

# RENEWABLE ENERGY APPROVAL DOCUMENTS

RE Midhurst 2 Solar Project  
Executive Summary

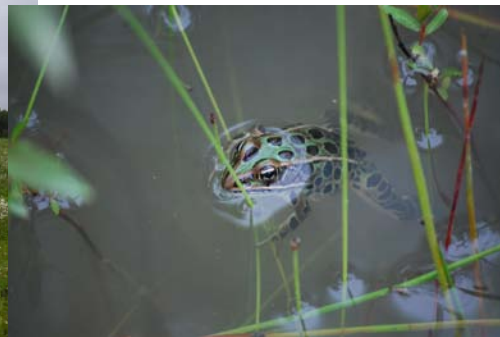
September 12, 2011

RECURRENT  
ENERGY



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*Leopard Frog found on site*

*RE Midhurst 2 Project Site*

### **Disclaimer**

This report has been prepared by or on behalf of RE Midhurst 2 ULC for submission to the Ontario Ministry of the Environment as part of the Renewable Energy Approval process. The content of this report is not intended for the use of, nor is it intended to be relied upon by, any other person. Neither RE Midhurst 2 ULC nor any of its directors, officers, employees, agents or consultants has any liability whatsoever for any loss, damage or injury suffered by any third party arising out of, or in connection with, their use of this report.

## Section 1: Project Introduction

### 1.1: Project Location

RE Midhurst 2 ULC is proposing to develop a 3.5-megawatt (MW) solar photovoltaic (Solar PV) facility, on an approximately 35-hectare (ha) parcel of land. This proposed facility is referred to as “RE Midhurst 2” and is also referred to as the “Project.”

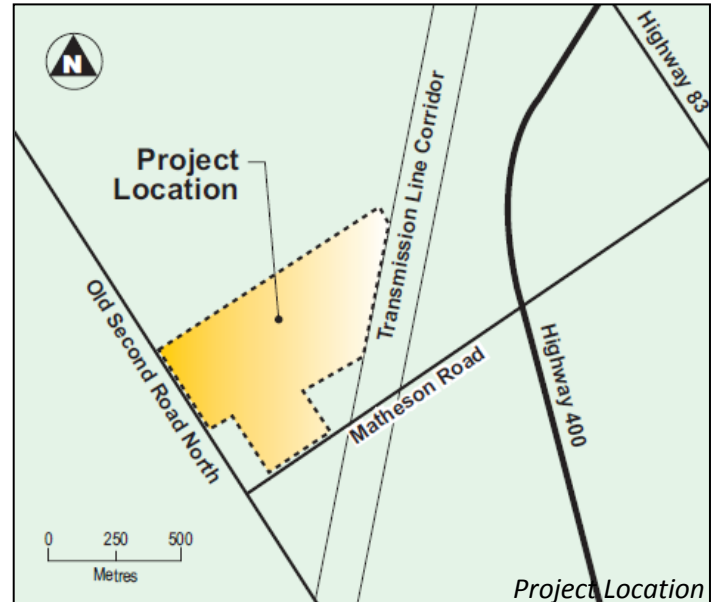
**RE Midhurst 2** is located in the Township of Springwater within the County of Simcoe, approximately 18 km north northwest of the City of Barrie.

### 1.2: Project Proponent

The RE Midhurst 2 Project is being proposed by **RE Midhurst 2 ULC**, a Nova Scotia Unlimited Liability Company owned by Recurrent Energy, LLC through its subsidiaries. Recurrent Energy is an independent power producer and a leading developer of distributed solar projects for utilities, government, and commercial customers.

The company develops, builds, and operates distributed solar power systems – typically 2 to 20 MW each – connected to the existing distribution grid. Its vision is to use proven solar technology to meet rising energy demand with a fleet of clean power plants located right where they are needed most.

RE Midhurst 2 ULC has retained Hatch Ltd. to coordinate the completion of the Renewable Energy Approval (REA) process. All comments or questions in relation to the REA documents provided herein should be directed to Hatch, at the contact information provided below.



*Examples of Comparable Solar Arrays*

Contact Information	
<p><b>Primary Contact</b></p> <p>Noel Boucher, B.Sc.  Environmental Coordinator  Hatch Ltd.  4342 Queen Street, Suite 500  Niagara Falls, ON, Canada L2E 7J7  Tel: 905-374-0701 ext. 5757  Email: nboucher@hatch.ca</p>	
<p><b>Project Contact</b></p> <p>RE Midhurst 2 ULC  c/o Recurrent Energy  300 California Street, 8th Floor  San Francisco, CA 94104  Tel: 415-675-1500  Fax: 415-675-1501  <a href="http://www.ontariosolarfuture.ca">www.ontariosolarfuture.ca</a></p>	<p><b>Secondary Contact</b></p> <p>David Brochu  RE Midhurst 2 ULC  300 California Street, 8th Floor  San Francisco, CA 94104  Tel: 630-333-7602  Email: <a href="mailto:david.brochu@recurrentenergy.com">david.brochu@recurrentenergy.com</a></p>

### 1.3: Project Description

The Project will consist of solar photovoltaic panels that generate direct current (DC) electricity when exposed to sunlight. The panels will be stationary, arranged in rows mounted off the ground and tilted to the south to catch the sun’s rays. Electricity generated by the rows of panels is collected through underground cabling by inverters which convert the DC electricity to alternating current (AC). The AC current then continues from the inverters through underground cabling to a single main facility substation. At this substation, a transformer increases the voltage to the level of voltage of the electricity distribution grid. The Project will provide electricity to the grid by interconnecting with the existing distribution line near the intersection of Horseshoe Valley Road and Old Second Road North, southwest of the Project site. Other Project components include a small parking area, control house and internal access road network. The proposed site plan layout is provided in Figure 1.

Construction of the Project is scheduled to commence October 2011, subject to receipt of the REA and any other permits or approvals that may be required. Construction will last for approximately 6-10 months, with the earliest possible commissioning of the facility scheduled for May 2012. The commercial operation date and associated construction schedules proposed herein are currently estimates based on a number of variables. The start of construction and operations dates for the project may be significantly changed, either accelerated or delayed, due to changes in expected timeframes for regulatory approval, equipment procurement, and/or project scheduling optimization.

Commissioning is the process of assuring that all systems and components of the Project are installed, tested, and operating safely and according to its operational requirements. The main construction activities will include site preparation (road and parking area construction, minor vegetation removal and grading), installation of facilities (racking structures, solar panels, underground cabling, inverters and substation components), testing and commissioning and site restoration.

The facility is expected to operate for 30 years prior to decommissioning. Upon decommission the site, all Project components will be removed and the site will be restored to its previous agricultural use.

## 1.4: Project Benefits

The proposed Project will result in a number of social and environmental benefits, both at a local level and throughout the Province of Ontario.

### *Social Benefits*

Operation of the Project will result in production of approximately 4.8 million kWh of electricity per year, enough to power approximately 500 average homes. Construction and operation of the Project will result in the creation of jobs for the people of Ontario throughout the life of the Project – from initial development, design and manufacture, to construction and ongoing maintenance. At least 60% of the materials for the Project will be made or sourced from Ontario. This will help contribute to the Province’s goal of creating 50,000 jobs in the green energy industry. The Project will also result in benefits for the local landowner of the Project.

### *Environmental Benefits*

Solar PV is among the safest and cleanest sources of energy generation. It uses using only the sun, a completely renewable energy source, as its fuel, with no harmful pollutants emitted due to electricity generation. The Project will help Ontario to meet its goal of increasing the amount of energy generated from green renewable sources in the Province. This will assist in helping the Province phase out heavily polluting, non-renewable coal generation by 2014, therefore greatly reducing emissions associated with power generation. Further, operation of the facility will result in minimal waste generation and very limited use of raw materials (e.g., minimal water requirements for cleaning purposes), limiting the long-term environmental impacts associated with power generation.

## 1.5: Renewable Energy Approval Process

The environmental approval for renewable energy projects is called the **Renewable Energy Approval (REA)**. It is regulated by the Ministry of the Environment (MOE) and the Ministry of Natural Resources (MNR). To obtain a Renewable Energy Approval, the Project is subject to the requirements of Ontario

### *Benefits to Ontario*

The Project will help Ontario to meet its goal of doubling the amount of energy generated from renewable sources by 2025.

This will allow the Province to phase out existing coal generating facilities by 2014, which will substantially reduce air emissions due to power generation activities.

The RE Midhurst 2 Project will assist the Province in meeting these important goals.

Regulation (O. Reg.) 359/09 – *Renewable Energy Approvals Under Part V.0.1 of the Act*, (herein referred to as the REA Regulation) created under the *Environmental Protection Act*. The REA Regulation identifies a process to engage and receive feedback from the public, Aboriginal communities, municipal and regulatory agencies. As part of the REA Regulation, RE Midhurst 2 ULC is required to prepare a number of documents to describe the Project and identify potential adverse effects. Any adverse effects will be prevented or minimized through mitigation measures and monitoring commitments. These documents are required to be made available for public, Aboriginal, municipal and agency review and comment prior to submission of the REA Application to the MOE. The documents that are included in this package for review include:

- Project Description Report
- Construction Plan Report
- Design and Operations Report
- Decommissioning Plan Report
- Natural Heritage Records Review, Site Investigation, Evaluation of Significance and Environmental Impact Study (EIS) Reports
- Water Body Records Review, Site Investigation and EIS Reports
- Stage 1 & 2 Archaeological Assessment Reports
- Noise Study Report

The Natural Heritage and Water Body Reports identified several environmental features within 120 m of the Project site including two tributaries of Matheson Creek, several significant woodlands, a portion of the Craig's Swamp/Copeland Forest Provincially Significant Wetland and significant wildlife habitat. Mitigation measures have been specified to prevent and/or minimize adverse effects on this feature due to construction, operation and eventual decommissioning of the facility. A letter from the Ontario Ministry of Natural Resources confirming that the Natural Heritage Assessment satisfies the REA Regulation criteria is provided in Appendix 9.

Stage 1 & 2 Archaeological Assessments were conducted on the Project site to assess the potential for presence of archaeological features that could be disturbed due to construction. No significant archaeological resources were located during the study. A letter from the Ministry of Tourism and Culture confirming that the Stage 1 and 2 Archaeological Assessment is acceptable is provided in Appendix 14.

A Heritage Checklist was completed to determine if a heritage resource was located on the property. The results indicated that a heritage resource was not located on the property and therefore a heritage assessment was not required. For further

### *Benefits to Ontario*

Power 500 homes with clean, sustainable energy.

60% of materials made or sourced from Ontario.

Contribute to the goal of creating 50,000 jobs in the Province's renewable energy industry through the Feed-In Tariff program.

information relating to protected properties and heritage resources please refer to Appendix 15.

A noise study was undertaken to assess noise emissions from the inverters and transformer. The solar panels themselves do not emit noise. Mitigation measures (e.g., sound enclosures over the transformer) will be applied as necessary to ensure the Project meets MOE requirements with respect to noise levels in rural environments.

Summaries of each of these reports are provided in Appendix A.

## 1.6: Guide to Reviewing Project Reports

The REA Regulation requires that the reports discussed in Section 1.4 be made available for Aboriginal and public review at least 60 days in advance of the second public information centre for the Project. This section of the Executive Summary has been prepared to use as a guide when reviewing and commenting on these reports.

