Ernestown Wind Park

Raptor Wintering Area Habitat-use Surveys Report

Prepared by: M.K. Ince and Associates Ltd.

Prepared for: Ernestown Windpark LP

February 13, 2013



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1 Introduction

Site investigations of the Ernestown Wind Park project location determined the presence of two candidate raptor wintering areas (RWA01 and RWA02; see **Figure 1-1**). These candidate habitats were identified based on the combination of fields and woodlands that are >20 ha to provide roosting, foraging and resting habitat. **Table 1-1** below presents additional information on the candidate habitats identified during the site investigation. Please note that the two candidate habitats are not connected due to the presence of a railway separating the northern candidate habitat (RWA01) from the southern candidate habitat (RWA02).

Table 1-1:	Description	of Candidate	Raptor	Wintering Area	S

Feature	Project		Attributes and Composition	Function	Associated Natural Features	
ID	Components within 120 m	Size	ELC Community	Function		
RWA01	Access Road (0m) Collector (0m) Hardstand (0m) Turbine (0m)	119 ha	Deciduous woodland communities - FODM7-6, FODM2-3, FODM9-4, SWDM2-1, and FODM6-1. Upland cultural meadow, thicket and woodland communities - MEMM3, WOCM1-1, and THDM2-4.	Open field hunting/ foraging grounds for wintering raptors, together with	Woodland (WO04, WO06)	
RWA02	Access Road (0m) Collector (0m) Hardstand (0m) Turbine (0m)	158 ha	Deciduous and coniferous woodland communities - FODM7-1, FODM7-2, FOCM1-2, and FOCM2-1. Upland cultural meadow, thicket and woodland communities: MEMM3, THDM2-4, and WOCM1-1.	with woodlands which serve as roosting/ perching habitat.	Woodland (WO05-4, WO13)	

The *Natural Heritage Evaluation of Significance Report* (MKI, 2012) did not report on the outcomes of the evaluation of significance for RWA01 and RWA02, due to seasonality constraints and surveys unable to be conducted prior to the submission of the Natural Heritage Assessment. Consequently, RWA01 and RWA02 were treated as significant and subject to additional habitat-use surveys to determine significance. This process of treating a habitat as significant and committing to undertake studies prior to construction is outlined in Appendix D of the Natural Heritage Assessment Guide (MNR, 2011).

This report presents the results from the pre-construction habitat-use surveys for RWA01 and RWA02.

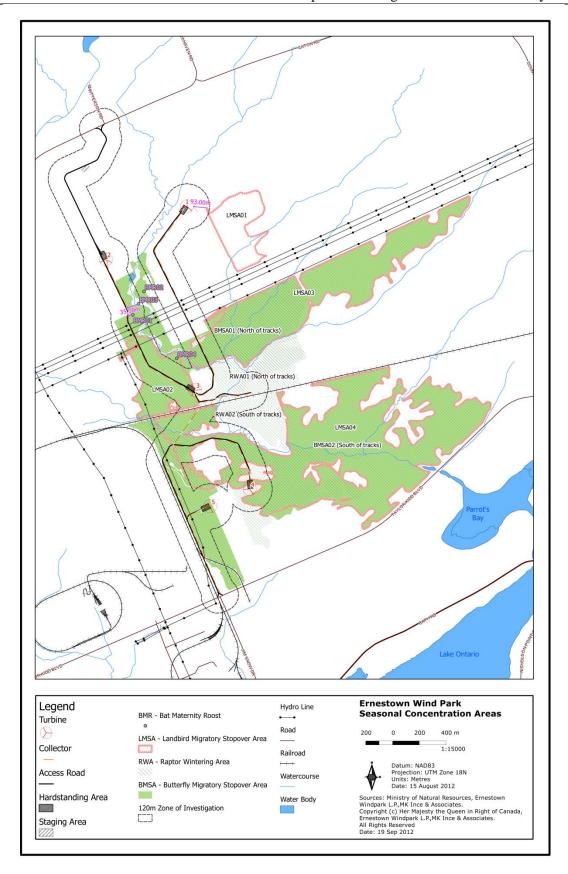


Figure 1-1: Map indicating location of candidate Raptor Wintering Area at Ernestown Wind Park

2 METHODOLOGY

Detailed methodology for pre-construction surveys to evaluate the significance of RWA01 and RWA02 was provided within the *Natural Heritage Environmental Impact Study Report* (MKI, 2012). In December 2012, prior to the commencement of surveys, the Ministry of Natural Resources (MNR) was contacted with a copy of the methodology copied from the *Natural Heritage Environmental Impact Study Report* (MKI, 2012) as well as a map outlining the proposed transect routes.

