

Appendix H-2

Bat Surveys

BOW LAKE WIND FARM**NATURAL HERITAGE ASSESSMENT AND ENVIRONMENTAL IMPACT STUDY****BAT MATERNITY ROOST SURVEYS and CALL DATA ANALYSIS**

Candidate SWH for bat maternity roosts may be found in mixed wood or deciduous forests that contain a high density (ten per hectare or more) of large diameter (25 cm diameter at breast height (dbh) or more) snags or cavity trees (MNR 2011b). Depending on the species, maternity roosts for bats can include tree foliage, tree cavities and crevices under loose bark. Any of the following Community Types should be surveyed for candidate bat maternity roosts: Deciduous Forest (G016-19, G040-42, G055-58, G070-75, G088-91, G103-107 and G118-124) and Mixed Forest (G028, G043, G059, G092, G108, G125). The best candidate trees or snags for bat maternity roosts within these habitats are considered according to the following criteria (in order of importance): those that are the tallest; have cavities or crevices; have a large dbh; are within the highest density of snags/cavity trees; have a large amount of loose, peeling bark; have a cavity or crevice high in the tree (more than 10 m); are tree species that provide good cavity habitat (i.e. aspen, maple, ash, oak or white pine), are within an open canopy; and exhibit early stages of decay (class 1-3).

As part of the Bow Lake Wind Farm Natural Heritage Assessment, the MNR Bat and Bat Habitats - Guidelines for Wind Power Projects (MNR 2011b) were used as guidance to identify candidate bat maternity roosts in the field and evaluate their significance. The Project Location and the surrounding landscape are radically different from the typical southern Ontario landscape where the guidelines have been most often applied. Rather than a few scattered woodlots in a mosaic of agricultural lands with extensive man-made structures, the potential maternity roost habitat is found in a more or less continuously forested landscape that functions in many respect as one large "mega woodland". In response to the challenge of applying guidelines developed and applied mostly in an agricultural setting to a forested setting, Stantec requested further guidance from the MNR on methods. Discussions were held in June 2012 and it was recommended that Stantec complete 30 snag habitat plots and, if candidate SWH for Maternity roost was confirmed, Stantec agreed to conduct exit surveys at 60 representative trees.

SITE INVESTIGATION

During the Site Investigation, all Mixedwood Forest and Deciduous ELC community types within 120m of the Project Location were considered one contiguous woodland feature. Within this contiguous woodland, the density of snags/cavity trees was calculated as follows:

- A total of 30 fixed area 12.6 m radius plots (0.05 hectares) were selected at random.
- The number of snags ≥ 25 cm dbh within each plot was recorded. Each tree was described according to characteristics relevant to roosting bats (per MNR 2011b).
- The formula πr^2 was used to determine the number of snags per hectare.

Twenty-four plots were completed by MKI from March 31-April 5, 2012. Six additional 12.6 m radius plots were completed by Stantec from June 15-June 28, 2012, as well as 29 informal (not uniformly 12.6 m radius) plots.

BOW LAKE WIND FARM**NATURAL HERITAGE ASSESSMENT AND ENVIRONMENTAL IMPACT STUDY**

Our field work confirmed that suitable cavity habitat trees with greater than 25 cm dbh and decay classes of 1-3 were common and widespread across the landscape. In total, 257 snags or trees suitable for supporting significant maternity colonies (i.e. those with particularly large slabs of loose bark or suitable cavities) were observed and recorded within 120 m of the Project Location. For the 30 12.6 m radius (0.05 ha) plot surveys completed by MKI and Stantec, the observed density of snags which met candidate Bat Maternity Roost criteria was 26.7 snags/ha. Per MNR (2011b), a snag tree density of ≥ 10 snags per hectare indicates that the site is a candidate for maternity colony roosts. As all Mixedwood and deciduous forest ecosites are contiguous within the Project Location, the forested area was assessed as one feature for candidate SWH for bat maternity colonies.

In early August, as part of the field season “mop up” efforts, David Charlton spent two full field days travelling the broader study area (generally delineated as the area between the Montreal River; Mile 69 Road; and Highway 17) observing the distribution of snag tree and other habitat features. The purpose of this work was to confirm that the Project Location was ecologically similar to the broader study area, and, that SWH present in the Project Location was also well represented throughout the contiguous forest areas. This work involved, among other things, observations of more than two hundred excellent candidate snag trees in all portions of the study area. Leaf cover high in the canopy likely obscured many cavities, but even with this limitation, highly suitable trees with excellent cavity development were readily observed.

EVALUATION OF SIGNIFICANCE

In accordance with MNR guidelines and recommendations (2011b), 70 candidate roost trees were monitored for evidence of maternity colonies through exit surveys from June 15 - 28, 2012. A broad-band acoustic bat detector was used in conjunction with 55 exit surveys. The best examples of candidate bat maternity roost trees were selected, whether they were located within the 30 12.6 m (0.05 ha) radius plots or identified in separate surveys. In order to achieve better areal coverage of the Project Location and the surrounding landscape, approximately half of the exit surveys were conducted by crews sent to randomly selected areas with instructions to survey the best candidate roost trees in the vicinity. The primary criteria for site selection were safe and accessible areas for the nighttime work, and a reasonable distribution of sites across the Project Location and Project Study Area. In all cases, crews were able to find excellent candidate maternity roost trees to survey without extensive searching.

Observers chose a viewing station with a clear aspect of cavity opening or crevice. The cavity opening or crevice was monitored from 30 minutes before dusk until 60 minutes after dusk for evidence of bats exiting. MNR direction for evaluation of significance was that if one or more bats was observed exiting a candidate bat maternity roost tree, the entire woodland or the forest stand ELC ecosite would be considered SWH for maternity colony roost.

As reported in the NHA, no bats were observed exiting cavities of candidate bat maternity roost trees. Thus, the contiguous Mixedwood and Deciduous forest of the ZOI does not satisfy the defining criteria for significance.

