Grand Renewable Energy Park

Presentation to Haldimand County Council

December 13, 2010

One Team. Infinite Solutions

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Grand Renewable Energy Park

Agenda

- *The Park Description*
- *Current Status*
- *Project Benefits*
- *Approvals Overview*
- *Haldimand County Role*
- *Schedule*
- *Questions?*

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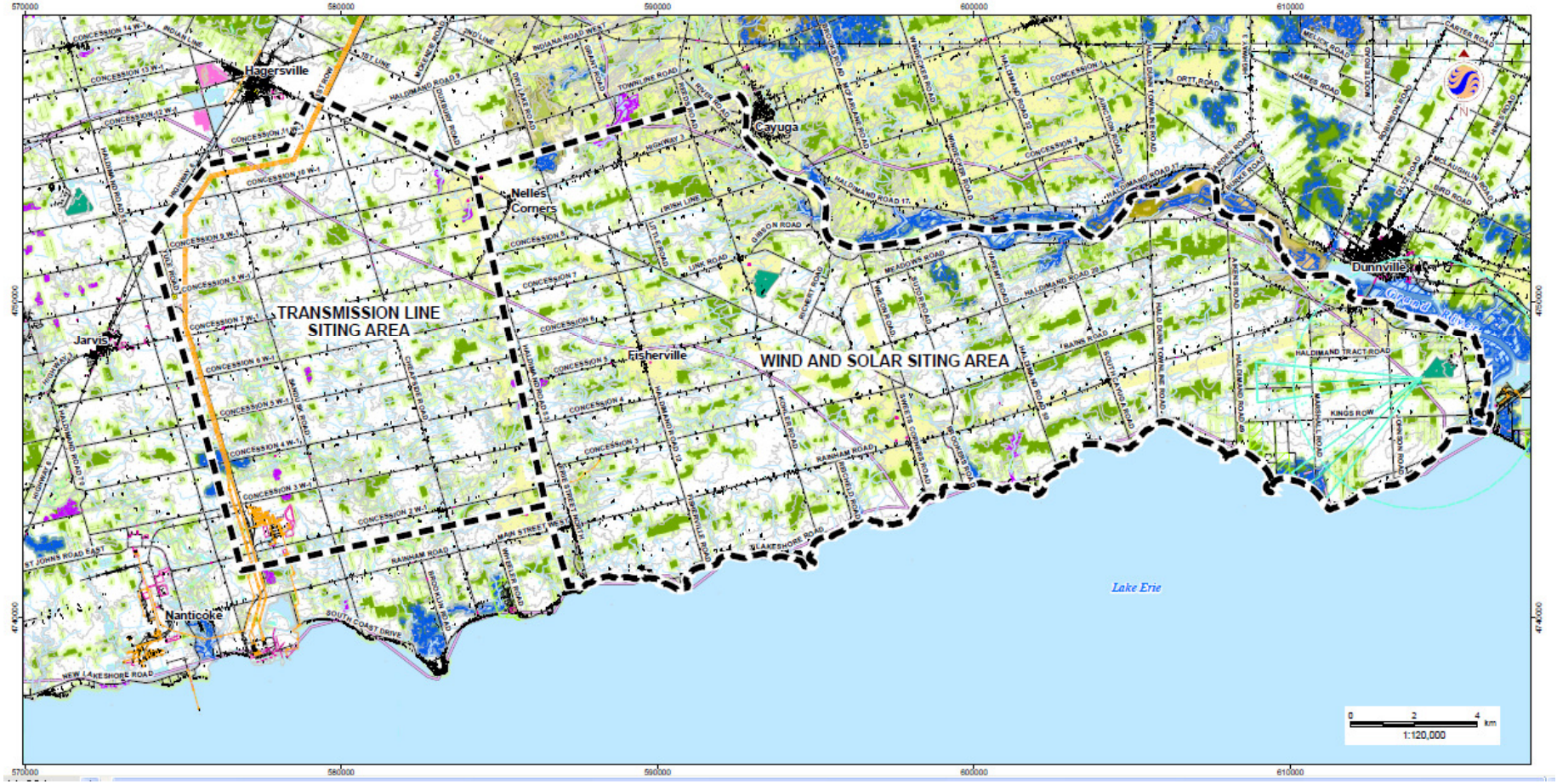
Grand Renewable Energy Park

The Park Description



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The Park Description

Park Capacity

- *155 MWatts peak power generated by wind*
- *100 MWatts of peak power generated by sunlight*
- *Potentially 255 MWatts of peak power in total*

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Grand Renewable Energy Park

The Park Description

Park Components

- *70 Wind Turbine Generators at 100m hub height having an individual power output of 2.221 MWatts per turbine*
- *~ 400,000 Ground Mounted Solar PV panels on 900 acres of land having an individual power output of 270 watts per panel*

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Grand Renewable Energy Park

The Park Description

Park Infrastructure

- *Access Laneways for each Wind Turbine Generator*
- *Access and Service roads for Solar Farm*
- *Power Collection Circuits*
- *Collector Substation*
- *Operations & Maintenance Facility*
- *230 kV Transmission Line of 20 km*
- *Interconnect Station*

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Project Benefits

Benefits of Renewable Energy…

- *Inexhaustible*
- *Reduces reliance on imported fuel*
- *Environmental benefits*
- *Land use*
- *Creates jobs*

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Project Benefits

Benefits of Renewable Energy…

- *Income for Property Owners*
- *Local Tax Base Increased*
- *Greater Direct Economic Impact*
- *Energy at Stable Cost*

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Project Benefits

Environmental Benefits of Renewable Energy Compared to Coal-Fired Generation

Carbon Dioxide Emissions Reduced

462,080 tonnes/year

equivalent to 81,496 cars

Coal

212,329 tonnes /year

Sulfur Dioxide

2,075 tonnes/year

Nitrogen Oxides

773 tonnes/year

Freshwater Conserved

33.6 trillion liters/year

92 million liters/day

112,877 people each day

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Project Benefits

Support to Local Economy

- *During Construction and Operation*
- *Service Business Revenue*

Contribution to County Tax Base

- *Increases Tax Base of Haldimand County*

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Grand Renewable Energy Park
Project Benefits

Creates Job Opportunities

- *250 – 300 jobs during construction period*
  - *Project Managers*
  - *Tradespeople*
  - *Contractors*
  - *SubContractors*
- *Approximately 20 permanent positions during operations*
  - *Maintenance personnel*
- *"Ripple Effect…"*

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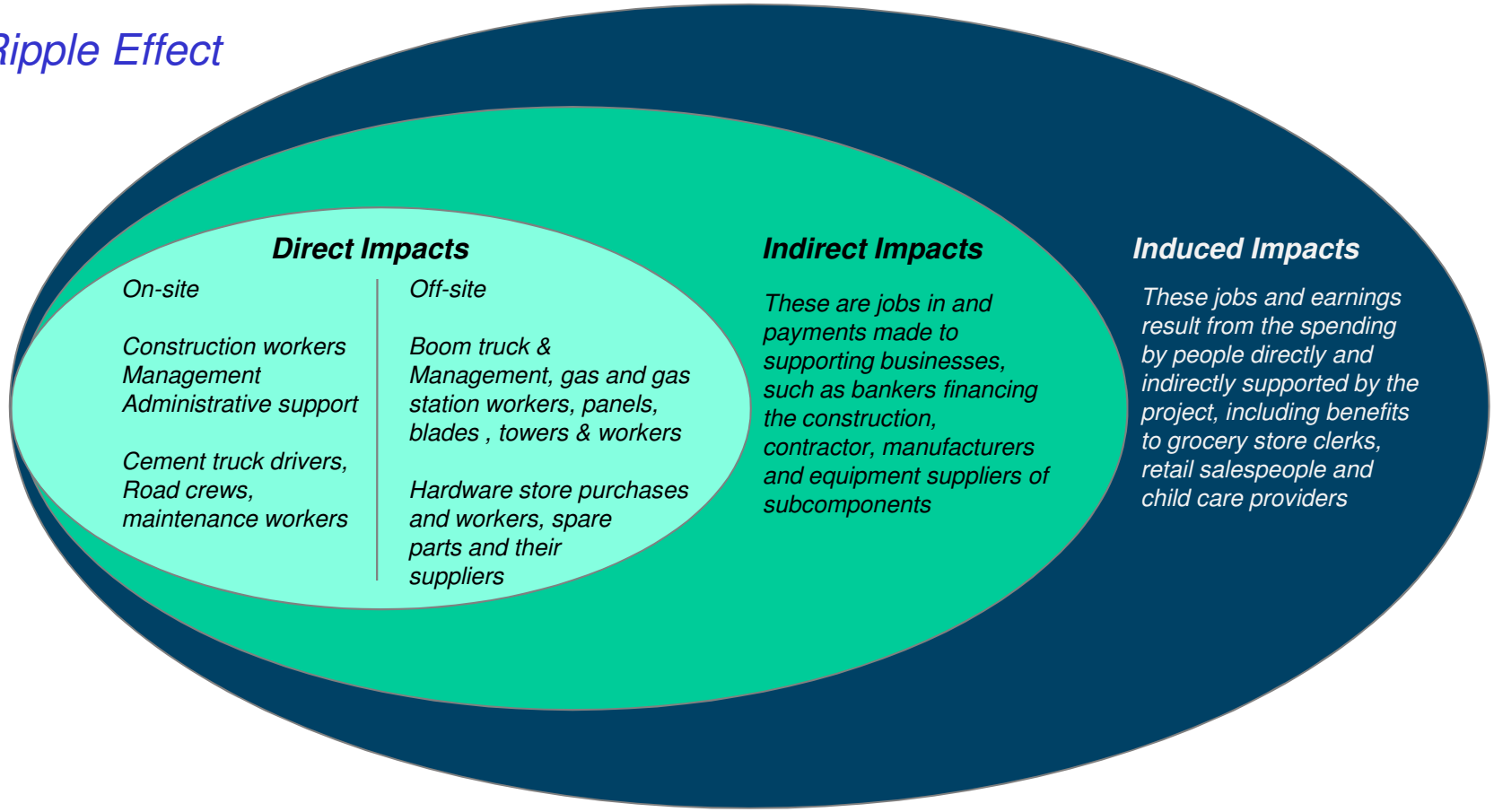
Project Benefits

Ripple Effect



Grand Renewable Energy Park

Current Status

Land Access Rights

- *ORC License Agreement*
- *Private Landowners*

Investigations

- *Survey and Aerial Photography*
- *Geotechnical survey*
- *Natural heritage surveys*
- *Archaeological Assessment surveys*
- *Noise Assessment complete*

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Grand Renewable Energy Park

Current Status

First Nation Consultation

- *Six Nations consultation and involvement*
- *Mississauga's of New Credit*
- *Métis Nation of Ontario*
- *Other First Nations being included for further consultation*

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Grand Renewable Energy Park

Current Status

Municipal Consultation

- *Notice of Commencement*
- *Project Description Report*
- *Open House #1*
- *Comments and Response*
- *Haldimand County Hydro*

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Grand Renewable Energy Park
Current Status

Power Collection

- Collector System
  - Below ground from turbine to public road
  - Above ground on public roads (100 km)
  - Private and county easement use
  - Joint use: Haldimand County Hydro
- Collector Substation Location
  - Central – Mt Olivet/Rd 20
  - Operations & Maintenance Facility

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Grand Renewable Energy Park

Current Status

Power Transmission

- 230 KVTransmission Line
  - Route Selection
    - Technology
    - Safety
    - Time
    - Cost

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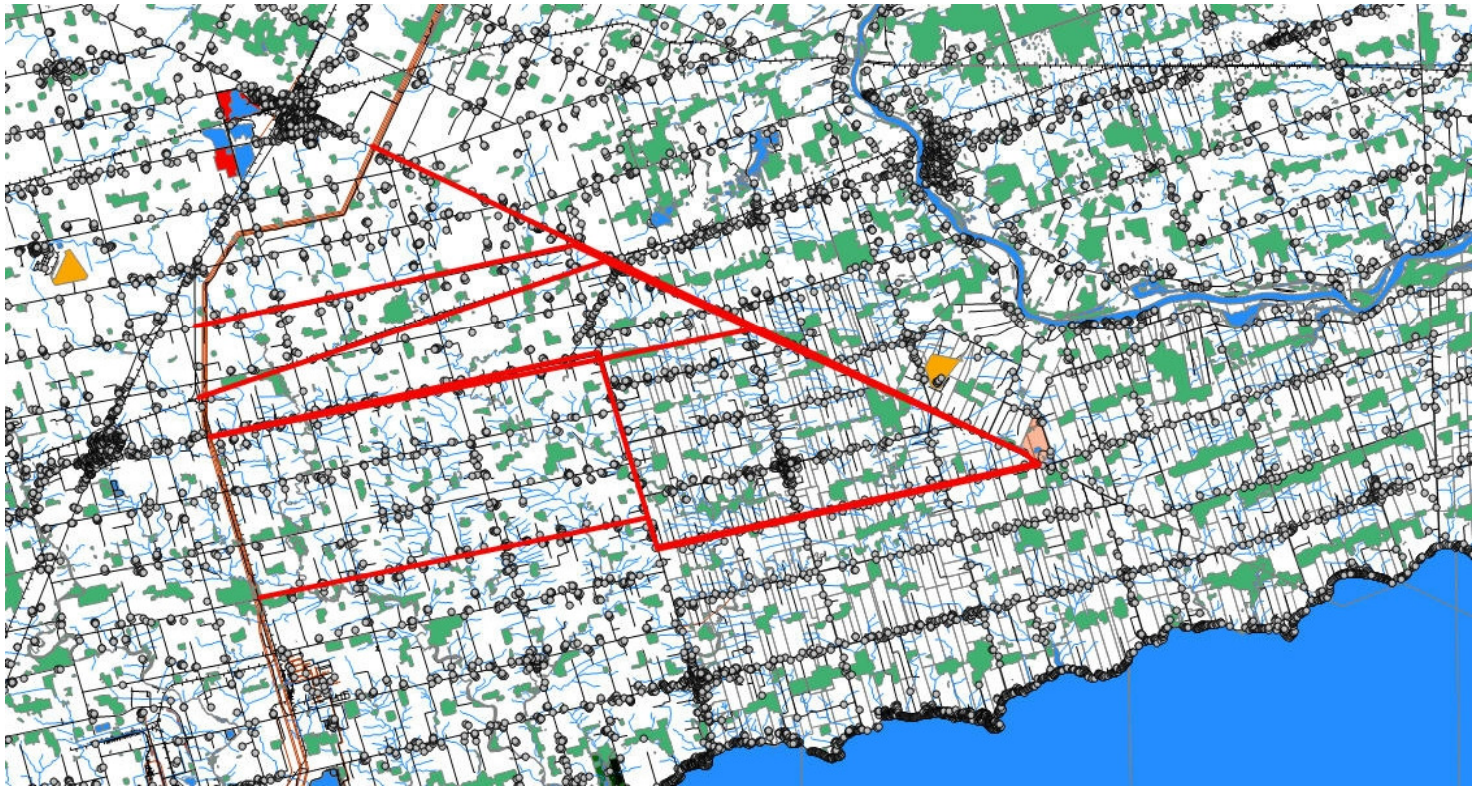
Grand Renewable Energy Park

Current Status

Transmission Route Selection – 6 Routes



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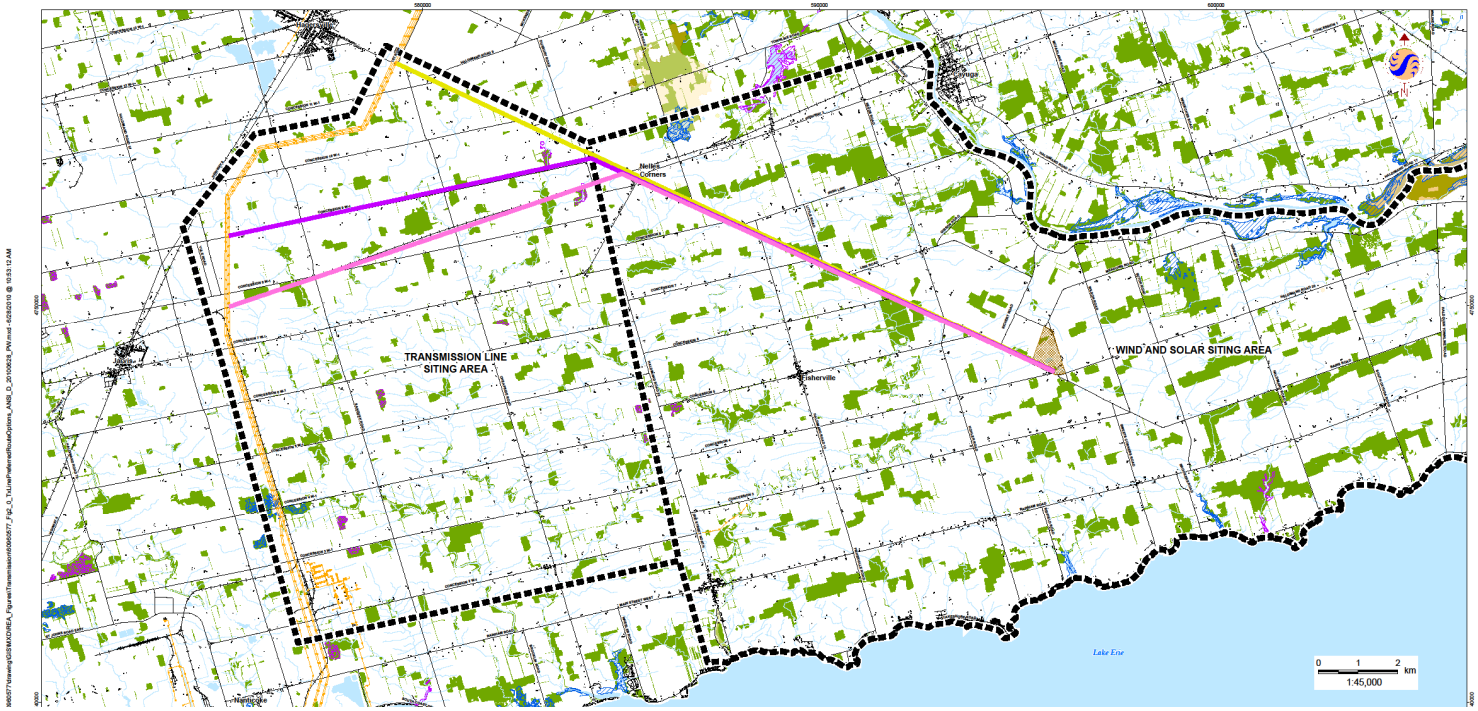
Current Status

Transmission Route Selection – Open House – 3 Routes



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Grand Renewable Energy Park

Current Status

Transmission Route Selection – Overhead vs Underground?

Table 1 Overhead vs Underground Transmission @ 230 KV		
Criteria	**Overhead**	**Underground**
Technology	Proven	New
Reliability	Good	Fair
Repair Time	Short	Long
Decommissioning	Easy	Difficult
Service Contractors	Several	Limited
Ground Temperature	No Change	Elevated
Magnetic Fields	Elevated	@Ground level
ROW Width	Wide	Narrow
Time to Construct	24 months	17 months
Cost	$1M per km	$4M per km

Grand Renewable Energy Park

Current Status

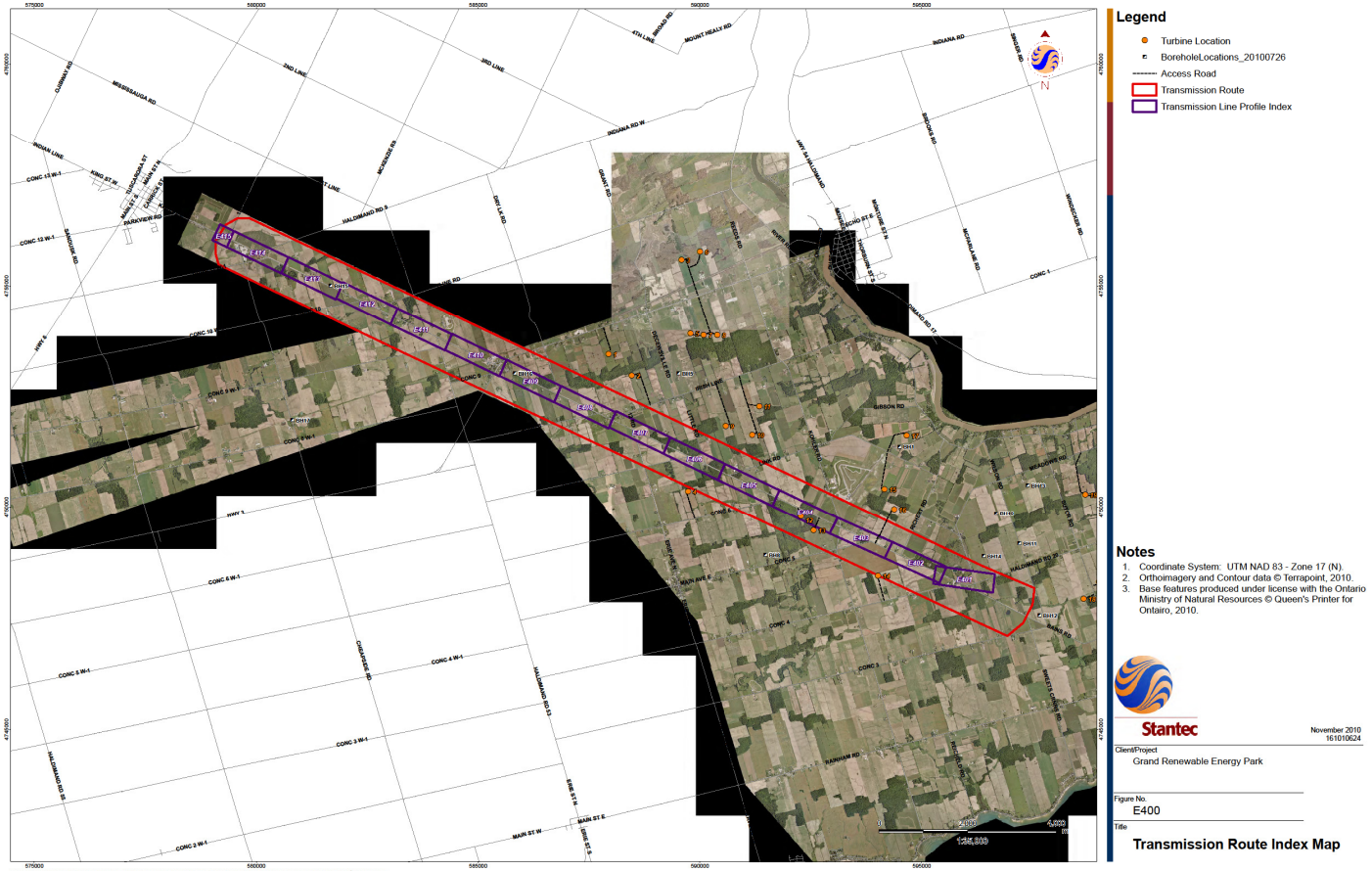
Transmission Route Selection – Which Route?

Table 2 Route Comparison			
Feasibility Criteria	**Haldimand Rd 20**	**Concession Roads**	**Private ROW**
Technology	O/H or U/G	U/G	O/H
Method	Monopole	Ductbank	Lattice
ROW Width	30m	0m	30m
Easements	Some	Not Req'd	Some
Expropriation	No	No	Yes
Existing Infrastructure	Minimal	Yes	None
Safety Clearances (CSA)	Meets	Meets	Meets
Traffic Clear Zone	8.8m	NA	NA
Esthetics	Pleasing	Pleasing	Objectionable
Time to Construct	24 months	17 months	36 months
Cost	$20M	$80M	$18M

Grand Renewable Energy Park

Current Status

Transmission Route Selection – Preferred Route – Haldimand Rd 20.



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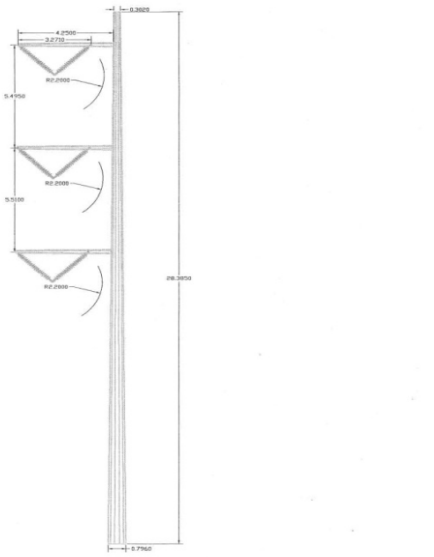
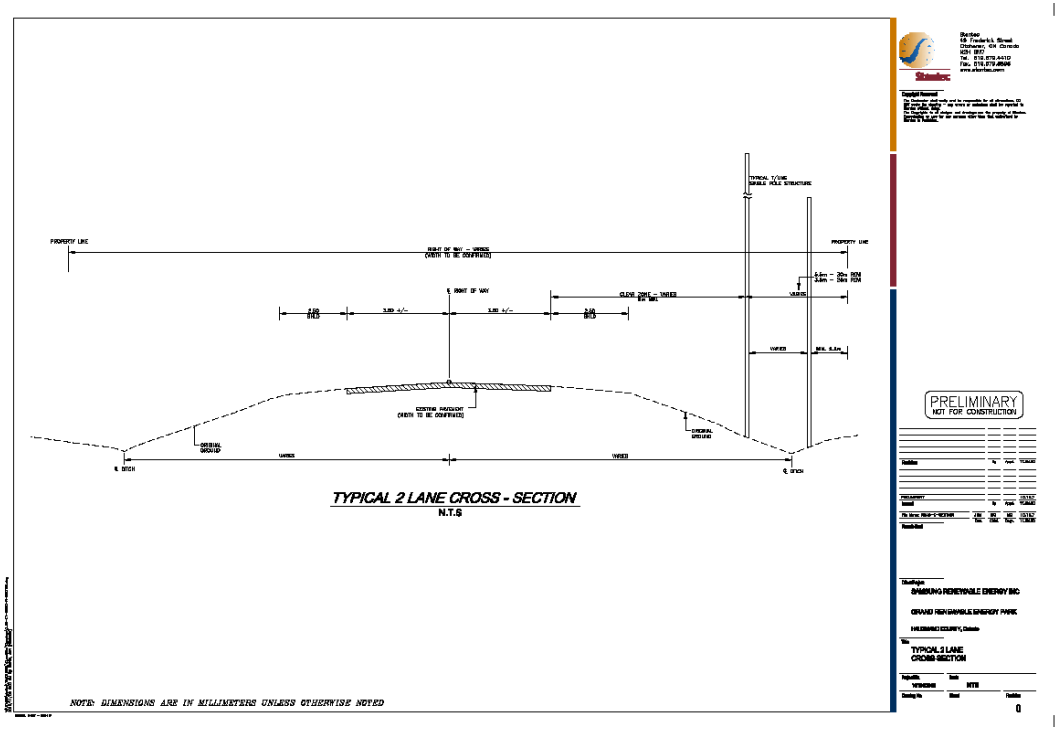
Current Status

Transmission Route Selection – Preferred Route – Haldimand Rd 20.



Tangent Pole (0-2)
12F- Top Dia. 302mm Taper 18.66mm/m Stee
Allowable Yield Stress 448 MPa.
Approximate Dimensions in Meter.



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Approvals Overview

Federal

- *Transport Canada – Aeronautical*
- *Transport Canada – Navigational*
- *NavCanada – Land Use*

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Grand Renewable Energy Park

Approvals Overview

Provincial

- *REA (Ministry of Environment)*
- *Grand River and long Point Conservation Authorities*
- *ESA*
- *IESO/Hydro One*
- *OEB*
- *Ministry of Labour*
- *Ministry of Transportation*

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Grand Renewable Energy Park

Approvals Overview

Municipal

- *Roads and Right of Way Use*
- *Permits:*
  - *Road damage*
  - *Drainage*
  - *Encroachment*
  - *Building*
  - *Access Roads*
  - *Water and Sanitary*
- *Tree Cutting Approval*

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Grand Renewable Energy Park

Haldimand County Role in Approvals

Municipal Involvement

- *Consultation during REA process*
- *Support for OEB Leave to Construct*
- *Consent for use of Right-of-Ways*
  - *Transmission Line*
  - *Collector Lines*

Grand Renewable Energy Park

Schedule

Milestone	Start/End Date	
Land Acquisition	**~June, 2009**	**~October, 2010**
Renewable Resource Analysis	**~October, 2009**	**~April, 2011**
Equipment Procurement	**~January, 2010**	**~May, 2011**
Power Purchase Agreement	**~June, 2010**	**~August, 2010**
Engineering	**~June, 2010**	**~August, 2011**
Permitting / Approvals	**~May, 2010**	**~July, 2011**
Financing	**~March, 2010**	**~May, 2011**
Construction	**~July, 2011**	**~November, 2012**
Commercial Operation (targeted)	**~November, 2012**	**~March, 2013**

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Questions?

Questions?

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Ontario

Ministry of the Environment

Renewable Energy Approval
Consultation Form: municipalities, local authorities
ss. 18(2) Ontario Regulation 359/09
Ce formulaire est disponible en français

PART A: TO BE COMPLETED BY THE APPLICANT BEFORE SUBMITTING TO MUNICIPALITY OR LOCAL AUTHORITY

Section 1 – Project Description

1.1 – Renewable Energy Project					
Project Name (Project identifier to be used as a reference in correspondence): **Grand Renewable Energy Park**					
Project Location: **Haldimand County, Ontario.**					
Same as Applicant Physical Address? ☒Yes ☐No (If no, please provide site address information below					
Civic Address – Street information (includes street number, name, type and direction **55 Standish Court** **Mississauga, ON L5R 4B2** *** Samsung Renewable Energy Inc. Headquarters**				Unit Identifier (i.e. apartment number)	
Survey Address (Not requires if Street information is provided					
Lot and Conc.: Used to indicate location within a subdivided township and consists of a lot number and a concession number.			Part and Reference: Used to indicate location within unorganized territory, and consists of a part and a reference plan number indicating the location within that plan. Attach copy of the plan.		
Lot **Multiple Lot and Conc. Locations (see attached documents)**	Conc.		Part **Multiple locations (see attached documents)**	Reference Plan	
Location Information *(includes any additional information to clarify physical location)(e.g. municipality, ward/ township)* **Project Location is generally bounded by Townline Road to the north, Haldimand Road 20 to the west, the Grand River to the east and Lake Erie to the south**					
Geo Reference : **Southeast Corner of Study Area**					
Map Datum	Zone	Accuracy Estimate	Geo Referencing Method	UTM Easting	UTM Northing
NAD83	**17**	**Sub meter**	**Arc GIS 9.3**	**615873.86**	**4745410.01**

Project Phasing *(outline construction, operation and decommissioning activities)*

Key Project Activities

Project Phase	Activities
Construction	**Turbine and Solar Sites**
	Delineation of temporary work areas
	Access road construction
	Completion of necessary site grading
	Installation of tower and panel foundations
	Installation of crane pads
	Tower/turbine erection and panel installation
	Installation of step-up transformer and required wiring
	Installation of collector lines, usually parallel to access roads
	Reclamation of temporary work areas
	Site landscaping (final grading, topsoil replacement, etc.)
	Electrical Transmission Sites
	Preparation of laydown area
	Installation of substation and connection with grid
	Construction of operations and maintenance building
	Reclamation of temporary work areas
	Off-Site Activities
	Installation of collector lines and transmission line in municipal road right of way
Operation	**Turbine and Solar Sites**
	Preventative maintenance
	Unplanned maintenance
	Meter calibrations
	Grounds keeping
	Electrical Transmission Sites
	Preventative maintenance for substation
	Unplanned maintenance for substation
	Remote wind farm condition monitoring
	Operations and maintenance building maintenance
	Off-Site Activities
	Electrical line maintenance
Decommissioning	**Turbine and Solar Sites**
	Removal of turbine and solar panel infrastructure
	Removal of step-up transformer
	Site grading (dependent upon new proposed use)
	Possible removal of access roads dependent upon agreement with property owner
	Possible excavation and removal of collector lines depending upon agreement with property owner
	Off-Site Activities
	Possible removal of collector system and transmission line in municipal right of way (remove wires and poles)
	Disconnection of substation from provincial grid
	Removal of substation

1.2 - Environmental Context

Describe any negative environmental effects that may result from engaging in the project *(consider construction, operation and decommissioning activities.)*

The potential negative effects that may result from engaging in the Project have been fully described within the attached reports. Specifically, the attached reports address the following:

Construction Plan Report
Sets out a description of the details of the construction activities, location and timing of activities, any negative effects which may result from the activities, and mitigation measures in respect of the negative effects. Site plans during the construction phase have also been provided.

Design and Operations Report
Sets out a site plan of the Project during the operational phase of the Project, conceptual plans/descriptions detailing the operational activities associated with the Project, an environmental effects monitoring plan in respect of any negative environmental effects that may result from operation of the Project, and a response plan setting out the actions for dealing with/informing stakeholders during operation of the Project.

Decommissioning Plan Report
Sets out a description of the decommissioning activities including pprocedures for dismantling the facility, activities related to restoration of land and water negatively affected, and procedures for managing excess materials and waste.

Project Description Report
Provides a summary of the above noted reports including information such as the energy sources to be used, the activities to be engaged in, the associated potential negative effects, and site plans for the Project.

Propose early avoidance/prevention/mitigation concepts and measures

Avoidance through proper siting of the Project has been the most important preventative measure used for the Project including adherence to regulated setbacks. All proposed avoidance, mitigation, and monitoring plans are detailed in the above noted reports including proposed contingency plans (Design and Operations Report) to be implemented if monitoring identifies negative effects associated with the Project.

1.3 – Renewable Energy Generation Facility

Type of Facility / Operation *(select all that apply & complete all appropriate sections)*

☒Wind Facility (Land Based)
☐Wind Facility (Off Shore)
☐Biogas Facility (Anaerobic Digesters
☐Biomass Facility (Thermal Treatment)
☐Biofuel Facility
☒Solar Power Voltaic Facility
☐Other describe:
☐Class (if applicable):

Name Plate Capacity	*Expected Generations*	Service Area	Total Area of Site (hectares)
253.1 MW	***N/A***	**South western Ontario**	**21393.39 Ha**

Provide a description of the facilities equipment or technology that will be used to convert the renewable energy source or any other energy source to electricity.

Project components are detailed in Section 2.3 of the Project Description Report. In general, the Project will consist of 69 Siemens model SWT-2.3 wind turbines (the majority de-rated to 2.221 MW nameplate capacity), approximately 325 hectares of solar panels, and the creation of a 19 km long transmission line which will connect the Project to the provincial grid.

1.4-Renewable Energy Generation Activities

Describe the activities that will be engaged in as part of the renewable energy project:

Project activities are detailed above (Key Project Activities under Project Phasing). This includes activities during the construction, operation, and decommissioning stages of the Project.

Section 2 – Supporting Documents

2.1- Requirement	Name of Draft Document distributed for consulting	Date available to Municipal or Local Authority Contact
DRAFT Project Description Report	**DRAFT Project Description Report**	**February 16, 2011**
DRAFT Design and Operations Report	**DRAFT Design and Operations Report**	**February 16, 2011**
DRAFT Construction Plan Report	**DRAFT Construction Plan Report**	**February 16, 2011**
DRAFT Decommissioning Plan	**DRAFT Decommissioning Plan**	**February 16, 2011**
List of Other Documents	**None**	

Location where written draft reports can be obtained for public inspection *(physical location for viewing and the applicants project website if one is available)*:

To be determined prior to the issuance of the Notice of Public Meeting (at least 60 days before the Public Meeting). Public viewing locations will be indicated in the Notice of Public Meeting.

Section 3 – Applicant Address and Contact Information

3.1 Applicant Information (Owner of project/facility)	
Applicant Name *(legal name of individual or organization as evidenced by legal documents)* **Samsung Renewable Energy Inc.**	Business Identification Number **85118 086 RT0001**
Business Name *(the name under which the entity is operating or trading - also referred to as trade name)*	☒ same as Applicant Name
Civic Address- Street information *(includes street number, name, type and direction)* **55 Standish Court** **Mississauga, ON L5R 4B2**	Unit Identifier *(i.e. apartment number)*

Survey Address (Not required if Street Information is provided)

Lot and Conc.: used to indicate location within a subdivided township and consists of a lot number and a concession number.	Part and Reference: used to indicate location within an unsubdivided township or unsurveyed territory, and consists of a part and a reference plan number indicating the location within that plan. Attach copy of the plan.