There were two modifications made to the methodology presented in the *Natural Heritage Environmental Impact Study Report* (MKI, 2012). The first change was an inclusion of surveys for short-eared owls, during dawn or dusk, in addition to proposed mid-day surveys for other listed species. The second change was the modification in the number of required survey dates. Following the conclusion of the first three surveys, a review of surveys by the MNR was conducted, to assess the need for the latter three surveys. Please see **Appendix A** for a copy of the protocol reviewed by the MNR in December 2012 and all associated correspondence.

3 RESULTS

A summary of the pre-construction habitat-use surveys for RWA01 and RWA02 at the Ernestown Wind Park Project is provided in **Table 3-1** below. Details on the dates, time, weather conditions during each site visit, as well as the names of each of the investigators is provided.

Table 3-1: Summary of Site Visits

Date	Purpose / Habitat Surveyed	Start/ End Time	Weather Conditions	Site Investigators
2013-01-15	RWA02 - Raptors	09:30-11:35	Temp: -2°C to 1°C - Cloud Cover: 4/10	Rhiannon Leshyk & Erin Jaggard
	RWA01 - Raptors	12:10-14:00	Wind (beaufort): 0-1	
	RWA01 & RWA02 - Short-eared owl surveys	16:15-17:30	Visibility: unlimited Precipitation: none	
2013-01-25	RWA01 & RWA02 - Short-eared owl surveys	07:00-08:30	Temp: -17°C Cloud Cover: 5/10	Rhiannon Leshyk & Yves Scholten
	RWA01 - Raptors	08:30-09:50	Wind (beaufort): 0	
	RWA02 - Raptors	10:00-12:00	Visibility: unlimited Precipitation: none	
2013-02-06	RWA02 - Raptors	09:45-12:10	Temp: -7°C Cloud Cover: 2/10 to 8/10	Rhiannon Leshyk & Erin Jaggard
	RWA01 - Raptors	12:45-15:30	Wind (beaufort): 1 to 3 or	
	RWA01 & RWA02 - Short-eared owl surveys	16:45-17:30	Visibility: unlimited Precipitation: none	

All raptor observations made during the three site visits can be seen in **Table 3-2** below. Please see **Appendix B** for a copy of all field forms as well as field maps indicating the location of each of the observations.

Table 3-2: All Raptor Observations during Pre-Construction Habitat-Use Surveys of RWA01 and RWA02

Date	Candidate Habitat	Observations	Notes
2013-01-15	RWA01	One RTHA	Flying within candidate habitat
	RWA02	No observations	
2013-01-25	RWA01	No observations	
	RWA02	One RTHA	Flying/perched within candidate habitat
2013-02-06	RWA01	One accipiter species (unidentified, however not a listed species in Ecoregion 6E Criteria schedule)	Flushed from perch
	RWA02	Four RTHA	Flying within candidate habitat

To evaluate each habitat, the *Significant Wildlife Habitat Ecoregion 6E Criterion Schedule* (MNR, 2012) was used. This document states that raptor wintering areas are considered significant if used by one or more short-eared owls or at least 10 individuals and two listed species. The listed species include: roughlegged hawk, red-tailed hawk, northern harrier, American kestrel, snowy owl and short-eared owl (special concern). Overall, the site must be used regularly for a minimum of 20 days by the aforementioned number of birds.

There were insufficient raptor observations made during the three site visits to meet significance for either RWA01 or RWA02. Additionally, following a conversation with the MNR on February 12, 2013, it was determined that there was no justification for proceeding with the latter three surveys given the few raptor observations made during the first three site visits.

4 Conclusion

There were three site visits made to Ernestown Wind Park for the evaluation of two candidate habitats treated as significant in the *Natural Heritage Evaluation of Significance Report* (MKI, 2012). Preconstruction habitat-use surveys were conducted in January and February 2013. There were some redtailed hawks observed during these surveys, however, there were insufficient observations of raptors both in abundance and diversity to meet the requirements for significance. Additionally, following a conversation with the MNR, it was determined that no additional surveys were required and that both RWA01 and RWA02 do not meet the requirements for significance. Consequently, the potential negative environmental effects and mitigation measures as well as the environmental effects monitoring plan for RWA01 and RWA02, presented in the *Natural Heritage Environmental Impact Study Report* (MKI, 2012), are not applicable to the Ernestown Wind Park Project, as the habitats have been determined to be not significant.