Figure 2 identifies the Project reports that are available for review, summarizes the purpose of each report and identifies a logical progression in which reports should be read to form a complete understanding of the Project and its potential environmental implications. If read in this sequence, the first reports provide information on Project construction, operation and decommissioning plans. Next, the reports identify the existing environmental features on or near the site. Finally, the remaining reports assess the potential adverse effects based on the interactions of the Project components and activities with the environmental features.

If you have any questions or require clarification on any of the information contained within these reports, you may contact Mr. Boucher by phone. However, all comments on the Project should be submitted in writing by letter, fax or email.

Once all comments have been received, they will be compiled and reviewed by Recurrent Energy and Hatch. A Consultation Report will be prepared identifying all comments received and how each comment has been addressed, and where necessary, how reports have been changed as a result.

Once all comments have been addressed, the complete REA application package, including the application form and all of the Project reports, will be submitted to the MOE for review. The MOE will then have 6 months to review the application and make a decision on the Project. The MOE's decision will be posted for a 15-day comment period on the Environmental Bill of Rights (EBR) Registry. Provided no appeal requests are received, the Project could commence, subject to receipt of any other permits and approvals that may be required.

### *Submitting Comments*

Comments on these reports should be submitted, in writing, no later than 2 weeks following the final public meeting, to the attention of:

**Noel Boucher, B.Sc.**  
Environmental Coordinator  
Hatch Ltd.  
4342 Queen Street, Suite 500  
Niagara Falls, ON, Canada L2E 7J7  
Tel: 905-374-0701 ext. 5757  
Email: nboucher@hatch.ca



Figure 2: Project Reports

Report Name	Purpose
<b>Project Description Report</b>	Summarizes Project location, construction and operational activities, potential environmental effects and mitigation, and social and environmental benefits.
<b>Construction Plan Report</b>	Summarizes construction activities, timelines, materials, temporary uses of land and waste materials generated and environmental effects, mitigation and monitoring during construction.
<b>Design and Operations Report</b>	Summarizes the site layout plan, Project components, operations and maintenance activities, communications and emergency response plan, and environmental effects monitoring plan.
<b>Decommissioning Plan Report</b>	Summarizes activities undertaken to decommission and restore the Project site.
<b>Natural Heritage Records Review Report</b>	Summarizes existing information on natural heritage features including woodlots, valleylands, wetlands, Areas of Natural and Scientific Interest and wildlife habitat.
<b>Natural Heritage Site Investigations Report</b>	Documents the results of the site investigations to identify and confirm natural heritage features on and within 120 m of the Project.
<b>Natural Heritage Evaluation of Significance Report</b>	Evaluates the significance of any natural heritage features located within 120 m of the Project.
<b>Natural Heritage Environmental Impact Study</b>	Identifies potential adverse environmental effects on significant natural heritage features, mitigation measures to prevent or minimize adverse effects and monitoring requirements.
<b>Water Body Records Review Report</b>	Summarizes existing information on waterbodies including lakes, permanent and intermittent streams and groundwater seepage areas.
<b>Water Body Site Investigation Report</b>	Documents the results of the site investigations to identify and confirm water body features on and within 120 m of the Project.
<b>Water Body Environmental Impact Study</b>	Identifies potential adverse environmental effects on waterbodies, mitigation measures to prevent or minimize adverse effects and monitoring requirements.
<b>Stage 1 &amp; 2 Archaeological Assessment Report</b>	Documents the results of the desktop Stage 1 study to identify archaeological potential and the Stage 2 site investigations to confirm if archaeological artefacts are present on the site.
<b>Heritage Resources</b>	Documents the results of the assessment of potential effects on protected properties and heritage resources.
<b>Noise Assessment Study Report</b>	Documents the results of noise modeling to identify noise emissions levels at nearby sensitive receptors and mitigation requirements to meet MOE noise emissions guidelines.

## Appendix A: Project Report Summaries

- Appendix A1 – Project Description Report Summary
- Appendix A2 – Construction Plan Report Summary
- Appendix A3 – Design and Operations Report Summary
- Appendix A4 – Decommissioning Plan Report Summary
- Appendix A5 – Natural Heritage Records Review Report Summary
- Appendix A6 – Natural Heritage Site Investigation Report Summary
- Appendix A7 – Natural Heritage Evaluation of Significance Report Summary
- Appendix A8 – Natural Heritage Environmental Impact Study Summary
- Appendix A9 – MNR Confirmation Letter
- Appendix A10 – Water Body Records Review Report Summary
- Appendix A11 – Water Body Site Investigation Report Summary
- Appendix A12 – Water Body Environmental Impact Study Summary
- Appendix A13 – Stage 1 & 2 Archaeological Assessment Report Summary
- Appendix A14 – MTC Confirmation Letter
- Appendix A15 – Protected Properties and Heritage Resources
- Appendix A16 – Noise Assessment Study Summary

**Appendix A1**  
**Project Description**  
**Report Summary**

**RE Midhurst 2 ULC  
RE Midhurst 2 Solar Project****Summary****Project Description Report****1. Introduction**

As per Section 17 of the Renewable Energy Approvals Regulation (O. Reg. 359/09) under Part V.0.1 of the *Environmental Protection Act*, the following is a summary of the Project Description Report for the RE Midhurst 2 Solar Project.

RE Midhurst 2 ULC is proposing to develop and operate a 3.5-megawatt (MW) solar photovoltaic (Solar PV) facility, on an approximately 35-hectare (ha) parcel of land located about 18 km north-northwest of Barrie in the Township of Springwater in Simcoe County; herein referred to as “RE Midhurst 2 Solar Project” or the “Project”.

Table 1 of the REA Regulation requires proponents of Class 3 solar projects to prepare a Project Description Report (PDR). The PDR is prepared as one of the first Project documents once the REA process commences and is made available for public review prior to the first public meeting. The purpose of the PDR is to provide preliminary information regarding the Project to members of the public, Aboriginal groups, municipalities and other government agencies. The contents of the PDR are summarized in the following sections.

**2. Project Proponent**

The RE Midhurst 2 Solar Project is being proposed by RE Midhurst 2 ULC, a Nova Scotia Unlimited Liability Company owned by Recurrent Energy, LLC through its subsidiaries.

RE Midhurst 2 ULC has retained Hatch Ltd., an Ontario-based environmental and engineering consulting company, to undertake the REA process.

**3. Summary of Project**

The proposed Project consists of a 3.5-MW Class 3 solar facility, constructed on privately owned land in the Township of Springwater. RE Midhurst 2 ULC has entered into a lease agreement with the private landowner for a lease term of 30 years. RE Midhurst 2 ULC has obtained a contract from the Ontario Power Authority (OPA) to buy the power produced by the proposed facility under the Feed-In-Tariff (FIT) program for a period of 20 years. The proposed commercial operation date is May 15, 2012. Decommissioning of the facility would likely not occur until around 2043.

Construction of the proposed facility would occur over a 6 to 10 month period with major construction activities, including site preparation, access road construction, installation of solar

panels (including footings, support structures and panels), installation of inverters and transformer and all electrical cabling and site rehabilitation following construction.

The facility would operate 365 d/yr, generating electricity when sufficient solar irradiation conditions exist. Inspection and maintenance activities would be conducted periodically through the year, with primary activities including inspection of components, replacement of air filters, maintenance of ground cover vegetation and panel washing (approximately three times per year). The proposed facility would not consume any fuels nor produce any waste as a result of generation activities.

#### **4. Potential Environmental Effects**

The PDR summarized the existing environmental features on the Project location. The site primarily consists of agricultural land with a small portion of forested land with several excavated drainage channels traversing the Project location. Additionally, there is a presence of several small drainage channels and small creeks running into the Craig's Swamp/Copeland Forest Complex Provincially Significant Wetland on and adjacent to the Project location.

The PDR also identified preliminary potential environmental effects of the Project including

- potential erosion and sedimentation due to construction activities
- temporary loss of agricultural lands due to facility installation and operation
- removal of not at risk tree species in the hedgerows and forested area
- noise emissions from the invertors and transformer.

Mitigation measures were identified to prevent or eliminate those effects. Potential effects and mitigation measures were assessed in more detail in other Project reports.

#### **5. Outline of REA Process**

The PDR provided a point form outline of the REA process, including the main points of Aboriginal, public and agency consultation and reporting and assessment requirements, including identification of the Project reports required to be prepared under the REA Regulation.

#### **6. Project's Social and Environmental Benefits**

Benefits provided by the Project include

- increasing diversity, reliability, public health and environmental benefits of energy mix
- promoting stable electricity prices
- protecting public health and improving environmental quality
- ameliorating air quality problems
- improving public health by reducing the burning of fossil fuels
- enhancing energy resource diversity.

**Appendix A2**  
**Construction Plan**  
**Report Summary**

## **RE MIDHURST 2 PROJECT SUMMARY: CONSTRUCTION PLAN**

### **Introduction:**

RE Midhurst 2 (the "Project") is made by RE Midhurst 2 ULC. As per the March 1, 2010 draft of *Technical bulletin three: Guidance for preparing the Construction Plan Report as part of an application under O.Reg.359/09 PIBS 7438e* made under the Renewable Energy Approvals, the following is a summary of the reporting completed for the DRAFT Construction Plan for the RE Midhurst 2 Solar Project.

RE Midhurst 2 ULC is proposing to develop and operate a 3.5 megawatt (MW) facility on a parcel of agricultural land totalling approximately 35 hectares located about 18 km north northwest of Barrie, in the Township of Springwater, County of Simcoe, Province of Ontario (herein referred to as RE Midhurst 2 project).

The Project will consist of solar photovoltaic panels that generate direct current (DC) electricity when exposed to sunlight. This project will use 230W – 280W crystalline photovoltaic modules to form the solar panel arrays. The panels will be stationary, arranged in rows mounted off the ground with a fixed tilt angle to the south to catch the sun's rays. Electricity generated by the rows of panels is collected through underground cabling by inverter/transformer pairs which convert the DC electricity to alternating current (AC) at a specified voltage. The AC current then continues from the inverters through underground cabling to a single main facility substation. At this substation, the main power transformer increases the voltage to the level of voltage of the electricity distribution grid. The power passes through protective relays (SEL - 351) and fault - breaking switches before being delivered to Hydro One's electrical network. The total installed capacity of the Project is 3.5 MW AC.

### **Construction:**

The construction of the facility will be conducted in three phases:

- Phase 1: Site preparation;
- Phase 2: Construction and Installation; and
- Phase 3: Post-installation.

Construction of the facility is scheduled to begin in October 2011 and a completion date between May 2012 and August 2012. The commercial operation date and associated construction schedules proposed herein are currently estimates based on a number of variables. The start of construction and operations dates for the project may be significantly

changed, either accelerated or delayed, due to changes in expected timeframes for regulatory approval, equipment procurement, and/or project scheduling optimization.

### Phase 1 – Site Preparation

Site preparation activities includes: connecting a temporary power supply; site survey and staking; road and parking area construction; water well installation; preparation of site including, removal of vegetation and topsoil and compaction of sub-grade, land preparation for construction of substation and control house, shaping of ditches and swales and; installation of a perimeter security fence.

Schedule: October 28, 2011 to March 5, 2012

### Phase 2 – Construction and Installation

Construction and installation activities includes: excavation of substation area for footings, foundations and oil containment area; construction of substation and control house; installation of culverts across ditches to the public roadways and; installation of panels, transformers, inverters, cable and other equipment. The site will accommodate approximately 16,300 solar panels.