BOW LAKE WIND FARM**NATURAL HERITAGE ASSESSMENT AND ENVIRONMENTAL IMPACT
STUDY****BAT CALL DATA ANALYSIS**

While no significant wildlife habitat for bat maternity roosting was identified in the Zone of Investigation, our work did confirm the presence of bat species during the maternity roosting season at candidate maternity roost trees and other locations in the ZOI. From June 15th to June 28th (67 detector nights), broad-band acoustic bat detectors were used to collect over 5900 ultrasonic data samples from candidate bat maternity roosting trees, amphibian survey areas, and other sites within 120 m of the Project Location. From these samples, 1191 bat calls were identified (see Table H-2.1). Seven of eight bat species known to be present in the region were recorded in the study area, including at candidate bat maternity roost trees. The species most frequently recorded were Little Brown Bat and Northern Long-eared Bat, with 495 calls and 168 calls respectively. Five other species (Red Bat, Eastern Pipistrelle, Big Brown Bat, Silver-haired Bat and Hoary Bat) were recorded infrequently over the sampling period, with from 4 to 21 calls for each species. Within the 1191 total bat calls recorded, 459 calls could not be identified to species, due to very short call segment length or a low-quality sample. For these, the call was identified to guild, or simply as a high or low frequency call. Eastern Small-footed Bat calls are very difficult to distinguish from other myotic bat species, thus while the species could be present within the study area, its presence could not be confirmed by acoustic surveys. Given these results, it is only reasonable to assume that the bats were roosting in appropriate trees across the extensively forested landscape.

[illegible]

BOW LAKE WIND FARM
NATURAL HERITAGE ASSESSMENT AND ENVIRONMENTAL IMPACT STUDY

Table H.2-1: Bat Call Data Analysis																
Date	Area	UTM E	UTM N	# Calls (Total)	Calls by Guild and Species											
					Myotis			Red & Pipistrelle			Big Brown, Silver & Hoary				Unknown	
					MYLU	MYSE	MYSP (Species Unknown)	LABO	PISU	RBEP (Species Unknown)	EPFU	LANO	LACI	BBSH (Species Unknown)	HFUN	LFUN
21-Jun-12	BMRC-116	684905	5231712	3	2			1								
22-Jun-12	BMRC-122	687333	5233869	0												
22-Jun-12	BMRC-120	687365	5234109	66		34	31								1	
22-Jun-12	BMRC-137	686300	5234620	27	13	3	10								1	
23-Jun-12	BMRC-125	687532	5233439	0												
23-Jun-12	BMRC-130	687679	5233462	3		3										
23-Jun-12	BMRC-126	687498	5233528	2		1									1	
23-Jun-12	BMRC-127	687364	5233264	23			1	3	6	7					5	1
23-Jun-12	BMRC-129	687633	5233450	0												
24-Jun-12	BMRC-136	687190	5234406	32			32									
24-Jun-12	BMRC-131	686127	5235064	1		1										
24-Jun-12	BMRC-133	687169	5234436	70	2	39	20								9	
24-Jun-12	BMRC-132	686139	5235110	0												
24-Jun-12	BMRC-135	687263	5234372	0												
25-Jun-12	BMRC-142	685340	5233960	0												
25-Jun-12	BMRC-146			0												
25-Jun-12	BMRC-145	684607	5233944	0												
25-Jun-12	BMRC-143	685395	5233894	1											1	
25-Jun-12	BMRC-147	684787	5233975	9	8										1	
26-Jun-12	BMRC-150	678299	5231770	0												
26-Jun-12	BMRC-152	678761	5231583	0												
26-Jun-12	BMRC-153	682687	5230585	20	9		6						2		2	1

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NATURAL HERITAGE ASSESSMENT AND ENVIRONMENTAL IMPACT STUDY
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					MYLU	MYSE	MYSP (Species Unknown)	LABO	PISU	RBEP (Species Unknown)	EPFU	LANO	LACI	BBSH (Species Unknown)	HFUN	LFUN
26-Jun-12	BMRC-151	678616	5231671	21											21	
26-Jun-12	BMRC-155	682215	5229660	40	34					1	2	1				2
27-Jun-12	BMRC-159	685783	5232982	0												
27-Jun-12	BMRC-156	685024	5232106	1		1										
27-Jun-12	BMRC-162	689598	5229270	3	3											
27-Jun-12	BMRC-157	685679	5232765	0												
27-Jun-12	BMRC-160	689169	5229428	2	1		1									
28-Jun-12	BMRC-166	690490		0												
28-Jun-12	BMRC-169	690596	5232062	4		4										
28-Jun-12	BMRC-164	689296	5231016	8	3	2	3									
28-Jun-12	BMRC-168	690621	5232024	0												
28-Jun-12	BMRC-165	690704	5232015	10	4		4	2								
Other Survey Locations Within the Project Study Area																
16-Jun-12	AS-1	684361	5231559	5	4		1									
17-Jun-12	jackpine	684771	5229843	1	1											
18-Jun-12	WP 11	690105	5229060	13	11		2									
18-Jun-12	WP 10	689667	5228101	16	4	9	1								2	
19-Jun-12	AS-11	689219	5231406	197	93	37	32		1		1	1	1		28	3
20-Jun-12	AS-12	684438	5231747	300	166	17	68					4	2	2	37	4
21-Jun-12	near T5	684340	5234240	168	83	1	64			2		2			16	
22-Jun-12	atop met tower	687496	5233675	22	9		2	3	1	4				1	1	1

BOW LAKE WIND FARM

NATURAL HERITAGE ASSESSMENT AND ENVIRONMENTAL IMPACT STUDY

Table H.2-1: Bat Call Data Analysis																
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Total Calls for All Survey Locations																
				1191	495	175	311	9	9	14	4	21	7	3	130	13

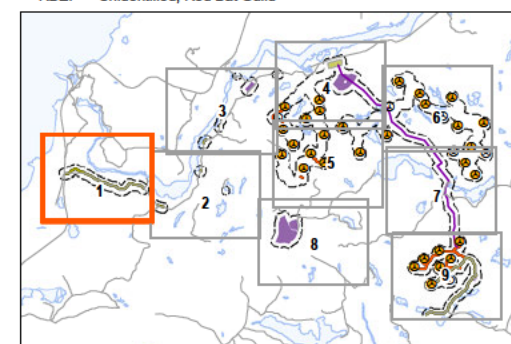
MYLU	<i>Myotis lucifugus</i>	Little Brown Bat	LANO	<i>Lasiurus noctivagans</i>	Silver-haired Bat
MYSE	<i>Myotis septentrionalis</i>	Northern Long-eared Bat	LACI	<i>Lasiurus cinereus</i>	Hoary Bat
MYSP	<i>Myotis</i> sp.	Unidentified, <i>Myotis</i> Guild	EPFU	<i>Eptesicus fuscus</i>	Big Brown Bat
PISU	<i>Perimyotis subflavus</i>	Eastern Pipistrelle / Tricoloured Bat	BBSH		Unidentified Big Brown Bat Guild
LABO	<i>Lasiurus borealis</i>	Eastern Red Bat	HFUN		Unidentified High Frequency Call
RBEP		Unidentified Red Bat Guild	LFUN		Unidentified Low Frequency Call

Bat acoustic data were analysed using AnalookW software. Analysis was conducted by Melissa Cameron, M.Sc. (Zoology), and confirmed by Andrew Taylor, B.Sc. (Ecology), Terrestrial Ecologist and Terrestrial Team Lead at Stantec Consulting Ltd.



