

## **Appendix C**

### ***Public Meeting Materials***

# LOYALIST SOLAR PROJECT - OPEN HOUSE

June 29, 2016

Name	Organization	Address	Phone	Email
[Redacted Content]				

Personal information has been redacted.

# LOYALIST SOLAR PROJECT - OPEN HOUSE

June 29, 2016

Name	Organization	Address	Phone	Email
Pa				
R				
m				
D				
P				
S				
K				

# LOYALIST SOLAR PROJECT - OPEN HOUSE

June 29, 2016

Name	Organization	Address	Phone	Email
[Redacted Content]				



# LOYALIST SOLAR PROJECT - OPEN HOUSE

June 29, 2016

Name	Organization	Address	Phone	Email

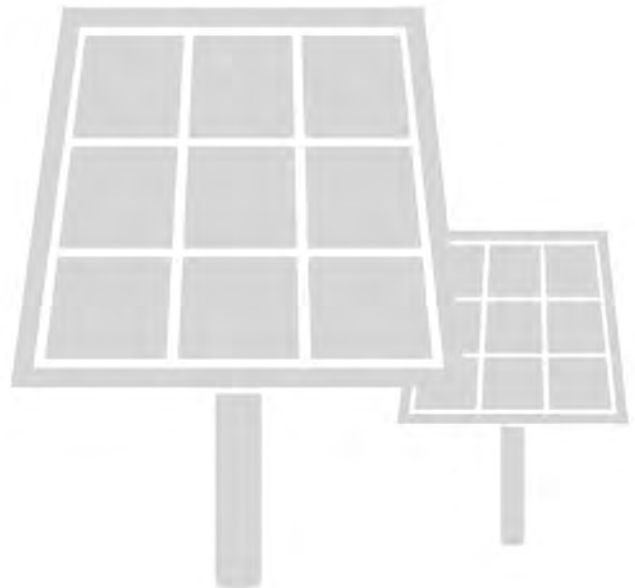
# Community Meeting

Please sign in at the front desk and provide your contact information if you would like to receive project updates.

We invite you to walk around and look at the displays.

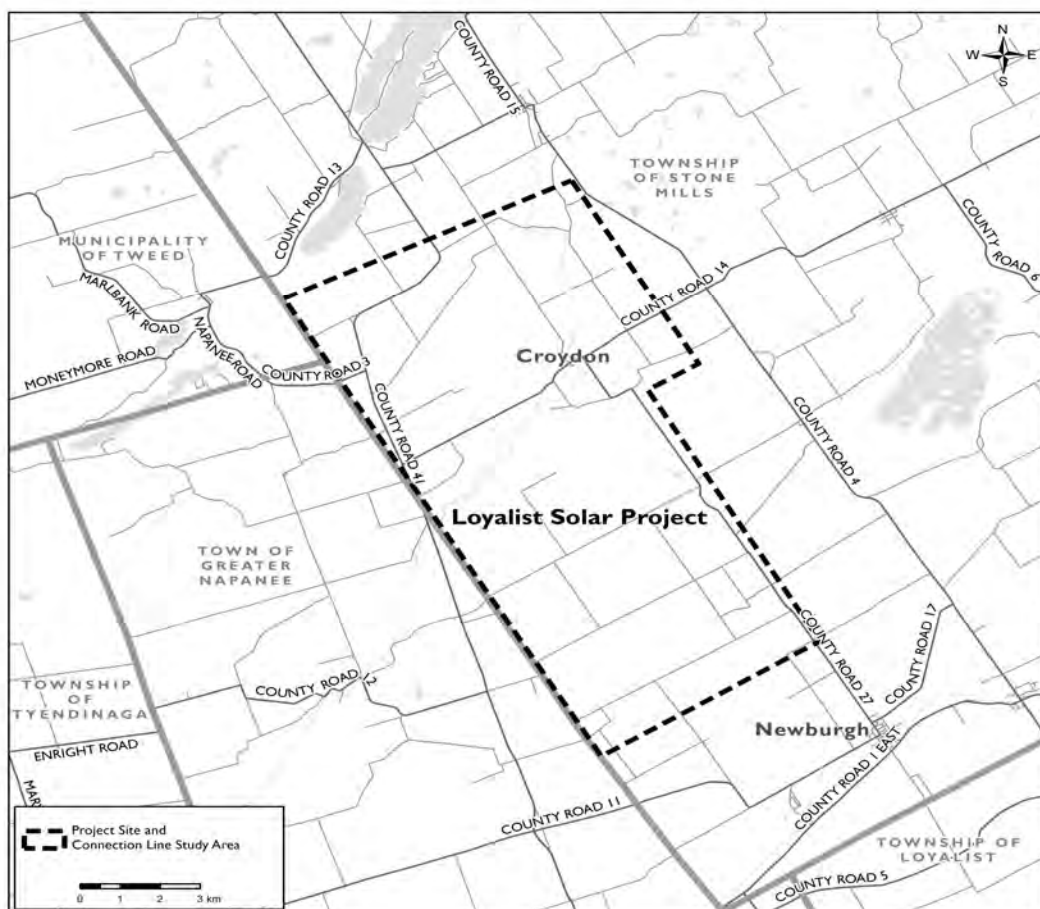
If you have questions or comments, please ask one of our representatives.

**Thank you for attending!**



## Project Description

- Up to 54 megawatt (MW AC) solar project
- Located in the Township of Stone Mills, County of Lennox & Addington, Ontario
- The Project is being developed by Loyalist Solar LP, a partnership between BluEarth Renewables and the Mohawks of the Bay of Quinte
- The Project Site consists of solar panels, racking, direct current (DC) electrical collection system, alternating current (AC) electrical system, inverters, and associated infrastructure. The Project Connection Line includes overhead and underground electrical circuits, electrical transformer stations, communication lines, and related electrical infrastructure required to connect the Site to the existing Hydro One Networks Inc. transmission system
- The project is being developed in response to being awarded a contract under the Independent Electricity System Operator's Large Renewable Procurement initiative





## Community Benefits

- **Community Vibrancy Agreement.** Loyalist Solar LP has entered into an agreement with the Township of Stone Mills that prescribes development requirements and long-term monetary contributions
- **Additional long-term tax revenue.** Over the course of the Project's lifespan, it will provide ongoing contributions to the Township's tax base without requiring municipal services such as water and wastewater services
- **Employment.** The jobs that are created during construction include: land surveying, notary services, tree/brush clearing, road construction, set-up of electrical and communication networks, excavation, concrete and aggregates supply and installation, foundations, assembly of solar facility, construction of the sub-station, and material transportation. The Project will also require permanent employees during operations
- **Boosting the local economy.** Construction supplies, components and contractors will be sourced locally to the extent reasonably possible subject to meeting quality, quantity, and workmanship requirements
- **Renewable energy.** Renewable energy provides clean, sustainable, zero-emission electricity and reduces the risk of climate change.



## Your questions answered!

### How could the proposed project impact property values?

There is no evidence that solar facilities decrease property values of surrounding properties. Generally speaking, when new infrastructure projects are proposed, potential buyers may be hesitant until project construction is complete. With proper visual screening and reasonable setbacks from homes, we believe that the project will not have any long-term negative impact for adjacent landowners.

### How are visual concerns addressed?

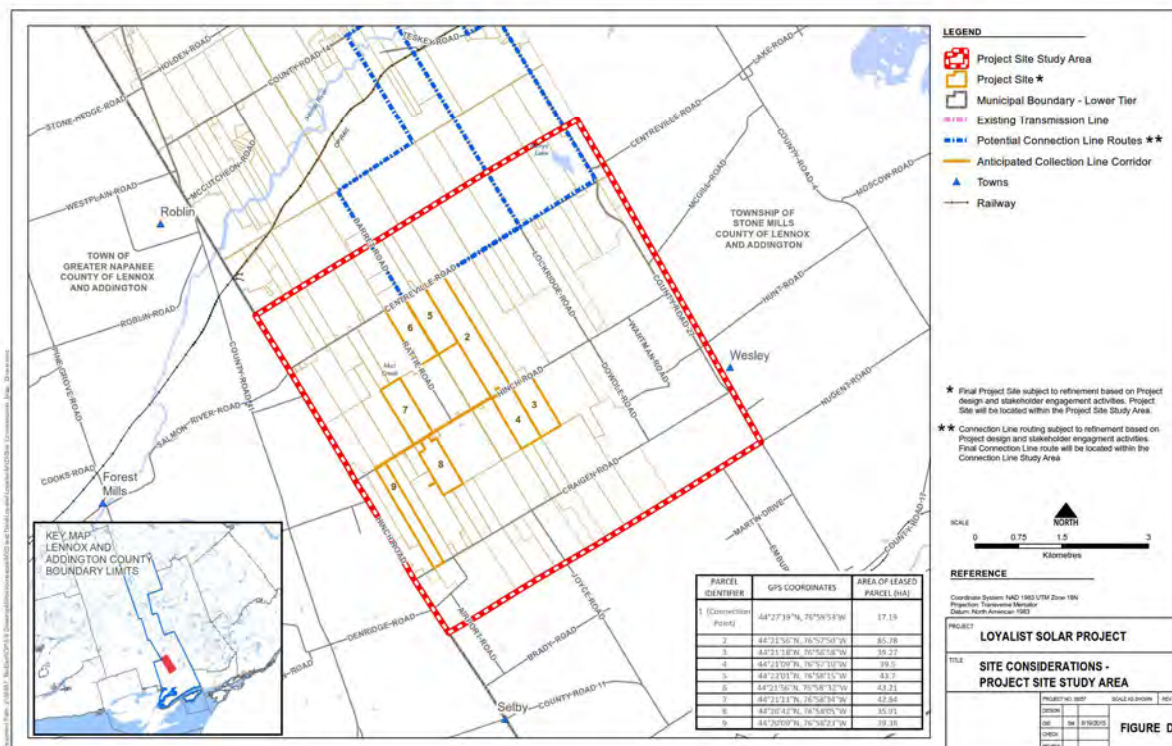
The ability to see the solar panels will be limited due to setbacks from the roadways and by leaving existing vegetation where possible. In some cases additional vegetation can be planted. BluEarth will be meeting with individual residents to help understand their concerns and discuss how these can be reasonably addressed.





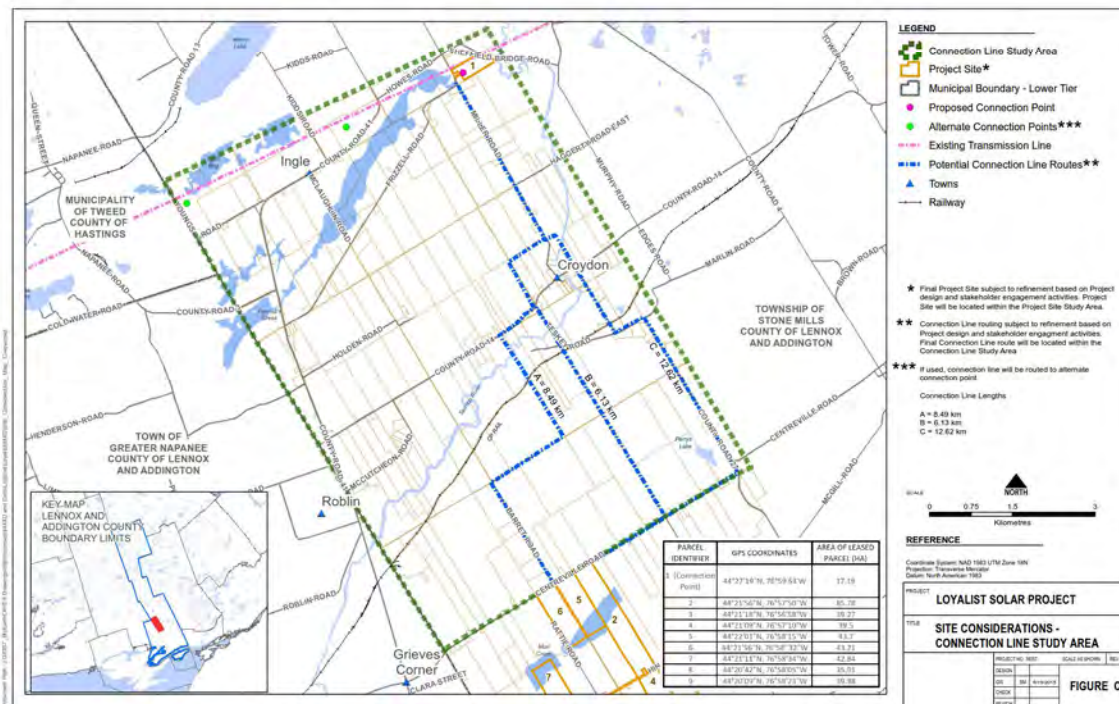
## Project Site

- Consists of the lands on which the generating facility is proposed to be located, and includes solar panel arrays, electrical collection system, inverters, operations and maintenance building, and ancillary equipment
- Lands have been identified that are anticipated to be sufficient for the Project, however other lands within the Project Site Study Area may be added if needed
- Studies and stakeholder consultation will determine the final lands to be used within the Project Site Study Area
- Studies will include geotechnical and engineering assessments, archaeological and natural heritage assessments, noise studies, grading and drainage assessments, visual screening assessments, among others
- Consultation will include engagement with Township of Stone Mills, Lennox and Addington County, local residents, First Nations, Quinte Conservation Authority, Ministry of Natural Resources and Forestry, Ministry of Environment and Climate Change, and other stakeholder groups



## Connection Line

- Consists of above and below ground electrical cabling used to connect the Project to the existing 230kV transmission line near the intersection of Miller Rd and Frizzell Rd
- Potential routes have been identified, however the final route will be determined through additional studies and consultation
- Studies will include geotechnical and engineering assessments, archaeological and natural heritage assessments, among others
- Consultation will include engagement with Township of Stone Mills, Lennox and Addington County, local residents, First Nations, Quinte Conservation Authority, Hydro One Networks Inc., Ministry of Natural Resources and Forestry, Ministry of Environment and Climate Change, and other stakeholder groups
- Final route will be within the Connection Line Study Area shown, however not necessarily one of the potential routes shown
- May be installed in road rights-of-way or on private lands or a combination of the two
- If on private lands, this will be done through agreements with the landowners involved





## Why here?

- Suitable solar resource
- Compatible with land use requirements (e.g. not on lands designated as Prime Agricultural)
- Close to existing electrical transmission circuit with sufficient capacity for 54 MW of generation
- Landowners willing to host the Project
- Community Vibrancy Agreement with the Township of Stone Mills





## Why now?

- Project is being developed in response to the Independent Electricity System Operator's (IESO) Large Renewable Procurement (LRP) initiative
- Ministry of Energy directed IESO to implement the LRP to procure up to 565 MW of large renewable energy projects, 140 MW of which were awarded to solar projects
- Loyalist Solar LP was selected as a Qualified Applicant under the LRP I RFP because of considerable experience in developing and operating large renewable energy projects
- Loyalist Solar LP was awarded a contract based on bidding a highly competitive price for power, achieving a municipal resolution of support, and an agreement with the Township of Stone Mills, and having support of many adjacent landowners

## Other Permits, Approvals and Agreements (board 1 of 3)

Other authorizations may be required for the project from the following:

Authority, Agency or Governing Body	Requirement	
Department of Fisheries and Oceans (DFO)	<ul style="list-style-type: none"> <li>Fisheries Act authorization for watercourse crossings (or Letter of Advice)</li> </ul>	
Electrical Safety Authority (ESA)	<ul style="list-style-type: none"> <li>Connection Authorization</li> <li>Safety Inspection</li> </ul>	
Hydro One Networks Inc. (HONI)	<ul style="list-style-type: none"> <li>Customer Impact Assessment – Integration of project within HONI system and effects on customers</li> <li>Connection Cost Recovery Agreement</li> </ul>	
Independent Electricity System Operator (IESO)	<ul style="list-style-type: none"> <li>Authorization as market participant</li> <li>Registration of facility</li> <li>Registration of metering service</li> <li>Connection Assessment Approval (CAA)</li> </ul>	<ul style="list-style-type: none"> <li>System Impact Assessment (SIA) – Integration of project with Hydro One's transmission and distribution infrastructure</li> <li>Notice to Proceed</li> <li>Security deposits, financing plan, metering plan, etc.</li> </ul>

## Other Permits, Approvals and Agreements (board 2 of 3)

Other authorizations may be required for the project from the following:

Authority, Agency or Governing Body	Requirement
Landowners	<ul style="list-style-type: none"> <li>• Lease Agreements</li> </ul>
Ministry of Natural Resources and Forestry (MNR)	<ul style="list-style-type: none"> <li>• Water Crossing Work Permit under Regulation 453/96 of the Public Lands Act</li> <li>• Species at Risk Permit under the Endangered Species Act (2007) if listed species and/or habitat is impacted.</li> <li>• Confirmation Letter for the Natural Heritage Assessment</li> </ul>
Ministry of Tourism, Culture and Sport (MTC)	<ul style="list-style-type: none"> <li>• Comment Letter for the Stage 1 and 2 Archaeological Assessments and the Cultural Heritage Assessment.</li> </ul>
Ministry of Transportation (MTO)	<ul style="list-style-type: none"> <li>• Compliance with Road User Safety Policy and Corridor Management Permits, including Highway Traffic Act and Road Safety Regulations</li> <li>• Highway Entrance Permit(s), Transportation Permits (e.g. Oversize, Overweight Permit or Special Vehicle Configuration Permit)</li> </ul>