Schedule: January 10, 2012 to May 15, 2012

### Phase 3 – Post-installation

Post-installation activities include: re-seeding/re-vegetating the site including ditches and swales and testing of systems prior to commencement of operations known as commissioning, commissioning of the interconnection.

Schedule: April 30, 2012 to May 15, 2012

Re-seeding/re-vegetating the site including ditches and swales will occur in the spring of 2012 when weather conditions allow. A non-invasive, native, low-maintenance plant species will be spread in order to reduce soil erosion.

### **Communications and Emergency Response:**

Outlined in the report is a general plan for emergency communications and response at the site, including a listing of applicable local contacts for each type of emergency. A response plan to deal with general inquiries is also included in the report. A detailed emergency response plan will be developed in consultation with the local municipal authorities and emergency response agencies prior to the commencement of the construction.

**Appendix A3**  
**Design and Operations**  
**Report Summary**

## RE MIDHURST 2 PROJECT SUMMARY: DESIGN & OPERATIONS

### Introduction:

RE Midhurst 2 (the "Project") is made by RE Midhurst 2 ULC. As per the March 1, 2010 draft of *Technical bulletin two: Guidance for preparing the Design and Operations Report as part of an application under O.Reg.359/09 PIBS 7437e* made under the Renewable Energy Approvals, the following is a summary of the reporting completed for the DRAFT Design and Operations of the RE Midhurst 2 Solar Project.

RE Midhurst 2 ULC is proposing to develop and operate a 3.5 megawatt (MW) facility on a parcel of agricultural land totalling approximately 35 hectares located about 18 km north northwest of Barrie, in the Township of Springwater, County of Simcoe, Province of Ontario (herein referred to as RE Midhurst 2 project).

The Project will consist of solar photovoltaic panels that generate direct current (DC) electricity when exposed to sunlight. This project will use 230W – 280W crystalline photovoltaic modules to form the solar panel arrays. The panels will be stationary, arranged in rows mounted off the ground with a fixed tilt angle to the south to catch the sun's rays. Electricity generated by the rows of panels is collected through underground cabling by inverter/transformer pairs which convert the DC electricity to alternating current (AC) at a specified voltage. The AC current then continues from the inverters through underground cabling to a single main facility substation. At this substation, the main power transformer increases the voltage to the level of voltage of the electricity distribution grid. The power passes through protective relays (SEL - 351) and fault - breaking switches before being delivered to Hydro One's electrical network. The total installed capacity of the Project is 3.5 MW AC.

### Structures:

In addition to the PV panels, the facility will consist of a substation with a power transformer, control house, and internal access roadways.

Structural components in the substation area will include:

- Footings and oil containment system for the power transformer;
- Footings for the control house; and
- A pre-fabricated control house to enclose the protection and control equipment.

The internal road system will consist of approximately 2,400 m of granular roadways with widths varying from 3.5 to 4.0 m and varying depths of granular pavement structure depending on the type of subsoils encountered on the site.

**Stormwater:**

In general, the development will follow the existing topography of the site to the greatest extent possible in order to minimize the extent of re-grading required and to maintain existing drainage patterns. A system of swales, ditches and culverts will be constructed to collect and transport stormwater runoff through the site to existing drainage outlets. These swales and ditches will generally be installed adjacent to the proposed internal roadways and will be lined with vegetation to minimize the potential for erosion.

**Maintenance:**

Maintenance will include panel repairs, panel washing, maintenance to transformers, inverters and other electrical equipment as needed, maintenance to the oil/water separator system and road and fence repairs. Inspections will occur monthly and all items will be documented and repairs will take place accordingly, as required.

As part of maintenance to the property, vegetation onsite will be managed appropriately. Control of the vegetation will be satisfied to allow access to all areas of the site, as well as maintaining good aesthetics.

A water well will be installed during the construction phase of the project. The water will be used for panel washing and dust control (when required). Panels will be washed as needed, current plans are three times per year. It is estimated that approximately 9,000 L of water would be drawn from the well over two to three days for each panel washing maintenance cycle.

The facility electrical operations will be monitored remotely with a SCADA system. The facility will be monitored by security cameras installed around the facility.

**Communications and Emergency Response:**

Outlined in the report is a general plan for emergency communications and response at the site, including a listing of applicable local contacts for each type of emergency. A response plan to deal with general inquiries is also included in the report. A detailed emergency response plan will be developed in consultation with the local municipal authorities and emergency response agencies prior to the commencement of the construction.

**Appendix A4**  
**Decommissioning Plan**  
**Report Summary**

## **RE MIDHURST 2 PROJECT SUMMARY: DECOMMISSIONING**

### **Introduction:**

RE Midhurst 2 (the "Project") is made by RE Midhurst 2 ULC. As per the March 1, 2010 draft of *Technical bulletin four: Guidance for preparing the Decommissioning Plan Report as part of an application under O.Reg.359/09 PIBS 7439e* made under the Renewable Energy Approvals, the following is a summary of the reporting completed for the DRAFT Decommissioning Plan for the RE Midhurst 2 Solar Project.

Decommissioning includes details for the Midhurst 2 facility at the cease of operations, or if the facility is abandoned before completion. The area is currently farm land and the intent of the decommissioning process will be to return the location to as close to the baseline conditions established in 2009 as possible.

RE Midhurst 2 ULC is proposing to develop and operate a 3.5 megawatt (MW) facility on a parcel of agricultural land totalling approximately 35 hectares located about 18 km north northwest of Barrie, in Township of Springwater, County of Simcoe, Province of Ontario (herein referred to as RE Midhurst 2 project).

The Project will consist of solar photovoltaic panels that generate direct current (DC) electricity when exposed to sunlight. This project will use 230W – 280W crystalline photovoltaic modules to form the solar panel arrays. The panels will be stationary, arranged in rows mounted off the ground with a fixed tilt angle to the south to catch the sun's rays. Electricity generated by the rows of panels is collected through underground cabling by inverter/transformer pairs which convert the DC electricity to alternating current (AC). The AC current then continues from the inverters through underground cabling to a single main facility substation. At this substation, the main power transformer increases the voltage to the level of voltage of the electricity distribution grid. The power passes through protective relays (SEL - 351) and fault - breaking switches before being delivered to Hydro One's electrical network. The total installed capacity of the Project is 3.5 MW AC.

### **Removal of Equipment:**

The decommissioning and restoration process comprises removal of above ground structures; removal of below ground structures; and restoration of topsoil, re-vegetation and seeding.

It is anticipated that structures will be fully removed from the ground. In the event that a structure breaks off below 1.2 m (4 feet) below the ground surface, the remaining section

will be left in place. If the structure breaks off in the upper 1.2 m (4 feet) of soil, it will be excavated and removed.

Removal of the above ground equipment includes electrical wiring, the equipment on the inverter pads and the interconnection transformer pad and associated equipment. The equipment will be de-energized prior to removal, salvaged (where possible), placed in appropriate shipping containers and secured in a truck transport trailer for shipment off-site.

Removal of the solar modules includes removing the racks which the solar panels are attached and placed in secure transport crates and into a trailer for storage for ultimate transportation to another facility. The bolts and reusable fasteners, attaching each module to the racks, will be removed will be saved for re-use, where possible. Once the solar modules have been removed, the racks will be disassembled and the structures supporting the racks will be removed. These components will be scraped and sold for salvage value.

All other associated site infrastructure will be removed which includes roads, fences, awnings, concrete pads that supported the inverters, transformers and related equipment, and the underground electrical wiring. The fence and gate shall be removed and all materials recycled to the greatest extent possible. The culvert crossing will be removed if requested by the landowner and approved by the applicable authorities.

#### **Site Restoration:**

All roads and other areas compacted during original construction or by equipment used in the decommissioning, shall be tilled in a manner adequate to restore the sub-grade material to the proper density and depth consistent with the surrounding fields. Low areas will be filled with clean, compatible sub-grade material. After proper sub-grade depth is established, topsoil will be placed to a depth and density consistent with the surrounding field. Compost will be applied to the topsoil spread and then the entire site will be tilled to further loosen the soil and blend in the compost.

Finally, an appropriate seed mixture, in accordance with the lease agreement with the landowner, subject to guidelines of local and provincial authorities, will be broadcast or drilled across the site and weed-free mulch spread will be crimped in to stabilize the soil until germination takes place and the young plants are established to facilitate moisture retention in the soil which, helps improve germination and survival of the seedlings.

#### **Communications and Emergency Response:**

Outlined in the report is a general plan for emergency communications and response at the site, including a listing of applicable local contacts for each type of emergency. A response plan to deal with general inquiries is also included in the report. A detailed emergency response plan will be developed in consultation with the local municipal authorities and emergency response agencies prior to the commencement of the decommissioning.

**Appendix A5**  
**Natural Heritage**  
**Records Review Report Summary**

**RE Midhurst 2 ULC  
RE Midhurst 2 Solar Project****Summary****Natural Heritage Records Review Report****1. Introduction**

As per Section 17 of the Renewable Energy Approvals Regulation (O. Reg. 359/09) under Part V.0.1 of the *Environmental Protection Act*, the following is a summary of the Natural Heritage Records Review Report for the RE Midhurst 2 Solar Project.

RE Midhurst 2 ULC is proposing to develop and operate a 3.5-megawatt (MW) solar photovoltaic (Solar PV) facility, on an approximately 35-hectare (ha) parcel of land located about 18 km north-northwest of Barrie in the Township of Springwater in County of Simcoe; herein referred to as "RE Midhurst 2" or the "Project".

Section 25 of the REA Regulation requires proponents of Class 3 solar projects to undertake a Natural Heritage Records Review. Records were searched within a minimum distance of 1 km from the Project location from Ministry of Natural Resources (MNR), federal government, Nottawasaga Valley Conservation Authority (NVCA), County of Simcoe, Township of Springwater and other relevant sources.

**2. Results**

Key natural features and points of interest identified during the records review include the following:

- the Copeland-Craighurst-Guthrie Provincially Significant Wetland Complex is located approximately 500 m east of the Project location
- an unnamed, unevaluated wetland is present on and within 120 m of the Project location
- a portion of a woodland occurs within the eastern side of the Project location and within 120 m of the Project location at the site's northeast corner
- a woodland occurs within 120 m south of the Project location and another woodlot occurs within 120 m west of the Project location
- the Copeland Forest Resource Management Area ANSI (life science) is located approximately 1 km east of the Project location
- no Crown land, and therefore Crown Forest Resources were identified in the vicinity of the Project location. The adjacent transmission line is owned by Hydro One Networks Inc.
- no ANSIs, specific wildlife habitat features or valleylands were identified within 120 m of the Project location
- no provincial parks or conservation reserves on or within 120 m of the Project location

- records from the Natural Heritage Information Centre (NHIC) identified occurrences of Milksnake (*Lampropeltis triangulum*), Cerulean Warbler (*Dendroica cerulea*), Broad Beech Fern (*Phegopteris hexagonoptera*), Prairie Warbler (*Dendroica discolor*), Hackberry Emperor (*Asterocampa celtis*), Forked Three-awned Grass (*Aristida basiramea*), Nerveless Muhlenberg's Sedge (*Carex muehlenbergii* var. *enervis*), Schweintz Sedge (*Carex schweinitzii*) and Beaked Spike-Rush (*Eleocharis rostellata*) in the study area
- the Ontario Herpetofaunal Summary Atlas identified several species of reptile and amphibian whose ranges may include with the Project location of which several are species of conservation concern, including Milksnake, Western Chorus Frog (*Pseudacris triseriata*) and Snapping Turtle (*Chelydra serpentina*)
- information provided by the NVCA identified that a portion of the Project location is within the Regulation Limits associated with tributaries of Matheson Creek and the 120 m buffer around wetlands
- County of Simcoe Schedule A Zoning By-law established that two of the unnamed, unclassified wetlands are zoned for environmental protection
- in the Ontario Breeding Bird Atlas, five species of conservation concern were identified within the vicinity of the Project: Olive-sided Flycatcher (*Contopus cooperi*), Red-headed Woodpecker (*Melanerpes erythrocephalus*), Cerulean Warbler (*Dendroica cerulea*), Golden-winged Warbler (*Vermivora chrysoptera*), Canada Warbler (*Wilsonia canadensis*).