5 REFERENCES

M.K. Ince and Associates. 2012. Natural Heritage Evaluation of Significance Report. 133p.

M.K. Ince and Associates. 2012. Natural Heritage Environmental Impact Study Report. 78p.

Ministry of Natural Resources. 2012. *Significant Wildlife Habitat Ecoregion 6E Criterion Schedule*. 42p.

Ministry of Natural Resources. 2011. *Natural Heritage Assessment Guide for Renewable Energy Projects*. 99p.

6 QUALIFICATIONS AND LIMITATIONS

M. K. Ince & Associates Ltd. (MKI) has prepared this report in accordance with its proposal and information provided by its Client. The information and analysis contained herein is for the sole benefit of the Client and save for regulatory review purposes may not be relied upon by any other person.

MKI's assessment was made in accordance with guidelines, regulations and procedures believed to be current at this time. Changes in guidelines, regulations and enforcement policies can occur at any time and such changes could affect the conclusions and recommendations of this report.

The reports, maps and related documents may rely on information provided to MKI by the Client. This information may include but is not limited to manufacturer and construction specifications and other related information. Maps are created using a Geographic Information System (GIS) that compiles records, information, and data from various sources which may contain errors. While we have referred to and made use of reports, maps and geospatial data and specifications prepared by others, we assume no liability for the accuracy of the information contained within.

Maps and documents made available by MKI are not legal surveys and are not intended to be used as such. No original surveying is included as part of these maps. If any contradictions exist between this document and relevant municipal, provincial or federal laws, regulations, codes, or policies, the text of the laws, regulations, codes or policies will be the legal authority.

Ernestown Wind Park	Raptor Wintering Area Habitat-use Surveys Report
APPENDIX A – PROTOCO	L AND CORRESPONDENCE

RAPTOR WINTERING AREA (RWA01 & RWA02)

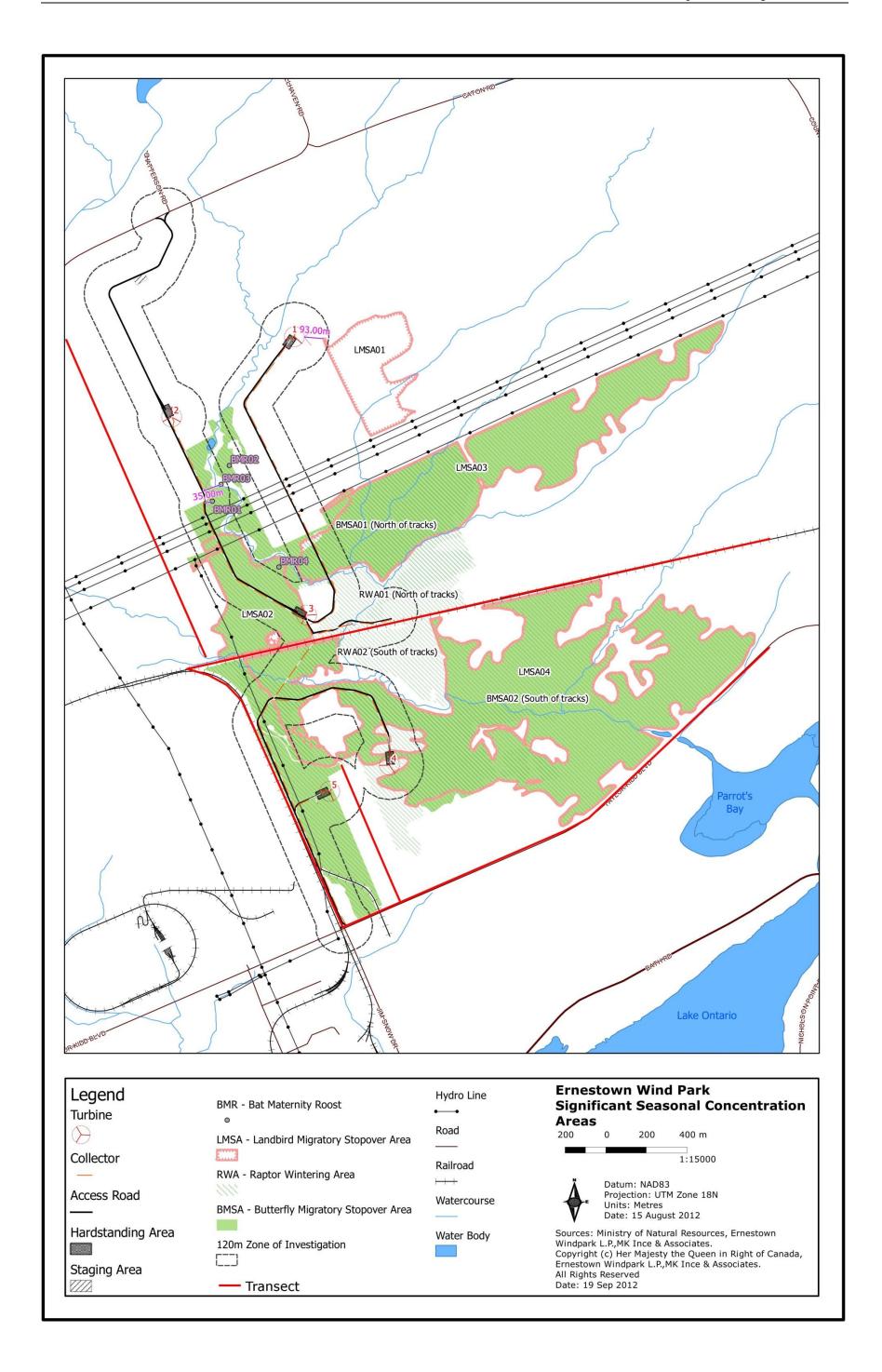
Field staff will visit identified candidate raptor wintering areas to observe for the presence of wintering raptors and will evaluate habitat according to methodology outlined in the *Bird and Bird Habitats: Guidelines for Wind Power Projects* (OMNR, 2011) for "standardized area searches". Preselected transect routes will be selected within the candidate habitat. Prior to conducting surveys the MNR district office will be contacted to approve transect routes. Transects will be walked in field and GPS tracks will be recorded.