Lot	Conc.	Part	Reference Plan

Municipality	**County/District**	**Province/State**	**Country**	**Postal Code**

PART B: TO BE COMPLETED BY THE MUNICIPALITY OR LOCAL AUTHORITY

Section 4 – Municipal or Local Authority Contact Information (check the one that applies)

Local Municipality (include each local municipality in which project is situated ☐ Yes ☐ No					
Name of Municipality	Address	Phone	Clerk's Name	Clerk's Phone/Fax	E-mail Address
Upper Tier Municipality (include each upper tier municipality in which project location is ☐ Yes ☐ No					
Name of Municipality	Address	Phone	Clerk's Name	Clerk's Phone/Fax	E-mail Address
Local road area (include each local roads area in which project location is situated ☐ Yes ☐ No					
Name of local roads board	Address	Phone	Secretary-treasurer's Name	Secretary-treasurer's Phone/Fax	E-mail Address
Board Area (include each board area in which project location is situated) ☐ Yes ☐ No					
Name of Local Service Board	Address	Phone	Secretary's Name	Secretary's Phone/Fax	E-mail Address

Section 5: Consultation Requirement

5.1 - Project Location
Provide comment on the project location with respect to infrastructure and servicing.
5.2 – Project Roads
Provide comment on the proposed project's plans respecting proposed road access.
Identify any issues and provide recommendations with respect to road access
Provide comment on any proposed Traffic Management Plans
Identify any issues and provide recommendations with respect to the proposed Traffic Management Plans

5.3 – Municipal or Local authority Service Connections
Provide comment on the proposed project plans related to the location of and type of municipal service connections, other than roads.
Identify any issues and provide recommendations with respect to the type of municipal service connections, other than roads.
5.4 – Facility Other
Identify any issues and recommendations with respect to the proposed landscaping design for the facility Provide comment on the proposed project plans for emergency management procedures / safety protocols.

Identify any issues and recommendations with respect to the proposed emergency management procedures /safety protocols.
Identify any issues and recommendations with respect to any Easements or Restrictive Covenants associated with the Project Location
5.5 Project Construction
Identify any issues and recommendations with respect to the proposed rehabilitation of any temporary
Identify any issues and recommendations with respect to the proposed location of fire hydrants and connections to existing drainage, water works and sanitary sewers
Identify any issues and recommendations with respect to the proposed location of buried kiosks and above-grade utility vaults
Identify any issues and recommendations with respect to the proposed location of existing and proposed gas and electricity lines and connections
Provide comment on the proposed project plans with respect to Building Code permits and licenses.
Identify any issues and recommendations related to the identification of any significant natural features and water bodies within the municipality or territory.

Identify any issues and recommendations related to the identification any archaeological resource or heritage resource.

Friedl, Susanne

From: Kozak, Mark
Sent: Tuesday, February 15, 2011 2:59 PM
To: JAMES GOODRAM
Cc: 'Adam Rosso'
Subject: Grand Renewable Energy Park - Municipal Consultation Form
Attachments: CoverPage.pdf

Good afternoon Mr. Goodram,

Please find the attached cover letter from Samsung regarding the issuance of the REA Municipal Consultation Form and Draft REA Reports to Haldimand County. Below, you will find a link to our secure FTP site where you can download the Draft REA Reports and Consultation Form. Hard copies of the reports and Consultation Form are currently being delivered to your office.

Please do not hesitate to contact me if you have any questions.

Regards,
Mark

Automatic Login

FTP site link: ftp://s0301065810:9569989@ftptmp.stantec.com
By clicking on the link above (or pasting the link into Windows Explorer) you will be automatically logged into your FTP site.

Manual Login

FTP link: ftp://ftptmp.stantec.com
Login name: s0301065810
Password: 9569989
Disk Quota: 2GB
Expiry Date: 3/1/2011

If your site has not expired and you require a onetime 2 week extension, please contact the IT Service Center.

Mark Kozak, BES
Environmental Scientist
Stantec
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Fx: (519) 836-2493
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mark.kozak@stantec.com
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Samsung Renewable Energy

Samsung Renewable Energy Inc.
55 Standish Court, 9th Floor
Mississauga, Ontario L5R 4B2

February 15, 2011

Haldimand County
45 Munsee Street North
P. O. Box 400
Cayuga, Ontario N0A 1E0

Attention: Mr. James Goodram

RE: Grand Renewable Energy Park Municipal Consultation Package

Dear Mr. James Goodram;

As per the requirements of Ontario Regulation 359/09, please find enclosed the municipal consultation forms for the Grand Renewable Energy Park (Project). The submission of the municipal consultation forms initiates the commencement of the 90 day municipal review. In addition to the municipal consultation forms the following reports are also enclosed:

- Project Description Report
- Construction Plan Report
- Design and Operations Report
- Decommissioning Report

Samsung Renewable Energy Inc. would also like to offer a meeting with Municipal staff to present a summary of the reports and identify next steps. If you have any questions regarding our Project, please do not hesitate to contact the undersigned at (905) 285-1872 or via email at a.rosso@samsungrenewableenergy.ca.

All the best,
Samsung Renewable Energy Inc.

Adam Rosso

Friedl, Susanne

From: Adam Rosso <a.rosso@samsungrenewableenergy.ca>
Sent: Wednesday, April 13, 2011 10:34 AM
To: Paul Heeg
Cc: Lloyd Payne; JAMES GOODRAM; ???; Marnie Dawson; Kozak, Mark
Subject: RE: Samsung's Grand Energy Renewable Park - Municipal Consultation Form
Attachments: image001.jpg

Follow Up Flag: Follow up
Flag Status: Flagged

Hi Paul;

We haven't provided a package to Haldimand Hydro as of yet because we're waiting for MNR sign off. Once we get confirmation from them we'll release the full package to all stakeholders including Haldimand Hydro.

James, I'd like to remind you that you have lots of time to complete the municipal consultation form. We are providing Haldimand County nearly two to three times the required duration to be able to have an early review of the documents already provided. I'd like to point out that the package we've current sent to the municipality is not the full REA package. The package we provided to the county included 4 documents. Those documents are the specific reports required under Reg. 359 that the municipality has an additional 30 days to review prior to providing a complete package to all stake holders, of which Haldimand Hydro is a member. In our case we are providing more than 30 days.

Thanks Kindly;

SAMSUNG
Renewable Energy Inc.

Adam Rosso, P.Eng., M.Sc.
Manager, Business Development
C: 416.389.8942
T: 905.285.1872
E: a.rosso@samsungrenewableenergy.ca

From: Paul Heeg [mailto:pheeg@hchydro.ca]
Sent: Wednesday, April 13, 2011 9:26 AM
To: Adam Rosso
Cc: Lloyd Payne; JAMES GOODRAM
Subject: Samsung's Grand Energy Renewable Park - Muncipal Consultation Form
Importance: High

Hi Adam,

On March 8, 2011 Haldimand County Hydro had been notified by Haldimand County's Economic Development & Tourism Division about a Samsung Grand Energy Renewable Park - Municipal Package for the purposes of a REA Municipal Consultation Form review.

I had requested a copy of the package from Haldimand County on March 8, 2011 for participation but did not receive one.

Haldimand County (James Goodram, Manager) has informed me that Haldimand County Hydro should have received a package directly from Samsung.

This is a request for the referenced package so Haldimand County Hydro has an opportunity to provide comments to Haldimand County as part of the REA Municipal Consultation Review.

Please contact me if you have any questions.

Regards,

Paul Heeg
Engineering Manager
Haldimand County Hydro Inc.
(905) 765 5211 x 2247

Stantec Consulting Ltd.
70 Southgate Drive Suite 1
Guelph ON N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

July 7, 2011

File: 160960577

Haldimand County
45 Munsee Street North
P.O. Box 400
Cayuga, Ontario N0A 1E0

Attention: **Mr. James Goodram, Manager – Economic Development and Tourism**

Reference: **Grand Renewable Energy Park Municipal Consultation Package**

Dear: Mr. Goodram;

Thank you for your continued involvement in the development of the Grand Renewable Energy Park (the Project). I am writing to follow-up on various Project related correspondence that was previously provided to you.

On February 15, 2011, you were sent a cover letter, four Draft REA Reports (Project Description Report, Construction Plan Report, Design and Operations Report, and Decommissioning Plan Report) and the Municipal Consultation Form for the Project. This information was provided at the commencement of the 90-day municipal review period as per the requirements of Ontario Regulation 359/09. We provided you with the Municipal Consultation Form and four Draft REA Reports with the intent of receiving comments related to public works type matters (e.g. public roads, service connections, construction concerns, etc.) from the County.

We are sending this follow-up letter, as the 90 day municipal review period ended on May 15, 2011, and we have not received any written comments from Haldimand County related to the Municipal Consultation Form. For your convenience, we have attached a copy of the Municipal Consultation Form that was provided to you on February 15, 2011. Please let us know if you have any comments regarding the Project by filling out the attached form.

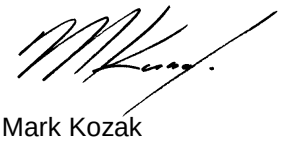
In addition, we are in the process of completing Draft REA Reports for public review and comment. We anticipate the release of these reports for a 60-day public review in the next few months. For your information, we will be providing a copy of the reports to you at that time.

If you have any questions regarding the Project, please do not hesitate to contact the undersigned at 519-836-6050 or via email at mark.kozak@stantec.com. Thank you for your time and we appreciate your comments.

Reference: Grand Renewable Energy Park Municipal Consultation Package

Sincerely,

STANTEC CONSULTING LTD.



Mark Kozak
Environmental Scientist
Tel: (519) 836-6050
Fax: (519) 836-2493
mark.kozak@stantec.com

Attachment: Municipal Consultation Form – February 15, 2011

CC. Adam Rosso, Samsung Renewable Energy Inc.

Stantec Consulting Ltd.
Suite 1 - 70 Southgate Drive
Guelph ON N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

July 19, 2011
File: 160960577

Haldimand County
45 Munsee Street North
PO Box 400
Cayuga ON N0A 1E0

Attention: Evelyn Eichenbaum, Clerk

Dear Ms. Eichenbaum:

Reference: Grand Renewable Energy Park – Release of Draft Renewable Energy Approval Reports

Samsung C&T (Samsung), Pattern Energy (Pattern), and Korea Power Electric Corporation (KEPCO) (together, these companies referred to herein as "SPK") are proposing to develop, construct, and operate a wind and solar energy project as part of the Grand Renewable Energy Park, in Haldimand County. SPK is planning to engage in this renewable energy project in respect of which the issuance of Renewable Energy Approvals (REA) is required. The proposal to engage in the project and the project itself are subject to the provisions of the *Environmental Protection Act (ACT)* Part V.0.1 and Ontario Regulation 359/09 (O. Reg. 359/09).

On behalf of SPK, Stantec is pleased to provide you with a copy of the Draft REA Reports for your review and comment. As required under O. Reg. 359/09 and the Ministry of Natural Resources (MNR) *Approval and Permitting Requirements Document (APRD) for Renewable Energy Projects*, this Draft REA Reports package includes the following draft reports:

- Project Description Report – as outlined in item 10 of Table 1 of O. Reg. 359/09;
- Natural Heritage Assessment Report – as required under sections 24, 25, 26, 27 and 28 of O. Reg. 359/09 and section 6.3 of the MNR's Requirements Document;
- Construction Plan Report – as outlined in item 1 of Table 1 of O. Reg. 359/09 and section 6.7 of the MNR's Requirements Document;
- Design and Operations Report – as outlined in item 4 of Table 1 of O. Reg. 359/09 and section 6.6 of the MNR's Requirements Document;
- Decommissioning Plan Report – as outlined in item 3 of Table 1 of O. Reg. 359/09 and section 6.8 of the MNR's Requirements Document;
- Environmental Impact Study – as required under section 38 of O. Reg. 359/09;
- Wind Turbine Specifications Report – as outlined in item 13 of Table 1 of O. Reg. 359/09;
- Archaeological and Heritage Reports - as required under sections 19, 20, 21, 22 and 23 of O.Reg. 359/09;

Reference: Grand Renewable Energy Park – Release of Draft Renewable Energy Approval Reports

- Water Body and Water Assessment Report - as required under sections 29, 30 and 31 of O. Reg. 359/09. Further information related to potential effects and mitigation measures to water bodies, as required under sections 39, 40, 44, and 45 of O. Reg. 359/09 is provided in the Water Body and Water Assessment Report, Construction Plan Report and Design and Operations Report; and,

- Project Summary Report – as outlined in section 17. (1)3 of O. Reg. 359/09.

Copies of the MNR's confirmation letter of the Natural Heritage Assessment/Environmental Impact Study and the Ministry of Tourism and Culture written comments/confirmation have also been provided within the package.

As described in the attached Notice of Public Meeting, these reports are being provided for review and comment from **July 23, 2011 to September 22, 2011**. To learn more about the project proposal, the public meeting, and to communicate questions regarding the attached material, please contact the project team via e-mail at GrandRenewable@SamsungRenewableEnergy.ca or by phone at 1-877-536-6050 or 1-519-836-6050. Written comments can also be directed to the undersigned.

We respectfully request all comments to be provided by no later than September 22, 2011 for their inclusion within SPK's Renewable Energy Approval application.

Sincerely,

STANTEC CONSULTING LTD.

Mark Kozak, BES
Project Manager
Tel: (519) 836-6050
Fax: (519) 836-2493
mark.kozak@stantec.com

Attachment: Draft Renewable Energy Approval Report package
Notice of Public Meeting

c. James Goodram, Haldimand County
Adam Rosso, Samsung Renewable Energy Inc.

Meeting Notes

Grand Renewable Energy Park – Haldimand County Meeting

Stantec

Date/Time:	August 26, 2011 / 10 AM
Place:	Haldimand County
Next Meeting:	N/A
Attendees:	Adam Rosso, Andrew Moores, James Goodram, Lidy Romanuk, Rick Smith, Zach Gable, Drew Cherry, Michal Masior, Kris Fanklin, Paul Heeg, Judy Brown, Tim Dickhout, Dean Stewart, Nasir Mahmood, Alan Gee, Tyson Haedrich, Mark Kozak, Hagen Lee
Absentees:	
Distribution:	All

Item:	**Action:**
Municipal Consultation Form	
County provided a copy and an overview of their comments with respect to the Municipal Consultation Form. A brief discussion was held to review the key concerns of the County. Comments are in draft form and will be provided to Council for endorsement before being officially provided to Samsung/Stantec (earliest date of Sept 19). Samsung/Stantec will begin to prepare written responses to the draft comments prior to receipt of endorsed comments from Council (responses will be revised based on Council revisions to the comments). Samsung/Stantec noted that some comments cannot be addressed during the REA stage, but will be addressed during detailed design once an EPC contractor has been confirmed. County agreed with this commitment and approach.	County to provide a copy of the revised comments to Samsung prior to Council endorsement.
GRCA Comments	
GRCA will provide written comments at a later date. Initial concerns are related to impacts to wetlands and variations in the boundaries compared to GRCA data. Stantec committed to setting up a meeting with GRCA (and LPRCA) within the next two weeks to further review the conservation authorities concerns (may include additional site visits). GRCA requested digital copies of the GIS files of the natural features layers to compare to GRCA data. GRCA will also have timing windows for any required in-water works.	Stantec to set up a meeting with GRCA and LPRCA within the next two weeks. Stantec to send GIS shape files of natural feature layers to GRCA.

Preliminary Construction Drawings

County requested preliminary construction drawings for initial review. Eight sets of full drawings will be required once finalized. If available at the preliminary stage, entrance details from County roads are to be provided.

Samsung will provide a copy (hard and electronic) to the County for initial review.

Right-of-way Investigations

Other infrastructure is located within the County road rights-of-way and Samsung will be required to conduct investigations of this infrastructure. Other users include Bell, Union Gas, etc. and meetings may be required with these providers. The County will provide a list of utility providers to Samsung that were involved with NextEra's adjacent project.

County to provide a list of utility providers to Samsung that were involved with NextEra's adjacent project.

Road Upgrades and Construction Updates

The County provided a copy of the Haldimand County Design Criteria for road upgrades that will need to be adhered to by Samsung during road upgrade work. The County is upgrading staff resources to facilitate a construction update process. County requested that Samsung assist in the development of a plan to provide construction related updates to the County throughout the construction process.

Samsung committed to assisting with the development of a construction update plan. This commitment to be included in the REA Reports.

Haldimand Road 20

The County confirmed that it has no plans to expand the road surface of Haldimand Road 20 in the foreseeable future.

Additional Permits

The County requested that Samsung provide copies of additional permits received from other agencies so that they can be kept on file (e.g. MTO, GRCA, etc.)

Samsung will provide copies of additional permits on an on-going basis.

Haldimand County Hydro

Haldimand County Hydro was present, but indicated they would not be commenting through the Municipal Consultation Form as discussions related to the transmission line are being dealt with under a separate

regulatory process.

The meeting adjourned at 12 PM.
The foregoing is considered to be a true and accurate record of all items discussed. If any discrepancies or inconsistencies are noted, please contact the writer immediately.

STANTEC CONSULTING LTD.

Mark Kozak, BES
Environmental Scientist
mark.kozak@stantec.com

Renewable Energy Approval Consultation Form: Municipalities, Local Authorities

****Municipal Consultation Process for Haldimand County****

Please note once the Haldimand County Renewable Energy Review Team completes the Renewable Energy Approval – Municipal Consultation Form the process is to submit a report to Council seeking their approval of the comments included on the form.

The Grand Renewable Energy Park project, being proposed within Haldimand County will require the use of County road allowances for the collection and transmission of electricity generated as a result of these private, for-profit energy projects. Haldimand County will require compensation for said use of County road allowances; the amount of which is to be negotiated and approved by Council prior to Haldimand County permitting works within County Road allowances.

It should be noted that in no way does the submission of the attached Municipal Consultation form constitute the completion of municipal involvement or approval of the Grand Renewable Energy project. This is simply the end of the first phase of the development approval process and staff will look forward to continuing the positive professional working relationship between the company and the County.

In addition concerns were raised by Haldimand County Council and forwarded to the proponent via email on August 24, 2010. These concerns have yet to be fully addressed by the proponent. Haldimand County concerns are as follows:

1. Council has requested greater details relating to the cutting of woodlots and proposed measure for replacement of these environmental features. Also how other features including wetlands and significant species will be impacted/mitigated.

2. Evaluation of the possible impacts of the anchoring of wind turbines to bedrock and whether this provides a conduit for the transmission of vibration to other properties.

3. The relationship of the proposed electrical transmission corridors to the County's Trail Master Plan and opportunities/constraints that may exist or occur.

4. Clarification on the location of the transmission corridor.

5. Confirmation that the decommissioning plan, funding mechanism and report will include the capital works in the transmission corridor.

6. The impact of construction traffic and access from the County Road system to the project components and how this will be addressed.

7. As part of the economic impact assessment conduct a complete comparison of the difference between the project and the use of the land for agricultural purposes to Haldimand County. Also provide a breakdown of the type of jobs to be created.

Since the original comments were forwarded on August 24, 2010, additional concerns and issues have been raised by Council and the community. These are as follows:

1. The impact this project will have on tourism.

2. The impact on the property values of land adjacent to project.

3. Additional information and studies to show how the setback of a wind turbine of 550 metres was determined.

4. A request for studies that demonstrate how high or low pitch frequencies affect the nervous and mobility system and the long term affects for human and animal health.

5. A request for the results of studies on how wild life (birds, deer, fox, rabbit, wolf, mice, earthworms, insects etc.) are affected in the immediate and surrounding areas where wind turbines are already in place.

6. A request for confirmation that upon the termination of the wind turbines projects the land involved in the projects will revert back to agriculture land from industrial.

7. Demonstrated outcomes of the consultation with the First Nations on all renewable energy projects.

5.1 Project Location

Provide comment on the project location with respect to infrastructure and servicing

Haldimand County Review Team Comments

All drawings and documents reports shall be submitted in full size/original format. Drawings for approvals shall be dated, stamped and signed.

Detailed as constructed drawings will be required by the county for all infrastructure located within the right of way.

SOLAR

Wilson Road (mud road) north of Haldimand Road 20 is proposed to be closed to accommodate the operation of the solar facility, further discussions has taken place for road closure/lease of the Road Allowance. Please note closure of Wilson Road will require the proponent to proceed through the road closure process through the Haldimand County Clerks Office. This issue will need to be resolved prior permitting/construction. Ultimately, access must remain in place to existing residences and entrances.

Investigation into the impact of the proposed berm /fencing regards to potential snow drifting onto Haldimand Road 20 must be addressed.

WIND

Please see comments in attached site tour notes.

Turbines # 15, 17, 44, have entrances off of mud roads. Roads will be required to be upgraded to County standard to allow for emergency services access during and after construction. Refer to Appendix B of the Haldimand County Design Criteria.

Additionally, the Haldimand County Renewable Energy Review team requests that all turbines located near urban areas are reviewed to determine appropriate setbacks from urban boundaries.

Ramsey Road extension (south Dunnville Airport) is proposed to be closed to accommodate the operation of the wind facility, further discussions has taken place for road closure/lease of the Road Allowance. Please note closure of the unopened road will require the proponent to proceed through the Haldimand County Clerks Office. This issue will need to be resolved prior permitting/construction.

The adjacency and overlapping of part of this project with NextEra's "Summerhaven Wind Energy Centre" project may be a potential source of cumulative noise impacts. In this situation, the geographic boundaries of the two projects may have to be jointly drawn and joint noise modelling may be required to be completed to ensure that

cumulative noise impacts are appropriately quantified and mitigative measures are considered. It must also be ensured that these measures actually work and wind turbines in the two projects are located in such a manner that they do not accentuate on another's noise.

WIND & SOLAR

In view of the project's potential to generate noise, a Noise Study Report must be prepared to ensure that all required certificates of approval are obtained and that the project is in compliance with MOE's noise guidelines.

In view of the project's potential to generate flicker/reflection effect, a reflection study should also be completed, and mitigation measures adopted to minimize potential distress to the public.

TRANSMISSION

Locations of poles should be investigated to minimize the impacts on woodlots and demonstrate consideration to the existing residences, private property constraints, as well as, existing utility infrastructure.

The alignment of the transmission line should avoid the removal of trees from existing woodlots.

In order to provide a clear zone and to facilitate in the regular roadway maintenance Haldimand County prefers that poles be placed on the back side of ditches. Where sufficient clear zone can not be achieved appropriate mitigating measures must be proposed for review.

OPERATION MAINTENANCE BUILDING

Further comments to follow with submission of detailed construction drawings.

WIND & SOLAR

In order to minimize impact on prime agricultural lands, the lowest quality agricultural lands should be used for the proposed wind energy and solar projects.

5.2 Project Roads

Provide comment on the proposed project's plans respecting proposed road access

Haldimand County Review Team Comments

SOLAR

Wilson Road (mud road) north of Haldimand Road 20 is proposed to be closed to accommodate the operation of the solar facility, further discussions has taken place for road closure/lease of the Road Allowance. Please note closure of Wilson Road will require the proponent to proceed through the road closure process through the Haldimand County Clerks Office. This issue will need to be resolved prior permitting/construction. Ultimately, access must remain in place to existing residences and entrances.

WIND

Please see comments in attached site tour notes.

Turbines # 15, 17, 44, have entrances off of mud roads. Roads will require upgrade to allow for emergency services access during and after construction. Refer to Appendix B of the Haldimand County Design Criteria.

Haldimand County requires all access roads to be well signed, as there is a concern that the public might perceive these as concession roads or trails. Labelling of entrances to be addressed at pre-construction phase.

Turbine sites with entrances on different roads other than the parcel address should be noted.

Haldimand County Review team will need to review road entrances and access roads when final design completed. Also where 2 or more road accesses will abut the same road, intersection details will be required. Haldimand

County will be reviewing structures on access roads, and ensure adequate crossing, bridges culverts etc. when final design forwarded.

Haldimand County Review Team will require details of all access roads that have a parallel component adjacent to county roads. The details shall include:

- Plan at scale showing: all relevant dimensions, existing and proposed grades and covering: public right-of-way, roadside ditches, utility locations, proposed access road, proposed collector lines, drainage pattern and extended topographic data of min. 15m to the adjacent land.
- Minimum two (2) cross sections at scale to illustrate grading/drainage design approach (preferable at low and high point).

WIND & SOLAR

In order to determine the extent of damage to roads in Haldimand County and to estimate the restoration costs, pre and post construction road conditions surveys need to be coordinated with Haldimand County. An appropriate agreement and a suitable security should be collected to ensure that the affected roads are restored to pre-construction condition.

Please note all required Haldimand County Permits will not be granted until all requested documents and reports are submitted and approved by Haldimand County.

TRANSMISSION

Pole location should be such that the need for separate entrances is minimized.

OPERATION MAINTENANCE BUILDING

Further comments to follow with submission of detailed construction drawings.

Identify any issues and provide recommendations with respect to road access

Haldimand County Review Team Comments

SOLAR

Wilson Road (mud road) north of Haldimand Road 20 is proposed to be closed to accommodate the operation of the solar facility, further discussions has taken place for road closure/lease of the Road Allowance. Please note closure of Wilson Road will require the proponent to proceed through the road closure process through the Haldimand County Clerks Office. This issue will need to be resolved prior permitting/construction. Ultimately, access must remain in place to existing residences and entrances.

WIND

Haldimand County Entrance permits required for all turbines with the exception of Turbines# 18, 33, 34, 36, 41 and 45. These are located on Highway 3 and under The Ministry of Transportation jurisdiction and will require MTO permits. Entrance permits will require detailed drawings as well as intersection details where applicable.

During the construction phase this project will be putting in place a fairly significant road system in our rural area. Haldimand County requires all access roads to be well signed as there is a concern that the public might perceive these as concession roads/trails. Labelling of entrances to be addressed at pre-construction phase. Access for turbines along the shore of Lake Erie will require additional attention as these roads are frequently narrow and intended to provide local access to the high density of cottage properties that are subject to seasonal traffic variations.

Turbine sites with entrances on different roads other than the parcel address should be noted.

A second access is required due to the number of turbines and length of access road for turbines #1, 3, 6, 8, 54, 69.

Ramsey Road extension (south Dunnville Airport) is proposed to be closed to accommodate the operation of the wind facility, further discussions has taken place for road closure/lease of the Road Allowance. Please note closure of the unopened road will require the proponent to proceed through the Haldimand County Clerks Office. This issue will need to be resolved prior permitting/construction.

There is a half-load restriction on many Haldimand County roads between March 1st and April 30. Also, please note any posted bridge load restrictions. + done that before. exemption.

Please see comments in attached site tour notes.

TRANSMISSION

Pole locations should be such that the need for separate entrances is minimized.
Detailed drawing and further investigation will be required for proposed underground section through Nelles Corners. Particular attention should be given to utility locations, and the preconstruction condition of the existing buildings.

OPERATION MAINTENANCE BUILDING

Further comments to follow with submission of detailed construction drawings.

Provide comment on any proposed Traffic Management Plans

Haldimand County Review Team Comments

The Traffic Management plan has not been provided to the Haldimand County Renewable Energy Review Team. When provided, the Haldimand County Renewable Energy Review Team requests the ability to review and provide comments.

The Traffic Management plan must be submitted prior to the Road Condition survey being completed.

Please note all required Haldimand County Permits will not be granted until all requested documents and reports are submitted and approved by Haldimand County.

Please see comments above and in attached site tour notes.

Identify any issues and provide recommendations with respect to proposed Traffic Management Plans

Haldimand County Review Team Comments

The Traffic Management plan has not been provided to the Haldimand County Renewable Energy Review Team. When it is provided, the Haldimand County Renewable Energy Review Team requests the ability to review and provide comments.

Please see comments in attached site tour notes.

Please note all required Haldimand County Permits will not be granted until all requested documents and reports are submitted and approved by Haldimand County.

5.3 Municipal or Local Authority Service Connections

Provide comment on the proposed project plans related to the location of and type of municipal service connections, other than roads.

Haldimand County Review Team Comments

Please see comments in attached site tour notes.

General comments for SWM:
Note - Haldimand County commonly uses the Mount Hope precipitation gauge and IDF parameters as per section 'H' of Haldimand County Design Criteria. SWM calculations should be completed for the entire solar facility and

MK

data should be provided to mitigate the pre to post development flows.

SOLAR
The site plan for the proposed solar farm should accommodate existing drainage patterns, and have no adverse affect on flows on private property or Haldimand Road 20. SWM should be completed for the entire solar facility and data should be provided to mitigate the pre to post development flows.

WIND
Detailed as constructed drawings will be required by the county for all infrastructure located within the Right of Way.

TRANSMISSION
Haldimand County Review Team will review and comment on transmission information when final design is provided.

Detailed as constructed drawings will be required by the county for all infrastructure located within the right of way. Particular attention should be given to the area surrounding Nelles Corners.

OPERATION MAINTENANCE BUILDING
Not applicable –Development Engineering Group

Please note all required Haldimand County Permits will not be granted until all requested documents and reports are submitted and approved by Haldimand County.

Identify any issues and provide recommendations with respect to the type of municipal service connections, other than roads.

Haldimand County Review Team Comments

Further comments will follow with submission of detailed construction drawings.

As Above.

5.4 Facility Other

Identify any issues and recommendations with respect to the proposed landscaping design for the facility

Haldimand County Review Team Comments

SOLAR
Investigation into the impact of the proposed berm /fencing regards to potential snow drifting onto Haldimand Road 20 must be addressed. Mitigation measures should be provided to minimize the distraction of drivers traveling along Haldimand Road 20.

WIND
Consideration shall be given for the replacement of trees removed in the creation of access roads.

TRANSMISSION
Locations of poles should be investigated to minimize the impacts on woodlots and demonstrate consideration to the existing residences, private property constraints, as well as, existing utility infrastructure.

The alignment of the transmission line should avoid the removal of trees from existing woodlots.

OPERATION MAINTENANCE BUILDING
Further comments with follow with submission of detailed construction drawings.

Please see comments in attached site tour notes.

Provide comment on the proposed project plans for emergency management procedures/safety protocols

Haldimand County Review Team Comments

SOLAR

Investigation into the impact of the proposed berm /fencing regards to potential snow drifting onto Haldimand Road 20 must be addressed. Mitigation measures should be provided to minimize the distraction of drivers traveling along Haldimand Road 20.

WIND

Turbines # 15, 17, 44, have entrances off of mud roads. Roads will be required to be upgraded to County standard to allow for emergency services access during and after construction. Refer to Appendix B of the Haldimand County Design Criteria.

Where there are several turbines located on one access, Haldimand County requests a 2nd access for emergency purposes in the event the primary access is blocked. A second access is required due to the number of turbines and length of access road for turbines #1, 3, 6, 8, 54, 69.

Haldimand County requires all access roads to be well signed, as there is a concern that the public might perceive these as concession roads or trails. Labelling of entrances to be addressed at pre-construction phase.

Turbine sites with entrances on different roads other than the parcel address should be noted.

As well turn-around planned for construction should be left in place for emergency purposes.

TRANSMISSION

In order to provide a clear zone and to facilitate in the regular roadway maintenance Haldimand County prefers that poles be placed on the back side of ditches. Where sufficient clear zone can not be achieved appropriate mitigating measures must be proposed for review.

OPERATION MAINTENANCE BUILDING

Further comments with follow with submission of detailed construction drawings.

Identify any issues and recommendations with respect to the proposed emergency management procedures/safety protocols

Haldimand County Review Team Comments

SOLAR

Investigation into the impact of the proposed berm /fencing regards to potential snow drifting onto Haldimand Road 20 must be addressed.

WIND

Turbines # 15, 17, 44, have entrances off of mud roads. Roads will be required to be upgraded to County standard to allow for emergency services access during and after construction. Refer to Appendix B of the Haldimand County Design Criteria.

Where there are several turbines located on one access, Haldimand County requests a 2nd access for emergency purposes in the event the primary access is blocked. A second access is required due to the number of turbines and length of access road for turbines #1, 3, 6, 8, 54, 69.

Haldimand County requires all access roads to be well signed, as there is a concern that the public might perceive these as concession roads or trails. Labelling of entrances to be addressed at pre-construction phase.

Turbine sites with entrances on different roads other than the parcel address should be noted.
As well turn-around planned for construction should be left in place for emergency purposes.

TRANSMISSION

In order to provide a clear zone and to facilitate in the regular roadway maintenance Haldimand County prefers that poles be placed on the back side of ditches. Where sufficient clear zone can not be achieved appropriate mitigating measures must be proposed for review.

Further comments to follow with the submission of the Construction Management Plan.

OPERATION MAINTENANCE BUILDING
Further comments with follow with submission of detailed construction drawings.

Identify any issues and recommendations with respect to any Easements or Restrictive Covenants associated with the Project Location

Haldimand County Review Team Comments

SOLAR
Wilson Road (mud road) north of Haldimand Road 20 is proposed to be closed to accommodate the operation of the solar facility, further discussions has taken place for road closure/lease of the Road Allowance. Please note closure of Wilson Road will require the proponent to proceed through the Haldimand County Clerks Office. This issue will need to be resolved prior permitting/construction. Ultimately, access must remain in place to existing residences and entrances.

WIND
Ramsey Road extension (south Dunnville Airport) is proposed to be closed to accommodate the operation of the wind facility, further discussions has taken place for road closure/lease of the Road Allowance. Please note closure of the unopened road will require the proponent to proceed through the Haldimand County Clerks Office. This issue will need to be resolved prior permitting/construction.

WIND & SOLAR
In order to sever land, severance applications would be required for any easements that are established across private lands where the life of the easement is for a period of time which is more than 50 years.

TRANSMISSION

OPERATION MAINTENANCE BUILDING
Further comments with follow with submission of detailed construction drawings.

Request details regarding easements, or registered easements required for access roads. Also the ability for municipal staff to access roads through the easements and how is this described in lease agreements with landowners.

5.5 Project Construction

Identify any issues and recommendations with respect to the proposed rehabilitation of any temporary disturbance areas and any municipal or local authority infrastructure that could be damaged during construction

Haldimand County Review Team Comments
Prior to any approvals required by the County, a precondition survey of County infrastructure (such as roads, bridges or culverts) shall be conducted. This will establish the current condition of the infrastructure and be used to identify any determine any remedial works required.

Locations of poles should be investigated to minimize the impacts on woodlots and demonstrate consideration to the existing residences, private property constraints, as well as, existing utility infrastructure.

The alignment of the transmission line should avoid the removal of trees from existing woodlots.

Please note all required Haldimand County Permits will not be granted until all requested documents and reports are submitted and approved by Haldimand County.

WIND & SOLAR

The proponent needs to prepare a detailed decommissioning and rehabilitation plan containing an appropriate mechanism to ensure that the plan is adhered to. One such mechanism is to deposit appropriate "decommissioning and rehabilitation security" with Haldimand County which can be released on satisfactory decommissioning and rehabilitation.

Identify any issues and recommendations with respect to the proposed location of fire hydrants and connections to existing drainage, water works and sanitary sewers

Haldimand County Review Team Comments

General comments for SWM:
Note - Haldimand County commonly uses the Mount Hope precipitation gauge and IDF parameters as per section 'H' of Haldimand County Design Criteria. SWM calculations should be completed for the entire solar facility and data should be provided to mitigate the pre to post development flows.

SOLAR

The site plan for the proposed solar farm should accommodate existing drainage patterns, and have no adverse affect on flows on private property or Haldimand Road 20. SWM should be completed for the entire solar facility and data should be provided to mitigate the pre to post development flows.

WIND

Potential impact on existing Municipal Drain Mazi-Weikman

The road allowances for Haldimand Road 55 and Haldimand Road 3 (Rainham Road) will be reserved for future transmission corridor for sanitary and water.

Please note that many of the turbines have a significant number of drainage crossings, some with 2 to 5. Haldimand County will require final design of culverts and drainage crossings for review.

Further comments with follow with submission of detailed construction drawings.

