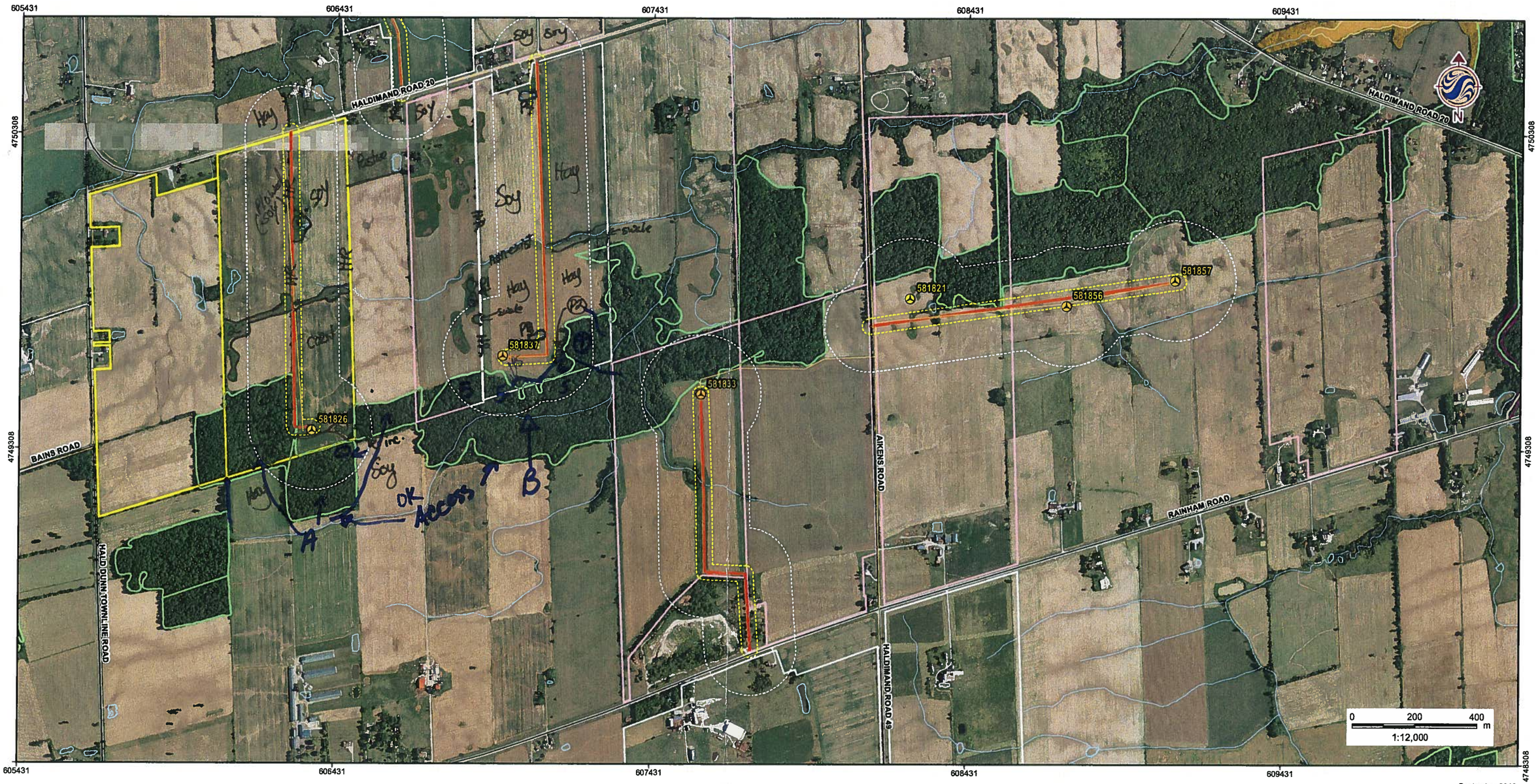
ELC PLANT SPECIES LIST

SITE:	GREP
POLYGON:	F3
DATE:	Sept 28, 2010
SURVEYOR(S):	ART

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 1	2	3	4	COLL.	SPECIES CODE	LAYER 1	2	3	4	COLL.
PINSYLV						wh clover					
						timothy					
						bird's foot trefoil					
						w. carrot					
						chicory					
						sm. brome					



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September 2010
160960577

Legend

- Project Location
- Proposed Turbine Location
- Proposed Access Road
- Proposed Collector Line
- ROW Installation Zone
- 120m Investigation Zone
- Elexco Aquired Agreements
- Government Lands
- UDI Lands
- Road
- Railway
- Abandoned Railway
- Transmission Line (OBM)
- Deer Wintering Area
- Provincially Significant Wetland
- Non-Provincially Significant Wetland
- Watercourse (OBM)
- Waterbody

Area of Natural and Scientific Interest (ANSI)

- Life Science, Provincially Significant
- Earth Science, Provincially Significant
- Earth Science, Regionally Significant

Notes

1. Coordinate System: UTM NAD 83 - Zone 17 (N).
2. Data Sources: Ontario Ministry of Natural Resources © Queens Printer Ontario, 2009; © GREP, 2010; © Samsung, 2010.
3. Image Source: © First Base Solutions, 2010 - Imagery Date: Spring 2006; **LIDAR IMAGERY SOURCE???**

Client/Project

SAMSUNG C&T
GRAND RENEWABLE ENERGY PARK

Figure No.

FIELD MAP 14

Title

PROJECT LOCATION MAP

Stantec

Feature 52

ELC COMMUNITY DESCRIPTION & CLASSIFICATION

SITE: Samsung		POLYGON: 1	
SURVEYOR(S): M.S.	DATE: 5-Oct-2010	UTME:	
START: 10:00	END: 10:30	UTMZ:	UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	3	1	Salix sp.
2	SUB-CANOPY	2-3	2	CORSTOL > KUBIDEA ≥ Stag Sumac
3	UNDERSTOREY	—	—	
4	GRD. LAYER	4-7	4	Purple stem aster ≤ Reed Canary Grass > Goldenrod

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:		< 10	N	10 - 24	N	25 - 50	N	> 50
STANDING SNAGS:	N	< 10	N	10 - 24	N	25 - 50	N	> 50
DEADFALL / LOGS:	N	< 10	N	10 - 24	N	25 - 50	N	> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE:	X	PIONEER		YOUNG		MID-AGE		MATURE		OLD GROWTH

SOIL ANALYSIS:

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

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS: Marsh	CODE: MA	
COMMUNITY SERIES: Meadow Marsh	CODE: MAM	
ECOSITE: Mineral Meadow Marsh	CODE: MAM2	
VEGETATION TYPE: Reed-canary Grass Mineral Meadow Marsh	CODE: MAM2-2	Pic 572, 73, 71
INCLUSION —	CODE:	
COMPLEX	CODE:	

Notes: Multiple Deer bed locations
Transitions from HC to SWT to curn in 85 m x ~40 wide.

ELC PLANT SPECIES LIST

SITE:	Samsung
POLYGON:	#1
DATE:	5-Oct 2010
SURVEYOR(S):	M. Strauss

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 1	2	3	4	COLL.
BPTCEM	R	—	—		
Grape Riverbank				O	
KUBIDEA				O	
Staghorn Sumac				R	
Salix sp.	R	—	—		
CORSTOL		O			

SPECIES CODE	LAYER 1	2	3	4	COLL.
Teasel					
AST Purplestem					
Wild Carrot					
B. Foot Trefoil					
Reed Canary Grass				A	
[illegible]					
Goldenrod					

Page ...... of ......

2

601000 602000 603000 604000 605000

4751000 4750000 4749000

HALDIMAND ROAD 20

HALDIMAND ROAD 50

SOUTH CAYUGA ROAD

HALDIMAND ROAD 20

HALD DUNN TOWNLINE ROAD

BAINS ROAD

581820
1 = CUM1
2 = CUW1-3*
3 = CUP3-12*
4 = FOD1-4

581854
1 = FOD1-6*

CORN
Soy
Hay
Corn
POND

0 200 400 m
1:12,000

N

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September 2010
160960577

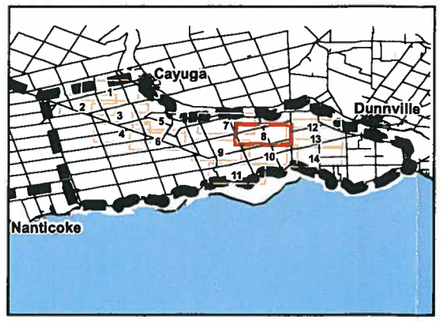
Legend

- Project Location
- Proposed Turbine Location
- Proposed Collector Line
- Proposed Access Road
- Road
- Railway
- Abandoned Railway
- Transmission Line (OBM)
- Deer Wintering Area
- MEI
- Elexco Aquired Agreements
- ROW Study Area
- Crane Pad Study Area
- ROW Installation Zone
- Provincially Significant Wetland
- Non-Provincially Significant Wetland
- Watercourse (OBM)
- Waterbody

Area of Natural and Scientific Interest (ANSI)

- Life Science, Provincially Significant
- Earth Science, Provincially Significant
- Earth Science, Regionally Significant

Stantec



Original : Don't Throw out

Notes

1. Coordinate System: UTM NAD 83 - Zone 17 (N).
2. Data Sources: Ontario Ministry of Natural Resources © Queens Printer Ontario, 2009; © GREP, 2010; © Samsung, 2010.
3. Image Source: © First Base Solutions, 2010 - Imagery Date: Spring 2006.

Client/Project
SAMSUNG C&T
GRAND RENEWABLE ENERGY PARK

Figure No.
FIELD MAP 8

Title
PROJECT LOCATION MAP

Stantec Consulting Ltd.
70-1 Southgate Drive
Guelph, Ontario, Canada
N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

Wildlife Habitat Assessment

Feature 53
Turbine 7 + Access Road
581854

Project Number 161010646

Project Name: Samsung

Date / Time: Sept. 22, 2010

Field Personnel: GAW

Weather Conditions:	Temp:	Wind:	Cloud:	PPT:	PPT in last 24 hrs:
	20°	1	100%	Ø	RAIN

Reptile Hibernacula Features i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)

Does the site contain potential reptile hibernacula features? ☐ Yes ☒ No (if yes, describe details in Table 1).

Bat Hibernacula Features i.e. karst topography, abandoned mines or caves

Does the site contain potential bat hibernacula features? ☐ Yes ☒ No (if yes, describe details in Table 1).

Table 1: Potential bat/reptile hibernacula features identified on site

UTM	Feature type	Photo #	Description	Species observed using feature

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.e. AMRO/VO BLJA	deer	AMTO	Sulphur yellow	

Woodland Assessment- *complete 1 assessment for each woodland*

Woodlot # (indicate on map) : Only One

Approximate age of stand Mature

Are large (i.e. >40cmDBH and >25m tall) **trees present** ☒ Yes ☐ No
If yes, approximate # present or % of stand <5%
Location in stand (i.e throughout, in west side only, in FOD2-6 only etc,.) just^ in edge (looked 120m)

Are snags present? ☐ Yes ☒ No
If yes provide characterization of number present, height and DBH of snags and indicate if they contain loose bark.

Trees with cavities present? ☒ No ☐ Rare ☐ Occasional ☐ Abundant
If present:

	Height ranges of tree	Range of Tree DBH	Range of Cavity Heights	Cavity sizes (approx. diameter)

Bat Mat Roost? No

Presence of large stick nests (i.e. raptor nests)? ☐ Yes ☒ No
If yes, UTM and describe tree type, height and position in tree, size of nest, species present

Evidence of disturbance? (i.e logging, roads, paths, ATV use, trails) ☐ Yes ☒ No
If yes, describe

Seeps/ springs present? ☐ Yes ☒ No If yes,

Seep/Spring #	UTM	Description	Surrounding Habitat

Vernal Pools Present? ☐ Yes ☒ No If yes,

#	Location	Depth of water	Size of pool (diameter)	Presence of emergent/submergent veg?	Presence of shrubs, logs at pond edge

ELC — COMMUNITY DESCRIPTION & CLASSIFICATION

SITE: 161010646		POLYGON: (1)	
SURVEYOR(S): GAW	DATE: Sept. 22. 2010	UTME	
START:	END	UTMZ:	UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	2	4	ACESASA = Shagbark ≥ QUERUBR
2	SUB-CANOPY	3	4	" " "
3	UNDERSTOREY	4-5	4	" " = PRUVIVI
4	GRD. LAYER	6-7	4	CIRLEUT, RHURA.NE, Saplings

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:	A	< 10	A	10 - 24	A	25 - 50	R	> 50
STANDING SNAGS:	R	< 10	R	10 - 24	R	25 - 50	/	> 50
DEADFALL / LOGS:	A	< 10	A	10 - 24	O	25 - 50	/	> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :		PIONEER		YOUNG		MID-AGE	X	MATURE		OLD GROWTH

SOIL ANALYSIS:

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

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS: Forest	CODE: FO
COMMUNITY SERIES: Deciduous Forest	CODE: FOD
ECOSITE: F-M Sugar Maple Dec. Forest	CODE: FOD6
VEGETATION TYPE: Fresh - moist Sugar Maple - Hickory Dec. Forest	CODE: FOD6-6*
INCLUSION	CODE:
COMPLEX	CODE:

Notes:

ELC — PLANT SPECIES LIST

SITE: Turbine 7 + Access Road (581854)	
POLYGON: Feature 53	
DATE:	
SURVEYOR(S):	

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 1	2	3	4	COLL.
FRAAMER	O	O	O	O	
ACESASA	A	A	A	O	
QUERUBR	O	O	O		
Shagbark	A	A	A	O	
FAGGRAN	R	O	O		
OSTVIRG		O	O		
TILAMER	O	O			
PRUVIVI			O	O	
CORFORA			O		
RHACATH			O		
Crataegus			O		
VITRIPA			O		

SPECIES CODE	LAYER 1	2	3	4	COLL.
CIRLEUT				O	
EUOBOV				O	
RHURA.NE				O	
GEUAPPEL				O	
FRAVESC				O	
GERMACU				O	
SOLCANA				O	

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE:		POLYGON:	
	SURVEYOR(S):	DATE		UTME:
	START:	END	UTMZ:	UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY			
2	SUB-CANOPY			
3	UNDERSTOREY			
4	GRD. LAYER			

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:		< 10		10 - 24		25 - 50		> 50
STANDING SNAGS:		< 10		10 - 24		25 - 50		> 50
DEADFALL / LOGS:		< 10		10 - 24		25 - 50		> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :		PIONEER		YOUNG		MID-AGE		MATURE		OLD GROWTH

SOIL ANALYSIS:

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

COMMUNITYCLASSIFICATION:

COMMUNITY CLASS:		CODE:
COMMUNITY SERIES:		CODE:
ECOSITE:		CODE:
VEGETATION TYPE:		CODE:
INCLUSION		CODE:
COMPLEX		CODE:

Notes:

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

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 1	2	3	4	COLL.	SPECIES CODE	LAYER 1	2	3	4	COLL.

