

RE MIDHURST 3 SOLAR PROJECT

Natural Heritage
Evaluation of Significance

August 3, 2011

RECURRENT
ENERGY





RE Midhurst 3 ULC

Natural Heritage
Evaluation of Significance

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Project Report

August 3, 2011

RE Midhurst 3 ULC
RE Midhurst 3 Solar Project

Natural Heritage Evaluation of Significance

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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*, made under the *Environmental Protection Act* identifies the Renewable Energy Approval (REA) requirements for renewable energy projects in Ontario. Ground-mounted solar facilities with a nameplate capacity greater than 10 kW are classified as Class 3 solar facilities and require an REA in accordance with Section 4 of O. Reg. 359/09.

Section 24(1) of O. Reg. 359/09 requires proponents of Class 3 solar projects to prepare a natural heritage assessment consisting of a records review report, site investigation report and an evaluation of significance report for each natural feature identified during the records review and site investigation.

Natural features are defined in Section 1(1) of O. Reg. 359/09 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.

1.2.1 Records Review Report

Section 25 of the REA Regulation requires proponents of Class 3 solar projects to undertake a natural heritage records review to identify “whether the project is

- a) in a natural feature
- b) within 50 m of an area of natural and scientific interest (earth science)
- c) within 120 m of a natural feature that is not an area of natural or scientific interest (earth science).” (O. Reg. 359/09, s. 25, Table).

Subsection 3 of Section 25 of the REA Regulation requires the proponent to prepare a report “setting out a summary of the records searched and the results of the analysis” (O. Reg. 359/09). The Natural Heritage Records Review Report (Hatch Ltd., 2010a) was prepared to meet these requirements.

1.2.2 Site Investigation Report

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

- 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
- whether any additional natural features exist, other than those that were identified in the (natural heritage records review) report prepared under Subsection 25(3)
- 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
- the distance from the Project location to the boundaries determined under Clause (c).

The Natural Heritage Site Investigations Report (Hatch Ltd., 2010b) was prepared to meet these requirements.

1.2.3 Evaluation of Significance Report

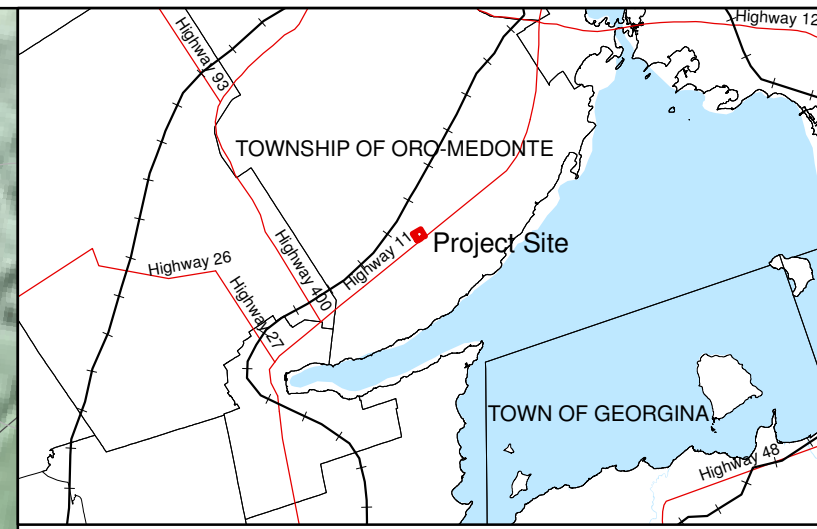
Section 27 of the REA Regulation requires proponents of Class 3 solar projects to undertake an evaluation of significance (EOS) for natural heritage features identified during the records review and site investigation that sets out

- a determination of whether the natural feature is
 - ◆ provincially significant
 - ◆ significant
 - ◆ not significant
 - ◆ not provincially significant
- a summary of the evaluation criteria or procedures used to make the determinations
- the name and qualifications of any person who applied to evaluation criteria or procedures
- the dates of the beginning and completion of this evaluation.

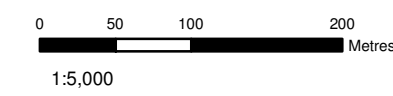
This Evaluation of Significance Report for the natural features identified on and within 120 m of the Project location has been prepared to meet these requirements. It has also been prepared in accordance with the Ministry of Natural Resources Natural Heritage Assessment Guide for Renewable Energy Projects (December 2010).

