APPENDIX C

Bat Habitat and Snag Density Field Form





\\\) GOLDER

Bat SWH and Snag Density Survey

Project Name:	Project Number:		Surveyors:	Date:	Polygon ID:	Ecosite:
Location Description (or wpt):			Start Time:	End Time:	Photos:	
Polygon Size (ha):	Plots Needed:		Temp:	Wind speed:	Wind Dir:	Precip:
Comments (i.e., disturbance le	vel):					
Stand Structure:	Even-aged	Tiered	Stand Composition:		Homogeneous	Complex/Diverse
Canopy:	Cluttered	Open	Approx. Total Cavitie	s:	<100/ha	>100/ha
Proximity to open wate	er: > 100m	<100m	Karst/sinkhole/cliff/cr	evice//talus/rock pile/rock	coutcrop: >100m	<100m

>25 cm DBH Snags/na	nags/ha	DBH	cm	>25
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(see page 2+)

"Survey a min of 10 plots for ≤10 ha and add 1 plot/ha up to max 35 plots"

General estimate of the density of trees in the entire community:

Trees	<25cm dbh (es	timated)	>25cm dbh (e	stimated)	Description	Comments
Live Trees	<100/ha	>100/ha	<100/ha	>100/ha		
Standing Snags	<10/ha	>10/ha	<10/ha	>10/ha	Dead tree erect	
Deadfall	<10/ha	>10/ha	<10/ha	>10/ha	Dead trees on ground	
Mast Trees	<10/ha	>10/ha	<10/ha	>10/ha	Breaching Canopy / High seeds	
Bark Trees	<10/ha	>10/ha	<10/ha	>10/ha	Exposed or peeling bark	
Cavity Trees	<10/ha	>10/ha	<5/ha 5/ha	– 10/ha > 10/ha	Holes or cracks in trees	
"Leaf Clumps"	<10/ha	>10/ha	<10/ha	>10/ha		



Figure 1: Sample Classification system for snags.

Incidental Tree Observations:

Wpt	Easting	Northing	Photos	Species	Description

Bat Snag Density

Project Name:

Project Number:

Surveyors:

Date:

Polygon ID:

Total Polygon Area: Total Plots Used:

"12.6 m radius survey plot = 0.05 ha"

"Survey a min of 10 plots for \leq 10 ha and add 1 plot/ha up to max 35 plots"

(to be completed in office)

Plot Number	Cavity trees >25cm DBH	Area Surveyed	Cavity Trees per Hectare	Comments
1		0.05		
2		0.05		
3		0.05		
4		0.05		
5		0.05		
6		0.05		
7		0.05		
8		0.05		
9		0.05		
10		0.05		
		0.05		
		0.05		
		0.05		
		0.05		
		0.05		
		0.05		
		0.05		
		0.05		
		0.05		
		0.05		
		0.05		
		0.05		
Total Cavity Tr	ees per hectare = Total cavity trees	found / total area surve	eyed	
		Cavity Trees Per		
		Hectare		