### 3. Conclusions

Table 3.1 summarizes the results of the records review.

**Table 3.1 Summary of Records Review Determinations**

Determination to be Made	Yes/No	Description
Is the Project in or within 120 m of a provincial park or conservation reserve?	No	
Is the Project in a natural feature?	Yes	There are woodlands and unevaluated wetlands on the Project location.
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 are woodlands and unevaluated wetlands within 120 m of the Project location.

Therefore, depending on the layout of the proposed Project, some components could potentially be located within 120 m of a natural feature. As per Section 26 of the REA Regulation, a site investigation will be required to confirm the features identified during this records review. The site investigation will (i) identify if any corrections to the information presented herein are required, (ii) determine whether any additional natural features exist on or adjacent to the Project location, (iii) confirm the boundaries of the natural features within 120 m of the Project, and (iv) determine the distance from the Project to the natural feature boundary. In addition, the potential for species at risk identified will be considered during the site investigation.

**Appendix A6**  
**Natural Heritage**  
**Site Investigation Report Summary**

## RE Midhurst 2 ULC RE Midhurst 2 Solar Project

### Summary

## Natural Heritage Site Investigations Report

### 1. Introduction

As per Section 17 of the Renewable Energy Approvals Regulation (O. Reg. 359/09) under Part V.0.1 of the *Environmental Protection Act*, the following is a summary of the Natural Heritage Site Investigations Report for the RE Midhurst 2 Solar Project.

RE Midhurst 2 ULC is proposing to develop and operate a 3.5-megawatt (MW) solar photovoltaic (Solar PV) facility, on an approximately 35-hectare (ha) parcel of land located about 18 km north-northwest of Barrie in the Township of Springwater in Simcoe County; herein referred to as "RE Midhurst 2" or the "Project".

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 if the information provided in the Natural Heritage Records Review Report is correct and identifies any knowledge gaps, if any additional natural heritage features are present within 120 m of the Project, and if the borders and distance of the natural heritage features from the Project location are correct. To obtain this information a site visit was completed.

### 2. Results

The Project location is composed predominantly of agricultural lands, with a portion consisting of natural features including a woodland, unevaluated wetland and cultural vegetation communities. In addition, the Project location and the surrounding areas would be classified as wildlife habitat.

Several wetland communities were identified on and within 120 m of the Project location. The woodland to the north, east and south of the Project location was determined to contain various woodland communities including a Red Pine plantation, moist mixed forest community, coniferous forest community, and dry-fresh sugar maple deciduous forest.

#### 2.1 Habitats of Seasonal Concentrations of Animals

The Project location and surrounding 120 m was searched for winter deer yards/moose late winter habitat, colonial bird nesting sites, waterfowl stopover and staging areas, waterfowl nesting, shorebird/landbird migratory stopover areas, raptor winter feeding and roosting sites, wild turkey winter range, turkey vulture summer roosting areas, reptile hibernacula, bat hibernacula, bullfrog concentration areas, and migratory butterfly stopover areas. None of the twelve habitat types were identified on or within 120 m of the Project location.

## 2.2 Rare Vegetation Communities or Specialized Habitat for Wildlife

Vegetation communities and specialized habitat for wildlife were searched on and within 120 m of the Project location. 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.

Specialized wildlife habitats include habitat for area sensitive species, forest providing a high diversity of habitats, old-growth or mature growth stands, foraging areas with abundant mast, woodlands supporting amphibian breeding ponds, turtle-nesting habitat, specialized raptor-nesting habitat, mink, otter, marten and fisher denning sites, highly diverse areas, cliffs and caves and seeps and springs. Only woodland supporting amphibian breeding ponds was determined to occur on or within 120 m of the Project location.

## 2.3 Habitat of Species of Conservation Concern

Habitat for Red-headed Woodpecker, Olive-sided Flycatcher, Golden-winged Warbler, Canada Warbler, Cerulean Warbler, Prairie Warbler, Milksnake, Snapping Turtle, Western Chorus Frog, Hackberry Emperor, Broad Beech Fern, Forked Three-awned Grass, Nerveless Muhlenberg's Sedge, Schweintz Sedge, and Beaked Spike-Rush was searched for on and within 120 m of the Project location. 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, however should the wetland and woodland be considered significant habitat for Snapping Turtle, Red-headed Woodpecker, and Olive-sided Flycatcher will be assessed.

## 2.4 Animal Movement Corridors

The woodlands located on and within 120 m of the Project located were determined be animal movement corridors and will be assessed.

## 3. Conclusions

Based on the results of the site investigations, the following changes to the Records Review are required:

- the boundary of the woodland north of the Project location has been extended
- new areas of wetland have been identified
- several candidate significant wildlife habitats were identified that were not documented through the Records Review.

There are several natural features on or within 120 m of the Project location that will require an Evaluation of Significance in order to determine whether Environmental Impact Studies are required:

- wildlife habitat on and within 120 m the Project location
  - ◆ woodland supporting amphibian-breeding ponds
  - ◆ animal movement corridors within the woodlands
- woodlands on and within 120 m of the Project location
- wetlands within 120 m of the Project location.

**Appendix A7**  
**Natural Heritage**  
**Evaluation of Significance**  
**Report Summary**

## RE Midhurst 2 ULC RE Midhurst 2 Solar Project

### Summary

## Natural Heritage Evaluation of Significance

### 1. Introduction

As per Section 17 of the Renewable Energy Approvals (REA) Regulation (O. Reg. 359/09) under Part V.0.1 of the *Environmental Protection Act*, the following is a summary of the Evaluation of Significance – Natural Heritage Features for the RE Midhurst 2 Solar Project

RE Midhurst 2 ULC is proposing to develop and operate a 3.5-megawatt (MW) solar photovoltaic (Solar PV) facility, on an approximately 35-hectare (ha) parcel of land located about 18 km north-northwest of Barrie in the Township of Springwater in County of Simcoe; herein referred to as “RE Midhurst 2” or the “Project”.

Section 24 of the REA Regulation requires proponents of Class 3 solar projects to undertake an Evaluation of Significance for each natural heritage feature identified in the records review and site investigations reports within 120 m of the Project. These reports identified the need to complete an Evaluation of Significance for

- woodlands supporting amphibian breeding ponds
- woodlands on and within 120 m of the Project location as animal movement corridors
- woodland on and within 120 m of the Project location
- unevaluated wetland located on the eastern portion of the Project location.

### 2. Results

#### 2.1 Wildlife Habitat

The criteria and processes outlined in the Ministry of Natural Resources Natural Heritage Reference Manual (NHRM) and Significant Wildlife Habitat Technical Guide (SWHTG) were used to evaluate the significance of wildlife habitat. These resources identify four main types of wildlife habitat that are considered to be significant. These include: seasonal concentrations of animals, rare or specialized habitats for wildlife, habitat for species of conservation concern and wildlife movement corridors. Significant wildlife habitat is found in the fields on and within 120 m of the Project location, in the meadow habitat adjacent to the Project location, and in the Shelswell’s Creek Wetland Complex adjacent to the Project location.

The woodlands supporting amphibian breeding ponds was evaluated on the criteria of provision of significant wildlife habitats, degree of permanence, species diversity of pond, presence of rare species, size and number of ponds, diversity of submergent and emergent vegetation, presence of

shrubs, logs at edge of pond, adjacent forest habitat, water quality, and level of disturbance. The woodlands supporting amphibian breeding ponds was determined to be significant as it met the criteria of 6 of the 10 criteria.

The animal movement corridor within the woodlands on and within 120 m of the Project location was evaluated on the criteria of importance of areas linked by corridor, importance of corridor to survival of target species, dimensions of corridor, continuity of corridor, habitat and habitat structure of corridor, species found in corridor or presumed to be using corridor, risk of mortality for species using corridor, opportunity for protection, and provision for other related values. The woodland to the north, east and south of the Project location was determined to be a significant animal movement corridor as it linked significant habitats. The woodland to the southwest of the Project location was determined not to be a significant animal movement corridor as it did not meet any of the listed criteria.

## 2.2 Woodlands

The criteria for establishing woodland significance identified within Section 7 of the Natural Heritage Reference Manual (MNR, 2010). These criteria include

- 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).

The woodland to the north, east and south of the Project location was determined to be a significant woodland as it met the criteria for linkage, proximity to a water feature and proximity to other significant natural features.

The woodland to the southwest of the Project location was determined to be a significant woodland as it met the criteria for size, interior habitat, and proximity to a water feature.

## 2.3 Wetland

The Ontario Wetland Evaluation System (OWES) was developed by the MNR to determine the significance of wetlands. Natural Resource Solutions Inc. (NRSI) was retained by Hatch Ltd. to conduct the wetland evaluation. It was determined that the wetlands within 120 m of the Project location should be complexed to the Copeland-Craighurst-Guthrie Provincially Significant Wetland Complex, and therefore considered provincially significant wetlands themselves.

### 3. Conclusions

Table 3.1 summarizes the results of the Evaluation of Significance Report.

**Table 3.1 Significant Natural Features on and within 120 m of the Project Location**

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

Therefore, of the natural heritage features evaluated, the two woodlands, significant wildlife habitat and Provincially Significant Wetland will require an Environmental Impact Study as per Section 38 of the REA Regulation.

**Appendix A8**  
**Natural Heritage**  
**Environmental Impact**  
**Study Summary**

**RE Midhurst 2 ULC  
RE Midhurst 2 Solar Project**

**Summary**

**Natural Heritage Environmental Impact Study**

**1. Introduction**

As per Section 17 of the Renewable Energy Approvals (REA) Regulation (O. Reg. 359/09) under Part V.0.1 of the *Environmental Protection Act*, the following is a summary of the Environmental Impact Study – Natural Heritage Features for the RE Midhurst 2 Solar Project.

RE Midhurst 2 ULC is proposing to develop and operate a 3.5-megawatt (MW) solar photovoltaic (Solar PV) facility, on an approximately 35-hectare (ha) parcel of land, located about 18 km north-northwest of Barrie in the Township of Springwater in Simcoe County; herein referred to as “RE Midhurst 2” or the “Project”.

Section 38 of the REA Regulation requires proponents of Class 3 solar projects to complete an Environmental Impact Study (EIS) for all significant natural heritage features determined to be within a specified setback in order to obtain a REA. The EIS is required in order to determine (i) any potential negative environmental effects on the natural features (ii) identify mitigation measures (iii) describe how the environmental effects monitoring plan in the Design and Operations Report addresses any negative environmental effects and (iv) describe how the Construction Plan Report addresses any negative environmental effects.