Please note all required Haldimand County Permits will not be granted until all requested documents and reports are submitted and approved by Haldimand County.

TRANSMISSION

Identify any issues and recommendations with respect to the proposed location of buried kiosks and above-grade utility vaults.

Haldimand County Review Team Comments

Further comments with follow with submission of detailed construction drawings.

No comments from the Development or Engineering Group

Identify any issues and recommendations with respect to the proposed location of existing and proposed gas

and electricity lines and connections.

Haldimand County Review Team Comments

Further comments to follow with submission of detailed construction drawings.

Please see attached Site review table for comments regarding existing utility locations. These comments are from visual inspection only and should be verified with the appropriate utilities

Provide comment on the proposed project plans with respect to Building Code permits and licenses.

Haldimand County Review Team Comments

SOLAR

Building permits are required for the structures that support the solar panels where the structure beneath the panels has a supporting frame greater than 10 square metres each. * Fees

WIND

Building permits are required for the structure that supports a wind turbine generator having a rated output of more than 3kW. *Fees.

TRANSMISSION

Building permits are also required for any substations greater than 10 square metres.

Development charges, building permit fees and forms are all available on our website. Civic addresses will need to be created and signs placed at Haldimand County roads and access roads to the towers. The towers will need to be additionally labelled with the civic addresses, especially when multiple towers are accessed via the same access road. $60+tax.

Further comments to follow with submission of detailed construction drawings.

Please note all required Haldimand County Permits will not be granted until all requested documents and reports are submitted and approved by Haldimand County.

Identify any issues and recommendations related to the identification of any significant natural features and water bodies within the municipality or territory.

Haldimand County Review Team Comments

SOLAR

The site plan for the proposed solar farm should accommodate existing drainage patterns, and have no adverse affect on flows on private property or Haldimand Road 20. SWM should be completed for the entire solar facility and data should be provided to mitigate the pre to post development flows. Investigation into the impact of the proposed berm /fencing regards to potential snow drifting onto Haldimand Road 20 must be addressed.

WIND

Please note that many of the turbines have a significant number of drainage crossings, some with 2 to 5. Haldimand County will require final design of culverts and drainage crossings for review.

WIND & SOLAR

As there is a potential for the Wetlands (provincially significant and provincially non-significant) located in the

project area to be affected, it is suggested that adequate mitigation measures be adopted and environmental effects monitoring plans developed in consultation with Long Point Region Conservation Authority (LPRCA) and/or Grand River Conservation Authority (whichever may be applicable) to conserve natural heritage features through all stages of project development as well as decommissioning.

In cases where trees may have to be removed to implement portions of the proposed wind energy or solar projects, appropriate compensation for trees to be removed should be provided. Haldimand County's Forestry Officer should be consulted to determine the appropriate plan/program for a compensation strategy.

Every effort should be made to limit;

- Encroachment into adjacent woodlands,
  -including improper removal of overhanging branches which would impact the health of the adjacent trees;
  -resulting in the destruction of trees and reducing forest cover;
- Removal of trees located in windrows, fence rows, along natural features
- Removal of single "public" trees within road allowances for the purpose of installing transmission lines – underground or above ground. Removal of trees adjacent/underneath utility corridors is preferred versus ongoing maintenance/pruning, in most cases.

In previous similar applications the proposed final draft of locations of towers, roads, utility lines was reviewed in the field by Forest Conservation Services staff before finalization of the project layout – staff would request the same.

Where such impacts were required, the "contractor" and County staff agreed upon compensation in lieu of destruction of trees.

Removal of woodlands would require compensation in lieu which would result in a "zero-net" loss of County forest cover – thus funding of reforestation on lands elsewhere in Haldimand County – either through the Haldimand and Area Woodlot Owners Association, the Long Point Region Conservation Authority, or the Grand River Conservation Authority.

As for removal of single road allowance tree (s), compensation would be tree for tree (minimum 40 mm calliper – native tree stock) – offering first right of refusal for a compensating tree being offered to impacted adjacent property owners. Surplus trees would be used to replant strategically along County roadsides.

TRANSMISSION

Locations of poles should be investigated to minimize the impacts on woodlots and demonstrate consideration to the existing residences, private property constraints, as well as, existing utility infrastructure.

The alignment of the transmission line should avoid the removal of trees from existing woodlots.

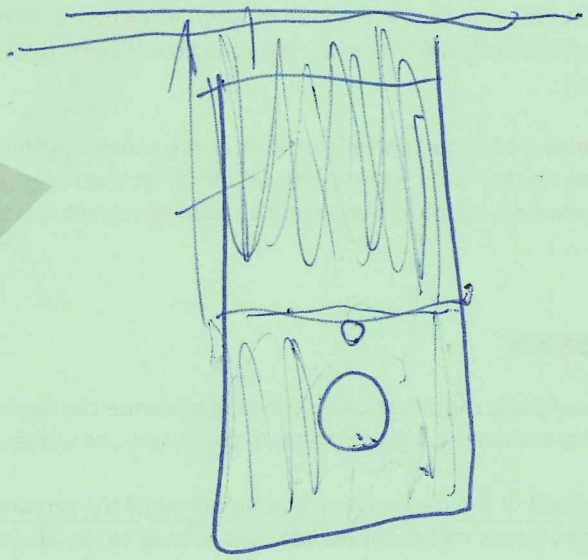
Identify any issues and recommendations related to the identification any archaeological resource or heritage resource.

Not provided –NO Comment from Development or Engineering Group.

WIND & SOLAR

As there may be potential for the archaeological resources to be affected, Stage 1 and 2 Archaeological Assessment may be required. Haldimand County requires that findings of the archaeological assessments be shared with the County, and adequate mitigation measure be adopted where needed to minimize any adverse

impacts. The archaeological assessment should be done in consultation with First Nations communities.



Stantec Consulting Ltd.
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September 21, 2011
File: 161010624/161010646

Haldimand County
45 Munsee Street North
PO Box 400
Cayuga ON N0A 1E0

Attention: James Goodram, Manager, Economic Development and Tourism

Dear Mr. Goodram:

Reference: Haldimand County Council Comments

Thank you for meeting with Samsung and Stantec on August 26, 2011 to discuss Haldimand County's draft comments related to the Municipal Consultation Form for the Grand Renewable Energy Park (the Project). As part of the draft comments which were provided, Haldimand County Council identified 14 questions (seven of which were previously provided on August 24, 2010) which they requested be addressed in addition to the Municipal Consultation Form. The following has been prepared in response to the Haldimand County Council questions based on the current status of the Project:

1. *Council has requested greater details relating to the cutting of woodlots and proposed measures for replacement of these environmental features. Also, how other features including wetlands and significant species will be impacted/mitigated.*

   Proposed clearing will result in the removal of approximately 1.72 ha of plantation in areas identified as significant woodland. Additional information has been presented within the Natural Heritage Assessment/Environmental Impact Study including mitigation measures associated with clearing activities. Though the effects are anticipated to be minimal, there is some potential for disturbance of natural features during construction as a result of the limited removal of vegetation and increased human activity, traffic, noise and dust. However, these effects are expected to be short-term in duration and spatially limited to the work areas and their immediate vicinity. The relatively small amount of woodland to be removed represents a very small proportion of the available habitat in the Study Area and is not anticipated to have a significant effect on the ecological functions these features support.

   Setbacks from wetlands and mitigation measures for infrastructure within 30 m of wetlands will ensure that there is no disruption of wetland function and no net loss of wetland area. Additional information has been presented within the Natural Heritage Assessment/Environmental Impact Study related to the potential impacts to other natural features such as wildlife and wildlife habitat. Additional permitting discussions have also been initiated with the Grand River Conservation Authority and Long Point Region Conservation Authority.

2. *Evaluation of the possible impacts of anchoring of wind turbines to bedrock and whether this provides a conduit for the transmission of vibration to other properties.*

   Preliminary geotechnical work was completed across the wind farm, solar farm and transmission line components of the Project to confirm site-specific conditions within the Study Area. This information was

used to determine the suitability of the area in general. It was found that the soil and bedrock conditions are conducive for the design and construction of the Project. Additional detailed geotechnical work will be required prior to Project construction as part of the detailed engineering for the Project. As reported in the *Expert Panel Review* by Dr. Colby et al (2009), it has been found that ground-borne vibrations from wind turbines are too weak to be detected by, or to affect, humans.

3. *The relationship of the proposed electrical transmission corrdidors to the County's Master Trail Plan and opportunities/constraints that may exist or occur.*

   The transmission line is proposed to be located along Haldimand Road 20 within the municipal road right-of-way. The transmission line is proposed to be an overhead line with the exception of an area through Nelles Corners where the transmission line will be transitioned to an underground line for approximately 700 m. The County's Trail Master Plan identifies a section of Haldimand Road 20 between Hagersville and Nelles Corners (approximately 6 km) which could potentially share the same corridor as the transmission line where the trail would be within the municipal road right-of-way (e.g. on-road bicycle routes). Samsung will work with the county through the Community Vibrancy Fund to hopefully improve the County's Master Trail Plan and make many of the proposed plans a reality.

4. *Clarification on the location of the transmission corridor.*

   The transmission line is proposed to be located along Haldimand Road 20 within the municipal road right-of-way. The transmission line is proposed to be an overhead line with the exception of an area through Nelles Corners where the transmission line will be transitioned to an underground line for approximately 700 m. The transmission line will be approximately 20 km and will terminate near Hagersville where the Project will connect to the provincial grid.

5. *Confirmation that the decommissioning plan, funding mechanism and report will include the capital works in the transmission corridor.*

   The Decommissioning Plan Report includes plans for the removal of all Project components including the transmission line. The costs for removal of Project infrastructure would be the responsibility of Samsung or the owner of the transmission line at the time of decommissioning. The use and decommissioning of transmission line is regulated by the Ontario Energy Board.

6. *The impact of construction traffic and access from the County road system to the project components and how this will be addressed.*

   The Construction Plan Report details the potential impacts related to construction traffic. Truck traffic will increase on some roads during Project component deliveries, but would be restricted to predetermined routes and times to the greatest extent possible. Road safety is not expected to be an issue during the construction phase due to the implementation of a Traffic Management Plan which Samsung has committed to developing in consultation with Haldimand County prior to Project construction. Once the general contractor is selected, Samsung will begin drafting the Traffic Management Plan.

7. *As part of the economic impact assessment, conduct a complete comparison of the difference between the project and the use of the land for agricultural purposes to Haldimand County. Also provide a breakdown of the type of jobs to be created.*

   Given that agricultural land will be required during the operation of the Project, landowners are being financially compensated for the lease of the private lands and thus offset the effect of removing the land from agricultural production. To the greatest extent possible, efforts have been made to site the Project in such a way as to minimize disturbances to existing agricultural lands and operations. The removal of lands from agricultural production is not anticipated to have a noticeable impact on the local agri-business economy given the magnitude of the Project and the inherent variability in crop production (please see the attached summary report for further information).

   During construction, the actual number employed and the make-up of those employed would vary over time as the Project goes through the various construction phases. On average, it is expected that up to 305 persons may be directly employed during the construction period of the Project. It is anticipated the the construction breakdown would be as follows; 178 persons for the wind component, 92 persons for the solar component, and approximately 35 persons for the electrical components. It is Samsung's intention, when feasible, to employ and train local persons during the construction of the Project. The construction of the Project would also result in indirect and induced employment, the majority of which is anticipated to be filled by local businesses.

   Operation of the facility is expected to continue for a minimum of approximately 20 years. During operations, it is expected that approximately twelve operation and maintenance staff from Samsung and the Operation and Maintenance Contractor would be employed during operation of the Project.

Comments provided following August 24, 2010:

1. *The impact this project will have on tourism.*

   A tourism-specific study is not required as part of the Renewable Energy Approval (REA) process and has not been completed for this Project. While, there is a perceived negative effect on tourism as a result of the effect on the viewshed from wind turbines, previous studies have noted that wind power projects can have an advantageous influence on local tourism initiatives. This depends a great deal on how the tourism potential of wind plant developments is marketed locally, regionally, and provincially. Haldimand County has previously expressed interest to the Provincial Government in becoming known as an Energy Hub in Southern Ontario due to the positive economic impacts associated with renewable energy development. Therefore, if Haldimand County markets the development of the Project for tourism purposes, as it is the first combined wind and solar project in the world, it is anticipated that there is potential for attracting additional tourism to the area.

2. *The impact on the property values on land adjacent to the Project.*

   Based upon the data reviewed to date in other areas with established wind plants (e.g., Canada, USA, Europe, and Australia), no evidence of a material negative effect on property value as a result of the presence of wind plants was provided. Ontario data (including information from Chatham-Kent) suggests that wind plants have a neutral effect on property values; which is consistent with international trends and experiences.

The solar farm component of the Project will be designed to minimize any potential visual effects on nearby landowners and thus any potential impact to property values. With regards to a property being within visual distance of the solar farm and the potential effects to property values, there is no available evidence to-date (via systematic reviews of property value impacts) which links the location of a solar farm with impacts on property values.

3. *Additional information and studies to show how the setback of a wind turbine of 550 m was determined.*

   In developing setback distances for wind turbines in O.Reg. 359/09, the Ministry of the Environment (MOE) reviewed leading scientific studies from around the world to ensure that Ontario's rules are protective of human health and the environment and are appropriate for the needs of Ontario's communities. The MOE also looked at how wind projects are regulated in other countries to learn from their standards and setbacks for wind turbines. Please contact the MOE directly if you require additional information related to the establishment of wind turbine setbacks. In addition, the Project completed a Noise Assessment Report which confirmed that the 40 dBA sound limit was met at all non-participating receptors at the 550 m setback.

4. *A request for studies that demonstrate how high or low pitch frequencies affect the nervous and mobility system and the long term affects for human and animal health.*

   A detailed health impact assessment including an assessment of low frequency noise was completed for Samsung and was included within the Draft Design and Operations Report (Attachment F) as part of the Draft REA Report package. Studies used to support the conclusions within the assessment were cited within the assessment.

5. *A request for the results of studies on how wildlife are affected in the immediate and surrounding areas where wind turbines are already in place.*

   Detailed information related to the potential effects to wildlife is included within the Natural Heritage Assessment/Environmental Impact Study. In determining the potential effects, Stantec staff reviewed several studies related to post-construction impacts to wildlife in proximity to wind farms and are cited appropriately at the end of the document.

6. *A request for confirmation that upon the termination of the project, the land involved in the project will revert back to agricultural land from industrial.*

   As stated in Section 2.3 of the Draft Decommissioning Plan Report, agricultural land will be restored such that normal farming practices may resume. It should be noted that the Project proponent has a decommissioning bond available at commencement of construction for each of the land owners to remove works from their private property, in the unlikely event that such action is necessary.

7. *Demonstrated outcomes of the consultation with the First Nations on all renewable energy projects.*

   Samsung is currently conducting engagement activities with multiple aboriginal communities (as identified by the Ministry of the Environment (MOE)) in accordance with the requirements of O. Reg. 359/09. Details regarding the engagement activities including copies of letters and summaries of meetings will be provided within the Consultation Report as part of Samsung's final REA application to the MOE.

Reference: Haldimand County Council Comments

Respectfully,

STANTEC CONSULTING LTD.

Mark Kozak, BES
Environmental Scientist
Tel: (519) 836-6050
Fax: (519) 836-2493
mark.kozak@stantec.com

Attachment: Agricultural Economic Impact Assessment Summary

c. Adam Rosso, Samsung Renewable Energy
Lidy Romanuk, Haldimand County

Findings

Agricultural Economic Impacts of Conversion of Agricultural Land to Solar Energy Production in Haldimand, Ontario

Glenn Fox
Professor of Agricultural Economics, University of Guelph
and Agricultural Economics Consultant
Rockwood, Ontario

September 14, 2010

Cropland area and crop revenue data are published at the regional level, which combines Haldimand county and Norfolk county into one reporting unit. There are approximately 400,000 acres of cropland and 500,000 acres of farmland in Haldimand-Norfolk. The land area required for the proposed solar energy facility is approximately 816 acres. This represents about 0.16% of the farmland in the two counties. Approximately 800 acres of this farmland is currently in crops.

The gross revenue from soybean, grain corn and wheat production in Haldimand-Norfolk was $57.3 million, $33.2 million and $12.4 million respectively in 2008, the most recent year for which data are published. The approximate share of gross revenue per acre potentially spent on local inputs and services for these three crops was estimated to be 53%, 61% and 68% respectively for the three main crops. Assuming a 40% markup in sales of those inputs and services, the regional value of aggregate gross margins from local sales of inputs and services would have been $12.1 million, $8.1 million and $3.4 million per year respectively, for soybeans, grain corn and winter wheat, for an annual total for 2008 of $23.6 million.

The estimated reduction in gross margins from sales of crop inputs and services from the withdrawl of 800 acres of cropland was estimated to be approximately $106,000 per year. This represents a potential reduction of 0.45% for the region. A loss of this magnitude, given the inherent variability in crop production choices and crop input sales from year to year, would not be noticeable in terms of its impact on the local economy. In addition, there is no guarantee that the purchases of inputs and services currently associated with cropland in the study area have been made exclusively in Haldimand-Norfolk in the past, or that they would be made locally in the future, with or without the proposed facility.

Stantec Consulting Ltd.
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July 19, 2011
File: 160960577

Haldimand County Hydro
1 Glendale Drive
Caledonia ON N3W 2J3

Attention: Lloyd Payne, President/CEO

Dear Mr. Payne:

Reference: Grand Renewable Energy Park – Release of Draft Renewable Energy Approval Reports

Samsung C&T (Samsung), Pattern Energy (Pattern), and Korea Power Electric Corporation (KEPCO) (together, these companies referred to herein as "SPK") are proposing to develop, construct, and operate a wind and solar energy project as part of the Grand Renewable Energy Park, in Haldimand County. SPK is planning to engage in this renewable energy project in respect of which the issuance of Renewable Energy Approvals (REA) is required. The proposal to engage in the project and the project itself are subject to the provisions of the *Environmental Protection Act (ACT)* Part V.0.1 and Ontario Regulation 359/09 (O. Reg. 359/09).

On behalf of SPK, Stantec is pleased to provide you with a copy of the Draft REA Reports for your review and comment. As required under O. Reg. 359/09 and the Ministry of Natural Resources (MNR) *Approval and Permitting Requirements Document (APRD) for Renewable Energy Projects*, this Draft REA Reports package includes the following draft reports:

- Project Description Report – as outlined in item 10 of Table 1 of O. Reg. 359/09;
- Natural Heritage Assessment Report – as required under sections 24, 25, 26, 27 and 28 of O. Reg. 359/09 and section 6.3 of the MNR's Requirements Document;
- Construction Plan Report – as outlined in item 1 of Table 1 of O. Reg. 359/09 and section 6.7 of the MNR's Requirements Document;
- Design and Operations Report – as outlined in item 4 of Table 1 of O. Reg. 359/09 and section 6.6 of the MNR's Requirements Document;
- Decommissioning Plan Report – as outlined in item 3 of Table 1 of O. Reg. 359/09 and section 6.8 of the MNR's Requirements Document;
- Environmental Impact Study – as required under section 38 of O. Reg. 359/09;
- Wind Turbine Specifications Report – as outlined in item 13 of Table 1 of O. Reg. 359/09;
- Archaeological and Heritage Reports - as required under sections 19, 20, 21, 22 and 23 of O.Reg. 359/09;

Reference: Grand Renewable Energy Park – Release of Draft Renewable Energy Approval Reports

- Water Body and Water Assessment Report - as required under sections 29, 30 and 31 of O. Reg. 359/09. Further information related to potential effects and mitigation measures to water bodies, as required under sections 39, 40, 44, and 45 of O. Reg. 359/09 is provided in the Water Body and Water Assessment Report, Construction Plan Report and Design and Operations Report; and,

- Project Summary Report – as outlined in section 17. (1)3 of O. Reg. 359/09.

Copies of the MNR's confirmation letter of the Natural Heritage Assessment/Environmental Impact Study and the Ministry of Tourism and Culture written comments/confirmation have also been provided within the package.

As described in the attached Notice of Public Meeting, these reports are being provided for review and comment from **July 23, 2011 to September 22, 2011**. To learn more about the project proposal, the public meeting, and to communicate questions regarding the attached material, please contact the project team via e-mail at GrandRenewable@SamsungRenewableEnergy.ca or by phone at 1-877-536-6050 or 1-519-836-6050. Written comments can also be directed to the undersigned.

We respectfully request all comments to be provided by no later than September 22, 2011 for their inclusion within SPK's Renewable Energy Approval application.

Sincerely,

STANTEC CONSULTING LTD.

Mark Kozak, BES
Project Manager
Tel: (519) 836-6050
Fax: (519) 836-2493
mark.kozak@stantec.com

Attachment: Draft Renewable Energy Approval Report package
Notice of Public Meeting

c. Paul Heeg, Haldimand County Hydro
Adam Rosso, Samsung Renewable Energy Inc.

Stantec Consulting Ltd.
Suite 1 - 70 Southgate Drive
Guelph ON N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

July 26, 2010
File: 160960577/161010624

Environment Unit, Lands and Trust Services
Indian and Northern Affairs Canada, Ontario Region
25 St. Clair Ave. East, 8th Floor
Toronto, ON M4T 1M2

Attention: **Mei Ling Chan**

Reference: **Samsung Grand Renewable Energy Park**

Dear Ms. Chan,

Samsung Renewable Energy Inc. (Samsung) is planning to develop and construct the Grand Renewable Energy Park in Haldimand County, Ontario. The proposed project will include a 140 MW name plate capacity wind farm, consisting of approximately 63 wind turbines and a 100 MW name plate capacity solar farm. The project will also include electrical collection lines, a 30 km transmission line, substation and other ancillary facilities such as access roads. Samsung has retained Stantec Consulting Ltd. (Stantec) to prepare a Renewable Energy Approval (REA) Application, as required under Ontario Regulation 359/09 - Renewable Energy Approvals under Part V.0.1 of the Act of the *Environmental Protection Act* (O. Reg. 359/09).

As part of the REA requirements a Draft Project Description Report was sent to the Ministry of the Environment (MOE) on June 24, 2010. This enables the MOE to identify all First Nation and Métis communities that are located in proximity to the Project Study Area. At this time we are respectfully requesting a list of the aforementioned communities from Indian and Northern Affairs Canada (INAC). Please find the Draft Project Description Report attached that provides additional information and details about the Project for your convenience.

Sincerely,

STANTEC CONSULTING LTD.

Rob Nadolny
Senior Project Manager
Tel: (519) 836-6050
Fax: (519) 836-2493
rob.nadolny@stantec.com

Attachment: Draft Project Description – Version 2

CC. Adam Rosso, Samsung Renewable Energy Inc.

Friedl, Susanne

From: Ejay Lai (LPRCA) <gis@lprca.on.ca>
Sent: Thursday, July 15, 2010 11:23 AM
To: Worsell, Patrick
Cc: Nadolny, Rob
Attachments: LPRCA_IP_Agreement_stantec_jul2010_signed.zip

Hi Patrick,

See attached for the data requested. The data licensing agreement is included in the compressed file as well as the receipt of the payment.

Let me know if you have any problem in this regard.

Thanks,

Ejay H. Lai, *M.Sc.*
GIS & IT Specialist
Long Point Region Conservation Authority
4 Elm St., Tillsonburg, ON, N4G 0C4
www.lprca.on.ca | gis@lprca.on.ca
519-842-4242 Ext. 235

Stantec Consulting Ltd.
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June 18, 2010
File: 160960577 / 161010624

Long Point Region Conservation Authority
4 Elm St.
Tilsonburg, ON N4G 0C4

Attention: **Ms. Heather Surette, Manager – Watershed Resources**

Reference: **Grand Renewable Energy Park**
Request for Information

Dear Ms. Surette,

I am writing with regards to the proposed Grand Renewable Energy Park to be located in Haldimand County, Ontario. The Project is being proposed by Samsung Renewable Energy Inc. and if approved, would consist of a 140 MW wind farm, a 100 MW solar farm, a transmission line and other project associated infrastructure.

The Renewable Energy Approval (REA) process has been initiated for the Project in accordance with Ontario Regulation 359/09 (O. Reg 359/09). In accordance with Section 29.(1) O. Reg 359/09, Stantec is required to conduct a water assessment consisting of a records review and site investigation for the Project location (please see the attached map). As such, we are requesting any information your agency may have with respect to the following within the Project location:

- The location and classification of all permanent and intermittent streams including drainage ditches;
- The location of any lakes (including the average annual high water mark) other than a Lake Trout lake that is at or above development capacity;
- The location of any Lake Trout lakes that are at or above development capacity including the average annual high water mark;
- The location of any seepage areas;
- Watershed reports which should be considered in our assessment of natural heritage features; and,
- Any fisheries related data for waterbodies (including species at risk) within the Project location.

Reference: Grand Renewable Energy Park – Request for Information

We look forward to working with you, and obtaining your valuable input, and a Project representative will be in contact with you shortly to determine the best way to obtain the above noted information. In addition, please contact the undersigned if you require any additional information (including digital mapping) to assist in providing the requested information.

Sincerely,

STANTEC CONSULTING LTD.

Rob Nadolny
Senior Project Manager
Tel: (519) 836-6050
Fax: (519) 836-2493
Rob.nadolny@stantec.com

Attachment: Project Location Map

CC: Lidy Romanuk, Haldimand County
Drew Cherry, Grand River Conservation Authority
Heather Riddell, Ministry of Natural Resources, Aylmer District

Stantec Consulting Ltd.
Suite 1 - 70 Southgate Drive
Guelph ON N1G 4P5
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Fax: (519) 836-2493

July 19, 2011
File: 160960577

Long Point Region Conservation Authority
4 Elm Street
Tilsonburg ON N4G 0C4

Attention: Ben Hodi, Water Resource Analyst

Dear Mr. Hodi:

Reference: Grand Renewable Energy Park – Release of Draft Renewable Energy Approval Reports

Samsung C&T (Samsung), Pattern Energy (Pattern), and Korea Power Electric Corporation (KEPCO) (together, these companies referred to herein as "SPK") are proposing to develop, construct, and operate a wind and solar energy project as part of the Grand Renewable Energy Park, in Haldimand County. SPK is planning to engage in this renewable energy project in respect of which the issuance of Renewable Energy Approvals (REA) is required. The proposal to engage in the project and the project itself are subject to the provisions of the *Environmental Protection Act (ACT)* Part V.0.1 and Ontario Regulation 359/09 (O. Reg. 359/09).

On behalf of SPK, Stantec is pleased to provide you with a copy of the Draft REA Reports for your review and comment. As required under O. Reg. 359/09 and the Ministry of Natural Resources (MNR) *Approval and Permitting Requirements Document (APRD) for Renewable Energy Projects*, this Draft REA Reports package includes the following draft reports:

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- Design and Operations Report – as outlined in item 4 of Table 1 of O. Reg. 359/09 and section 6.6 of the MNR's Requirements Document;
- Decommissioning Plan Report – as outlined in item 3 of Table 1 of O. Reg. 359/09 and section 6.8 of the MNR's Requirements Document;
- Environmental Impact Study – as required under section 38 of O. Reg. 359/09;
- Wind Turbine Specifications Report – as outlined in item 13 of Table 1 of O. Reg. 359/09;
- Archaeological and Heritage Reports - as required under sections 19, 20, 21, 22 and 23 of O.Reg. 359/09;

Reference: Grand Renewable Energy Park – Release of Draft Renewable Energy Approval Reports

- Water Body and Water Assessment Report - as required under sections 29, 30 and 31 of O. Reg. 359/09. Further information related to potential effects and mitigation measures to water bodies, as required under sections 39, 40, 44, and 45 of O. Reg. 359/09 is provided in the Water Body and Water Assessment Report, Construction Plan Report and Design and Operations Report; and,

- Project Summary Report – as outlined in section 17. (1)3 of O. Reg. 359/09.

Copies of the MNR's confirmation letter of the Natural Heritage Assessment/Environmental Impact Study and the Ministry of Tourism and Culture written comments/confirmation have also been provided within the package.

As described in the attached Notice of Public Meeting, these reports are being provided for review and comment from **July 23, 2011 to September 22, 2011**. To learn more about the project proposal, the public meeting, and to communicate questions regarding the attached material, please contact the project team via e-mail at GrandRenewable@SamsungRenewableEnergy.ca or by phone at 1-877-536-6050 or 1-519-836-6050. Written comments can also be directed to the undersigned.

We respectfully request all comments to be provided by no later than September 22, 2011 for their inclusion within SPK's Renewable Energy Approval application.

Sincerely,

STANTEC CONSULTING LTD.

Mark Kozak, BES
Project Manager
Tel: (519) 836-6050
Fax: (519) 836-2493
mark.kozak@stantec.com

Attachment: Draft Renewable Energy Approval Report package
Notice of Public Meeting

c. Adam Rosso, Samsung Renewable Energy Inc.

Preliminary List and Probable Occurrences of Species at Risk

Common Name	Scientific Name	COSSARO	Chatham-Kent		Haldimand
			East	West	
Acadian Flycatcher	*Empidonax virescens*	END			
American Badger	*Taxidea taxus jacksoni*	END			
American Chestnut	*Castanea dentata*	END			
American Columbo	*Frasera caroliniensis*	END			
American Ginseng	*Panax quinquefolius*	END			
Bald Eagle	*Haliaeetus leucocephalus*	SC			
Barn Owl	*Tyto alba*	END			
Blanding's Turtle	*Emydoidea blandingii*	THR			
Broad Beech Fern	*Phegopteris hexagonoptera*	SC			
Butternut	*Juglans cinerea*	END			
Cerulean Warbler	*Dendroica cerulea*	SC			
Chimney Swift	*Chaetura pelagica*	THR			
Climbing Prairie Rose	*Rosa setigera*	SC			
Common Five-Lined Skink (Carolinian population)	*Plestiodon fasciatus*	END			
Dense Blazing Star	*Liatris spicata*	THR			
Eastern Foxsnake (Carolinian population)	*Pantherophis gloydi*	END			
Eastern Hog-nosed Snake	*Heterodon platirhinos*	THR			
Eastern Flowering Dogwood	*Corunus florida*	END			
Eastern Musk Turtle	*Sternotherus odoratus*	THR			
Eastern Pondmussel	*Liqumia nasuta*	END			
Eastern Ribbonsnake	*Thamnophis sauritus*	SC			
Eastern Sand Darter	*Ammocrypta pellucida*	THR			
Fowler's Toad	*Anaxyrus fowleri*	THR			
Goldenseal	*Hydrastis canadensis*	THR			
Gray Ratsnake (Carolinian population)	*Pantherophis spiloides (Carolinian population)*	END			
Grey Fox	*Urocyoncinereoargenteus*	THR			
Hooded Warbler	*Wilsonia citrina*	SC			
Jefferson Salamander	*Ambystoma jeffersonianum*	THR			
Kidneyshell	*Ptychobranchus fasciolaris*	END			
King Rail	*Rallus elegans*	END			
Lake Chubsucker	*Erimyzon sucetta*	THR			
Least Bittern	*Ixobrychus exilis*	THR			
Milksnake	*Lampropeltis triangulum*	SC			
Monarch	*Danaus plexippus*	SC			
Nodding Pogonia	*Triphora trianthophora*	END			
Northern Map Turtle	*Graptemys geographica*	SC			
Prothonotary Warbler	*Protonotaria citrea*	END			
River Redhorse	*Moxostoma carinatum*	SC			
Round Hickorynut	*Obovaria subrotunda*	END			
Round Pigtoe	*Pleurobema sintoxia*	END			
Silver Chub	*Macrhybopsis storeriana*	SC			
Snapping Turtle	*Chelydra serpentina*	SC			
Snuffbox	*Epioblasma triquetra*	END			
Spiny Softshell	*Apalone spinifera*	THR			
Spotted Gar	*Lepisosteus oculatus*	THR			
Spotted Sucker	*Minytrema melanops*	SC			
Spotted Turtle	*Clemmys guttata*	END			
Swamp Rose Mallow	*Hibiscus moscheutos*	SC			
Virginia Mallow	*Sida hermaphrodita*	END			
Warmouth	*Lepomis gulosus*	SC			
Wavy-rayed Lampmussel	*Lampsilis fasciola*	END			
Woodland Vole	*Microtus pinetorum*	SC			
Yellow-breasted Chat	*Icteria virens*	SC			

Key to Colours for Likelihood of Occurrence

- High likelihood
- Medium likelihood
- Low likelihood of occurring

Provided by MNR
May 6/2010

Stantec Consulting Ltd.
Suite 1 - 70 Southgate Drive
Guelph ON N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

June 18, 2010
File: 160960577 / 161010624

Ministry of Natural Resources
615 John St. North.
Aylmer, ON N5H 2S8

Attention: **Ms. Heather Riddell, Manager – Planning Ecologist**

Reference: **Grand Renewable Energy Park**
Request for Information

Dear Ms. Riddell,

I am writing with regards to the proposed Grand Renewable Energy Park to be located in Haldimand County, Ontario. The Project is being proposed by Samsung Renewable Energy Inc. and if approved, would consist of a 140 MW wind farm, a 100 MW solar farm, a transmission line and other project associated infrastructure.

The Renewable Energy Approval (REA) process has been initiated for the Project in accordance with Ontario Regulation 359/09 (O. Reg 359/09). In accordance with Section 29.(1) O. Reg 359/09, Stantec is required to conduct a water assessment consisting of a records review and site investigation for the Project location (please see the attached map). As such, we are requesting any information your agency may have with respect to the following within the Project location:

- The location and classification of all permanent and intermittent streams including drainage ditches;
- The location of any lakes (including the average annual high water mark) other than a Lake Trout lake that is at or above development capacity;
- The location of any Lake Trout lakes that are at or above development capacity including the average annual high water mark;
- The location of any seepage areas;
- Watershed reports which should be considered in our assessment of natural heritage features; and,
- Any fisheries related data for waterbodies (including species at risk) within the Project location.

Reference: Grand Renewable Energy Park – Request for Information

We look forward to working with you, and obtaining your valuable input, and a Project representative will be in contact with you shortly to determine the best way to obtain the above noted information. In addition, please contact the undersigned if you require any additional information (including digital mapping) to assist in providing the requested information.

Sincerely,

STANTEC CONSULTING LTD.

Rob Nadolny
Senior Project Manager
Tel: (519) 836-6050
Fax: (519) 836-2493
Rob.nadolny@stantec.com

Attachment: Project Location Map

CC: Lidy Romanuk, Haldimand County
Drew Cherry, Grand River Conservation Authority
Heather Surette, Long Point Region Conservation Authority

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July 23, 2010
File: 161010624 / 161010646

Ministry of Natural Resources
615 John St. North
Aylmer, ON N5H 2S8

Attention: **Ms. Heather Riddell, Planning Ecologist**

Dear Ms. Riddell,

Reference: **Samsung Grand Renewable Energy Park**
Data Request and Site Investigation Work Program

Thank you for the natural heritage features mapping your agency provided at the May 6, 2010 meeting regarding the proposed Grand Renewable Energy Park to be located in Haldimand County, Ontario. The Project is being proposed by Samsung Renewable Energy Inc. and if approved, would consist of a 140 MW wind farm, a 100 MW solar farm, a transmission line and other project associated infrastructure.

This letter outlines our current understanding of the natural heritage features of the Project area, requests any additional information that the Ministry might have available, and presents a site investigation work program for Ministry review. This letter also summarizes the proposed Project schedule. The majority of field work is scheduled to be completed by the end of August, 2010, and receipt of your comments on the proposed work program in this time frame would be very much appreciated. With implementation of this work program, we expect that no additional field studies or inventories will be required for a complete Renewable Energy Approval application.

1. RECORDS REVIEW AND DATA REQUEST

At this time, we would like to request that your agency confirm the completeness of Ministry of Natural Resources (MNR) data presented on the attached Natural Heritage Features map (please see attached **Figure 1**), which was developed based on a records review, and includes digital data provided by Ian Thornton (Guelph District MNR) and Brad Graham (Aylmer District MNR) on May 6, 2010. In particular, please confirm:

- the designation of “deer yard” on all woodlands in the Guelph District portion of the Project area
- the significance of Wardell’s Creek Mouth wetland (identified as “provincially significant” in the data provided by MNR, but “other” significance in Biodiversity Explorer)
- supporting information for Frandenburg Tract Provincially Significant Wetland (apparently not accessible in Biodiversity Explorer)
- supporting information for an unnamed provincially significant Life Science Area of Natural and Scientific Interest, located along the Lake Erie shoreline east of Reicheld Road (LIO Object IDs 651039221 and 651039222)

If necessary, please identify any additional natural heritage features or elements, such as potentially significant wildlife habitat or the locations of known occurrences of species at risk, that are not displayed.

