

# RE MIDHURST 3 SOLAR PROJECT

Natural Heritage  
Site Investigations Report

August 3, 2011

RECURRENT  
ENERGY





RE Midhurst 3 ULC

Natural Heritage  
Site Investigations Report

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Project Report

October 5, 2011

**RE Midhurst 3 ULC  
RE Midhurst 3 Solar Project**

**Natural Heritage Site Investigations Report**

**Table of Contents**

**1. Introduction ..... 3**

    1.1 Project Description ..... 3

    1.2 Legislative Requirements..... 3

**2. Summary of Results of Records Review..... 4**

**3. Site Investigation Methodology ..... 7**

    3.1 Site Investigation 1 ..... 7

        3.1.1 Date, Time, and Duration of Site Investigation ..... 7

        3.1.2 Weather Conditions During Site Investigation ..... 7

        3.1.3 Name and Qualifications of Person Conducting Site Investigation ..... 7

    3.2 Site Investigation 2 ..... 8

        3.2.1 Date, Time, and Duration of Site Investigation ..... 8

        3.2.2 Weather Conditions During Site Investigation ..... 8

        3.2.3 Name and Qualifications of Person Conducting Site Investigation ..... 8

    3.3 Survey Methods ..... 9

**4. Results of Site Investigation..... 9**

    4.1 Valleylands ..... 9

    4.2 Wetlands..... 9

    4.3 Wildlife Habitat ..... 10

        4.3.1.1 Habitats of Seasonal Concentrations of Animals ..... 12

        4.3.1.2 Rare Vegetation Communities or Specialized Habitat for Wildlife..... 13

        4.3.1.3 Habitat of Species of Conservation Concern ..... 15

        4.3.1.4 Animal Movement Corridors ..... 16

    4.4 Woodlands ..... 17

**5. Conclusions..... 17**

**6. References..... 17**

**Appendix A Site Investigation Field Notes**

## List of Tables

Table 2.1	Summary of Records Review Determinations .....	4
Table 4.1	Wildlife Species Observed on and Adjacent to the Project Location .....	10

## List of Figures

Figure 1.1	Project Location and Natural Heritage Features .....	5
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## 1. Introduction

### 1.1 Project Description

RE Midhurst 3 ULC is proposing to develop and operate a 3.5-megawatt (MW) solar photovoltaic (Solar PV) facility, on an approximately 12-hectare (ha) parcel of land located about 14 km northeast of Barrie in the Township of Oro-Medonte in County of Simcoe (Figure 1.1); herein referred to as “RE Midhurst 3” or the “Project”.

### 1.2 Legislative Requirements

Ontario Regulation (O. Reg.) 359/09 – *Renewable Energy Approvals Under Part V.0.1 of the Act*, (herein referred to as the REA Regulation) made under the *Environmental Protection Act* identifies the Renewable Energy Approval (REA) requirements for renewable energy projects in Ontario. As per Section 4 of the REA Regulation, ground mounted solar facilities with a name plate capacity greater than 10 kilowatts (kW) are classified as Class 3 solar facilities and do require an REA.

Section 26 of the REA Regulation requires proponents of Class 3 solar projects to undertake a natural heritage site investigation for the purpose of determining

- a) whether the results of the analysis summarized in the Natural Heritage Records Review report prepared under subsection 25 (3) are correct or require correction, and identifying any required corrections
- b) whether any additional natural features exist, other than those that were identified in the [Natural Heritage Records Review] report prepared under subsection 25 (3)
- c) the boundaries, located within 120 m of the project location, of any natural feature that was identified in the records review or the site investigation
- d) the distance from the project location to the boundaries determined under clause (c).

Natural Features are defined in Section 1.1 of the REA Regulation to be all or part of

- a) an area of natural and scientific interest (ANSI) (earth science)
- b) an ANSI (life science)
- c) a coastal wetland
- d) a northern wetland
- e) a southern wetland
- f) a valleyland
- g) a wildlife habitat, or
- h) a woodland.

Subsection 26 (3) of the REA Regulation requires the proponent to prepare a report setting out the following:

1. A summary of any corrections to the Natural Heritage Records Review report prepared under subsection 25 (3) and the determinations made as a result of conducting the site investigations under subsection (1).
2. Information relating to each natural feature identified in the records review and in the site investigations, including the type, attributes, composition and function of the feature.
3. A map showing
  - i. the boundaries mentioned in clause (1) (c)
  - ii. the location and type of each natural feature identified in relation to the project location
  - iii. the distance mentioned in clause (1) (d).
4. The dates and times of the beginning and completion of the site investigation.
5. The duration of the site investigation.
6. The weather conditions during the site investigation.
7. A summary of methods used to make observations for the purposes of the site investigation.
8. The name and qualifications of any person conducting the site investigation.
9. Field notes kept by the person conducting the site investigation.