Legend

- 120m Zone of Investigation
- Project Components**
 - Turbine Location
 - Gate Location
 - Meteorological Tower
 - Proposed Water Extraction Location
 - Access Road (New)
 - Access Road (Upgrade)
 - Overhead/Underground Collector Line
 - Access Road Corridor
 - Collector Line Corridor
 - Turbine Sweep Area
 - Turbine Laydown Area
 - Construction Compound
 - Construction Compound & Welfare Building
 - Construction Compound & Transformer Station/Operations & Maintenance Building
- Existing Features**
 - Expressway / Highway
 - Road
 - Elevation Contour
 - Existing Transmission Line
 - Watercourse
 - Waterbody
 - Patent Land
- Bat Survey Data**
 - Candidate Bat Maternity Roost
 - Snag Plot (12.6m radius)
 - Exit Survey
- MYSP Species Identified in Call Data Analysis**
 - MYLU *Myotis lucifugus* (Little Brown Bat)
 - LANO *Lasiurus noctivagans* (Silver-haired Bat)
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 - MYSP *Myotis* sp. (Unidentified, *Myotis* Guild)
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 - BBSH Unidentified, Big Brown Bat Guild
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Notes

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Bow Lake Wind Farm
Nodin Kitagan Limited Partnership and Nodin Kitagan 2
Limited Partnership, through their General Partners
Shongwish Nodin Kitagan GP Corp. and Shongwish
Nodin Kitagan 2 GP Corp.

Figure No.

H-2.1

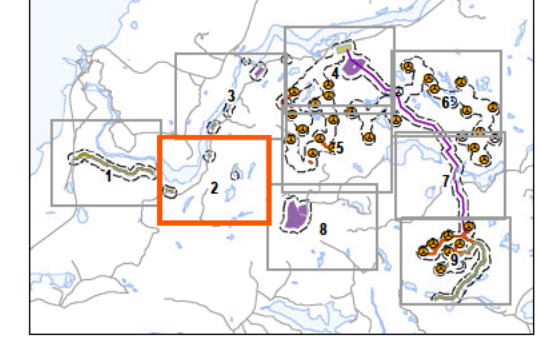
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**Bat Maternity Roost Surveys &
Call Data Analysis**



Legend

- 120m Zone of Investigation
- Project Components**
- Turbine Location
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 - Access Road (New)
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|------|--|
| MYLU | Myotis lucifugus (Little Brown Bat) |
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| MYSP | Myotis sp. (Unidentified, Myotis Guild) |
| EPFU | Eptesicus fuscus (Big Brown Bat) |
| PISU | Perimyotis subflavus (Eastern Pipistrelle / Tricoloured Bat) |
| BBSH | Unidentified, Big Brown Bat Guild |
| LABO | Lasiurus borealis (Eastern Red Bat) |
| UNKN | Unidentified Bat Call |
| RBEF | Unidentified, Red Bat Guild |



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Limited Partnership, through their General Partners
Shongwish Nodin Kitagan GP Corp. and Shongwish
Nodin Kitagan 2 GP Corp.

Figure No.
H-2.2

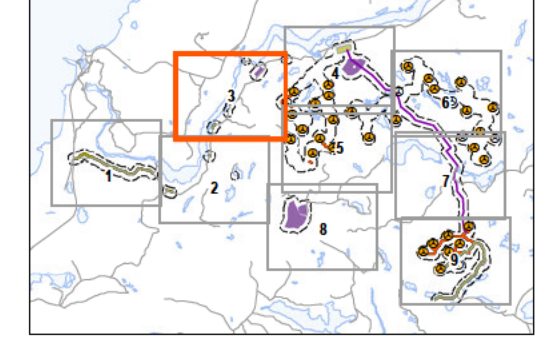
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**Bat Maternity Roost Surveys &
Call Data Analysis**



Legend

- 120m Zone of Investigation
- Project Components**
 - Turbine Location
 - Gate Location
 - Meteorological Tower
 - Proposed Water Extraction Location
 - Access Road (New)
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 - Overhead/Underground Collector Line
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 - Turbine Laydown Area
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 - BBSH Unidentified, Big Brown Bat Guild
 - LABO *Lasiurus borealis* (Eastern Red Bat)
 - UNKN Unidentified Bat Call
 - RBEF Unidentified, Red Bat Guild



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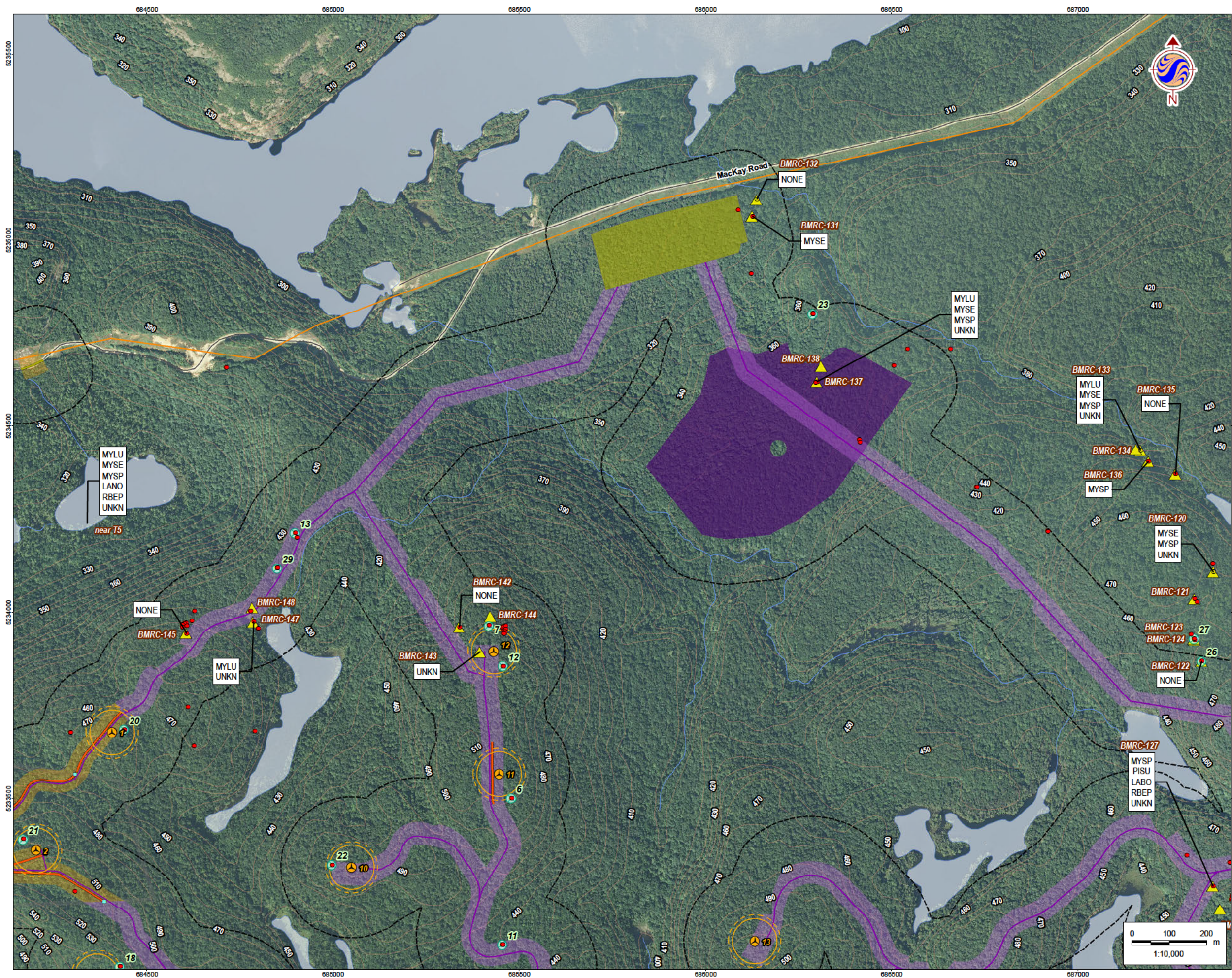
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Nodin Kitagan Limited Partnership and Nodin Kitagan 2 Limited Partnership, through their General Partners Shongwish Nodin Kitagan GP Corp. and Shongwish Nodin Kitagan 2 GP Corp.