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September 2010
160960577

Legend

- Project Location
- Proposed Turbine Location
- Proposed Access Road
- Proposed Collector Line
- ROW Installation Zone
- 120m Investigation Zone
- Elexco Aquired Agreements
- Government Lands
- UDI Lands
- Road
- Railway
- Abandoned Railway
- Transmission Line (OBM)
- Deer Wintering Area
- Provincially Significant Wetland
- Non-Provincially Significant Wetland
- Watercourse (OBM)
- Waterbody

Area of Natural and Scientific Interest (ANSI)

- Life Science, Provincially Significant
- Earth Science, Provincially Significant
- Earth Science, Regionally Significant

Stantec

Original: Don't Throw Out

Notes

1. Coordinate System: UTM NAD 83 - Zone 17 (N).
2. Data Sources: Ontario Ministry of Natural Resources © Queens Printer Ontario, 2009; © GREP, 2010; © Samsung, 2010.
3. Image Source: © First Base Solutions, 2010 - Imagery Date: Spring 2006; **LIDAR IMAGERY SOURCE???**

Client/Project

SAMSUNG C&T
GRAND RENEWABLE ENERGY PARK

Figure No.

FIELD MAP 8

Title

PROJECT LOCATION MAP

Stantec Consulting Ltd.
70-1 Southgate Drive
Guelph, Ontario, Canada
N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

Wildlife Habitat Assessment

Feature 54
Turbine 8 + Access Road
581820

Project Number 161010646

Project Name: Samsung

Date / Time: Sept. 22, 2010

Field Personnel: GAW

Weather Conditions:	Temp:	Wind:	Cloud:	PPT:	PPT in last 24 hrs:
	20°	1	100%	Ø	RAIN

Reptile Hibernacula Features i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)

Does the site contain potential reptile hibernacula features? ☐ Yes ☒ No (if yes, describe details in Table 1).

Bat Hibernacula Features i.e. karst topography, abandoned mines or caves

Does the site contain potential bat hibernacula features? ☐ Yes ☒ No (if yes, describe details in Table 1).

Table 1: Potential bat/reptile hibernacula features identified on site

UTM	Feature type	Photo #	Description	Species observed using feature

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.e. AMRO/VO AMGO BLJA RTHA WITU	deer	AMTO		

Woodland Assessment- *complete 1 assessment for each woodland*

Woodlot # (indicate on map) : Only One

Approximate age of stand Mature

Are large (i.e. >40cmDBH and >25m tall) **trees present** ☒ Yes ☐ No
If yes, approximate # present or % of stand < 10%
Location in stand (i.e throughout, in west side only, in FOD2-6 only etc,.) throughout

Are snags present? ☒ Yes ☐ No
If yes provide characterization of number present, height and DBH of snags and indicate if they contain loose bark. Several, most 20-30cm DBH, some loose bark.

Trees with cavities present? ☒ No ☐ Rare ☐ Occasional ☐ Abundant none seen
If present:

	Height ranges of tree	Range of Tree DBH	Range of Cavity Heights	Cavity sizes (approx. diameter)

Bat Mat Roost ? No

Presence of large stick nests (i.e. raptor nests)? ☐ Yes ☒ No
If yes, UTM and describe tree type, height and position in tree, size of nest, species present

---

Evidence of disturbance? (i.e logging, roads, paths, ATV use, trails) ☒ Yes ☐ No
If yes, describe ATV trail, logging (selective)

Seeps/ springs present? ☐ Yes ☒ No If yes,

Seep/Spring #	UTM	Description	Surrounding Habitat

Vernal Pools Present? ☒ Yes ☐ No If yes,

#	Location	Depth of water	Size of pool (diameter)	Presence of emergent/submergent veg?	Presence of shrubs, logs at pond edge
~10-15	throughout	none	1m – 10m	yes - graminoid	yes

ELC — COMMUNITY DESCRIPTION & CLASSIFICATION

SITE: 161010646		POLYGON: (1)	
SURVEYOR(S): GAW	DATE: Sept. 22. 2010	UTME:	
START:	END	UTMZ:	UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY			
2	SUB-CANOPY			
3	UNDERSTOREY			
4	GRD. LAYER			

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:	○	< 10	✓	10 - 24	✓ 25 - 50	✓	> 50
STANDING SNAGS:	✓	< 10	✓	10 - 24	✓ 25 - 50	✓	> 50
DEADFALL / LOGS:	○	< 10	✓	10 - 24	✓ 25 - 50	✓	> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :		PIONEER	☒	YOUNG		MID-AGE		MATURE		OLD GROWTH

SOIL ANALYSIS:

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

COMMUNITYCLASSIFICATION:

COMMUNITY CLASS:	CODE:
COMMUNITY SERIES:	CODE:
ECOSITE:	CODE:
VEGETATION TYPE:	CODE: Edges/CUM1
☐ INCLUSION	CODE:
☐ COMPLEX	CODE:

Notes:

ELC — PLANT SPECIES LIST

581820

SITE:	Turbine 8 + Access Road
POLYGON:	Feature 54
DATE:	
SURVEYOR(S):	

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 1	2	3	4	COLL.
EUTGRAM					
Woolgrass					
LYCUNIF					
RUMCRIS					
RUBALLE					
ROSMULTI					
CORFO·RA					
PLAMAJO					
Ragweed					
Green foxtail					
barnyard gr					
red clover					
b.medic					
lady thumb					
SOLCANA					
alsike clover					
AGTNOVA					
DAUCARO					
SOLALTI					
VICCRAC					
TAROFFI					
b.f.trefoil					
teasle					
C.burdock					
VITRIPA					
RUBIDAE					
Chicory					

SPECIES CODE	LAYER 1	2	3	4	COLL.
grasses					
ASCSYRI					
HYPPERF					
ROSMULTI					

ELC COMMUNITY DESCRIPTION & CLASSIFICATION

SITE: | POLYGON: (2)

SURVEYOR(S): | DATE: | UTME:

START: | END | UTMZ: | UTMN:

POLYGON DESCRIPTION

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
☑ TERRESTRIAL ☐ WETLAND ☐ AQUATIC	☐ ORGANIC ☑ MINERAL SOIL ☐ PARENT MIN. ☐ ACIDIC BEDRK. ☐ BASIC BEDRK. ☐ CARB. BEDRK.	☐ LACUSTRINE ☐ RIVERINE ☐ BOTTOMLAND ☐ TERRACE ☐ VALLEY SLOPE ☐ TABLELAND ☑ ROLL. UPLAND ☐ CLIFF ☐ TALUS ☐ CREVICE / CAVE ☐ ALVAR ☐ ROCKLAND ☐ BEACH / BAR ☐ SAND DUNE ☐ BLUFF	☐ NATURAL ☑ CULTURAL	☐ PLANKTON ☐ SUBMERGED ☐ FLOATING-LVD. ☐ GRAMINOID ☐ FORB ☐ LICHEN ☐ BRYOPHYTE ☑ DECIDUOUS ☐ CONIFEROUS ☐ MIXED	☐ LAKE ☐ POND ☐ RIVER ☐ STREAM ☐ MARSH ☐ SWAMP ☐ FEN ☐ BOG ☐ BARREN ☐ MEADOW ☐ PRAIRIE ☐ THICKET ☐ SAVANNAH ☑ WOODLAND ☐ FOREST ☐ PLANTATION

SITE

☐ OPEN WATER
☐ SHALLOW WATER
☑ SURFICIAL DEP.
☐ BEDROCK

COVER

☐ OPEN
☐ SHRUB
☑ TREED

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	3	3	RHUTYPH = FRAAMER
2	SUB-CANOPY	4	4	RHACATH = RHUTYPH = Cornus
3	UNDERSTOREY	5	4	Solidagos, Asters
4	GRD. LAYER	6-7	4	" "

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

COMM. AGE :		PIONEER	X	YOUNG		MID-AGE		MATURE		OLD GROWTH

SOIL ANALYSIS:

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

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS: Cultural	CODE:	CU
COMMUNITY SERIES: Cultural Woodland	CODE:	CUW
ECOSITE: Mineral Cultural Woodland	CODE:	CUW1
VEGETATION TYPE: Ash-Sumac Mineral Cultural Woodland	CODE:	CUW1-3*
INCLUSION	CODE:	
COMPLEX	CODE:	

Notes:

ELC PLANT SPECIES LIST

SITE:

POLYGON:

DATE:

SURVEYOR(S):

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 1	2	3	4	COLL.
RHUTYPH	A	A			
ACENEGU	R				
RHACATH		A			
VITRIPA		O			
FRAAMER	A	O			
ULMAMER	R				
CORFO.RA		A	A		
CORSTOL		A	A		
JUGNIGR		O			
Pear	R				

SPECIES CODE	LAYER 1	2	3	4	COLL.
PHAARUN			O		
Ragweed				O	
green foxtail				O	
SOLCANA				A	
ASTNOVA				A	
SOLALTI				A	
EUTGRAM				A	
DAUCARO				A	
Teasle				A	
RUBIDAE			O		
RUBALLE			O		
Grasses			O	O	
BROINER			O		
ASTLATE				O	

ELC — COMMUNITY DESCRIPTION & CLASSIFICATION

SITE: 16101064		POLYGON: (3)	
SURVEYOR(S): GAW	DATE: Sept. 22. 2010	UTME:	
START:	END	UTMZ:	UTMN:

POLYGON DESCRIPTION

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
☑ TERRESTRIAL	☐ ORGANIC	☐ LACUSTRINE	☐ NATURAL	☐ PLANKTON	☐ LAKE
☐ WETLAND	☑ MINERAL SOIL	☐ RIVERINE	☑ CULTURAL	☐ SUBMERGED	☐ POND
☐ AQUATIC	☐ PARENT MIN.	☐ BOTTOMLAND		☐ FLOATING-LVD.	☐ RIVER
	☐ ACIDIC BEDRK.	☐ TERRACE		☐ GRAMINOID	☐ STREAM
	☐ BASIC BEDRK.	☐ VALLEY SLOPE		☐ FORB	☐ MARSH
	☐ CARB. BEDRK.	☐ TABLELAND		☐ LICHEN	☐ SWAMP
		☑ ROLL. UPLAND		☐ BRYOPHYTE	☐ FEN
		☐ CLIFF		☐ DECIDUOUS	☐ BOG
		☐ TALUS		☑ CONIFEROUS	☐ BARREN
		☐ CREVICE / CAVE		☐ MIXED	☐ MEADOW
		☐ ALVAR			☐ PRAIRIE
		☐ ROCKLAND			☐ THICKET
		☐ BEACH / BAR			☐ SAVANNAH
		☐ SAND DUNE			☐ WOODLAND
		☐ BLUFF			☐ FOREST
					☑ PLANTATION

SITE	COVER
☐ OPEN WATER	☐ OPEN
☐ SHALLOW WATER	☐ SHRUB
☑ SURFICIAL DEP.	☑ TREED
☐ BEDROCK	

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	3	4	PINSTRO ≥ PICGLAU
2	SUB-CANOPY	—	—	
3	UNDERSTOREY	—	—	
4	GRD. LAYER	6-7	4	Meadow Species

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:

		< 10	10 - 24	25 - 50	> 50
SIZE CLASS ANALYSIS:	D				
STANDING SNAGS:					
DEADFALL / LOGS:					

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :	PIONEER	YOUNG	MID-AGE	MATURE	OLD GROWTH
		X			

SOIL ANALYSIS:

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

COMMUNITYCLASSIFICATION:

COMMUNITY CLASS: Cultural	CODE: CU
COMMUNITY SERIES: Cultural Plantation	CODE: CUP
ECOSITE: Coniferous Plantation	CODE: CUP3
VEGETATION TYPE: White Pine – White Spruce Con. Plant.	CODE: CUP3-12*
INCLUSION	CODE:
COMPLEX	CODE:

Notes:

ELC — PLANT SPECIES LIST

SITE: Turbine 8 + Access Rd	, 58/820
POLYGON: Feature 54	
DATE:	
SURVEYOR(S):	

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 1	2	3	4	COLL.
PICGLAU	A	A			
PINSTRO	A	A			
RUBALLE			O		
ROSMULT			O		
PARINSE			O		
FRAAMER	O	O			

SPECIES CODE	LAYER 1	2	3	4	COLL.
Ragweed				O	
SOLCANA				A	
ASTNOVA				A	
SOLALTI				A	
EUTGRAM				A	
DAUCARO				A	
teasle				O	
RUBIDAE				O	
Grasses				O	
BROINER				O	
ASTLATE				O	

ELC
COMMUNITY DESCRIPTION & CLASSIFICATION

SITE:		POLYGON: (4)	
SURVEYOR(S):	DATE:	UTME:	
START:	END	UTMZ:	UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	2	4	Shagbark > ACESASA > QUERUBR
2	SUB-CANOPY	3	4	ACESASA > Shagbark
3	UNDERSTOREY	4-5	4	// > FRAPENN = PRUVIVI
4	GRD. LAYER	6-7	4	EVOOBOV, RHURA·NE, Saplings

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:	A	< 10	A	10 - 24	A	25 - 50	R	> 50
STANDING SNAGS:	R	< 10	R	10 - 24	R	25 - 50	/	> 50
DEADFALL / LOGS:	A	< 10	A	10 - 24	O	25 - 50	/	> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :		PIONEER		YOUNG		MID-AGE	X	MATURE		OLD GROWTH

SOIL ANALYSIS:

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

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS: Forest	CODE:	FO
COMMUNITY SERIES: Deciduous Forest	CODE:	FOD
ECOSITE: FM Oak - Maple - Hickory Dec. Forest	CODE:	FOD9
VEGETATION TYPE: Fresh-moist Shagbark Hickory Dec. Forest	CODE:	FOD9-4
INCLUSION	CODE:	
COMPLEX	CODE:	

Notes:

ELC
PLANT SPECIES LIST

SITE:	
POLYGON:	
DATE:	
SURVEYOR(S):	

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 1	2	3	4	COLL.
Shagbark	D	A	O		
ACESASA	A	A	A	A	
FRAPENN	O	O	A	O	
QUERUBR	O	O	R	R	
FAGGRAN	R	R	O		
Blue beech			O		
QUEALBA	R				
OSTVIRG		O			
TILAMER	O	O	O	O	
PRUSERO		O	O		
ACERUBR	O	O	O		
PRUVIVI			O		
LONDIOI			⊘	O	
blackberry			O		
RUBIDAE			O		
RIBCYNO			O		
CORFORA			O		
witchhazel			O		
RHACATH			O		
Crataegus sp			O		
VITRIPA			O		
ULMAMER	R	R			

SPECIES CODE	LAYER 1	2	3	4	COLL.
ELYHYST				R	
CIRLEUT				O	
SOLDULC				O	
GERMACU				A	
AGRGRYP				O	
SOLCAES				O	
Hairy Sol Seal				O	
hog-peanut				R	
bristly buttercup				R	
ARITR·TR				R	
IMPCAPE				R	
CIRLEUT				O	
EVOBOV				O	
RHURA·NE				A	
GEUAPPEL				O	
I.I.aster				O	
VEROFFI				O	
GLYSTRI				O	
FRAVESC				O	
SOLCANA				O	
IMPCAPE				O	

ELC — COMMUNITY DESCRIPTION & CLASSIFICATION

SITE: 161010646		POLYGON: (5)	
SURVEYOR(S): GAW	DATE: Sept. 22, 2010	UTME:	
START:	END	UTMZ:	UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	2	4	ACESASA = Shagbark ≥ QUERCUS
2	SUB-CANOPY	3	4	" " "
3	UNDERSTOREY	4-5	4	" " = PRUVIVI
4	GRD. LAYER	6-7	4	CIRLEUT RHURA·NE, Saplings

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:	A	< 10	A	10 - 24	A	25 - 50	R	> 50
STANDING SNAGS:	R	< 10	R	10 - 24	R	25 - 50	/	> 50
DEADFALL / LOGS:	A	< 10	A	10 - 24	O	25 - 50	/	> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE:		PIONEER		YOUNG		MID-AGE	X	MATURE		OLD GROWTH

SOIL ANALYSIS:

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

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS: Forest	CODE: FO
COMMUNITY SERIES: Deciduous Forest	CODE: FOD
ECOSITE: F-M Sugar Maple Dec. Forest	CODE: FOD6
VEGETATION TYPE: Fresh-moist Sugar Maple-Hickory Dec. Forest	CODE: FOD6-6*
INCLUSION	CODE:
COMPLEX	CODE:

Notes:

ELC — PLANT SPECIES LIST

581820

SITE: Turbine 8 + Access Rd	
POLYGON: Feature 54	
DATE:	
SURVEYOR(S):	

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 1	2	3	4	COLL.
FRAAMER	O	O	O	G	
ACESASA	A	A	A	O	
Shagbark	A	A	A	O	
FAGGRAN	R	O	O		
QUERUBR	O	O	O		
Blue beech			O		
QUEALBA	R				
OSTVIRG		O	O		
TILAMER	O	O	O		
FRAPENN	R	R			
PRUSERO	R				
ACERUBR	R				
PRUVIVI			O	O	
LONDIOI				O	
Blackberry			O		
RUBIDAE			O		
RIBCYNO			O		
CORFORA			O		
Witchhazel			O		
Crataegus sp			O		
RHACATH			O		
VITRIPA			O		

SPECIES CODE	LAYER 1	2	3	4	COLL.
hog peanut				O	
SOLCAES				O	
h. Sol. seal				O	
CIRLEUT				A	
EQUOBOV				O	
RHURA·NE				A	
GERROBE				O	
GEUAPPEL				O	
FRAVESC				O	
GERMACU				O	
OXASTKI				O	
SOLCANA				O	
ASTNOVA				O	
Viola sp				O	
ASTLATE				O	
HYPPERF				O	
GLYSTRI				O	
AGRGRYP				O	
IMPCAPE				O	
l.l. aster				O	
VEROFFI				O	

ELC
COMMUNITY DESCRIPTION & CLASSIFICATION

SITE:		POLYGON:	
SURVEYOR(S):	DATE:		UTME:
START:	END:	UTMZ:	UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY			
2	SUB-CANOPY			
3	UNDERSTOREY			
4	GRD. LAYER			

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:		< 10		10 - 24		25 - 50		> 50
STANDING SNAGS:		< 10		10 - 24		25 - 50		> 50
DEADFALL / LOGS:		< 10		10 - 24		25 - 50		> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :		PIONEER		YOUNG		MID-AGE		MATURE		OLD GROWTH

SOIL ANALYSIS:

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

COMMUNITYCLASSIFICATION:

COMMUNITY CLASS:	CODE:
COMMUNITY SERIES:	CODE:
ECOSITE:	CODE:
VEGETATION TYPE:	CODE:
INCLUSION	CODE:
COMPLEX	CODE:

Notes:

ELC
PLANT SPECIES LIST

SITE:	
POLYGON:	
DATE:	
SURVEYOR(S):	

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 1	LAYER 2	LAYER 3	LAYER 4	COLL.	SPECIES CODE	LAYER 1	LAYER 2	LAYER 3	LAYER 4	COLL.

Stantec Consulting Ltd.
70-1 Southgate Drive
Guelph, Ontario, Canada
N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

Wildlife Habitat Assessment

Feature 54
Turbine 15 + Access Rd
581847

Project Number 161010646

Project Name: Samsung

Date / Time: Sept. 24. 2010

Field Personnel: GAW

Weather Conditions:	Temp:	Wind:	Cloud:	PPT:	PPT in last 24 hrs:
	24°	5	50%	Ø	Ø

Reptile Hibernacula Features i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)

Does the site contain potential reptile hibernacula features? ☐ Yes ☒ No (if yes, describe details in Table 1).

Bat Hibernacula Features i.e. karst topography, abandoned mines or caves

Does the site contain potential bat hibernacula features? ☐ Yes ☒ No (if yes, describe details in Table 1).

Table 1: Potential bat/reptile hibernacula features identified on site

UTM	Feature type	Photo #	Description	Species observed using feature

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.e. AMRO/VO BLJA	wht. t. deer	AMTO	sulphur yellow	

Woodland Assessment- *complete 1 assessment for each woodland*

Woodlot # (indicate on map) : Only One

Approximate age of stand Mature

Are large (i.e. >40cmDBH and >25m tall) **trees present** ☒ Yes ☐ No
If yes, approximate # present or % of stand <5% of stand
Location in stand (i.e throughout, in west side only, in FOD2-6 only etc,.) mostly @ edges

Are snags present? ☒ Yes ☐ No
If yes provide characterization of number present, height and DBH of snags and indicate if they contain loose bark. Few, 10 - 25cm DBH, some w loose bark.

Trees with cavities present? ☐ No ☒ Rare ☐ Occasional ☐ Abundant
If present:

	Height ranges of tree	Range of Tree DBH	Range of Cavity Heights	Cavity sizes (approx. diameter)
	15-20m	20-30cm	10-15m	10-20cm

Bat Mat Roost? No.

Presence of large stick nests (i.e. raptor nests)? ☐ Yes ☒ No
If yes, UTM and describe tree type, height and position in tree, size of nest, species present

---

Evidence of disturbance? (i.e logging, roads, paths, ATV use, trails) ☒ Yes ☐ No
If yes, describe Very old logging roads.

Seeps/ springs present? ☐ Yes ☒ No If yes,

Seep/Spring #	UTM	Description	Surrounding Habitat

Vernal Pools Present? ☒ Yes ☐ No If yes,

#	Location	Depth of water	Size of pool (diameter)	Presence of emergent/submergent veg?	Presence of shrubs, logs at pond edge
~10	away from edge east - centre	dry	Variable	yes	yes

ELC — COMMUNITY DESCRIPTION & CLASSIFICATION

SITE: 161010646		POLYGON: (1)	
SURVEYOR(S): GAW	DATE: Sept. 24. 2010	UTME:	
START:	END	UTMZ:	UTMN:

POLYGON DESCRIPTION

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
☒ TERRESTRIAL	☐ ORGANIC	☐ LACUSTRINE	☐ NATURAL	☐ PLANKTON	☐ LAKE
☐ WETLAND	☒ MINERAL SOIL	☐ RIVERINE	☒ CULTURAL	☐ SUBMERGED	☐ POND
☐ AQUATIC	☐ PARENT MIN.	☐ BOTTOMLAND		☐ FLOATING-LVD.	☐ RIVER
	☐ ACIDIC BEDRK.	☐ TERRACE		☐ GRAMINOID	☐ STREAM
	☐ BASIC BEDRK.	☐ VALLEY SLOPE		☐ FORB	☐ MARSH
	☐ CARB. BEDRK.	☐ TABLELAND		☐ LICHEN	☐ SWAMP
		☒ ROLL. UPLAND		☐ BRYOPHYTE	☐ FEN
		☐ CLIFF		☐ DECIDUOUS	☐ BOG
		☐ TALUS		☒ CONIFEROUS	☐ BARREN
		☐ CREVICE / CAVE		☐ MIXED	☐ MEADOW
		☐ ALVAR			☐ PRAIRIE
		☐ ROCKLAND			☐ THICKET
		☐ BEACH / BAR			☐ SAVANNAH
		☐ SAND DUNE			☐ WOODLAND
		☐ BLUFF			☐ FOREST
					☒ PLANTATION

SITE	COVER
☐ OPEN WATER	☐ OPEN
☐ SHALLOW WATER	☐ SHRUB
☒ SURFICIAL DEP.	☒ TREED
☐ BEDROCK	

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	3	4	PICGLAU
2	SUB-CANOPY	4	4	" >CORFO·RA = FRAPENN
3	UNDERSTOREY	5-7	4	CUMI sp
4	GRD. LAYER			

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:	D	< 10	R	10 - 24	/	25 - 50	/ > 50
STANDING SNAGS:	/	< 10	/	10 - 24	/	25 - 50	/ > 50
DEADFALL / LOGS:	O	< 10	R	10 - 24	/	25 - 50	/ > 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :		PIONEER	X	YOUNG		MID-AGE		MATURE		OLD GROWTH

SOIL ANALYSIS:

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

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS: Cultural		CODE: CU
COMMUNITY SERIES: Cultural Plantation		CODE: CUP
ECOSITE: Coniferous Plantation		CODE: CUP3
VEGETATION TYPE: wht spruce Coniferous Plantation		CODE: CUP3-13*
INCLUSION		CODE:
COMPLEX		CODE:

Notes:

ELC — PLANT SPECIES LIST

581847

SITE: Turbine 15 + Access Road	
POLYGON: Feature 54	
DATE:	
SURVEYOR(S):	

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 1	2	3	4	COLL.
PICGLAU	D	D	R		
FRAPENN	R	O	O		
RHACATH		O	O		
Crataegus sp		O	O		
Willow sp		R			
CORFO·RA		O	O		

SPECIES CODE	LAYER 1	2	3	4	COLL.
CUMI sp					

ELC — COMMUNITY DESCRIPTION & CLASSIFICATION

SITE:		POLYGON: (2)	
SURVEYOR(S):	DATE:		UTME:
START:	END	UTMZ:	UTMN:

POLYGON DESCRIPTION

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
☒ TERRESTRIAL ☐ WETLAND ☐ AQUATIC	☐ ORGANIC ☒ MINERAL SOIL ☐ PARENT MIN. ☐ ACIDIC BEDRK. ☐ BASIC BEDRK. ☐ CARB. BEDRK.	☐ LACUSTRINE ☐ RIVERINE ☐ BOTTOMLAND ☐ TERRACE ☐ VALLEY SLOPE ☐ TABLELAND ☒ ROLL. UPLAND ☐ CLIFF ☐ TALUS ☐ CREVICE / CAVE ☐ ALVAR ☐ ROCKLAND ☐ BEACH / BAR ☐ SAND DUNE ☐ BLUFF	☒ NATURAL ☐ CULTURAL	☐ PLANKTON ☐ SUBMERGED ☐ FLOATING-LVD. ☐ GRAMINOID ☐ FORB ☐ LICHEN ☐ BRYOPHYTE ☒ DECIDUOUS ☐ CONIFEROUS ☐ MIXED	☐ LAKE ☐ POND ☐ RIVER ☐ STREAM ☐ MARSH ☐ SWAMP ☐ FEN ☐ BOG ☐ BARREN ☐ MEADOW ☐ PRAIRIE ☐ THICKET ☐ SAVANNAH ☐ WOODLAND ☒ FOREST ☐ PLANTATION

SITE	COVER
☐ OPEN WATER ☐ SHALLOW WATER ☒ SURFICIAL DEP. ☐ BEDROCK	☐ OPEN ☐ SHRUB ☒ TREED

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	2	4	ACESASA = Shagbark > QUERUBR
2	SUB-CANOPY	3	4	// > bluebeech
3	UNDERSTOREY	4-5	4	// //
4	GRD. LAYER	6-7	4	Ash seedlings, RHURA.NE

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:	A	< 10	A	10 - 24	O	25 - 50	R	> 50
STANDING SNAGS:	O	< 10	O	10 - 24	R	25 - 50	/	> 50
DEADFALL / LOGS:	A	< 10	O	10 - 24	/	25 - 50	/	> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :		PIONEER		YOUNG		MID-AGE	X	MATURE		OLD GROWTH

SOIL ANALYSIS:

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

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS: Forest	CODE: FO
COMMUNITY SERIES: Deciduous Forest	CODE: FOD
ECOSITE: F-M Sugar Maple Deciduous Forest	CODE: FOD6
VEGETATION TYPE: Fresh-moist Sugar Maple - Hickory Dec. Forest	CODE: FOD6-6*
INCLUSION	CODE:
COMPLEX	CODE:

Notes:

ELC — PLANT SPECIES LIST

SITE:	
POLYGON:	
DATE:	
SURVEYOR(S):	

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 1	2	3	4	COLL.
QUEMACR	O				Edges
TILAMER	R	O	O	O	
Shagbark	A	A	O		
FRAPENN	O	O	O	A	
ACESASA	A	A	O	O	
ACERUBR		O	O		
OSTVIRG		O	O		
bluebeech		A	A		
QUERUBR	A	O	O		
FAGGRAN	R	O	O		
PRUSERO			O	O	
VLMAMER		R	R		edges
blackberry			O		
PRUVIVI			O		
ROSMULTI			R		
RHACATH			O		
RUBALLE			O		
SAMCANA			R		
RIBCYNO			O		
VITRIPA			O		

SPECIES CODE	LAYER 1	2	3	4	COLL.
bottlebrush gr				O	
PARINSE				O	
RHURA.NE				A	
false s. seal				O	
ASTLATE				O	
bladder-sedge				R	X
FRAVESC				O	
Viola sp.				O	
GEUAPPE				O	
PREALBA				O	
GERMACU				O	
CIRLEUT				O	
SOLCAES				O	
GLYSTRI				O	
RANHISP				R	
St. nettle				O	
ONOSENS				O	
hog peanut				O	
EUOOBOV				O	
climb. p. ivy				O	
hairy s. seal				O	
AGRGRYP				O	
GEUCANA					
IMPCAPE					
GERROBE					

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70-1 Southgate Drive
Guelph, Ontario, Canada
N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

Wildlife Habitat Assessment

Feature 54
Turbine 14 + Access Rd
581846

Project Number 161010646

Project Name: Samsung

Date / Time: Sept. 24. 2010

Field Personnel: GAW

Weather Conditions:	Temp:	Wind:	Cloud:	PPT:	PPT in last 24 hrs:
	24°	5	50%	0	0

Reptile Hibernacula Features i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)

Does the site contain potential reptile hibernacula features? ☐ Yes ☒ No (if yes, describe details in Table 1).

Bat Hibernacula Features i.e. karst topography, abandoned mines or caves

Does the site contain potential bat hibernacula features? ☐ Yes ☒ No (if yes, describe details in Table 1).

Table 1: Potential bat/reptile hibernacula features identified on site

UTM	Feature type	Photo #	Description	Species observed using feature

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.e. AMRO/VO BLJA	deer trail/ beds in soy		cabbage wht sulphur yellow	

Woodland Assessment- *complete 1 assessment for each woodland*

Woodlot # (indicate on map) : Only one

Approximate age of stand Mature

Are large (i.e.>40cmDBH and >25m tall) **trees present** ☒ Yes ☐ No
If yes, approximate # present or % of stand < 2% of stand,
Location in stand (i.e throughout, in west side only, in FOD2-6 only etc,.) Mostly @ edges

Are snags present? ☒ Yes ☐ No
If yes provide characterization of number present, height and DBH of snags and indicate if they contain loose bark. Few. DBH 10-15 cm, some in loose bark

Trees with cavities present? ☐ No ☒ Rare ☐ Occasional ☐ Abundant
If present:

	Height ranges of tree	Range of Tree DBH	Range of Cavity Heights	Cavity sizes (approx. diameter)
	10-15m	15-25cm	5-10m	5-10cm

Bat Mat Roost? No

Presence of large stick nests (i.e. raptor nests)? ☐ Yes ☒ No
If yes, UTM and describe tree type, height and position in tree, size of nest, species present

---

Evidence of disturbance? (i.e logging, roads, paths, ATV use, trails) ☒ Yes ☐ No
If yes, describe old logging road

Seeps/ springs present? ☐ Yes ☒ No If yes,

Seep/Spring #	UTM	Description	Surrounding Habitat

Vernal Pools Present? ☒ Yes ☐ No If yes,

#	Location	Depth of water	Size of pool (diameter)	Presence of emergent/submergent veg?	Presence of shrubs, logs at pond edge
Few	east-centre	dry	2-5m	yes	yes

ELC — COMMUNITY DESCRIPTION & CLASSIFICATION

SITE: 16101064		POLYGON: (1)	
SURVEYOR(S): GAW	DATE: Sept. 24. 2010	UTME:	
START:	END	UTMZ:	UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	2	4	ACESASA = Shagbark > QUERUBR
2	SUB-CANOPY	3	4	" > blue beech
3	UNDERSTOREY	4-5	4	" "
4	GRD. LAYER	6-7	4	Ash seedlings

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:	A	< 10	A	10 - 24	O	25 - 50	R	> 50
STANDING SNAGS:	O	< 10	O	10 - 24	R	25 - 50	/	> 50
DEADFALL / LOGS:	A	< 10	O	10 - 24	/	25 - 50	/	> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :		PIONEER		YOUNG		MID-AGE		MATURE		OLD GROWTH

SOIL ANALYSIS:

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

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS: Forest	CODE:	FO
COMMUNITY SERIES: Deciduous Forest	CODE:	FOD
ECOSITE: F-M Sugar Maple Decid. Forest	CODE:	FOD6
VEGETATION TYPE: Fresh-moist Sugar Maple-Hickory Dec. Forest	CODE:	FOD6-6*
INCLUSION	CODE:	
COMPLEX	CODE:	

Notes:

ELC — PLANT SPECIES LIST

581846

SITE: Turbine 14 + Access Road	
POLYGON: Feature 54	
DATE:	
SURVEYOR(S):	

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 1	2	3	4	COLL.
QUEMACR	O				Edges
TILAMER	R	O	O	O	
Shagbark	A	A	O		
FRAPENN	G	O	O	A	
ACESASA	A	A	G	O	
ACERUBR		O	O		
OSTVIRG		O	O		
blue beech		A	A		
QUERUBR	A	O	O		
FAGGRAN	R	O	O		
PRUSERO			O	O	
ULMAMER		R	R		edges
blackberry					
PRUVIVI					
ROSMULT					
RHACATH					
RUBALLE					
SAMCANA					
RIBCYNO					
VITRIPA					
Crataegus sp					

SPECIES CODE	LAYER 1	2	3	4	COLL.
bottlebrush gr				R	
PARINSE				O	
RHURA·NE				O	
false s. seal				O	
ASTLATE				O	
FRAVESC				O	
Viola sp				O	
GEUAPPE				O	
PREALBA				O	
GERMACU				O	
CIRLEUT				O	
SOLCAES				O	
GLYSTRI				O	
RANHISP				R	
St. Nettle				O	
ONOSENS				O	
hog peanut				O	
EUOOBOV				O	
climb. p. ivy				O	
hairy s. seal				O	
AGRGRYP				O	
GEUCANA				O	
IMPCAPE				O	
GERROBE				O	

ELC
COMMUNITY DESCRIPTION & CLASSIFICATION

SITE:		POLYGON:
SURVEYOR(S):	DATE:	UTME:
START: END	UTMZ:	UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY			
2	SUB-CANOPY			
3	UNDERSTOREY			
4	GRD. LAYER			

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:		< 10		10 - 24		25 - 50		> 50
STANDING SNAGS:		< 10		10 - 24		25 - 50		> 50
DEADFALL / LOGS:		< 10		10 - 24		25 - 50		> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :		PIONEER		YOUNG		MID-AGE		MATURE		OLD GROWTH

SOIL ANALYSIS:

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

COMMUNITYCLASSIFICATION:

COMMUNITY CLASS:	CODE:
COMMUNITY SERIES:	CODE:
ECOSITE:	CODE:
VEGETATION TYPE:	CODE:
INCLUSION	CODE:
COMPLEX	CODE:

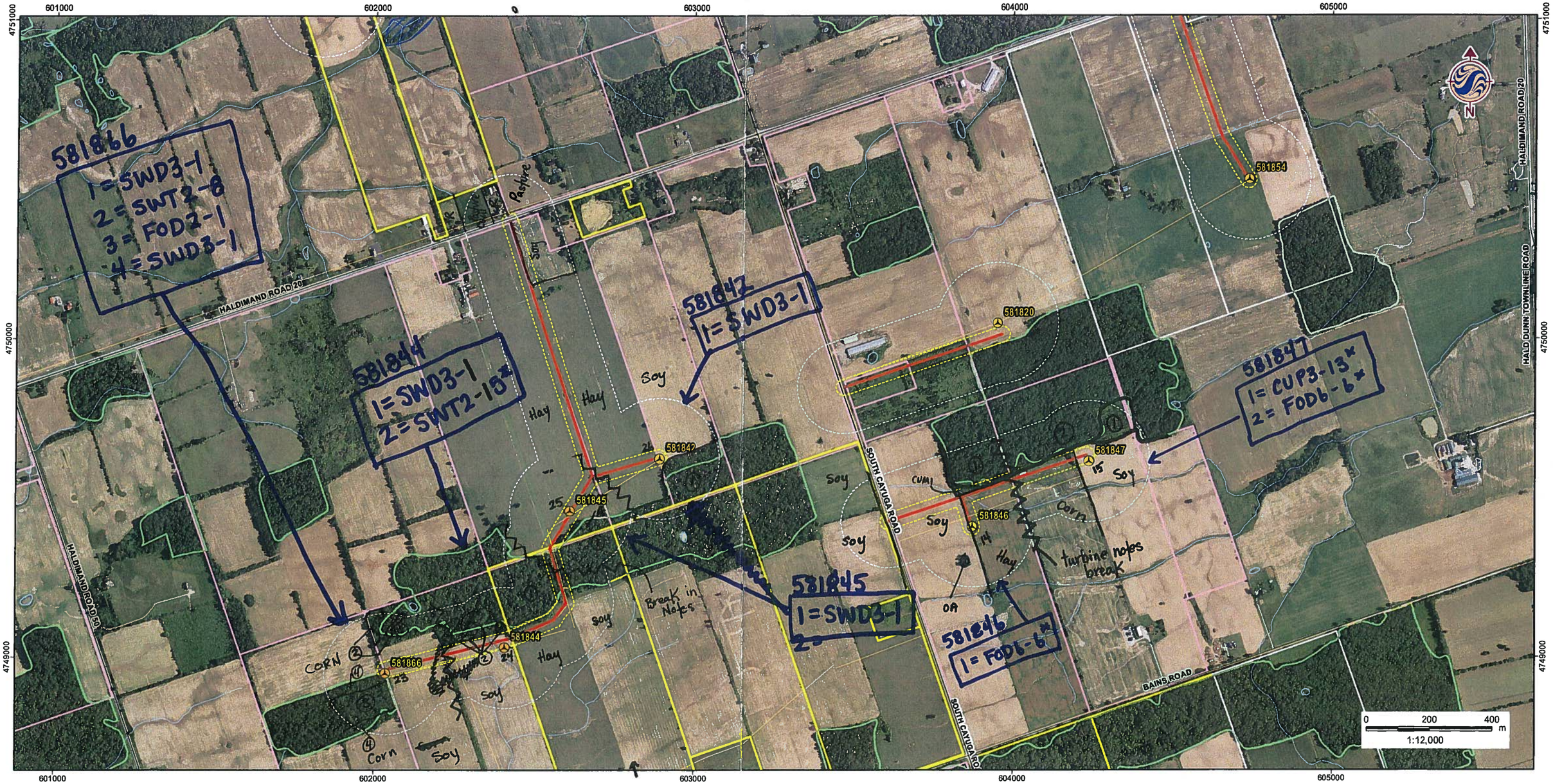
Notes:

ELC
PLANT SPECIES LIST

SITE:	
POLYGON:	
DATE:	
SURVEYOR(S):	

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 1	LAYER 2	LAYER 3	LAYER 4	COLL.	SPECIES CODE	LAYER 1	LAYER 2	LAYER 3	LAYER 4	COLL.



W:\active\160960577\drawing\GIS\MXD\Natural-HeritageAssessment\FieldMaps\60960577_FIELDMAP_ProjectLocation_Mapbook_20100921_PW.mxd - 9/22/2010 @ 12:15:19 PM

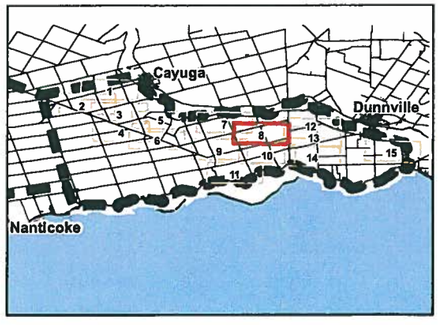
September 2010
160960577

Legend

- Project Location
- Proposed Turbine Location
- Proposed Access Road
- Proposed Collector Line
- ROW Installation Zone
- 120m Investigation Zone
- Elexco Aquired Agreements
- Government Lands
- UDI Lands
- Road
- Railway
- Abandoned Railway
- Transmission Line (OBM)
- Deer Wintering Area
- Provincially Significant Wetland
- Non-Provincially Significant Wetland
- Watercourse (OBM)
- Waterbody

Area of Natural and Scientific Interest (ANSI)

- Life Science, Provincially Significant
- Earth Science, Provincially Significant
- Earth Science, Regionally Significant



Original: Don't Throw Out

Notes

1. Coordinate System: UTM NAD 83 - Zone 17 (N).
2. Data Sources: Ontario Ministry of Natural Resources © Queens Printer Ontario, 2009; © GREP, 2010; © Samsung, 2010.
3. Image Source: © First Base Solutions, 2010 - Imagery Date: Spring 2006; **LIDAR IMAGERY SOURCE???**

Client/Project
SAMSUNG C&T
GRAND RENEWABLE ENERGY PARK

Figure No.
FIELD MAP 8

Title
PROJECT LOCATION MAP

Stantec

Stantec Consulting Ltd.
70-1 Southgate Drive
Guelph, Ontario, Canada
N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

Wildlife Habitat Assessment

Feature 55
Turbine 23
581866

Project Number 161010646

Project Name: Samsung

Date / Time: Sept. 30. 2010

Field Personnel: GAW

Weather Conditions:	Temp:	Wind:	Cloud:	PPT:	PPT in last 24 hrs:
	20°	1-2	100%	Ø	Fog

Reptile Hibernacula Features i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)

Does the site contain potential reptile hibernacula features? ☐ Yes ☒ No (if yes, describe details in Table 1).

Bat Hibernacula Features i.e. karst topography, abandoned mines or caves

Does the site contain potential bat hibernacula features? ☐ Yes ☒ No (if yes, describe details in Table 1).

Table 1: Potential bat/reptile hibernacula features identified on site

UTM	Feature type	Photo #	Description	Species observed using feature

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.e. AMRO/VO RWBB DOWO AMCR	GRSQ Deer east. cottontail	NLFR		

Woodland Assessment- *complete 1 assessment for each woodland*

Woodlot # (indicate on map) : aspen (Feature 55)

Approximate age of stand young to mature trees

Are large (i.e. >40cmDBH and >25m tall) **trees present** ☒ Yes ☐ No
If yes, approximate # present or % of stand < 5%
Location in stand (i.e throughout, in west side only, in FOD2-6 only etc..) oaks throughout

Are snags present? ☒ Yes ☐ No
If yes provide characterization of number present, height and DBH of snags and indicate if they contain loose bark. Some very large, concentrated @ west end. two > 50cm DBH, some w loose bark. Above SWT vegetation.

project location moved; now >120m.

BAT MAT Roost? Maybe

Trees with cavities present? ☐ No ☐ Rare ☒ Occasional ☐ Abundant
If present:

	Height ranges of tree	Range of Tree DBH	Range of Cavity Heights	Cavity sizes (approx. diameter)
	5-20m	10cm – >50	4-18m	Small & medium

Presence of large stick nests (i.e. raptor nests)? ☐ Yes ☒ No
If yes, UTM and describe tree type, height and position in tree, size of nest, species present

Evidence of disturbance? (i.e logging, roads, paths, ATV use, trails) ☒ Yes ☐ No
If yes, describe regenerating

Seeps/ springs present? ☐ Yes ☒ No If yes,

Seep/Spring #	UTM	Description	Surrounding Habitat

Vernal Pools Present? ☒ Yes ☐ No If yes,

#	Location	Depth of water	Size of pool (diameter)	Presence of emergent/submergent veg?	Presence of shrubs, logs at pond edge
	SWT	dry	variable	yes	yes

ELC — COMMUNITY DESCRIPTION & CLASSIFICATION

SITE: 16101064 6		POLYGON: (1)	
SURVEYOR(S): GAW	DATE: Sept. 30. 2010	UTME:	
START:	END	UTMZ:	UTMN:

POLYGON DESCRIPTION

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
☐ TERRESTRIAL	☐ ORGANIC	☐ LACUSTRINE	☒ NATURAL	☐ PLANKTON	☐ LAKE
☒ WETLAND	☒ MINERAL SOIL	☐ RIVERINE	☐ CULTURAL	☐ SUBMERGED	☐ POND
☐ AQUATIC	☐ PARENT MIN.	☐ BOTTOMLAND		☐ FLOATING-LVD.	☐ RIVER
	☐ ACIDIC BEDRK.	☐ TERRACE		☐ GRAMINOID	☐ STREAM
	☐ BASIC BEDRK.	☐ VALLEY SLOPE		☐ FORB	☐ MARSH
	☐ CARB. BEDRK.	☐ TABLELAND		☐ LICHEN	☒ SWAMP
		☒ ROLL. UPLAND		☐ BRYOPHYTE	☐ FEN
		☐ CLIFF		☒ DECIDUOUS	☐ BOG
		☐ TALUS		☐ CONIFEROUS	☐ BARREN
		☐ CREVICE / CAVE		☐ MIXED	☐ MEADOW
		☐ ALVAR			☐ PRAIRIE
		☐ ROCKLAND			☐ THICKET
		☐ BEACH / BAR			☐ SAVANNAH
		☐ SAND DUNE			☐ WOODLAND
		☐ BLUFF			☐ FOREST
					☐ PLANTATION

SITE	COVER
☐ OPEN WATER	☐ OPEN
☐ SHALLOW WATER	☐ SHRUB
☒ SURFICIAL DEP.	☒ TREED
☐ BEDROCK	

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	2	4	ACERUBR > QUERCUS ≥ FRAPENN
2	SUB-CANOPY	3	4	FRAPENN > blue beech
3	UNDERSTOREY	4-5	4	blue beech > FRAPENN
4	GRD. LAYER	6-7	4	moss, RHURANE, FRAVESC

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:	A	< 10	A	10 - 24	O	25 - 50	/ > 50
STANDING SNAGS:	O	< 10	R	10 - 24	R	25 - 50	/ > 50
DEADFALL / LOGS:	A	< 10	O	10 - 24	R	25 - 50	/ > 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :		PIONEER		YOUNG		MID-AGE	X	MATURE		OLD GROWTH

SOIL ANALYSIS:

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

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS: Swamp	CODE: SW
COMMUNITY SERIES: Deciduous Swamp	CODE: SWD
ECOSITE: Maple Mineral Deciduous Swamp	CODE: SWD3
VEGETATION TYPE: Red Maple Mineral Deciduous Swamp	CODE: SWD3-1
INCLUSION	CODE:
COMPLEX	CODE:

Notes: Front (N) edge is younger regen

ELC — PLANT SPECIES LIST

581842

SITE: Turbine 26 + Access Rd	
POLYGON: Feature 55	
DATE:	
SURVEYOR(S):	

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 1	2	3	4	COLL.
ACERUBR	D	A	O		
FRAPENN	O	O	O	O	
ULMAMER	R	O			
QUERUBR	A				
Shagbark	O	O			
TILAMER	O	O			
QUEALBA	O				
Swamp wht oak	O				
FAGGRAN			R		
OSTVIRG		R			
FRANIGR	O	O	O	O	
QUEMACR	O				
blue beech		O	D	A	
RHACATH				O	
com barberry				R	
PRUVIV1				O	
RUBIDAE				O	
LONDIOI				O	
RIBAMER					x

SPECIES CODE	LAYER 1	2	3	4	COLL.
RHURANE				A	
VEROFFI				O	
Carex sp.				O	
FRAVESC				A	
GEUAPPE				O	
AGRGRYP				O	
OXASTRI				O	
ONOSENS				O	
EUOBOV				O	
wild basil				O	
PREALBA				O	
Viola sp.				O	
CIRLEUT				O	
GERMACU				O	
GEUCANA				O	
mosses				A	
climb. p. ivy				O	
ASTLATE				O	
SOLDULC				O	
hog peanut				O	
SMITHISP				O	
Skullcap				O	
false s. seal				O	
Grass sp.				O	
PARINSE				O	
GLYSTRI				O	

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE:		POLYGON:	
	SURVEYOR(S):	DATE:		UTME:
	START:	END	UTMZ:	UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY			
2	SUB-CANOPY			
3	UNDERSTOREY			
4	GRD. LAYER			

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:		< 10		10 - 24		25 - 50		> 50	
STANDING SNAGS:		< 10		10 - 24		25 - 50		> 50	
DEADFALL / LOGS:		< 10		10 - 24		25 - 50		> 50	

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :		PIONEER		YOUNG		MID-AGE		MATURE		OLD GROWTH

SOIL ANALYSIS:

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

COMMUNITYCLASSIFICATION:

COMMUNITY CLASS:		CODE:
COMMUNITY SERIES:		CODE:
ECOSITE:		CODE:
VEGETATION TYPE:		CODE:
☐ INCLUSION		CODE:
☐ COMPLEX		CODE:

Notes:

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

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 1	2	3	4	COLL.	SPECIES CODE	LAYER 1	2	3	4	COLL.

Page ...... of ......

Stantec Consulting Ltd.
70-1 Southgate Drive
Guelph, Ontario, Canada
N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

Wildlife Habitat Assessment

Feature SS
Turbine 24
581844

Project Number: 161010646	Project Name: Samsung
Date / Time: Sept. 30. 2010	Field Personnel: GAW

Weather Conditions:	Temp:	Wind:	Cloud:	PPT:	PPT in last 24 hrs:
	20°	1-2	100%	Ø	FOG

Reptile Hibernacula Features i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)

Does the site contain potential reptile hibernacula features? ☐ Yes ☒ No (if yes, describe details in Table 1).

Bat Hibernacula Features i.e. karst topography, abandoned mines or caves

Does the site contain potential bat hibernacula features? ☐ Yes ☒ No (if yes, describe details in Table 1).