Project	Name:		Pro	oject Number:			Surveyors:	Date:		Poly	gon ID:		
Cavitie	Trees	Tally F	Plot Number	r: 1	Sta	tion Cen	tre UTM:					Radius: 12.6m(0	.05ha)
Snag	Pic#	WPT	Le	ocation			Cavity				Tree		
#			Easting	Northing	HT	Dia	Description	Species	DBH	HT	Snag	Description	
					(m)	(cm)			(cm)	(m)	Class		
	mmon	ts.									Total s	nag >25dm DBH:	Snag/ha:
Plot C	лппен												
Plot C	Jiiiieii										1000015	C	e
Plot C	Jiiiiieii												
Plot Contract Contrac	Trees	Tally F	Plot Number	r: 2	Sta	tion Cen	tre UTM:					Radius: 12.6m(0	.05ha)
Plot Contract Contrac	<u>s Trees</u> Pic#	Tally F WPT	Plot Number	r: 2 ocation	Sta	tion Cen	tre UTM: Cavity				Tree	Radius: 12.6m(0	.05ha)
Cavities Snag #	Trees Pic#	Tally F WPT	Plot Number Lo Easting	r: 2 ocation Northing	Sta	tion Cent	tre UTM: Cavity Description	Species	DBH	HT	Tree Snag	Radius: 12.6m(0	.05ha)
Cavitie Snag #	Trees Pic#	Tally F WPT	Plot Number Lo Easting	r: 2 ocation Northing	Sta HT (m)	tion Cent Dia (cm)	tre UTM: Cavity Description	Species	DBH (cm)	HT (m)	Tree Snag Class	Radius: 12.6m(0	.05ha)
Cavities	<u>s Trees</u> Pic#	Tally F WPT	Plot Number Lo Easting	r: 2 ocation Northing	Sta HT (m)	Dia (cm)	tre UTM: Cavity Description	Species	DBH (cm)	HT (m)	Tree Snag Class	Radius: 12.6m(0	.05ha)
Cavitie Snag #	Trees Pic#	Tally F WPT	Plot Number Lo Easting	r: 2 ocation Northing	Sta HT (m)	Dia (cm)	tre UTM: Cavity Description	Species	DBH (cm)	HT (m)	Tree Snag Class	Radius: 12.6m(0	.05ha)
Cavitie Snag #	s Trees Pic#	Tally F WPT	Plot Number Lo Easting	r: 2 ocation Northing	Sta HT (m)	Dia (cm)	tre UTM: Cavity Description	Species	DBH (cm)	HT (m)	Tree Snag Class	Radius: 12.6m(0	.05ha)
Cavitie Snag #	Trees Pic#	Tally F WPT	Plot Number Lo Easting	r: 2 ocation Northing	Sta HT (m)	Dia (cm)	tre UTM: Cavity Description	Species	DBH (cm)	HT (m)	Tree Snag Class	Radius: 12.6m(0	.05ha)
Cavitie Snag #	s Trees Pic#	Tally F WPT	Plot Number Lo Easting	r: 2 ocation Northing	Sta HT (m)	tion Cent Dia (cm)	tre UTM: Cavity Description	Species	DBH (cm)	HT (m)	Tree Snag Class	Radius: 12.6m(0	.05ha)
Cavities Snag #	Trees Pic#	Tally F WPT	Plot Number Lo Easting	r: 2 ocation Northing	Sta HT (m)	tion Cent Dia (cm)	tre UTM: Cavity Description	Species	DBH (cm)	HT (m)	Tree Snag Class	Radius: 12.6m(0	.05ha)
Cavitie Snag #	s Trees Pic#	Tally F WPT	Plot Number Lo Easting	r: 2 ocation Northing	Sta HT (m)	tion Cent Dia (cm)	tre UTM: Cavity Description	Species	DBH (cm)	HT (m)	Tree Snag Class	Radius: 12.6m(0	.05ha)
Cavities Snag #	S Trees Pic#	Tally F WPT	Plot Number Lasting	r: 2 ocation Northing	Sta	tion Cent Dia (cm)	tre UTM: Cavity Description	Species	DBH (cm)	HT (m)	Tree Snag Class	Radius: 12.6m(0	.05ha)
Cavities Snag #	s Trees Pic#	Tally F WPT	Plot Number Lo Easting	r: 2 ocation Northing	Sta	tion Cent Dia (cm)	tre UTM: Cavity Description	Species	DBH (cm)	HT (m)	Tree Snag Class	Radius: 12.6m(0	.05ha)
Plot Co	s Trees Pic#	Tally F WPT	Plot Number Lasting	r: 2 ocation Northing	Sta	tion Cent Dia (cm)	tre UTM: Cavity Description	Species	DBH (cm)	HT (m)	Tree Snag Class	Radius: 12.6m(0	.05ha)