## Other Permits, Approvals and Agreements (board 3 of 3)

Other authorizations may be required for the project from the following:

Authority, Agency or Governing Body	Requirement
Quinte Conservation Authority (QCA)	<ul style="list-style-type: none"> <li>Permit under Regulation 319/09 of the Conservation Authorities Act (Regulation of Development, Interference with Wetlands and Alterations to Shorelines and Watercourses), if required.</li> </ul>
Ontario Energy Board (OEB)	<ul style="list-style-type: none"> <li>License to Generate under Section 57(c) of the OEB Act</li> </ul>
Township of Stone Mills and/or County of Lennox and Addington	<ul style="list-style-type: none"> <li>Building Permit(s)</li> <li>Transportation and public safety permits (e.g. entrance permit, road occupancy, moving permit, encroachment permit)</li> <li>Road Use Agreement</li> <li>Tree Cutting Permit (to be confirmed)</li> <li>Authorization, by way of Section 41 of the Electricity Act, for construction of collector/connection lines on public streets</li> </ul>
Industry Canada	<ul style="list-style-type: none"> <li>Communication Frequency License</li> </ul>

# Site-Specific REA Studies

A number of studies are required and are currently ongoing. These include:

## Water Body Studies

Identifies water bodies at or near the proposed project location through a background desktop review of relevant information, followed by a site investigation

If water bodies are identified a Water Body Report is prepared that characterizes the existing conditions of the water bodies and identifies potential negative impacts and any mitigation measures required to minimize or avoid negative impacts

## Archaeological Assessments

Identify any areas of archaeological significance at or near the proposed project location

Assessment involves records reviews, field surveys and if necessary, specific excavations

Ensures areas of archaeological significance will not be adversely affected through implementation of the project

Completed by licensed archaeologist with First Nation participation

## Cultural Heritage Assessment

Identifies resources of cultural heritage value or significance such as historic buildings, structures, landscape features, or other property features

Should the assessment identify resources of value, mitigation measures will be developed and implemented to preserve and/or document the cultural heritage features



## Site-Specific REA Studies (cont.)

### Noise Assessment Report

- A Noise Assessment Report must be completed to in accordance with regulations to demonstrate compliance with MOECC noise requirements
- Project noise sources such as inverters and transformers must be located so as to not create noise levels greater than 40 dBA at nearby residences

### Hydrogeological Studies

- Assessment involves the study of surface and sub-surface water to determine flow patterns
- Assessment utilizes data from piezometers, flow gauges, rain gauges and topographical studies, among others
- This informs the site grading and drainage plan to ensure water flows from site do not cause adverse impacts to adjacent properties and wildlife habitats

### Groundwater Monitoring

- Well water monitoring will take place at residences adjacent to the project to confirm that the project construction has not impacted local wells
- Pre- and post-construction well water samples will be analyzed at a third-party laboratory to check for any out-of-compliance results



## NHA Process

A Natural Heritage Assessment (NHA) will be completed for natural features that are located within the project location or within 50 m. Natural features are defined as woodlands, wetlands, wildlife habitat and areas of natural and scientific interest. The NHA is comprised of four distinct reports:

- 1. Records Review (RR)** – a desktop study completed to document what is known about natural features and their approximate distance to the proposed project location. A variety of resources are consulted to complete this report, including historical records and reports, wildlife atlases, and consultation with stakeholders such as the MNRF, Quinte Conservation Authority, local natural organizations and the general public.
- 1. Site Investigation (SI)** – following the compilation of known records for natural features, site investigations are completed to confirm and/or amend results of the RR. Field work for this report typically includes Ecological Land Classification, wetland delineation according to the provincial protocol and the identification of wildlife habitat features.
- 1. Evaluation of Significance (EoS)** – once a natural feature is confirmed through the SI that it is within the proposed project location or surrounding 50 m, the feature is then evaluated for significance/provincial significance. Where field studies to determine the significance of wildlife habitat are not practical due to seasonal requirements (ex. breeding bird surveys, amphibian surveys, etc.), these features are treated as significant and studies are required to be completed prior to construction.
- 1. Environmental Impact Study (EIS)** – for those natural features evaluated as significant, provincially significant or being treated as significant, an EIS is completed to identify potential negative environmental effects to these features and outline the recommended mitigation measures to demonstrate that impacts can be avoided or minimized.

The NHA package is required to be submitted to the MNRF for review and confirmation (approval) prior to the submission of the REA application to the MOECC.



## Field Surveys

To support the completion of the NHA, as well as other potential permitting requirements, the following field studies are being completed as part of the project:

- Ecological Land Classification
- Wetland Delineation
- Wildlife Habitat Surveys
- Alvar Surveys
- Bat Cavity/Snag Density Survey
- Breeding Bird Surveys
- For diurnal, crepuscular and nocturnal species
- Amphibian Surveys
- Turtle Basking Surveys
- Botanical Surveys
- Targeted Rare Plant Surveys
- Water body Surveys, including surveys for seasonal features
- Species at Risk surveys according to MNRF protocols



If you have information or observations the Project should be aware of, please submit your comments!



## Wildlife in Project Vicinity



Adult Loggerhead Shrike



Juvenile Loggerhead Shrike



Adult Loggerhead Shrike



Adult Loggerhead Shrike



Northern Mockingbird – note the lack of a black face and hooked beak

### Loggerhead Shrike

*Lanius ludovicianus*

Provincial Status: **Endangered**

National Status: **Endangered**

<b>Colour</b>	<ul style="list-style-type: none"> <li>• White underparts</li> <li>• Black wings</li> <li>• Long black tail</li> <li>• Grey back</li> </ul>
<b>Distinctive Features</b>	Black face mask with wings that have a large white patch. The bill is black and has a distinctive hook
<b>Typical Size</b>	Typically 15 to 20 cm in height (6" to 8")
<b>Other</b>	Kill their prey by impaling on thorns, spines or barbed wire. If impaled insects, birds, small mammals, reptiles, frogs are present then Loggerhead Shrike is likely in the area. Nickname is the "Butcher Bird"

#### Habitat

- Prefers pasture or other grasslands with scattered low trees, shrubs and short grasses.
- Fields or alvars (areas of exposed bedrock) with short grass make it easier to spot prey.
- Nests in small trees or shrubs.
- Requires a source to impale prey such as Hawthorn shrubs or barbwire fencing.

#### Other Information

- Only present in Ontario from April until September.
- Northern Shrike (*Lanius excubitor*) is similar in appearance but only occurs in Southern Ontario during the winter
- Northern Mockingbird (*Mimus polyglottos*) is another similar species but has lighter wings, smaller head, lacks the black face mask and hooked beak



## Wildlife in Project Vicinity



Male Bobolink



Adult Female Bobolink



Female Red-winged Blackbird – note the darker colouring and longer bill



Grasshopper Sparrow – note the short tail and larger head

### Bobolink

*Dolichonyx oryzivorus*

Provincial Status: **Threatened**

National Status: **No Status**

<b>Colour</b>	<ul style="list-style-type: none"> <li>• Males are black with a white/grey back/rump and a yellow nape</li> <li>• Females and non-breeding males are yellowish brown with bold black stripes on the head and back</li> <li>• Juveniles are similar in appearance to the female but contain more yellow</li> </ul>
<b>Distinctive Features</b>	<ul style="list-style-type: none"> <li>• Males have a contrasting colour pattern</li> <li>• Thick, short bill similar to a finch</li> </ul>
<b>Typical Size</b>	Typically 15 to 21 cm long (5" to 5.5")
<b>Other</b>	<ul style="list-style-type: none"> <li>• Males tend to appear unexpectedly, flying over vegetation and singing a bubbly, metallic song</li> </ul>

#### Habitat

- Ground-nesting species that spend majority of time foraging on the ground in grassland, open meadow, perennial cover crop, and/or pasture
- Nest is comprised of dead grasses with a central lining of fine grass or sedges. The nest may have a canopy of dead grass hanging over the top
- Nests are well camouflaged and contain eggs are a bluish gray or pale reddish brown with irregular dark spots and blotches

#### Other Information

- Males are very distinctive but females, juveniles and non-breeding males can be confused with female Red-winged Blackbird (*Agelaius phoeniceus*) or Grasshopper Sparrow (*Ammodramus savannarum*)
- Red-winged Blackbird is darker, more heavily striped on the chest and has a longer bill
- Grasshopper Sparrow has similar colouring and dark striped head with pale central crown but is much smaller with proportionally larger head and shorter tail



## Wildlife in Project Vicinity



Eastern Meadowlark



Eastern Meadowlark



Meadowlark in flight – note the distinctive white outer tail feathers



Non-breeding Eastern Meadowlark – note the muted colour

### Eastern Meadowlark

*Sturnella magna*

Provincial Status: **Threatened**

National Status: **No Status**

<b>Colour</b>	<ul style="list-style-type: none"> <li>• Pale brown, marked with blackish streaking on the back, wings &amp; tail</li> <li>• Bright yellow underparts and a bold black "V" across the breast</li> <li>• Males and females have similar colouration</li> </ul>
<b>Distinctive Features</b>	<ul style="list-style-type: none"> <li>• Bright yellow breast</li> <li>• Black "V" across the breast</li> <li>• Long, slender, spear-shaped bill</li> <li>• Outer tail feathers are white and conspicuous during flight</li> </ul>
<b>Typical Size</b>	Typically 19-26 cm in length (7.5"-10") Wingspan of 35-40 cm (14"- 16")
<b>Other</b>	<ul style="list-style-type: none"> <li>• Often perched and singing from a post, pole, wires or tops of shrubs</li> <li>• Flutelike descending song which sounds like <i>Spring-of-the-year</i></li> </ul>

#### Habitat

- Ground-nesting species most commonly found in pasture, perennial cover crop, grassland and savannah
- Can be found in a wide variety of other habitats including weedy meadow, young orchard, golf courses, restored grassland, and herbaceous fencerows

#### Other Information

- The female Red-winged Blackbird (*Agelaius phoeniceus*), female Bobolink (*Dolichonyx oryzivorus*) and Savannah Sparrow (*Passerculus sandwichensis*) can be confused with this species but all three are much smaller but lack the bright yellow underparts, long bill and white outer tail feathers
- Can nest from early May to mid-August in well camouflaged nests comprised of grasses on the ground



## Wildlife in Project Vicinity



Blanding's Turtle



Hinged Shells of the Blanding's



Blanding's Turtle – spots on shell



Blanding's Turtle – note the bright yellow throat and chin



Spotted Turtle – note the vivid yellow spots

### Blanding's Turtle

*Emydoidea blandingii*

Provincial Status: **Threatened**

National Status: **Threatened**

<b>Colour</b>	<ul style="list-style-type: none"> <li>The upper shell is usually black or dark brown but sometimes grey or a lighter brown</li> <li>Upper shell covered in tan to yellow lines or spots scattered at random</li> <li>Lower shell is a rich yellow</li> <li>Skin is often black or dark brown</li> </ul>
<b>Distinctive Features</b>	<ul style="list-style-type: none"> <li>Domed shell resembles an army helmet</li> <li>Throat and chin a bright yellow</li> <li>Upper jaw is notched and the mouth curves upwards, giving the impression that the turtle is smiling</li> </ul>
<b>Typical Size</b>	Can reach up to 27 cm (10") long
<b>Other</b>	<ul style="list-style-type: none"> <li>Shells are hinged so some individuals can completely close the shell after pulling in the head and limbs</li> </ul>

#### Habitat

- Inhabits shallow lakes, ponds and wetlands with clean water and mucky bottoms.
- Can travel several kilometres between summer, nesting and overwintering habitats.
- Hibernates in the soft bottoms or water bodies.

#### Other Information

- This turtle is very distinct because of the yellow throat, domed shell and smiling appearance.
- Spotted Turtles (*Clemmys guttata*) may be mistaken for Blanding's from a distance but Spotted Turtles have distinct, vivid yellow spots



## Wildlife in Project Vicinity



Whip-poor-will roosting in a tree



Whip-poor-will



Whip-poor-will at nest



Common Nighthawk for comparison – note the outer white bar on the wing and colder gray-brown colour

### Whip-poor-will

*Caprimulgus vociferus*

Provincial Status: **Threatened**

National Status: **Threatened**

<b>Colour</b>	<ul style="list-style-type: none"> <li>• Mottled brown and grey feathers</li> <li>• Feather pattern blends with grey-brown leaf litter and tree bark</li> <li>• Pale, silvery shoulder patches</li> <li>• Throat is black and bordered at the bottom by a white bib</li> </ul>
<b>Distinctive Features</b>	<ul style="list-style-type: none"> <li>• Camouflaged grey-brown body with white bib at bottom of throat</li> <li>• “Front-heavy” look with large, rounded head and stout chest, which tapers to a long, thin tail</li> <li>• Sings loud “whip-poor will” song at nighttime</li> </ul>
<b>Typical Size</b>	<ul style="list-style-type: none"> <li>• Both sexes: 22 to 26 cm (7”-10”) long and wingspan of 45-48 cm (18”-19”)</li> </ul>
<b>Other</b>	<ul style="list-style-type: none"> <li>• Most vocal during bright, moonlit nights</li> </ul>

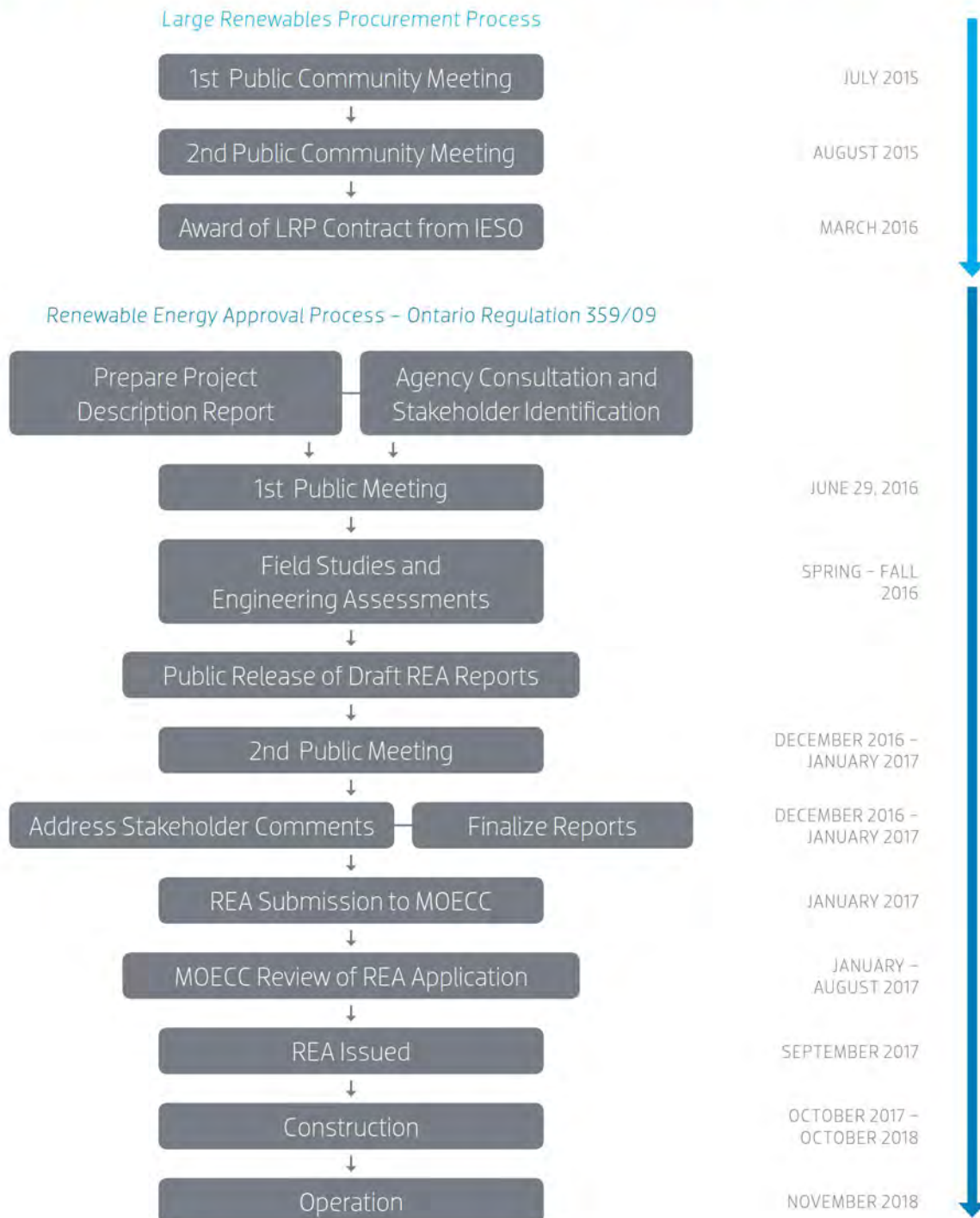
#### Habitat

- Usually found in areas with a mix of open and forested areas
- Forages in open areas and uses forested areas for roosting and nesting
- Prefer forested areas with little or no underbrush and will avoid large tracts of uninterrupted forest with dense canopy
- Eggs are laid directly on the forest floor without a nest

#### Other

- Common Nighthawk (*Chordeiles minor*) is similar in appearance but is a colder gray-brown overall
- Nighthawks are more likely to be seen in the daylight or crepuscular hours (dusk/dawn).
- Nighthawks have an obvious white-bar on the outer part of the wings.