The woodlands and wildlife habitat on and within 120 m of the Project location were identified as significant and therefore an EIS was completed. It has been determined that there are no significant environmental effects to these features as a result of the Project.

**2. Results**

The results of the EIS on the significant natural features are summarized in Table 2.1.

**Table 2.1 Summary of Potential Negative Environmental Effects and Proposed Mitigation**

Project Phase	Potential Negative Environmental Effect	Proposed Mitigation Measure
<b>Vegetation Communities/Wildlife Habitat</b>		
Construction	Removal of vegetation due to direct encroachment on the natural feature.	No direct encroachment will occur within the woodland to the southwest and to the Provincially Significant Wetland Complex. Clearing within the woodland on the Project location will occur, removing approximately 6% of the woodland. Trees along the new edge of the woodland will be inspected in order to ensure connectivity. An annual assessment will be conducted on the

Project Phase	Potential Negative Environmental Effect	Proposed Mitigation Measure
		<p>woodland for 5 years and remediation measures will be employed if stress on the woodland is identified.</p> <p>Work areas in proximity to the woodland are to be marked, workers to be made aware not to enter areas of the woodland where development will not occur.</p>
Construction/ Decommissioning	Heavy dust may impact photosynthesis due to fugitive dust generation.	Use of dust suppressant, phased construction and decommissioning, stockpiles to be stabilized and/or covered, hard surfaces for access roads, and avoid earthworks during windy days.
Construction	Increase in surface water runoff rate and alter surface water pattern and therefore effect vegetation due to land grading and ditching, soil compaction, and vegetation removal.	Minor grading will occur and take into consideration current land grade to replicate present stormwater flow pattern. Discing or other soil loosening methods will be used on compacted areas. Long-term ground cover will be planted that will have better surface water runoff control than row crops.
Operations	Alterations to surface water runoff and therefore vegetation communities due to changes in grading and ditching, impervious or less pervious surfaces and changes in vegetation.	Minor grading will occur and take into consideration current land grade to replicate present stormwater flow pattern. Long-term ground cover will be planted that will have better surface water runoff control than crops. Impervious and less pervious soils drain into ditches or localized areas; therefore no appreciable impact to local drainage patterns.
Decommissioning	Alterations to surface water runoff due to changes in grading and changes in vegetation.	All infrastructure will be removed, including access roads and drainage ditches, thereby bringing the site back to pre-construction conditions.
<b>Wildlife Communities</b>		
Construction/ Decommissioning	<p>Auditory and visual disturbance of local wildlife populations may result in a short-term reduction of resident populations.</p> <p>Potential for incidental take of wildlife.</p>	Vehicular speeds on access roads will be restricted. Construction workforce will be made aware of the potential for wildlife occurring on the Project location and to avoid wildlife wherever possible. If wildlife are observed on the Project location, they will be either directed off of the Project location by a worker or collected by a designated employee, who has been provided with protocols for the safe handling and transport of wildlife, and transported to the nearest available location off site and released.
Construction/ Decommissioning	Auditory and visual disturbance of local wildlife using the animal movement corridor.	Construction activities to occur during the day while most animal movement will occur during the night. Prior to the completion of the installation of the fence the Project location will be examine for presence of wildlife. Mitigation measures discussed above will be employed.
Construction/ Decommissioning	Auditory and visual disturbance of amphibians within breeding habitat.	Construction activities to occur during the day whereas amphibian breeding occurs during the night. Mitigation measures discussed above to be implemented.

Project Phase	Potential Negative Environmental Effect	Proposed Mitigation Measure
Operations	Potential for incidental take of wildlife.	<p>Vehicular speeds on access roads will be restricted. Visual monitoring of access roads will also occur. Workforce will be made aware of the potential for wildlife occurring on the Project location. If wildlife are observed on the Project location, they will be either directed off of the Project location by a worker or collected by a designated employee, who has been provided with protocols for the safe handling and transport of wildlife, and transported to the nearest available location off site and released.</p> <p>Known occurrences of incidental take due to mowing will be reported and species impacted will be documented. If the species is determined to be a species of conservation concern, work within the area will be ceased immediately, and the MNR/EC will be contacted to make them aware of the occurrence. Work in the area will remain ceased until a survey is conducted by a trained biologist to ensure that there are no further species of conservation concern present in the area.</p>

Table 5.1 in the EIS summarizes the proposed monitoring plan.

As discussed in the Design and Operations Report, environmental effects monitoring is proposed with respect to any negative environmental effects that may result from engaging in the Project. The monitoring plan in the Design and Operations Report identifies: performance objectives with respect to the negative environmental effects; mitigation measures to assist in achieving the performance objectives; and, a program for monitoring negative environmental effects for the duration of the time the Project is engaged in, including a contingency plan to be implemented if any mitigation measures fail.

In addition, the Construction Plan Report details the construction and installation activities, location and timing of construction and installation activities, any negative environmental effects that result from construction activities within 300 m of the Project and mitigation measures for the identified negative environmental effects.

### 3. Conclusions

The EIS has been prepared to identify potential negative environmental effects that all phases of the Project may have on the significant natural features. Potential negative effects are associated with:

- alterations to vegetation communities/wildlife habitat as a result of
  - ◆ direct encroachment on the feature
  - ◆ fugitive dust generation

- ◆ changes to surface water runoff
- ◆ disturbance of wildlife communities as a result of Project activities.

Mitigation measures have been proposed to prevent these effects from occurring or minimize the magnitude, extent, duration and frequency in the event that they do occur. The primary mitigation measure that will prevent adverse effects on the natural features is avoidance of direct encroachment onto the features themselves. Certain construction activities may have short-term minor impacts, but these would be temporary in nature. Operational activities are not anticipated to impact the natural heritage features. Decommissioning activities will be similar to construction activities and as such they may cause short-term minor impacts; yet once the Project location has been restored to its previous condition, no long-term impacts are anticipated.

**Appendix A9**  
**MNR Confirmation Letter**

June 13, 2011

RE Midhurst 2 ULC  
c/o Bob Leah, Recurrent Energy LLC  
800 E. Northwest Highway  
Suite 611  
Palatine, Illinois  
60074

Dear Mr. Leah,

In accordance with the Ministry of the Environment's (MOE's) Renewable Energy Approvals regulation (O.Reg.359/09), applicants are required to prepare a natural heritage assessment and environmental impact study using evaluation criteria or procedures established or accepted by the Ministry of Natural Resources (MNR). The regulation requires MNR to confirm that the natural heritage assessment and environmental impact study, including mitigation measures, were prepared using established procedures acceptable to MNR. The MNR's confirmation letter, along with other required project documentation, must be submitted to MOE as part of an application for a Renewable Energy Approval for consideration by MOE in making their Renewable Energy Approval decision.

The Ministry of Natural Resources (MNR) has reviewed the natural heritage assessment and environmental impact study for RE Midhurst 2 Solar Project in the Township of Oro-Medonte submitted by RE Midhurst 2 ULC on June 6, 2011.

In accordance with sections 28(2) and 38(2)(b) of the Renewable Energy Approvals regulation, MNR provides the following confirmations following review of the natural heritage assessment reports:

1. The MNR confirms that the determination of the existence of natural features and the boundaries of natural features was made using applicable evaluation criteria or procedures established or accepted by MNR.
2. The MNR confirms that the site investigation and records review were conducted using applicable evaluation criteria or procedures established or accepted by MNR, if no natural features were identified.
3. The MNR confirms that the evaluation of the significance or provincial significance of the natural features was conducted using applicable evaluation criteria or procedures established or accepted by MNR (if required).
4. The MNR confirms that the project location is not in a provincial park or conservation reserve.

5. The MNR confirms that the environmental impact study report has been prepared in accordance with procedures established by the MNR.

Where specific commitments have been made by the applicant in the natural heritage assessment with respect to project design, construction, rehabilitation, operation, mitigation, or monitoring, MNR expects that these commitments will be considered in MOE's Renewable Energy Approval decision and, if approved, be implemented by the applicant.

This confirmation letter is valid for the project as proposed in the natural heritage assessment and environmental impact study, including those sections describing the environmental effects monitoring plan and construction plan report. Should any changes be made to the proposed project that would alter the natural heritage assessment, MNR may need to undertake additional review of the natural heritage assessment.

In accordance with section 12(1) of the Renewable Energy Approvals Regulation, this letter must be included as part of your application submitted to the MOE for a Renewable Energy Approval.

If you wish to discuss any part of the confirmation or additional comments provided, please contact Whitney Moore, Renewable Energy Planning Ecologist, at (705) 725-7560.

Sincerely,



Mark Shoreman  
District Manager  
Midhurst District, MNR

cc. Jim Beal, Renewable Energy Provincial Field Program Coordinator, Regional  
Operations Division, MNR  
Narren Santos, Environmental Assessment and Approvals Branch, MOE

**Appendix A10**  
**Water Body**  
**Records Review Report Summary**

**RE Midhurst 2 ULC  
RE Midhurst 2 Solar Project****Summary****Water Body Records Review Report****1. Introduction**

As per Section 17 of the Renewable Energy Approvals (REA) Regulation (O. Reg. 359/09) under Part V.0.1 of the *Environmental Protection Act*, the following is a summary of the Water Body Records Review Report for the RE Midhurst 2 Solar Project.

RE Midhurst 2 ULC is proposing to develop and operate a 3.5-megawatt (MW) solar photovoltaic (Solar PV) facility, on an approximately 35-hectare (ha) parcel of land, located about 18 km north-northwest of Barrie in the Township of Springwater in Simcoe County; herein referred to as “RE Midhurst 2 Solar Project” or the “Project”.

Section 30 of the REA Regulation requires proponents of Class 3 solar projects to undertake a Water Body Records Review. The focus of the assessment was on identifying whether or not the Project was located within or adjacent to any of the specified water features (e.g., within 120 m of the average annual high water mark of a permanent or intermittent stream). Records were searched from the Ministry of Natural Resources (MNR), Ontario Ministry of Agriculture, Food and Rural Affairs, federal government, Nottawasaga Valley Conservation Authority (NVCA), County of Simcoe, Township of Springwater records and other relevant sources.

**2. Results**

Key water body features and points of interest identified during the records review include the following:

- two tributaries of Matheson Creek are present within 120 m of the Project location. Both discharge into the Craig’s Swamp/Copeland Forest Provincially Significant Wetland (PSW) Complex, located approximately 600 m east of the Project location
- Matheson Creek is located south of the Project location
- one tributary of Matheson Creek adjacent to the southwest portion of the Project location is within the Regulation Limits for the NVCA
- NVCA indicated the presence of a wetland in the woodlot on the eastern portion of the Project location and within the woodlot south of the Project location.

**3. Conclusions**

Table 3.1 summarizes the results of the records review.

**Table 3.1 Summary of Records Review Determinations**

<b>Determination to be Made</b>	<b>Yes/No</b>	<b>Description</b>
Is the Project in a water body?	Yes	A culvert may be required within the tributary of Matheson Creek on the access road from Old Second Road North.
Is the Project within 120 m of the average annual high water mark of a lake, other than a lake trout lake that is at or above development capacity?	No	No lakes are present on or within 120 m of the Project location.
Is the Project within 300 m of the average annual high water mark of a lake trout lake that is at or above development capacity?	No	No lake trout lakes are present on or within 300 m in the Project location.
Is the Project within 120 m of the average annual high water mark of a permanent or intermittent stream?	Yes	Two small tributaries of Matheson Creek originate within 120 m of the Project location.
Is the Project within 120 m of a seepage area?	No	No seepage areas were identified during the Records Review.