1.3 Evaluation of Significance Report Format

Section 1 of this EOS has identified the legislative requirements for an EOS under the REA Regulation and identified the reasons why an EOS is required for the Project. Section 2 provides a summary of the results of the records review and site investigation. Section 3 provides the evaluation of



- Legend**
- Roads
 - +— Rail
 - Topographic Contour (5m interval)
 - Watercourse
 - ▭ Parcels
 - ▭ Wetland
 - ▭ Woodland
- Significant Natural Heritage Features**
- ▭ Significant Woodland
 - ▨ Woodlands supporting Amphibian Breeding Habitat
- Project Components**
- Connection Point to Existing Distribution Line
 - ▭ Project Location
 - ▨ Temporary Construction Laydown Area
 - ▭ 120 m from Project Location



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
 Significant Natural
 Heritage Features



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significance for wildlife habitat, Section 4 identifies the conclusions of the evaluation of significance, and the references are provided in Section 5.

2. Summary of Results of Records Review and Site Investigation

As stated above, natural features requiring an evaluation of significance are identified through the records review (Hatch Ltd., 2010a) and site investigation (Hatch Ltd., 2010b) required under Sections 25 and 26 of the REA Regulation, respectively. These studies have already been completed, and the results are summarized in Table 2.1. This report provides the evaluations for the features identified in Table 2.1.

Table 2.1 Natural Features on and within 120 m of the Project Location

Natural Feature	Project Location	Adjacent Lands (within 120 m)	Notes
ANSI – Earth Science	No	No	
ANSI – Life Science	No	No	
Valleyland	No	No	
Wetland	No	Yes	An evaluation of wetland significance has already been completed and is not required (see NHIC, 2010)
Woodland	No	Yes	
Wildlife Habitat	No	Yes	

3. Wildlife Habitat

Woodland supporting amphibian-breeding ponds were the lone candidate significant wildlife habitat identified within 120 m of the Project location during the site investigation.

The criteria processes outlined in the Ministry of Natural Resources (MNR) Natural Heritage Reference Manual (NHRM) (MNR, 2010a) and Significant Wildlife Habitat Technical Guide (SWHTG) (MNR, 2000) are used to evaluate the significance of wildlife habitat. The specific criteria used in the evaluation from these sources are discussed by habitat type below.

3.1 Specialized Habitat for Wildlife

Criteria for evaluation of specialized habitat for wildlife are identified within the Significant Wildlife Habitat Ecoregion Criteria Schedules Addendum to Significant Wildlife Habitat Technical Guide (MNR 2009).

3.1.1 Woodland Supporting Amphibian-Breeding Ponds

Criteria for evaluation of woodlands supporting amphibian breeding ponds are identified within Table Q-2 of Appendix Q of the SWHTG. The criteria that were considered during the evaluation of the features are discussed in respect of the individual features below.

- Provision of significant wildlife habitats – Amphibian breeding habitat within 120 m of the Project location is not identified as providing other significant wildlife habitats.

- Degree of permanence – Presence of water within the wetland community is seasonal.
- Species diversity of pond – No species of amphibians were recorded during the site investigations, therefore diversity is considered to be low and this criteria is not met.
- Presence of rare species – No rare amphibian species were recorded during the site investigations.
- Size and number of ponds – The size of the wetland is small (approximately 2.5 ha).
- Diversity of submergent and emergent vegetation – A diversity of submergent and emergent vegetation was not observed within the wetland.
- Presence of shrubs, logs at edge of pond – Shrubs are not abundant at the edge of the wetland. A large number of logs was not recorded.
- Adjacent forest habitat – There is a woodland located immediately adjacent to the breeding habitat.
- Water quality – Water quality, when present, is assumed to be consistent with the region.
- Level of disturbance – There is no disturbance between the wetland and woodland.

As a result, though there is a lack of confirmed species, several of the criteria have been met and this feature is determined to be significant.

3.2 Date of Beginning and Completion of Evaluation

The evaluation of wildlife habitat commenced with records reviews (i.e., search of existing sources, review of satellite imagery) in June 2009. Site visits were completed in association with this evaluation on June 18, 2009 and June 2, 2010. Notes from the site investigation as well as information gathered through the records review were compared to criteria for significance periodically from July 2010 through February 2011. The evaluation of significance is completed with the completion of this Report in February 2011.

3.3 Name and Qualifications of Evaluator

Evaluations of wildlife habitat were completed by Sean K. Male of Hatch Ltd.