## REA Process and Project Schedule





## What's next?

The Project schedule consists of activities related to obtaining various approvals under the Renewable Energy Approval ("REA") process that are necessary for the construction and operations of the Project. In 2016, a number of studies will be completed to obtain the necessary permits and approvals, before determining the final project design. The REA is the key approval needed before the Project can be constructed. The schedule below outlines the major activities associated with the REA.

### Anticipated REA Schedule for the Loyalist Solar Project

Activity	Anticipated Date
Public Meeting #1	June 29, 2016
Field studies and engineering assessments	Spring to Fall 2016
Public Meeting #2	December 2016 or January 2017
REA application submission to the MOECC	January 2017
MOECC review of REA application	January to August 2017
REA approval by the MOECC	September 2017
Construction of the project	October 2017 to October 2018
Commercial operation of the project	November 2018



The Project is expected to start construction in late 2017 and become operational in late 2018.



With offices in Calgary, AB and Guelph ON Canada, BluEarth is a private company focused on commercial scale renewable energy development. As an independent renewable power producer, our goal is to sustainably build, own, and operate wind, run-of-river hydroelectric, and solar generation projects across North America. BluEarth currently has 60 MW of hydro and solar facilities in operation, and has another 92 MW of projects scheduled to go into operation in 2015. BluEarth also owns and interest eight hydroelectric facilities on northern Ontario through H2O Power Limited Partnership.

BluEarth strives for timely and meaningful consultation with all stakeholders and First Nation communities. As one of the most experienced renewable energy teams in Canada, we fully appreciate the importance of communication with those that live near our projects. BluEarth is committed to consulting with and involving stakeholders in the decision-making process for our proposed and existing facilities. We believe that trust is the foundation for long-term successful relationships, and we know that trust is only earned over time, by working together with honest and transparent communications.



BluEarth operates five solar facilities in Ontario and has three more under development.

For more information, visit [bluearth.ca](http://bluearth.ca).





# Loyalist Solar Project



For more information  
on BluEarth and the  
Loyalist Solar Project,  
visit:

[bluearth.ca/loyalist](http://bluearth.ca/loyalist)  
[projects@bluearth.ca](mailto:projects@bluearth.ca)  
1.844.214.2578

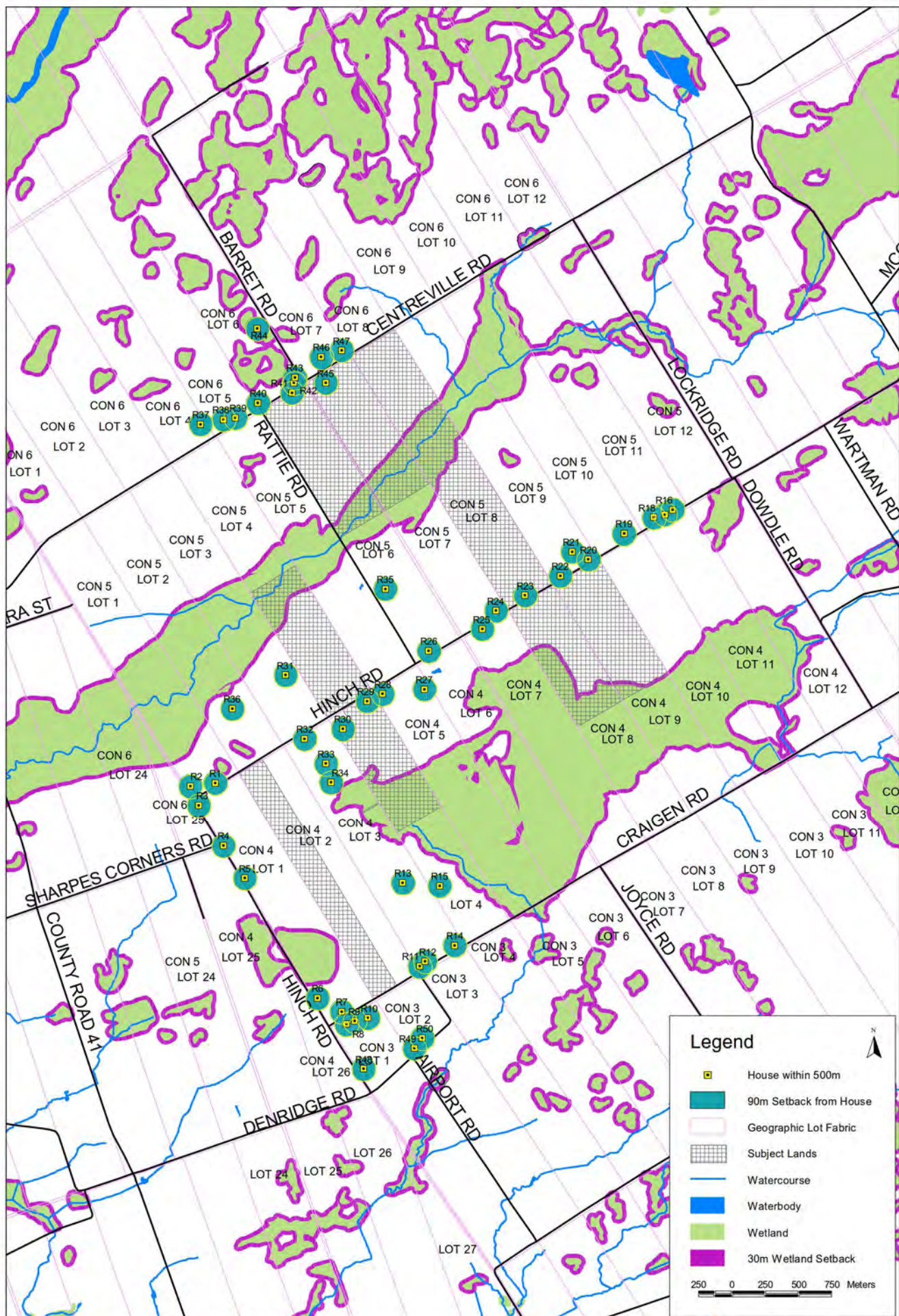


*The Power to Change the Future.™*

## Community Vibrancy Agreement

- The Township of Stone Mills Council has passed a Council Resolution of Support and executed a Community Vibrancy Fund Agreement for the Loyalist Solar Project
- Through the Vibrancy Fund Agreement, the Township of Stone Mills has set out several requirements for how the Project will be developed, including:
  - ◇ Visual screening and setbacks
  - ◇ Stormwater management and grading design review
  - ◇ Hydrogeological study requirements
  - ◇ Establishment of a Technical Review Committee
  - ◇ Community Vibrancy Fund contributions to be used for community initiatives at the discretion of the Township, including:
    - Land stewardship
    - Recreation
    - Community & protective services
    - Roads & public infrastructure
    - Community improvement projects
  - ◇ Preference for qualified local labour and supplies
  - ◇ Financial security requirements for Project decommissioning
  - ◇ Reimbursement for reasonable Township expenses associated with review of Project permits





**Harden**  
Environmental  
Services Ltd.

Project No: 1615

Date: May 2016

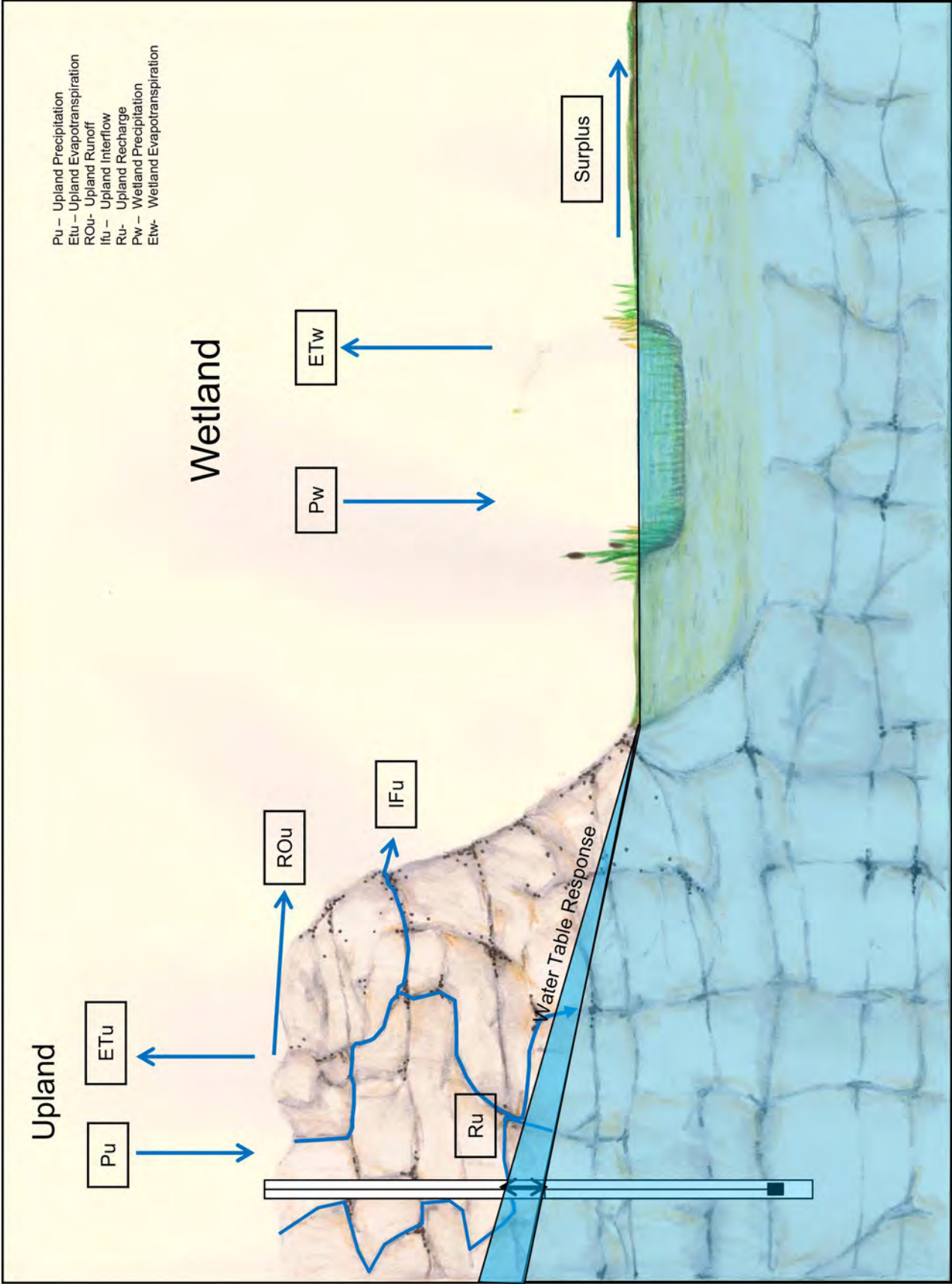
Drawn By: AR

# Hydrogeological Investigation

Concession 4 Lots 2/4/8/9, Concession 5 Lots 4/6/7/8  
Township of Stone Mills, County of Lennox and Addington

Figure 2: Houses within 500 metres





Privileged and Confidential

**Figure 2: Water Balance Components of Upland and Wetland Areas**

<b>Project No:</b>	<b>Figure:</b>
<b>Date:</b>	<b>Drawn By: SD</b>

# Frequently Asked Questions

## What studies need to be completed as part of the Renewable Energy Approval (REA)?

Multiple studies are required to be completed as part of the REA process, including a Natural Heritage Assessment (NHA), surface water studies, sound, stormwater management, archaeology and cultural heritage assessments. In addition to these, specific reports are prepared regarding construction, operation and decommissioning of the facility and these analyze potential effects and propose mitigation measures for those potential effects. Reports are expected to be completed in Q4 2016.

## What are the next steps in this process?

The reports comprising the REA application are anticipated to be completed in Q4 2016. Once the reports are completed, they will be made available for public review at least 60 days before the next public meeting. Once the public meeting has taken place, the reports may be updated based on the results of that consultation. Following this, the Consultation Report for the Project will be finalized and the complete application will be submitted to the Ministry of the Environment and Climate Change (MOECC). The submission date is anticipated to be in Q1 2017. The MOECC will subsequently undertake a review of the application, and, upon deeming it complete, will post a notice on the Environmental Registry. Following posting on the Environmental Registry, the MOECC will review all reports and evaluate the application. Once the technical review is complete, and comments are gathered from the Environmental Registry, the MOECC will make a decision regarding issuance of the Project's REA. This is presently anticipated for Q4 2017. Please see the detailed Project schedule, available on our [website](#).

## Can the Project be developed within a wetland?

Development of solar projects in Provincially Significant Wetlands (PSWs) is prohibited, with limited exceptions for power and communication lines, such as directionally drilling under the PSW. However, no solar panels will be constructed in wetlands. Development may occur within 50 m of a PSW if an Environmental Impact Study (EIS) demonstrates that there will be no negative effects to the wetland. An EIS has been prepared as part of the Natural Heritage Assessment for the Loyalist Project. Wetland communities in the vicinity of the Project's development area will be afforded appropriate protection buffers and will remain in effect during Project construction and operations – as a result, following implementation of appropriate mitigation measures, no impacts to wetlands are anticipated as a result of the Project.



## Will chemicals be used to control weed growth at the Project location during operations?

Weeds will be controlled through mechanical means and occasionally by the targeted application of common herbicides in specific areas.

## Will the installation of poles to support the solar racking system, and the connection line affect groundwater or my well? What about poles for the connection line?

Groundwater quality issues due to connection line pole and solar racking post installations are not anticipated. The depths of boreholes for these installations are expected to be between 3 to 4 metres for power poles and 1.4 to 2 metres for racking posts. Where power poles are installed in rock, suitable aggregate backfill materials will be used. Where racking posts are installed in rock, they will be grouted to prevent surface water movement to the subsurface. No impacts to groundwater quality are anticipated as a result of the Project.

## Which connection lines will be built?

Several connection line options are being considered at this stage.

## If the connection line route is adjacent to my property, will it be gated to stop trespassers and protect livestock?

Where the connection line runs overland on an unopened municipal right-of-way, measures can be taken to protect livestock and to prevent trespassing. To prevent unwanted livestock movement, fencing can be installed, where needed, along the connection line route. Also, to prevent trespassing, gates can be installed where the connection line intersects with municipal roads.

## If a solar facility is built in the area, will the value of my property decrease?

While nothing specific to solar farms has been published, the Municipal Property Assessment Corporation (MPAC) completed [a study in 2012](#) that analyzed the potential impact on property values for homes in proximity to wind energy facilities. The study concluded that "there is no statistically significant impact on sale prices of residential properties in these market areas resulting from proximity to an industrial wind turbine." We believe the same results would be found for property values around solar facilities. Should studies specific to solar become available, we will share these with interested stakeholders.

### Will my property be accessed for field studies / aerial imagery even if I'm not participating and haven't given permission?

No. Field staff will not be conducting studies on private properties without first seeking permission from the property owner. Similarly, drones have been used to collect aerial imagery of road rights-of-way, but will not be collecting imagery from private properties without landowner permission.

### I am a landowner in the Project area, and am interested in getting involved in the Project.

We sincerely appreciate all the interest and support for the Loyalist Solar Project. While participation in the Loyalist Solar Project is presently full, for inquiries about getting involved in future developments, please contact Lead, Development, Andrea Garcia by calling 1-844-214-2578 or emailing [projects@bluearth.ca](mailto:projects@bluearth.ca).

January 31, 2017

Name

## Organization

Address

Phone

Email

(2)

(2)

(2)

Personal information has been redacted.



# LOYALIST SOLAR PROJECT - OPEN HOUSE

January 31, 2017

Name	Organization	Address	Phone	Email
W				
H				
H				
M				
T				
(2) D				
J				
R				
F				
B				
(2) M				

# Loyalist Solar Project

---

## Open House January 31, 2017

Thanks you for attending our open house to discuss the Loyalist Solar Project. Please take a moment to answer a few questions and note your thoughts, comments or questions below.

Were the information displays and maps helpful in explaining possible revisions to the project?

☒ Yes / ☐ No

Did you have concerns about the project before attending the open house?

Yes / ☒ No

Please explain.

---

---

---

Were the Loyalist Solar LP representatives able to adequately answer your questions?