In addition, several drainage ditches were noted on the Project location during the Records Review, although it was not possible to confirm if these ditches met the definition of a Water Body under the REA Regulation.

A site investigation, as required in Section 31 of the REA Regulation will be completed to (i) confirm the features identified during this records review, (ii) identify if any corrections to the information presented herein are required, (iii) determine whether any additional waterbodies exist in the Project area, (iv) confirm the boundaries of any water feature within 120 m of the Project and (v) determine the distance from the Project to the water boundary.

# **Appendix A11**

## **Water Body Site Investigation Report Summary**

## RE Midhurst 2 ULC RE Midhurst 2 Solar Project

### Summary

## Water Body Site Investigations Report

### 1. Introduction

As per Section 17 of the Renewable Energy Approvals (REA) Regulation (O. Reg. 359/09) under Part V.0.1 of the *Environmental Protection Act*, the following is a summary of the Water Body Site Investigations Report for the RE Midhurst 2 Solar Project.

RE Midhurst 2 ULC is proposing to develop and operate a 3.5-megawatt (MW) solar photovoltaic (Solar PV) facility, on an approximately 35-hectare (ha) parcel of land, located about 18 km north-northwest of Barrie in the Township of Springwater in Simcoe County; herein referred to as "RE Midhurst 2 Solar Project" or the "Project".

Section 31 of the REA Regulation requires proponents of Class 3 solar projects to undertake a water site investigation for the purpose of determining if the information provided in the Water Body Records Review Report is correct and identifies any knowledge gaps, if any additional waterbodies are present on or within 120 m of the Project location, and if the borders and distance of the waterbodies from the Project location are correct. A site visit was completed to obtain this information.

### 2. Results

Several waterbodies were identified on and within 120 m of the Project location, including the following:

- Drainage Ditches A and B which consist of linear, excavated drainage channels, originate on the Project location and flow west towards the Tributary of Matheson Creek. Portions of these drains meet the definition of a Water Body under the REA Regulation.
- a tributary of Matheson Creek originates as flow from the drains and roadside ditch on the western side of the Project location and flows south towards Matheson Creek
- a second tributary of Matheson Creek originates in the swamp woodland on south of the Project location and flows in a south-easterly direction away from the Project location
- there are several grassed swale drainage ditches that do not meet the definition of a water body in the REA Regulation.

### 3. Conclusions

The two tributaries of Matheson Creek and the two Drains on the Project location will require an Environmental Impact Study (EIS) as per Sections 39 and 40 of the REA Regulation since the average annual high water mark is located between 30 and 120 m from the Project location.

**Appendix A12**  
**Water Body**  
**Environmental Impact**  
**Study Summary**

**RE Midhurst 2 ULC  
RE Midhurst 2 Solar Project****Summary****Waterbodies Environmental Impact Study****1. Introduction**

As per Section 17 of the Renewable Energy Approvals (REA) Regulation (O. Reg. 359/09) under Part V.0.1 of the *Environmental Protection Act*, the following is a summary of the Waterbodies Environmental Impact Study for the RE Midhurst 2 Solar Project..

RE Midhurst 2 ULC is proposing to develop and operate a 3.5-megawatt (MW) solar photovoltaic (Solar PV) facility, on an approximately 35-hectare (ha) parcel of land, located about 18 km north-northwest of Barrie in the Township of Springwater in Simcoe County (Figure 1.1); herein referred to as "RE Midhurst 2 Solar Project" or the "Project".

Sections 39 and 40 of the REA Regulation require proponents of Class 3 solar projects to complete an Environmental Impact Study (EIS) for all waterbodies determined to be within a specified setback in order to obtain a REA. The EIS is required in order to determine (i) any potential negative environmental effects on the natural features (ii) identify mitigation measures (iii) describe how the environmental effects monitoring plan in the Design and Operations Report addresses any negative environmental effects and (iv) describe how the Construction Plan Report addresses any negative environmental effects.

This EIS was completed on the four tributaries of Matheson Creek (two natural channels and two drainage ditches), located within 120 m of the Project location. Solar panels will be constructed between 30 and 120 m from the two natural tributaries. One of the tributaries will be crossed by the proposed access road and an overhead distribution line. Drainage Ditch A will be realigned off the Project location, and Drainage Ditch B will be eliminated. The EIS has determined that there are no significant environmental effects to these waterbodies as a result of the Project.

**2. Results**

The results of the EIS on the waterbodies are summarized in Table 2.1.

**Table 2.1 Summary of Potential Negative Environmental Effects and Proposed Mitigation**

<b>Project Phase</b>	<b>Potential Negative Environmental Effect</b>	<b>Proposed Mitigation Measure</b>
<b>Surface Water Runoff</b>		
Construction	Altered surface water runoff pattern and rate causing an increase in surface water runoff to the receiving water body due	Install flow dissipation measures near the 30-m setback from the water body. Ditches will be vegetated with appropriate grass species to aid in flow dissipation and

Project Phase	Potential Negative Environmental Effect	Proposed Mitigation Measure
	to land grading and ditching, ditch realignment and removal, soil compaction, and vegetation removal.	water uptake. Grading will occur to maintain site drainage following removal and realignment of ditches. Enhanced vegetated swales and filter strips will be utilized where appropriate. Rock flow check dams and/or straw bale flow checks will be used in ditches to promote minor ponding in order to decrease turbidity and increase water retention. Discing or other soil loosening methods will be used on compacted areas. Long-term ground cover will be planted.
Operations	Altered surface water runoff pattern and rate causing an increase in surface water runoff to the receiving water body due to land grading and ditching, impervious and less pervious soils, and changes in vegetation.	Minor grading will occur and take into consideration current land grade to replicate present stormwater flow pattern. Long-term ground cover will be planted. Impervious and less pervious soils will allow runoff into ditches or localize points and discharge into vegetation to allow flow dissipation; therefore no appreciable impact to local drainage patterns or runoff rates.
Decommissioning	Altered surface water runoff pattern and rate causing an increase in surface water runoff to the receiving water body due to land grading and ditching, and vegetation removal.	All infrastructure will be removed, including access roads and drainage ditches, thereby bringing the site back to pre-construction conditions.
<b>Surface Water Quality</b>		
Construction	Increase soil erosion and sedimentation may cause an increase in turbidity in the receiving water body due to land grading and ditching, ditch realignment, water crossing installation, soil compaction, and vegetation removal.	Erosion and Sediment Control plan to be created and implemented. Examples of key components of the plan are: minimize size of cleared and disturbed areas, phase construction to minimize time of exposed soils, adequate supply of erosion and sediment control measures (e.g., silt fences), divert runoff through vegetated areas, install flow velocity control measures in drainage ditches, revegetate and stabilize exposed soils, grade stockpiles to stable angle, stockpiles placed in suitable areas away from the receiving water body.
Construction/ Decommissioning	Heavy dust may impact surface water quality.	Use of dust suppressant (water or other materials that will not adversely affect water quality or vegetation growth), phased construction and decommissioning, stockpiles to be stabilized and/or covered, hard surfaces for access roads, and avoid earthworks during windy days.

Project Phase	Potential Negative Environmental Effect	Proposed Mitigation Measure
Construction/ Operations/ Decommissioning	Accidental spills contaminating surface water.	Fuelling stations and hazardous materials storage to be located outside of the 1:100-yr Flood Hazard. Emergency spill kit on site at all times and the spill kit will have adequate materials/equipment for spill response. Machinery arriving on site to be clean and free of leaks. Contractor to have spill response procedure and all workers will be properly trained on the procedure. No cement products to be placed into any watercourse. Concrete truck rinsing station at least 120 m away from any known watercourse. Cement storage to be raised and placed in a waterproof shelter.
Operations	Increase soil erosion and sedimentation may cause an increase in turbidity in the receiving water body due to land grading and ditching, and changes in vegetation.	Stormwater flow patterns will be replicated. Long- term ground cover will be planted. Impervious and less pervious soils will allow runoff into ditches or localize points and discharge into vegetation to allow flow dissipation; therefore no appreciable impact to local drainage patterns.
Operations	Water used in maintenance activities to be released on site may affect surface water quality.	Panel washing will use up to 9000 L over a 2 to 4 day period. No cleaning agents will be used and therefore no impacts to surface water quality is anticipated.
Decommissioning	Increase soil erosion and sedimentation may cause an increased in turbidity in the receiving water body due to land grading and ditching, and changes in vegetation.	All infrastructure will be removed, including access roads and drainage ditches, thereby bringing the site back to pre-construction conditions.
<b>Aquatic Biota and Habitat</b>		
Construction/ Operations/ Decommissioning	Indirectly affected by changes to surface water quality, surface water runoff rate, or groundwater.	Proposed mitigation for surface water quality, surface water runoff and groundwater, as above, is anticipated to be sufficient.
Construction	Adverse effects on aquatic habitat due to drainage Ditch realignment and removal.	Drainage Ditch A to be realigned will be stabilized with vegetation or other structure measures to prevent erosion and provide habitat. 30-m buffer around the ditch will be naturally vegetated. Additional mitigation and/or compensation may be necessary to account for loss of Drainage Ditch B.
Construction	Adverse effects on aquatic habitat due to water crossing installation.	Install water crossing outside of in-water timing restriction period. Use flow diversion and cofferdam measures to allow construction in the dry. Removal fish as necessary before dewatering. Use appropriate culvert installation procedures

Project Phase	Potential Negative Environmental Effect	Proposed Mitigation Measure
		to prevent impacts on fish movement. Riparian plantings to rehabilitate disturbed shoreline areas.
Construction	Adverse effects on aquatic habitat due to overhead line crossing.	Follow mitigation in DFO's Operational statement for Overhead Line Crossing to prevent adverse effects on aquatic habitat in the Tributary of Matheson Creek.
<b>Groundwater</b>		
Construction	Groundwater levels may be affected if pumping from excavations is required.	Only the substation excavation may be deep enough to intersect groundwater table. Duration of pumping minimized to extent possible. Seepage to be controlled at source in excavation if significant pumping necessary.
Construction	Groundwater levels may be affected due to water takings from on-site well for construction purposes.	Groundwater takings anticipated to be around 10,000 L/d for majority of construction. If more water required, takings will be limited to 45,000 L/d to minimize local changes in groundwater table.
Operations	Groundwater resources potentially affected by well withdrawals for periodic maintenance purposes.	Panel washing will use up to approximately 9000 L over a 2 to 4 day period approximately three times per year. Should other maintenance activities require more water, groundwater withdrawal will be limited to 45,000 L/d or less. This will have a minimal short-term effect on the local groundwater table around the well.
Construction/ Operations/ Decommissioning	Groundwater contamination due to accidental spills.	See mitigation measures above for accidental spills contaminating surface water.

Table 5.1 in the EIS summarizes the proposed monitoring plan.

As discussed in the Design and Operations Report, environmental effects monitoring is proposed in respect of any negative environmental effects that may result from engaging in the Project. The monitoring plan in the Design and Operations Report identifies: performance objectives in respect of the negative environmental effects; mitigation measures to assist in achieving the performance objectives; and, a program for monitoring negative environmental effects for the duration of the time the Project is engaged in, including a contingency plan to be implemented if any mitigation measures fail.