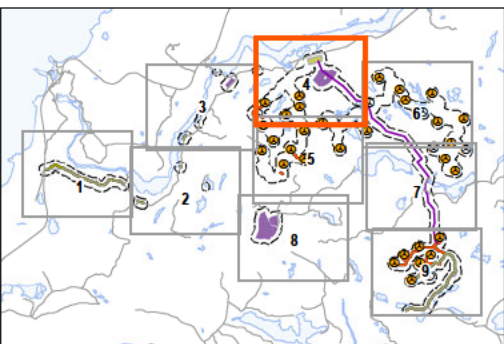
Figure No.
H-2.3

Title
Bat Maternity Roost Surveys & Call Data Analysis



Legend

- 120m Zone of Investigation
- Project Components**
 - Turbine Location
 - Gate Location
 - Meteorological Tower
 - Proposed Water Extraction Location
 - Access Road (New)
 - Access Road (Upgrade)
 - Overhead/Underground Collector Line
 - Access Road Corridor
 - Collector Line Corridor
 - Turbine Sweep Area
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 - Construction Compound
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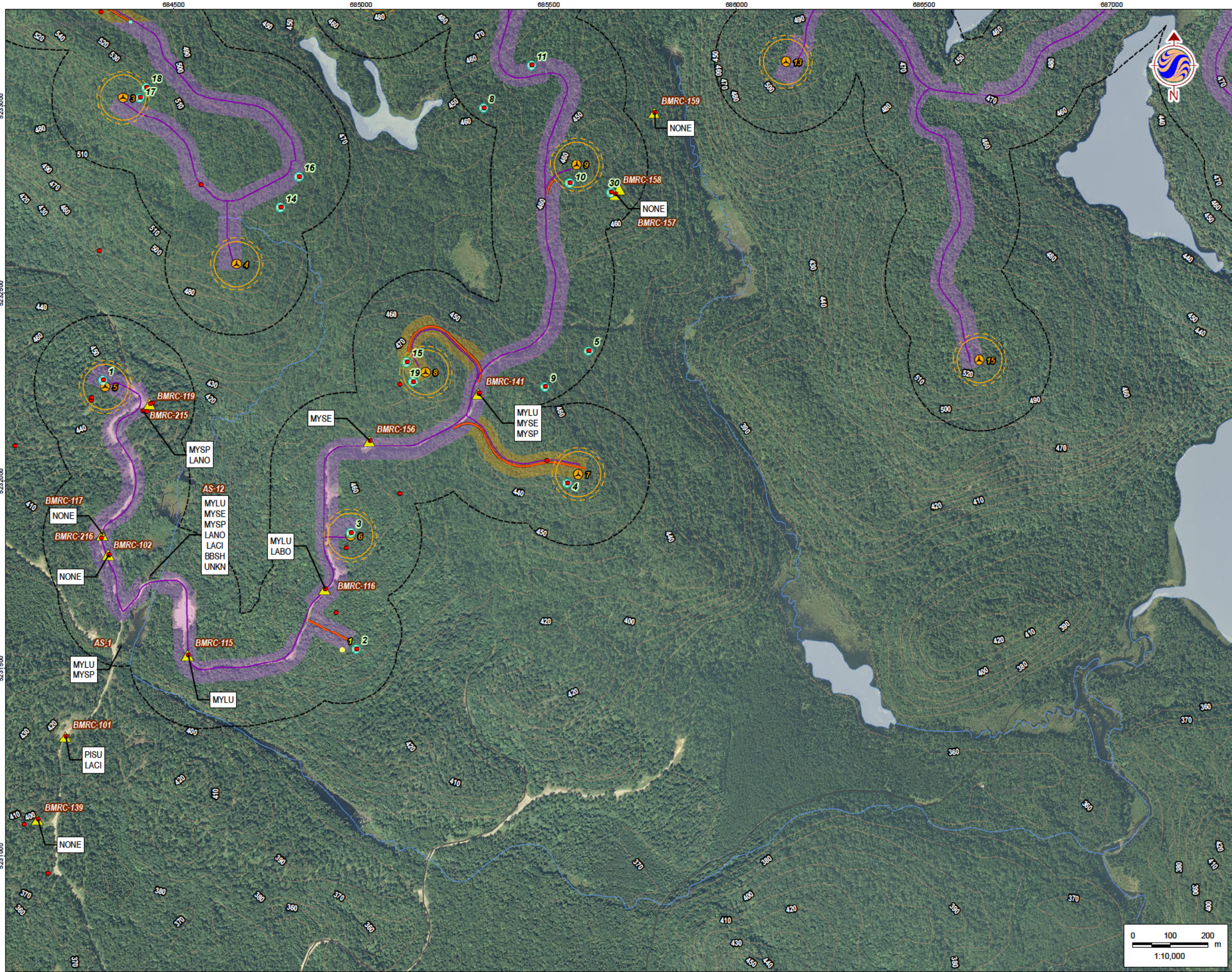
Bow Lake Wind Farm
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Figure No.