Surveys will be conducted by an individual experienced in identifying the birds of eastern North America both aurally and visually. Transects will be walked six times throughout January-early March. All surveys will be conducted during late morning or early afternoon. No surveys will be conducted during severe weather events such as heavy precipitation, as this can bias results. All birds heard or seen will be recorded and flyovers will be clearly indicated. Surveyors will record the following data at each visit on standardized data forms (see **Appendix A1**):

- Date
- Names of people conducting the work
- Time (start and end time of transect; duration of time it took to walk the transect)
- Weather conditions (temperature, %cloud cover, Beaufort wind scale, visibility)
- GPS track of each transect
- Species observed and total number of individuals of each species detected along the transect
- Behaviour recorded as: foraging, flying, perching, perched on ground
- Height category (0=0-9m; 1=10-19m; 2=20-29m; 3=30-39m, etc.)
- Flight direction
- Direction and distance from observer

Species of particular interest (focal species) include: Rough-legged Hawk, Red-tailed Hawk, Northern Harrier, American Kestrel, Snowy Owl, and Short-eared Owl (COSSARO: Special Concern).

The *Draft Ecoregion 6E Criterion Schedule* (OMNR, 2012) will be used to evaluate candidate habitat for significance. This document states that a habitat is considered significant if the area is used by one or more Short-eared Owls, or ten individuals of the two focal species. The site must be used for a minimum of 20 days to be considered significant. The presence of Short-eared Owls would also classify the area as habitat for special concern and rare wildlife species, as these species are currently listed as Special Concern by COSSARO.





Erin Jaggard <erin.jaggard@mkince.ca>

Ernestown RWA survey route confirmation

5 messages

Erin Jaggard <erin.jaggard@mkince.ca>

Tue, Dec 18, 2012 at 2:03 PM

To: eric.prevost@ontario.ca

Cc: Thomas Bernacki <tom.bernacki@mkince.ca>

Dear Eric

I am contacting you primarily regarding the Raptor Wintering Area pre-construction surveys for the Ernestown Project which are scheduled to commence in early January. We have established a transect/survey route map which is a attached. We kindly ask that you provide us with any feedback or suggested modifications to the route as you see fit. Additionally, the survey protocol, copied directly from the Environmental Impact Study Report is also attached.

The transects will be walked or where possible, driven (40-50 km/hr) with frequent stops. Binoculars in combination with a spotting scope will be used to help identify raptors up to 1 km away. As raptors will be most visible foraging within the open areas and some species like the Short-eared Owl and Northern Harrier roost only within grasslands, these are the areas that will be primarily surveyed with the transects and little to no focus will occur within the forest itself.