This Natural Heritage Site Investigation Report has been prepared to meet these requirements. It has also been prepared in accordance with the Ministry of Natural Resources Natural Heritage Assessment Guide for Renewable Energy Projects (December 2010).

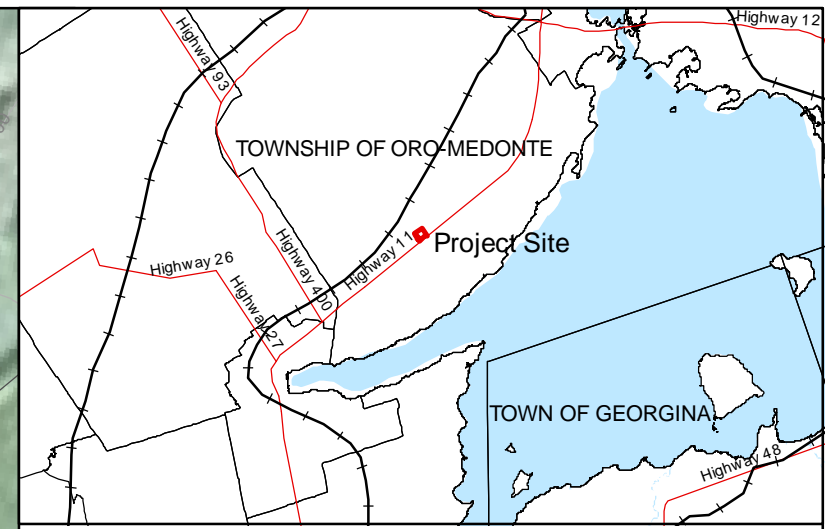
## 2. Summary of Results of Records Review

Table 2.1 summarizes the results of the records review (Hatch Ltd., 2010).

**Table 2.1 Summary of Records Review Determinations**

Determination to be Made	Yes/No	Description
Is the Project in a natural feature?	No	The Project location is not located within a natural feature.
Is the Project within 50 m of an ANSI (earth science)?	No	The nearest earth science ANSI is located several kilometres from the Project location.
Is the Project within 120 m of a natural feature that is not an ANSI (earth science)?	Yes	There is a woodland and the Shelswell's Creek Evaluated Non-Provincially Significant Wetland located within 120 m of the Project location.

In addition to the above, the records reviewed determined that potential habitat for several species of conservation concern may be found on or within 120 m of the Project location:



**Legend**

- Roads
- +— Rail
- Topographic Contour (5m interval)
- Watercourse
- ▭ Parcels

**Natural Heritage Features**

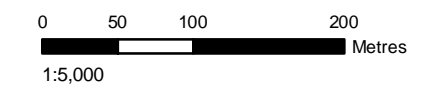
- ▨ Woodlands supporting Amphibian Breeding Habitat
- ▭ Wetland
- ▭ Woodland

**Project Components**

- Connection Point to Existing Distribution Line
- ▭ 120 m from Project Location
- ▨ Temporary Construction Laydown Area
- ▭ Project Location

**Ecological Land Classification**

- AG - Agricultural (Row Crop)
- CUH - Cultural Hedgerow
- CUM - Cultural Meadow
- FOD3 - Dry-Fresh Poplar-White Birch Deciduous Forest
- MAM - Meadow Marsh
- SWT - Thicket Swamp



Notes: Base data downloaded from www.geographynetwork.ca, other environmental data from LIO, UTM NAD83, December 2010.

Figure 1.1  
 Recurrent Energy  
**RE Midhurst 3**  
 Project Location and  
 Natural Heritage Features



Back of figure

- Milksnake (*Lampropeltis triangulum*)
- Snapping Turtle (*Chelydra serpentina*)
- Western Chorus Frog (*Pseudacris triseriata*)
- Olive-sided Flycatcher (*Contopus cooperi*);
- Red-headed Woodpecker (*Melanerpes erythrocephalus*);
- Cerulean Warbler (*Dendroica cerulea*);
- Golden-winged Warbler (*Vermivora chrysoptera*); and
- Canada Warbler (*Wilsonia canadensis*).

### 3. Site Investigation Methodology

#### 3.1 Site Investigation 1

##### 3.1.1 *Date, Time, and Duration of Site Investigation*

- Date: June 18, 2009
- Start Time: 15:00 hours
- Duration: approximately 1.5 hours

##### 3.1.2 *Weather Conditions During Site Investigation*

- Temperature: 18°C
- Beaufort Wind: 1
- Cloud Cover: 10%

##### 3.1.3 *Name and Qualifications of Person Conducting Site Investigation*

The site investigation was completed by Sean K. Male.