H-2.4

Title

Bat Maternity Roost Surveys & Call Data Analysis



Legend

120m Zone of Investigation

Project Components

Turbine Location

Gate Location

Meteorological Tower

Proposed Water Extraction Location

Access Road (New)

Access Road (Upgrade)

Overhead/Underground Collector Line

Access Road Corridor

Collector Line Corridor

Turbine Sweep Area

Turbine Laydown Area

Construction Compound

Construction Compound & Welfare Building

Construction Compound & Transformer Station/Operations & Maintenance Building

Existing Features

Expressway / Highway

Road

Elevation Contour

Existing Transmission Line

Watercourse

Waterbody

Patent Land

Bat Survey Data

Candidate Bat Maternity Roost

Snag Plot (12.6m radius)

Exit Survey

MYSPP

Species Identified in Call Data Analysis

MYLU

LANO

MYSE

LACI

MYSP

EPFU

PISU

BBSH

LABO

UNKN

RBEP

Myotis lucifugus (Little Brown Bat)

Lasiurus noctivagans (Silver-haired Bat)

Myotis septentrionalis (Northern Long-eared Bat)

Lasiurus cinereus (Hoary Bat)

Myotis sp. (Unidentified, Myotis Guild)

Eptesicus fuscus (Big Brown Bat)

Perimyotis subflavus (Eastern Pipistrelle / Tricoloured Bat)

Unidentified, Big Brown Bat Guild

Lasiurus borealis (Eastern Red Bat)

Unidentified Bat Call

Unidentified, Red Bat Guild

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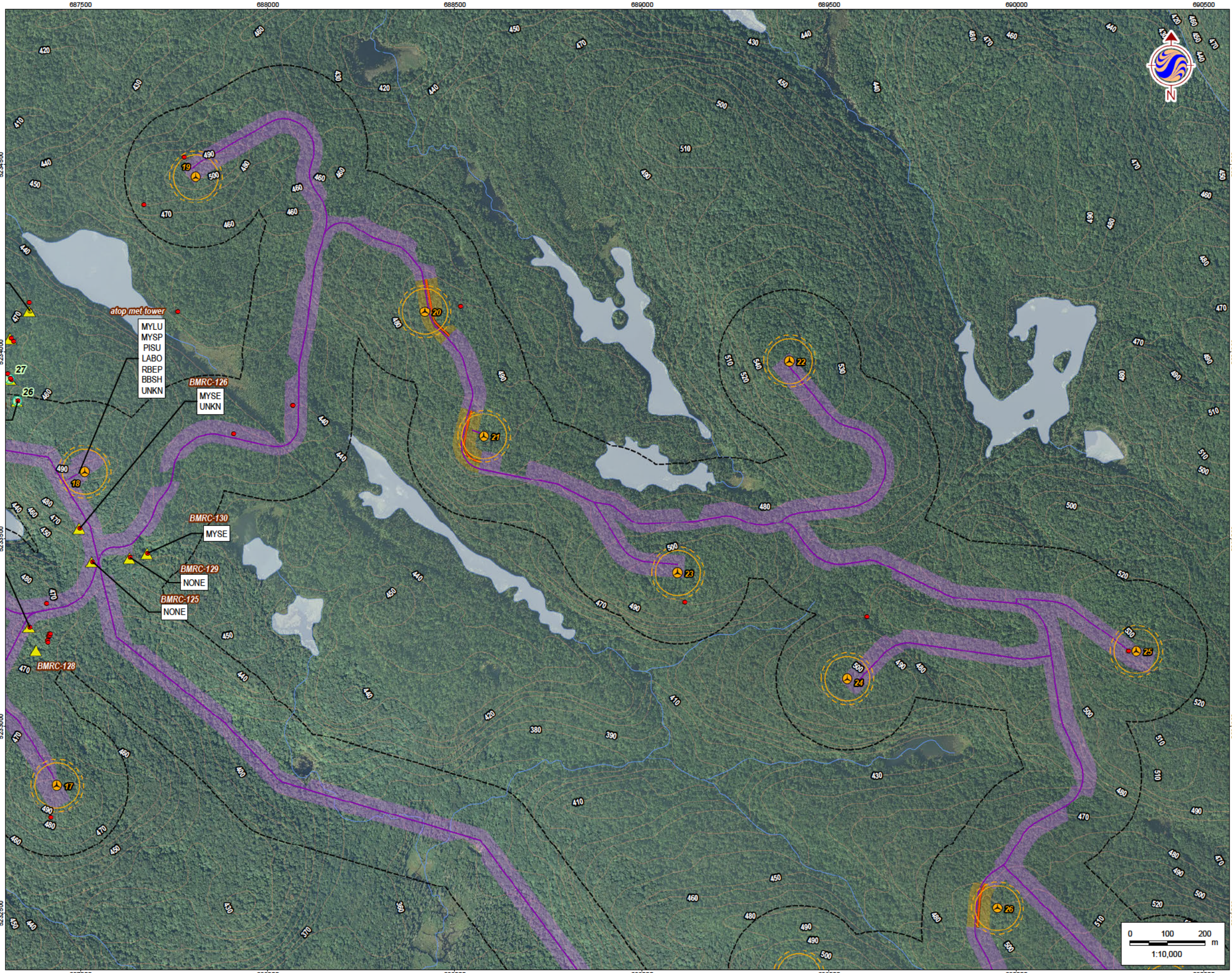
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Figure No.

H-2.5

Title

Bat Maternity Roost Surveys & Call Data Analysis



Legend

120m Zone of Investigation

Project Components

Turbine Location

Gate Location

Meteorological Tower

Proposed Water Extraction Location

Access Road (New)

Access Road (Upgrade)

Overhead/Underground Collector Line

Access Road Corridor

Collector Line Corridor

Turbine Sweep Area

Turbine Laydown Area

Construction Compound

Construction Compound & Welfare Building

Construction Compound & Transformer Station/Operations & Maintenance Building

Existing Features

Expressway / Highway

Road

Elevation Contour

Existing Transmission Line

Watercourse

Waterbody

Patent Land

Bat Survey Data

Candidate Bat Maternity Roost

Snag Plot (12.6m radius)

Exit Survey

 MYSP Species Identified in Call Data Analysis

MYLU

Myotis lucifugus (Little Brown Bat)

LANO

Lasiurus noctivagans (Silver-haired Bat)

MYSE

Myotis septentrionalis (Northern Long-eared Bat)