On a separate note, we look forward to completing all of our pre-construction surveys for Ernestown in the next few months. In the face of some re-organization within the REA Approvals team at the MNR, can we expect that you will continue to work with us in 2013? Please let us know if we can expect that the Ernestown Project will be moved into another's portfolio. Should this be the case, we would like to discuss and finalize our conclusions from the fall landbird migratory stopover surveys since you were heavily involved in the fall survey protocols/program. Conversely, perhaps such matters can be held off until early in 2013.

Thank you Eric. Be in touch,

Erin

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Erin Jaggard, MSc

Renewable Energy Analyst

M.K. Ince and Associates Ltd.

11 Cross Street, Dundas, Ontario L9H 2R3

Phone: 905.628.0077 Fax: 905.628.1329

Email: erin.jaggard@mkince.ca

Web: www.mkince.ca



RWA Protocol 2012-12-18 EJ.pdf

838K

Prevost, Eric (MNR) <eric.prevost@ontario.ca>
To: Erin Jaggard <erin.jaggard@mkince.ca>

Wed, Dec 19, 2012 at 2:07 PM

Hello Erin,

The survey routes and methodologies look accurate. I would however recommend an additional consideration within your methodology to account for the fact that short eared owls are generally only active during dawn and dusk, and therefore the timing associated with completing the routes should consider how you will appropriately capture those owls during your surveys.

Moving forward, I will continue to the be the contact for your project. Hopefully the continuity serves us well as we move forward.

Best wishes,

Eric R. Prevost

Renewable Energy

Planning Ecologist

Ontario Ministry of Natural Resources

Peterborough District

300 Water Street

Peterborough ON

K9J 7M7

Phone - (705) 755-3134

From: Erin Jaggard [mailto:erin.jaggard@mkince.ca]

Sent: December-18-12 2:03 PM

To: Prevost, Eric (MNR) **Cc:** Thomas Bernacki

Subject: Ernestown RWA survey route confirmation

[Quoted text hidden]

Erin Jaggard <erin.jaggard@mkince.ca>
To: "Prevost, Eric (MNR)" <eric.prevost@ontario.ca>

Wed, Dec 19, 2012 at 3:05 PM

Hi Eric

Thank you for the response. Glad to hear that you will continue to be involved with the Ernestown project in the

new year!

In response to your comment regarding the need to survey during dawn/dusk, are you suggesting that we modify our protocols so that the routes are surveyed during dawn or dusk as opposed to what is stated in our protocol ("during the late morning or early afternoon")? Or are you suggesting the that route be surveyed twice for each visit?

Additionally, we just received some guidance for another project and were informed that if no raptors are observed during the first three surveys, the latter three surveys can be dropped. Can we modify our protocol to include this change as well?

Be in touch and please feel free to give me a call should you wish to discuss these questions over the phone. I can be reached at 905.628.0077.

Regards,

Erin

[Quoted text hidden]

Prevost, Eric (MNR) <eric.prevost@ontario.ca>
To: Erin Jaggard <erin.jaggard@mkince.ca>

Fri, Dec 21, 2012 at 8:14 AM

Hello Erin,

It may be best to stick with the protocol that you have, just rely more on the afternoon visits and try to ensure that some time is spent during the early evening looking for Shorteared owl in the open grass land areas.

As with the pre-construction surveys, we are able to review the results of survey data throughout the survey period to determine whether an appropriate determination can be made. My suggestions is to keep the protocol as is and that we look at the data together should we need to make such a determination.

Best wishes,

Eric R. Prevost

Renewable Energy

Planning Ecologist

Ontario Ministry of Natural Resources

Peterborough District

300 Water Street

Peterborough ON

K9J 7M7

Phone - (705) 755-3134

From: Erin Jaggard [mailto:erin.jaggard@mkince.ca]

Sent: December-19-12 3:06 PM

To: Prevost, Eric (MNR)

Subject: Re: Ernestown RWA survey route confirmation

[Quoted text hidden]

Erin Jaggard <erin.jaggard@mkince.ca>

Fri, Dec 21, 2012 at 10:48 AM

To: Thomas Bernacki <tom.bernacki@mkince.ca>

Hi Tom

Please see the note below. I will save this correspondence in the pre-construction folder. Are you able to relay pertinent information below to the client? Such information includes the following:

- 1. It has been confirmed by the MNR that surveys will be required in the dawn/dusk to search for short-eared owl, particularly in open grassland areas.
- 2. Following the completion of the first three surveys, discussions will occur with the MNR regarding the need to proceed with the latter three surveys.