Bat S	nag D	ensity	/								^			
Project	Name:		Pı	roject Number:			Surveyors:	Date:		Poly	gon ID:			
Cavitie	s Trees	Tally I	Plot Numbe	er: 3	Sta	tion Cen	tre UTM:	1				Radius: 12.6m(0	.05ha)	
Snag	Pic#	WPT	L	ocation			Cavity					Tree		
#			Easting	Northing	HT	Dia	Description	Species	DBH	HT	Snag	Description		
					(m)	(cm)			(cm)	(m)	Class			
Plot C	ommen	ts.									Total s	nag >25dm DBH·	Snag/ha·	
1100 0	ommen										Total	1111 20 111 2 DI 11	Singfina	
Cavitie	s Trees	Tally I	Plot Numbe	er: 4	Sta	tion Cen	tre UTM:					Radius: 12.6m(0	0.05ha)	
Snag	Pic#	WPT	L	ocation		(Cavity				Tree			
#			Easting	Northing	HT	Dia	Description	Species	DBH	HT	Snag	Description		
					(m)	(cm)			(cm)	(m)	Class			
Plot C	ommen	te.	<u>I</u>	I					I	1	Total	nag >25dm DBH·	Snag/ha-	
1 101 C											1 Otal S	mug / 250m DDH.	Shag/ha.	

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Bat S	nag D	ensity	7										
Project	Name:		Pr	oject Number:			Surveyors:	Date:		Poly	gon ID:		
Cavitie	s Trees	Tally I	Plot Numbe	r: 5	Sta	ation Cen	tre UTM:					Radius: 12.6m(0	.05ha)
Snag	Pic#	WPT	L	ocation		(Cavity				Tree	1	
#			Easting	Northing	HT	Dia	Description	Species	DBH	HT	Snag	Description	
					(m)	(cm)			(cm)	(m)	Class		
													1
Plot C	ommen	ts:									Total s	nag >25dm DBH:	Snag/ha:
	T	T II I			C (<i>·</i> · · · · ·							0.51
Cavitie	s Trees		lot Numbe		Sta	ation Cen					T	Kadius: 12.6m (0	.05na)
	PIC#	WPI	L Easting	Nexthine	UT			C	DDU	UT	Gree	Description	
#			Easting	Northing	HI	Dia	Description	Species	DBH	HI	Snag	Description	
					(m)	(cm)			(cm)	(m)	Class		
Diet C	0.000										Tetal -	nog > 25 dra DDU	Snog/box
Plot C	ommen	is:									1 otal s	nag >250m DBH:	Snag/na:

Bat S	nag D	ensity	7								<u> </u>		
Project	Name:		Pr	roject Number:			Surveyors:	Date:		Poly	gon ID:		
Cavitie	s Trees	Tally I	Plot Numbe	er: 7	Sta	tion Cen	tre UTM:	1				Radius: 12.6m(0	.05ha)
Snag	Pic#	WPT	L	ocation		(Cavity				Tree	1	
#			Easting	Northing	HT	Dia	Description	Species	DBH	HT	Snag	Description	
					(m)	(cm)			(cm)	(m)	Class		
Plot C	ommen	ts:									Total s	snag >25dm DBH:	Snag/ha:
Cavitie	s Trees	Tally I	Plot Numbe	er: 8	Sta	tion Cen	tre UTM:					Radius: 12.6m(0	.05ha)
Snag	Pic#	WPT	L	ocation		(Cavity			-	Tree		
#			Easting	Northing	HT	Dia	Description	Species	DBH	HT	Snag	Description	
					(m)	(cm)			(cm)	(m)	Class		
Plot C	ommen	ts:									Total s	mag >25dm DBH:	Snag/ha:

GOLDER

Bat S	nag D	ensity	7								•		
roject	Name:		Pr	roject Number:			Surveyors:	Date:		Poly	gon ID:		
Cavitie	s Trees	Tally I	Plot Numbe	er: 9	Sta	tion Cen	tre UTM:					Radius: 12.6m(0	.05ha)
Snag	Pic#	WPT	L	ocation		(Cavity				Tree		
#			Easting	Northing	HT	Dia	Description	Species	DBH	HT	Snag	Description	
					(m)	(cm)			(cm)	(m)	Class		
										_			
										_			
Plot C	ommen	ts:									Total s	nag >25dm DBH:	Snag/ha:
Cavitie	s Trees	Tally I	Plot Numbe	r: 10	Sta	tion Cen	tre UTM:					Radius: 12.6m(0	.05ha)
Snag	Pic#	WPT	L	ocation			Cavity				Tree	(()
#			Easting	Northing	HT	Dia	Description	Species	DBH	HT	Snag	Description	
			8	6	(m)	(cm)	I. I.	1	(cm)	(m)	Class	I I I	
						_							
					-	_							
Plot C	ommen	te.	1	1					I		Totals	nag >25dm DRH.	Snag/ha-
1 101 C	ommen										Totals	2.5 mag > 2.5 mm DDII.	Shag/ha.