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, participating in a study of the impacts of woodlot size on breeding birds.

Sean joined Hatch Ltd. as a Terrestrial Ecologist in 2006. Since joining Hatch Ltd., Sean has participated in several environmental assessments, REAs and other regulatory approvals for hydro, wind and solar power developments as the terrestrial biologist specializing in field investigations identifying flora and fauna species, including species of significance. 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.

4. Woodlands

4.1 Description of Natural Feature

There is a small portion of a single woodland identified within 120 m of the Project location.

4.2 Evaluation Criteria and Guidelines for Woodlands

The criteria for establishing woodland significance identified within Section 7 of the Natural Heritage Reference Manual (MNR, 2010). Many of the criteria rely on the amount of existing forest cover within a given region; the forest cover within the region of the Project location has been determined to have greater than or equal to 30% forest cover.

Therefore, the criteria used to assess the woodlands within 120 m of the Project location are

- woodland size (woodlands greater than 50 ha are significant)
- ecological function
 - ◆ woodland interior (woodlands with greater than 8 ha of forest interior)
 - ◆ proximity to other woodlands or other habitats (woodlands within 30 m of a significant natural feature receiving ecological benefit from the woodland)
 - ◆ linkages (woodlands providing a connecting link between two other significant features)
 - ◆ water protection (Woodlands within 50 m of water features)
 - ◆ woodland diversity (a high native diversity through a combination of composition and terrain)
- uncommon characteristics (i.e., old-growth, rare vegetation communities)
- economic and social functional values (high economic or special services value).

4.2.1 Woodland to the South of Project Location

Characteristics of Woodland 1 in relation to the previously identified criteria are discussed below:

- the woodland is 22.5 ha in size
- the woodland has 5.6 ha of interior forest habitat.

- the woodland is located within 30 m of a water feature
- the woodland is located within 30 m of a significant natural heritage feature, amphibian-breeding ponds (see Section 3 above)
- the woodland does not provide a linkage between significant features
- the woodland does contain upland and lowland habitats
- the woodland does not have uncommon characteristics
- the woodland is not known to provide significant ecological or social benefit.

Therefore, this woodland meets the criteria of proximity to a watercourse and proximity to significant natural features and therefore, is considered to be a significant woodland.

4.3 Date of Beginning and Completion of Evaluation

The evaluation of the woodlands commenced with records reviews (i.e., search of existing sources, review of satellite imagery) in June 2009. Site visits were completed in association with this evaluation on June 18, 2009 and June 2, 2010. Notes from the site investigation as well as information gathered through the records review were compared to criteria for significance periodically from July through November of 2010. The evaluation of significance is completed with the completion of this Report in February 2011.

4.4 Name and Qualifications of Evaluator

Evaluations of woodlands were completed by Sean K. Male of Hatch Ltd. His qualifications are provided in Section 3.3

5. Conclusions

Results of the evaluation of significance are summarized in Table 5.1. Based on the evaluation of significance outlined above, there is a significant woodland and significant wildlife habitat present within 120 m of the Project location. The locations of these features are shown in Figure 1.1.

An environmental impact study conducted according to the requirements of Section 38(2) of O. Reg. 359/09 will be required in order to construct Project components within 120 m of these significant natural features.

Table 5.1 Significant Natural Features on and within 120 m of the Project Location

Natural Feature		Project Location	Adjacent Lands (within 120 m)
SIGNIFICANT	Woodland	No	Yes
	Wildlife Habitat	No	Yes
	Valleyland	No	No
PROVINCIALY SIGNIFICANT	Wetland	No	No
	Earth Science ANSI	No	No
	Life Science ANSI	No	No

6. References

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

Hatch Ltd. 2010b. RE Midhurst 3 Solar Project – Natural Heritage Site Investigations Report. Prepared for RE Midhurst 3 ULC.

Ministry of Natural Resources (MNR). March 2010. Natural Heritage Reference Manual for Natural Heritage Policies of the Provincial Policy Statement, 2005. Second Edition. Toronto: Queen’s Printer for Ontario. 248 pp.

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

Natural Heritage Information Centre (NHIC). 2010. Natural Areas Reports: Shelswell’s Creek Wetland Complex. Available on-line at <https://www.biodiversityexplorer.mnr.gov.on.ca/nhicWEB/eoNaturalAreasDetailReport.do?naSearchResultsId=7936>. Accessed July 21, 2010.