LACI

Lasiurus cinereus (Hoary Bat)

MYSP

Myotis sp. (Unidentified, Myotis Guild)

EPFU

Eptesicus fuscus (Big Brown Bat)

PISU

Perimyotis subflavus (Eastern Pipistrelle / Tricoloured Bat)

BBSH

Unidentified, Big Brown Bat Guild

LABO

Lasiurus borealis (Eastern Red Bat)

UNKN

Unidentified Bat Call

RBEP

Unidentified, Red Bat Guild

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Bow Lake Wind Farm

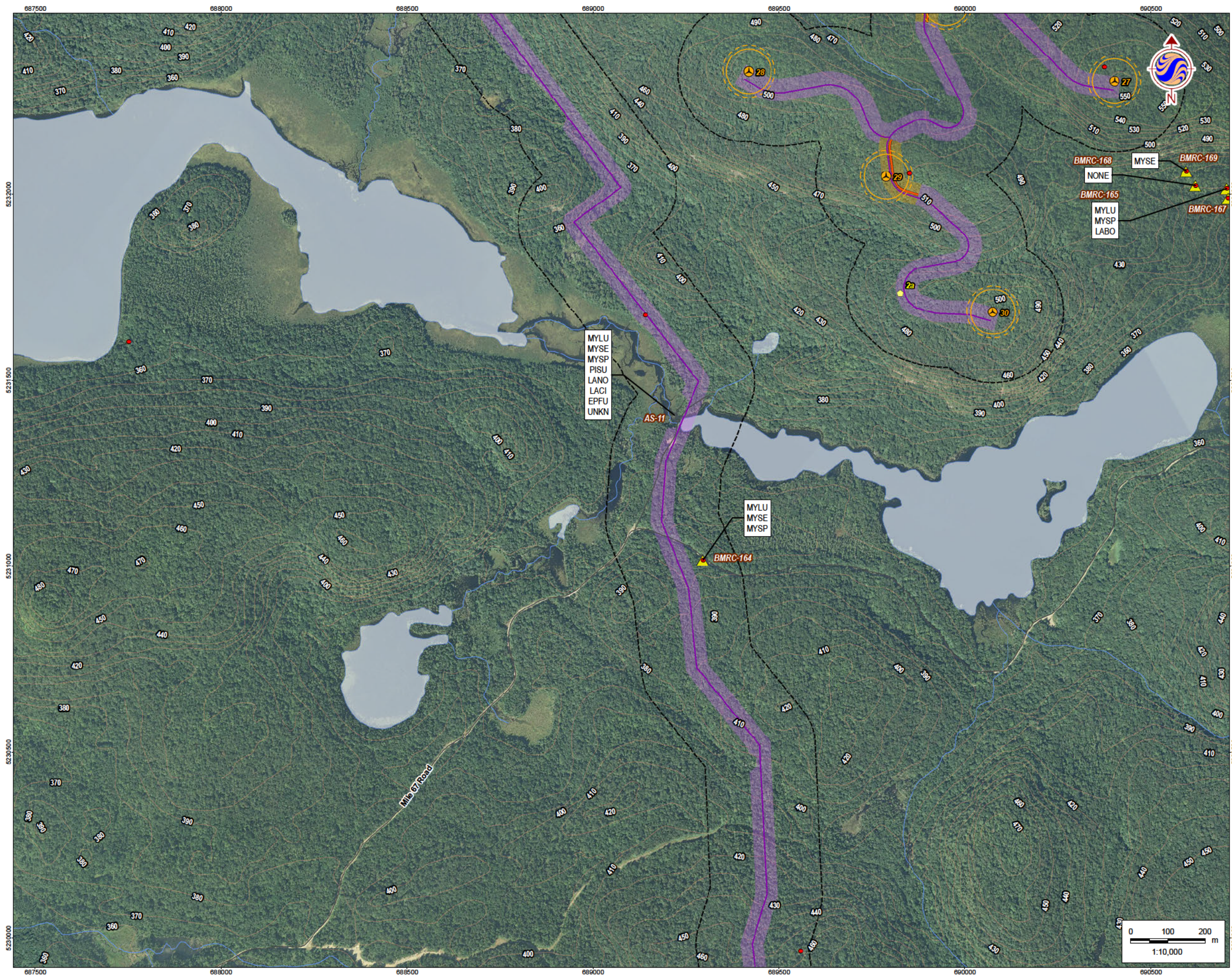
Nodin Kitagan Limited Partnership and Nodin Kitagan 2 Limited Partnership, through their General Partners Shongwish Nodin Kitagan GP Corp. and Shongwish Nodin Kitagan 2 GP Corp.

Figure No.

H-2.6

Title

Bat Maternity Roost Surveys & Call Data Analysis



Legend

120m Zone of Investigation

Project Components

- Turbine Location
- Gate Location
- Meteorological Tower
- Proposed Water Extraction Location
- Access Road (New)
- Access Road (Upgrade)
- Overhead/Underground Collector Line
- Access Road Corridor
- Collector Line Corridor
- Turbine Sweep Area
- Turbine Laydown Area
- Construction Compound
- Construction Compound & Welfare Building
- Construction Compound & Transformer Station/Operations & Maintenance Building

Existing Features

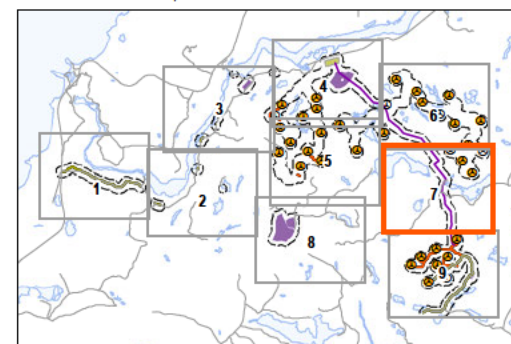
- Expressway / Highway
- Road
- Elevation Contour
- Existing Transmission Line
- Watercourse
- Waterbody
- Patent Land

Bat Survey Data

- Candidate Bat Maternity Roost
- Snag Plot (12.6m radius)
- Exit Survey

Species Identified in Call Data Analysis

- | | |
|------|--|
| MYLU | Myotis lucifugus (Little Brown Bat) |
| LANO | Lasiurus noctivagus (Silver-haired Bat) |
| MYSE | Myotis septentrionalis (Northern Long-eared Bat) |
| LACI | Lasiurus cinereus (Hoary Bat) |
| MYSP | Myotis sp. (Unidentified, Myotis Guild) |
| EPFU | Eptesicus fuscus (Big Brown Bat) |
| PISU | Perimyotis subflavus (Eastern Pipistrelle / Tricoloured Bat) |
| BBBS | Unidentified, Big Brown Bat Guild |
| LABO | Lasiurus borealis (Eastern Red Bat) |
| UNKN | Unidentified Bat Call |
| RBEP | Unidentified, Red Bat Guild |



Notes

- Coordinate System: NAD 1983 UTM Zone 16N
- Base features produced under license with the Ontario Ministry of Natural Resources © Queen's Printer for Ontario, 2013.
- Orthographic imagery provided by © USGS, 2013. Imagery taken in 2008.