The Project area has recently expanded to include a transmission line siting area. This expanded area is approximately bounded by Haldimand Road 53 to the east, Halidmand Road 55 to the west, Concession 10 W-1 to the north and Rainham Road to the south (please see attached **Figure 2**). At this time, we would like to request all natural heritage features information for the portion of the expanded Project area. Additionally, please identify any known occurrences of species at risk for the expanded Project Area.

2. BACKGROUND INFORMATION AND SITE CONTEXT

The Project area consists of flat, gently rolling farmland. It is generally bounded by Haldimand Concession 11 W-1 to the north; Haldimand Road 55 to the west; the Grand River to the east; and Lake Erie to the south. The Project will be located on privately owned and Ontario Realty Corporation (ORC) managed lands within Haldimand County.

2.1 Significant Natural Heritage Features

A number of designated significant natural heritage features are present within or adjacent to the Project area:

- *Grand River Marshes (Cayuga-Dunville Dam) Provincially Significant Wetland.* This wetland complex is comprised of 10 individual wetlands dominated by marsh (67%) and deciduous swamp (32%). It is reported to support nesting colonial waterbirds, and locally significant winter cover for wildlife including deer (MNR, undated).

- *Dunville Marshes Provincially Significant Wetland.* This wetland complex is comprised of 5 individual wetlands dominated by marsh (96%) and deciduous swamp (4%). It is reported to support nesting colonial waterbirds, and regionally significant staging habitat for waterfowl and fish spawning/rearing (MNR, undated).

- *Erco Provincially Significant Wetland.* The Erco Wetland is a coastal wetland composed of two wetland types (85% swamp and 15% marsh). It is reported to supported nesting colonial waterbirds and active feeding areas for Great Blue Heron, and locally significant winter cover for wildlife and fish spawning and rearing. Snapping Turtle has been observed here (MNR, undated).

- *James N. Allen Park Woodlot-Wetland Provincially Significant Wetland.* This coastal wetland complex is made up of five individual wetlands, composed of two wetland types (65% swamp and 35% marsh). It is reported to supported nesting colonial waterbirds and active feeding areas for Great Blue Heron, and locally significant winter cover for wildlife and fish spawning and rearing.

- *Dunville Grand River Alluvial Marshes Provincially Significant Life Science Area of Natural and Scientific Interest.* This area presents a 5 km expanse of the lower Grand River that includes a broad series of natural features associated with the inundated, still water riparian environment that has resulted from the dam at Dunville. "The general landform of the area is a series of broad alluvial islands and floodplains separated by natural basins and the major channel of the river. This area presents the best complement of still water riparian landforms and community patterns recorded in the lower Grand River Valley. Even though the environment is not strictly natural due to the impacts

of the Dunnville dam, nevertheless, it does present a splendid diversity and development of riparian wetland community patterns" (MNR, undated).

- *Oriskany Sandstone and Woodlands Provincially Significant Life Science Area of Natural and Scientific Interest.* The Oriskany sandstone area is an isolated sandstone plain located in the western portion of the Haldiman clay plain. The plant communities of the ANSI are derived from the well-drained site conditions and previous land uses. Significant elements of the ANSI include the unique geological formation and its brachiopod fossil community; the unique oak-hickory forest association supported by the dry, acid substrate; the approximately 30 plant species that are rare in Ontario; and the endangered black rat snake whose unusual habitat is formed by the crevices and cracks of the Oriskany formation. (MNR, undated). The vegetation of the Oriskany Sandstone and Woodlands ANSI includes a variety of dry and mesic upland and wet lowland deciduous forests, a large pond and wetland complex, and successional barrens, meadows and thickets. Concentrations of prairie plant species are present.

- *Oriskany Sandstone Provincially Significant Earth Science Area of Natural and Scientific Interest.* "The ANSI contains the only exposures of the Devonian Oriskany Formation in Canada. This sandstone was deposited in an Early Devonian nearshore environment rich in fossil remains. Unconformities exist between this formation and both the Bertie and Bois Blanc Formations which are also present." (MNR, undated).

- *Sandusk Falls Provincially Significant Earth Science Area of Natural and Scientific Interest.* "Sandusk Falls ANSI exhibits Middle Devonian, Onondaga Formation, Moorehouse Member cherty, fossiliferous limestone. The bedrock units in the area have been recently revised. This site has been defined as the Onondaga Formation and the contact with the overlying Dundee Formation is exposed." (MNR, undated).

- *Hemlock Creek Limestone Provincially Significant Earth Science Area of Natural and Scientific Interest.* "Hemlock Creek ANSI exhibits the Middle Devonian, Onondaga Formation, Moorehouse limestone Member. This outcropping contains a diverse Onondaga faunal assemblage dominated by corals, bryozoans and brachiopods. The Moorehouse Member is exposed better at this site than any other area in the Niagara Peninsula." (MNR, undated).

There are no designated Important Bird Areas in the Project area. However, the Project area is known or expected to support other types of natural heritage features. Large, mature woodlands are arrayed along rear lots, particularly in the eastern portion of the wind and solar siting area (**Figure 1**). Fish habitat is present in many watercourses and their tributaries throughout the Project area. Lake Erie and the Grand River are important for staging migrant or overwintering waterfowl. The Lake Erie shoreline is thought to concentrate migrating raptors and possibly bats in fall. The area around Fisherville historically supported unusually high numbers of wintering raptors and owls.

2.2 Significant Species

The Project area supports potential habitat for numerous species at risk. Table 1 lists significant species occurrences within the Project area. Special concern species identified by the MNR as having a "high likelihood" of occurrence are:

Milksnake

Monarch

Snapping Turtle

Special concern species identified by the MNR as having a "medium likelihood" of occurrence are:

Eastern Ribbonsnake

Hooded Warbler

Northern Map Turtle

River Redhorse

2.3 Threatened and Endangered Species

MNR has provided a preliminary list and probable occurrences of species at risk in the Grand River Energy Park Study Area. The only threatened or endangered species identified as having a "high likelihood" of occurrence by the MNR is Gray Ratsnake (Endangered). Ratsnakes (*Elaphe obsolete*) have varying habitat preferences, ranging from open fields to forested communities. This species will nest individually or communally with other ratsnakes, often returning to the same nesting site each time. Nests generally occur in loose decaying organic material such as hollow trees and piles of compost, leaves and manure. Eggs are often laid in July and hatch sometime between September and October. After hatching, juveniles usually remain at the nest site until their first shed. Ratsnakes are constrictors and often climb trees in search of food. Studies have shown that ratsnakes often utilize community edges for thermoregulatory purposes and because these areas tend to have higher prey abundance.

Threatened and endangered species identified as having a "medium likelihood" of occurrence by the MNR are:

Terrestrial Wildlife	Terrestrial Plants	Aquatic Wildlife
American Badger	American Chestnut	Eastern Sand Darter
Barn Owl	Eastern Flowering Dogwood	Round Pigtoe
Blanding's Turtle		
Chimney Swift		
Fowler's Toad		

Site investigations in 2009 and 2010 will assess the presence, or potential presence, of these species within 120 m of the Project location. Additionally, the Haldimand Stewardship Council will be contacted for information on Gray Ratsnake sightings within the Project area. No potentially intrusive surveys, requiring a permit under the *Endangered Species Act* (2007), are proposed at this time. If the presence or potential presence of an endangered or threatened species is confirmed, to assure compliance with the *Endangered Species Act* (2007), additional detailed studies will be conducted in 2011. MNR will be consulted regarding specific study programs and permit requirements at that time.

3. PROPOSED SITE INVESTIGATION WORK PROGRAM

O. Reg. 359/09 requires that a natural heritage assessment ("NHA") be completed for wind power projects. This is comprised of a records review, site investigation, and evaluation of significance of each natural feature identified in the course of the records review and site investigation. This work program is intended to provide a comprehensive overview of all natural heritage requirements under the new approval process.

3.1 Bird Studies

Bird studies were conducted by Hatch across four seasons between March 2009 and February 2010. The bird monitoring program was developed with reference to the following guidance documents:

- Guideline to Assist in the Review of Wind Power Proposals – Potential Impacts to Birds and Bird Habitats v. 1.0 (MNR, August 2007)
- Recommended Protocols for Monitoring Impacts of Wind Turbines on Birds (Environment Canada, February 2007)
- Wind Turbines and Birds – A Guidance Document for Environmental Assessment (Environment Canada, February 2007)

The 2009 bird study area was smaller than the current Project area. Accordingly, supplementary breeding bird studies were conducted by Stantec in June, 2010. Details on methods are provided below.

Spring Migration

Four visits to the site were completed by Hatch to characterize spring bird migration within the Study Area. Surveys took place on March 27, April 8, April 24 and May 11 – 12, 2009 and were comprised of driving surveys along the roadsides of the 2009 bird study area. All birds observed were recorded and approximate locations of large flocks were noted, if observed. Flight heights and directions of any raptors or waterfowl observed were also noted. Weather conditions (precipitation, Beaufort wind speed, wind direction, air temperature, and cloud cover) were noted at the start of each survey and every hour following. The surveys were performed in the morning and in the evening.

Following the morning observations, behavioural watches were completed for 1 hour at each of four proposed locations within the project area. These survey locations were:

Dunnville-Haldimand Townline Rd., just north of Dover-Dunnville Rd. (Rainham Rd.), in the southeast of the study area

River Rd, just west of Cayuga Sideroad South and River Rd. in the northeast of the study area

Meadows Rd. in the northwest of the study area, between Mt. Olivet and Wilson (near the Fradenburg Tract Provincially Significant Wetland)

Intersection of Bains Rd. and Sweets Corners Rd. in the southwestern portion of the study area (near the Wardell's Creek Woods Life Science Site).

Weather conditions were noted prior to the surveys. The location at which the survey commenced was randomly determined, with the order being different for each visit. Notes on species and the number of birds, plus bird behaviour such as flight height, patterns, directions and notable actions, were recorded.

During the monitoring event in May (during the peak of passerine migration), an area search around the woodlots of the study area was conducted to determine if any were being heavily used by migrants. Areas searches were conducted through the day, starting in the morning, and were completed within 5 hours of sunrise. As landowner permission for access to the woodlots was not obtained, the observer was restricted to working from the roadsides along the edges of woodlots that bordered the road.

Summer Breeding

Breeding bird surveys consisted of a combination of point counts, area searches, and behavioural watches. In addition, targeted surveys for SAR that may be present were conducted.

Summer breeding bird surveys were conducted during the first half of June 2009 (June 4, 5 and 10), with surveys repeated 20 days later during the second half of June (June 23, 24, and 26, and July 14 and 15). This provided replicate coverage of the site during the breeding bird period.

Seventy-one 10-minute, unlimited distance point counts were conducted from roadsides within the study area. These were distributed across the study area in the following manner:

20 point counts along the lakeshore

11 point counts along the Grand River (number limited by availability of suitable monitoring locations within the study area)

20 point counts from areas associated with woodlots – these point counts also involved broadcast calls for species at risk, discussed below.

20 point counts in open areas (agricultural fields)

Point count locations along the river, lakeshore and associated with woodlots were chosen based on availability of suitable monitoring locations (i.e., proximity to shoreline, woodlot, etc). Point count locations in open areas were randomly selected. Point counts commenced 0.5 hours prior to dawn and continued until a maximum of 5 hours after dawn. Spacing recommendations identified in guidance documents were maintained between point count locations.

Behavioural watches were conducted as during the spring migration surveys, with two counts conducted per station across the breeding period. In addition to the four stations monitored during spring migration, two additional stations in the western half of the study area, as well as three Lake Erie shoreline stations were monitored.

When property access was obtained in June, 2010, supplementary breeding bird point counts and area searches were conducted by Stantec. Following a site reconnaissance visit, grassland habitats in the expanded Project area and off-road woodland habitats in the entire Project area were targeted. Thirty-five additional woodland points and 13 grassland point counts were monitored between June 17 and June 22, and monitoring was repeated at least 10 days later between June 28 and July 2, 2010.

Targeted investigations were also conducted by Hatch in 2009 to detect the possible presence of the following species at risk or species which may have otherwise been missed during regular surveys:

Bald Eagles were targeted during behavioural watch surveys.

Common Nighthawk/Chimney Swift – Searches for these crepuscular species were conducted by driving slowly throughout the study area, starting 1.5 hours prior to sunset, with the survey finishing at full dark.

Woodland Passerines: Acadian Flycatcher, Red-headed Woodpecker, Canada Warbler, Hooded Warbler - As part of point counts associated with forest habitat, a broadcast survey of calls of these species was conducted. Protocols for the broadcast survey generally follow the guidelines of the Marsh Monitoring Program, with periods of passive observation and periods of broadcast calls.

Fall Migration

Surveys during the fall migration were conducted exactly as indicated during the spring migration, with the addition of the behavioural monitoring stations surveyed during the summer breeding bird period, and an additional survey period included. Surveys were conducted on August 28, September 2 and 3, September 25 and 30, October 14 and 15, November 3 and 4, November 17 and 23, 2009.

Area searches of local woodlots were conducted during visits in September where landowner permission was available.

Over-winter Resident

Surveys during the over-winter resident period were conducted by driving on roads within the study area, as was conducted for spring migration monitoring, to determine bird use of the area. The study area was visited three times, on December 21, 2009, February 4, 2010 and February 25, 2010.

3.2 Bat Studies

An acoustic bat monitoring program was carried out by Hatch in August and September, 2009 based on the working draft " Guideline to Assist in the Review of Wind Power Proposals – Potential Impacts to Bats and Bat Habitats" (MNR, August 2007). Consultation with the MNR in August 2009 indicated there were no known significant hibernacula, significant maternity roosts, swarming sites, caves or adits within the vicinity of the 2009 Project area. The nearest potential habitats were located between 5 km (karst areas near the Grand River north of the Project area) and 15 km (abandoned mines near Hagersville). The results of the 2009 acoustic monitoring did not suggest the presence of day roosts or swarming sites in the Project area, although Hatch notes that this cannot be confirmed on the basis of the acoustic monitoring.

The revised "Bats and Bat Habitats: Guidelines for Wind Power Projects" (MNR, March 2010) requires a physical search of the air, land and water within 120 m of the project to determine if additional candidate bat significant wildlife habitat is present. This physical search will be carried out in conjunction with the 2010 site investigation, to be carried out in August, 2010.

3.3 Other Natural Heritage Features

The records review and the results of the 2009-2010 wildlife studies have provided general guidance to Project siting. Once a preliminary site layout is available, an site investigation field program will be conducted in and within 120m of the Project location for the purpose of determining:

- Whether the results of the records review are correct or require correction;
- Whether any additional natural features or water bodies exist that were not documented in the records review;
- The boundaries, located within 120m of the project location, of any natural feature or water body identified in the records review or site investigation; and,
- The distance from the project location to the boundaries of each natural feature or water body.

The presence of features such as woodlands, wetlands, and valleylands will be determined through completion of Ecological Land Classification (ELC) of vegetation communities (Lee et al., 1998) and reference to the Ontario Wetland Evaluation System (2002) and the Natural Heritage Reference Manual for Natural Heritage Policies of the Provincial Policy Statement, 2005 (MNR, 2010).

A field assessment will be undertaken to identify the potential for features that may be designated as significant wildlife habitat (i.e., seasonal concentration areas, rare vegetation communities or specialized habitats, movement corridors and habitats of species of conservation concern) within the project location. Each feature, which background information indicates could reasonably be found in the Project area, will be assessed through the site investigations.

Seasonal Concentration Areas

The presence of bird-related seasonal concentration areas (such as colonial bird nesting sites, waterfowl stopover, staging and nesting areas, shorebird and landbird migratory stopover areas, raptor winter feeding and roosting areas) will be assessed based on the results of the four-season bird studies described in Section 3.

Physical searches for habitat that could potentially serve as reptile or bat hibernacula will be conducted within 120 m of the Project location in August, 2010.

Rare Vegetation Communities or Specialized Habitats

The presence of rare vegetation communities and specialized habitats related to vegetation (such as forests providing a high diversity of habitats, old-growth or mature forest stands, foraging areas with abundant mast) will be determined through completion of Ecological Land Classification (ELC) of vegetation communities (Lee et al., 1998) within 120 m of the project location.

The presence of bird-related specialized habitats (such as habitat for area-sensitive species, specialized raptor nesting habitat) will be assessed based on the results of the four-season bird studies described in Section 3.

Physical searches for habitat that could potentially serve as amphibian woodland breeding ponds, turtle nesting habitat, mineral licks, as well as cliffs, seeps and springs, will be conducted within 120 m of the Project location in August, 2010.

Habitats of Species of Conservation Concern

The presence of habitats for plant species of concern will be determined through a botanical inventory of lands within 120 m of the Project location in August, 2010, along with completion of Ecological Land Classification (ELC) of vegetation communities (Lee et al., 1998). The presence of habitats for bird species of concern will be assessed based on the results of the four-season bird studies described in Section 3.

The presence of habitats for amphibian and reptile species of concern will be determined through a physical search of lands within 120 m of the Project location in August, 2010. Species potentially occurring include milksnake, eastern ribbonsnake, snapping turtle, and northern map turtle. Milksnake is a habitat generalist, favouring open woodlands, fields and farm buildings. It is commonly associated with rural areas, and travels across agricultural areas, yards and roads. As such, it will not be possible to identify specific areas of habitat within the Project area for this species. The physical searches for the other three reptile species will focus on suitable waterbodies and wetlands, and detecting suitable nesting substrates and potential hibernacula on adjacent lands.

Animal Movement Corridors

Animal movement corridors are defined as elongated, naturally vegetated parts of the landscape used by animals to move from one habitat to another, and include riparian zones, shorelines, woodlands, hydro and pipeline corridors, abandoned road and rail allowances, fencerows and windbreaks. Where such features occur within 120 m of the Project location, an assessment for potential for animal movement will be conducted during physical searches in August, 2010.

Upon completion of the site investigation field program, an evaluation of significance for the natural heritage assessment will be conducted in accordance with the MNR's Natural Heritage Reference Manual (2010), and Significant Wildlife Habitat Technical Guide (2000). The Natural Heritage Assessment Report will be produced and submitted to the MNR, and will include mapping of the project in relation to identified natural features.

4. PROJECT SCHEDULE

Bird and bat field surveys were completed in 2009. Additional surveys specific to the key features of the Renewable Energy Approvals process are planned for 2010.

To permit a REA submission in February 2011, it will be necessary to issue the REA reports, including the Natural Heritage Assessment report, to the public in November 2010. To meet this timeline, we propose the following schedule:

September 17, 2010	• preliminary project layout will be available
September 20 - 24, 2010	• conduct project location-specific field work
October 4, 2010	• submit final Natural Heritage Assessment, and Environmental Impact Study (EIS) if necessary, for MNR review and confirmation before November 4, 2010

Reference: Samsung Grand Renewable Energy Park

We look forward to discussing this work program and project schedule with you. Please do not hesitate to contact the undersigned should you require further information.

Sincerely,

STANTEC CONSULTING LTD.

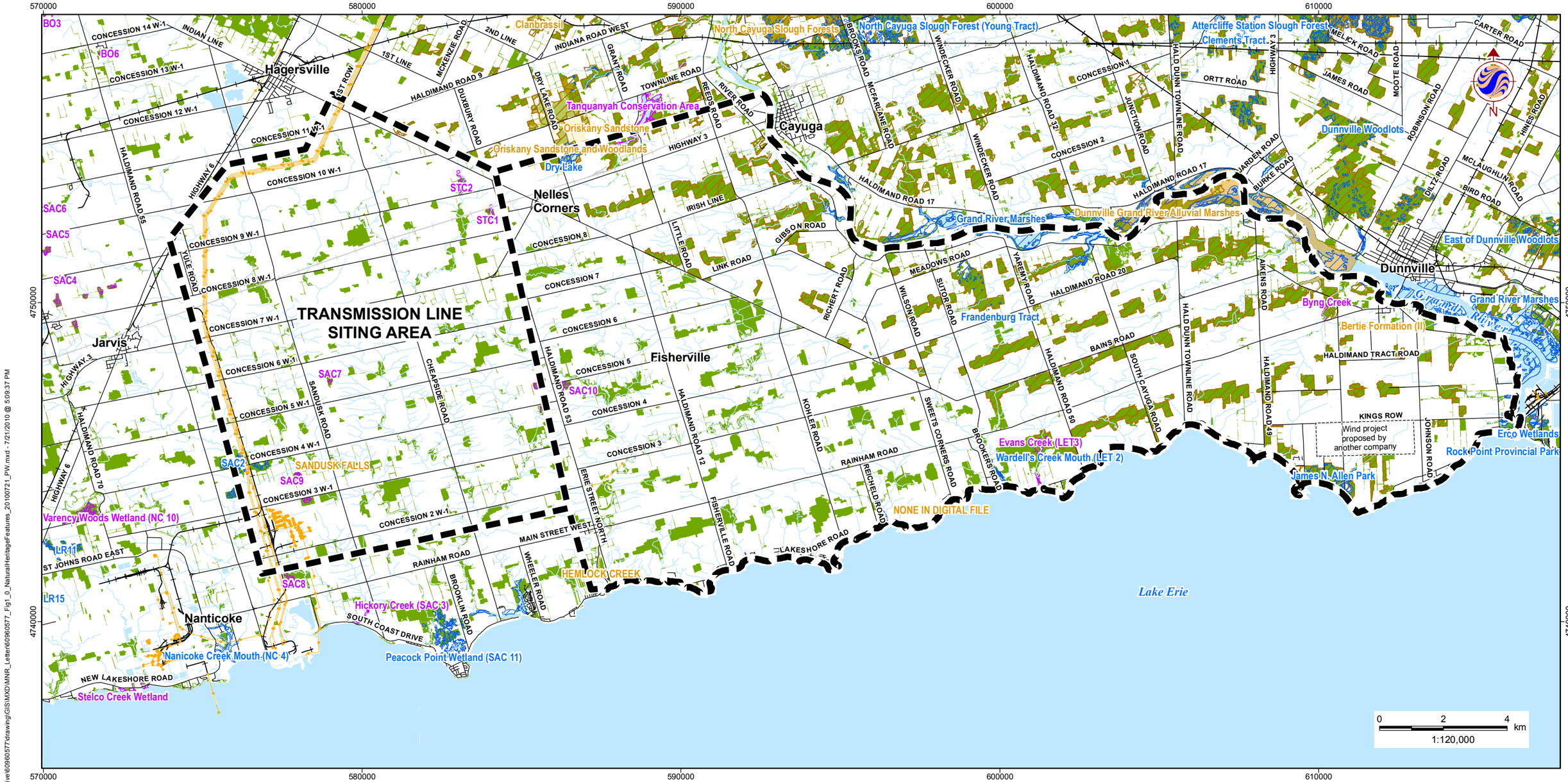
Valerie Wyatt, M.Sc.
Senior Project Manager
Tel: (519) 836-6050 x 237
Fax: (519) 836-2493
valerie.wyatt@stantec.com

Attachment: Figure 1 – Natural Heritage Features map

Figure 2 – Project Location map

Table 1 – Natural Heritage Information Centre Species Search Results

cc. Carrie Hayward, MNR Regional Director – Southern Region
Adam Rosso, Samsung Renewable Energy
Michael Henderson, Samsung Renewable Energy
Rob Nadolny, Stantec Consulting Ltd.



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July, 2010
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Legend

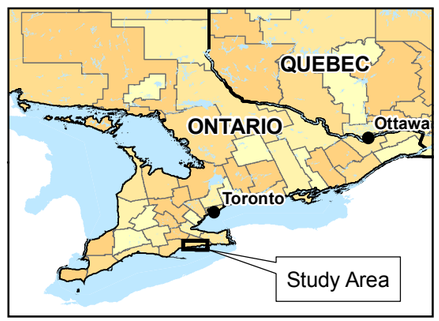
- Project Location
- Road
- Railway
- Abandoned Railway
- Watercourse (OBM)
- Transmission Line (OBM)
- Waterbody (OBM)
- Wooded Area
- Deer Yard

Area of Natural and Scientific Interest (ANSI)

- Life Science, Provincially Significant
- Earth Science, Provincially Significant
- Earth Science, Regionally Significant

Wetland

- Provincially Significant Wetland
- Non-Provincially Significant Wetland



Notes

1. Coordinate System: UTM NAD 83 - Zone 17 (N).
2. Data Sources: Ontario Ministry of Natural Resources © Queens Printer Ontario, 2009; © GREP, 2010; © Samsung, 2010.

Client/Project

SAMSUNG C&T
GRAND RENEWABLE ENERGY PARK

Figure No.

1.0

Title

NATURAL HERITAGE FEATURES

570000 580000 590000 600000 610000

4750000

4740000

Hagersville

TRANSMISSION LINE SITING AREA

Cayuga

WIND AND SOLAR SITING AREA

Nelles Corners

Dunnville

Jarvis

Fisherville

Nanticoke

Lake Erie

N

0 2 4 km

1:120,000

July, 2010

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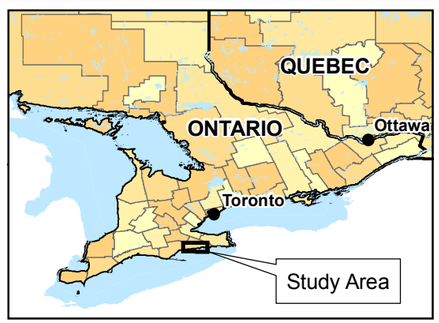
Legend

- Project Location
- NHIC Tile



Notes

1. Coordinate System: UTM NAD 83 - Zone 17 (N).
2. Data Sources: Ontario Ministry of Natural Resources © Queens Printer Ontario, 2009; © GREP, 2010; © Samsung, 2010.

Client/Project

SAMSUNG C&T
GRAND RENEWABLE ENERGY PARK

Figure No.

2.0

Title

PROJECT LOCATION MAP

Stantec

# of EOs	Unique Identifier (Element ID)	Taxonomic Group	Family	Scientific Name	English Name	G-rank	S-rank	Committee on the Status of Endangered Wildlife in Canada (COSEWIC) Status	Species At Risk in Ontario (SARO) Status
1	180730	Mammals	Mustelidae	Taxidea taxus	American Badger	G5	S2	END	END
1	180700	Mammals	Cricetidae	Microtus pinetorum	Woodland Vole	G5	S3?	SC	SC
3	180258	Birds	Tytonidae	Tyto alba	Barn Owl	G5	S1	END	END
1	180063	Birds	Ardeidae	Ixobrychus exilis	Least Bittern	G5	S4B	THR	THR
1	180239	Birds	Laridae	Chlidonias niger	Black Tern	G4	S3B	NAR	SC
1	180411	Birds	Parulidae	Dendroica cerulea	Cerulean Warbler	G4	S3B	SC	SC
2	180752	Reptiles and Turtles	Emydidae	Emydoidea blandingii	Blanding's Turtle	G4	S3	THR	THR
1	180753	Reptiles and Turtles	Emydidae	Graptemys geographica	Northern Map Turtle	G5	S3	SC	SC
1	180759	Reptiles and Turtles	Trionychidae	Apalone spinifera	Spiny Softshell	G5	S3	THR	THR
8	180770	Reptiles and Turtles	Colubridae	Lampropeltis triangulum	Milksnake	G5	S3	SC	SC
2	17156	Reptiles and Turtles	Colubridae	Pantherophis spiloides pop. 2	Gray Ratsnake (Carolinian population)	G5T1	S1	END	END
1	182542	Reptiles and Turtles	Colubridae	Thamnophis sauritus	Eastern Ribbonsnake	G5	S3	SC	SC
1	180785	Reptiles and Turtles	Viperidae	Sistrurus catenatus	Massasauga	G3G4	S3	THR	THR
3	201116	Amphibians	Ambystomatidae	Ambystoma hybrid pop. 1	Jefferson X Blue-spotted Salamander, Jefferson genome dominates	GNA	S2		
4	180023	Amphibians	Bufonidae	Anaxyrus fowleri	Fowler's Toad	G5	S2	THR	THR
1	180569	Fish	Cyprinidae	Notropis photogenis	Silver Shiner	G5	S2S3	SC	SC
1	180599	Fish	Catostomidae	Moxostoma carinatum	River Redhorse	G4	S2	SC	SC
1	180601	Fish	Catostomidae	Moxostoma erythrurum	Golden Redhorse	G5	S4	NAR	NAR
2	181402	Freshwater Mussels	Unionidae	Epioblasma triquetra	Snuffbox	G3	S1	END	END
1	181419	Freshwater Mussels	Unionidae	Pleurobema sintoxia	Round Pigtoe	G4G5	S1	END	END
1	181245	Dragonflies and Damselflies	Coenagrionidae	Enallagma aspersum	Azure Bluet	G5	S3		
1	181206	Dragonflies and Damselflies	Libellulidae	Sympetrum corruptum	Variegated Meadowhawk	G5	S3		
2	24000	Moncotyledons	Araceae	Arisaema dracontium	Green Dragon	G5	S3	SC	SC
2	83030	Dicotyledons	Fabaceae	Astragalus neglectus	Cooper's Milk-vetch	G4	S3		
2	23214	Moncotyledons	Cyperaceae	Carex hirsutella	Hairy Green Sedge	G5	S3		
1	23240	Moncotyledons	Cyperaceae	Carex juniperorum	Juniper Sedge	G3	S1	END	END
1	23402	Moncotyledons	Cyperaceae	Carex seorsa	Weak Stellate Sedge	G4	S2		
2	23474	Moncotyledons	Cyperaceae	Carex willdenowii	Willdenow's Sedge	G5	S1		
1	44002	Dicotyledons	Juglandaceae	Carya glabra	Pignut Hickory	G5	S3		
1	44004	Dicotyledons	Juglandaceae	Carya laciniosa	Shellbark Hickory	G5	S3		
2	46000	Dicotyledons	Fagaceae	Castanea dentata	American Chestnut	G4	S2	END	END
1	146502	Dicotyledons	Cuscutaceae	Cuscuta cephalanthi	Buttonbush Dodder	G5	S2		
1	83092	Dicotyledons	Fabaceae	Desmodium rotundifolium	Prostrate Tick-trefoil	G5	S2		
1	22260	Moncotyledons	Poaceae	Echinochloa walteri	Coast Barnyard Grass	G5	S3		
2	168232	Dicotyledons	Asteraceae	Eurybia schreberi	Schreber's Wood Aster	G4	S2S3		
1	143010	Dicotyledons	Gentianaceae	Frasera caroliniensis	American Columbo	G5	S2	END	END
1	31000	Moncotyledons	Juncaceae	Juncus acuminatus	Sharp-fruited Rush	G5	S3		
1	151066	Dicotyledons	Lamiaceae	Lycopus rubellus	Taper-leaved Bugleweed	G5	S3		
2	149040	Dicotyledons	Boraginaceae	Mertensia virginica	Virginia Lungwort	G5	S3		
1	151086	Dicotyledons	Lamiaceae	Monarda didyma	Scarlet Beebalm	G5	S3		
1	125070	Dicotyledons	Onagraceae	Oenothera pilosella	Pillose Evening Primrose	G5	S2		
1	149062	Dicotyledons	Boraginaceae	Onosmodium molle ssp. hispidissimum	Soft-hairy False Gromwell	G4G5T4	S2		
1	61086	Dicotyledons	Caryophyllaceae	Paronychia fastigiata	Cluster-stemmed Nailwort	G5	S1		
3	54016	Dicotyledons	Polygonaceae	Persicaria arifolia	Halberd-leaved Tearthumb	G5	S3		
1	147010	Dicotyledons	Polemoniaceae	Phlox subulata	Moss Phlox	G5	S1?		
1	109036	Dicotyledons	Malvaceae	Sida hermaphrodita	Virginia Mallow	G3	S1	END	END
1	15002	Moncotyledons	Sparganiaceae	Sparganium androcladum	Branching Burreed	G4G5	SH		
1	22616	Moncotyledons	Poaceae	Torreyochloa pallida	Torrey's Manna Grass	G5	S2		
1	16910	Dicotyledons	Violaceae	Viola palmata	Palmate-leaved Violet	G5	S2S3		

Friedl, Susanne

From: Hindmarsh, Ben (MNR) <Ben.Hindmarsh@ontario.ca>
Sent: Tuesday, August 17, 2010 1:51 PM
To: Pomeroy, Mark
Cc: Riddell, Heather (MNR); Yagi, Anne (MNR)
Subject: RE: Samsung (GREP) Fish permit application
Attachments: Haldimand - Master.xls; Haldimand - North.jpg; Haldimand - Overview.jpg; Haldimand - West.jpg; Haldimand - Central.jpg; Haldimand - East.jpg; Haldimand - Fish Species.xls

Hello Mark,

Please see the attached detailed fisheries data for the portion of the Samsung project area falling within Aylmer District.

If you have any questions, please let me know.

Thanks,
Ben Hindmarsh

Ben Hindmarsh
Sr. Fish and Wildlife Technical Specialist
Ministry of Natural Resources
615 John St. N.
Aylmer, Ontario N5H 2S8
Tel: (519) 773-4711
Fax: (519) 773-9014
Email: ben.hindmarsh@ontario.ca

From: Riddell, Heather (MNR)
Sent: July 26, 2010 3:27 PM
To: Hindmarsh, Ben (MNR); Yagi, Anne (MNR)
Cc: Nix, April (MNR)
Subject: FW: Samsung (GREP) Fish permit application
Importance: High

Hi Ben & Anne,

This is what Stantec is proposing.

Please let me know what your thoughts are on this.

Thanks,

Heather Riddell
A/ Planning Ecologist
MNR, Aylmer District
(519) 773-4723

From: Pomeroy, Mark [mailto:mark.pomeroy@stantec.com]
Sent: July 26, 2010 3:24 PM
To: Riddell, Heather (MNR)
Subject: Samsung (GREP) Fish permit application
Importance: High

Heather,

I have attempted to phone you today on two occasions (once at about 2pm and again at about 330pm), but have received a busy signal both times.

I understand that there was a meeting on Friday, during which the feasibility of a blanket permit was discussed. I also understand that a bit more clarification may be necessary regarding details of the proposed activities, and that it would be preferable to the MNR if the area could be narrowed somewhat. I would like to propose that Stantec submit a map with a narrowed study area, including dots where we would like to sample. If there are areas where MNR prefers that sampling not occur (due to there being sufficient recent fish data, or the presence of SAR), the map could be returned to me showing locations where sampling is not required or wanted, hopefully with a brief rationale. I could then submit a permit application package based on that, which should satisfy requirements of both parties. Please let me know if this is acceptable. You can give me a call if you'd like to discuss further, or if I'm not being clear.

Thanks,

Mark Pomeroy, B.Sc.
Biologist / Project Manager
Stantec
Ph: (519) 836-6050 Ext. 224
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mark.pomeroy@stantec.com
stantec.com

Ministry of
Natural Resources
615 John Street North
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Tel: 519-773-9241
Fax: 519-773-9014

Ministère des
Richesses naturelles
615, rue John Nord
Aylmer ON N5H 2S8
Tél: 519-773-9241
Téléc: 519-773-9014

Ontario

August 19, 2010

Valerie Wyatt
Senior Project Manager
Stantec Consulting
70 Southgate Drive, Suite 1
Guelph ON N1G 4P5

Dear Ms. Wyatt,

Re: **Samsung Grand Renewable Energy Park**
Data Request and Site Investigation Work Program

Further to our meeting of July 23, 2010, the MNR provides the following additional information and comments for consideration. It is understood that the area of interest is for Samsung's proposed Grand Renewable Energy Park project, which is proceeding through the Ministry of Environment's (MOE) renewable energy approvals (REA) process under Regulation 359/09.

Under Regulation 359/09 there are several requirements for Renewable Energy projects that must be met/addressed pertaining to the protection of natural heritage features as part of the application process. You can find the Regulation online at:
http://www.e-laws.gov.on.ca/html/regs/english/elaws_regs_090359_e.htm

More specifically Sections 24-28 of the Regulation outline natural heritage requirements for renewable energy projects. Section 38 also outlines natural heritage prohibitions and Environment Impact Study requirements.