☒ Yes / ☐ No

Please note and questions, comments or concerns you may have regarding the information presented to you today.

---

---

---

---

---

---

---

---



# Loyalist Solar Project

---



Check here if you would like to be included on the mailing list for this project and provide your contact information below.

Name: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

Telephone: \_\_\_\_\_

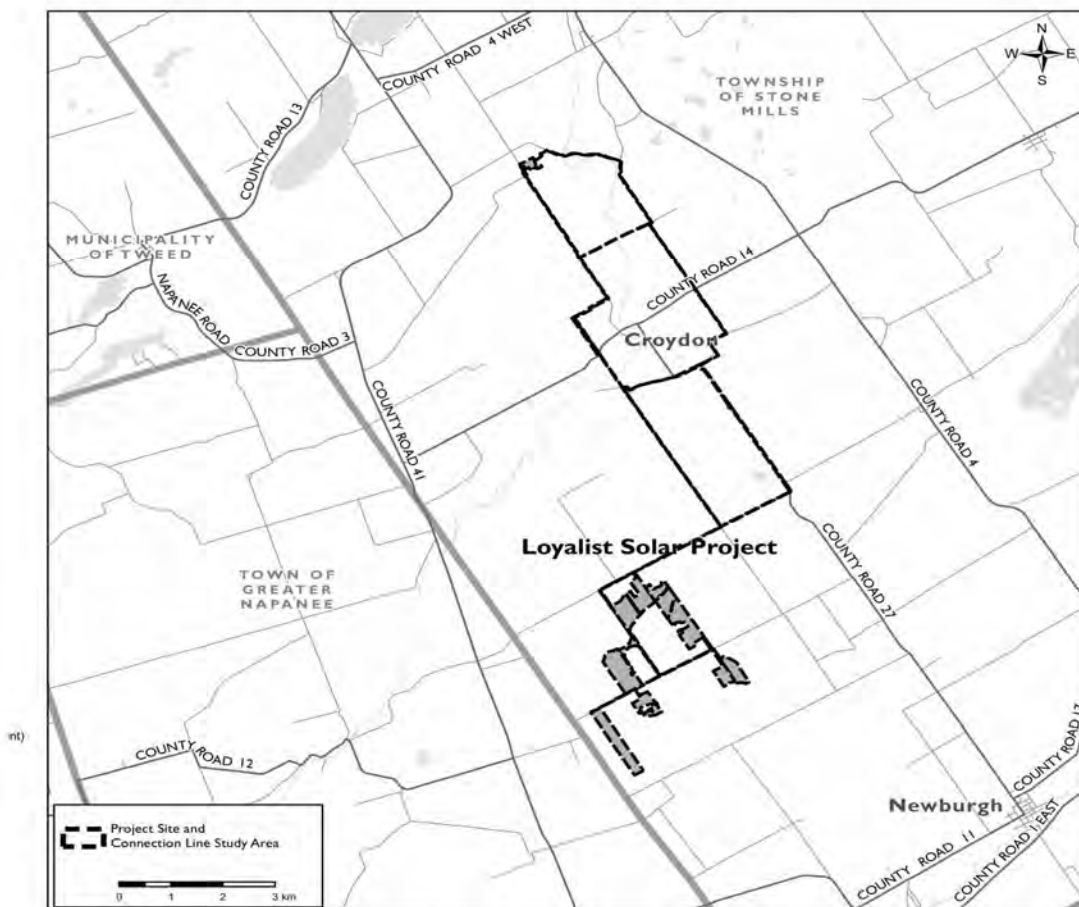
Email: \_\_\_\_\_

Please give your completed comment form to one of the Loyalist Solar LP representatives, or send your completed form to:

Loyalist Solar Project  
200, 4723 1 Street SW  
Calgary, AB T2G 4Y8  
[projects@bluearth.ca](mailto:projects@bluearth.ca)

## Project Description

- Up to 54 megawatt (MW<sup>AC</sup>) solar project
- Located in the Township of Stone Mills, County of Lennox & Addington, Ontario
- The Project is being developed by Loyalist Solar LP, a partnership between BluEarth Renewables Inc. and Mohawks of the Bay of Quinte (Yaote LS Solar Inc.)
- The Project Site consists of solar panels, racking, internal access roads, cabling, alternating current (AC) electrical collection system, inverters, facilities and associated infrastructure. An Operations and Maintenance building may also be located on site
- The Project Connection Line includes overhead and underground electrical circuits, a transformer substation, communication lines and tower, and related electrical infrastructure required to connect the Site to the existing Hydro One Networks Inc. transmission system
- The Project is being developed in response to being awarded a contract under the Independent Electricity System Operator's Large Renewable Procurement initiative





## Summary of REA Reports

Under the Ontario Regulation 359/09, proposed Class 3 solar facilities, such as the Loyalist Solar Project, must receive a Renewable Energy Approval (REA) prior to starting construction. The REA application is made up a number of reports which describe the studies undertaken, the design of the project, potential effects and mitigation measures. These reports are listed below.

Report Title	Purpose
<b>Project Description Report (PDR)</b>	The Project Description Report is a summary document for the REA application. It includes a brief description of each of the phases of the project (construction, operations and decommissioning) and the potential negative effects and mitigation measures.
<b>Construction Plan Report (CPR)</b>	The Construction Plan Report describes the activities to be undertaken during the construction phase of the project. This includes an estimation of the type and amount of equipment to be brought to and from the Project Location, the approximate schedule and duration of construction, and details of potential negative effects and mitigation measures to be implemented during construction.
<b>Design and Operations Report (DOR)</b>	The Design and Operations Report provides details on the site plan for the Project, including a description of the components to be used. The DOR also describes maintenance activities that are anticipated once the Project is operational, and provides an outline of how emergencies and communications will be handled.
<b>Decommissioning Plan Report (DPR)</b>	The Decommissioning Plan Report describes how the Proponent proposes to decommission the site and restore the Project Location to its anticipated use. This includes information about how components will be uninstalled and how waste will be handled. The DPR is typically updated at least 6 months prior to the start of decommissioning to reflect the standards of the day.
<b>Consultation Report</b>	The Consultation Report documents how consultation activities were undertaken throughout the Project. The Consultation Report also documents comments received from various stakeholders (public, municipalities, agencies, Indigenous Communities) and how the comments were addressed in the project design.



## Summary of REA Reports (Cont'd)

Report Title	Purpose
<b>Natural Heritage Assessment (NHA)</b>	The Natural Heritage Assessment is a series of four reports that determine the potential significant natural features and wildlife habitats that may be impacted by the Project. The NHA identifies potential negative effects during all phases of the project and recommends mitigation measures to minimize or eliminate those effects.
<b>Water Assessment</b>	The Water Assessment includes a records review and sited investigation for the purpose of identifying and characterizing water bodies or water courses as defined by the Regulation. The Water Assessment identifies potential negative effects that could take place during all phases of the project and recommends mitigation measures to minimize or eliminate those effects.
<b>Archaeological Assessments</b>	The Archaeological Assessments identify areas with the potential to have archaeological resources. These areas are surveyed by licensed archaeologists to determine if any archaeological resources are present. If so, they are documented and possibly more in-depth assessments are required. The Archaeological Assessment Report describes this process and any findings.
<b>Cultural Heritage Assessment</b>	The Cultural Heritage Assessment determines the potential for the Project to impact built heritage features or cultural heritage landscapes and recommends mitigation measures to minimize or eliminate potential negative effects.
<b>Noise Study Report</b>	The Noise Study Report assesses the potential effect on receptors (residences) from noise emitting equipment. The report must demonstrate that the Project is designed in such a way as to ensure the MOECC noise limits' receptors are not exceeded.



## Project Construction

The construction phase of the project is expected to take between 10 and 12 months, with a breakdown of construction activities shown below:

### SCHEDULE:

Construction Activity	Estimated Timing	Duration
Site Preparation	Q4/2017-Q2/2018	9 months
Installation of solar components (structural supports, racking, modules, collection system)	Q1/2018-Q3/2018	9 months
Installation of substation and Operations & Maintenance building	Q1/2018-Q4/2018	12 months
Commissioning, site clean-up and restoration	Q4/2018	3 months



## Project Construction

Construction of the project is anticipated to take 12 months and will employ a workforce of approximately 150–200 people. Major activities during the construction phase include:

<b>Construction Activity</b>	<b>Potential Materials</b>	<b>Potential Equipment</b>
<b>Surveying and Staking of Project Location</b>	Survey stakes Flagging Tape	Pick-up Truck
<b>Clearing, ground levelling, compacting and grading</b>	N/A	Motor graders Soil compactors Dump trucks Wheel loaders
<b>Installation of perimeter fence and security lighting</b>	Granular A and B Geotextile	Bulldozer Dump Truck
<b>Construction of foundations for inverter stations, substation components and O&amp;M building</b>	Concrete Rebar and sonotubes for footing construction	Excavators Dump Trucks
<b>Installation of support, racking and PV modules</b>	Racking support	Pile driving equipment Rock drilling equipment Excavator
<b>Construction of O&amp;M building</b>	Lumber or brick	Excavator Dump Truck Backhoe
<b>Installation of wiring, inverter stations, substation, connection to grid and O&amp;M building</b>	Inverter stations Electrical cabling	Excavator Backhoe Pick-up Truck
<b>Installation of connection line and electrical collector system</b>	Electrical poles Guy wires Junction boxes	Hydraulic ram Aerial bucket truck Tension machines
<b>Remediation and clean-up of work areas</b>	N/A	Pick-up truck Hydroseeding device
<b>Site landscaping and vegetation</b>	Vegetative seed	Hydroseeding device
<b>Testing and commissioning</b>	N/A	Service vehicles



## Project Operation – Components

The facility is anticipated to include the following components:

- **190,000 to 290,000 solar photovoltaic (PV) panels.** These are the PV panels that will convert solar energy into electricity
- **Racking system.** The PV panels will be installed on a racking system mounted on steel posts which are installed into the ground
- **Up to 34 inverter stations.** The inverter stations include inverters and transformers to convert direct-current electricity from the PV panels into alternating current electricity and step up the voltage to 34.5 kV
- **Electrical collection system.** This cabling transmits electricity from the inverter stations to the connection line. The collector system is anticipated to be buried when installed within the solar panel area and installed on overhead poles when in the municipal road rights of way
- **Connection Line.** The connection line will transmit the electricity from the inverter stations and collection lines to the substation transformer. The connection line will follow one of four routes currently being assessed. The final route will be determined prior to construction. The connection line will be mostly mounted overhead on poles except in some instances where it may be installed underground
- **Substation transformer.** The substation transformer steps up the 34.5kV electricity from the connection line to the 230kV needed to connect to the existing transmission lines
- **Internal access roads.** Consist of gravel roads inside the perimeter fence used for maintenance vehicles to access inverter stations and other equipment for maintenance and repair purposes. These roads will be in place for the life of the project and removed at the time of decommissioning
- **Perimeter fence.** Consists of a chain-link security fence approximately 1.8m high to surrounding the panel areas
- **Control building and Communication Tower.** A control building and communication tower will be installed to provide transfer of operational data to HydroOne Networks Inc. during operations. The control building will be constructed to house electrical controls, protection, and monitoring systems and be located at the substation
- **Operations and Maintenance Building.** Will house equipment to monitor the facility's operation as well as vehicles, tools and supplies needed for maintenance and repairs. The building will contain staff offices, washrooms, lunch room, warehouse and parking area.



## Project Operation – Activities

Activities associated with the facility's operation include:

- **Monitoring and meter calibration.** The facility will be remotely monitored to ensure operation is within required parameters
- **Routine maintenance of components and security checks.** Regularly scheduled visits to inspect components and ensure proper operation and confirm facility security
- **Access road maintenance.** Levelling and grading and addition of granular material as needed
- **Vegetation control.** Regular maintenance to manage weed growth. Herbicides are not typically used; weeds are normally removed using mechanical means
- **Cleaning of PV panels.** Panels will be cleaned with water and it is not anticipated that chemical detergents will be used. Snow will be removed mechanically (e.g. blowers mounted on maintenance vehicles)
- **Substation transformer.** Substation spill containment system will be inspected regularly and effluent will be tested to ensure oil level limits are not exceeded
- **Drainage and erosion control.** Storm water management features such as drainage ditches, culverts and rock check dams will be routinely expected and repairs and sediment removal will be completed as needed

Please refer to the [Design and Operations Report](#) for more information regarding the operation of the facility.





## Decommissioning Phase

During the decommissioning phase and after the Project has been disconnected from the grid, components will be dismantled and removed. Decommissioning is expected to take between 10 to 12 months. Once complete, the land can be used as it was prior to Project's construction. Examples of decommissioning activities are shown below:

<b>Activity</b>	<b>Description</b>
<b>Solar panels and racking</b>	Disconnect all above-ground wirings, cables and interconnections. Remove solar panel modules, racking and support structures and temporarily store on-site in a delineated area before removal by a truck to an appropriate facility.
<b>Access road and other components</b>	Consult with landowners to determine if access roads should be left in place for their continued use. Remove aggregate materials. Compacted areas will be tilled to restore the density and depth. Top soil will be applied as needed. Remove perimeter fencing, anchors and guy wires.
<b>Connection line and collection line</b>	Remove line and poles and fill holes.
<b>Underground cables</b>	Underground electrical lines will either be removed or cut and left in place approximately 1m below ground to allow agricultural practices to resume.
<b>Substation</b>	Removal of all equipment.
<b>Equipment foundations</b>	Foundations will either be completely removed or excavated to a depth of 1m. All materials removed from site and holes backfilled.

After all components are removed, the site will be graded and revegetated where necessary. The site will be restored to so that off-site drainage patterns are maintained to pre-construction conditions. Please refer to the Decommissioning Plan Report for more information regarding the decommissioning activities.



## Natural Heritage Assessment (NHA)

The NHA is comprised of four reports that systematically assess natural features that may be impacted by the project and identify mitigations to minimize those impacts.

Report	Findings	Conclusions
<b>Records Review and Site Investigation (RR and SI).</b> These reports are a desktop study and field investigation that identify natural features within 50 m of the Project Location.	Several natural features were identified within 50 m of the Project Location. These included wetlands, woodlands, and wildlife habitat.	The Project Location boundary needed to be refined to avoid sensitive natural features, where possible.
<b>Evaluation of Significance (EoS).</b> Additional surveys were completed to evaluate the significance of natural features. Wildlife and vegetation surveys occurred over a period of 5.5 months in the spring, summer and fall of 2016 (over 475 hours).	The following features were evaluated to be significant or treated as significant: Provincially significant wetlands; Assumed provincially significant wetlands; Woodlands; Significant rare vegetation communities; Turtle nesting area; Amphibian breeding habitat; Woodland-area sensitive breeding bird habitat; Waterfowl stopover and staging areas; Turtle wintering habitat; Reptile hibernaculum; Colonially-nesting bird breeding habitat; Several habitat areas for specific species.	The features evaluated and treated as significant must be assessed in the Environmental Impact Study and mitigation measures need to be identified to minimize or eliminate potential effects to these features.
<b>Environmental Impact Study (EIS)</b>	Specific mitigation measures were identified for each feature evaluated or treated as significant in the EoS.	The EIS concludes that negative environmental effects will be mitigated and identifies a program for ongoing monitoring of the effectiveness of mitigation measures. The report documents contingency plans, should monitoring reveal that mitigation measures were not sufficient.

Please refer to the NHA Report for more information.

*The Power to Change the Future.™*



## Community Benefits

- **Community Vibrancy Agreement.** Loyalist Solar LP has entered into an agreement with the Township of Stone Mills that prescribes development requirements and long-term contributions from the Project
- **Additional long-term tax revenue.** Over the course of the Project's lifespan, it will provide ongoing contributions to the Township's tax base without requiring municipal services such as water and wastewater services
- **Employment.** The jobs that are created during construction include: land surveying, notary services, tree/brush clearing, road construction, set-up of electrical and communication networks, excavation, concrete and aggregates supply and installation, foundations, assembly of solar facility, construction of the transformer station, and material transportation. The Project will also require permanent employees during operations
- **Boosting the local economy.** Construction supplies, components and contractors will be sourced locally to the extent reasonably possible, subject to meeting quality, quantity, availability, and workmanship requirements
- **Renewable energy.** Renewable energy provides clean, sustainable electricity and helps to support climate change policies



## Your questions answered!

### What are the next steps in this process?

The reports comprising the REA application are complete and have been available for public review for 60 days before this public meeting. These reports may be updated after the public meeting, based on the results of consultation. Following this, the Consultation Report for the Project will be finalized, then the complete application will be submitted to the Ministry of the Environment and Climate Change (MOECC) in Q1 2017. The MOECC will subsequently undertake a review of the application, and, upon deeming it complete, will post a notice on the Environmental Registry. Following posting on the Environmental Registry, the MOECC will review all reports and evaluate the application. Once the technical review is complete, and comments are considered from the Environmental Registry, the MOECC will make a decision regarding issuance of the Project's REA. This is presently anticipated for Q4 2017. All REA reports are available on our website.