Table 1: Potential bat/reptile hibernacula features identified on site

UTM	Feature type	Photo #	Description	Species observed using feature

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.e. AMRO/VO AMCR DOWO	GRSQ	AMTO SPPE		

→ drainage ditch through woods

Woodland Assessment- *complete 1 assessment for each woodland*

Woodlot # (indicate on map) : only one

Approximate age of stand Mature

Are large (i.e. >40cmDBH and >25m tall) **trees present** ☒ Yes ☐ No
If yes, approximate # present or % of stand <5%
Location in stand (i.e throughout, in west side only, in FOD2-6 only etc..) oaks throughout

Are snags present? ☒ Yes ☐ No
If yes provide characterization of number present, height and DBH of snags and indicate if they contain loose bark. fairly abundant, most 15-25cm DBH with loose bark
BAT MAT ROOST? No.

Trees with cavities present? ☐ No ☒ Rare ☐ Occasional ☐ Abundant
If present:

	Height ranges of tree	Range of Tree DBH	Range of Cavity Heights	Cavity sizes (approx. diameter)
	4-10m	15-30cm	3-7m	small + medium

Presence of large stick nests (i.e. raptor nests)? ☐ Yes ☒ No
If yes, UTM and describe tree type, height and position in tree, size of nest, species present

Evidence of disturbance? (i.e logging, roads, paths, ATV use, trails) ☒ Yes ☐ No
If yes, describe past logging

Seeps/ springs present? ☐ Yes ☒ No If yes,

Seep/Spring #	UTM	Description	Surrounding Habitat

Vernal Pools Present? ☒ Yes ☐ No If yes,

#	Location	Depth of water	Size of pool (diameter)	Presence of emergent/submergent veg?	Presence of shrubs, logs at pond edge
	throughout. SWT within woods could be breed habitat	shallow "	→ 2x10m	yes - shrubs	yes

ELC — COMMUNITY DESCRIPTION & CLASSIFICATION

SITE: 16101064		POLYGON: 1	
SURVEYOR(S): GAW	DATE: Sept. 30. 2010	UTME:	
START:	END	UTMZ:	UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	2	1	ACERUBR ≥ QUEMACR
2	SUB-CANOPY	3	4	" > FRAPENN
3	UNDERSTOREY	4-5	4	" " > Cornus = blue beech
4	GRD. LAYER	6-7	4	RHURA·NE, RUBIDAE, FRAVESC

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:	D	< 10	A	10 - 24	R	25 - 50	R	> 50
STANDING SNAGS:	O	< 10	R	10 - 24	O	25 - 50	O	> 50
DEADFALL / LOGS:	A	< 10	O	10 - 24	/	25 - 50	/	> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE:		PIONEER		YOUNG	X	MID-AGE		MATURE		OLD GROWTH

SOIL ANALYSIS:

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

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS: Swamp		CODE: SW
COMMUNITY SERIES: Deciduous Swamp		CODE: SWD
ECOSITE: Maple Mineral Deciduous Swamp		CODE: SWD3
VEGETATION TYPE: Red Maple Mineral Deciduous Swamp		CODE: SWD3-1
☐ INCLUSION		CODE:
☐ COMPLEX		CODE:

Notes: younger regen

ELC — PLANT SPECIES LIST

581866

SITE: Turbine 23	
POLYGON: Feature 55	
DATE:	
SURVEYOR(S):	

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 1	2	3	4	COLL.
ACERUBR	D	A	A		
QUEMACR	A	O			
FRAPENN	O	O	O	O	
ULMAMER		O	O		
blue beech		O	O		
Shagbark	R	O			
ACEFREE	O	O			
FAGGRAN		R	O		
silky dogwd			A		
RHACATH			O		
Crataegus sp			O		
RUBIDAE				O	
SPIALBA			O	O	
PRUVIVI			O		

SPECIES CODE	LAYER 1	2	3	4	COLL.
RHURA·NE				A	
FRAVESC				A	
Carex sp.				O	
ASTLATE				O	
VEROFFI				O	
IRIVERS				R	
ONOSENS				O	
St. nettle				O	
SOLDULC				O	
CARINTU				O	

ELC
COMMUNITY DESCRIPTION & CLASSIFICATION

SITE:		POLYGON: (2)	
SURVEYOR(S):	DATE:		UTME:
START:	END	UTMZ:	UTMN:

POLYGON DESCRIPTION

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
☐ TERRESTRIAL ☒ WETLAND ☐ AQUATIC	☐ ORGANIC ☒ MINERAL SOIL ☐ PARENT MIN. ☐ ACIDIC BEDRK. ☐ BASIC BEDRK. ☐ CARB. BEDRK.	☐ LACUSTRINE ☐ RIVERINE ☐ BOTTOMLAND ☐ TERRACE ☐ VALLEY SLOPE ☐ TABLELAND ☒ ROLL. UPLAND ☐ CLIFF ☐ TALUS ☐ CREVICE / CAVE ☐ ALVAR ☐ ROCKLAND ☐ BEACH / BAR ☐ SAND DUNE ☐ BLUFF	☒ NATURAL ☐ CULTURAL	☐ PLANKTON ☐ SUBMERGED ☐ FLOATING-LVD. ☐ GRAMINOID ☐ FORB ☐ LICHEN ☐ BRYOPHYTE ☒ DECIDUOUS ☐ CONIFEROUS ☐ MIXED	☐ LAKE ☐ POND ☐ RIVER ☐ STREAM ☐ MARSH ☒ SWAMP ☐ FEN ☐ BOG ☐ BARREN ☐ MEADOW ☐ PRAIRIE ☐ THICKET ☐ SAVANNAH ☐ WOODLAND ☐ FOREST ☐ PLANTATION

SITE
☐ OPEN WATER
☐ SHALLOW WATER
☒ SURFICIAL DEP.
☐ BEDROCK

COVER
☐ OPEN
☒ SHRUB
☐ TREED

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	3	2	ACERUBR > ULMAMER
2	SUB-CANOPY	4	4	Cornus
3	UNDERSTOREY	5	4	"
4	GRD. LAYER	6-7	4	grasses, SOLRUGO, EUTGRAM

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:	D	< 10	O	10 - 24	/	25 - 50	/	> 50
STANDING SNAGS:	O	< 10	O	10 - 24	/	25 - 50	/	> 50
DEADFALL / LOGS:	O	< 10	O	10 - 24	/	25 - 50	/	> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :		PIONEER	X	YOUNG		MID-AGE		MATURE		OLD GROWTH

SOIL ANALYSIS:

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

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS: Swamp	CODE: SW
COMMUNITY SERIES: Thicket Swamp	CODE: SWT
ECOSITE: Mineral Thicket Swamp	CODE: SWT2
VEGETATION TYPE: Silky Dogwood Mineral Thicket Swamp	CODE: SWT2-8
☐ INCLUSION: Forb-graminoid Min M. Marsh	CODE:
☒ COMPLEX: ↘	CODE: MAM2-11*

Notes: occasional large oaks in super-canopy

ELC
PLANT SPECIES LIST

SITE:	
POLYGON:	
DATE:	
SURVEYOR(S):	

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 1	2	3	4	COLL.
Silky dogwood		D	D		
ILEVERT		O	O		
ULMAMER	O	O			
FRAPENN	O	O			
ACERUBR	A	A			
CORSTOL		A	A		
SPIALBA			O		
ROSMULT			O		
ROSPALU			O		
QUEMACR	O	O			
RHACATH			O		

SPECIES CODE	LAYER 1	2	3	4	COLL.
Grass sp				A	
Carex sp				O	
GLYSTRI				O	
SOLDULC				O	
EUTGRAM				A	
SOLRUGO				A	
P.st aster				O	

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Fax: (519) 836-2493

Wildlife Habitat Assessment

Feature 55
Turbine 23
581866

Project Number 161010646

Project Name: Samsung

Date / Time: Sept. 30. 2010

Field Personnel: GAW

Weather Conditions:	Temp:	Wind:	Cloud:	PPT:	PPT in last 24 hrs:
	20°	1-2	100%	ø	Fog

Reptile Hibernacula Features i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)

Does the site contain potential reptile hibernacula features? ☐ Yes ☒ No (if yes, describe details in Table 1).

Bat Hibernacula Features i.e. karst topography, abandoned mines or caves

Does the site contain potential bat hibernacula features? ☐ Yes ☒ No (if yes, describe details in Table 1).

Table 1: Potential bat/reptile hibernacula features identified on site

UTM	Feature type	Photo #	Description	Species observed using feature

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.e. AMRO/VO RWBB DOWO AMCR	GRSQ Deer east. cottontail	NLFR		

Woodland Assessment- *complete 1 assessment for each woodland*

Woodlot # (indicate on map) : eastern (Feature 55)

Approximate age of stand young w mature trees

Are large (i.e. >40cmDBH and >25m tall) **trees present** ☒ Yes ☐ No
If yes, approximate # present or % of stand < 5%
Location in stand (i.e throughout, in west side only, in FOD2-6 only etc..) oaks throughout

Are snags present? ☒ Yes ☐ No
If yes provide characterization of number present, height and DBH of snags and indicate if they contain loose bark. Some very large, concentrated @ west end. two > 50cm DBH some w loose bark. Above SWT vegetation.

BAT MAT Roost? Maybe

Trees with cavities present? ☐ No ☐ Rare ☒ Occasional ☐ Abundant
If present:

	Height ranges of tree	Range of Tree DBH	Range of Cavity Heights	Cavity sizes (approx. diameter)
	5-20m	10cm – >50	4-18m	Small & medium

Presence of large stick nests (i.e. raptor nests)? ☐ Yes ☒ No
If yes, UTM and describe tree type, height and position in tree, size of nest, species present

Evidence of disturbance? (i.e logging, roads, paths, ATV use, trails) ☒ Yes ☐ No
If yes, describe regenerating

Seeps/ springs present? ☐ Yes ☒ No If yes,

Seep/Spring #	UTM	Description	Surrounding Habitat

Vernal Pools Present? ☒ Yes ☐ No If yes,

#	Location	Depth of water	Size of pool (diameter)	Presence of emergent/submergent veg?	Presence of shrubs, logs at pond edge
	SWT	dry	variable	yes	yes

ELC — COMMUNITY DESCRIPTION & CLASSIFICATION

SITE: 161010646		POLYGON: 1	
SURVEYOR(S): GAW	DATE: Sept. 30. 2010	UTME:	
START:	END	UTMZ:	UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	2	4	ACERUBR ≥ FRAXINUS ≥ QUERCUS
2	SUB-CANOPY	3	4	FRAXINUS > blue beech
3	UNDERSTOREY	4-5	4	blue beech > FRAXINUS
4	GRD. LAYER	6-7	4	moss, RHURA·NE, FRAVESC

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:	A	< 10	A	10 - 24	O	25 - 50	R	> 50
STANDING SNAGS:	O	< 10	R	10 - 24	R	25 - 50	/	> 50
DEADFALL / LOGS:	A	< 10	O	10 - 24	R	25 - 50	/	> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :		PIONEER		YOUNG		MID-AGE	X	MATURE		OLD GROWTH

SOIL ANALYSIS:

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

COMMUNITY CLASSIFICATION:

		CODE:
COMMUNITY CLASS: Swamp		SW
COMMUNITY SERIES: Deciduous Swamp		SWD
ECOSITE: Maple Mineral Deciduous Swamp		SWD3
VEGETATION TYPE: Red Maple Mineral Deciduous Swamp		SWD3-1
INCLUSION		CODE:
COMPLEX		CODE:

Notes: Drainage ditch through SWD running E-W

581844

ELC — PLANT SPECIES LIST

SITE: Turbine 24 Feature 55

POLYGON:

DATE:

SURVEYOR(S):

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 1	2	3	4	COLL.
POPTREM	R				
FAGGRAN	O	O			nearer edges
ULMAMER	O	O	O		
QUERUBR	A	O			
FRAPENN	O	O	O	O	
ACERUBR	D	A	A		
Shagbark	O	O			
TILAMER	O	O			
QUEALBA	O				
swmp wh. oak	O				
FAGGRAN			O		
OSTVIRG		O	O		
FRANIGR	O	O	O	O	
blue beech		A	D	O	
RIBCYNO			O		
PRUSERO			R		
RUBIDAE			O		
silky dogwood			O		
ROSPALU			O		
SPIALBA			O		
QUEMACR	O				

SPECIES CODE	LAYER 1	2	3	4	COLL.
DRYMARG				O	
ladyfern				O	
St. nettle				O	
l.l.aster				O	
IMPCAPE				O	
VITRIPA				O	
RHURA·NE				A	
FRAVESC				A	
GEUCANA				O	
EUOBOV				O	
ONOSENS				O	
OXASTRI				O	
PREALBA				O	
Viola sp				A	
CIRLEUT				O	
GERMACU				O	
moss				A	
climb. p. ivy				O	
ASTLAE				O	
hog. peanut				O	
GLYSTRI				O	

ELC COMMUNITY DESCRIPTION & CLASSIFICATION

SITE:		POLYGON: (2)	
SURVEYOR(S):	DATE:		UTME:
START:	END	UTMZ:	UTMN:

POLYGON DESCRIPTION

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
☐ TERRESTRIAL ☑ WETLAND ☐ AQUATIC	☐ ORGANIC ☑ MINERAL SOIL ☐ PARENT MIN ☐ ACIDIC BEDRK. ☐ BASIC BEDRK. ☐ CARB. BEDRK.	☐ LACUSTRINE ☐ RIVERINE ☐ BOTTOMLAND ☐ TERRACE ☐ VALLEY SLOPE ☐ TABLELAND ☑ ROLL. UPLAND ☐ CLIFF ☐ TALUS ☐ CREVICE / CAVE ☐ ALVAR ☐ ROCKLAND ☐ BEACH / BAR ☐ SAND DUNE ☐ BLUFF	☑ NATURAL ☐ CULTURAL	☐ PLANKTON ☐ SUBMERGED ☐ FLOATING-LVD. ☐ GRAMINOID ☐ FORB ☐ LICHEN ☐ BRYOPHYTE ☑ DECIDUOUS ☐ CONIFEROUS ☐ MIXED	☐ LAKE ☐ POND ☐ RIVER ☐ STREAM ☐ MARSH ☑ SWAMP ☐ FEN ☐ BOG ☐ BARREN ☐ MEADOW ☐ PRAIRIE ☐ THICKET ☐ SAVANNAH ☐ WOODLAND ☐ FOREST ☐ PLANTATION

SITE

☐ OPEN WATER
☐ SHALLOW WATER
☑ SURFICIAL DEP.
☐ BEDROCK

COVER

☐ OPEN
☑ SHRUB
☐ TREED

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	3	4	ACERUBR > ILEVERT
2	SUB-CANOPY	4-5	4	Cornus
3	UNDERSTOREY	6	4	"
4	GRD. LAYER	7	4	grass, sedge, EUTGRAM, SOLRUGO

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:	D < 10	R 10 - 24	/ 25 - 50	/ > 50
STANDING SNAGS:	○ < 10	/ 10 - 24	/ 25 - 50	/ > 50
DEADFALL / LOGS:	C < 10	/ 10 - 24	/ 25 - 50	/ > 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :		PIONEER	X	YOUNG		MID-AGE		MATURE		OLD GROWTH

SOIL ANALYSIS:

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

COMMUNITYCLASSIFICATION:

COMMUNITY CLASS: Swamp	CODE: SW	
COMMUNITY SERIES: Thicket Swamp	CODE: SWT	
ECOSITE: Mineral Thicket Swamp	CODE: SWT2	
VEGETATION TYPE: Red Maple Mineral Thicket Swamp	CODE: SWT2-15*	
INCLUSION	CODE:	
COMPLEX	CODE:	

Notes:

ELC PLANT SPECIES LIST

SITE:	
POLYGON:	
DATE:	
SURVEYOR(S):	

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 1	2	3	4	COLL.
Silky dogwood		D	A		
ILEVERT		O	O		
ULMAMER	O	O			
FRAPENN	O	O			
ACERUBR	A	A			
CORSTOL		A	A		
ROSMULT			O		
ROSPALU			O		
QUEMACR	O	O			
RHACATH		O	O		
SPIALBA			O		

SPECIES CODE	LAYER 1	2	3	4	COLL.
grass				O	
Carex sp.				A	
GLYSTRI				O	
SOLDULC				O	
Carrion flwr				R	
EUTGRAM				A	
SOLRUGO				A	
P.St. aster				A	

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Wildlife Habitat Assessment

Feature 55
Turbine 25
581845

Project Number 161010646

Project Name: Samsung

Date / Time: Sept. 30. 2010

Field Personnel: GAW

Weather Conditions:	Temp:	Wind:	Cloud:	PPT:	PPT in last 24 hrs:
	18°	1-2	100%	Ø	Fog

Reptile Hibernacula Features i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)

Does the site contain potential reptile hibernacula features? ☐ Yes ☒ No (if yes, describe details in Table 1).

Bat Hibernacula Features i.e. karst topography, abandoned mines or caves

Does the site contain potential bat hibernacula features? ☐ Yes ☒ No (if yes, describe details in Table 1).

Table 1: Potential bat/reptile hibernacula features identified on site

UTM	Feature type	Photo #	Description	Species observed using feature

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.e. AMRO/VO AMCR KILL DOWO	SKUNK	AMTO SPPE		

Woodland Assessment- *complete 1 assessment for each woodland*

Woodlot # (indicate on map) : Only One

Approximate age of stand Mature

Are large (i.e. >40cmDBH and >25m tall) **trees present** ☒ Yes ☐ No
If yes, approximate # present or % of stand <5%
Location in stand (i.e throughout, in west side only, in FOD2-6 only etc..) oaks throughout

Are snags present? ☒ Yes ☐ No
If yes provide characterization of number present, height and DBH of snags and indicate if they contain loose bark. few, 15-25cm DBH, some w loose bark
BAT MAT ROOST = No

Trees with cavities present? ☐ No ☐ Rare ☒ Occasional ☐ Abundant
If present:

	Height ranges of tree	Range of Tree DBH	Range of Cavity Heights	Cavity sizes (approx. diameter)
	4m – 20m	15-25cm	3m-10m	small + medium

Presence of large stick nests (i.e. raptor nests)? ☐ Yes ☒ No
If yes, UTM and describe tree type, height and position in tree, size of nest, species present

Evidence of disturbance? (i.e logging, roads, paths, ATV use, trails) ☒ Yes ☐ No
If yes, describe very old trail, old logging evidence

Seeps/ springs present? ☐ Yes ☒ No If yes,

Seep/Spring #	UTM	Description	Surrounding Habitat

Vernal Pools Present? ☐ Yes ☐ No If yes,

#	Location	Depth of water	Size of pool (diameter)	Presence of emergent/submergent veg?	Presence of shrubs, logs at pond edge
	see A – dug pool also throughout SWD	>50cm Dry	5m x 5m extensive	yes	yes

ELC — COMMUNITY DESCRIPTION & CLASSIFICATION

SITE: 161010646		POLYGON: (1)	
SURVEYOR(S): GAW	DATE: Sept. 30. 2010	UTME:	
START:	END	UTMZ:	UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	2	4	ACERUBR ≥ FRAXINUS ≥ QUERCUS
2	SUB-CANOPY	3	4	FRAXINUS > blue beech
3	UNDERSTOREY	4-5	4	blue beech > FRAXINUS
4	GRD. LAYER	6-7	4	moss, RHURA·NE, FRAVESC

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:	A	< 10	A	10 - 24	O	25 - 50	R	> 50
STANDING SNAGS:	O	< 10	R	10 - 24	R	25 - 50	/	> 50
DEADFALL / LOGS:	A	< 10	O	10 - 24	R	25 - 50	/	> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :		PIONEER		YOUNG		MID-AGE	X	MATURE		OLD GROWTH

SOIL ANALYSIS:

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

COMMUNITYCLASSIFICATION:

COMMUNITY CLASS: Swamp	CODE: SW
COMMUNITY SERIES: Deciduous Swamp	CODE: SWD
ECOSITE: Maple Mineral Deciduous Swamp	CODE: SWD3
VEGETATION TYPE: Red Maple Mineral Deciduous Swamp	CODE: SWD3-1
INCLUSION	CODE:
COMPLEX	CODE:

Notes:

581845

ELC — PLANT SPECIES LIST

SITE: Turbine 25 + Access Rd	
POLYGON: Feature 55	
DATE:	
SURVEYOR(S):	

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 1	2	3	4	COLL.
ACERUBR	D	A	O		
FRAPENN	O	O	O	O	
ULMAMER	R	O			
QUERUBR	A				
Shagbark	O	O			
TILAMER	O	O			
QUEALBA	O				
swmp wht oak	O				
FAGGRAN			R		
OSTVIRG		O	O		
FRANIGR	O	O	O	O	
blue beech		A	A		
PRUSERO				R	
SAMCANA				R	
RUBALLE			O		x
Silky dogwood			O		
SPIALBA			O		
ROSPALU			O		
QUEMACR	O				

SPECIES CODE	LAYER 1	2	3	4	COLL.	
1.1. aster				O		
VITRIPA				O		
DRYCART				O		
IMPCAPE				O		
LIGVULG				O	X	Photo
foamflower				O		
RHU'RA·NE				A		
FRAVESC				A		
GEUCANA				O		
EUOOBOV				G		
ONOSENS				O		
OXASTRI				O		
wild basil				O		
PREALBA				O		
Viola sp				O		
CIRLEUT				O		
GERMACU				O		
mosses				A		
climb p. IVY				O		
ASTLATE				G		
hog peanut				O		
skullcap				O		
false s. seal				O		
GLYSTRI				O		
PARINSE				O		

ELC COMMUNITY DESCRIPTION & CLASSIFICATION

SITE:		POLYGON:	
SURVEYOR(S):	DATE:		UTME:
START:	END:	UTMZ:	UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY			
2	SUB-CANOPY			
3	UNDERSTOREY			
4	GRD. LAYER			

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:	< 10	10 - 24	25 - 50	> 50	
STANDING SNAGS:	< 10	10 - 24	25 - 50	> 50	
DEADFALL / LOGS:	< 10	10 - 24	25 - 50	> 50	

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :	PIONEER	YOUNG	MID-AGE	MATURE	OLD GROWTH

SOIL ANALYSIS:

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

COMMUNITYCLASSIFICATION:

COMMUNITY CLASS:	CODE:
COMMUNITY SERIES:	CODE:
ECOSITE:	CODE:
VEGETATION TYPE:	CODE:
INCLUSION	CODE:
COMPLEX	CODE:

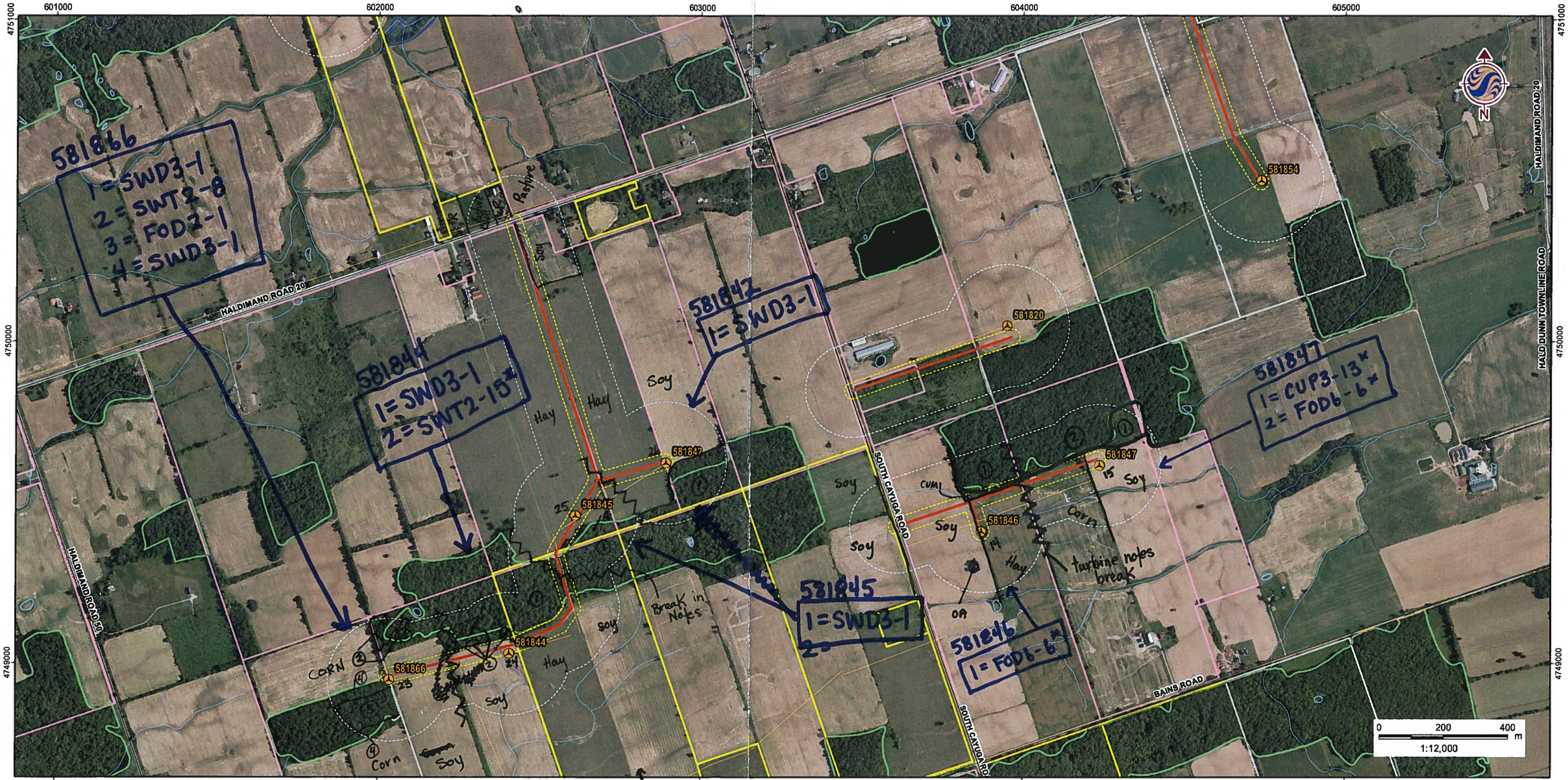
Notes:

ELC PLANT SPECIES LIST

SITE:	
POLYGON:	
DATE:	
SURVEYOR(S):	

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 1	2	3	4	COLL.	SPECIES CODE	LAYER 1	2	3	4	COLL.