Natural Heritage Information

Wetlands:

With respect to wetlands within the study area, MNR staff are currently working on updating Provincially Significant Wetlands mapping within Haldimand County, we will keep you informed as to when this new mapping becomes available. Given the limited existing wetlands mapping in Halidmand County it should be understood that there likely are wetland features that are previously unmapped and unevaluated by the Ministry within the study area. If part(s) of the project location for the Grand Renewable Energy Park are within 120m of these features, they will need to be evaluated using the most recent edition of the Ontario Wetland Evaluation System to identify, delineate and map these wetland communities in order to determine if they are a Provincially Significant Wetland (PSW) or part of a PSW Complex.

The Aylmer District database identified the following evaluated wetlands within the study area:

- Evans Creek (LET3) – Locally Significant Wetland (LSW)
- Gates Creek Mouth (LET1) – PSW
- SAC10 – LSW
- SAC2 – PSW
- SAC7 – LSW

- SAC9 – LSW
- STC1 – LSW
- STC2 – LSW
- STC4 – LSW
- Wardell's Creek Mouth (LET2) - PSW

The Guelph District database identified the following evaluated wetlands within the study area:
- Franctenburg Tract – PSW
- Dry Lake – PSW
- Tanquanyah C.A. – LSW
- Byng Creek – LSW

Woodlands:
There are also a number of wooded areas within the general study area; these appear to range from small hedgerow features to larger woodland communities up to around 100 hectares in size. Several of the woodland communities have also been identified as deer wintering areas, which should also be captured as part of the overall NHA in relation to significant wildlife habitat. Mapping for identified deer wintering areas within Guelph District and wooded areas is available through LIO. The Guelph District deer wintering area mapping in LIO is the most up-to-date available and was compiled by the Niagara Area office. If there are questions with respect to the mapping available please contact Anne Yagi Management Biologist at 905-562-1196 or anne.yagi@ontario.ca.

Areas of Natural and Scientific Interest (ANSI):
In regards to the request for *"supporting information for an unnamed provincially significant Life Science Area of Natural Interest, located along the Lake Erie shoreline east of Reichland Road (LIO Object ID's 65139221 and 651039222"*; according to our records, those ID's are identified as Sweets Corners Earth Science ANSI. How those features have been represented in the digital layer may not be entirely accurate and as such we recommend contacting Ontario Parks for further confirmation and/or information on that feature.

The Ministry has no records of any other ANSI features not already identified in the work program. Mapping of ANSI features is available through LIO. There is also older hard copy ANSI information available for the Oriskany Sandstone Life Science ANSI available through Guelph District. Please contact April Nix – Planning Intern at 519-826-4939 to make arrangements to access this information.

Bats and Bat Habitat:
The Ministry is aware of a potential bat hibernacula site within the Cayuga area south of highway 3 and west of the Grand River in Haldimand County. MNR staff are currently working on arranging a site visit to assess the potential of this feature. As such it is recommended that you contact Lesley Hale, Science Specialist - Renewable Energy at 705-755-3247 to make arrangements to co-ordinate a site investigation/field visit.

Further, there are areas of karst which may contain potential bat habitat within Halidmand County. Karst mapping is available through the Ministry of Northern Development, Mines and Forestry (MNDMF). It is also recommended that you obtain MNDMF's mapped abandoned mines layer as these sites may also be used as hibernacula. You will need to contact MNDMF directly to obtain available karst and mine data and information.

Bird and Bat Guidelines:
The Ministry also has guidelines to assist proponents in developing appropriate bird and bat monitoring protocols, including: Guideline to Assist in the Review of Wind Power Proposals – Potential Impacts to Birds and Bird Habitats; and the recently updated draft Bats and Bat Habitats – Guideline

for Wind Power Projects. These documents are available on the Ministry's website under the Energy –Windpower –Policies, Procedures and Guidelines section. Please note that the Ministry is currently in the process of updating the bird guidelines to reflect the recent changes to the renewable energy approvals process.

The Ministry has also recently released the new Natural Heritage Reference Manual – second edition, which can be found online at: http://www.mnr.gov.on.ca/289522.pdf.

Information Relating to the Approvals and Permitting Requirements Document (APRD)

It is understood the MNR staff have previously provided a list of Species at Risk (SAR) to Stantec for the Grand Renewable Energy Park study area. Please note, that the list of SAR protected under the Endangered Species Act, 2007 is updated from time to time. The complete list is available online on the MNR website, and also indicates when the latest updates to the list were completed. In addition, the priority list of species under review by the Committee on the Status of Species at Risk in Ontario (COSSARO) is also available through the Ministry website.

It should also be understood that where water crossings are proposed, including for related wind energy infrastructure, that these crossings may also be subject to approvals under the *Public Lands Act* as the beds of waterways may be Crown Land. Should any water crossings be proposed, it is recommended that you inform the Ministry, as early as possible, in order to determine if these approvals will apply.

Petroleum Resources:
It is also recommended that you review the Ontario Oil, Gas and Salt Resources Library for information about known well and pool locations (http://www.ogsrlibrary.com/) of petroleum in the study area. The Ontario Oil, Gas and Salt resources library is the most accurate source of petroleum resource information available. As noted in Section 7.8 of the APRD, development is not permitted within 75 metres of a petroleum resources operation, unless the applicant submits an engineers report demonstrating that there are no effects to the development.

General Comments on the Work Program

With respect to differences in mapping or data availability between the NHIC biodiversity explorer and mapping layers available through the LIO warehouse, it should be understood that NHIC maintains their own versions of the MNR LIO data and information. As such the NHIC's Natural Areas database may contain out-of-date information pertaining to some natural heritage features. The authoritative sources for wetland evaluation information are the LIO Wetland Unit dataset and the District wetland evaluation data records. As such, Ministry staff recommend referring to the LIO data as the primary data source for features such as wetlands, woodlands, ANSIs, etc. The NHIC biodiversity explorer can be used for general information searches and to identify element occurrences as indicators to support SAR and significant wildlife habitat. If you require detailed wetland evaluation records in Aylmer District, please contact Erin Sanders, Wetland Evaluation Project Biologist at 519-773-4715 or erin.sanders@ontario.ca. If you require the same from Guelph District, please contact Anne Yagi at the contact information provided above.

Section 2.2 and 2.3
Ministry staff note that the list of SAR previously provided ranked the likelihood of occurrence based on a high, medium or low potential to occur. Based on the work program provided, only species identified as having a medium or high likelihood of occurring are being considered within the work program. It should be understood that Ministry staff based the likelihood of a species occuring within

the study area on the basis of the limited information available, including habitat information and element occurrences (EOs).

As the province has not been surveyed comprehensively for the presence of species at risk (SAR), the absence of an EO in a particular geographic area does not indicate the absence of the species in that area. Please note that Ministry staff recommend that all SAR species that have potential to occur within the study area should be considered and surveyed for where there is potential habitat.

Section 3.2 describes bat studies completed to date and additional proposed investigations for August 2010. Please note that in addition to completing physical surveys within 120 m of the project location for potential hibernacula, the new draft bat guidelines also outline protocols for the identification of maternity roosts. As such, the natural heritage assessment for this project should include site investigations and evaluations of significance (where applicable) for both bat hibernacula and maternity roosts (significant wildlife habitat for bats) within the NHA.

Section 3.3 of the work program outlines other natural heritage features and how they will be assessed. Where physical searches for habitat suitable to serve as amphibian woodland breeding ponds, turtle nesting habitats, mineral licks, cliffs, seeps and springs identify potential habitats within 120 m of the project location, these habitats should also be evaluated for significance using criteria outlined in the Significant Wildlife Habitat Technical Guide. Site investigations should also consider the potential for SAR habitat where applicable (as required under the APRD). These evaluations should be conducted within appropriate timing windows/seasons in accordance with MNR standards, such as Wildlife Monitoring Programs and Inventory Techniques for Ontario (1998). Alternatively, the project location may be shifted so that it is not within 120m of these potential features and as such no evaluation of the significance is required.

The NHA should also identify whether the project location falls within 120m of any provincial parks or conservation reserves. Please note that James N. Allan Provincial Park is within the general study area.

Finally, if you have not already done so, we also recommend reviewing information that may be available through the County of Halidmand, the Grand River Conservation Authority, and Long Point Region Conservation Authority.

I trust this information will be of assistance. If you have any questions or wish to discuss further please contact me.

Sincerely,

Heather Riddell
A/Planning Ecologist
Aylmer District

519-773-4723
heather.riddell@ontario.ca

cc: Ian Thornton (MNR, Guelph District)
April Nix (MNR, Guelph District)

Stantec Consulting Ltd.
Suite 1 - 70 Southgate Drive
Guelph ON N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

August 30, 2010
File: 161010624 / 161010646

Ministry of Natural Resources
615 John St. North
Aylmer, ON N5H 2S8

Attention: Ms. Heather Riddell, A/Planning Ecologist

Dear Ms. Riddell:

Reference: Samsung Grand Renewable Energy Park
Response to MNR Comments on Data Request and Site Investigation Work Program

Thank you for your August 19, 2010 response to our data request and site investigation work program letter. This letter requests clarification regarding the following items:

- Bat hibernacula
- Species at risk and site investigation

BAT HIBERNACULA

We are in receipt of the coordinates of the adit potentially supporting a bat hibernacula (**Figure 1**). It is our understanding that candidate significant wildlife habitat extends 200 m beyond this point (Bats and Bat Habitats: Guidelines for Wind Power Projects [Draft March 2010], p. 9), and that studies of this feature are not required if the project is located more than 120 m from the candidate significant wildlife habitat (i.e. 320 m from the identified adit). Samsung is committed to ensuring a minimum 320 m setback from the point provided by MNR and we request your confirmation that provided this 320 m setback is respected, no studies of the potential bat hibernacula are required.

SPECIES AT RISK AND SITE INVESTIGATION

We acknowledge MNR's direction to consider species at risk with "Low Likelihood" of occurrence within the study area as part of the site investigation.

We have assumed, in the absence of comments to the contrary, that MNR agrees our proposed site investigation will be sufficient to determine the presence of potential habitat for species at risk. Should our site investigation identify the presence of potential habitat of endangered and threatened species, additional surveys may be required within appropriate seasons to satisfy the requirement of the Approval and Permitting Requirements Document for Renewable Energy Projects (APRD). However, it is our understanding that the results of seasonal surveys for endangered and threatened species will not be required as part of the Natural Heritage Assessment / Environmental Impact Study report, or for the MNR's letter of confirmation.

Specifically, the site investigations for birds carried out by Hatch in 2009 and Stantec in 2010 will be sufficient to detect the presence of potential habitat for bird species at risk (Bald Eagle, Barn Owl, Cerulean Warbler, Chimney Swift, Hooded Warbler, Least Bittern, Yellow-breasted Chat).

Reference: Samsung Grand Renewable Energy Park
Response to MNR Comments on Data Request and Site Investigation Work Program

The Ecological Land Classification, botanical inventory and significant wildlife habitat site investigations, planned for September 2010, will be sufficient to detect the presence of plant species at risk (American Chestnut, American Columbo, Broad Beech Fern, Butternut, Eastern Flowering Dogwood, Virgina Mallow) plus Monarch; the presence of potential turtle nesting habitat and basking areas (Blanding's Turtle, Northern Map Turtle, Snapping Turtle, Snuffbox, Spiny Softshell); the presence of potential snake hibernacula (Eastern Hog-nose Snake, Eastern Ribbonsnake, Gray Ratsnake, Milksnake), the presence of potential amphibian breeding ponds (Jefferson Salamander) or marshy shallows near sandy Lake Erie beaches (Fowler's Toad); and the presence of potential American Badger dens.

The planned aquatic habitat assessments and detailed watercourse work necessary for APRD will be sufficient to detect the presence of aquatic species at risk (Eastern Sand Darter, Kidneyshell, River Redhorse, Round Pigtoe).

The only resident, breeding population of Gray Fox is located on Pelee Island. Wandering individuals are occasionally reported elsewhere in southern Ontario, often near access points to the United States, where the species is more common. No targeted surveys for Gray Fox are proposed.

We request MNR's confirmation of our proposed site investigation as it relates to species at risk.

We look forward to the opportunity to discuss these items with you at our next meeting, currently scheduled for September 3.

Sincerely,

STANTEC CONSULTING LTD.

Valerie Wyatt, M.Sc.
Senior Project Manager
Tel: (519) 836-6050
Fax: (519) 836-2493
valerie.wyatt@stantec.com

Attachment: Location of Bat Hibernacula

c. Ian Hagman, MNR Guelph District
Marnie Dawson, Samsung Renewable Energy
Rob Nadolny, Stantec Consulting Ltd.

vew document4

W:\active\60960577\drawing\GIS\MXD\NaturalHeritageAssessment\Confidential-NotForCirculation\60960577_CONFIDENTIAL_ProjectLocationMap_20100823_PW.mxd - 8/24/2010 @ 11:01:31 AM

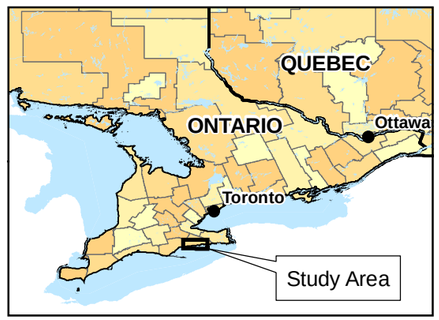
August 2010
160960577

Legend

- Project Location
- Airport Runway Area Point
- Airport Runway Area Polyline
- Airport Runway Area
- Airport (OBM)
- Motorsports Park
- Spot Elevation Height (OBM)
- Building Point (OBM)
- Building Area (OBM)
- Potential Hibernacula
- Tower (OBM)
- Wireless Communication Point
- Road
- Railway
- Abandoned Railway
- Watercourse (OBM)
- Transmission Line (OBM)
- Transport Line (OBM)
- Conservation Authority Boundary (OBM)
- Provincial Park (OBM)
- Tank (OBM)
- Pit or Quarry (OBM)
- Regulated Lands
- Wireless Communication Corridor
- Provincially Significant Wetland
- Non-Provincially Significant Wetland
- Waterbody (OBM)
- Wooded Area
- Road - 59m Setback
- Provincially Significant Wetland - 120m Setback
- Waterbody - 30m Setback
- Woodlot - 120m Setback
- ANSI (Earth Science) - 50m Setback
- ANSI (Life Science) - 120m Setback

Area of Natural and Scientific Interest (ANSI)

- Life Science, Provincially Significant
- Earth Science, Provincially Significant
- Earth Science, Regionally Significant



Notes

1. Coordinate System: UTM NAD 83 - Zone 17 (N).
2. Data Sources: Ontario Ministry of Natural Resources © Queens Printer Ontario, 2009; © GREP, 2010; © Samsung, 2010; © Long Point Region Conservation Authority, 2010.

Client/Project

SAMSUNG C&T
GRAND RENEWABLE ENERGY PARK

Figure No.

CONFIDENTIAL

Title

PROJECT LOCATION MAP

Stantec

AGENDA

Grand River Energy Project

Ministry of Energy and Infrastructure Office
77 Grenville Street, 9th Floor
Toronto, Ontario

September 3, 2010
3:00 to 4:00 P.M

Item	Topic
1.	Introductions
2.	Approval of Work Plan
3.	REA Submission i. 1 submission for both wind and solar project
4.	Hydrogeological Study i. Is there a requirement to complete a hydrog. Study for the GREP project?
5.	Requirements for Petroleum Wells i. What is required in the Engineer Report if we are located within 75 m of a well ii. Does this requirement included abandon/capped wells?
6.	MNR Review of Natural Heritage Report iii. How can we help to expedite the process iv. Meeting to provide an overview at the completion of the site investigation v. Meeting to provide an overview at the completion of the evaluation of significance
7.	Expected updates to the NHA guidance document - When are updates expected? - Will projects be grandfathered?
8.	Key Contacts for Project
9.	Establish Frequency for Project Update Meetings (weekly, bi-weekly)
10.	Next Steps

Friedl, Susanne

From: Nix, April (MNR) <April.Nix@ontario.ca>
Sent: Wednesday, September 08, 2010 11:05 AM
To: Wyatt, Valerie; m.dawson@samsungrenewableenergy.ca
Cc: Beriault, Karine (MNR); Riddell, Heather (MNR); Cotnam, Erin (MNR)
Subject: Samsung GREP Call to discuss SAR concerns

Valerie,

I've checked with staff and it looks like Thursday (Sept 9) morning from 11-12 would be the best time to arrange a call to discuss the outstanding Species-at-risk concerns regarding GREP.

Based on the discussions on Friday here is what I think we need to discuss,

1. Where areas of potential SAR habitat exist within the study area for GREP, what follow up SAR survey work is being completed (and when) to confirm if areas of "potential" are in fact SAR habitat? What are the MNRs expectations for this work and what is required?

2. What ESA permits may need to be applied for? And when? Including:
    a. "B" permits in support of confirmation of the presence of aquatic SAR. Is the current proposed aquatic habitat/ fish work sufficient to do this?

    b. Could any other "b" permits be needed for any other SAR confirmation work aside from aquatic SAR?

    c. If it was determined through the confirmation work that "C" permits were required, when would theses need to be applied for?

3. Also as I mentioned on the call last Friday updates to the species-at-risk list have been posted on the Environmental Registry, these amendments to the SAR list will be completed by September 29 2010. The posting number on the Registry is 011-1048. More specifically in the context of the GREP proposal, Bobolink is newly listed as Threatened and Four Leaved Milkweed is newly listed as Endangered, there are also status changes for several species on the list previously provided that should be reflected in any of the SAR related reports for the GREP proposal. Both of these newly listed species will also need to be added to the previous list provided, and the project will need to be assessed for these species as well.

This is just a rough outline, if there is anything I've overlooked or that you'd like to see included please let me know.

I've also reserved a teleconference line for the call, the number is 1-866-834-7689. Code 0920570#

Thanks,

April

April Nix
Planning Intern
Ministry of Natural Resources, Guelph District
1 Stone Road West
Guelph ON, N1G 4Y2
(P) 519-826-4939

(F) 519-826-6849
email: april.nix@ontario.ca

Meeting Notes

Samsung - Species at Risk Information Meeting

Grand Renewable Energy Project / FILE 161010624 / 161010646

Date/Time:	September 9, 2010 11:00 AM
Place:	Conference Call
Attendees:	April Nix, Ministry of Natural Resources Heather Riddell, Ministry of Natural Resources Karine Beriault, Ministry of Natural Resources Valerie Wyatt, Stantec Consulting Ltd. Andrew Taylor, Stantec Consulting Ltd.
Absentees:	Marnie Dawson, Samsung Renewable Energy Inc. Erin Cotnam, Ministry of Natural Resources
Distribution:	Attendees and Absentees

Item: **Action:**

Agenda

Agenda was based on April Nix email of September 9 (attached), as well as Stantec letters from July 23 and August 30

Species at Risk List

MNR agreed to provide specific locations of species at risk (SAR), where known, with acknowledgement that the information reflects limited field surveys and that SAR could occur elsewhere in the study area

A.Nix – to provide Guelph SAR records

H.Riddell – to provide Aylmer SAR records

SAR, NHA confirmation and REA submission

AN indicated that the APRD requirements are not needed for NHA confirmation, however, it is MNR's understanding that the complete REA submission to the MOE should contain any necessary Endangered Species Act (ESA) permit applications. These applications require the completion of any necessary seasonal field studies to determine the presence and boundaries of critical habitats etc.

AN indicated that the reason is because MNR has committed to reviewing the permit applications within the MOE's 6-month service guarantee. It was suggested that MOE should be contacted to confirm.

July 23 Site Investigation Work Program

M. Pomeroy to submit permit application for electrofishing

The scientific collectors' permit for electrofishing will stipulate that watercourses with the potential for aquatic SAR should be avoided. HR is corresponding with Mark Pomeroy (Stantec) regarding the permit application.

Following some discussion regarding aquatic species at risk, KB indicated that if there are historical records of a SAR and the habitat is still suitable, an ESA permit is required for electrofishing; however if there are historical records of a SAR but no suitable habitat remains, or if habitat is suitable but there is no reasonable expectation of finding a SAR and the purpose is general inventory, then no ESA permit is required for electrofishing. If a SAR is found where not expected, there are no repercussions under the ESA, but the occurrence must be reported to the MNR as soon as possible.

It was generally agreed that the proposed work program (Stantec, July 23) would be sufficient to identify potential habitat of SAR this fall. MNR directed Stantec to consider the habitat features discussed in the regulations (specifically for the American Badger but presumably any other species with relevant documentation). If potential habitat of SAR is identified through the site investigation, discussions will be initiated with MNR to determine the appropriate types and timing of more detailed studies, depending on the species involved.

SAR and the NHA Report

AN recommended that the NHA report contain a separate section or appendix that outlines the findings of the site investigation as they relate to SAR (to demonstrate due diligence; ie. level of survey effort, areas of potential habitat, if SAR presence has been confirmed) to allow MNR to determine if and what types of permits are required.

The meeting adjourned at 11:45 AM.
The foregoing is considered to be a true and accurate record of all items discussed. If any discrepancies or inconsistencies are noted, please contact the writer immediately.

STANTEC CONSULTING LTD.

Valerie Wyatt, M.Sc.
Senior Project Manager
valerie.wyatt@stantec.com

c. Rob Nadolny, Stantec Consulting Ltd.
Mark Kozak, Stantec Consulting Ltd.
Mark Pomeroy, Stantec Consulting Ltd.

Friedl, Susanne

From: Nix, April (MNR) <April.Nix@ontario.ca>
Sent: Friday, September 10, 2010 9:20 AM
To: Wyatt, Valerie; m.dawson@samsungrenewableenergy.ca
Cc: Beriault, Karine (MNR); Riddell, Heather (MNR)
Subject: Additional SAR info GREP - Guelph District
Attachments: DFO and some SAR_roads.jpg; DFO and some SAR_no roads.jpg

Valerie,

Attached are 2 diagrams showing the DFO mapping and SAR information for Bald Eagle, Badger, Gray Ratsnake, Fowler's Toad, Blanding's Turtle and Virginia Mallow – one with roads (for orientation), one without.

It should be understood that these diagrams only show known, accurate locations of the above-mentioned SAR, and not any other SAR species. It should also be noted that these species may occur elsewhere within the study area and could be found during investigations within 120m of the project location. Also please keep in mind that this information is also sensitive and as such should be treated appropriately. With respect to other SAR species from the list previously provided, an investigation for these species where there is potential habitat continues to be recommended.

Finally staff also wanted to add the following recommendations with respect to SAR investigations:

- Badger investigations should consider habitat that is described in the regulation.
- Potential hibernacula and old buildings and barns should be investigated for evidence or the presence of Gray Ratsnakes.
- Fowler's Toads are limited to the shoreline of Lake Erie – nocturnal surveys can be done from May to mid-September. The survey window has essentially closed for that species this year.
- Blanding's Turtle investigations should at the very least include surveys for potential hibernations sites, and basking surveys in appropriate habitat and weather.
- Virginia Mallow should be identified through vegetation surveys.

While MNR does not have any Queensnake records in the immediate vicinity of the project location, there are records northwest of the project location, associated with the Grand and it's tributaries. If suitable habitat is found within 120m of the project location, investigations should include basking surveys and surveys for individuals at the water's edge (babies are born around this time of year and can be locally abundant before they go into hibernation).

The following is what we would expect with regards to SAR snake surveys (with the exception of Queensnake in this case): transect surveys in appropriate habitat and weather, coverboards, and hibernacula surveys and assessments. Please note that cover board surveys for SAR species would require an ESA type "B" permit.

Heather is also checking with Aylmer District for any additional information or recommendations they may be able to offer as well.

If there are any questions please let me know.

April

April Nix
Planning Intern
Ministry of Natural Resources, Guelph District
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(F) 519-826-6849
email: april.nix@ontario.ca

Friedl, Susanne

From: Powell, Chris
Sent: Wednesday, September 29, 2010 11:36 AM
To: Erin (MNR) Sanders
Cc: Wyatt, Valerie; heather.riddell@ontario.ca
Subject: Samsung Grand Renewable Energy Park - LSW and PSW Wetland Records

Erin,

Further to my voice message, we are interested in obtaining copies of MNR wetland evaluation records for the following wetlands located within the study area for the proposed Samsung REA application, as outlined by Heather Riddell in her letter dated August 19, 2010:

1. Evans Creek (LET3) – Locally Significant Wetland (LSW)
2. Gates Creek Mouth (LET1) – PSW
3. SAC10 – LSW
4. SAC2 – PSW
5. SAC7 – LSW
6. SAC9 – LSW
7. STC1 – LSW
8. STC2 – LSW
9. STC4 – LSW
10. Wardell's Creek Mouth (LET2) - PSW

This information is required for incorporation into the Natural Heritage Assessment and EIS in support of the Renewable Energy Act submission anticipated in late October. Please advise when we can arrange to either pick up these documents or have them couriered, as well as any details regarding what additional information you require from us in order to do so. Digital copies (if available) would be preferred.

Thank you for your prompt attention to this request.

Sincerely,

Chris

Chris Powell, M.A.
Project Manager / Environmental Planner
Stantec Consulting Ltd.
49 Frederick Street
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chris.powell@stantec.com
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Friedl, Susanne

From: Powell, Chris
Sent: Wednesday, September 29, 2010 1:23 PM
To: Yagi, Anne (MNR)
Cc: Wyatt, Valerie; heather.riddell@ontario.ca
Subject: Samsung Grand Renewable Energy Park - LSW and PSW Wetland Records

Anne,

As discussed on the phone, we are interested in obtaining copies of any MNR wetland evaluation records for the following wetlands located within the study area for the proposed Samsung REA application, as outlined by Heather Riddell in her letter dated August 19, 2010:

1. Franctenburg Tract – PSW
2. Dry Lake – PSW
3. Tanquanyah C.A. – LSW
4. Byng Creek – LSW

We understand that these records are old (previous OWES version) and that the MNR is currently updating these records for the Haldimand Area (pending completion in 2011). However, any information that you can provide at this time would be greatly appreciated. A similar request has been made for this information from the Aylmer District office for those wetlands within their jurisdiction.

With respect to woodlands and deer wintering areas mapped by LIO, we would appreciate any information that you have regarding the findings of your field investigations undertaken within the study area (i.e. excel field data records, deer counts, etc.) to complement the LIO mapping layer, as discussed.

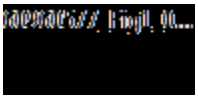
This information is required for incorporation into the Natural Heritage Assessment and EIS in support of the Renewable Energy Act submission for the Samsung Grand Renewable Energy Park anticipated in late October. Please advise when we can arrange to either pick up these documents or have them couriered, as well as any details regarding what additional information you require from us in order to do so. Digital copies (if available) would be preferred.

Thank you for your prompt attention to this request.

For your reference, attached is a copy of the study area for this project.

Sincerely,

Chris



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Friedl, Susanne

From: Powell, Chris
Sent: Wednesday, September 29, 2010 1:45 PM
To: april.nix@ontario.ca
Cc: Wyatt, Valerie; 'heather.riddell@ontario.ca'
Subject: Samsung Grand Renewable Energy Park - ANSI Records

April,

Further to my voice message, we are interested in obtaining any additional information that you may have regarding the Oriskany Sandstone Life Science ANSI. A similar request was sent to Anne Yagi regarding the various PSW and LSW evaluation records within the study area, as well as any further information regarding deer wintering areas identified in LIO mapping.

This information is required for incorporation into the Natural Heritage Assessment and EIS in support of the Renewable Energy Act submission anticipated in late October. Please advise when we can arrange to either pick up these documents or have them couriered, as well as any details regarding what additional information you require from us in order to do so. Digital copies (if available) would be preferred.

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From: Powell, Chris
Sent: Wednesday, September 29, 2010 11:36 AM
To: Erin (MNR) Sanders
Cc: Wyatt, Valerie; heather.riddell@ontario.ca
Subject: Samsung Grand Renewable Energy Park - LSW and PSW Wetland Records

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From: Powell, Chris
Sent: Wednesday, September 29, 2010 1:23 PM
To: Yagi, Anne (MNR)
Cc: Wyatt, Valerie; heather.riddell@ontario.ca
Subject: Samsung Grand Renewable Energy Park - LSW and PSW Wetland Records

Anne,

As discussed on the phone, we are interested in obtaining copies of any MNR wetland evaluation records for the following wetlands located within the study area for the proposed Samsung REA application, as outlined by Heather Riddell in her letter dated August 19, 2010:

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3. Tanquanyah C.A. – LSW
4. Byng Creek – LSW

We understand that these records are old (previous OWES version) and that the MNR is currently updating these records for the Haldimand Area (pending completion in 2011). However, any information that you can provide at this time would be greatly appreciated. A similar request has been made for this information from the Aylmer District office for those wetlands within their jurisdiction.

With respect to woodlands and deer wintering areas mapped by LIO, we would appreciate any information that you have regarding the findings of your field investigations undertaken within the study area (i.e. excel field data records, deer counts, etc.) to complement the LIO mapping layer, as discussed.

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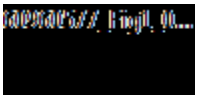

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Ontario

Ministry of Natural Resources

Ministère des Richesses naturelles

Licence to Collect Fish for Scientific Purposes

Permis pour faire la collecte de poissons à des fins scientifiques

Licence No. / N° de permis	Local Reference No. / N° de référence local	Issuer Account No. / N° de compte du delivreur de permis.
1059507	7200	10001664

This licence is issued under Part I of the Fish Licensing Regulation made under the Fish and Wildlife Conservation Act, 1997 to:

Ce permis est délivré en vertu de la Partie I du règlement sur la délivrance de permis de pêche formulé conformément à la Loi sur la protection du poisson et de la faune de 1997 à:

Name of Licencee / **Nom du titulaire du permis**

Last Name / Nom de famille	First Name / Prénom	Middle Name / Second Prénom
Mr. Pomeroy	Mark	

Name of Business/Organization/Affiliation (if applicable) / Nom de l'entreprise/de l'organisme/de l'affiliation (le cas échéant)

Stantec Consulting Ltd.

Mailing address of Licencee / *Adresse postale du titulaire du permis*

Street Name & No./PO Box/RR#/Gen. Del./ N° rue/C.P./R.R./poste restante

70 Southgate Drive Suite 1

City/Town/Municipality / Ville/village/municipalité	Province/State / Province/État	Postal Code/Zip Code / Code Postal/Zip
Guelph	ON	N1G 4P5

to collect the species, size and quantites of fish from the waters as set out below.

Pour faire la collecte des espèces suivantes (stade et nombre indiqués ci-dessous):

Species / Espèces	Eggs / Oeuf	Juvenile / Fretin	Adults / Adulte	Numbers / Nombre	Name of Waterbody / Nom de l'étendue d'eau
	X	X	X		
All Species		X	X		Waterbodies as indicated in Schedule B

Yes/Oui ☐ Additional species/Waterbody list attached / Liste d'espèces/d'étendue d'eau additionnelles ci-jointe

Purpose of collection / *But de la collecte*: Background data colletion for Samsung Grand Energy Park project

Licence Dates / *Dates du permis*

Effective Date / Date d'entrée en vigueur (YYYY-MM-DD)	Expiry Date / Date d'expiration (YYYY-MM-DD)
2010-09-28	2010-12-31

Licence conditions / *Conditions du permis*: This licence is subject to the conditions contained in Schedule A if included. / Ce permis doit respecter les conditions de l'annexe A si celle-ci est jointe.

Yes/Oui ☒ No/Non ☐ Schedule A included. / Annexe A ci-jointe

Issued by (please print) / Délivré par (veuillez écrire en caractères d'imprimerie)	Signature of issuer / Signature du délivreur	Date of Issue/Date de délivrance (YYYY-MM-DD)
Al Murray, Guelph Area Supervisor		2010-09-28

Signature of Licencee / Signature du titulaire du permis	Date (YYYY-MM-DD)
Mark Pomeroy	2010-09-28

Personal information contained on this form is collected under the authority of the Fish and Wildlife Conservation Act, 1997 and will be used for the purpose of licencing, identification, enforcement, resource management and customer service surveys. Please direct further inquiries to the District Manager of the MNR issuing district.

Les renseignements personnels dans ce formulaire sont recueillis conformément à la Loi sur la protection du poisson de la faune, 1997 , et ils seront utilisés aux fins de délivrance de permis, d'identification, d'application des règlements, de gestion des ressources et de sondage sur les services a la clientèle. Veuillez communiquer avec le chef du district du MRN qui délivré le permis si vous avez des questions.

FW0032 (04/00)

Licence to Collect Fish for Scientific Purposes
Permis pour faire la collecte de poissons à des fins scientifiques
Schedule A - Licence Conditions
Annexe A - Conditions du permis

Licence No.
No de permis 1059507

This licence is subject to the conditions listed below.

1. This Licence is valid only for the persons, species, numbers, areas and calendar year indicated. A written report covering the operation of the preceding year must be submitted to the licence issuer within 30 days of the termination date, but in no case later than January 31 next following the year of issue. The report shall contain a statement outlining the objectives of the operations, the methods used, the number and species of fish caught and their fate as well as a map indicating where the collections took place. An analysis is not required. The submission of a satisfactory report is a prerequisite to any subsequent renewals.

2. Before carrying out any operation under the licence in any area the licenced person shall inform the Area Supervisor or Lake Manager of his or her intentions at least a week before commencing work and include information as to the type of operation, location, duration, and the name or names of personnel involved.

3. A copy of the original licence must be carried by the licenced person when working at the designated sites. An assistant of the licenced person who is carrying out activities under this licence during the absence of the licenced person shall carry a copy of the licence on his or her person.

4. All collection gear shall be clearly marked with the licenced person's and the organization's name.

5. This licence is not valid in Provincial Parks, conservation reserves, or National Parks without the written permission from the authorized person in charge of the area concerned.

6. Capture gear shall be inspected regularly and live holding traps must be inspected at least once daily.

7. This licence does not allow access to any property without permission of the landowner.

Additional conditions (English only):

8. The following may assist under the authority of this licence: Marc Faiella, Joe Keene, Ryan Park, Roxanne Dibbley, Kathleen Todd, Jessica Sosa-Campos and Nancy Harttrup.

9. Gear is restricted to: Smith Root backpack electrofisher, dip nets, seine net, and minnow traps

10. The Licensee, assistants and any personnel involved in the collection, handling, transportation and holding of fish must adhere to the Fisheries Section Technical Bulletin – Best Management Practices – FS Bulletin 2008-01.

Ce permis doit se conformer aux conditions ci-dessous.

1. Ce permis n'est valide que pour les personnes, espèces, nombres, zones et année civile indiqués. Un rapport écrit portant sur les activités de l'année précédente doit être soumis au délivreur du permis dans les 30 jours suivant la date d'expiration et jamais plus tard que le 31 janvier qui suit la date de délivrance. Le rapport devra comprendre une déclaration décrivant les objectifs des activités, les méthodes utilisées, le nombre et les espèces de poissons capturés et leur destination finale ainsi qu'une carte montrant l'emplacement des collectes. Une analyse n'est pas requise. La présentation d'un rapport satisfaisant est une condition préalable pour obtenir un renouvellement de permis.

2. Avant de réaliser toute activité visée par le permis dans toute zone, le titulaire du permis doit aviser le superviseur de la zone ou le gestionnaire du lac de ses intentions au moins une semaine avant de commencer ses activités et il doit fournir des renseignements sur le type d'activité, l'emplacement, la durée et le nom de toutes les personnes impliquées.

3. Le titulaire du permis doit avoir en sa possession un exemplaire du permis original lorsqu'il travaille dans les endroits désignés. Si un adjoint du titulaire du permis réalise des activités visées par le permis en l'absence du titulaire du permis, il devra avoir un exemplaire du permis en sa possession.

4. Tout le matériel de collecte doit indiquer bien clairement le nom du titulaire du permis et de son organisme.

5. Ce permis n'est pas valide dans les parcs provinciaux, les réserves de parcs et les parcs nationaux sans la permission écrite de la personne autorisée qui est responsable de la zone en question.

6. Tout le matériel de collecte doit être inspecté régulièrement et les viviers doivent être inspectés au moins une fois par jour.