### When will the final connection line route be known?

The Project team is currently finalizing right of way surveys and has commenced engineering design work for the connection line. These will determine the placement of the transmission line poles. The Team is currently in the process of finalizing road use agreements with both Lennox and Addington County and the Township of Stone Mills. Both the County and the Township will need to approve the proposed transmission line design before proceeding. BluEarth will provide more detailed information to landowners and stakeholders, and will share the transmission line map once designs are finalized.

### How are visual concerns addressed?

The Township of Stone Mills has approved a visual screening plan which incorporates setbacks and vegetation screening to reduce visual impact. The plan includes visual simulations to depict how the project will look from certain vantage points.





## Connection Line

**Consists of above and below ground electrical cabling used to connect the generating components of the Project (PV panels, inverter stations, collection lines) to the existing 230kV transmission line near the intersection of Miller Road and Frizzell Road.**

- Four potential routes are being considered:

**Preferred Route:** Travels east on Centreville Road, then north on County Road 27, east on Marlin Road, north on Edges Road to Murphy Road to Sheffield Bridge Road where it reaches the substation transformer. (**Purple** on plan).

**Bid Route:** Travels east on Centreville road to the intersection with Lockridge Road where it then turns north over land through an unopened municipal right-of-way to Teskey Road where it crosses County Road 14 and on to Miller Road through private land easements. It continues north on Miller Road until it reaches the substation transformer. (**Orange** on plan)

**Alternate 1:** Follows the same route as the Preferred Route until the point of reaching Haggerty Road where it travels west on Haggerty Road, crosses the Salmon River to Miller Road, then travels north on Miller Road until it reaches the substation transformer. (**Dark blue** on plan).

**Alternate 2:** Follows the same route as the Preferred Route until the point of reaching Teskey Road where it travels west and then north as it crosses County Rd 14 and on to Miller Road through private land easements. It then continues north on Miller Road until it reaches the substation transformer. (**Green** on plan)

- As described above, the Connection Line will be installed in right rights-of-way or on private lands, or a combination of the two
- The connection line will likely consist of three 3-phase circuits mounted either on poles or below ground (where necessary). Poles will be approximately 65 feet high and consist of cross-members, insulators, and ancillary equipment such as communications cables, grounding wires, switchgear, and others as needed. Some poles will require guy wires and anchors. If the poles replace existing utility poles, the height will be approximately 80 feet to accommodate additional circuits from the existing poles.
- If located on private lands, lease agreements have been made with the landowners involved.
- Final route will be determined based on the result of further studies (engineering designs, geotechnical investigations) and the outcomes of consultation with MNRF, the Township of Stone Mills and local stakeholders.

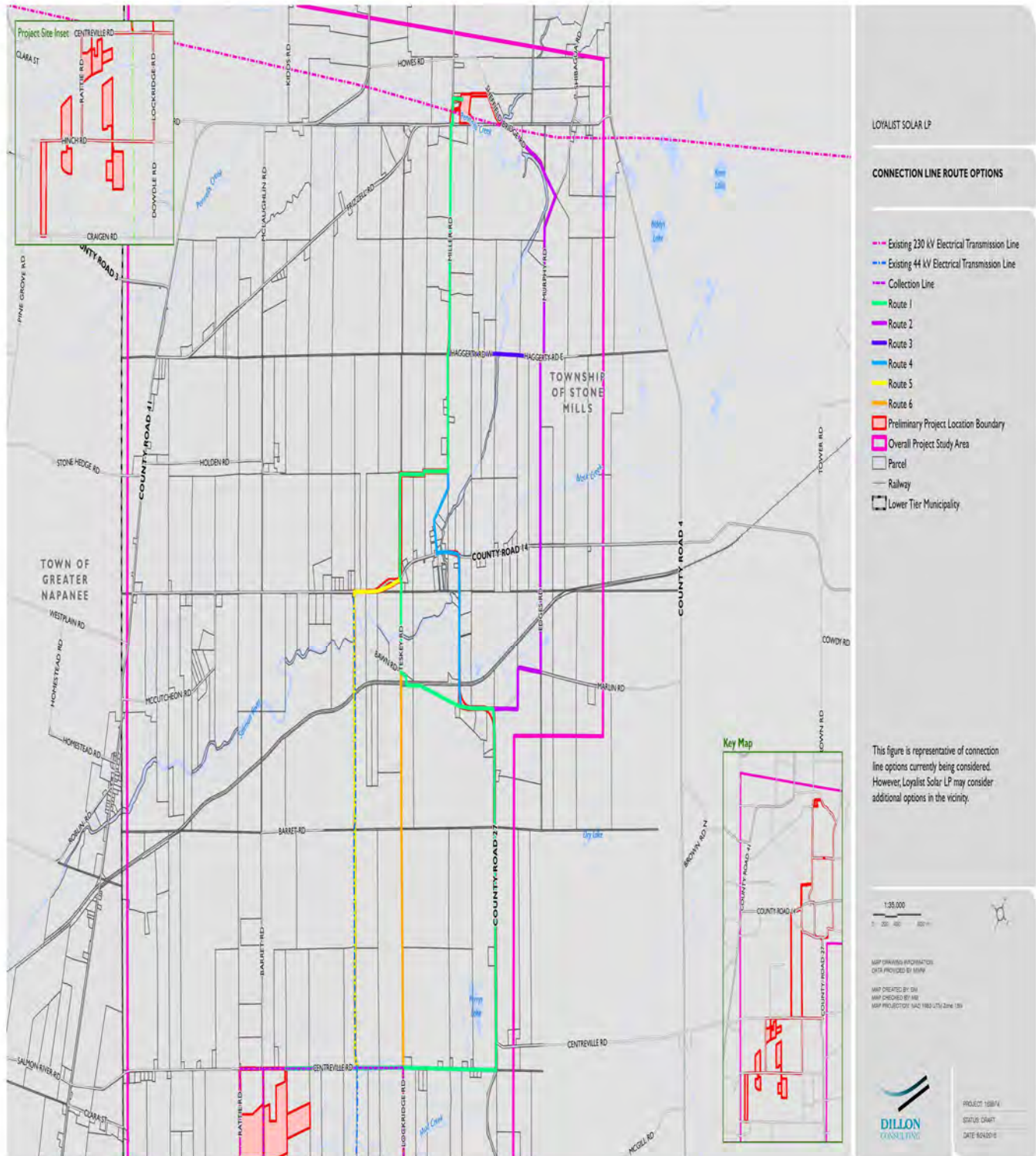


# Loyalist Solar Project



Yaote LS Solar Inc.

## Connection Line Map



The Power to Change the Future.™



## Revisions to REA Reports\*

Report Title	Description of Revisions
<b>Project Description Report</b>	Clarification details were added to describe the four Connection Line options. The final Connection Line route will be determined through engineering assessments and agency consultation and residents will be notified once the final route has been selected. The report was updated to summarize the revisions to the other reports, as described below. Changes related to formatting, consistencies between reports and re-review of the Project Location boundary has also resulted in other minor edits.
<b>Design and Operations Report</b>	A section was added to describe a standby generator to be installed at the substation transformer for maintenance and emergency purposes. If being used for maintenance, the generator will not operate for more than 60 hours in a 12-month period and only between the hours of 7am and 7pm. If being used in the case of an emergency, it will only be used in situations where there is a serious risk to the health and safety of a person, the environment or damage to property. Revisions were made to the potential equipment for PV panels and inverters. It is anticipated that the following models (or equivalent) will be used: Hanwha Q Cells 340 W PV panel, or SMA Sunny Central SC 2200. Clarification details were added related to site maintenance; routine inspections of access roads may indicate the need for the addition of granular material and/or minor grading or leveling activities. Stormwater management features such as drainage ditches, culverts, rip rap, rock check dams, etc. will be regularly inspected. Changes related to formatting, consistencies between reports and re-review of the Project Location boundary has also resulted in other minor edits to the DOR.
<b>Water Body Report</b>	No changes.
<b>Water Assessment Report</b>	No changes.
<b>Noise Study Report</b>	For clarity, a scale and coordinate system was added to the figures. The frequency spectra shown in the octave tables was changed to be linear rather than A-weighted.
<b>Decommissioning Plan Report</b>	Changes related to formatting, consistencies between reports and re-review of the Project Location boundary has also resulted in other minor edits to the DPR.
<b>Archaeological Assessment</b>	Based on feedback from the MTCS, the archaeological assessments were refined to indicate that sixteen sites containing archaeological materials were identified. Further investigation was recommended for seven of the sites prior to development. The MTCS provided their acceptance of the archaeological assessments on December 6, 2016.

\*Since November 2016 draft.



## Revisions to REA Reports\*

Report Title	Description of Revisions
<b>Construction Plan Report (CPR)</b>	<p>A section was added to summarize potential effects to groundwater during construction. Mitigation measures, such as erosion and sediment control, the creation of a spill response plan, and spill containment will be implemented to minimize potential effects. A Stormwater Management Plan will be developed prior to the start of construction to identify how grading and water flow management features will be installed to ensure the Project does not result in a net change of water flow to adjacent properties and natural features. Clarification details were added related to the installation of supports, racking and PV modules. Racking foundation design will vary depending on the depth of overburden (soil above bedrock). The foundations will either be a rock socket type anchor (for &lt;1.2 m overburden), a spread footing anchor (for &gt;1.2 and &lt;2.2 m overburden) and a helical pile anchor for areas with &gt; 2.2 m overburden. Construction details were added to describe the installation of the electrical collection and Connection Line system. Where cabling will be installed on poles, the poles will be placed in excavated holes and set in place with anchors or guy wires as needed. The cabling will be installed using a tension machine. Poles will likely be either grey fiberglass or wood and approximately 18–21 m tall (with approx. 3 m underground.) A back-up generator will be located within the substation area to provide power in the case of periodic maintenance and for unexpected loss of electrical service connection. Changes related to formatting, consistencies between reports and re-review of the Project Location boundary has also resulted in other minor edits to the CPR.</p>
<b>Natural Heritage Assessment</b>	<p>Revision of conservation status for the Giant Swallowtail butterfly. The population is considered secure in Ontario and therefore is not a Species of Conservation Concern and its habitat is not required to be included as a type of wildlife habitat in the NHA. Addition of Terrestrial Waterfowl Stopover and Staging Habitat. Upon consultation with the MNRF, it was agreed that this habitat would be treated as significant until surveys could be completed in the spring of 2017. Addition of Eastern Wood-Pewee Habitat. This bird is a woodland bird Species of Conservation Concern that was identified during the breeding bird surveys for the Project and has since been added to the NHA. Changes related to formatting, consistencies between reports and re-review of the Project Location has also resulted in minor edits to the NHA reports.</p>
<b>Cultural Heritage Assessment</b>	<p>Revisions were made to note which connection lines were no longer being considered. Additional mitigations to address potential vibration impacts were described. Other minor clarifications to mitigations were added.</p>

\*Since November 2016 draft.



## Potential Effects and Mitigation Measures

Potential Effect	Project Phase	Examples of Recommended Mitigation
Disruption or destruction of archaeological or cultural materials	Construction	Archaeological sites have been identified and either avoided, or the materials documented and removed. Cultural Heritage effects will be managed by avoidance and altered construction practices.
Increased water flow and sedimentation to adjacent properties and natural features	Construction & Operations	During construction, erosion and sediment control measures will be implemented. Cleared lands will be re-vegetated as soon as practical, following construction activities. During operations, storm water management controls will be in place to avoid significant changes to water flow to adjacent areas.
Impacts to wildlife and vegetation species	Construction & Operations	Protocols will be developed for specific measures when wildlife is encountered. Fencing will be installed to deter wildlife from entering the construction site. Construction vehicle speeds will be reduced in areas adjacent to applicable wildlife features. Construction activities will occur outside of sensitive wildlife breeding windows. Access roads designed to deter wildlife nesting.
Loss of significant natural features including woodlands and wildlife habitat	Construction	The Project has been designed to avoid significant areas. Where required, habitat compensation measures have been proposed. These measures include, but are not limited to, species transplantation, construction of habitat features, removal of invasive species, etc.
Crossing of water bodies and wetlands by the Connection Line	Construction	Crossing methods designed to minimize impacts to features and implement mitigation measures developed by Fisheries and Oceans Canada. Poles supporting overhead connection lines to avoid significant wetland areas.
Removal of land from agricultural production	Construction & Operations	Lands will be restored to their pre-construction condition, or a similar state at the time of decommissioning.



## Potential Effects and Mitigation Measures

Potential Effect	Project Phase	Examples of Recommended Mitigation
Impacts to the groundwater table as a result of accidental fuel spillage/releases from equipment, stormwater runoff, and minor waste generation	Construction & Operations	Spill containment installed for substation transformer. A spill response plan will be in place prior to the start of construction. Erosion and sediment control measures (e.g., silt fencing) will be installed. A foundation type for the PV racking will be selected that considers the local groundwater regime.
Increased noise disturbance due to on-site activities.	Construction & Operations	During construction, noise levels and hours of work will be in compliance with local noise bylaws. During operations, a noise audit will be conducted to ensure compliance with MOECC noise limit requirements.
Visual impact	Construction & Operations	Visual impacts during construction will be temporary in nature. A visual screening plan has been designed and approved by the Township of Stone Mills. The plan will minimize visual impacts from the solar panel area through setbacks and vegetation screenings.
Periodic traffic disruption	Construction	A Traffic Management Plan will be prepared in consultation with the Township and County.
Damage to local roads	Construction	A Road Use Agreement with the Township and County will prescribe how roads will be repaired if damaged by the Project.
Fires (electrical, wildfire, etc.) at the Project Location	Construction & Operations	Smoking will be prohibited except in designated areas. Fire safety equipment (including fire extinguishers) will be available on site and stored in construction vehicles and site trailers as appropriate. The local fire department will be involved in the development of an emergency response and communications plan.
Electrocution or other injury from operating components.	Operations	The Project Location will be fenced as per Electrical Safety Authority ("ESA") requirements to prevent unauthorized access. Warning signs will be placed at locations with high-voltage equipment as per safety code requirements.

For more information, see the Environmental Effects Management Plan sections of the Natural Heritage Assessment, Construction Plan Report and Design and Operations Report.



# Loyalist Solar Project



**Yaote LS Solar Inc.**

## Why here?

- Strong solar resource
- Compatible with land use requirements (e.g., not on lands designated as Prime Agricultural)
- Close to existing electrical transmission circuit with sufficient capacity for 54 MW<sup>AC</sup> of generation
- Landowners willing to host the Project
- Support through the Community Vibrancy Agreement with the Township of Stone Mills



*The Power to Change the Future.™*

# Loyalist Solar Project



**Yaote LS Solar Inc.**

## Why now?

Loyalist Solar LP was awarded a contract based on bidding a highly competitive price for power, achieving a municipal resolution of support, an agreement with the Township of Stone Mills, and having support of the Mohawks of the Bay of Quinte and many adjacent landowners. To meet the requirements set out in the contract, the Project is anticipated to be constructed and operating by late 2018.



*The Power to Change the Future.™*



# Loyalist Solar Project

With offices in Calgary, AB and Guelph ON Canada, BluEarth is a private company focused on commercial scale renewable energy development. As an independent renewable power producer, our goal is to sustainably build, own, and operate wind, run-of-river hydroelectric, and solar generation projects across North America. BluEarth currently has nearly 170 MW of wind, hydro and solar facilities in operation. BluEarth also owns and interest eight hydroelectric facilities in Ontario and one in the USA through H2O Power Limited Partnership.

BluEarth strives for timely and meaningful consultation with all stakeholders and First Nation communities. As one of the most experienced renewable energy teams in Canada, we fully appreciate the importance of communication with those that live near our projects. BluEarth is committed to consulting with and involving stakeholders in the decision-making process for our proposed and existing facilities. We believe that trust is the foundation for long-term successful relationships, and we know that trust is only earned over time by working together with honest and transparent communications.

For more information, visit [bluearth.ca](http://bluearth.ca).



BluEarth currently operates five solar facilities in Ontario.

*The Power to Change the Future.™*

# Loyalist Solar Project



**Yaote LS Solar Inc.**

## Next Steps

A Consultation Report will be prepared, which will document the consultation activities undertaken to date for the Project, including any questions or concerns received at this Public Meeting. The Consultation Report will also document how public input was considered in the design and development of the Project.

Please provide any additional comments to the Project team by **February 3, 2017** via a comment form available here at this meeting or via telephone or email at the coordinates below.