Sean K. Male, M.Sc. is a Terrestrial Ecologist specializing in assessments of terrestrial habitat, flora and fauna. Sean received his Bachelors of Science (Honours) in Biology from Queen's University, where he completed his Honour's thesis under Dr. Raleigh J. Robertson, studying the impacts of nestbox density in Tree Swallows (*Tachycineta bicolor*) on nest-building behaviour. He then completed a Master's of Science degree in the Watershed Ecosystem Graduate Program at Trent University under Dr. Erica Nol. Sean's thesis focussed on examining the impacts of a Canadian diamond mine on a population of breeding passerines. For his thesis, Sean spent two summers in the Canadian arctic studying populations of Lapland Longspurs (*Calcarius lapponicus*) around the Ekati Diamond Mine, located 300 km northeast of Yellowknife. While at Trent, Sean participated in the Northern Saw-whet Owl (*Aegolius acadicus*) Migration Banding Project at the Oliver Centre. Following his time at Trent, Sean participated in the Landscape Monitoring Program and was involved in a study of the impacts of woodlot size on breeding birds.

Sean joined Hatch as a Terrestrial Ecologist in 2006. Since joining Hatch, Sean has participated in several environmental assessments for hydro and wind power developments. He has developed and implemented baseline monitoring and impact assessment programs for both terrestrial wildlife and plant communities, including detailed bird and bat studies for several wind power developments, including the proposed 100-MW Coldwell Wind Power Development near Marathon, Ontario, a proposed 20-MW facility near Port Dover, Ontario, and a proposed 110-MW wind facility in southwestern Ontario. Sean has also conducted terrestrial and wetland vegetation surveys for several proposed hydropower projects totalling over 40 MW in southern and northern Ontario and has participated in fisheries surveys for several of these projects.

## **3.2 Site Investigation 2**

### **3.2.1 *Date, Time, and Duration of Site Investigation***

- Date: June 2, 2010
- Start Time: 09:00 hours
- Duration: approximately 5.5 hours

### **3.2.2 *Weather Conditions During Site Investigation***

- Temperature: 23°C
- Beaufort Wind: 1 to 3
- Cloud Cover: 25% to 100%

### **3.2.3 *Name and Qualifications of Person Conducting Site Investigation***

The site investigation was completed by Martine Esraelian.

Martine Esraelian, B.Sc. is an Environmental Scientist specializing in species at risk and terrestrial ecosystems. She has a B.Sc. from Trent University where she specialized in Conservation Biology and Ecological Management and an Ecosystem Management Technician diploma from Sir Sandford Fleming College. During her time at Trent University, she completed a 1-yr internship with the MNR which involved developing a genetic-based protocol for the extraction of DNA from unknown turtle eggshells to assist with species identification. The project entailed extensive molecular genetics research and intensive lab work to develop a protocol able to supplement existing conservation management practices.

She offers expertise across the full breadth of the field from environmental assessments and technical analysis of environmental data to conservation management, corporate and government consulting, and community outreach. Martine has liaised with all levels of government, the community, and a portfolio of clients that includes consulting firms, planners, and high-profile developers. She has both technical and hands-on experience conducting site investigations (terrestrial and aquatic), evaluations of significance, environmental and agricultural impact studies, constraint analyses, water quality and soil assessments, species at risk, wildlife management and fisheries studies to meet regulatory requirements.

Martine has a wide range of field experience related to terrestrial and aquatic ecosystems and species at risk. She has conducted reptile and amphibian surveys, small-mammal trapping, benthic invertebrate monitoring and fisheries inventories (seine netting and electrofishing). She has conducted detailed natural areas inventories which involve species identification of flora and fauna, vegetation community mapping, identifying rare vegetation communities and significant wildlife habitats.

Martine has project management and fieldwork experience for a number of species at risk monitoring projects. Some of the species she has been involved with include: fowler's toad, eastern massasauga rattlesnake, eastern ratsnake, queensnake, eastern ribbonsnake, milksnake, blanding's turtle, map turtle, spotted turtle, snapping turtle, Jefferson salamander, northern dusky and mountain alleghany dusky salamander, butternut, flowering dogwood, swamp rose mallow and spoon-leaved moss.

Martine is a certified Butternut Health Assessor and also holds a certificate in the Ecological Land Classification (ELC) system.

### **3.3 Survey Methods**

On both occasions, the entire Project location and lands within 120 m were searched by the observer on foot in order to document and characterize natural features.

Photographs of the vegetation communities and any features identified as being of interest for candidate significant wildlife habitats were taken. Area searches of candidate significant wildlife habitats were completed, and any wildlife species observed either through visual (i.e., species seen, tracks noted, etc) or auditory (heard calling/singing) were documented. Area searches included identified potential habitats of species of conservation concern. UTM coordinates were taken for any features determined to be of importance.

Vegetation communities on and within 120 m of the Project location were characterized according to the Ecological Land Classification (ELC) during the second site visit.

A list of vegetation and wildlife species observed during the site visits was kept.

A copy of the field notes kept by the observer is provided in Appendix A.

## **4. Results of Site Investigation**

Ecological Land Classification of vegetation communities on and within 120 m of the Project location is provided in Figure 1.1.

### **4.1 Valleylands**

No valleylands were identified on or within 120 m of the Project location during the site investigation.