7. Ce permis ne permet pas au titulaire d'avoir accès à une propriété privée sans la permission du propriétaire foncier.

11. Should the licensee capture any fish species-at-risk (SAR), the key identification characters for the species shall be photographed (if possible) and reported to the Area Biologist or Species at Risk Biologist responsible for the area in which the collection was made. Any incidentally caught individual of a species at risk shall be immediately released unharmed to the waters from which it was caught.

12. Unless authorized under the Endangered Species Act (ESA), no person shall fish for any threatened or endangered fish species.

Prepared by Ben Hindmarsh, Sr. Fish and Wildlife Technical Specialist 519-773-4711

Signature of Licencee / Signature du titulaire du permis

Mark Pomeroy

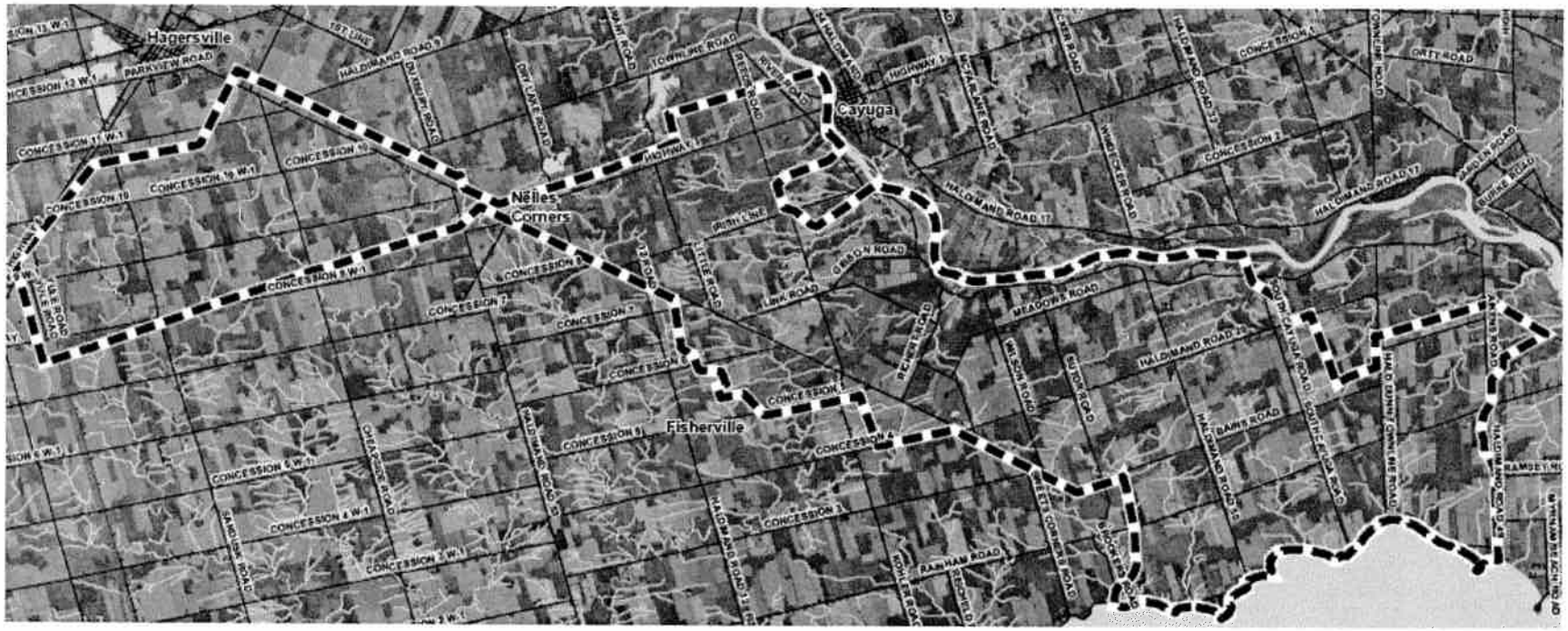
Mark Pomeroy

Date

09/28/2010

Licence to Collect Fish for Scientific Purposes
Schedule B - Licensed Area

Licence No. 1059507



Signature of Licencee / Signature du titulaire du permis

Mark Pomeroy

Mark Pomeroy

Date

09/28/2010

Friedl, Susanne

From: Nix, April (MNR) <April.Nix@ontario.ca>
Sent: Thursday, January 13, 2011 2:25 PM
To: Wyatt, Valerie
Cc: Hagman, Ian (MNR); Marnie Dawson; Adam Rosso; Powell, Chris; Riddell, Heather (MNR); Drabick, Ron (MNR); Thornton, Ian (MNR); Harkins, Erin (MNR)
Subject: RE: Samsung GREP - woodlands question
Attachments: Woodlands EOS criteria.doc

Valerie,

With respect to your question about how to address the tree farm (Tile 8 – CUP3-12), the Ministry would recommend the following:

Based on the woodland definition in the REA regulation (both the pre-Jan 1, 2011 version and the amended version), the tree farm would be considered a woodland which would require site investigation and evaluation on significance if it is within 120 meters of the project location.

There are currently two definitions of woodlands, as the definition was changed in the recent amendment to the REA regulation. Under the transition provision in section 63 of the amended regulation, an applicant that has distributed their first public notice before January 1, 2011 is subject to the woodland definition in the pre-2011 regulation however, they may elect to have the new definition of woodland apply to their project and would need to make this decision clear in their NHA documentation.

The pre-2011 woodland definition is:

"woodland" means land,

(a) that is south and east of the Canadian Shield as shown in Figure 1 in the Provincial Policy Statement issued under section 3 of the *Planning Act* and approved by the Lieutenant Governor in Council by Order in Council No. 140/2005,

(b) that has, per hectare, at least,

(i) 1,000 trees of any size,

(ii) 750 trees measuring over five centimetres in diameter, measured in accordance with subsection (7),

(iii) 500 trees measuring over 12 centimetres in diameter, measured in accordance with subsection (7), or

(iv) 250 trees measuring over 20 centimetres in diameter, measured in accordance with subsection (7), and

(c) that does not include a cultivated fruit or nut orchard or a plantation established for the purpose of producing Christmas trees;

Following this definition, an applicant would be required to determine if the site qualifies as woodland using the above criteria, which requires stem counts and DBA measurements. Given the tree farm is probably not densely planted and the trees are likely relatively uniform in size, stem count/size estimates may be fairly simple and could rule this out as woodland.

If an evaluation of significance would be required, I have attached a document that provides evaluation of significance criteria from the NHAG with some new criteria added (that is from the ORMCP Technical Paper Series) and you could apply these now and they would be acceptable.

The new criteria are intended as a quick first-screening for woodlands that explicitly rule out certain sites as significant, including plantations managed for nursery stock, and then uses minimum standards for crown cover and width and stem counts to rule out woodlands that will not be considered significant. If the woodland exceeds these criteria, the full evaluation of significance must be complete. As this approach is still in development, I would appreciate if you did not distribute this material for the time being.

The Jan 1, 2011 woodland definition is:

"woodland" means a treed area, woodlot or forested area, other than a cultivated fruit or nut orchard or a plantation established for the purpose of producing Christmas trees, that is located south and east of the Canadian Shield as shown in Figure 1 in the Provincial Policy Statement issued under section 3 of the *Planning Act* and approved by the Lieutenant Governor in Council by Order in Council No. 140/2005;

Under the new definition, the site would be considered woodland, with no estimates or related work required. However the project would be required to undertake a site investigation and then apply the evaluation of significance screening criteria outlined in the attachment which would then determine whether the woodland is significant or not.

If you want to discuss, please let me know.

April

April Nix
Renewable Energy Planning Ecologist
Ministry of Natural Resources, Guelph District
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Guelph ON, N1G 4Y2
(P) 519-826-4939
(F) 519-826-6849
email: april.nix@ontario.ca

From: Wyatt, Valerie [mailto:valerie.wyatt@stantec.com]
Sent: December 23, 2010 3:21 PM
To: Nix, April (MNR); Riddell, Heather (MNR)
Cc: Hagman, Ian (MNR); Marnie Dawson; Adam Rosso; Powell, Chris
Subject: Samsung GREP - proposed approach to Wetland Rapid Assessment Protocol

Hello April and Heather,

1. Our wetland evaluators have put their heads together to develop the attached proposed approach to wetland rapid assessment under REA. The document outlines the approach as well as one example application, with the objective of identifying information necessary for the EIS for project components within 120 m of project infrastructure. Could you please circulate this to the necessary MNR experts for their comment and endorsement, so that we can proceed with the other wetlands in the Samsung GREP study area, as soon as possible?

2. We had a question related to significant woodlands as well: there is a tree farm within 120 m of some project infrastructure (Tile 8 – CUP3-12). It is our understanding that the young trees (both coniferous and deciduous) are spaded out for transplantation elsewhere. Should we be considering this as part of the woodland to be evaluated as significant?

Thank you. I look forward to speaking with you in the new year.
Val

Valerie Wyatt, M.Sc.
Senior Project Manager
Stantec
Suite 1 - 70 Southgate Drive
Guelph ON N1G 4P5

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Friedl, Susanne

From: Nix, April (MNR) <April.Nix@ontario.ca>
Sent: Thursday, January 13, 2011 2:25 PM
To: Wyatt, Valerie
Cc: Hagman, Ian (MNR); Marnie Dawson; Adam Rosso; Powell, Chris; Riddell, Heather (MNR); Drabick, Ron (MNR); Thornton, Ian (MNR); Harkins, Erin (MNR)
Subject: RE: Samsung GREP - woodlands question
Attachments: Woodlands EOS criteria.doc

Valerie,

With respect to your question about how to address the tree farm (Tile 8 – CUP3-12), the Ministry would recommend the following:

Based on the woodland definition in the REA regulation (both the pre-Jan 1, 2011 version and the amended version), the tree farm would be considered a woodland which would require site investigation and evaluation on significance if it is within 120 meters of the project location.

There are currently two definitions of woodlands, as the definition was changed in the recent amendment to the REA regulation. Under the transition provision in section 63 of the amended regulation, an applicant that has distributed their first public notice before January 1, 2011 is subject to the woodland definition in the pre-2011 regulation however, they may elect to have the new definition of woodland apply to their project and would need to make this decision clear in their NHA documentation.

The pre-2011 woodland definition is:

"woodland" means land,

(a) that is south and east of the Canadian Shield as shown in Figure 1 in the Provincial Policy Statement issued under section 3 of the *Planning Act* and approved by the Lieutenant Governor in Council by Order in Council No. 140/2005,

(b) that has, per hectare, at least,

(i) 1,000 trees of any size,

(ii) 750 trees measuring over five centimetres in diameter, measured in accordance with subsection (7),

(iii) 500 trees measuring over 12 centimetres in diameter, measured in accordance with subsection (7), or

(iv) 250 trees measuring over 20 centimetres in diameter, measured in accordance with subsection (7), and

(c) that does not include a cultivated fruit or nut orchard or a plantation established for the purpose of producing Christmas trees;

Following this definition, an applicant would be required to determine if the site qualifies as woodland using the above criteria, which requires stem counts and DBA measurements. Given the tree farm is probably not densely planted and the trees are likely relatively uniform in size, stem count/size estimates may be fairly simple and could rule this out as woodland.

If an evaluation of significance would be required, I have attached a document that provides evaluation of significance criteria from the NHAG with some new criteria added (that is from the ORMCP Technical Paper Series) and you could apply these now and they would be acceptable.

The new criteria are intended as a quick first-screening for woodlands that explicitly rule out certain sites as significant, including plantations managed for nursery stock, and then uses minimum standards for crown cover and width and stem counts to rule out woodlands that will not be considered significant. If the woodland exceeds these criteria, the full evaluation of significance must be complete. As this approach is still in development, I would appreciate if you did not distribute this material for the time being.

The Jan 1, 2011 woodland definition is:

"woodland" means a treed area, woodlot or forested area, other than a cultivated fruit or nut orchard or a plantation established for the purpose of producing Christmas trees, that is located south and east of the Canadian Shield as shown in Figure 1 in the Provincial Policy Statement issued under section 3 of the *Planning Act* and approved by the Lieutenant Governor in Council by Order in Council No. 140/2005;

Under the new definition, the site would be considered woodland, with no estimates or related work required. However the project would be required to undertake a site investigation and then apply the evaluation of significance screening criteria outlined in the attachment which would then determine whether the woodland is significant or not.

If you want to discuss, please let me know.

April

April Nix
Renewable Energy Planning Ecologist
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From: Wyatt, Valerie [mailto:valerie.wyatt@stantec.com]
Sent: December 23, 2010 3:21 PM
To: Nix, April (MNR); Riddell, Heather (MNR)
Cc: Hagman, Ian (MNR); Marnie Dawson; Adam Rosso; Powell, Chris
Subject: Samsung GREP - proposed approach to Wetland Rapid Assessment Protocol

Hello April and Heather,

1. Our wetland evaluators have put their heads together to develop the attached proposed approach to wetland rapid assessment under REA. The document outlines the approach as well as one example application, with the objective of identifying information necessary for the EIS for project components within 120 m of project infrastructure. Could you please circulate this to the necessary MNR experts for their comment and endorsement, so that we can proceed with the other wetlands in the Samsung GREP study area, as soon as possible?

2. We had a question related to significant woodlands as well: there is a tree farm within 120 m of some project infrastructure (Tile 8 – CUP3-12). It is our understanding that the young trees (both coniferous and deciduous) are spaded out for transplantation elsewhere. Should we be considering this as part of the woodland to be evaluated as significant?

Thank you. I look forward to speaking with you in the new year.
Val

Valerie Wyatt, M.Sc.
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Transmittal

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To:	April Nix, Renewable Energy Planning Ecologist	From:	Valerie Wyatt
Company:	Ministry of Natural Resources	☐	For Your Information
Address:	1 Stone Road West Guelph ON, N1G 4Y2	☐	For Your Approval
		x	For Your Review
		☐	As Requested
Date:	February 1, 2011		
File:	161010624 / 161010646		
Delivery:	Courier		

Reference: SPK Grand Renewable Energy Park
Natural Heritage Assessment/Environmental Impact Study

Attachment:

Copies	Doc Date	Description
1	February 1, 2011	Natural Heritage Assessment / Environmental Impact Study
1	February 1, 2011	Environmental Effects Monitoring Plan for Wildlife and Wildlife Habitats

Please find enclosed one copy of each of the Grand Renewable Energy Park Natural Heritage Assessment / Environmental Impact Study and the Environmental Effects Monitoring Plan for Wildlife and Wildlife Habitats.

As per O.Reg 359/09 (specifically Section 28.(2) submission of the Natural Heritage Assessment including the required confirmation from MNR, is required as part of the Renewable Energy Approval package. As a result, we wish to obtain the following in writing from the MNR:

1. Confirmation that the determination of the existence of natural features and the boundaries of natural features was made using applicable evaluation criteria or procedures established or accepted by the MNR, as amended from time to time.

2. Confirmation that the evaluation of the significance or provincial significance of the natural features was conducted using applicable evaluation criteria or procedures established or accepted by the MNR, as amended from time to time.

Reference: SPK Grand Renewable Energy Park
Natural Heritage Assessment/Environmental Impact Study

3. Confirmation that the MNR agrees that the Project is not in a provincial park or conservation reserve.

We would also like to extend an invitation to the MNR for a meeting if it is determined that a meeting could better assist the MNR in its review of the attached information. Please feel free to contact me via the information below if you have any questions or concerns regarding this information.

On behalf of Samsung, Pattern and KEPCO, thank you for your continued attention to this matter.

STANTEC CONSULTING LTD.

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c. Heather Riddell, Planning Ecologist, MNR Aylmer (1 NHA/EIS, 1 EEMP)
Adam Rosso, Samsung Renewable Energy Inc.
Marnie Dawson, Samsung Renewable Energy Inc.

Ministry of Natural Resources

Ministère des Richesses naturelles

Guelph District
1 Stone Road West
Guelph, Ontario
N1G 4Y2

Telephone: (519) 826-4955
Facsimile: (519) 826-4929

Ontario

March 1, 2011

Adam Rosso
Samsung Renewable Energy Inc.
55 Standish Court, 9th Floor
Mississauga ON, L5R 4B2

Dear Mr. Rosso,

Re: Grand Renewable Energy Park
Natural Heritage Assessment, Environmental Impact Study and Environmental Effects Monitoring Plan

Thank you for your recent circulation of the above-noted Natural Heritage Assessment (NHA) in support of a Renewable Energy Approval application, subject to the requirements of the Ministry of Environment's (MOE) *Renewable Energy Approvals Regulation 359/09* under the *Environmental Protection Act*. Staff have reviewed the submitted assessment in accordance with the regulatory requirements and offer the following comments for your consideration.

It is understood that the above noted study is in support of a proposed Class 4 Wind Facility and a Class 3 Solar Facility located within the County of Haldimand. The project is generally located southeast of the Town of Hagersville, south of the Town of Cayuga and west of the Grand River.

While the submitted NHA and EIS follows the general structure of Sections 24-28 and 38 of the REA Regulation, there remain a number of requirements from the REA Regulation that have not been addressed or need to be clarified.

The Ministry is required to provide confirmation under the REA Regulation with respect to a natural heritage assessment for the following:

- the determination of the existence of natural features and the boundaries of natural features was made using applicable evaluation criteria or procedures established by the MNR;
- the site investigation and records review were conducted using applicable evaluation criteria or procedures established or accepted by the MNR, if natural features are identified;
- the evaluation of significance or provincial significance of natural features was conducted using applicable evaluation criteria or procedures established or accepted by the MNR;
- the project location is not in a provincial park or conservation reserve; and
- the environmental impact assessment report(s) has/have been prepared in accordance with the procedures established or accepted by the MNR and in accordance with the requirements Section 38 of the REA Regulation.

The Ministry is unable to provide this confirmation at this time as the submitted document lacks information and cannot be deemed complete when reviewed and checked against the requirements in the REA Regulation. The attached table discusses specific deficiencies in the NHA, Environmental Impact Study and Environmental Effects Monitoring Plan reports. As such, a revised Natural Heritage Assessment Report, Environmental Impact Study and Environmental Effects Monitoring Plan for the Grand Renewable Energy Park proposal will need to be submitted to the Ministry that addresses these concerns.

Approval and Permitting Requirements Document (APRD)

Requirements outlined within the Ministry's Approval and Permitting Requirements Document (APRD) are intended to be addressed and completed as part of a complete submission to the Province for a renewable energy facility. The document outlines the requirements for the application, review and decisions regarding the approval of a renewable energy facility where MNR has a legislative responsibility. As the APRD requirements are separate from the NHA requirements under the REA regulation Ministry staff recommend compiling APRD information into a separate report.

Ministry staff understand that Samsung and Stantec are in the process of preparing reports to address APRD requirements including: a petroleum resources engineer's report; and, a reporting addressing potential for species-at-risk. It is recommended that these reports be provided to the Ministry as soon as they are available.

Ministry staff also note that Stantec has not yet submitted the Mandatory Report required as a condition for the License to Collect Fish for Scientific Purposes that was issued on September 29, 2010 for this project. This information should be provided to the Ministry as soon as possible.

I trust this information will be of assistance. If you wish to discuss these comments prior to our meeting on March 7, 2011, or have any questions you can contact me at april.nix@ontario.ca or at (519)826-4939.

Sincerely,

April Nix

Renewable Enegry Planning Ecologist
Ministry of Natural Resources, Guelph District
1 Stone Road West
Guelph, ON, N1G 4Y2
(519) 826-4939

Cc: Valerie Wyatt, Stantec
Catherine Jong, MNR
Rebecca Dixon, MNR
Narren Santos, MOE

Project Name: Grand Renewable Energy Park (GREP)
Proponent: Samsung Renewable Energy Inc.
Consultant: Stantec
Date Received: Feb 1, 2011

***** Please make the following revisions to the sections and figures identified with the NHA, Environmental Impact Study and Environmental Effects Monitoring Plan. Comments of a general nature, are included after the table.**

Overview - Summary of Comments/ Concerns:

- Additional detail is required pertaining to the rationale/ criteria and analysis used to support the identification of candidate wildlife habitats within the records review and site investigation reports.
- Landbird migratory stopover areas have not been identified or evaluated for the project, and this must be addressed to meet the requirements of Section 26-28 and 38 of O. Reg 359/09.
- Clarification regarding the inclusion of rare (S1-S3 ranked) species and Special Concern species is needed through the NHA.
- Additional information regarding James N. Allen Provincial Park is necessary to address the requirements of Sections 25 and 38 of O.Reg 359/09.
- Information submitted as part of a physical site investigation must include all of the required information from Section 26(3) of O.Reg 359/09.
- Alternative site investigations appear to have been completed for parts of the project location; the required information for an alternative site investigation needs to be provided as per Section 26(3) of O.Reg 359/09.
- Limited ELC vegetation (fall surveys), rather than 3 season identification period to account for plants species associated with the spring and summer growing periods were completed. As such, some candidate wildlife habitats may have been overlooked, particularly since parts of the project location are proposed within natural features.
- Staff have concerns regarding the identification, delineation and evaluation of wetland features within 120m of the project location; the use of ELC information to identify these areas; whether boundaries have been mapped according to OWES; and the application of the Wetland Characteristics Assessment for REA projects to evaluate these features.
- Additional detail regarding proposed mitigation measures to prevent negative impacts to natural features where the project location is within and/or adjacent to features is needed.

Section	Page #	Wording/ Topic	Comments	How/ Where Concern was Addressed
Section 3.0 Records Review				
3.0	3.1	Constructible area	Ministry staff recommend including a discussion regarding the constructible area concept at the outset of the NHA. This discussion should clarify how this area is established, confirm that the 120m setback from the edge of the project location is from the edge of the construable area, and describe each of the types of activities that would occur within this area and whether they are temporary or permanent in nature.	

Section	Page #	Wording/ Topic	Comments	How/ Where Concern was Addressed
3.2.6 – Wildlife Habitat & throughout NHA	3.10	A compilation of background information on known wildlife use of the Study Area was undertaken. Using this information, a preliminary assessment was conducted to identify wildlife habitat features that may be present in or within 120 m of the Project Location to determine whether the area contains confirmed significant wildlife habitat (SWH) or involves a trigger for candidate SWH.	Many of the descriptions of wildlife habitats currently within the records review do not incorporate criteria identified within the Significant Wildlife Habitat Technical Guide (SWHTG) adequately, please provide additional detail and analysis for: • Landbird Migratory Stopover Habitat • Butterfly Stopover Habitat • Habitat for Provincially Rare (S1-S3) species and SC species. • Raptor Nesting Habitat (woodland nesting hawks) separate from Area Sensitive song-birds) • Waterfowl Nesting Habitat These criteria and descriptions should also be utilized to identify potential wildlife habitats that need to be carried forward to Site Investigation.	
	3.10	Waterfowl Stopover and Staging Areas, Raptor Winter Feeding and Roosting Areas	Waterfowl stopover and staging and raptor winter feeding and roosting habitats should be discussed separately in the report. The locations of wintering raptors on maps from 1996 should be included as records of habitat, these site specific locations identified within the study area and in relation to the project location need to be assessed on a site specific basis for this habitat as Candidate SWH.	
	3.13	Landbird Migratory Stopover Areas	The presence of larger/ extensive forested areas within 5km of Lake Erie can be considered as part of the landscape attributes to support land bird migratory areas. Information regarding these areas should be presented within the records review. Areas should also be identified as candidate significant wildlife habitat within the site investigation report of the NHA and evaluated for significance where the project location is within 120m.	
	3.14	Migratory Butterfly Stopover Areas	Butterfly stopover habitat, potential habitat exists within this study area as per criteria within the SWHTG which should be identified within the records review. This would include Field/Woodland sites >20ha within 5km of lake Erie. Although no records were found for this habitat it still has the potential to exist within the study area.	
	3.15	Animal Movement Corridors	These features should be considered in relation to identified natural features and wildlife habitats. If deer wintering areas and amphibian breeding habitat are identified for the area then movement corridors for these species should be identified within the NHA and evaluated for significance where required.	
	3.17	Rare Vegetation Communities	There is at least one plant community identified within the NHIC Bio-diversity Explorer (Graminoid Coastal Meadow Marsh Type) that should be included within the records review. In addition Appendix M of the SWHTG should be referenced as a record for potential rare plant communities for Ecoregion 7E and Haldimand County. Please also include a discussion regarding how Old Growth forests as well as seeps and springs were considered/ identified within this section.	

Section	Page #	Wording/ Topic	Comments	How/ Where Concern was Addressed
	3.17	Area Sensitive Species	This analysis should be broken into two main habitats: Area Sensitive Woodland habitat and Open Country Breeding Bird Habitat. Appendix G should be used in conjunction with Appendix C of the SWHTG for outlining species identified as area sensitive. Appendix Q of the SWHTG, page 350 SWHTG should be used for criteria to delineate these habitats and a description and analysis should be included for each feature within the NHA.	
	3.17	Specialized Raptor Nesting Habitat	Criteria from Appendix Q page 350 and Table 10-1-3 page 104 of the SWHTG should be used to describe and analyse the study area for this habitat.	
	3.18	Species of Conservation Concern	Please include additional detail with respect to Provincially Rare species (S1-S3). The NHIC Biodiversity Explorer may assist in identifying some of these species. Each Provincially Rare / Special Concern species should be described and analysed with linkages made to habitat to support the identification of natural features.	
3.2.8,	3.20	James N. Allen Provincial Park	Identifying that part(s) of the project location are within 120m of the park boundary should be included within this section. Where projects are within 120m of a provincial park, Ontario parks staff should be contacted directly to obtain additional information pertaining to the values/purpose of the park as a protected area. This information should be identified and discussed within the records review and is necessary to address the requirements within the EIS as per Section 38 of O. Reg 359/09.	
Section 4.0 Site Investigation				
4.0 – **Methods**	Entire section	Identification and mapping of natural features	Each natural feature (woodland, wetland, wildlife habitat, etc.) should have its own unique identifier and be addressed separately throughout the site investigation and evaluation of significance. As currently presented and mapped, multiple natural features are captured within a single “feature #” within the NHA. In addition, the extent of the mapping of natural features is generally limited to the area within 120m of the project location, and should include the entire feature. Please clarify.	
4.1.1	4.2	Alternative Site Investigation Ministry staff have noted that within the Site Investigation report on page 4.2 of NHA within Section 4.1.1 it states: *“Vegetation communities were first identified through aerial photograph interpretation, and review of existing natural features mapping. The Zone of Investigation surrounding the wind infrastructure (turbine locations, access roads and crane pads, excluding collector lines), solar components and some of the transmission line components Zone of Investigation was traversed on foot and physically inventoried. Physical site investigations were carried out from roadside locations for the wind project collector lines, the remaining portions of the transmission line components and their associated 120 m Zone of Investigation due to the very large number of non-participating landowners, and with the understanding that all work for these project components would be*	**Note: comments regarding this concern were provided to Stantec/Samsung in an e-mail dated: Feb 15, 2011** Based on this information it would appear that in some areas an alternative site investigation was completed for selected areas of the wind and transmission line project location. The amended O. Reg 359/09 allows for the completion of an alternative investigation of the site only where it is determined that it is not reasonable to conduct a site investigation by visiting the site. Where an alternative investigation of the site was conducted, Section 26(3)7 of O. Reg 359/09 requires the following to be included in the site investigation report: • The dates of the generation of the data used in the site investigation. • An explanation of why the person who conducted the alternative investigation determined that it was not reasonable to conduct the site investigation by visiting the site.	

Section	Page #	Wording/ Topic	Comments	How/ Where Concern was Addressed
		restricted to the already-disturbed, existing road rights-of-way".	As such, the site investigation report should be revised to address these requirements. Ministry staff recommend considering the following changes to address the requirements: **Section 4.1. – Methods** • Identify the type of data used to complete aerial photograph interpretation, and review of natural features mapping and the date that any data used was generated • Identify who was responsible for completing this analysis • Where this analysis was complemented with field checks via roadside /fence line surveys, please explain the methods used for the road side /fence line survey(s). • Identify methods of how landowners were approached/ contacted to obtain access to private property. **Section 4.2. – Results** • Identify the areas subject to the alternative site investigation methods. This may be best shown on a map and referenced within the report. • To support the determination that it was not reasonable to conduct the site investigation by visiting the site (due to non-participating landowners), please provide: o List of landowners contacted and contact information o Number of attempts, time/date of contact o Copies of written correspondence and replies (if available) o Results of requests for access to site (landowner responses) o Identify the results of the investigation, such as the identified natural features, ELC communities, etc. (Note: It is understood that much of this information may already be within the site investigation report).	
4.1.4 – Bird Surveys 4.1.5 Bat Surveys	4.4 4.6	Bird studies conducted by Hatch across four seasons between March 2009 and February 2010 Acoustic bat monitoring conducted by Hatch in August and September, 2009.	Based on the information provided for the various Hatch surveys, these studies do not include all of the required information for a site investigation as required within Section 27(3) of O. Reg 359/09. Recognizing that these studies were completed previously by other consultants in support of the renewable energy proposal, Ministry staff recommend including these studies as records within the records review. Also please identify where they were applied to support the identification of natural features in the Site Investigation Report and/or in support of evaluating natural features for significance within the Evaluation of Significance Report.	
4.1.4	4.4 - 4.6	Bird Surveys, including: • Spring Migration Surveys • Summer Breeding Surveys (09,10) • Fall Migration Surveys • Over-winter Resident Surveys	Additional detail is needed describing how each of these surveys inform the site investigation report, for the purposes of identifying candidate significant wildlife habitat. Clarify if additional survey work be required to evaluate these types of features, and the relation between identified features and the project location? Please identify where the investigations were completed including: (as part of the summer 2009 breeding surveys) for bald eagle behavioural watch surveys, crepuscular bird surveys	

Section	Page #	Wording/ Topic	Comments	How/ Where Concern was Addressed
		Bat Surveys	and passerine surveys In addition please explain how the Hatch (2009) bat monitoring consider known cave features such as those in the Oriskany Sandstone formation at the northern portion of the study area, or bluff formations along the shoreline of Lake Erie?	
4.1.6 and throughout NHA	4.7	Field investigations to identify wildlife habitat located within 120 m of the Project Location were conducted during the vegetation community and vascular plant surveys performed between September and December 2010.	Ministry staff have concerns with the lack of early season flora information provided within the NHA. The review time frame for the collection and identification of plant species should have included a 3-season identification period to account for plants species associated with the spring and summer growing periods. Some of the features were surveyed during the month of December. On this basis snow cover and plant decay would impair the ability to identify herbaceous plants species. This appears to have resulted in an incomplete species listing. Given that parts of the proposed project location are within natural features or are proposed immediately adjacent to natural features the identification of spring-summer flora may have identified additional candidate significant wildlife habitat(s).	
4.2.5 Wildlife and Wildlife Habitat	4.10	Species of Conservation Concern	Please include additional detail with respect to Provincially Rare species (S1-S3). Each Provincially Rare / Special Concern species should be described and analysed with linkages made to specific habitats to support the identification natural features.	
		Amphibian breeding ponds/ amphibian habitats - salamanders	Please clarify how the work undertaken considered salamanders when identifying candidate significant wildlife habitat(s). Please also include information relating to what was considered as potential salamander habitats.	
(Results) Wetlands 4.3.2 (Wind), 4.4.2 (Solar), 4.5.2 (TC)	4.11, 4.23, 4.31	Identification and delineation of wetlands and wetland boundaries using ELC and OWES. Based on a review of the ELC field cards provided within the Appendix E, staff have identified a number of concerns with the ELC work completed, including: • no soils data • no species composition • some records are unreadable • no spring records are available • species codes are not uniform	**Comments regarding this concern were provided to Stantec /Samsung in an e-mail dated: Feb 15, 2011** Ministry staff have concerns with respect to a number of ELC units within 120m of parts of the project location, specifically for ELC units in features 8,14,15,42, 68, 69,73,74,75 and 76. In the Feb 15 e-mail Ministry staff provided a table that identified each of these areas and what additional information is needed to clarify the type of feature present OR whether the Ministry would consider this area as a wetland feature. This information should be reflected within the NHA.	

Section	Page #	Wording/ Topic	Comments	How/ Where Concern was Addressed
		According to table 5.4, Appendix B of the NHA: "*A 141 m stretch of road will result in the removal of 0.141 ha of fresh-moist ash lowland deciduous forest (FOD 7-2). This feature was identified as a significant woodland and wetland that supports significant wildlife habitat in the form of valleyland, winter deer yard, amphibian breeding ponds, habitat for area-sensitive forest birds and habitat for forest bird species of conservation concern".*	Ministry staff have identified a concern with respect to the proposed access road from turbine 4 to turbine 2 through feature 68. Based on the vegetation information available for this ELC community (FOD7-2) and in the absence of soils and other complete ELC information, it would appear that this area better fits the composition of an ELC wetland community and not a woodland community. Recognising the timelines for the proposed project, Ministry staff recommend that a site visit for this location be organized with Ministry staff to confirm the ELC community for this portion of Feature 68, ASAP. Ron Drabick and Anne Yagi should be contacted to set up a site visit. Ron can be reached at 519-773-4728 or ron.drabick@ontario.ca . Anne can be reached at 519-562-1196 or anne.yagi@ontario.ca Should this site visit confirm that the area is a wetland community, the proposed access road feature would be considered as going through a wetland feature and will require a full OWES evaluation to be completed for the entire wetland feature including complexing.	
Wetlands 4.3.2 (Wind), 4.4.2 (Solar), 4.5.2 (TC)	4.11, 4.23, 4.31	Wetland boundaries	Regarding Feature 10: The proposed access road for turbine 58 near feature 10 crosses a "riparian HR" ELC community. This would appear to be a wetland feature on the eastside of the road while it is unclear on the west side. No ELC data had been provided for the "riparian HR" natural feature. Please clarify.	
		Wetland boundaries	With respect to Features 66: Ministry staff note that the access lane for these features crosses a plantation that is riddled with meadow marshes connected to the hedgerow and the swamp at the intersection of the access roads for the two turbines. ELC has only identified the plantation and not the wetland inclusions. Based on the ELC notes, the wetland features should have been identified (the wetland sloughs) separately from the plantation or at least have indicated there were wetland inclusions present. The wetland sloughs should be identified and avoided. The wetland mapping in the woodland directly north of turbine 32 and between the two swamp communities includes an area that has been labelled as CUP 3-2, a white pine plantation. However, in looking at the swoop 2006 aerial photos and the 2010 photos, this area appears very similar in composition to the areas labelled swamp on either side of it. It does not appear this area has been converted to plantation. Please clarify the wetland boundaries in these areas.	

Section	Page #	Wording/ Topic	Comments	How/ Where Concern was Addressed
			Turbine 9 is within 10m of a wetland swale. There also appear to be two created wetlands (labelled lagoons) within the construction laydown area, based on the 2010 photos. The access road may be within wetland features and no buffering of the natural feature is provided. The proximity of the base of turbine 9, measured from the center, to an adjacent watercourse is about 9m and there appears to be wetland vegetation along this area as well. This turbine is said to be more than 25m from a wetland however Ministry staff have concerns as this would appear to be base on incorrect wetland mapping within the woodland to the west of the turbine. The wetland is located at the extreme west side of the zone of investigation but should have been mapped as extending to the extreme east side of the woodland where the watercourse meets the woodland just west of the turbine base. The identification of features needs to be clarified and adjusted to provide for appropriate setbacks and mitigation measures.	
		Evans Creek LSW boundaries	Ministry staff also note that the boundaries for the LSW at Lakeshore Rd have not been corrected. This should have been completed as part of the site investigation. The swoop 2006 and provided 2010 photo's indicate the presence of a dug pond, structures around the pond and manicured lawn. An update of the file using OWES would not have identified this area as wetland given what is visible on the aerial photos. Please complete this analysis for these areas.	
4.3.4 Wildlife Habitat (Wind)	4.13 – 4.17	Landbird Migratory Stopover Areas Butterfly Migratory Stopover Areas	As mentioned previously in records review, landbird migratory stopover habitat and butterfly stopover habitat are not adequately assessed based on site specific habitats associated with the project location. Please clarify using criteria from the SWHTG and identify candidate habitats.	
		Colonial Bird Nesting Sites	Ministry staff note that there are numerous swamp habitats identified during the ELC field work, which could contain colonial bird nesting habitats. Please clarify how these habitats were considered. Further, colonial bird colonies include bank and cliff swallows and gull and tern colonies, do any of these habitat types exist in or within 120m of the project location? Please refer to SWHTG for feature based criteria to be used during Site Investigation.	
	4.14	Waterfowl Stopover and Staging Areas	Large wetlands such as swamp and marshes should be considered as candidate habitats and further clarification regarding the identification of potential habitat is needed. Fall roosting habitat in swamp or marsh feautres would be an example of inland habitats that would be potentially significant for waterfowl. Please clarify if these habitats were considered within the site investigation.	