In addition, the Construction Plan Report for the Project details the construction and installation activities, location and timing of construction and installation activities, any negative environmental effects that result from construction activities within 300 m of the Project and mitigation measures for the identified negative environmental effects.

### 3. Conclusions

The EIS has been prepared to identify potential negative environmental effects that all phases of the Project may have on waterbodies. Mitigation measures have been proposed to prevent these effects from occurring or minimize the magnitude, extent, duration and frequency in the event that they do occur. The primary mitigation measure that will prevent adverse effects on the water body is adherence to the 30-m setback requirement. Certain construction activities may have short-term minor impacts, but these would be temporary in nature. Operational activities are not anticipated to impact the water body as the Project will be operated remotely and maintenance is only expected to occur periodically throughout the year. Decommissioning activities will be similar to construction activities and as such they may cause short-term minor impacts yet once the Project location has been restored to its previous condition no long-term impacts are anticipated.

Overall, while the Project will result in some changes to the natural environment, no negative effects on the water body are anticipated to occur following implementation of the mitigation and monitoring measures proposed in this EIS.

# **Appendix A13**

## **Stage 1 and 2 Archaeological Assessment Report Summary**

**RE Midhurst 2 ULC  
RE Midhurst 2 Solar Project****Summary****Stage 1 and 2 Archaeological Assessment Report****1. Introduction**

As per Section 17 of the Renewable Energy Approvals (REA) Regulation (O. Reg. 359/09) under Part V.0.1 of the *Environmental Protection Act*, the following is a summary of the Archaeological Assessment Report, prepared by D.R. Poulton & Associates for the RE Midhurst 2 Solar Project.

RE Midhurst 2 ULC is proposing to develop and operate a 3.5-megawatt (MW) solar photovoltaic (Solar PV) facility, on an approximately 35-hectare (ha) parcel of land located about 18 km north-northwest of Barrie in the Township of Springwater in Simcoe County; herein referred to as “RE Midhurst 2 Solar Project” or the “Project”.

Section 22 of the REA Regulation requires proponents of Class 3 solar projects to undertake an Archaeological Assessment where there is a concern that an undertaking could impact archaeological resources. The Ministry of Tourism and Culture must review and accept the Archaeological Assessment Report and provide an acceptance letter that will become part of the application for a REA. The purpose of the present assessment was to confirm the presence or absence of significant archaeological resources that could represent potential constraints for the proposed RE Midhurst 2 Solar Generation Facility. The assessment included a Stage 1 background study of past archaeological investigations and known archaeological sites within a 2-km radius of the RE Midhurst 2 Solar Project location. It also included a systematic 5-m interval Stage 2 archaeological survey of all of the Leased Lands in the property.

**2. Results**

The background study determined that there are two registered and three unregistered archaeological fieldwork or discoveries documented within a 2-km radius of the RE Midhurst 2 Solar Project location. The two registered sites are called Martine site (BdGw-20) and McGuire site (BdGw-21) or Flos 36 site. The unregistered sites consist of Flos 38, 37 and 41 sites. The study also determined that the property had at most a moderate potential for as-yet undiscovered sites. The survey did find a scattering of Euro-Canadian artefacts dating to late 19<sup>th</sup> or early 20<sup>th</sup> Century. Given the later date of site and the function to be a minor refuse pit, the site is not considered to represent a significant archaeological resource or planning concern.

### 3. Conclusions

The office of the Ministry of Tourism and Culture has reviewed the Archaeological Assessment Report in accordance with Part VI of the Ontario Heritage Act, R.S.O 1990, c 0.18, and accepted its findings. The minor refuse pit of late 19<sup>th</sup> to early 20<sup>th</sup> Euro-Canadian archaeological resources is not considered a significant archaeological resource or planning concern, therefore further investigation is not warranted and the Project location does not have any significant archaeological resources or planning concerns for the proposed solar generation facility.

**Appendix A14**  
**MTC Confirmation Letter**

**Ministry of Tourism and Culture**  
Culture Division  
Culture Programs Unit  
Programs and Services Branch  
400 University Avenue, 4<sup>th</sup> floor  
Toronto, ON, M7A 2R9  
Telephone: 416-314-7132  
Facsimile: 416-314-7175  
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**Ministère du Tourisme et de la Culture**  
Division de culture  
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400, avenue University, 4<sup>e</sup> étage  
Toronto, ON, M7A 2R9  
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Email : Jim.Sherratt@ontario.ca



September 9, 2010

Ms. Kimberley Arnold  
Hatch Limited  
4342 Queen Street  
Niagara Falls, Ontario  
L2E 7J7

**RE: RE Midhurst 2 Solar Generation Facility, Lot 47 and 48, Concession 1, Flos Geographic Township, Township of Springwater, Simcoe County, Ontario, FIT-FEMZNAG, MTC File no. HD00509, PIF No. P316-067-2010.**

Dear Proponent:

This letter constitutes the Ministry of Tourism and Culture's written comments as required by s. 22(3)(a) of O. Reg. 359/09 under the *Environmental Protection Act* regarding archaeological assessments undertaken for the above project.

Based on the information contained in the report you have submitted for this project, the Ministry believes the archaeological assessment complies with the *Ontario Heritage Act's* licensing requirements, including the licence terms and conditions and the Ministry's 1993 Archaeological Assessment Technical Guidelines. Please note that the Ministry makes no representation or warranty as to the completeness, accuracy or quality of the Report.\*

The report [P316-067-2010] recommends the following:

*In summary, the Stage 1 background study determined that there were no documented past archaeological investigations or documented sites within or in close proximity to the RE Midhurst 2 property. However, it also determined that the property had a moderate potential for as-yet undiscovered sites. Notwithstanding the inferred potential, the subsequent Stage 2 survey of the RE Midhurst 2 property determined that there is only one archaeological site within the property. It is a late 19<sup>th</sup> to early 20<sup>th</sup> century Euro-Canadian refuse deposit. This site is not considered to represent a significant archaeological resource or planning concern. Given the negative results of the assessment, it is recommended that no further archaeological investigations or concerns are warranted for the proposed RE Midhurst 2 Solar Generation Facility.*

*Further to the above, it is recommended that the Ministry of Tourism and Culture issue a letter accepting the present report into the Provincial registry (sic) of archaeological reports. It is also recommended that the letter include a statement that the Ministry concurs with the recommendations and other findings presented in the report. Finally, it is requested that a copy of the letter be forwarded by email to Bob Leah, Director of Development, Canada, Recurrent Energy. His email is [Bob.Leah@recurrentenergy.com](mailto:Bob.Leah@recurrentenergy.com). In due course, this letter and the related archaeological assessment report will be submitted by Recurrent Energy and hatch Ltd. to the Ontario Ministry of the Environment as part of the complete REA application for the development of the proposed solar generation facility on the RE Midhurst 2 property.*

*The above conclude the property-specific recommendations of this report. Nevertheless, it should be emphasized that no archaeological assessment can be considered to totally negate the potential for deeply buried cultural remains, including human burials. In recognition of this fact, the archaeological assessment technical guidelines formulated by the Province of Ontario require that all reports on archaeological assessments include recommendations to address the possibility that deeply buried remains may be encountered during earthmoving and construction (MCTR 1993:12). Accordingly, it is recommended that archaeological staff of the Ontario Ministry of Tourism and Culture be notified immediately if any deeply buried archaeological remains should be discovered during earthmoving or construction related to the proposed solar generation facility. In the event that human remains should be encountered, it is similarly recommended that the proponent contact Jim Sherratt, Archaeological Review Officer, Ontario Ministry of Tourism and Culture (email address [Jim.Sherratt@ontario.ca](mailto:Jim.Sherratt@ontario.ca), telephone 416-314-7132) and Michael D'Mello, the Registrar of the Cemeteries Regulation Unit of the Ontario Ministry of Small Business and Consumer Services (telephone #416 326-8404; email address [Michael.D'Mello@ontario.ca](mailto:Michael.D'Mello@ontario.ca)).*

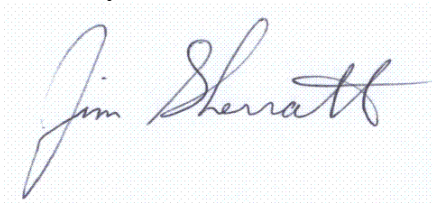
The Ministry is satisfied with these recommendations.

This letter does not waive any requirements which you may have under the Ontario *Heritage Act*. A separate letter addressing archaeological licensing obligations under the Act will be sent to the archaeologist who completed the assessment and will be copied to you.

This letter does not constitute approval of the renewable energy project. Approvals of the project may be required under other statutes and regulations. It is your responsibility to obtain any necessary approvals or licences.

Please feel free to contact me if you have questions or require additional information.

Sincerely,

A handwritten signature in blue ink that reads "Jim Sherratt". The signature is written in a cursive style and is positioned above a light blue dotted rectangular area.

Jim Sherratt  
Archaeology Review Officer  
Eastern Region

- c. Ms. Sherri Pearce, D.R. Poulton & Associates Inc.  
Mr. Bob Leah, Recurrent Energy

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\*In no way will the Ministry be liable for any harm, damages, costs, expenses, losses, claims or actions that may result: (a) if the Report(s) or its recommendations are discovered to be inaccurate, incomplete, misleading or fraudulent; or (b) from the issuance of this letter. Further measures may need to be taken in the event that additional artifacts or archaeological sites are identified or the Report(s) is otherwise found to be inaccurate, incomplete, misleading or fraudulent.

## **Appendix A15**

### **Protected Properties and Heritage Resources**

Project Report

September 6, 2011

**RE Midhurst 2 ULC**  
**RE Midhurst 2 Solar Project**

**Protected Properties and Heritage Resources**

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## 1. Introduction

### 1.1 Project Description

RE Midhurst 2 ULC is proposing to develop and operate a 3.5-megawatt (MW) solar photovoltaic (Solar PV) facility, on an approximately 35-hectare (ha) parcel of land, located about 18 km north-northwest of Barrie in the Township of Springwater in Simcoe County; herein referred to as “RE Midhurst 2” or the “Project”.

### 1.2 REA 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 19 of the REA Regulation requires proponents of Class 3 solar projects to determine whether the project location is on a property described in Column 1 of the Table to Section 19. Table 1.1 has been prepared to meet this requirement.

Section 23 of the REA requires that proponents of Class 3 solar projects, determine whether engaging in the renewable energy project may have an impact on a heritage resource described in Subsection 20 (1). Table 1.2: *The Ministry of Culture – Check Sheet for Environmental Assessments: Screening for Impacts to Built Heritage and Cultural Heritage Landscapes* has been completed to address the requirements described in Section 23.

## 2. Protected Properties

As discussed in Section 1.2, Table 1.1 has been prepared to address Section 19 of the REA Regulation.

## 3. Heritage Assessment

As discussed in Section 1.2, Table 1.2 has been prepared to address Section 23 of the REA Regulation.

## 4. Conclusion

Based on the information presented in Table 1.1 the proposed Project is not located on a Protected Property as described in Column 1 of the Table to Section 19. In addition, research and agency consultation undertaken as described within Table 1.2 has not identified the need for a heritage impact assessment under Section 23 of the REA Regulation.