### **4.2 Wetlands**

The boundaries of the Shelswell's Creek Evaluated Non-Provincially Significant Wetland Complex were confirmed as accurate during the site investigation. This feature is located within 120 m of the Project location (approximately 40 m east at the nearest point). As this feature has already been

evaluated an Evaluation of Significance is not required for the wetland complex. Further, as the evaluation concluded that the wetland is not provincially significant, an environmental impact study is also not required.

Wildlife habitat functions of the wetland within 120 m of the Project location are addressed in Section 4.3, where applicable. Other functions that the wetland within 120 m of the Project location may provide include the following.

- Watershed protection – Wetland communities provide protection of watersheds through (i) filtration of surface water inflow thereby improving water quality, (ii) flood control by trapping water flowing into a watercourse, and slowly releasing it, and (iii) protecting the shoreline of the watercourse from erosion by slowing the flow of water along the banks.
- Preservation of biodiversity – Wetland communities help preserve biodiversity by providing habitat for wetland obligate species of flora and fauna.
- Support of natural cycles – wetland communities provides an important component of support for carbon, nitrogen and water.

### 4.3 Wildlife Habitat

A list of wildlife species recorded during the site investigations is provided in Table 4.1. It is expected that other species of wildlife not recorded in Table 4.1 may be present on or within 120 m of the Project location at various times of year.

**Table 4.1 Wildlife Species Observed on and Adjacent to the Project Location**

Common Name	Scientific Name	Rank		At Risk Status	
		Global (GRank)	Provincial (SRank)	COSEWIC	SARO
<b>Mammals</b>					
White-tailed Deer	<i>Odocoileus virginianus</i>	G5	S5	-	-
<b>Birds</b>					
Red-tailed Hawk	<i>Buteo jamaicensis</i>	G5	S5	-	-
Killdeer	<i>Charadrius vociferus</i>	G5	S5B,S5N	-	-
Blue Jay	<i>Cyanocitta cristata</i>	G5	S5	-	-
Northern Flicker	<i>Colaptes auratus</i>	G5	S4B	-	-
American Robin	<i>Turdus migratorius</i>	G5	S5B	-	-
Veery	<i>Catharus fuscescens</i>	G5	S4B	-	-
Wood Thrush	<i>Hylocichla mustelina</i>	G5	S4B	-	-
Gray Catbird	<i>Dumetella carolinensis</i>	G5	S4B	-	-
Eastern Wood-pewee	<i>Contopus virens</i>	G5	S4B	-	-
Yellow Warbler	<i>Dendroica petechia</i>	G5	S5B	-	-
Common Yellowthroat	<i>Geothlypis trichas</i>	G5	S5B	-	-
Horned Lark	<i>Eremophila alpestris</i>	G5	S5B	-	-
American Goldfinch	<i>Carduelis tristis</i>	G5	S5B	-	-

Common Name	Scientific Name	Rank		At Risk Status	
		Global (GRank)	Provincial (SRank)	COSEWIC	SARO
Black-capped Chickadee	<i>Poecile atricapillus</i>	G5	S5	-	-
Chipping Sparrow	<i>Spizella passerine</i>	G5	S5B	-	-
Song Sparrow	<i>Melospiza melodia</i>	G5	S5B	-	-
Savannah Sparrow	<i>Passerculus sandwichensis</i>	G5	S4B	-	-
Red-winged Blackbird	<i>Agelaius phoeniceus</i>	G5	S4	-	-
<b>Reptiles</b>					
Eastern Gartersnake	<i>Thamnophis sirtalis sirtalis</i>	G5	S5	-	-
<b>Butterflies</b>					
Viceroy	<i>Limenitis archippus</i>	G5	S5	-	-
Canadian Tiger Swallowtail	<i>Papilio Canadensis</i>	G5	S5	-	-
Red Admiral	<i>Vanessa atalanta</i>	G5	S5	-	-
Eastern Comma	<i>Polygonia comma</i>	G5	S5	-	-
<b>Acronyms/Definitions</b>					
<b>Global</b>					
G5 – <b>Very common</b> (demonstrably secure under present conditions)					
T – Denotes that the rank applies to a subspecies or variety.					
<b>Provincial</b>					
S5 – <b>Secure</b> (Common, widespread, and abundant in the nation or state/province)					
S4 – <b>Apparently Secure</b> (Uncommon but not rare; some cause for long-term concern due to declines or other factors)					
B - Denotes that the S-rank is for breeding species					
N - Denotes that the S-rank is for non-breeding					
SNA – <b>Not Applicable</b> (A conservation status rank is not applicable because the species is not a suitable target for conservation activities)					
NAR – Not at Risk					

The Significant Wildlife Habitat Technical Guide (SWHTG) (MNR, 2000) identifies four main types of wildlife habitat that can be classified as significant:

- habitat for seasonal concentrations of animals
- rare or specialized habitats for wildlife
- habitat for species of conservation concern
- wildlife movement corridors.