APPENDIX D

Proposed Bat Hibernacula Survey Locations







WAASIGAN	TRANSMISSION L	NE		
TITLE				
CANDIDATI	E BAT HIBERNACU	LASITES		
CONSULTANT		YYYY-MM-DD	2022-03-21	
*** **		DESIGNED	CS	
1121	GOLDEF	PREPARED	MM	
		REVIEWED	####	
		APPROVED	####	
PROJECT NO.	CONTROL	RE	V.	FIGURE
20137728	0001	A		D-1

HYDRO ONE NETWORKS INC.

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PROJECT

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DRAFT

NOTE(S) ALL LOCATIONS ARE APPROXIMATE LOCATIONS OF AMIS FEATURES HAVE BEEN ADJUSTED SLIGHTLY FOR ILLUSTRATIVE PURPOSES TO AVOID OVERLAPPING SYMBOLOGY







Alternative Route 1 Alternative Route 1A

- SECONDARY HIGHWAY

WATERCOURSE LOCAL STUDY AREA WATERBODY

- RAILWAY -

LEGEND

KEY MAP



PROJECT WAASIGAN 1	RANSMISSION LI	NE		
	BAT HIBERNACU	LA SITES		
CONSULTANT		YYYY-MM-DD	2022-03-21	
		DESIGNED	CS	
1121	GOLDER	PREPARED	MM	
		REVIEWED	####	
		APPROVED	####	
	CONTROL	RF	V	FIGURE
PROJECT NO.	CONTROL			TIOOTIL

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NOTE(S) ALL LOCATIONS ARE APPROXIMATE LOCATIONS OF AMIS FEATURES HAVE BEEN ADJUSTED SLIGHTLY FOR ILLUSTRATIVE PURPOSES TO AVOID OVERLAPPING SYMBOLOGY



DRAFT



KEY MAP







WATERCOURSE LOCAL STUDY AREA WATERBODY

SECONDARY HIGHWAY



LEGEND





25mm IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FRO

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1:50,000	KILOMETERS	
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PURPOSES TO AVOID OVERLAPPING SYMBOL	DJUSTED SLIGHTLY DGY	FOR ILLUSTRATIVE
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WAASIGAN TRANSMISSION LIN	IE A SITES VYYY-MM-DD DESIGNED PREPARED REVIEWED	2022-03-21 CS MM ####
WAASIGAN TRANSMISSION LIN	IE A SITES VYYY-MM-DD DESIGNED PREPARED REVIEWED APPROVED	2022-03-21 CS MM ####
WAASIGAN TRANSMISSION LIN TITLE CANDIDATE BAT HIBERNACUL CONSULTANT CONSULTANT CONSULTANT CONSULTANT CONSULTANT CONSULTANT	IE A SITES VYYY-MM-DD DESIGNED PREPARED REVIEWED APPROVED RE	2022-03-21 CS MM #### #### V. FIGURE

- WATERBODY

Alternative Route 1C .

 \bigcirc \bigcirc

- Alternative Route 2B
- Alternative Route 2C
- Alternative Route 3B • • •
- Alternative Route 3C
- SECONDARY HIGHWAY

- LOCAL STUDY AREA
- ---- RAILWAY

- WATERCOURSE

- LEGEND CANDIDATE BAT HIBERNACULUM 2020 MINE SITE SURVEY - MODERATE POTENTIAL (LOW POTENTIAL)
 - CANDIDATE BAT HIBERNACULUM 2020 MINE SITE SURVEY LOW POTENTIAL

Alternative Route 2A

Pry den

KEY MAP



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