**Table 1.1 - Protected Properties Table**  
**Under the Renewable Energy Approval: O. Reg. 359/09 Section 19**

19. (1) A person who proposes to engage in a renewable energy project shall determine whether the project location is on a property described in Column 1 of the Table to this Section.

**Property:** Midhurst 2

**Address:** 1878 Matheson Rd., Springwater, ON, L0L 2K0

**Township and County:** Township of Springwater, Simcoe County

Item	Description of Property	Reference
1	A property that is subject of an agreement, covenant or easement entered into under clause 10(1)(b) of the <i>Ontario Heritage Act</i> .	See MCL Check Sheet Step 2, Item 4. The property is not designated under clause 10(1)(b) of the <i>Ontario Heritage Act</i> .
2	A property in respect of which a notice of intention to designate the property to be of cultural heritage value or interest has been given in accordance with section 29 of the <i>Ontario Heritage Act</i> .	Consultation with the municipality, as per MCL Check Sheet Step 2, Item 8 has not determined that a notice of intention to designate has been given. In addition, The MCL Ontario Heritage Properties Database includes properties designated under Part IV of the <i>Ontario Heritage Act</i> . The Project is not proposed to be located on or adjacent to such a property.
3	A property designated by a municipal by-law made under section 29 of the <i>Ontario Heritage Act</i> as a property of cultural heritage value or interest.	Consultation with the municipality, as per MCL Check Sheet Step 2, Item 8 has not determined that the Project is located on a property designated by a municipal by-law. In addition, The MCL Ontario Heritage Properties Database includes properties designated under Part IV of the <i>Ontario Heritage Act</i> . The Project is not proposed to be located on or adjacent to such a property.
4	A property designated by order of the Minister of Culture made under section 34.5 of the <i>Ontario Heritage Act</i> as a property of cultural heritage value or interest of provincial significance.	The MCL Ontario Heritage Properties Database includes properties designated under Part IV of the <i>Ontario Heritage Act</i> . The Project is not proposed to be located on or adjacent to such a property.
5	A property in respect of which a notice of intention to designate the property as property of cultural heritage value or interest of provincial significance has been given in accordance with section 34.6 of the <i>Ontario Heritage Act</i> .	The MCL Ontario Heritage Properties Database includes properties designated under Part IV of the <i>Ontario Heritage Act</i> . The Project is not proposed to be located on or adjacent to such a property.
6	A property that is subject of an easement or a covenant entered into under section 37 of the <i>Ontario Heritage Act</i> .	The MCL Ontario Heritage Properties Database includes properties designated under Part IV of the <i>Ontario Heritage Act</i> . The Project is not proposed to be located on or adjacent to such a property.

7	A property that is part of an area designated by a municipal by-law made under section 41 of the <i>Ontario Heritage Act</i> as a heritage conservation district.	The MCL Ontario Heritage Properties Database includes properties designated under Part V of the <i>Ontario Heritage Act</i> . The Project is not proposed to be located on or adjacent to such a property.
8	A property designated as a historic site under Regulation 880 of the Revised Regulations of Ontario, 1990 (Historic Sites) made under the <i>Ontario Heritage Act</i> .	The property is not designated a historic site under Regulation 880.

**Table 1.2 - Ministry of Tourism and Culture – Check Sheet for Environmental Assessments  
Screening for Impacts to Built Heritage and Cultural Heritage Landscapes**

This checklist will help identify potential cultural heritage resources, determine how important they are and indicate whether a heritage impact assessment is needed.

**Property:** Midhurst 2

**Address:** 1878 Matheson Rd., Springwater, ON, L0L 2K0

**Township and County:** Township of Springwater, Simcoe County

<b>Step 1 – Screening Potential Resources</b>			
		<b>Built heritage resources</b>	<b>Reference</b>
<b>Yes</b>	<b>No</b>	Does the property contain any built structures, such as:	The following resources were assessed using Google Earth 5.1.3533.1731 on February 26, 2010. All leased lands for this project appear to be on land cultivated for agricultural use.
	√	Residential structures (e.g. house, apartment building, trap line shelter)	
	√	Agriculture (e.g. barns, outbuildings, silos, windmills)	
	√	Industrial (e.g. factories, complexes)	
	√	Engineering works (e.g. bridges, roads, water/sewer systems)	
<b>Cultural heritage landscapes</b>			
<b>Yes</b>	<b>No</b>	Does the property contain landscapes such as:	
	√	Burial sites and/or cemeteries	
	√	Parks	
	√	Quarries or mining operations	
	√	Canals	
√		Other human-made alterations to the natural landscape	Lands have been cultivated for agricultural use. Drainage tile may be installed below the surface.

<b>Step 2 – Screening Potential Significance</b>			
<b>Yes</b>	<b>No</b>	<b>A property's heritage significance may be identified through the following:</b>	<b>Reference</b>
	√	1. Is it designated or adjacent to a property designated under the Ontario Heritage Act?	According to the MTC Ontario Heritage Properties Database there are no heritage properties located on or adjacent to the property. (Website search: 26Feb10 <a href="http://www.culture.gov.on.ca/english/heritage/hpd.htm">http://www.culture.gov.on.ca/english/heritage/hpd.htm</a> ) See general comment above.

	√	2. Is it listed on the municipal heritage register or provincial register (e.g. Ontario Heritage Bridge List)?	See general comment above.
	√	3. Is it within or adjacent to a Heritage Conservation District?	None of Ontario's Heritage Conservation Districts are located within the Municipality according to the MTC's current list. (Research completed 26Feb10 <a href="http://www.culture.gov.on.ca/english/heritage/conservation/conservation_list.htm">http://www.culture.gov.on.ca/english/heritage/conservation/conservation_list.htm</a> )
	√	4. Does it have an Ontario Heritage Trust easement or is it adjacent to such a property?	According to the Ontario Heritage Trust website ( <a href="http://www.heritagefdn.on.ca">www.heritagefdn.on.ca</a> ) no easement properties are located in the vicinity of the Project. In addition, the Ontario Heritage Properties Database did not reveal any easement properties. (Research completed 26Feb10)
	√	5. Is there a provincial or federal plaque?	There are no provincial plaques located in the vicinity of the Project location (Research completed 25Feb10 <a href="http://www.ontarioplaques.com/index.html">http://www.ontarioplaques.com/index.html</a> ). Federal plaques appear at National Historical Sites of Canada, none of which exist within the vicinity of the Project (See Item 6 below).
	√	6. Is it a National Historic Site?	See general comment above. National Historic Sites are included within the Ontario Heritage Properties Database. In addition, no sites within the vicinity of the Project are listed on the Canadian Register of Historic Places (Research completed 26Feb10 <a href="http://www.historicplaces.ca">www.historicplaces.ca</a> )
	√	7. Does documentation exist to suggest built heritage or cultural heritage landscape potential? (e.g. research studies, heritage impact assessment reports, etc.)	
	√	8. Was the municipality contacted regarding potential cultural heritage value?	Consultation with the Municipality commenced on Feb 26, 2010.
	√	Were any concerns expressed?	
		9. What are the dates of construction?	N/A
	√	Are the buildings and/or structures over 40 years old?	There are no buildings and/or structures on the lots where the Project will be located.
	√	Is it within a Canadian Heritage River watershed?	
		10. Is a renowned architect or builder associated with the property?	N/A

**Note:** If you answer "yes" to any of the questions in Step 2, a heritage impact assessment is required.

Step 3 – Screening for Potential Impacts			
Yes	No		Comments
	√	Destruction of any, or part of any, significant heritage attribute or feature.	
	√	Alteration that is not sympathetic, or is incompatible, with the historic fabric or appearance.	
	√	Shadows created that alter the appearance of a heritage attribute or change the visibility of a natural feature or plantings, such as a garden.	
	√	Isolation of a heritage attribute from its surrounding environment, context or a significant relationship.	
	√	Direct or indirect obstruction of significant views or vistas from, within, or to a built and natural feature.	
	√	A change in land use such as rezoning a battlefield from open space to residential use, allowing new development or site alteration to fill in the formerly open spaces.	
	√	Land disturbances such as a change in grade that alters soils and drainage patterns that adversely affect an archaeological resource.	

### **Contents of a Heritage Impact Assessment**

As a minimum, the following should be included in a heritage impact assessment:

1. Historical research, site analysis and evaluation
2. Identification of the significance and heritage attributes of the property
3. Description of the proposed development/ site alteration
4. Measurement of impacts
5. Consideration of alternatives, mitigation and conservation methods
6. Implementation and monitoring schedules
7. Summary statement and conservation recommendations

For more information, refer to Ministry of *Culture Info Sheet#5: Heritage Impact Assessments and Conservation Plans* as part of the Ontario Heritage Tool Kit, which is available on the Ministry's website [www.culture.gov.on.ca](http://www.culture.gov.on.ca).

## **Appendix A16**

### **Noise Assessment Study Report Summary**

## RE Midhurst 2 ULC RE Midhurst 2 Solar Project

### Summary

## Noise Assessment Study Report

### 1. Introduction

This report presents the results of the noise assessment study for the RE Midhurst 2 Solar Project, required under O. Reg. 359/09 as part of the Renewable Energy Approval Process (REA).

RE Midhurst 2 ULC is proposing to develop and operate a 3.5-megawatt (MW) solar photovoltaic (Solar PV) facility, on an approximately 35-hectare (ha) parcel of land, located about 18 km north-northwest of Barrie in the Township of Springwater in Simcoe County; herein referred to as “RE Midhurst 2 Solar Project” or the “Project”.

This Noise Impact Assessment has been prepared based on the document entitled “Basic Comprehensive Certificates of Approval (Air) – User Guide” by the Ontario Ministry of the Environment (MOE), which requires that the sound pressure levels at the points of reception (POR) are estimated using ISO 9613-2. The performance limits used for verification of compliance correspond to the values for Class 3 areas (45 dBA for day time, 40 dBA for night time) as established by MOE.

### 2. Results

- The main sources of noise from the solar facility will be the step-up transformer, located at the substation, and four inverter clusters which also contain step-up transformers.
- The sound pressure levels at the POR were predicted using procedures from ISO 9613-2 as required by MOE (Basic Comprehensive Certificates of Approval (Air) – User Guide), which is a widely used standard for evaluation of noise impact in environmental assessments
- For the purpose of evaluating the potential noise impacts of the substation transformer, the sound power level was estimated using data from the National Electrical Manufacturers Association (NEMA). This standard provides maximum sound level values for transformers, and manufacturers routinely meet this specification.
- Noise data was obtained for two inverter manufacturers: Satcon and Xantrex. Both inverters had the same capacity at 500 kW. Xantrex data was more complete, including third-octave band data, and it was also higher than the Satcon data in terms of sound power level. For that reason, Xantrex data was used for modelling the inverter clusters. The attenuation caused by the inverter enclosures/e-house and solar panels was not considered in the model.
- While analysis indicates that no additional mitigation will be required, the noise levels will be verified at the closest receptors after the RE Midhurst 2 facility goes into service. If

measurements indicate a need to reduce sound levels to satisfy MOE criteria, the mitigation measures will be taken at the sources.

### **3. Conclusions**

Based on the results obtained in this study, it is concluded that the sound pressure levels at the POR, following implementation of mitigation measure, will be below MOE requirements for Class 3 areas at night time (40 dBA), and well below the limits at day time (45 dBA).