Each of these types of wildlife habitat is considered further below and how they were considered during the site investigation is addressed.

#### 4.3.1.1 *Habitats of Seasonal Concentrations of Animals*

There are many different kinds of seasonal concentration areas, with the likelihood of occurrence of one of these areas depending on the characteristics of the study location. Those that were considered during the site investigations, and the discussion of their potential occurrence on or within 120 m of the Project location, are discussed below.

- Winter deer yards/moose late winter habitat – Winter deer yards/moose late winter habitat are sheltered areas where these species congregate during the winter months. As these species are not adept at moving through deep snow, a key component of these habitats is a core area predominantly composed of coniferous trees with a 60% canopy cover. As the woodland within 120 m of the Project location is deciduous, this habitat type is not present.
- Colonial bird nesting sites – Colonial bird nesting sites are locations where colonial species, such as herons, gulls, terns, and swallows traditionally nest in colonies of varying size. No colonial birds were observed during the site investigation, and further no heronries, or rocky areas suitable of supporting tern or gull populations, or potential swallow colonial breeding locations were identified on or within 120 m of the Project location. Though an area of meadow marsh was identified within 120 m of the Project location, the characteristics of the community were such that it was determined to not be capable of supporting colonial tern populations. No features capable of supporting colonial swallow populations (such as exposed clay banks, etc) were recorded during the site investigation. As a result, this habitat type is not found on or within 120 m of the Project location.
- Waterfowl stopover and staging areas – Waterfowl traditionally congregate in larger wetlands and relatively undisturbed shorelines with vegetation during spring and fall migration. Further, during the fall migration, waterfowl may commonly congregate in feeding or roosting ponds. During the spring migration, waterfowl may congregate on flooded agricultural fields. The area of meadow marsh habitat available within 120 m of the Project location is the only habitat identified capable of providing for waterfowl stopover or staging. The small size of this wetland community (approximately 2.5 ha) determines that it is not capable of supporting large numbers of waterfowl, a required characteristic of this habitat type. Therefore, this habitat type is not found on or within 120 m of the Project location.
- Waterfowl nesting – Waterfowl nesting sites can consist of relatively large, undisturbed upland areas with abundant ponds and wetlands, while other species nest within tree cavities in swamps or on the shorelines of waterbodies. As agricultural lands are used in row-crop production, suitable waterfowl nesting habitat is restricted to the previously identified meadow marsh habitats. No waterfowl or waterfowl nests were recorded during the site investigations within these features. As a result, this habitat type is not found on or within 120 m of the Project location.
- Shorebird/landbird migratory stopover areas – Shorebird migratory stopover areas are found along the shorelines of the Great Lakes and James Bay, while landbird stopover areas are found along the shorelines of the Great Lakes and contain a variety of habitat types from open fields to large woodlands. As the Project location is located more than 120 m away from these areas, this habitat type does not occur on or within 120 m of the Project location.

- Raptor winter feeding and roosting areas – This combined habitat type features suitable raptor roosting sites in proximity to winter feeding areas. For most raptor species, roosting sites are traditionally mature mixed or coniferous woodlands, a habitat type which is absent within 120 m of the Project location. Some species roost within grassy fields; a habitat type which was also not recorded on or within 120 m of the Project location. Therefore, this habitat type is not found on or within 120 m of the Project location.
- Wild turkey winter range – Similar to winter deer yards, wild turkey rely on coniferous forest stands for winter protection. As previously discussed, such habitat was not identified during the site investigations on or within 120 m of the Project location and therefore wild turkey winter range is not found.
- Turkey vulture summer roosting areas – Turkey vulture summer roosting areas traditionally consist of cliff ledges and large snags. No cliff ledges or large snags were noted during the site investigation on or within 120 m of the Project location.
- Reptile hibernacula – Reptile hibernacula are commonly found in animal burrows and rock crevices. Neither animal burrows nor rock crevices were noted during the site investigation on or within 120 m of the Project location. Therefore there is no potential for this habitat to occur.
- Bat hibernacula – Bat hibernacula are found in caves or abandoned mines. These features were not identified on or within 120 m of the Project site during the site investigation.
- Bullfrog concentration areas – Bullfrog concentration areas are predominantly found in areas of marsh habitat. An area of meadow marsh was identified within 120 m of the Project location, however no bullfrogs were recorded during the site investigation. Therefore, this habitat type is not found on or within 120 m of the Project location.
- Migratory butterfly stopover areas – These habitats are found within 5 km of the Great Lakes; as the Project area is located outside of this zone, such habitat features are not found.

Habitat criteria for these seasonal concentration areas were considered during the site investigation, however, none of these habitat types were observed.