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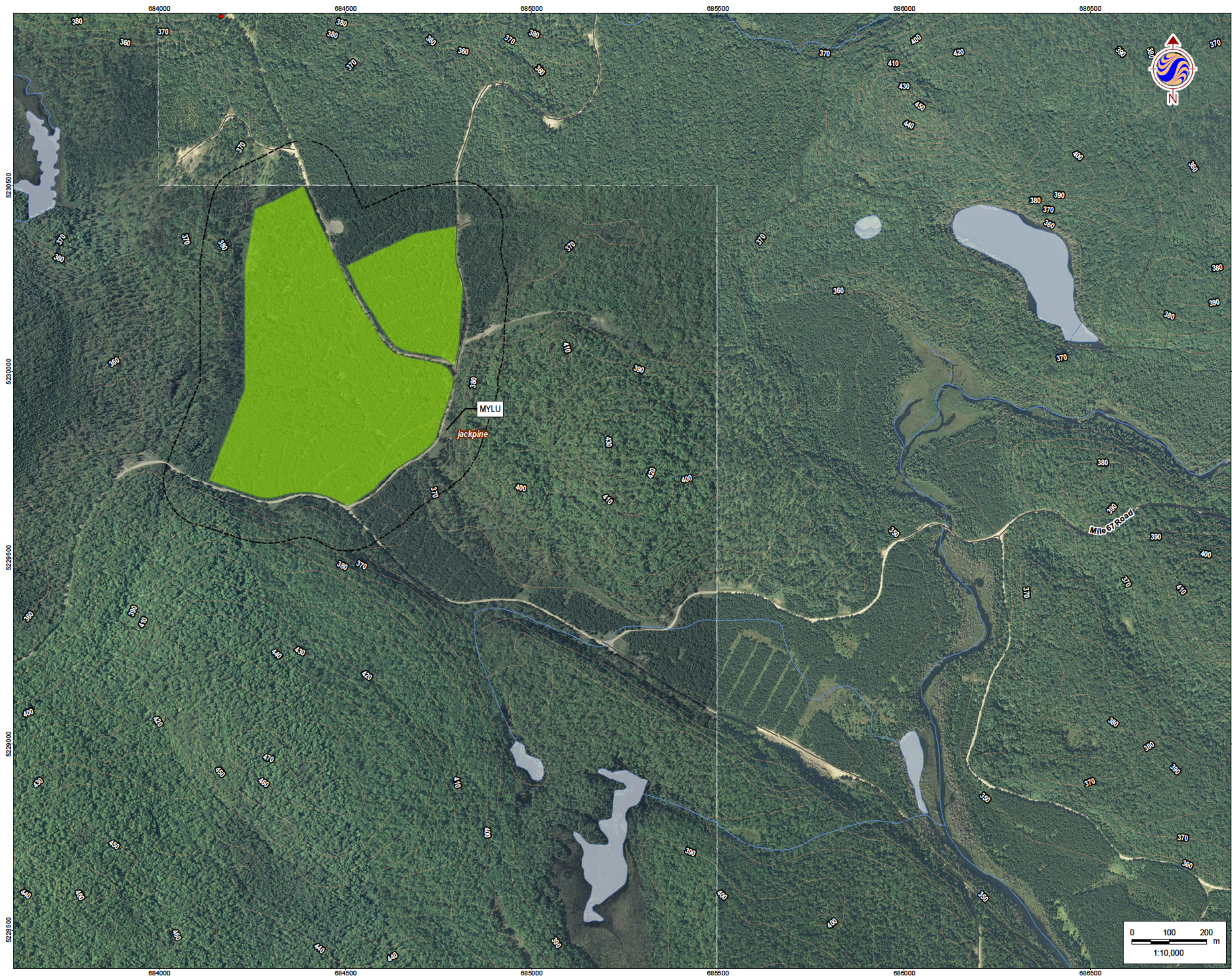
Bow Lake Wind Farm
Nodin Kitagan Limited Partnership and Nodin Kitagan 2
Limited Partnership, through their General Partners
Shongwish Nodin Kitagan GP Corp. and Shongwish
Nodin Kitagan 2 GP Corp.

Figure No.

H-2.7

Title

**Bat Maternity Roost Surveys &
Call Data Analysis**



Legend

120m Zone of Investigation

Project Components

- Turbine Location
- Gate Location
- Meteorological Tower
- Proposed Water Extraction Location
- Access Road (New)
- Access Road (Upgrade)
- Overhead/Underground Collector Line
- Access Road Corridor
- Collector Line Corridor
- Turbine Sweep Area
- Turbine Laydown Area
- Construction Compound
- Construction Compound & Welfare Building
- Construction Compound & Transformer Station/Operations & Maintenance Building

Existing Features

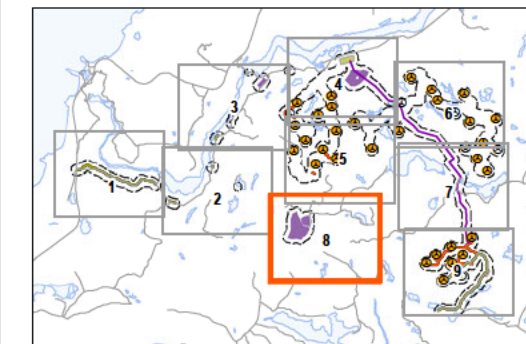
- Expressway / Highway
- Road
- Elevation Contour
- Existing Transmission Line
- Watercourse
- Waterbody
- Patent Land

Bat Survey Data

- Candidate Bat Maternity Roost
- Snag Plot (12.6m radius)
- Exit Survey

MYSP Species Identified in Call Data Analysis

- | | |
|------|--|
| MYLU | Myotis lucifugus (Little Brown Bat) |
| LANO | Lasiurus noctivagans (Silver-haired Bat) |
| MYSE | Myotis septentrionalis (Northern Long-eared Bat) |
| LACI | Lasiurus cinereus (Hoary Bat) |
| MYSP | Myotis sp. (Unidentified, Myotis Guild) |
| EPFU | Eptesicus fuscus (Big Brown Bat) |
| PISU | Perimyotis subflavus (Eastern Pipistrelle / Tricoloured Bat) |
| BBSH | Unidentified, Big Brown Bat Guild |
| LABO | Lasiurus borealis (Eastern Red Bat) |
| UNKN | Unidentified Bat Call |
| RBEP | Unidentified, Red Bat Guild |