Section	Page #	Wording/ Topic	Comments	How/ Where Concern was Addressed
	4.14	Raptor Wintering and Roosting Areas	Ministry staff have concerns with the area searches completed by Hatch in 2009. The identification of this type of habitat should follow the criteria within the SWHTG. The habitat needs to be delineated first, any historical concentration areas should be included from records review and the habitat analysed to ensure it still meets the criteria within the site investigation report. All candidate wildlife habitats identified in or within 120m of the project location should then be evaluated using proper study methods during the appropriate time of year.	
	4.15	Reptile Hibernacula	Please clarify how rock piles within hedgerows and fence lines were considered for the purposes of identify candidate significant wildlife habitat.	
	4.15-4.16	Bat Maternity Roosts	Please clarify where the criteria used to rule out potential bat maternity roosts (density of canopy or subcanopy, height of the stand) came from. Based on the assessment of all the woodlots in the study area, for the identified sites within table 4.3 better rationale is required to dismiss these areas as candidate habitat for bat maternity roosts.	
Wildlife Habitat 4.3.4.2 (Wind) 4.4.4.2 (Solar) 4.5.4.2 (TC)	4.17 4.26 4.33	Animal Movement Corridors	Individual hedgerows do not appear to have been described and discussed at all in this NHA, or included in mapping. Please clarify how hedgerows were considered as part of the rationale for identifying animal movement corridors.	
Wildlife Habitat 4.3.4.2 (Wind) 4.4.4.3 (Solar) 4.5.4.3 (TC)	4.18 4.27 4.34	Area Sensitive Species	Point Count surveys should be utilized to evaluate candidate significant wildlife habitats within Section 5.0 of the NHA. The identification of candidate significant wildlife habitats for area sensitive species could include incidental observations (where applicable) to support other criteria. Page 103-104 of the SWHTG suggests woodlands >10ha with at least 4 ha of interior habitat or Appendix Q which identifies that woodlands> 30ha with at least 10ha interior habitat be considered. The use of these criteria would be rationalized based on number and size of woodlands in landscape. Each woodland for this habitat should be described, rationalized and analyzed as a candidate significant wildlife habitat using the SWHTG criteria. Please clarify.	
Wildlife Habitat 4.3.4.3 (Wind)	4.18-4.19	Raptor nesting habitats	Based on the number of raptor observations reported, a number of these woodlands should be considered as candidate significant wildlife habitat for specialized Raptor Nesting habitat. Each of these features should be considered separately from Area Sensitive Songbird habitat and include a description, rationale and analysis. Please clarify.	
	4.20	Seeps and Springs	Please discuss seeps and springs separately, including information pertaining to the identified feature and its potential as significant wildlife habitat.	

Section	Page #	Wording/ Topic	Comments	How/ Where Concern was Addressed
Wildlife Habitat 4.3.4.3 (Wind) 4.4.4.4 (Solar) 4.5.4.4 (TC)	 4.21 4.29 4.36	Habitat of Species of Conservation Concern – Declining Populations – Grassland Breeding Birds	Field habitats that meet the criteria in App. Q (page 350 and page 104) from the SWHTG should be used in identifying candidate grassland habitats. Each of the habitats that meet the feature-based criteria should be identified separately, and have a description provided that includes the rationale used and an analysis for identify the feature as candidate significant wildlife habitat. Point Count surveys are used during Evaluation of Significance, not during Site Investigation. Bird lists from any previous studies can be used as supporting information but information pertaining to the evaluation of features should be within Section 5.0 of the NHA.	
		Other Provincially Rare and Special Concern Species	Please explain how provincially rare and special concern species were considered when conducting the site investigations and whether candidate significant wildlife habitat(s) were identified within 120m of the project location.	
4.4.4.1	4.26	Two Short-eared Owls were observed more than two weeks apart, on December 2 and December 23, 2010, within the 120 m Zone of Investigation northwest of the Solar Project Location.	Please clarify how the boundaries of this feature were assigned, and if the full extent of the habitat was mapped. Further, provide the criteria/rationale used to determine the extent of the habitat.	
Evaluation of Significance				
Wetlands 5.1.1 (Methods) 5.2.1 (Wind) 5.3.1 (Solar) 5.4.1 (TC)	 5.2 5.12 5.17 5.20	Wetland features not evaluated by MNR were assessed using a method for wetland Rapid Assessment developed by MNR (December 2010) to provide a set of evaluation criteria focused on wetland attributes relevant to the completion of an Environmental Impact Statement (EIS) for renewable energy projects. The criteria to be evaluated are presented in Appendix C of the *Natural Heritage Assessment Guide for Renewable Energy Projects* (MNR, December 2010).	The evaluation should be identified as the "Wetland Characteristics and Ecological Functions Assessment for Renewable Energy Projects" from the Natural Heritage Assessment Guide. The use of the wording Wetland Rapid Assessment refers to another wetland evaluation protocol not related to Renewalable Energy. A review of Stantec's interpretation of the Wetland Characteristics and Ecological Functions Assessment for Renewable Energy Projects found that the areas where they had proposed a standardized approach using "high med low" values should be changed to a statement of values and in some cases the inclusion of presence/absence values where applicable. This should be addressed in Appendix "B" Table 5.1 Rapid Assessment of Significance for Wetlands.	
		Where the wetland communities extend outside of the 120 m, they were included in the Rapid Assessment to ensure accurate documentation of the features and functions. Only wetland communities contiguous with those inside the 120 m Study Area were assessed.	According to this statement all contiguous units should have been assessed, which was the case for the areas identify within the solar project location and zone of investigation. However with respect to the wind and transmission corridor project locations and zone of investigation, it appears from the mapping that contiguous wetland units were not assessed fully, only the area within the 120-meter adjacent lands. Please clarify. With respect to wetland mapping on the significant natural features mapping (Figures 13 - 15), the PSW and LSW boundaries should be shown in addition to the renewable energy significant wetlands.	

Section	Page #	Wording/ Topic	Comments	How/ Where Concern was Addressed
		Flood Attenuation - isolated wetlands;	A number of wetlands have been evaluated as isolated wetlands; Ministry staff recognise that isolated wetlands are a rare occurrence within the southern landscape and after reviewing the wetland evaluations in conjunction with ortho-photography these wetlands should have been identified as palustrine. This should be addressed in Appendix "B" Table 5.1 Rapid Assessment of Significance for Wetlands.	
5.1.2 (Methods) 5.2.2 (Wind) 5.3.2 (Solar) 5.4.2 (TC)	5.7, 5.12 – 5.13	Valleylands	Please clarify whether the criteria from Natural Heritage Assessment Guide or the Natural Heritage Reference Manual is being applied. Further, the sections regarding the evaluation of significance of valleylands should be expanded out to discuss each valleyland in relation to each criteria to determine whether each natural feature is significant or not. This could be provided in a table. The descriptions provided in the NHA need to link back to the appropriate criteria used for each evaluation of significance.	
5.1.4.1 (Method) 5.2.5 (Wind) 5.3.5 (Solar) 5.4.5 (TC)	5.7, 5.13, 5.18 5.21	Criteria for determining the significance of deer yards is outlined in the Decision Support System Index #28 (MNR, undated). However, MNR has indicated that habitats used by White-tailed Deer in the Niagara Region differ from those used elsewhere in southern Ontario (A. Nix, pers. comm., December 15, 2010). In the Study Area, winter deer yards are therefore considered to be significant if MNR has identified them as such.	Criteria for determining the significance of deer congregation (wintering) areas within ecoregion 7E and management unit 90A in Guelph District should use the following criteria: • Size Class IV (>100 ha) for woodlands • Confirmed wintering deer density • And < 10% of Summer Deer Range. For Management unit 90A in Guelph District the: Total Wintering area = 664ha Total Summer Range = >9000ha Densities can be determined using the Niagara Aerial Deer Surveys provided to Stantec previously. Based on this analysis Features: 7, 31, 32, 47, 81 would be considered as significant deer congregation (wintering) areas. Please also see the attached shape file.	
5.1.4.1 (Method)	5.7	Methods for evaluating significant wildlife habitat.	Feature based criteria are relative to identifying canididate significant wildlife habitats, not for completing evaluations of these habitats. Point Count, Transect, Floristic Studies, Egg mass/larval counts and Observational Studies completed at the appropriate time of year are examples of methods for evaluating significance of natural features. Please revise and provide additional detail regarding evaluation methods for Bull Frog habitat, Raptor Winter Areas, Turtle Nesting, Area Sensitive Habitats (Songbirds, Grasslands, Raptors), Amphibian Woodland Breeding Habitat and Provincially Rare and SC species. Also please include any addition features identified from revisions to the records review and/or site investigation.	
5.1.4.2 (Method) 5.2.5 (Wind)	5.9 5.15 5.19	Amphibian Woodland Breeding Ponds	Please also reference table 5.3 – Vernal pools Evaluation of Significance within this section of the report.	

Section	Page #	Wording/ Topic	Comments	How/ Where Concern was Addressed
5.3.5 (Solar) 5.4.5 (TC)	5.21		The evaluations appear to be based on habitat characteristics only and do not appear to include any species presence/absence information. Were any specific studies for amphibians (frogs, salamanders) completed? Based on the evaluations completed significant woodland breeding ponds are present in features: 8,10, 15, 19, 22, 30, 31, 32, 38, 39, 42, 47, 49, 54, 56, 68, 69, 71, 72, 77	
5.1.4.3 (Method) 5.2.5 (Wind) 5.3.5 (Solar) 5.4.5 (TC)	5.10 5.14, 5.18 5.22	Animal Movement Corridors	Please identify the source of the criteria being applied, and provide a rationale as to why at least two criteria must be met for features to be considered as significant. Also, each individual animal movement corridor should be discussed in regards to each of the criteria, this could be provided within a table and reference in the body of the report.	
Section 5.1.5	5.11	One criteria recommended in the Haldimand County Official Plan was not utilized due to a lack of available information pertaining to managed woodlands, despite requests for this information from the MNR and County of Haldimand.	Please note that while there are managed woodlands that have written management agreements with Trees Ontario and the Haldimand Stewardship Council/Haldimand Woodlot Owners' Association within the study area, none are under agreement with MNR and all previous MNR agreements have expired.	
5.2.4	5.13	Significant Woodlands – Wind Project Location	Table 5.2 in Appendix B evaluates feature 56 as “not significant”, Ministry staff note that it should be evaluated as “significant” as it has at least 2 ELC communities present and because of proximity to water.	
5.5	5.22	Summary of significant natural features	It is noted that Feature 79 is not included within the summary table, although it was determined to be significant woodland. This should be corrected.	
Environmental Impact Study (EIS)				
EIS	Entire EIS	Wildlife in construction areas	What practices will be utilized to prevent wildlife from entering construction areas? For example if construction work occurs within the breeding season for turtles additional barriers (i.e. silt fencing) should be erected around areas of disturbed soils near natural features to discourage turtles from nesting/laying eggs in these areas. If wildlife is discovered within construction areas what practices will be implemented? Please clarify.	

Section	Page #	Wording/ Topic	Comments	How/ Where Concern was Addressed
6.1.1 6.1.2.1 6.1.2.2	6.2, 6.5 6.5	Description of the Wind Project – Impacts to Wetlands and Woodlands Within 30 m of wetlands, no excavation will take place; the roadbed material will be placed over the existing surface on geotextile material with equalization culverts to ensure no ponding or disruption of surface water flow… Efforts were made to incorporate the current road network at the site to the greatest extent possible. All components of the Wind Project are sited outside wetland boundaries; therefore there will be no direct loss of wetland habitat or function. Potential indirect effects may arise through changes to wetland hydrology during or after construction… Where components of the Wind Project are sited outside significant woodlands, there will be no direct loss or fragmentation of habitat or habitat function. Potential indirect effects may arise through changes to hydrology during or after construction…	Construction has been proposed within 30 meters of identified wetland edges for a number of wetland features, as well as woodland features; in some instances work has been proposed immediately adjacent to the wetland/ woodland edge. Ministry staff have concerns with respect to potential impacts to natural features given the close proximity of project components. Where accesses roads are proposed within close proximity to wetland/woodland edges as a means of preventing impacts to the edges of these features from changes in drainage, soil compaction, etc. Options for addressing these concerns could include incorporating: relocating/shifting project components, setbacks from natural features, buffers, enhancing erosion/sediment mitigation, etc.	
	6.1	Dewatering from construction	The EIS and related REA reports (where applicable) should commit to ensuring that water pumped during dewatering activities is directed away from natural features and is not pumped directly into wetlands. Further all potential impacts from dewatering activities that could impact natural features should be identified within the EIS and appropriate mitigation provided including those resulting from detailed engineering design.	
	6.2	Turbine laydown (prior to turbine erection) will take place adjacent to the access roads and, along with crane pads with dimensions of approximately 20 m x 40 m, have been incorporated into the Wind Project Location design by designating a 50 m wide “constructible area” for the access roads.	While it is understood that crane pads will be installed within the constructible area please describe how the crane pads will be installed. Are these pads temporary or permanent installations? Is excavation or dewatering required for the installation crane pads? What are potential impacts to natural features from the construction of the crane pads? Please clarify.	
6.1.2.1	6.5	Potential Impacts Wetlands - indirect effects may arise through changes to wetland hydrology during or after construction.	A review of road layout makes no mention of culvert placement along access roads to maintain wetland hydrology flow in drainage crossing areas. While Table 6.1 does generally identify consideration of equalization culverts in some areas, specific details regarding culverts have not been provided. If flow is disrupted in these areas it could well have an effect on wetlands within the watershed. Please clarify. Culverts should also be considered in relation to mitigating impacts to wildlife habitats and wildlife movement, including for amphibians. Additional site details regarding the placement of culverts along existing and proposed access road should be provided within the EIS.	

Section	Page #	Wording/ Topic	Comments	How/ Where Concern was Addressed
6.1.2.3	6.6	Rare Vegetation Species & Communities	As mentioned previously, Ministry staff have concerns regarding the potential impacts for rare vegetation species and communities, as plant surveys were completed from September – December 2010, and spring-summer flora surveys have not been completed. Particularly for those areas where the removal of vegetation is proposed. Options for addressing these concerns could include: completing spring flora surveys, relocating/shifting project components outside of natural features, setbacks from natural features, buffers, etc.	
6.1.3, et al.	Entire EIS	Commitment to implement proposed mitigation measures	Throughout the EIS it is stated that certain mitigation measures "should occur" under certain circumstances. Please revise the NHA to commit that the proposed mitigation measures "will occur" under those certain circumstances.	
6.1.3.2 et al.	6.9 & Entire EIS	Mitigation and Net Effects *If a nest is located, a designated buffer will be marked off…*	It is requested that a specific buffer distance be identified within the EIS, or that a protocol for determining the buffer be discussed within the EIS. Please make this change to all applicable sections of the EIS.	
	6.9 & Entire EIS	Regular monitoring of the limits of clearing will be employed to ensure the objective of minimal disturbance. Should monitoring reveal that clearing occurred beyond defined limits, mitigation action will be taken that could include rehabilitation of the disturbed area.	Pleas specify what other mitigation actions that would be taken other then rehabilitation of the disturbed area under these circumstances? Ministry staff recommend that if clearing occurs beyond defined limits, mitigation including at a minimum, the rehabilitation of the disturbed area occurs to the pre-disturbance conditions of the site. Preferably the improvement of habitat features is supported wherever possible.	
	6.9 & Entire EIS	Rehabilitation of laydown areas	Please specifically identify all areas where reseeding/replanting to natural vegetation is proposed within the EIS. All reseeding/ replanting should use species native to Ecoregion 7E. Preferably these species should also be native to the site/ surrounding natural features.	
6.1.5.2 et al.	6.14 & Entire EIS	Management of sediments and erosion from construction…	Are areas adjacent or within to the proposed construction area at risk to sediment/erosion? How have these areas been identified? Are there other mitigation tools proposed to minimize erosion impacts or provide for re-vegetation where erosion does occur in these areas? Please clarify.	
		Project components are planned within the 120 m zone of influence of the amphibian woodland breeding pools.	Proposed mitigation only addresses potential impacts to frogs…please clarify if there are any potential impacts to salamanders and how the proposed mitigation addresses these impacts. Please make these changes to this section and every subsequent section where it is repeated within the EIS.	
6.1.7 Natural Feature 10	6.18	Concerns regarding access road for turbine 58	Proposed access road crosses a "riparian HR" ELC community. This would appear to be a wetland on the eastside of the road, unclear on the west. No ELC data has been provided for the "riparian HR" natural feature. No discussion in table 6.1 regarding use of culverts for this area has been included. Swale	

Section	Page #	Wording/ Topic	Comments	How/ Where Concern was Addressed
			exists north of “riparian HR” this does not appear to have been identified or mitigated. Use of culvert would be wise to prevent pooling and maintain hydrology. Please clarify Please also clarify if the access lane beside or replacing the hedgerow in this location.	
6.1.10 Natural Feature 19	6.25	Concerns regarding wetland delineation in these areas, potential impacts to adjacent features and drainage	Please clarify the extent of the construction/laydown areas and how close they will be in proximity to adjacent natural features. Turbine 24 is within a narrow field 50 – 100m wide, and while Ministry staff recognise that it will be difficult to accommodate a minimum 10m buffer on each side, given potential impacts a buffer is recommended. Please address whether potential impacts to sensitive / declining species could be affected in this area due to potential interior woodland area reductions by the turbine placement. Please describe in more detail potential impacts to drainage and how specific mitigation measures will be implemented to prevent these impacts.	
6.1.12.1 Natural Feature 22	6.31	The location of Turbine 16 appears to be proposed on top of an darin/swale that drains into feature 22 and supports other features through the areas	Please clarify how the impacts from the location of the turbine base being placed on top of a drain/ swale, which flows into feature 22 and supports other adjacent features, is being mitigated to ensure no negative impacts from surface water drainage changes occur?	
6.1.13 Natural Feature 28	6.33	Concerns regarding impacts to surface water flows/ drainage	Clearing appears to be proposed within a low lying wet area within the construction/ laydown sites and within 17m of the turbine base. The swale also wraps around the turbine base location. There is also a swale that crosses the access road and then runs parallel to the access road; it appears part of the access road is on the swale. Please provide additional detail regarding how drainage will be maintained in this area, and how the proposed mitigation methods will be specifically implemented to accomplish this.	
6.1.17.2 Natural Feature 34	6.44	Measures taken to ensure the protection of the watercourse that supports Snapping Turtle (Water Assessment Report, Stantec 2011) will ensure the preservation of habitat characteristics needed for Snapping Turtle movement.	As MNR staff do not review the Water Report, please clarify what these measures include.	
6.1.22.1 Natural Feature 51	6.55	Distance to wetland feature	Table shows access road (west) within 1m of a significant woodland and overlapping a significant wetland. Report states “Construction is planned within the 120 m zone of influence of the wetland. A minimum 57m setback is planned between the wetland edge and any physical structure on the ground (excluding the turbine blade airspace)”. Please clarify	
6.1.30.2 Natural Feature 66	6.71 & Entire EIS	The required 10 m wide construction zone over the 1472 m length of the access road within the cultural plantation component of the woodland will result in the loss of approximately 1.472 ha of woodland, plus 0.028 ha for the turbine base and a temporary	Please identify the specific areas where the removal of natural features is proposed. How is the removal of natural vegetation within natural features to be mitigated for the project? Please clarify.	

Section	Page #	Wording/ Topic	Comments	How/ Where Concern was Addressed
		removal of 0.49 ha for the 70 m x 70 m crane pad…		
		With respect to Turbine 51	Project components are adjacent the wetland, additional mitigation (buffer) is needed. Please also clarify if culverts are proposed for this area to maintain drainage patterns/swales.	
6.1.44 Grassland habitats	6.100	No separate unique identifiers for each grassland habitat, insufficient detail for potential impacts and mitigation.	Please provide unique identifiers for each of the grassland habitats identified. Please discuss the potential impact to each feature individually based on the values for each habitat and provide appropriate mitigation for any potential negative environmental effects.	
6.1.46 James N. Allen Provincial Park	6.104	James N. Allen Provincial Park	The EIS needs to identify potential negative environmental effects and mitigation of the features, functions, values and ecological integrity of the provincial park as a protected area. An analysis should also include an assessment of the potential impacts of the project on the ability of the provincial park to fulfil its role in the protected area system, the integrity of the protected area as a whole, as well as the features, functions and values associated with the provincial park.	
6.2.1 Description of Solar Project	6.105	A 6m wide berm will be constructed to provide a landscaping barrier for landowners of adjacent residences….	Please clarify whether the berm is to be vegetated and whether native species will be used. Further are there any proposed impacts to natural features from/by the berm?	
	6.106	Minimal change from the existing grades is anticipated but some grading will be performed to accommodate the construction of internal solar module access roads. The solar farm land area will be graded by earth moving equipment to the elevations determined by the grading plans (Construction Report, under separate cover).	Please provide additional detail regarding the extent of the grading changes proposed, including an analysis on pre-existing to post-construction conditions.	
6.2.3.1 Direct impacts to natural features – significant wetlands	6.111	The lands located adjacent to the wetlands will be naturalized to create a vegetated buffer between the wetlands and Solar Project Location.	Please identify areas where naturalized buffers will be added. What species will be used in these areas? How wide is the buffer area? Ministry staff recommend that species native to Ecoregion 7E, preferably these species should also be native to the site/ surrounding natural features should be used.	
		No significant grading is proposed on the solar lands and existing drainage patterns will be maintained, ensuring any surface water flows currently draining to the various wetlands will be maintained.	Please clarify how this will be accomplished and the degree of grading proposed.	
6.2.3.1 Direct impacts to natural features – significant wildlife habitats	6.113	Two security fences are proposed along the western limit of the Solar Project Location that would cross the identified animal movement corridor between Natural Feature 29 and 30.	Ministry staff have concerns regarding the limitation of wildlife movement to the west from natural feature 30. It is recommended that the fencing be adjusted to maintain both eastern and western movement along these corridors.	
6.2.3.6 and 6.3.3.6 Erosion and Sediment Controls	6.117 and 6.141	Appropriate erosion and sediment controls should be employed during all phases of construction to minimize the potential deposition of silt and sediment within the receiving systems as a result of site grading works.	Please clarify what the specific erosion and sediment control measures are to manage silt and sediments as a result of grading/ construction.	
6.3.4 Net Effects	6.141	With respect to the Collector Substation, a minimum setback of 31 m will be maintained from the adjacent wetland and woodland (Natural Feature 30). The O&M facility will maintain a 30 m setback from the wetland and woodland feature (Natural Feature 38). The buffer areas between these facilities and the natural features will be	Please identify areas where naturalized buffers will be added. What species will be used in these areas? How large is the buffer area? Will the entire 30/31m setback be replanted? Ministry staff would recommend that native species to ecoregion 7E, preferably to the local area should be used.	

Section	Page #	Wording/ Topic	Comments	How/ Where Concern was Addressed
		naturalized with native plant species intended to be maintained as a 30 m vegetated buffer zone in perpetuity.		
Environmental Effects Monitoring Plan				
2.1	2.1	Purpose of EEMP	Ministry staff recommend that the mortality monitoring of the EEMP be in a separate plan and the disturbance monitoring proposed be included part of the EIS.	
2.2.3 2.2.4 2.2.5	2.5 – 2.8	Breeding and Grassland Bird Surveys, Amphibian Breeding Habitat, Wetland and Woodland Hydrology	Each of these proposed monitoring initiatives/ plans warrant further consideration and revisions based on additional details/ revisions to the NHA.	
2.2.1	2.2	Page 2.2 “Mortality monitoring within minimally-vegetated portions (i.e., Visibility Classes 1 and 2 [MNR, 2010a]) of a 50 m search area radius from the base of 30% (21 of 69) wind turbines” –	30% of 69 turbines should be 23 turbines as a sample size not 21	
	2.3	Followed by periodic checking to determine the rate of removal…	This should indicate that this checking will be done on the same schedule as the carcass searches (every 3-4 days)	
	2.4	Page 2.4 “The overall Ps for the facility will be calculated as the average of Ps1 through Ps9”	Please clarify where the 9 is coming from.	
		Observed fatalities will be photographed, and the species, GPS coordinates, substrate, carcass conditions, and distance and direction to the nearest turbine will be recorded along with the date, time and searcher.”	The sex and injuries of carcasses also needs to be included within the data collection	
2.2.2	2.5	“Persons handling bat carcasses will take reasonable precautions (e.g., gloves, tools etc.) to protect their personal health.”	Ministry staff recommend including rabies vaccinations	
			Please clarify what data will be recorded in the Se and Sc trials – e.g. species used, visibility class, weather… Please also clarify of how many trial carcasses will be placed at any one time to avoid bias and flooding the system with carcasses.	
3.1	3.2		Ministry staff recommend that the mitigation section for birds should indicate the required number of years of monitoring required (as per the guidelines) should the threshold be reached.	

General Comments/ Observations:				
	Entire NHA	Formatting, spelling, etc.	Ministry staff have noticed a number of spelling/ formatting errors within the NHA that should be corrected.	
	Entire NHA	Content pertaining to endangered/ threatened species	Please remove the information pertaining to Endangered or Threatened species and place this information in a separate species-at-risk report that will be provided to MNR under separate cover.	

Section	Page #	Wording/ Topic	Comments	How/ Where Concern was Addressed
Records Review				
3.2.1.1 3.2.1.2 3.2.2	3.3 – 3.4	Soils, Geology, Watershed Conditions	These topics are beyond the scope of what is required for receiving MNR's confirmation as such Ministry staff would request that these topics be removed from the NHA. Where Geological features are relevant to the identification of natural features please provide this clarification.	
3.2.4.4	3.10	Several of the unevaluated wetlands identified by the MNR, GRCA and LPRCA along the Lake Erie shoreline, lower reaches of the Grand River and various minor tributaries to Lake Erie would also be considered coastal wetlands. These wetlands are identified on **Figure 2 (Appendix A)**.	MNR has not identified any unevaluated wetlands within the study area; please clarify this statement to reflect this.	
3.2.6.3	3.17	Rare Vegetation Communities	A comparison of orthophotography flown in the early summer of 2010, to the 2006 leaf off orthophotography may have identified additional locations with rare vegetation communities within the study area.	
3.3	3.21	Records Review Summary	Please expand the summary to include all wildlife habitats identified in the SWHTG that may have linkage to habitat within the study area based on criteria provided within the SWHTG. As presented the list is incomplete and eliminates potential features without proper consideration of criteria or field assessment that would be completed during Site Investigation.	
Site Investigation				
4.1.2 –	4.2	Woodland features were compared to the definition of woodlands provided in O. Reg. 359/09, whereby any land that contained (or appeared to contain) (per hectare) at least (i) 1,000 trees of any size, (ii) 750 trees over 5 cm in diameter, (iii) 500 trees over 12 cm or (iv) 250 trees over 20 cm was considered a woodland in accordance with the REA definition. Treed areas were also compared to the definition of woodland provided in the *Natural Heritage Reference Manual* (MNR, 2010) and as revised in O. Reg. 359/09 as of January 1, 2011	According to Section 3.2.7 of the NHA Samsung has elected to apply to amended definition of woodlands from O. Reg 359/09. However based on the description of 4.1.2 the original definition from O. Reg 359/09 was applied and then the results were only compared to the amended definition. Please clarify.	
4.1.5	4.6	Bat Surveys	~~The revised~~ ***As outlined within the*** *Bats and Bat Habitats: Guidelines for Wind Power Projects* (MNR, March 2010) ***Section 26 of O. Reg 359/09*** requires a physical search of the air, land and water within 120m of the Project Location to determine…	
4.2.3	4.9	Vegetation Communities: The Winterberry – Buttonbush Mineral Thicket Swamp (SWT2-14*)	The suspected rare community should be confirmed with NHIC staff.	
4.3.4.5	4.22	Wildlife habitat summary	Please expand the summary to include all wildlife habitats identified in the SWHTG that have been identified as candidate significant wildlife habitat in or within 120m of the project location criteria provided within the SWHTG. As presented the list is incomplete and eliminates potential features without proper consideration of criteria or field assessment that would be completed during Site Investigation or prior to completing evaluations of the feature's significance.	
4.3.6	4.22	Summary of Natural Features - Wind	Please indicate how many/which unevaluated wetlands were identified as part of the site investigation and require evaluations for the Wind Project location and Zone of	

Section	Page #	Wording/ Topic	Comments	How/ Where Concern was Addressed
			Investigation.	
Evaluation of Significance				
5.1.4.1	5.8	Turtle Nesting Areas Criteria for determining the significance of **Bullfrog** breeding habitat…	This section is incomplete (and mentions bullfrog habitat under the turtle nesting areas section). Please Clarify	
5.2.3 and 5.4.3	5.13, 5.20		***There are no Life Science ANSIs located within 120 m and no Earth Science ANSIs located within 50 m of the Wind Project location.***	
5.5.3	5.24		An Environmental Impact Study is required to identify and assess any negative environmental effects and develop mitigation measures to the above-noted significant features that occur ***in* or** within 120 m of the Project Location.	
Environmental Impact Study (EIS)				
6.1.1	6.3	With the following seven exceptions, turbines, access roads and the collection system have been located outside of naturally vegetated areas:	With the following seven exceptions, turbines, access roads and the collection system have been located outside of natural~~ly vegetated areas~~ ***features***:	
Appendix B, Table 4.3	B.11 B.20	Feature 29 has open water area, likely from abandoned quarry “Edge assessment” listed under Species of Note column	Has an analysis been completed for abandoned quarries? Will this be discussed in a report supporting other APRD requirements? Please clarify if this is correct.	

Friedl, Susanne

From: Powell, Chris
Sent: Friday, March 11, 2011 2:50 PM
To: 'Cairns, Melody (MNR)'
Cc: april.nix@ontario.ca; 'Drabick, Ron (MNR)'; Kozak, Mark; Nadolny, Rob; Straus, Melissa
Subject: Samsung GREP - James N. Allan Provincial Park

Melody,

In your new capacity as an Ontario Parks ecologist, can you please assist us in obtaining any existing background information pertaining to the natural heritage aspects of James. N. Allan Provincial Park. This information is required to supplement the information that we have included in the draft NHA/EIS that was prepared and submitted to the MNR for the Samsung wind and solar project in Haldimand County.

The following is a summary of our description of the Provincial Park:

This "non-operating" park is a 117 ha park located on the north shore of Lake Erie, about seven kilometers southwest of Dunnville, with access via King's Row. There are no visitor facilities and it consists of 1 km of pebble beach, 100 m of fine sand beach and approximately 60 hectares is forest and wetlands. James N. Allen Provincial Park is intended to protect natural and scenic areas for scientific, educational and recreational use, with this park specifically identified as a good spot for swimming, boating, walking and bird-watching (Ontario Parks, 2003). A portion of the James N. Allen Park Woodlot-Wetland PSW occurs within the southern portion of the Park, which includes a mix of swamp and marsh that supports nesting colonial waterbirds, active feeding areas for Great Blue Heron, and locally significant winter cover for wildlife and fish spawning and rearing.

Attached is a map showing the natural heritage features known to exist within 120 metres of our Project (adjacent to the Park), which includes a proposal to install a new collector line along the opposite side of Kings Row adjacent to the Park.

With respect to the James N. Allen Park Woodlot-Wetland Provincially Significant Wetland, which occurs partially within the Park's boundaries, we have the following information:

This coastal wetland complex is made up of 5 individual wetlands, composed of 2 wetland types (65% swamp and 35% marsh). It is reported to support nesting colonial waterbirds and active feeding areas for Great Blue Heron, and locally significant winter cover for wildlife and fish spawning and rearing. This PSW is located along the north shore of Lake Erie south of Kings Row, east of Haldimand Road 49 in the southeast corner of the Study Area.

Our field investigations identified the following communities along the northern portion of the Park that fall within 120 m of the proposed collector line:

The vegetation communities along the northern edge of the Park, which occur within 120 m of a proposed collector line, include a fresh moist Red Oak – Shagbark Hickory deciduous forest (FOD9-6) and a green ash cultural woodland (CUW1-4*)… This feature is predominantly forested, natural forest to the west, culturally dominated to the east, and bisected by agriculture. The natural forests are co-dominated by shagbark hickory with red oak whereas the assessed cultural woodlands were dominated by green ash.*

Through our assessment of existing information, the Provincial Park includes a natural feature that contains Significant Woodland, Significant Wetland, Deer Wintering Area and supports Area-Sensitive Species Habitat…The woodland is part of a larger contiguous woodland that has been evaluated and determined to be a significant woodland based on size, connectivity, proximity to water, woodland diversity and woodland shape.

Through additional information provided by MNR, we have also confirmed that the southern portion of the woodlands within the Provincial Park are considered significant wildlife habitat for deer wintering.

Can you please provide any additional information pertaining to the natural features, functions and values of the protected area / Provincial Park, such as species records, management plans, research documents, site investigation results, mapping, etc. that would assist in identifying/assessing the natural features within the Provincial Park, as well as any documentation that could assist in identifying and assessing potential impacts of the Project of the following:

1. ability of the protected area to fulfill its role in the protected area system (i.e. representation),
2. the integrity of the protected area as a whole (e.g. intactness),
3. and the features, functions and values associated with the Provincial Park.

EIS consideration, in accordance with the *NHA Guide for Renewable Energy Projects* (MNR, 2010), suggests that potential impacts of the Project should be assessed with regard to

1. representation and condition (e.g. critical or rare landform-vegetation types),
2. diversity (e.g. high species diversity, surficial geological features),
3. ecological functions (e.g. hydrology, core areas, contiguity of natural areas, connectivity, interior habitat, natural disturbances, old growth forest),
4. special features (e.g. rare species/communities, specialized habitats, areas recognized for other initiatives (IBI, PSW, ANSI), significant wildlife habitat),
5. cultural heritage values (e.g. archaeological sites, aboriginal sites of interest, historic values)
6. sustainable recreational / traditional use values (e.g. recreational areas, traditional outdoor recreational uses, control of access, wilderness protection),
7. natural and cultural heritage appreciation (e.g. infrastructure, local educational/interpretation/demonstration sites), and
8. research (e.g. long-term research or monitoring plots, research re: protected areas priorities)

Any information that can assist in this assessment would be greatly appreciated.

Finally, we are required to conduct additional field work within 120 metres of the Project within the Provincial Park. Can you please either provide permission to conduct this work by our field ecologists or advise regarding the process to obtain that access permission?

Thank you very much in advance. Your urgent attention to this matter would be greatly appreciated. Can you please ensure that any response in this email is copied to the circulation list (specifically Melissa Straus).

I am looking forward to working with you once again (and much sooner than I had originally anticipated when you changed positions within MNR.

Take care.

Sincerely,

Chris

Chris Powell, M.A.
Project Manager / Environmental Planner
Stantec Consulting Ltd.
49 Frederick Street
Kitchener ON N2H 6M7
Ph: (519) 585-7416
Fx: (519) 579-4239
Cell: (519) 501-2368
chris.powell@stantec.com
stantec.com

Friedl, Susanne

From: Powell, Chris
Sent: Tuesday, March 22, 2011 10:49 AM
To: 'Cairns, Melody (MNR)'
Cc: Nix, April (MNR); Drabick, Ron (MNR); Kozak, Mark; Nadolny, Rob; Straus, Melissa
Subject: RE: Samsung GREP - James N. Allan Provincial Park
Attachments: image001.jpg; image002.jpg; MNR Park Access Application_22mar11.docx

Importance: High

Melody,

Attached is the completed application, as requested. I noticed in the "Notes to Applicant" section of the application, that permission may take up to 2 months to obtain. We do not have that time luxury for this project, unfortunately, and would greatly appreciate any efforts on your part to expedite this approval so we can access the property later this week.