#### 4.3.1.2 *Rare Vegetation Communities or Specialized Habitat for Wildlife*

Rare vegetation communities include alvars, tall-grass prairies, savannahs, rare forest types, talus slopes, rock barrens, sand barrens and Great Lakes dunes. None of these vegetation communities were identified during the site investigation. Vegetation communities that were observed during the site investigations have been previously described in Section 4.1; none of these communities are considered to be rare or uncommon within the local or provincial area.

Specialized wildlife habitats include

- areas that support species that have highly specific habitat requirements
- areas with high species and community diversity
- areas that provide habitat that greatly enhances species survival.

There are many habitat types that may meet these definitions; those that were considered during the site investigations as they had the potential to be present in the area, and the discussion of their potential occurrence on the Project location, are addressed below.

- Habitat for area-sensitive species – Appendix C of the SWHTG includes a list of area-sensitive species to be considered. Of these species, Savannah Sparrow, Ovenbird and Veery were recorded during the site investigations which were conducted during suitable time periods for detection. Savannah Sparrow were recorded within the long grasses of the wetland habitats, however the available habitat for Savannah Sparrow on site is less than 30 ha, which is the minimum size for significant habitat for area sensitive open country species (MNR, 2009). Both Ovenbird and Veery were recorded within the interior of the woodland more than 120 m south of the Project location (i.e., within suitable breeding habitat). As a result, suitable habitat for area-sensitive species is not found on or within 120 m of the Project location.
- Forests providing a high diversity of habitats/old-growth or mature forest stands/foraging areas with abundant mast – Woodland communities within 120 m of the Project location represent a small portion (<1 ha) of the woodland that is described as edge habitat. This type of habitat does not provide a high diversity and is not consistent with old growth of mature forest stands. Further, the woodland in this area does not provide abundant mast as suitable tree species (oak and beech) were not recorded. Therefore, these habitat types do not occur on or within 120 m of the Project location.
- Woodlands supporting amphibian-breeding ponds – The wetland habitats within 120 m of the Project location would provide amphibian breeding habitat, and are located adjacent to woodland communities. Therefore, this meets the habitat requirements, and is carried forward to the Evaluation of Significance.
- Turtle-nesting habitat – Turtle-nesting sites are areas where soft substrates, such as sand or fine gravel, are found that permit turtles to excavate their nests, and are located in open, sunny areas. Such habitats were not found on or within 120 m of the Project location during the site investigations.
- Specialized raptor-nesting habitat – Red-tailed Hawk were the lone raptor species observed during the site investigations, and evidence of nearby nesting was noted (i.e., aggravated behaviour). However, Red-tailed Hawk nests are not considered a candidate significant wildlife habitat (MNR, 2009), and no woodlands capable of supporting specialized raptor nesting are present on or within 120 m of the Project location. Therefore, this habitat type is not present on or within 120 m of the Project location.
- Mink, otter, marten, and fisher denning sites – Denning sites for these members of the weasel family were not recorded on or within 120 m of the Project location during the site investigations.
- Highly diverse areas – The habitats present on and within 120 m of the Project location were considered in respect of diversity. Only two natural habitat types were identified within 120 m of the Project location (woodland edge, meadow marsh and shrub thicket); therefore it is determined that highly diverse areas are not found on or within 120 m of the Project location.

- Cliffs and caves – These features were not identified on or within 120 m of the Project location during the site investigations.
- Seeps and springs – These features were not identified on or within 120 m of the Project location during the site investigations.

As a result, no rare vegetation communities or specialized wildlife habitats were identified on or within 120 m of the Project location.

#### 4.3.1.3 *Habitat of Species of Conservation Concern*

Species of conservation concern that were considered during the site investigation include the following:

- Olive-sided Flycatcher – This species is strongly associated with openings and edges in coniferous forest habitats. Open areas may be forest clearings, forest edges located near natural openings (such as rivers or swamps) or human-made openings (such as logged areas), burned forest or openings within old-growth forest stands; these forests are characterized by mature trees and large numbers of dead trees. Such habitat is not present on or within 120 m of the Project location, and Olive-sided Flycatchers were not observed during area searches completed within suitable habitats. Therefore, habitat for Olive-sided Flycatchers is not present on or within 120 m of the Project location.
- Red-headed Woodpecker – This species occurs in open woodland and woodland edges, especially in oak savannahs and riparian forest, which can often be found in parks, golf courses and cemeteries. These habitats contain a higher density of dead trees, which they commonly use for nesting and perching. Suitable habitat is limited to a small (< 1 ha) portion of the forest edge within 120 m of the Project location, and no Red-headed Woodpeckers or cavity nests were recorded during area searches within this habitat type. Though areas of suitable habitat were not confirmed as occupied and are therefore not carried forward to the evaluation of significance, as some of the habitat is associated with the woodland, impacts to that potential habitat will be assessed if the woodland is significant.
- Canada Warbler – Suitable habitat for Canada Warbler (wet, mixedwood forest with a well-developed shrub layer) were not recorded during the site investigation.
- Cerulean Warbler – Cerulean Warbler are commonly associated with mature deciduous upland or swamp forests. Woodland communities within 120 m of the Project location were not described as mature, and therefore suitable candidate significant wildlife habitat is not found on or within 120 m of the Project location.
- Golden-winged Warbler – Golden-winged Warblers are associated with shrub/early successional habitats. A small area of thicket swamp was identified within 120 m of the Project location, however no Golden-winged Warblers were recorded during area searches of suitable habitat. Therefore, Golden-winged Warbler habitat is not found on or within 120 m of the Project location. Though areas of suitable habitat are not confirmed as occupied and are therefore not carried forward to the evaluation of significance, as they are located within the wetland, impacts to the potential habitat will be assessed if the woodland is significant.