For more information on BluEarth and the Loyalist Solar Project, or to provide comments, visit:

[bluearth.ca/loyalist](http://bluearth.ca/loyalist)

[projects@bluearth.ca](mailto:projects@bluearth.ca)

1.844.214.2578

Or contact Mike Jablonicky,  
Senior Project Specialist, at:

[mike@bluearth.ca](mailto:mike@bluearth.ca)

226.567.1246

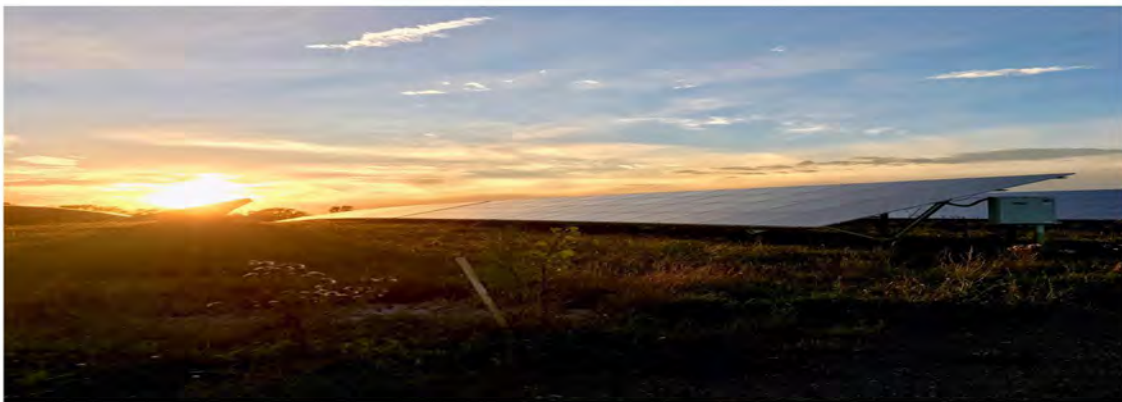


*The Power to Change the Future.™*



## Community Vibrancy Agreement

- The Township of Stone Mills Council has passed a Council Resolution of Support and executed a Community Vibrancy Fund Agreement for the Loyalist Solar Project
- Through the Vibrancy Fund Agreement, the Township of Stone Mills has set out several requirements for how the Project will be developed, including:
  - ◇ Visual screening and setbacks
  - ◇ Stormwater management and grading design review
  - ◇ Hydrogeological study requirements
  - ◇ Establishment of a Technical Review Committee
  - ◇ Community Vibrancy Fund contributions to be used for community initiatives at the discretion of the Township, including:
    - Land stewardship
    - Recreation
    - Community & protective services
    - Roads & public infrastructure
    - Community improvement projects
  - ◇ Preference for qualified local labour and supplies
  - ◇ Financial security requirements for Project decommissioning
  - ◇ Reimbursement for reasonable Township expenses associated with review of Project permits



## Site-Specific REA Studies

A number of required studies are now complete. These include:

### Water Assessment

- Identified water bodies at or near the proposed project location through a background desktop review of relevant information, followed by site investigations
- Identified water bodies were documented in a Water Body Report that characterized the existing conditions of the water bodies and identified potential impacts and any mitigation measures required to minimize or avoid these effects

### Archaeological Assessments

- Identified any areas of archaeological significance at or near the project location
- Assessment involved records reviews, field surveys and when necessary, specific excavations
- Study ensured areas of archaeological significance will not be adversely affected through implementation of the project
- Completed by licensed archaeologist with First Nation participation

### Cultural Heritage Assessment

- Identified resources of cultural heritage value or significance such as historic buildings, structures, landscape features, or other property features
- Mitigation measures will be developed and implemented to preserve and/or document the cultural heritage features

### Noise Assessment Report

- A Noise Assessment Report must be completed in accordance with regulations to demonstrate compliance with MOECC noise requirements
- Project noise sources such as inverters and transformers must be located so as to not create night time sound greater than 40 dBA at nearby residences



## Hydrogeology & Groundwater Studies

### Hydrogeological Studies

- Assessment involves the study of surface and sub-surface water to determine flow patterns
- Utilizes data from piezometers, flow gauges, rain gauges and topographical studies, among others
- Informs the site grading and drainage plan to ensure water flows from site do not cause adverse effects to adjacent properties and wildlife habitats
- Results indicate that the Project will not affect water quality or water quantity in any residential well and not affect water quality or water quantity discharging to Mud Creek or Hinch Swamp

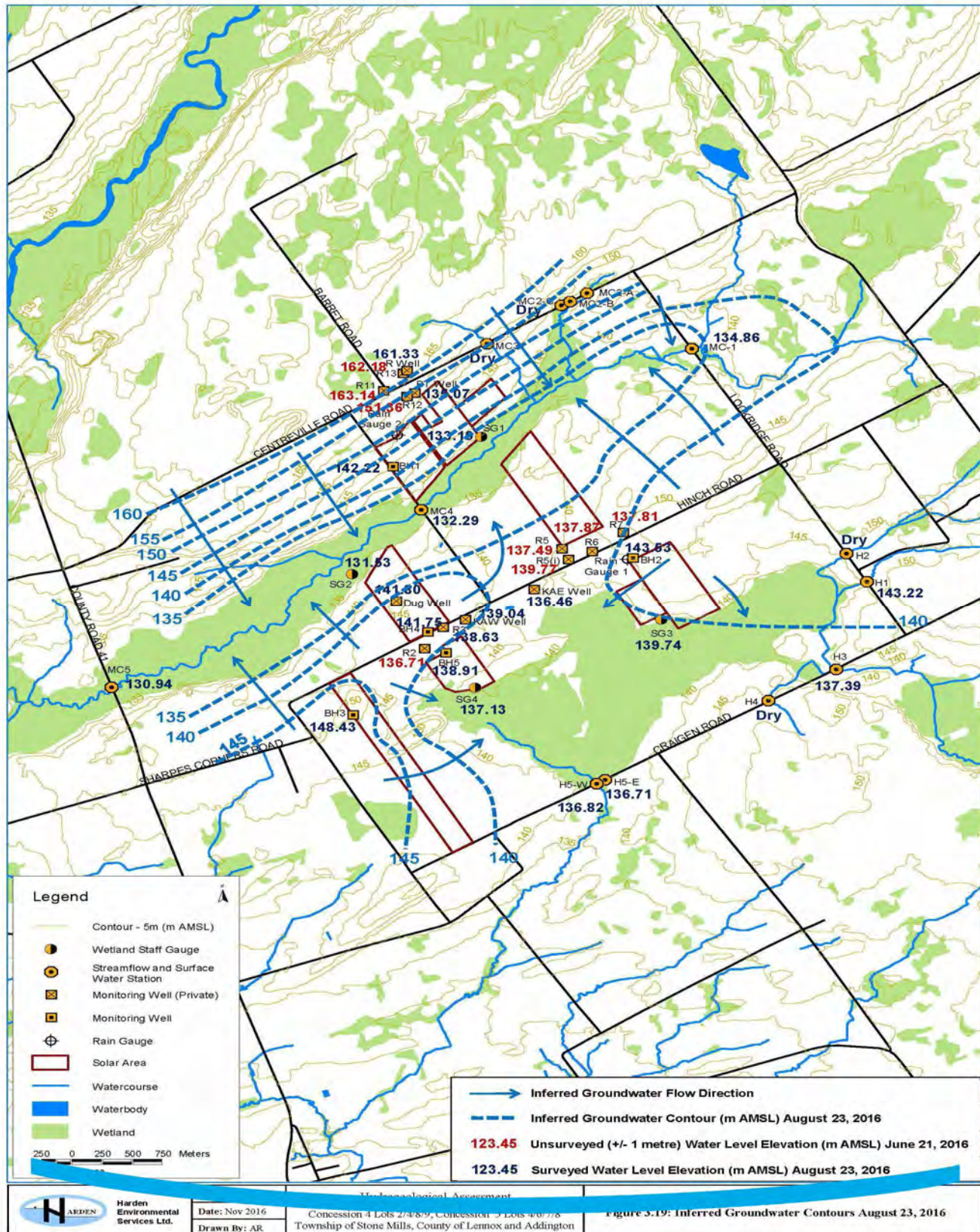
### Groundwater Monitoring

- Well water monitoring will take place at residences adjacent to the project to confirm that the project construction has not affected local wells
- Water wells in the vicinity of the Project were identified and solar panel areas have been setback 60m from drilled wells and 90m from dug wells
- Pre- and post-construction well water samples will be analyzed at a third-party laboratory to check for any out-of-compliance results





# Groundwater Flow Map





## Field Surveys

To support the completion of the NHA, as well as other permitting requirements, the following field studies were completed as part of the project:

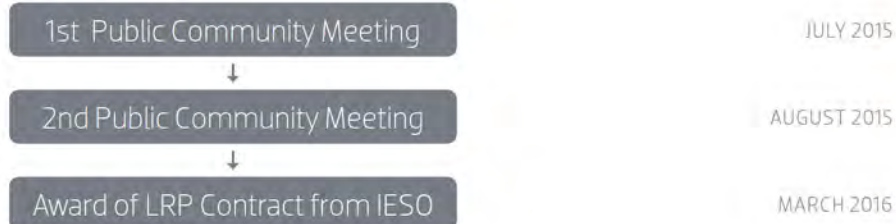
- Ecological Land Classification
- Wetland Delineation
- Wildlife Habitat Surveys
- Alvar Surveys
- Bat Cavity/Snag Density Survey
- Breeding Bird Surveys
- Diurnal, crepuscular and nocturnal species
- Amphibian Surveys
- Turtle Basking Surveys
- Botanical Surveys
- Rare Plant Surveys
- Water body Surveys, including surveys for seasonal features
- Species at Risk surveys according to MNRF protocols



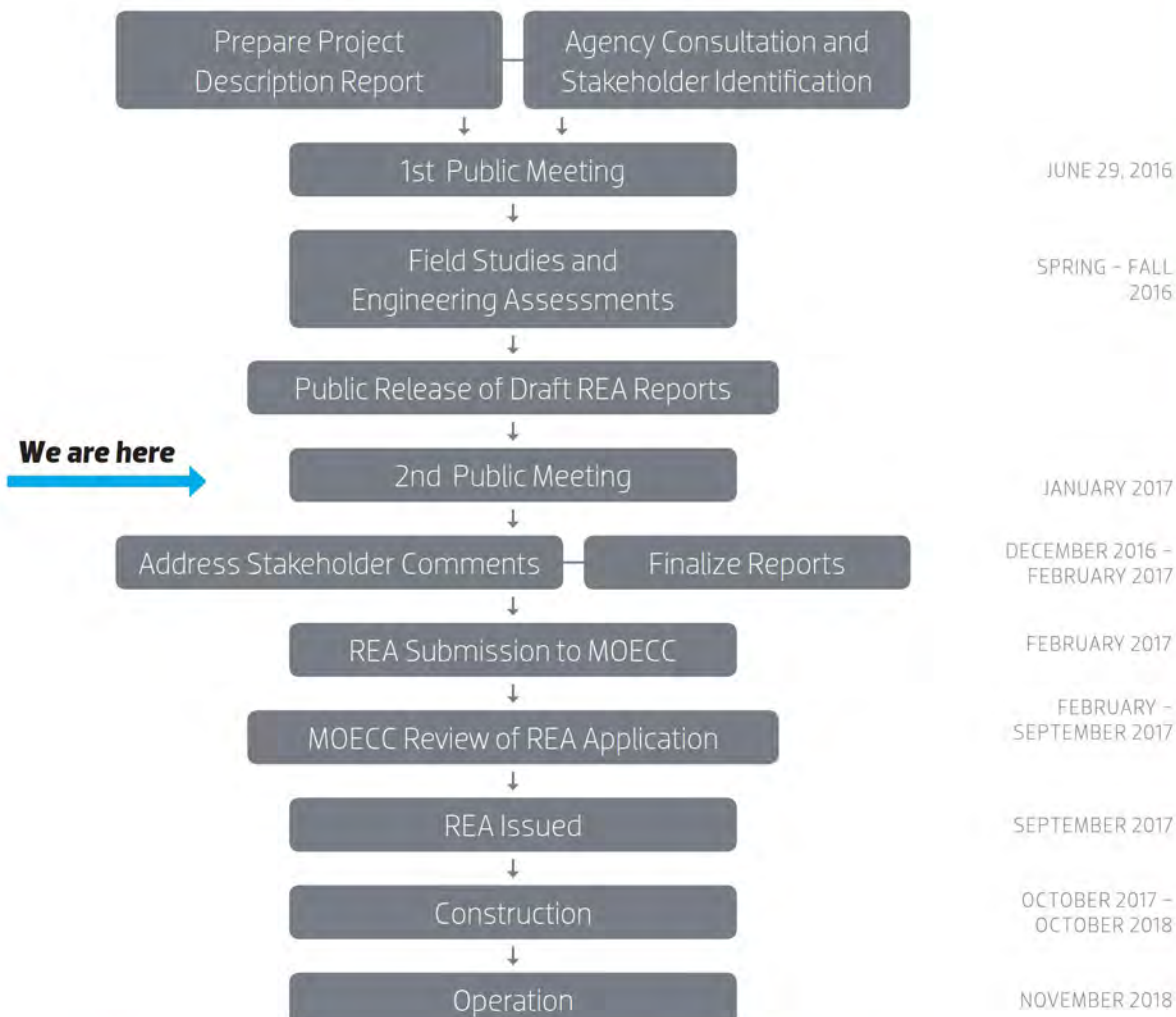
If you have information or observations the Project should be aware of, please submit your comments.

## REA Process and Project Schedule

### Large Renewables Procurement Process



### Renewable Energy Approval Process – Ontario Regulation 359/09





## Wildlife in Project Vicinity



Adult Loggerhead Shrike

Juvenile Loggerhead Shrike

Adult Loggerhead Shrike

Adult Loggerhead Shrike

Northern Mockingbird - note the lack of a black face and hooked beak

### Loggerhead Shrike

*Lanius ludovicianus*

Provincial Status: **Endangered**

National Status: **Endangered**

<b>Colour</b>	<ul style="list-style-type: none"> <li>• White underparts</li> <li>• Black wings</li> <li>• Long black tail</li> <li>• Grey back</li> </ul>
<b>Distinctive Features</b>	Black face mask with wings that have a large white patch. The bill is black and has a distinctive hook
<b>Typical Size</b>	Typically 15 to 20 cm in height (6" to 8")
<b>Other</b>	Kill their prey by impaling on thorns, spines or barbed wire. If impaled insects, birds, small mammals, reptiles, frogs are present then Loggerhead Shrike is likely in the area. Nickname is the "Butcher Bird"

#### Habitat

- Prefers pasture or other grasslands with scattered low trees, shrubs and short grasses.
- Fields or alvars (areas of exposed bedrock) with short grass make it easier to spot prey.
- Nests in small trees or shrubs.
- Requires a source to impale prey such as Hawthorn shrubs or barbwire fencing.

#### Other Information

- Only present in Ontario from April until September.
- Northern Shrike (*Lanius excubitor*) is similar in appearance but only occurs in Southern Ontario during the winter
- Northern Mockingbird (*Mimus polyglottos*) is another similar species but has lighter wings, smaller head, lacks the black face mask and hooked beak

**Photo Credits:** Gerrit Vyn, Kyle McCreary, Wikipedia Commons, Alan Murphy  
**Date Fact Sheet Was Created/Revised:** July 31, 2013

**DILLON**  
CONSULTING

The Power to Change the Future.™



## Wildlife in Project Vicinity



Photo Credits: Jim McCree, Gerrit Vyn, Kelly Azar  
Date Fact Sheet Was Created/Revised: August 1, 2013

### Bobolink

*Dolichonyx oryzivorus*

Provincial Status: **Threatened**

National Status: **No Status**

<b>Colour</b>	<ul style="list-style-type: none"> <li>• Males are black with a white/grey back/rump and a yellow nape</li> <li>• Females and non-breeding males are yellowish brown with bold black stripes on the head and back</li> <li>• Juveniles are similar in appearance to the female but contain more yellow</li> </ul>
<b>Distinctive Features</b>	<ul style="list-style-type: none"> <li>• Males have a contrasting colour pattern</li> <li>• Thick, short bill similar to a finch</li> </ul>
<b>Typical Size</b>	Typically 15 to 21 cm long (5" to 5.5")
<b>Other</b>	<ul style="list-style-type: none"> <li>• Males tend to appear unexpectedly, flying over vegetation and singing a bubbly, metallic song</li> </ul>

#### Habitat

- Ground-nesting species that spend majority of time foraging on the ground in grassland, open meadow, perennial cover crop, and/or pasture
- Nest is comprised of dead grasses with a central lining of fine grass or sedges. The nest may have a canopy of dead grass hanging over the top
- Nests are well camouflaged and contain eggs are a bluish gray or pale reddish brown with irregular dark spots and blotches

#### Other Information

- Males are very distinctive but females, juveniles and non-breeding males can be confused with female Red-winged Blackbird (*Agelaius phoeniceus*) or Grasshopper Sparrow (*Ammodramus savannarum*)
- Red-winged Blackbird is darker, more heavily striped on the chest and has a longer bill
- Grasshopper Sparrow has similar colouring and dark striped head with pale central crown but is much smaller with proportionally larger head and shorter tail