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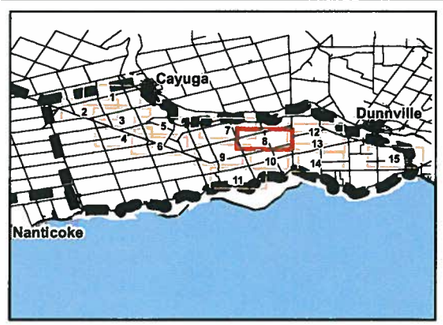
September 2010
160960577

Legend

- Project Location
- Proposed Turbine Location
- Proposed Access Road
- Proposed Collector Line
- ROW Installation Zone
- 120m Investigation Zone
- Elexco Aquired Agreements
- Government Lands
- UDI Lands
- Road
- Railway
- Abandoned Railway
- Transmission Line (OBM)
- Deer Wintering Area
- Provincially Significant Wetland
- Non-Provincially Significant Wetland
- Watercourse (OBM)
- Waterbody

Area of Natural and Scientific Interest (ANSI)

- Life Science, Provincially Significant
- Earth Science, Provincially Significant
- Earth Science, Regionally Significant



Original: Don't Throw Out

Notes

1. Coordinate System: UTM NAD 83 - Zone 17 (N).
2. Data Sources: Ontario Ministry of Natural Resources © Queens Printer Ontario, 2009; © GREP, 2010; © Samsung, 2010.
3. Image Source: © First Base Solutions, 2010 - Imagery Date: Spring 2006; **LIDAR IMAGERY SOURCE???**

Client/Project
SAMSUNG C&T
GRAND RENEWABLE ENERGY PARK

Figure No.
FIELD MAP 8

Title
PROJECT LOCATION MAP

Stantec

Stantec Consulting Ltd.
70-1 Southgate Drive
Guelph, Ontario, Canada
N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

Wildlife Habitat Assessment

Feature 5b

Project Number: 161010646

Project Name: Turbine 3/3 581866

Date / Time: Sept. 30. 2010

Field Personnel: GAW

Weather Conditions:	Temp:	Wind:	Cloud:	PPT:	PPT in last 24 hrs:
	20°	1-2	100%	Ø	Fog

Reptile Hibernacula Features i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)

Does the site contain potential reptile hibernacula features? ☐ Yes ☒ No (if yes, describe details in Table 1).

Bat Hibernacula Features i.e. karst topography, abandoned mines or caves

Does the site contain potential bat hibernacula features? ☐ Yes ☒ No (if yes, describe details in Table 1).

Table 1: Potential bat/reptile hibernacula features identified on site

UTM	Feature type	Photo #	Description	Species observed usi feature

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.e. AMRO/VO AMCR	GR. SQ Deer E. cottontail	/	/	/

Woodland Assessment- *complete 1 assessment for each woodland*

Woodlot # (indicate on map) : Feature 56

Approximate age of stand Mature

Are large (i.e. >40cmDBH and >25m tall) **trees present** ☒ Yes ☐ No
If yes, approximate # present or % of stand <10% of stand
Location in stand (i.e throughout, in west side only, in FOD2-6 only etc..) throughout

Are snags present? ☒ Yes ☐ No
If yes provide characterization of number present, height and DBH of snags and indicate if they contain loose bark. Several large beech + other smaller snags (10-14cm DBH). Some w loose bark. Beech were mostly short (broken off).

Trees with cavities present? ☐ No ☐ Rare ☒ Occasional ☐ Abundant
If present:

	Height ranges of tree	Range of Tree DBH	Range of Cavity Heights	Cavity sizes (approx. diameter)
	4-20m	10-40cm	3-10m	Small + medium

Bat Mat Roost? Possible

Presence of large stick nests (i.e. raptor nests)? ☐ Yes ☒ No
If yes, UTM and describe tree type, height and position in tree, size of nest, species present

Evidence of disturbance? (i.e logging, roads, paths, ATV use, trails) ☒ Yes ☐ No
If yes, describe drainage ditch

Seeps/ springs present? ☐ Yes ☒ No If yes,

Seep/Spring #	UTM	Description	Surrounding Habitat

Vernal Pools Present? ☒ Yes ☐ No If yes,

#	Location	Depth of water	Size of pool (diameter)	Presence of emergent/submergent veg?	Presence of shru logs at pond edg
	SWD	dry, likely shallow	Variable	yes	yes
	FOD	"	"	"	"

ELC — COMMUNITY DESCRIPTION & CLASSIFICATION

SITE: 161010646		POLYGON: (3)	
SURVEYOR(S): GAW	DATE: Sept. 30. 2010	UTME:	
START:	END	UTMZ:	UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	2	4	ACERUBR = FAGGRAN > Quercus
2	SUB-CANOPY	3	4	FAGGRAN > ACERUBR
3	UNDERSTOREY	4-5	4	" > blue beech = ACERUBR
4	GRD. LAYER	6-7	4	l.l. aster SOLCAES, seedlings

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:	A	< 10	A	10 - 24	A	25 - 50	R	> 50
STANDING SNAGS:	R	< 10	O	10 - 24	R	25 - 50	/	> 50
DEADFALL / LOGS:	A	< 10	O	10 - 24	R	25 - 50	/	> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE:		PIONEER		YOUNG		MID-AGE	X	MATURE		OLD GROWTH

SOIL ANALYSIS:

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

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS: Forest		CODE: FO
COMMUNITY SERIES: Deciduous Forest		CODE: FOD
ECOSITE: D-F Oak-Maple-Hickory Dec. Forest		CODE: FOD2
VEGETATION TYPE: Dry-fresh Oak-Red Maple Deciduous Forest		CODE: FOD2-1
X INCLUSION		CODE: FOD2-2
COMPLEX		CODE:

Notes: Vernal pools - shallow

581866

ELC — PLANT SPECIES LIST

SITE: Turbine 2/3

POLYGON: Feature 56

DATE:

SURVEYOR(S):

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 1	2	3	4	COLL.
POPTREM		R			
FAGGRAN	A	A	A	O	
ACERUBR	A	A	A	O	
QUERUBR	O	O			
OSTVIRG		O	O		
FRAPENN		O	A		
blue beech			A		
TILAMER					
ACESASA	R	O			
PRUSERO		O	O		
SAMCANA			R		
PRUVIVI			O		
RHACATH			O		
RIBCYNO			R		
ROSPALU			R		
CORFO·RA			O		

SPECIES CODE	LAYER 1	2	3	4	COLL.
l.l. aster				A	
SOLCAES				O	
barren straw.				O	
beech drops				O	
Viola sp.				A	
DRYCART				O	
true sol. seal				O	
GEUCANA				O	
TRIEREC				O	
sweet cecily				O	
OXASTRI				O	
FRAVESC				O	
RHURA·NE				O	
GLYSTRI				O	
foam flower				O	
blnt. lob. hepatica				O	
EUOBOV				O	
MAICANA				O	
hog peanut				O	
PREALBA				O	

ELC — COMMUNITY DESCRIPTION & CLASSIFICATION

SITE:	POLYGON: (4)	
SURVEYOR(S):	DATE:	UTME:
START:	END	UTMZ: / UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	2	4	ACERUBR > QUERCUS ≥ FRAPENN
2	SUB-CANOPY	3	4	FRAPENN > blue beech
3	UNDERSTOREY	4-5	4	blue beech > FRAPENN
4	GRD. LAYER	6-7	4	RHURA.NE, FRAVESC

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:	A	< 10	A	10 - 24	O	25 - 50	/	> 50
STANDING SNAGS:	O	< 10	R	10 - 24	R	25 - 50	/	> 50
DEADFALL / LOGS:	A	< 10	O	10 - 24	R	25 - 50	/	> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :		PIONEER		YOUNG		MID-AGE	X	MATURE		OLD GROWTH

SOIL ANALYSIS:

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

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS: Swamp		CODE: SW
COMMUNITY SERIES: Deciduous Swamp		CODE: SWD
ECOSITE: Maple Mineral Deciduous Swamp		CODE: SWD3
VEGETATION TYPE: Red Maple Mineral Deciduous Swamp		CODE: SWD3-1
☐ INCLUSION		CODE:
☐ COMPLEX		CODE:

Notes:

ELC — PLANT SPECIES LIST

SITE:

POLYGON:

DATE:

SURVEYOR(S):

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 1	2	3	4	COLL.
ACERUBR	D	A	O		
FRAPENN	O	O	O	O	
ULMAMER	R	O			
QUERUBR	A				
Shagbark	O	O			
TILAMER	O	O	O		
QUEALBA	O				
Swamp wht. oak	O				
FAGGRAN			R		
OSTVIRG		R	O		
FRANIGR	O	O	O	O	
blue beech		O	D	O	
RHACATH			O		
PRUVIVI			O		
RUBIDAE			O		
LONDIOI				O	

SPECIES CODE	LAYER 1	2	3	4	COLL.
RHURA.NE				A	
VEROFFI				O	
CAREX sp				O	
FRAVESC				A	
OXASTRI				O	
ONOSENS				O	
EUOOBOV				O	
PREALBA				O	
Viola sp				O	
CIRLEUT				O	
GERMACU				O	
moss				O	
climb. p. IVY				O	
SOLDULC				O	
GLYSTRI				O	
PARINSE				O	
GEUCANA				O	

602000 603000 604000 605000 606000

4748000

4747000

BAINS ROAD

HALDIMAND ROAD 50

RAINHAM ROAD

SOUTH CAYUGA ROAD

HALDIMAND-NORFOLK TOWNLINE ROAD

LAKESHORE ROAD

581817

581818

581810

581808

581808

Soy

Soy

Soy

CORN

CORN

Fallow

Bare Soil

Bare Soil

Fallow

581817
1= MAM2-2
2= SWD2-4*
3= FOD9-1

581810
1= MAM2-2
2= FOD9-1

581808
1= FOD7-2
2= FOD9-1

break b/w turbine rows

N

0 200 400 m

1:12,000

602000 603000 604000 605000 606000

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September 2010
160960577

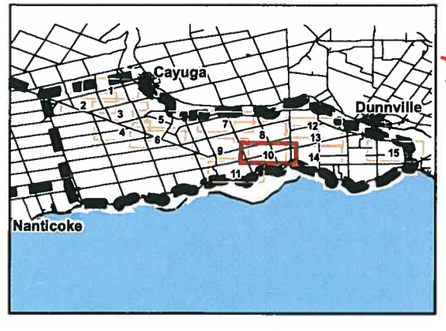
Legend

- Project Location
- Proposed Turbine Location
- Proposed Access Road
- Proposed Collector Line
- ROW Installation Zone
- 120m Investigation Zone
- Elexco Aquired Agreements
- Government Lands
- UDI Lands
- Road
- Railway
- Abandoned Railway
- Transmission Line (OBM)
- Deer Wintering Area
- Provincially Significant Wetland
- Non-Provincially Significant Wetland
- Watercourse (OBM)
- Waterbody

Area of Natural and Scientific Interest (ANSI)

- Life Science, Provincially Significant
- Earth Science, Provincially Significant
- Earth Science, Regionally Significant

Stantec



original:
Don't Throw out

Notes

1. Coordinate System: UTM NAD 83 - Zone 17 (N).
2. Data Sources: Ontario Ministry of Natural Resources © Queens Printer Ontario, 2009; © GREP, 2010; © Samsung, 2010.
3. Image Source: © First Base Solutions, 2010 - Imagery Date: Spring 2006; LIDAR IMAGERY SOURCE???

Client/Project
SAMSUNG C&T
GRAND RENEWABLE ENERGY PARK

Figure No.
FIELD MAP 10

Title
PROJECT LOCATION MAP

Stantec Consulting Ltd.
70-1 Southgate Drive
Guelph, Ontario, Canada
N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

Feature 58

Wildlife Habitat Assessment

581817
Turbine 11 + Access Road

Project Number 161010646

Project Name: Samsung

Date / Time: Sept. 23. 2010

Field Personnel: GAW

Weather Conditions:	Temp:	Wind:	Cloud:	PPT:	PPT in last 24 hrs:
	19°	1-2	50%	0	RAIN

Reptile Hibernacula Features i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)

Does the site contain potential reptile hibernacula features? ☐ Yes ☒ No (if yes, describe details in Table 1).

Bat Hibernacula Features i.e. karst topography, abandoned mines or caves

Does the site contain potential bat hibernacula features? ☐ Yes ☒ No (if yes, describe details in Table 1).

Table 1: Potential bat/reptile hibernacula features identified on site

UTM	Feature type	Photo #	Description	Species observed using feature

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.e. AMRO/VO BLJA MODO	Deer Raccoon	WOFR	Sulphur yellow	