- **Milksnake** – As Milksnake are habitat generalists, they may be found foraging on the agricultural fields on and within 120 m of the Project location. However, foraging habitat for Milksnake is not a candidate significant wildlife habitat feature. Candidate significant features would consist of rotting logs or stumps, organic material piles, rock piles, brush piles, and dump sites of old agricultural debris or equipment; features that may provide important hibernacula, retreat or basking habitat. Such features were not identified on or within 120 m of the Project location. Therefore, candidate significant Milksnake habitat is not found on or within 120 m of the Project location.
- **Snapping Turtle** – Though there is a wetland community within 120 m of the Project location, there is no open water present within this community that would indicate occupancy by species of turtles. Neither site investigation identified suitable habitat for turtles on or within 120 m of the Project location. Further, there is no suitable Snapping Turtle nesting habitat (sandy soils on south facing banks) on or within 120 m of the Project location. Therefore, candidate significant Snapping Turtle habitat is not present on or within 120 m of the Project location.
- **Western Chorus Frog** – The wetland community within 120 m of the Project location is determined to provide suitable breeding habitat for Western Chorus Frog given that the area would provide vernal pool habitats in the spring; this area has been previously identified as candidate significant woodland supporting amphibian breeding habitat. However, Western Chorus Frog were not detected during the site investigations and therefore this potential habitat is not identified as candidate significant breeding habitat for Western Chorus Frog. Though this area of suitable habitat is not confirmed as occupied and is therefore not carried forward to the evaluation of significance, as it is located within the identified areas of woodland supporting amphibian breeding habitat, impacts to the potential habitat will be assessed if the amphibian breeding habitat is significant.
- **Green-striped Darner** – Breeding occurs within open marshy areas. Such habitat is limited within 120 m of the Project location, and no Green-striped Darners were recorded during site investigations. Though this area of suitable habitat is not confirmed as occupied and is therefore not carried forward to the evaluation of significance, as it is located within the identified areas of woodland supporting amphibian breeding habitat, impacts to the potential habitat will be assessed if the amphibian breeding habitat is significant.

Based on the results of the site investigations, there are no habitats for species of conservation concern on or within 120 m of the Project location.

#### 4.3.1.4 *Animal Movement Corridors*

The SWHTG (MNR, 2000) defines animal movement corridors as “elongated, naturally vegetated parts of the landscape used by animals to move from one habitat to another”. Animal movement corridors were considered during the site investigations. Such features were found to be present within the hedgerows on and within 120 m of the Project location.

Section 8.7 of the SWHTG states that “fence and hedgerows should not be considered significant unless they provide the only animal movement corridors in the planning areas”. Given that there is a large animal movement corridor present in the local area (represented by the woodlands surrounding

Shelswell's Creek, that the hedgerows are generally restricted to a depth of a single tree width, these features are not considered to be animal movement corridors.

#### **4.4 Woodlands**

There is a small portion of a woodland present within 120 m of the Project location. This portion of the woodland is described as a deciduous forest community. The larger woodland community in the area of which this small portion is part is described as a Dry – Fresh Poplar – White Birch Deciduous Forest (FOD3). The dominant tree species within the larger community include trembling aspen, white birch, sugar maple and white ash. Other tree species included largetooth aspen, balsam poplar, white cedar, red pine, white pine and black cherry. The portion on the edge of the woodland within 120 m of the Project location consists of trembling aspen and maple.

Wildlife habitat functions of the various woodland communities are addressed in Section 4.3, where applicable. Beyond these functions, an additional function of the woodland communities on and within 120 m of the Project location are

- contribution to the riparian cover for the tributary of Shelswell's Creek
- contribution to local and regional water quality and quantity
- contributions to local nutrient cycling and food web interactions.

### **5. Conclusions**

Based on the results of the site investigations identified above, additional natural features (i.e., wildlife habitat) from those identified during the records review (Hatch 2010) were identified on and within 120 m of the Project location.

There are natural features present within 120 m of the Project location that will require an Evaluation of Significance. These are

- woodland
- woodland supporting amphibian-breeding ponds.

In addition, a wetland complex is present within 120 m of the Project location; however, the evaluation of wetland significance has already been completed on this feature (see Hatch Ltd, 2010 and Section 3, above) and therefore one is not required.