**DILLON**  
CONSULTING

The Power to Change the Future.™



## Wildlife in Project Vicinity



Eastern Meadowlark

Eastern Meadowlark

Meadowlark in flight – note the distinctive white outer tail feathers

Non-breeding Eastern Meadowlark - note the muted colour

### Eastern Meadowlark

*Sturnella magna*

Provincial Status: **Threatened**

National Status: **No Status**

<b>Colour</b>	<ul style="list-style-type: none"> <li>Pale brown, marked with blackish streaking on the back, wings &amp; tail</li> <li>Bright yellow underparts and a bold black "V" across the breast</li> <li>Males and females have similar colouration</li> </ul>
<b>Distinctive Features</b>	<ul style="list-style-type: none"> <li>Bright yellow breast</li> <li>Black "V" across the breast</li> <li>Long, slender, spear-shaped bill</li> <li>Outer tail feathers are white and conspicuous during flight</li> </ul>
<b>Typical Size</b>	Typically 19-26 cm in length (7.5"-10") Wingspan of 35-40 cm (14"- 16")
<b>Other</b>	<ul style="list-style-type: none"> <li>Often perched and singing from a post, pole, wires or tops of shrubs</li> <li>Flutelike descending song which sounds like <i>Spring-of-the-year</i></li> </ul>

#### Habitat

- Ground-nesting species most commonly found in pasture, perennial cover crop, grassland and savannah
- Can be found in a wide variety of other habitats including weedy meadow, young orchard, golf courses, restored grassland, and herbaceous fencerows

#### Other Information

- The female Red-winged Blackbird (*Agelaius phoeniceus*), female Bobolink (*Dolichonyx oryzivorus*) and Savannah Sparrow (*Passerculus sandwichensis*) can be confused with this species but all three are much smaller but lack the bright yellow underparts, long bill and white outer tail feathers
- Can nest from early May to mid-August in well camouflaged nests comprised of grasses on the ground

**Photo Credits:** Gerrit Vyn, Kirk M. Rogers, Ontario Ministry of Natural Resources, Phillip Simmons  
**Date Fact Sheet Was Created/Revised:** August 1, 2013

**DILLON**  
CONSULTING



## Wildlife in Project Vicinity



Blanding's Turtle



Hinged Shells of the Blanding's



Blanding's Turtle – spots on shell



Blanding's Turtle – note the bright yellow throat and chin



Spotted Turtle – note the vivid yellow spots

### Blanding's Turtle

*Emydoidea blandingii*

Provincial Status: **Threatened**

National Status: **Threatened**

<b>Colour</b>	<ul style="list-style-type: none"> <li>• The upper shell is usually black or dark brown but sometimes grey or a lighter brown</li> <li>• Upper shell covered in tan to yellow lines or spots scattered at random</li> <li>• Lower shell is a rich yellow</li> <li>• Skin is often black or dark brown</li> </ul>
<b>Distinctive Features</b>	<ul style="list-style-type: none"> <li>• Domed shell resembles an army helmet</li> <li>• Throat and chin a bright yellow</li> <li>• Upper jaw is notched and the mouth curves upwards, giving the impression that the turtle is smiling</li> </ul>
<b>Typical Size</b>	Can reach up to 27 cm (10") long
<b>Other</b>	<ul style="list-style-type: none"> <li>• Shells are hinged so some individuals can completely close the shell after pulling in the head and limbs</li> </ul>

#### Habitat

- Inhabits shallow lakes, ponds and wetlands with clean water and mucky bottoms.
- Can travel several kilometres between summer, nesting and overwintering habitats.
- Hibernates in the soft bottoms or water bodies.

#### Other Information

- This turtle is very distinct because of the yellow throat, domed shell and smiling appearance.
- Spotted Turtles (*Clemmys guttata*) may be mistaken for Blanding's from a distance but Spotted Turtles have distinct, vivid yellow spots

**Photo Credits:** Joe Crowley, Parks Canada, Ontario Ministry of Natural Resources, Mary Ferguson, Detroit Zoo  
**Date Fact Sheet Was Created/Revised:** August 8, 2013

**DILLON**  
CONSULTING



## Wildlife in Project Vicinity

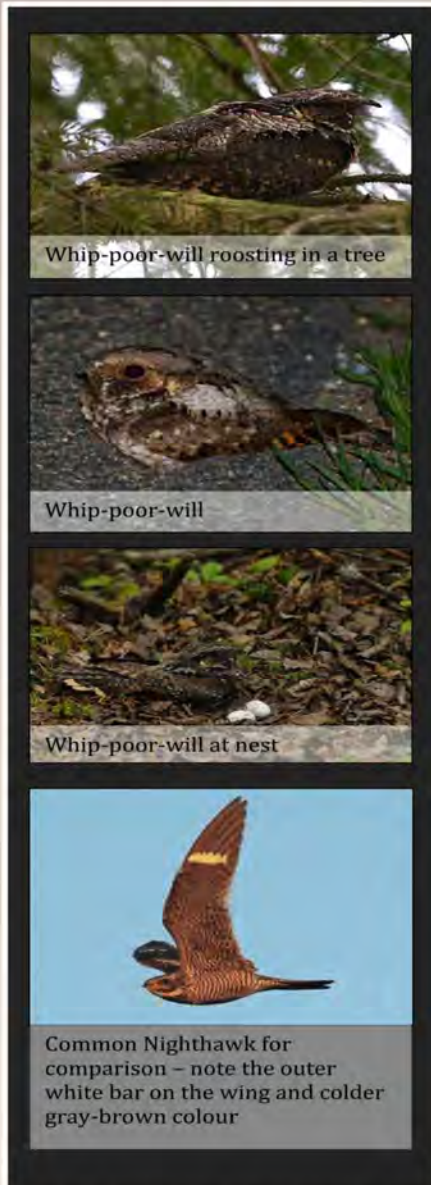


Photo Credits: Cornell Lab of Ornithology (© Nancy Landry, © Greg Lawrence), Mike McEvoy, Philip Simmons  
Date Fact Sheet Was Created/Revised: July 31, 2013

### Whip-poor-will

*Caprimulgus vociferus*

Provincial Status: **Threatened**

National Status: **Threatened**

<b>Colour</b>	<ul style="list-style-type: none"> <li>Mottled brown and grey feathers</li> <li>Feather pattern blends with grey-brown leaf litter and tree bark</li> <li>Pale, silvery shoulder patches</li> <li>Throat is black and bordered at the bottom by a white bib</li> </ul>
<b>Distinctive Features</b>	<ul style="list-style-type: none"> <li>Camouflaged grey-brown body with white bib at bottom of throat</li> <li>"Front-heavy" look with large, rounded head and stout chest, which tapers to a long, thin tail</li> <li>Sings loud "whip-poor will" song at nighttime</li> </ul>
<b>Typical Size</b>	<ul style="list-style-type: none"> <li>Both sexes: 22 to 26 cm (7"-10") long and wingspan of 45-48 cm (18"-19")</li> </ul>
<b>Other</b>	<ul style="list-style-type: none"> <li>Most vocal during bright, moonlit nights</li> </ul>

#### Habitat

- Usually found in areas with a mix of open and forested areas
- Forages in open areas and uses forested areas for roosting and nesting
- Prefer forested areas with little or no underbrush and will avoid large tracts of uninterrupted forest with dense canopy
- Eggs are laid directly on the forest floor without a nest

#### Other

- Common Nighthawk (*Chordeiles minor*) is similar in appearance but is a colder gray-brown overall
- Nighthawks are more likely to be seen in the daylight or crepuscular hours (dusk/dawn).
- Nighthawks have an obvious white-bar on the outer part of the wings.

**DILLON**  
CONSULTING



## Wildlife in Project Vicinity



Photo Credits: Eddie Y, Jo-Anna Ghadban, Stephen Ramirez, Ian F. Jeff Mitton  
Date Fact Sheet Was Created/Revised: August 7, 2013

### Barn Swallow

*Hirundo rustica*

Provincial Status: **Threatened**

National Status: **No Status**

<b>Colour</b>	<ul style="list-style-type: none"> <li>Glossy, steel-blue back and upper wings</li> <li>Rusty –red forehead and throat</li> <li>Beige coloured belly</li> <li>Juveniles are more dusky blue-gray and have a pale yellow bill</li> </ul>
<b>Distinctive Features</b>	<ul style="list-style-type: none"> <li>Pointed wings</li> <li>Deeply-forked tail</li> </ul>
<b>Typical Size</b>	Typically 15 to 18 cm long (6" to 7")
<b>Other</b>	<ul style="list-style-type: none"> <li>Diet consists of flying insects</li> </ul>

#### Habitat

- Prefers open habitats such as meadows, pastures and farmland during the breeding season
- Often uses man-made structures (e.g. bridges, culverts, barns) for nesting
- Nests are typically made of mud and grass and attached to the side of a structure or on a flat edge.
- Nests are cup-shaped.

#### Other Information

- Cliff Swallow (*Petrochelidon pyrrhonot*) has similar colouration but lacks the forked tail and has a distinctive pale rump patch, collar and forehead patch. Also builds mud nests in similar areas but nests are almost enclosed with a small entry/exit hole.
- Tree Swallow (*Tachycineta bicolor*) are a bright white from below with glossy blue-green upperparts and only a slightly forked tail.

**DILLON**  
CONSULTING

The Power to Change the Future.™



## Wildlife in Project Vicinity



Least Bittern



Least Bittern Nest

Photo Credits: Schwarz, 2012; Crowe, 2010; Michael Libbe  
Date Fact Sheet Was Created/Revised: January 13, 2017

### Least Bittern

*Ixobrychus exilis*

Provincial Status: **Threatened**

National Status: **Threatened**

<b>Colour</b>	<ul style="list-style-type: none"> <li>• Large chestnut patches on its wings</li> <li>• Brown and beige plumage</li> <li>• Crown and back of males is black; lighter in females and juveniles</li> <li>• Throat is light tan with white streaks</li> <li>• White belly</li> <li>• Legs and bill bright yellow</li> </ul>
<b>Distinctive Features</b>	<ul style="list-style-type: none"> <li>• Long neck and bill</li> <li>• Crown and back black/dark in colour</li> <li>• Front of neck and chest striped orange and white</li> </ul>
<b>Typical Size</b>	Typically 28 to 36 cm long (11" to 14")
<b>Other</b>	<ul style="list-style-type: none"> <li>• Diet consists of small fish and insects</li> </ul>

#### Habitat

- Can be found in a variety of wetland habitat.
- Prefers cattail marsh habitats with tall emergent vegetation.
- Nests are typically placed in dense, tall stands of vegetation on the ground on a platform made of marsh vegetation.

#### Other Information

- Part of the heron family.
- Similar species include the Green Heron, American Bittern and rails. Both the Green Heron and American Bittern are much larger in size. The Green Heron has completely dark wings and a dark bill; the American Bittern is entirely coloured with muted browns. Rails lack bright wing patches and have shorter necks.





## Wildlife in Project Vicinity



### Little Brown Myotis

*Myotis lucifugus*

### Northern Long-eared Myotis

*Myotis septentrionalis*

### Eastern Small-footed Myotis

*Myotis leibii*

### Tri-coloured Bat

*Pipistrellus subflavus*

Provincial Status: **Endangered**

National Status: **Endangered**

<b>Colour</b>	<ul style="list-style-type: none"> <li>Myotis species are similar in appearance.</li> <li>Have fur that is a pale tan to reddish or dark brown with a slightly paler belly</li> <li>Ears and wings are dark brown to black</li> </ul>
<b>Distinctive Features</b>	<ul style="list-style-type: none"> <li>Northern Long-eared has much longer ears than other Myotis species</li> <li>Eastern Small-footed has a black mask</li> <li>Tri-coloured has tri-coloured hairs</li> </ul>
<b>Typical Size</b>	<p>Little Brown - wingspan 25 to 27 cm</p> <p>Long-eared – wingspan 23 to 26 cm</p> <p>Eastern Small-footed - wingspan 21-25 cm</p> <p>Tri-coloured – wingspan 20-26 cm</p>
<b>Other</b>	<ul style="list-style-type: none"> <li>Active during the night</li> <li>Hard to distinguish from other bats without specialized equipment</li> </ul>

### Habitat

- Myotis species can be found roosting in hollow trees, caves, mine shafts, crevices or man-made structures (e.g. attics, barns)
- When roosting in natural habitats, preference is to loose bark and cavities in larger mature trees (>25 cm diameter)
- Northern species is more likely to roost in natural habitats
- Myotis hibernate in mines or caves

### Other Information

- If bats are observed at dusk or during the night, the best way to identify to species is using equipment that can detect bat calls and separate out species.
- If species are observed during the day, smaller Myotis species may be confused with other bat species such as the Big Brown Bat which are physically, much larger.

Photo Credits: Bob Hamilton, Annemieke Watkins, Roger Barbour, Hall Ecology, Wild Things Wildlife Control  
Date Fact Sheet Was Created/Revised: August 13, 2013; Rev: January 13, 2017