-Erin

[Quoted text hidden]

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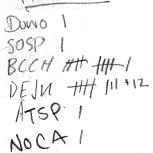
APPENDIX B - FIELD FORMS AND MAPS

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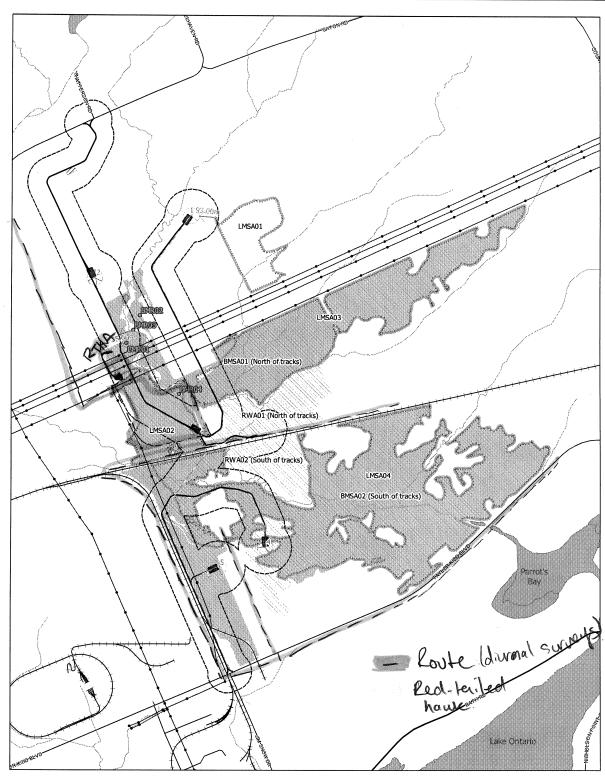
Focal Species: Rough-legged Hawk(RLHA), Red-tailed Hawk (RTHA), Northern Harrier (NOHA), American Kestrel (AMKE), Snowy Owl (SNOW), Short-eared Owl (SEOW)

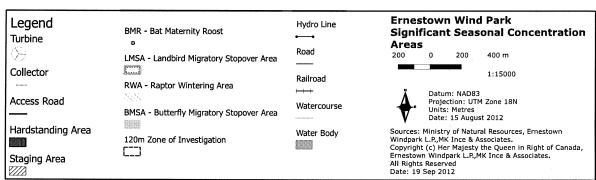


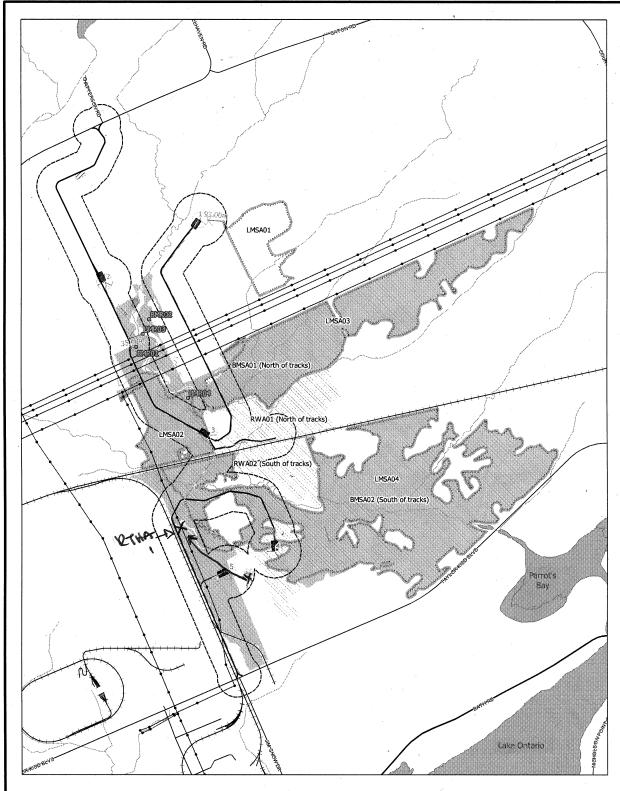


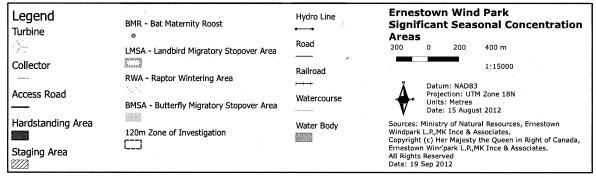
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Surveys









EEN RWA SURVIYS IN RWAST CRWADZ 2013-02-06.