### **6. References**

Hatch Ltd. 2010. RE Midhurst 3 Solar Project – Natural Heritage Records Review. Prepared for RE Midhurst 3 ULC.

Ministry of Natural Resources. 2009. Ecoregion Criteria Schedules – Addendum to the Significant Wildlife Habitat Technical Guide.

MNR. 2000. Significant Wildlife Habitat Technical Guide. 151 p.

**Appendix A**  
**Site Investigation**  
**Field Notes**

Location: 217 Line 5 N, oxa station

Date: June 2, 2010

Time: 0900 - 1430

% C.C. 25-100%

Temp: 23°C

Wind: 5 km/h Beaufort: 1-3

Agricultural

- Field near road
- oats

Back field - corn

5 horses, turkey, chicken, 5 dexter cows

Killdeer

deer tracks

savannah sparrow

Red-winged blackbird

garter snake

- Salt Marsh Sparrow (A)
- Kinglet
- goldenrod spp. (A) (T)
- milkweed (A)
- grass (A)
- white clover
- Red Pine sapling (R)
- Willow spp. (Immature) (A)
- Willow spp. (Immature) (O)
- ribwort grass (O)
- Sugar Maple (D) along hedgerow
- White Oak (A)
- European Larch (R)
- red-osier dogwood (R)
- raspberry spp. (O)
- Staghorn Sumac (O)
- black locust spp. (S)
- Burdock (O)
- Trunking Aspen (O)
- ox-eye daisy
- white ground (S)
- daisy fleabane
- corn vetch
- red clover
- white clover

Wetland

adjacent to property

South Woodland (edge spp & dominant trees)

Trembling Aspen (D) edge of forest

White Cedar (D)

raspberry (C)

common apple (L)

dogwood (wood-leaved) (D)

Hawthorn spp (C)

tall buttercup (R)

golden rod spp (A)

wild geranium (C)

horsetail spp (C)

Felops (R)

scrub area

willow spp (D) saplings

red pine sapling (R)

Trembling Aspen (A)

golden rod spp (A)

milkweed (C)

grass (A)

red. osier dogwood (C)

sedge (A)

Black cherry along Woodland edge

Ash

tall buttercup (R)

riverbank grape (R)

Aul-fruited Sedge (A)

low water (C)

common strawberry (C)

horsetail spp (C)

white cedar saplings (R)

wild carrot (C)

Turdus (R)

ox-eye daisy (R)

daisy Diabasis (R)

scrub tree (R)

mesquite (C)

hawkwort

Balsam Poplar Patch

willow spp

reed colony grass (D)

Deciduous woodland/wetland

Trembling Aspen (D)  
Black Ash

CA - MAM area

- majority of area dominated by reed canary grass
- isolated pockets of goldenrod spp dominated areas
- overall entire area is low-lying with poor drainage

Shrub clump area

- \* Willow spp. (D)
  - \* Trembling Aspen (A) sub-dominant
  - Baldern Poplar (D)
  - White Birch (R)
  - Red pine (copulce) (R)
  - red-oak dogwood (D)
  - White pine (sapling) (R)
- groundcover
- grasses (D)
  - sedges (D)
  - horsetails (D)
  - reed canary grass (D)
  - goldenrod spp.
  - straggles (D)
  - tree fern
  - milkweed (D)

Robin's nest

East Boundary Woodland/Wetland

- Trembling Aspen (A)
- White cedar (O)
- White birch (R)
- White ash (A) (O)
- Sugar maple (A)
- Basswood
- White Elm
- Balsam Fir (R)
- Yellow birch
- sensitive fern
- (O) silver maple (understory)
- ironwood (O)
- (D) Freeman's Maple (swampy area)

upland

Upland area - ironwood & white ash (O)

Swampy area

- Freeman's maple (O)
- silver maple (O)

Watercourse

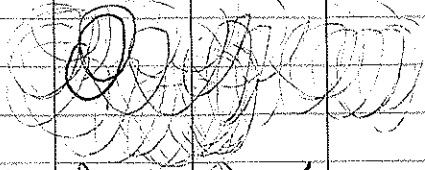
- no defined channel
- Reed Canary Grass (O)
- Viceroy butterfly
- tiger swallowtail
- not well defined in most areas
- some channel definition along shrub-line

Sand Woodland/Wetland

- Balsam Poplar (O)
- White Birch (A)
- Trembling Aspen (A) (O)
- Sugar Maple (O)
- White Ash (A)
- alderwood sap (S)
- common apple (O)

SA

WOTH



SOSP	AMRO	AMGO	CHSP
RUBL	COYE	GAW	SVSP
BOBO	KVA	BLJA	KEER
RTHA	WOTH	GRCA	HOLA
BLCH	NOPL		

Birk	Ash	mylk	Russwood
	Doer		

NON

	M	T	W	T	F
332643	<del>1</del>	4	8	25	7
308420				15	
333726	5			4	1
333000	2				