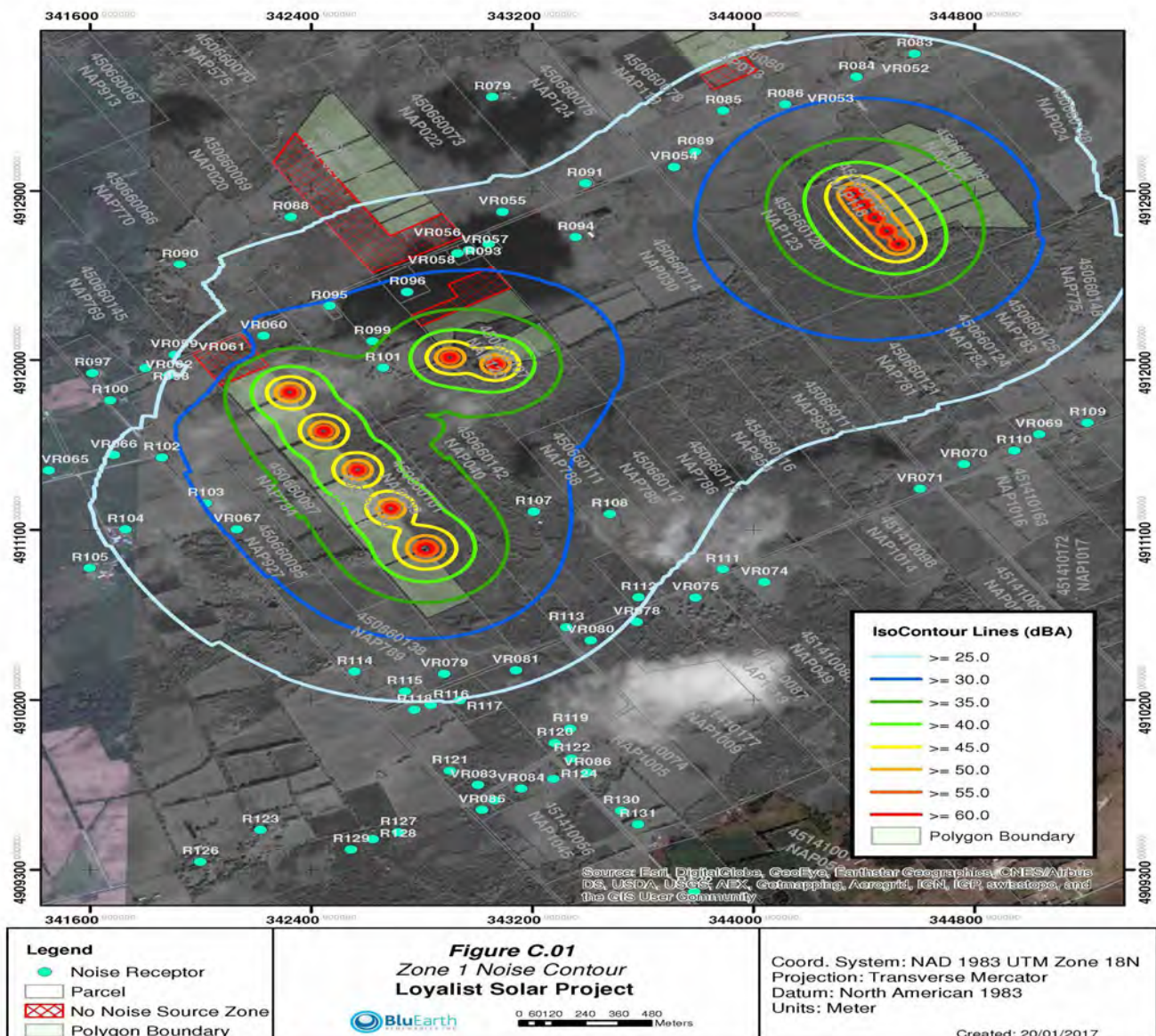
**DILLON**  
CONSULTING



## Noise Study Report

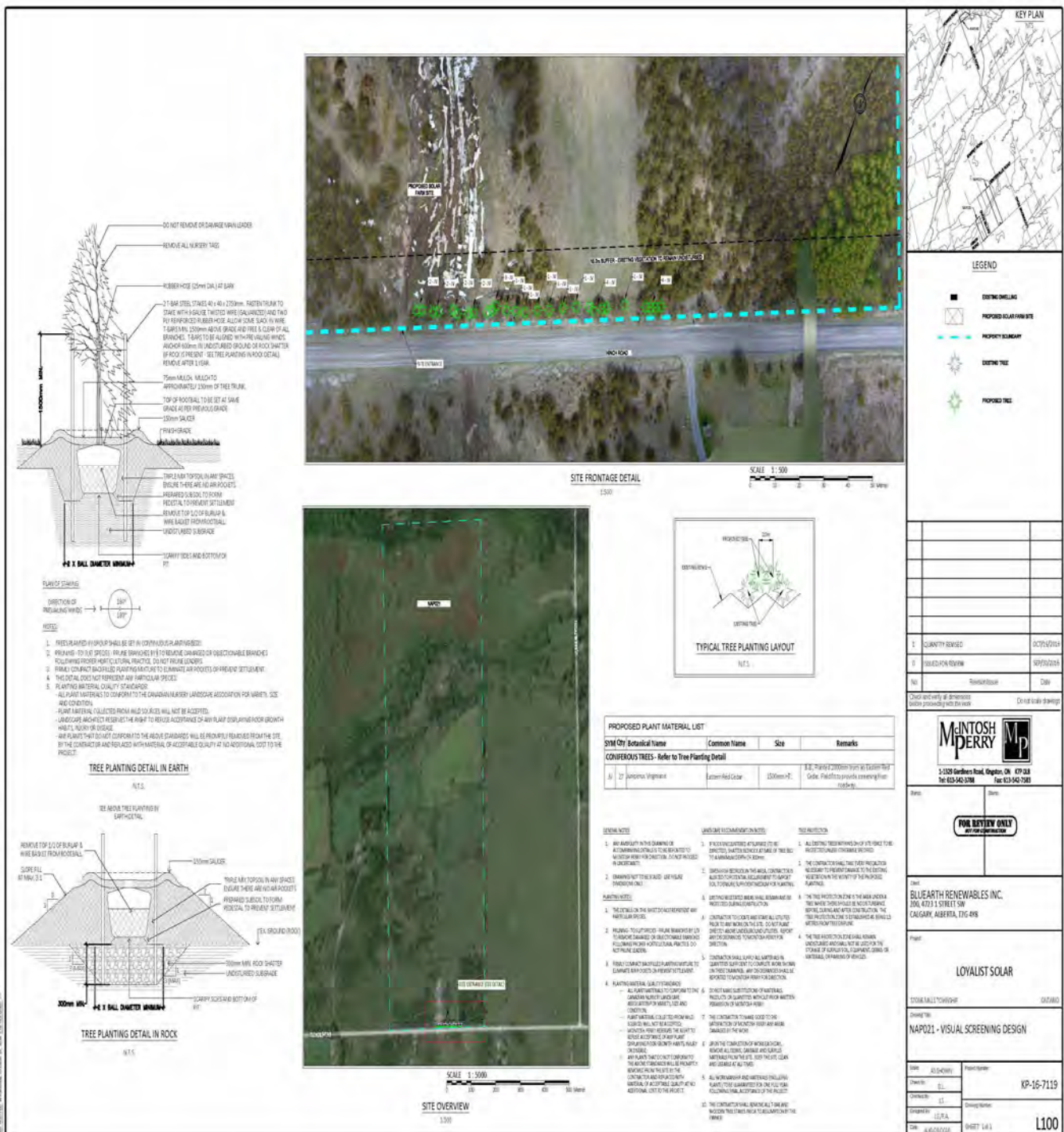
The Environmental Noise Impact Assessment (Noise Study Report) was completed by a third-party acoustical engineering consultant to demonstrate that the predicted sound levels at receptors will not exceed allowable noise limits.

- Points of reception within 1.5 km of the Project were identified and assessed to predict noise level exposure
  - Points of reception are defined as a dwelling, education facility, day nursery health care facility or place of worship
- The Project noise sources consist of the substation transformer and the 34 inverter stations (inverters and transformers)
- The noise sources were assessed in zones which allow them to be placed within a defined area while still ensuring the Project noise levels do not exceed allowable limits at points of reception
- Once operational, the facility will only produce noise during daylight hours
- The overall conclusion of the study is that The Project will be in compliance with the MOECC noise limit of 40 dBA at all Noise Receptors
- A post-construction noise audit will be conducted to ensure noise limits are not exceeded

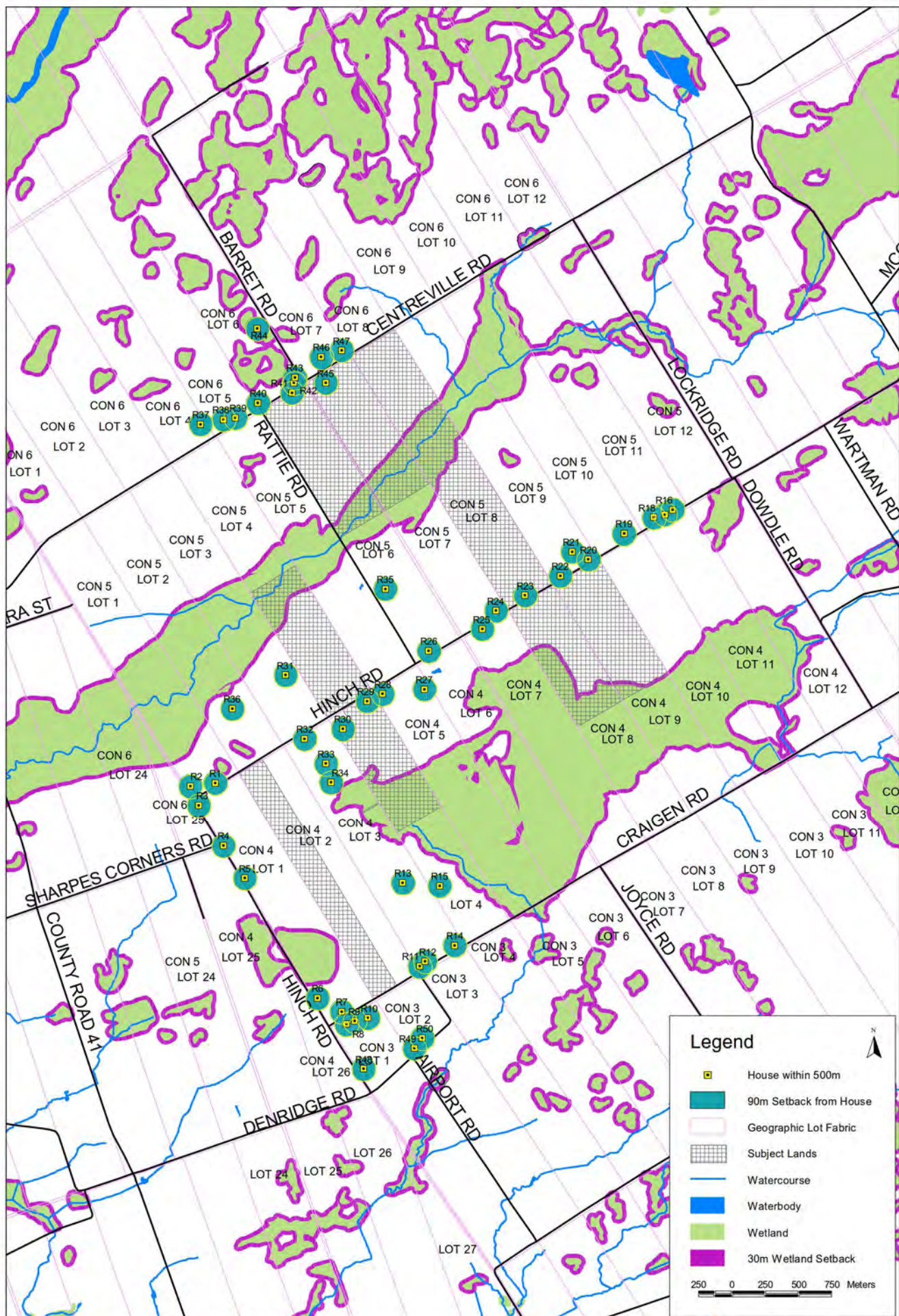




- The plan prescribes setback distances for the solar panels from municipal roads and requires that vegetation screening be in place
- Visual simulations were created to show how the solar panel areas may look from certain vantage points in the Project vicinity







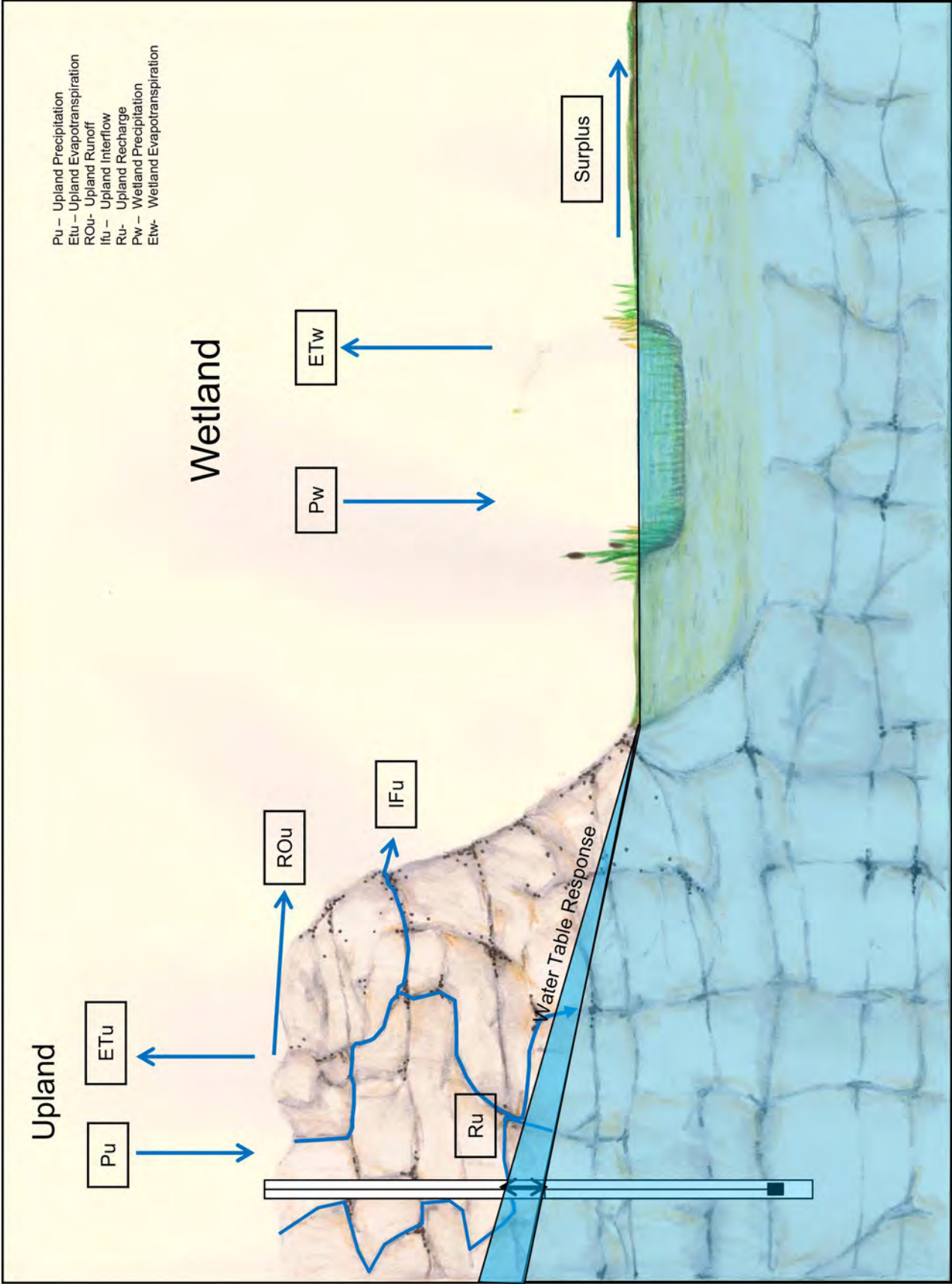
**Harden**  
Environmental  
Services Ltd.

Project No: 1615  
Date: May 2016  
Drawn By: AR

Hydrogeological Investigation  
Concession 4 Lots 2/4/8/9, Concession 5 Lots 4/6/7/8  
Township of Stone Mills, County of Lennox and Addington

Figure 2: Houses within 500 metres





Privileged and Confidential

**Figure 2: Water Balance Components of Upland and Wetland Areas**

<b>Project No:</b>	<b>Figure:</b>
<b>Date:</b>	<b>Drawn By: SD</b>



# Loyalist Solar Project



**Yaote LS Solar Inc.**

## Revisions to REA Reports\*

Report Title	Description of Revisions
<b>Project Description Report</b>	Clarification details were added to describe the four Connection Line options. The final Connection Line route will be determined through engineering assessments and agency consultation and residents will be notified once the final route has been selected. The report was updated to summarize the revisions to the other reports, as described below. Changes related to formatting, consistencies between reports and re-review of the Project Location boundary has also resulted in other minor edits.
<b>Design and Operations Report</b>	A section was added to describe a standby generator to be installed at the substation transformer for maintenance and emergency purposes. If being used for maintenance, the generator will not operate for more than 60 hours in a 12-month period and only between the hours of 7am and 7pm. If being used in the case of an emergency, it will only be used in situations where there is a serious risk to the health and safety of a person, the environment or damage to property. Revisions were made to the potential equipment for PV panels and inverters. It is anticipated that the following models (or equivalent) will be used: Hanwha Q Cells 340 W PV panel, or SMA Sunny Central SC 2200. Clarification details were added related to site maintenance; routine inspections of access roads may indicate the need for the addition of granular material and/or minor grading or leveling activities. Stormwater management features such as drainage ditches, culverts, rip rap, rock check dams, etc. will be regularly inspected. Changes related to formatting, consistencies between reports and re-review of the Project Location boundary has also resulted in other minor edits to the DOR.
<b>Water Body Report</b>	No changes.
<b>Water Assessment Report</b>	No changes.
<b>Noise Study Report</b>	For clarity, a scale and coordinate system was added to the figures. The frequency spectra shown in the octave tables was changed to be linear rather than A-weighted.
<b>Decommissioning Plan Report</b>	Changes related to formatting, consistencies between reports and re-review of the Project Location boundary has also resulted in other minor edits to the DPR.
<b>Archaeological Assessment</b>	Based on feedback from the MTCS, the archaeological assessments were refined to indicate that sixteen sites containing archaeological materials were identified. Further investigation was recommended for seven of the sites prior to development. The MTCS provided their acceptance of the archaeological assessments on December 6, 2016.

\*Since November 2016 draft.

*The Power to Change the Future.™*



# Loyalist Solar Project



**Yaote LS Solar Inc.**

## Revisions to REA Reports\*

Report Title	Description of Revisions
<b>Construction Plan Report (CPR)</b>	<p>A section was added to summarize potential effects to groundwater during construction. Mitigation measures, such as erosion and sediment control, the creation of a spill response plan, and spill containment will be implemented to minimize potential effects. A Stormwater Management Plan will be developed prior to the start of construction to identify how grading and water flow management features will be installed to ensure the Project does not result in a net change of water flow to adjacent properties and natural features. Clarification details were added related to the installation of supports, racking and PV modules. Racking foundation design will vary depending on the depth of overburden (soil above bedrock). The foundations will either be a rock socket type anchor (for &lt;1.2 m overburden), a spread footing anchor (for &gt;1.2 and &lt;2.2 m overburden) and a helical pile anchor for areas with &gt; 2.2 m overburden. Construction details were added to describe the installation of the electrical collection and Connection Line system. Where cabling will be installed on poles, the poles will be placed in excavated holes and set in place with anchors or guy wires as needed. The cabling will be installed using a tension machine. Poles will likely be either grey fiberglass or wood and approximately 18–21 m tall (with approx. 3 m underground.) A back-up generator will be located within the substation area to provide power in the case of periodic maintenance and for unexpected loss of electrical service connection. Changes related to formatting, consistencies between reports and re-review of the Project Location boundary has also resulted in other minor edits to the CPR.</p>
<b>Natural Heritage Assessment</b>	<p>Revision of conservation status for the Giant Swallowtail butterfly. The population is considered secure in Ontario and therefore is not a Species of Conservation Concern and its habitat is not required to be included as a type of wildlife habitat in the NHA. Addition of Terrestrial Waterfowl Stopover and Staging Habitat. Upon consultation with the MNRF, it was agreed that this habitat would be treated as significant until surveys could be completed in the spring of 2017. Addition of Eastern Wood-Pewee Habitat. This bird is a woodland bird Species of Conservation Concern that was identified during the breeding bird surveys for the Project and has since been added to the NHA. Changes related to formatting, consistencies between reports and re-review of the Project Location has also resulted in minor edits to the NHA reports.</p>
<b>Cultural Heritage Assessment</b>	<p>Revisions were made to note which connection lines were no longer being considered. Additional mitigations to address potential vibration impacts were described. Other minor clarifications to mitigations were added.</p>

\*Since November 2016 draft.

*The Power to Change the Future.™*