Notes

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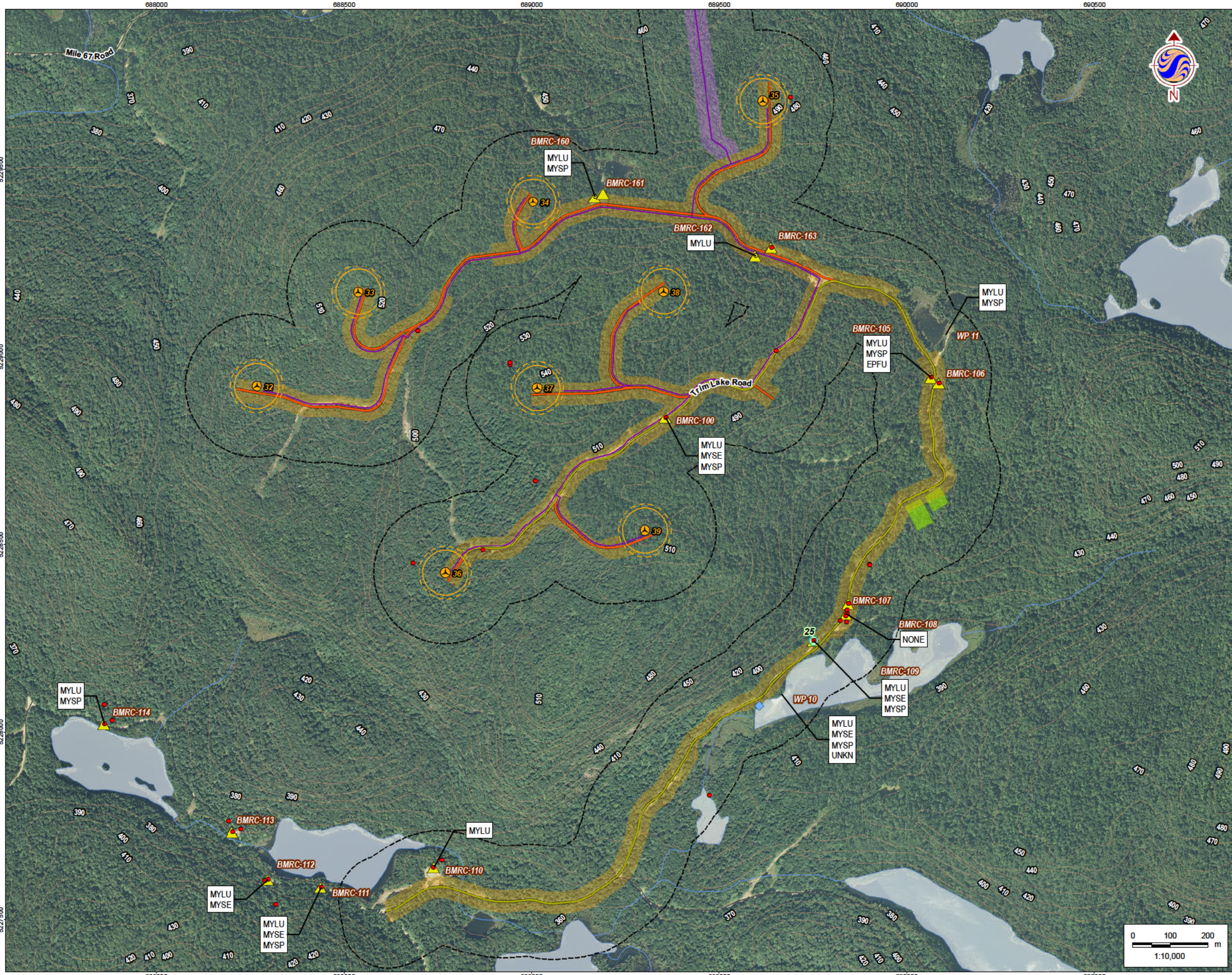
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Client/Project
Bow Lake Wind Farm
Nodin Kitagan Limited Partnership and Nodin Kitagan 2
Limited Partnership, through their General Partners
Shongwish Nodin Kitagan GP Corp. and Shongwish
Nodin Kitagan 2 GP Corp.

Figure No.
H-2.8

Title

Bat Maternity Roost Surveys & Call Data Analysis



Legend

120m Zone of Investigation

Project Components

Turbine Location

Gate Location

Meteorological Tower

Proposed Water Extraction Location

Access Road (New)

Access Road (Upgrade)

Overhead/Underground Collector Line

Access Road Corridor

Collector Line Corridor

Turbine Sweep Area

Turbine Laydown Area

Construction Compound

Construction Compound & Welfare Building

Construction Compound & Transformer Station/Operations & Maintenance Building

Existing Features

Expressway / Highway

Road

Elevation Contour

Existing Transmission Line

Watercourse

Waterbody

Patent Land

Bat Survey Data

Candidate Bat Maternity Roost

Snag Plot (12.6m radius)

Exit Survey

MYSP Species Identified in Call Data Analysis

MYLU

LANO

MYSE

LACI

MYSP

EPFU

PISU

BBSH

LABO

UNKN

RBEP

Myotis lucifugus (Little Brown Bat)

Lasiurus noctivagans (Silver-haired Bat)

Myotis septentrionalis (Northern Long-eared Bat)

Lasiurus cinereus (Hoary Bat)

Myotis sp. (Unidentified, Myotis Guild)

Eptesicus fuscus (Big Brown Bat)

Perimyotis subflavus (Eastern Pipistrelle / Tricoloured Bat)

Unidentified, Big Brown Bat Guild

Lasiurus borealis (Eastern Red Bat)

Unidentified Bat Call

Unidentified, Red Bat Guild

- Notes
1. Coordinate System: NAD 1983 UTM Zone 16N

2. Base features produced under license with the Ontario Ministry of Natural Resources © Queen's Printer for Ontario, 2013.

3. Orthographic imagery provided by © USGS, 2013. Imagery taken in 2008.

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180960771

Client/Project

Bow Lake Wind Farm
Nodin Kitagan Limited Partnership and Nodin Kitagan 2
Limited Partnership, through their General Partners
Shongwish Nodin Kitagan GP Corp. and Shongwish
Nodin Kitagan 2 GP Corp.

Figure No.

H-2.9

Title

Bat Maternity Roost Surveys &
Call Data Analysis