If you have any questions at all regarding this application or background information, please call me on my cell phone.

Thank you in advance,

Chris

Chris Powell, M.A.
Project Manager / Environmental Planner
Stantec Consulting Ltd.
49 Frederick Street
Kitchener ON N2H 6M7
Ph: (519) 585-7416
Fx: (519) 579-4239
Cell: (519) 501-2368
chris.powell@stantec.com
stantec.com

From: Cairns, Melody (MNR) [mailto:melody.cairns@ontario.ca]
Sent: Wednesday, March 16, 2011 3:19 PM
To: Powell, Chris
Cc: Nix, April (MNR); Drabick, Ron (MNR); Kozak, Mark; Nadolny, Rob; Straus, Melissa
Subject: RE: Samsung GREP - James N. Allan Provincial Park

Hi Chris,

In order to do any type of survey or assessment work inside the park, you would need to fill out an application to conduct research within a provincial park. Ontario Parks has a wide definition of the term 'research', which includes pretty much any and all survey, inventory and monitoring. You can complete the application in one of two ways: fill out the online form (http://www.ontarioparks.com/english/form2.html) and submit the form that way, or take the information from the online form and put it into an MSWord document and email it to me directly.

As to the other part of your request on background information, can you send me the sources that were used to write what's below? That will help me figure out if there are any key documents that I can send you.

Cheers,

- Melody

Melody Cairns
Zone Ecologist - Ontario Parks, Southwest Zone
659 Exeter Road, 4th Floor| London, ON| N6E 1L3
Tel: 519-873-4632| Fax: 519-873-4645| Email: Melody.Cairns@ontario.ca

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From: Powell, Chris [mailto:Chris.Powell@stantec.com]
Sent: March 11, 2011 2:50 PM
To: Cairns, Melody (MNR)
Cc: Nix, April (MNR); Drabick, Ron (MNR); Kozak, Mark; Nadolny, Rob; Straus, Melissa
Subject: Samsung GREP - James N. Allan Provincial Park

Melody,

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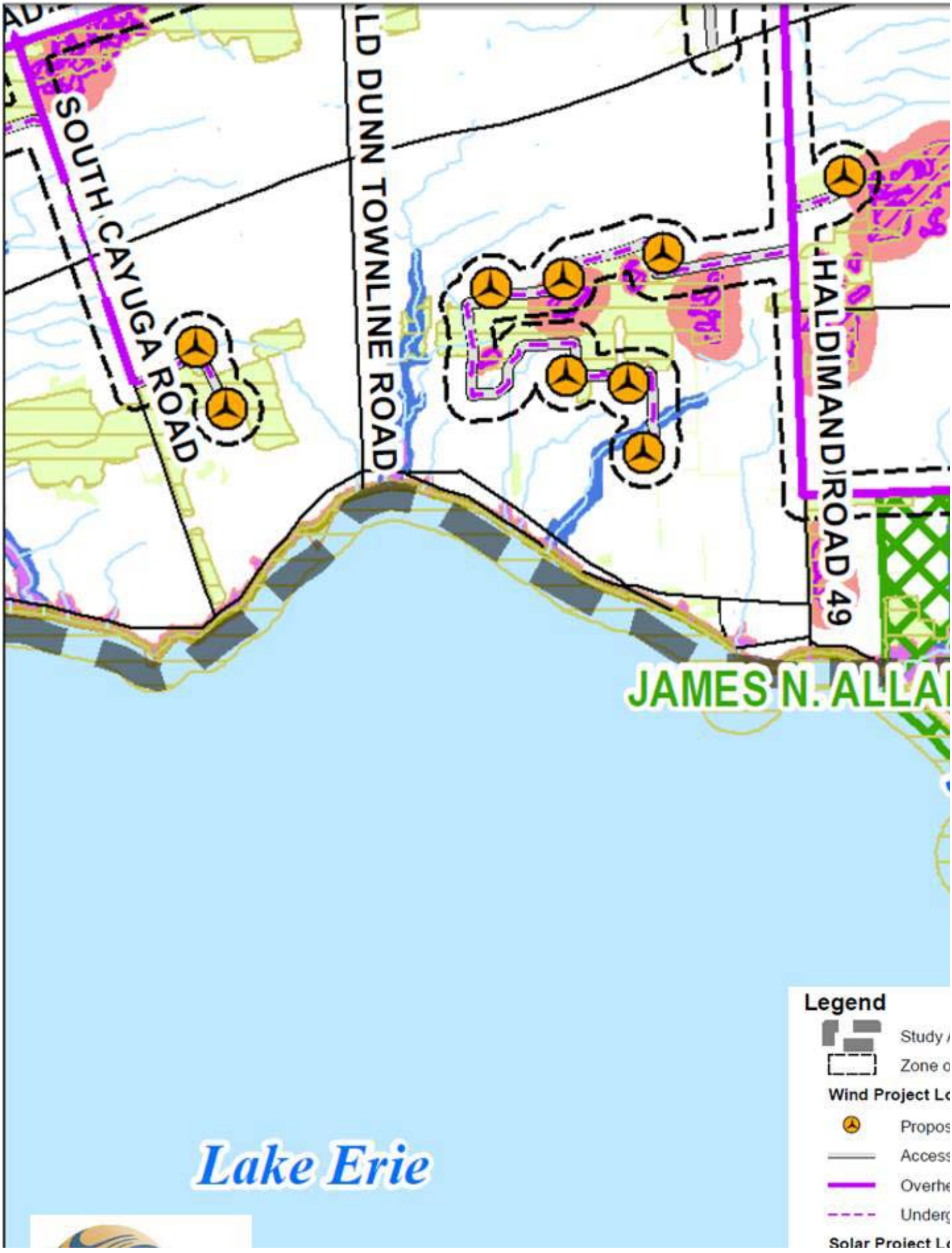
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LD DUNN TOWNLINE ROAD
HALDIMAND ROAD 49
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Solar Project Lo

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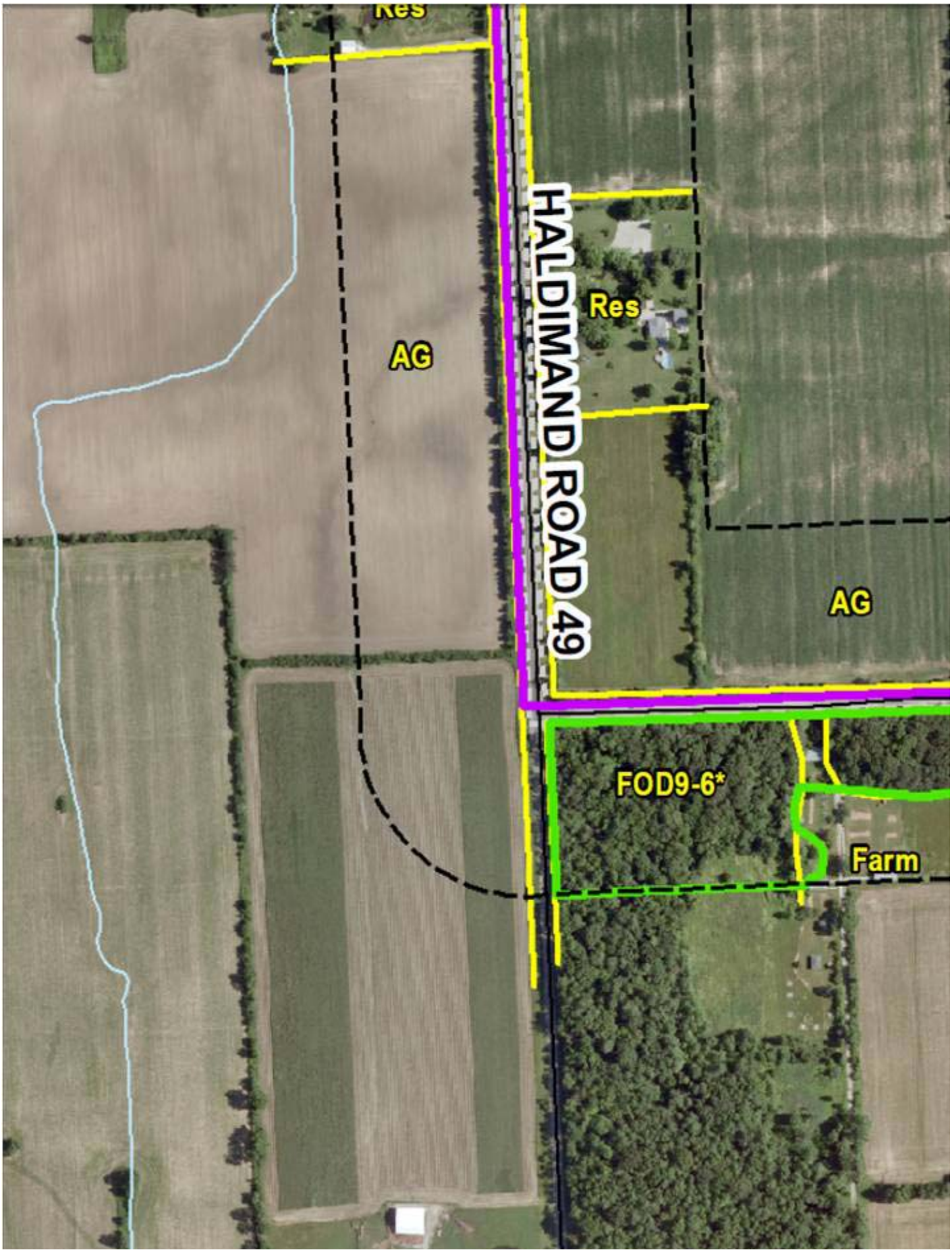
Res
HALDIMAND ROAD 49
Res
AG
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FOD9-6*
Farm

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Take care.

Sincerely,

Chris

Chris Powell, M.A.
Project Manager / Environmental Planner
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Kitchener ON N2H 6M7
Ph: (519) 585-7416
Fx: (519) 579-4239
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chris.powell@stantec.com
stantec.com

Powell, Chris

From: Nix, April (MNR) [April.Nix@ontario.ca]
Sent: Friday, March 25, 2011 11:55 AM
To: Powell, Chris
Cc: Wyatt, Valerie; Thornton, Ian (MNR); Hagman, Ian (MNR); Drabick, Ron (MNR); Jong, Catherine (MNR); Sanders, Erin (MNR); Marnie Dawson; Adam Rosso; Yagi, Anne (MNR); Harkins, Erin (MNR); Dixon, Rebecca (MNR)
Subject: Samsung GREP - Feautre 66 - Wetland identificiation
Attachments: Plantation Wetland Features.shx; Plantation Wetland Features.dbf; Plantation Wetland Features.prj; Plantation Wetland Features.sbn; Plantation Wetland Features.sbx; Plantation Wetland Features.shp

Chris,

As per the Ministry's comments regarding the GREP NHA, concerns were raised regarding potential wetland inclusions that were not identified as wetland features within the NHA report within the plantation Feature 66. Based on the field visit on March 15th Ministry staff did observe that there are wetland inclusions within the 120 meter of the project location, and that parts of the access road are proposed in the easterly portions of the wetland features. With respect to the one wetland feature onsite identified by Stantec (MAM2-10) at the northern perimeter of lakeshore road, the wetland appears to extend easterly across the area of the proposed access road. I have attached a shapefile indicating the wetland features, as identified by MNR staff within the plantation.

The boundaries identified in the attached shapefile are a draft conservative estimate of the wetland features. In order to accurately map the wetlands in this area, the plantation should be revisited and re-evaluated between mid spring and fall. The feature boundaries, which have been underestimated, flow in a southeasterly direction originating from the westerly edge of the eastern hedge feature. Based on the Ministry's review of the plantation area the wetland features are biologically contiguous. Hydrologically the majority of the wetland areas are flowing westerly toward the provincially significant wetland Wardell Creek Mouth (LET 2) with small portions flowing easterly toward the presently Locally significant wetland, Evan Creek (LET 3). Although small portions of the wetland features flow easterly, the biological connections and distance to LET 3 would dictate that these features should be complexed with the wetland to the west, the provincially significant wetland Wardell Creek Mouth (LET 2).
These features need to be identified within the site investigation report and evaluated within the evaluation of significance report.

Ministry staff also reviewed the ELC work completed by Stantec to support the delineation of these draft boundaries. A review of the ELC notes for feature 66 (within Appendix E of the NHA) indicated two areas listed as "CUP 3-12*" one visit was completed on October 11 and the other on December 22, 2010. With respect to this information, please note:

- The visit completed on October 11 is labelled Feature 67 yet bundled with Feature 66 data, was completed from the roadside.
- The visit completed on December 22, 2010 would be hard to identify vegetation species and wetland features if area was snow covered.
- The planted hardwood component was identified as "ash" (Fraxinus) not Green ash.
- ELC cards do not include mention of any shrub species or if so it is very difficult to distinguish what has been written.

In terms of evaluating the feature, based on the current project layout parts of the project location are proposed within the wetland(s) and as such an OWES evaluation would need to be completed.

Alternatively if the access road could be re-located so that it is not within the identified wetland features, including those along the eastern edge of the property, then the wetland characteristics assessment could be completed.

If you have any questions or wish to discuss, please let me know.

April

April Nix
Renewable Energy Planning Ecologist

Ministry of Natural Resources, Guelph District
1 Stone Road West
Guelph ON, N1G 4Y2
(P) 519-826-4939
(F) 519-826-6849
email: april.nix@ontario.ca

Powell, Chris

From: Nix, April (MNR) [April.Nix@ontario.ca]
Sent: Thursday, March 31, 2011 10:42 AM
To: Powell, Chris
Cc: Marnie Dawson; Adam Rosso; Hagman, Ian (MNR); Thornton, Ian (MNR); Harkins, Erin (MNR); Dixon, Rebecca (MNR); Jong, Catherine (MNR)
Subject: Samsung GREP - SWH additional clarification

Hi Chris,

So in addition to the comments regarding the NHA, Ministry staff provide the following additional feedback in response to the inquiries regarding certain specific types of wildlife habitats. I've organized this additional clarification into 2 parts to better reflect how it would fit within the NHA.

1. Evaluation of Significance

This approach would allow utilizing evaluation criteria focused on wildlife habitat attributes relevant to the completion of an EIS. This method is applicable where a wildlife habitat is treated as significant and the proponent proceeds to an EIS. This evaluation would provide the relevant information to fully assess the attributes of the wildlife habitat.

Amphibian Breeding Ponds:
With respect to amphibian breeding ponds Ministry staff would accept the evaluations for these habitats as significant subject to the following:

- The project location is proposed (adjacent) within 120 metres of the candidate significant wildlife habitat (amphibian breeding ponds).
- Each habitat is separately identified and delineated (mapped) within the Site Investigation Report and carried forward into the Evaluation of Significance Report.
- The habitat(s) are treated as significant within the Evaluation of Significance Report.
- All information pertaining to the species that are (or may) be using the habitat that is available is provided.
- Habitat descriptions are provided as part of the evaluation outlining the function and attributes of each feature. It is recommended that this analysis use the criteria for identifying amphibian breeding ponds from the SWHTG.

Rare Vegetation:
With respect to rare vegetation species/ communities, Ministry staff would accept the evaluations for these habitats as significant subject to the following:

- The project location is proposed within (adjacent) 120 metres of the candidate significant wildlife habitat (habitat of a rare veg. species)

  ****Where the project location is proposed within natural features complete evaluations of significance and mitigation will need to be completed and submitted as part of the NHA.*
- Candidate significant wildlife habitats are separately identified and delineated within the Site Investigation Report and carried forward into the Evaluation of Significance Report.
- The habitat(s) are treated as significant within the Evaluation of Significance Report.
- Habitat descriptions are provided as part of the evaluation outlining the function and attributes of each feature in relation to the rare vegetation species. It is recommended that this analysis use available

criteria/ rationale from the SWHTG where applicable other available sources of habitat information such as ELC and/or NHIC are also incorporate.

Bird Habitats:

With respect to the multiple types of candidate significant wildlife (bird) habitat, Ministry staff note that further clarification is required for a number of bird habitats as outlined in the Ministry's comments regarding the NHA, including for:

- Landbird Migratory Stopover Habitat
- Habitat for Provincially Rare (S1-S3) species and SC species.
- Raptor Nesting Habitat (woodland nesting hawks) separate from Area Sensitive song-birds)
- Raptor Wintering and Roosting Areas
- Waterfowl Nesting and Stopover/ Staging Habitat
- Colonial Nesting Bird Habitat

- Each natural feature (wildlife habitat) needs to be separately identified, described and delineated (mapped) within the Site Investigation Report. Where wildlife habitat meets the feature based criteria of the SWHTG and is within 120m of the project location it is then carried forward to evaluation of significance.
- The studies necessary for evaluating the significance for these types of habitats should examine the wildlife use of the specific habitat. Therefore abundance and diversity of wildlife species using the habitat needs should be determined during the evaluation of significance.

However; Ministry staff would accept the evaluations for these habitats as significant subject to the following:

- A thorough analysis using the criteria from the SWHTG identifies candidate significant wildlife habitats are separately identified and delineated within the Site Investigation Report and carries these features forward into the Evaluation of Significance Report.
    - For example for landbird migratory stopover areas the feature based criteria that should be examined should include:
        - size of site
        - habitat diversity
            - Sites with a variety of habitat types (e.g., forest, grassland) are often more significant than sites with homogeneous habitat.
        - historical use of site
        - location of site
            - Sites within 5 km of Lake Ontario and Lake Erie
            - Those along the shoreline are most significant.
        - relative importance of the site
            - Significant sites may be one of only a few in the planning area; therefore abundance of large woodlands in the planning area are a consideration and the if there are many large woodlands, the best representative and diverse woodland habitats should be selected as Candidate SWH.

- The habitat(s) are treated as significant within the Evaluation of Significance Report.
- Habitat descriptions are provided as part of the evaluation outlining the function and attributes of each feature in relation to the landbird migratory stop over areas. It is recommended that this analysis build on the available criteria/ rationale from the SWHTG. Some information regarding methods for setting up an appropriate procedure for assessing bird habitats are available within Birds and Bird Habitats – Guidelines for Wind Power Projects

2. Environmental Impact Study

As significant natural features (wildlife habitat) are within 120m of the project location an EIS must be completed as required under Section 38 of O. Reg 359/09

- identify and assess any negative environmental effects of the project on a natural feature, provincial park or conservation reserve;
- identify mitigation measures for any negative environmental effects on a natural feature, provincial park or conservation reserve;
- describe how the environmental effects monitoring plan addresses any negative environmental effects; and
- describe how the construction plan report addresses any negative environmental effects

Amphibian Breeding Ponds

Based on the initial review of the NHA and discussions to date with Samsung/ Stantec mitigation measures that could be utilized to address negative environmental effects on significant wildlife habitat (amphibian breeding ponds), should include:

- A setback of at least the dripline from the significant wildlife habitat where it is also a significant woodland feature or the dripline plus an additional area (preferably for a 10m setback in total) from the significant wildlife habitat where it is also a significant wetland.
- A vegetated buffer is established within the setback.
- Additional information on erosion/ sediment tools/methods being implemented beyond the installation of silt fencing.
- Boundaries of natural features will be marked/ staked by qualified personal (OWES certified for wetlands) and setbacks will be measured from the staked edge prior to construction commencing.
- Additional information will be provided regarding culvert locations. Culverts will be designed to mitigate potential impacts to surface water flow and mitigate potential impacts to wildlife habitats and wildlife movement, including for amphibians. At a minimum, a general culvert design should be provided within the EIS.
- Monitoring proposed within the EEMP should be expanded to include other amphibian species beyond frogs (i.e. salamanders). Monitoring should include the establishment of baseline (pre construction) conditions, as well as post construction monitoring. All monitoring must be completed during appropriate seasons and under appropriate conditions.

Rare Vegetation

Based on the initial review of the NHA and discussions to date with Samsung/ Stantec mitigation measures that could be utilized to address negative environmental effects on significant wildlife habitat (rare vegetation), should include:

- A setback of at least the dripline from the significant wildlife habitat where it is also a significant woodland feature or the dripline plus an additional area (preferably for a 10m setback in total) from the significant wildlife habitat where it is also a significant wetland.
- A vegetated buffer is established within the setback.
- Additional information on erosion/ sediment tools/methods being implemented beyond the installation of silt fencing.
- Boundaries of natural features will be marked/ staked by qualified personal (OWES certified for wetlands) and setbacks will be measured from the staked edge prior to construction commencing.
- Contingencies (relocation/ replanting) will be included within the EIS should rare vegetation be discovered during construction outside of identified natural features.

Birds

Potential impacts to these habitats could include behavioural changes or the avoidance of the habitats due to turbine locations. As such mitigation measures that could be utilized to address negative environmental effects on significant wildlife habitats for birds needs to include:

- Monitoring proposed within the EEMP should be expanded to include a monitoring plan to assess the function of the wildlife habitat. Monitoring should include the establishment of baseline (pre construction) conditions, as well as post construction monitoring. All monitoring must be completed during appropriate seasons and under appropriate conditions.
- As the purpose of these studies will be to assess behavioural or avoidance effects from the turbines around these habitats, the procedure developed for baseline (preconstruction monitoring) needs to be repeatable for post construction monitoring. Please note that the required mortality monitoring does not cover the monitoring for these habitats.
- As an example, for significant land bird migratory stopover areas it is recommended that monitoring include spring (early March – mid June) and fall (mid Aug – Oct) preconstruction monitoring and 3 years of post construction monitoring for each feature.
- Construction adjacent to these features would be phased so that no construction activities occur until the preconstruction monitoring is completed.

If you have any questions or wish to discuss let me know,

Cheers,

April

April Nix
Renewable Energy Planning Ecologist
Ministry of Natural Resources, Guelph District
1 Stone Road West
Guelph ON, N1G 4Y2
(P) 519-826-4939
(F) 519-826-6849
email: april.nix@ontario.ca

Meeting Notes

Samsung Grand Renewable Energy Park

Meeting with MNR to Discuss Comments Re: NHA/EIS Confirmation

Date/Time:	Wednesday, April 20, 2011 / 2::30 pm	
Place:	MNR Office, 1 Stone Road West, Guelph, ON	
Next Meeting:		
Attendees:	April Nix, MNR (AN)	Adam Rosso, Samsung (AR)
	Erin Harkins, MNR (EH)	Marnie Dawson, Samsung (MD)
	Heather Riddell, MNR (phone) (HR)	Chris Powell, Stantec (CP)
	John Boos, MNR (phone) (JB)	
Absentees:	Anne Yagi, MNR	
Distribution:	Attendees	
	Larry Galajda, Stantec	
	Rob Nadolny, Stantec	

No.	Item	Action By
1	**Introductions**	
2	**Approach to identifying Migratory Bird Stopover Habitat**	
	CP reviewed approach taken and table prepared / circulated in preparation for this meeting. While overall use by migratory birds is anticipated to be low for this area, based on known concentration areas (research papers, Stantec birders), no specific data / counts exist for specific features in the Study Area. Hatch data provides general use only (not feature based).	
	JB advised that the approach / table taken is acceptable, and suggested that further consideration be made to reduce the number of features (currently 13) to identify the "best representations" in the area – largest, most diverse, closest to the Lake.	Stantec to review and update table
	CP suggested eliminating those beyond 2 km from the Lake given number of large, diverse features in the Study Area. MNR agreed. Goal is to identify those that are most likely to be used by a significant # / diversity of birds.	
	With respect to Feature 42, a more rigorous review / assessment of the feature boundaries appears to suggest that it could be split into 2 separate features (woodlands, migratory bird stopover areas)	

No.	Item	Action By
	since the area immediately north of Bains Rd consists of small, coniferous trees within the nursery. As such, the north half of this feature, where Turbine 53 is proposed within the plantation, would be >2 km from the Lake. As such, it would no longer be considered SWH for migratory birds.	
3	**Feature 42 and 66 – Turbines proposed within plantations** Since Feature 42 is no longer considered SWH, the Project is no longer considered within SWH. As such, further detailed field investigations and full evaluation of significance (EOS) is not required. Feature 66 is one of the best examples in the area due to its size, diversity and proximity to the Lake. CP questioned the use of MNR's 'ecoregion criteria', which include only naturalized plantations within migratory bird stopover habitat, and whether the young, immature, mixed plantation could therefore be excluded from the SWH. JB advised that the criteria have been updated to include grasslands and other communities (including immature plantations) and therefore the draft cannot be used (no longer application). AN advised that MNR cannot rely on draft guidelines (i.e. the updated ecoregion criteria not yet released for public review) and therefore, the definition of SWH for migratory landbirds that uses 'woodlands', as described in the SWHTG, is the applicable document. Therefore, the plantation cannot be excluded from the SWH. CP reviewed the proposed 'modified' EOS approach outlined prior to the meeting, as circulated, whereby we assume significance and provide additional field data as MNR is reviewing the NHA/EIS for confirmation. Weekly data could be forwarded to MNR during the review to justify the EOS of this feature where Turbine 32 is located to provide 'scope' field support for the determination of significance. JB advised that MNR's modified approach for 'assuming' significance is only applicable where the Project is located adjacent to, but not within, the SWH feature. Acceptance of Stantec's modified approach in this case would be contrary to guidance provided to other Projects, and may create precedence that would not be acceptable to the MNR. AN noted that similar discussions / approach have been discussed for the Summerhaven Project and MNR response has to be consistent.	MNR to discuss acceptability of the modified approach and advise
	HR questioned what would happen if we found a significant number / diversity of birds, suggesting it would be too late to mitigate	

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	impacts of a turbine in SWH. CP suggested that turbines are not precluded from SWH and even if a significant number of species were identified, mitigation measures to minimize impacts would not change since we are assuming that the feature is significant. Based on monitoring data at other sites, impacts on migratory birds is limited, and the option for operational mitigation in cases where impacts are observed would be reserved and outlined in the EEMP. HR suggested that having a turbine within SWH for migratory birds would not look good. AR suggested that the comment was unfair. MD noted that Ostrander has 7 turbines within an IBA and it was approved by MNR. Similar conditions do not occur in this area.	
	JB noted that Ostrander has a significant amount of field data to justify the location, although the actual impacts have not been determined since it has not yet been constructed. He suggested that in order to proceed with the turbine within feature 66, a full EOS 9including spring and fall migratory data) would be required. MNR to discuss (as described above). CP suggested the option of restoration / compensation elsewhere adjacent to Feature 66, which would offset the loss of plantation for migratory birds. The goal of the restoration would be to provide a net benefit to the SWH. CP also noted that impacts and mitigation cannot be considered through REA until EOS is complete – limitation of the process.	MNR to discuss and advise
	AR questioned what would stop a landowner from cutting the trees in the plantation. AN suggested that the municipal tree by-law, carbon credit trees and stewardship council funding agreements for specific plantations may limit the ability to do so.	Stewardship Council to be contacted
4	**Pre- and Post-Construction Monitoring Program**	
	CP reviewed the brief table outlining proposed / anticipated monitoring that would be required by MNR for this Project, as circulated prior to the meeting. AN noted that additional details would be required to expand on the methods, frequency, duration and location of proposed monitoring in the EEMP.	
	AN noted the difference between behavioral impacts (avoidance, habitat changes) and mortality impacts (thresholds) of the turbines / Project, requesting that the EEMP clearly differentiate between the 2 monitoring programs.	Stantec to clarify in EEMP
	Migratory Landbirds - JB suggested that a minimum of 3 visits per week to the SWH adjacent to a turbine would be the minimum effort	Stantec to amend

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	anticipated, not once per week as suggested. Ostrander included 4 visits per week, although turbines were in the feature. There is no need to monitor disturbance resulting from other Project components (i.e. solar, collectors, transmission lines). Mortality surveys dictated by bird and bat guidelines. These are separate from the disturbance monitoring described above. AN noted that the EEMP should make commitment by Samsung discuss operational mitigation measures with MNR if thresholds are reached, the specifics of which are not to be set out in the EEMP but rather "to be discussed with MNR" (i.e. adaptive management approach) AR noted that the implementation of operational controls (i.e. during migratory period(s) should be discussed with Samsung senior staff so they are aware of this requirement.	workplan and add details to EEMP
	Area Sensitive Breeding Birds – JB noted that no monitoring would be required for woodlands supporting areas sensitive breeding birds unless the Project was proposed within corresponding SWH. JB noted that plantations would not be considered a component of the SWH, although large adjacent woodlands could be SWH. As such, the Project (wind, solar, transmission) is not located within areas sensitive breeding bird habitat so no disturbance monitoring is required.	Stantec to revise delineation of area sensitive breeding bird habitat.
	With respect to area sensitive grasslands, if any are considered SWH, monitoring should be completed where turbines are located adjacent to large natural grasslands (if any). JB confirmed that active hay fields are not considered SWH, although are relevant for bobolink (separate issue – ESA not NHA/EIS). Large CUM or low use pasture land may qualify for SWH for grassland species. Winter raptor habitat – CP noted that Stantec has undertaken additional winter raptor surveys to document use and identify concentration areas within the Study Area. ANT noted that it was completed without MNR direction / involvement. CP noted that concentration areas were identified (ex. # of raptors observed >5), which may be considered SWH. Further evaluation currently in progress.	Stantec to review grasslands and exclude hay fields (if applicable)
	JB questioned what was meant by raptor monitoring would be completed for the entire Study Area. CP clarified that we would focus on concentration areas, but also monitor the remainder of the study area to determine whether populations have shifted elsewhere following construction (changing crop uses or turbine	Stantec to provide details in the revised NHA/EIS

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	induced behavioral impacts to be considered). The intent was to ensure that if numbers decreased in the areas that we could advise whether it was a shift in patterns or a decline in species. Amphibian Breeding – CP noted that impacts to amphibian breeding are not anticipated as a result of turbine operation or operation of the access roads. JB agreed. CP noted that all access roads have been amended to avoid crossing features (except existing road in Feature 22 – no vernal pools). Impacts of access roads adjacent to wetlands will be mitigated during construction through BMPs, E&S, etc. AN noted that turbine noise has been identified by some groups to effect breeding success, and questioned JB whether MNR was concerned with this potential impact. JB was not concerned or aware of this issue. JB noted a study regarding impacts of traffic noise on amphibian breeding, which showed an impact (4-lane highway), but the same level of noise does not occur with turbines. All agreed that noise from turbines is not a real concern (no evidence to suggest impacts). CP proposed that amphibian monitoring would only be required where the Project was proposed (a) within SWH for amphibian breeding or (b) where the Project was proposed between 2 features (i.e. vernal pool and woodland). MNR agreed. CP suggests that no amphibian monitoring would be required for solar lands, where a 30 m naturalized buffer has been proposed. JB agreed but suggested that if any functional impacts are anticipated (i.e. change in hydrology / flows to wetlands) then monitoring should be done to confirm. CP noted that amphibian mortality associated with access roads was not anticipated given the infrequent traffic and time of day when maintenance vehicles would be using the access roads. EH noted that depending on the width, access roads can be barriers for some species where substrate changes (soils to gravel). JB noted that depending on width, they can be a barrier for some species. CP noted that access roads are generally proposed adjacent to features, and amphibians would be crossing roads to access an active farm field (not another feature). CP confirmed that previous discussion with MNR identified need for wildlife culverts to allow for safe access across the roads (protect against mortality from traffic and other species). CP noted that these culverts were not being proposed everywhere but only where	Stantec to amend EEMP Stantec to identify locations for wildlife culverts

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	roads were proposed through a feature (i.e. where movement was anticipated). Access roads have now been realigned to avoid new crossings of woodlands, although there may be some cases that would still warrant wildlife culverts (case by case basis). MNR agreed with approach.	within NHA/EIS
	AR questioned whether these could be installed after construction or whether they were required during construction.	MNR to discuss and advise
	CP requested whether any additional disturbance monitoring would be required. MNR confirmed none were anticipated.	
	General – AR questioned what would happen if behavioral changes are identified post-construction, for example where migratory bird counts decrease from pre-construction levels. How can MNR be certain that the reduction / avoidance is caused by the turbines and not some other reason. JB suggested that it would be extremely difficult to prove causal impacts. Science does not exist to suggest that there will / will not be behavioral impacts as a result of turbines, which the monitoring is therefore intended to document. N operational windfarms in Ontario that are undertaking disturbance monitoring for SWH. JB noted that the data would have to be scrutinized and a significant change would have to occur for any link to be made to the turbines.	
5	Next Steps	
	Stantec to continue working on the revised NHA/EIS, with anticipated delivery to MNR over the next 2 weeks (early May)	

The meeting adjourned at 4:30 p.m.

The foregoing is considered to be a true and accurate record of all items discussed. If any discrepancies or inconsistencies are noted, please contact the writer immediately.

STANTEC CONSULTING LTD.

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Transmittal

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To:	April Nix, Renewable Energy Planning Ecologist	From:	Chris Powell
Company:	Ministry of Natural Resources	☐	For Your Information
Address:	1 Stone Road West Guelph ON, N1G 4Y2	☐	For Your Approval
		x	For Your Review
		☐	As Requested
Date:	May 19, 2011		
File:	161010624 / 161010646		
Delivery:	By Courier		

Reference: SPK Grand Renewable Energy Park
Natural Heritage Assessment/Environmental Impact Study

Attachment:

Copies	Doc Date	Description
1	May 19, 2011	Natural Heritage Assessment / Environmental Impact Study
1	May 19, 2011	MNR Comment Table with Stantec Response
1	May 16, 2011	Alternative Site Investigation Contact - CONFIDENTIAL

Please find enclosed a copy of the Grand Renewable Energy Park Natural Heritage Assessment / Environmental Impact Study revised as per MNR comments dated March 1, 2011, a copy of the MNR Comment Table with the Stantec Responses and the Alternative Site Investigation Contact information. We note that contact information has been provided at the request of MNR to supplement the alternative site investigation, however, contains personal and proprietary information and is to be treated as confidential. It will not form part of the formal REA Application.

As per O.Reg 359/09 (specifically Section 28.(2) submission of the Natural Heritage Assessment including the required confirmation from MNR, is required as part of the Renewable Energy Approval package. As a result, we wish to obtain the following in writing from the MNR:

1. Confirmation that the determination of the existence of natural features and the boundaries of natural features was made using applicable evaluation criteria or procedures established or accepted by the MNR, as amended from time to time.

Reference: SPK Grand Renewable Energy Park
Natural Heritage Assessment/Environmental Impact Study

2. Confirmation that the evaluation of the significance or provincial significance of the natural features was conducted using applicable evaluation criteria or procedures established or accepted by the MNR, as amended from time to time.

3. Confirmation that the MNR agrees that the Project is not in a provincial park or conservation reserve.

Please feel free to contact me via the information below if you have any questions or concerns regarding this information.

On behalf of Samsung, Pattern Energy and KEPCO, thank you for your continued attention to this matter.

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Attch.: NHA/EIS, MNR Comment Table and Alternative Site Investigation Information

c. Heather Riddell, Planning Ecologist, MNR
Adam Rosso, Samsung Renewable Energy Inc.
Marnie Dawson, Samsung Renewable Energy Inc.

Project Name: Grand Renewable Energy Park (GREP)
Proponent: Samsung Renewable Energy Inc.
Consultant: Stantec
Date Received: Feb 1, 2011

***** Please make the following revisions to the sections and figures identified with the NHA, Environmental Impact Study and Environmental Effects Monitoring Plan. Comments of a general nature, are included after the table.**

Overview - Summary of Comments/ Concerns:

- Additional detail is required pertaining to the rationale/ criteria and analysis used to support the identification of candidate wildlife habitats within the records review and site investigation reports.
- Landbird migratory stopover areas have not been identified or evaluated for the project, and this must be addressed to meet the requirements of Section 26-28 and 38 of O. Reg 359/09.
- Clarification regarding the inclusion of rare (S1-S3 ranked) species and Special Concern species is needed through the NHA.
- Additional information regarding James N. Allen Provincial Park is necessary to address the requirements of Sections 25 and 38 of O.Reg 359/09.
- Information submitted as part of a physical site investigation must include all of the required information from Section 26(3) of O.Reg 359/09.
- Alternative site investigations appear to have been completed for parts of the project location; the required information for an alternative site investigation needs to be provided as per Section 26(3) of O.Reg 359/09.
- Limited ELC vegetation (fall surveys), rather than 3 season identification period to account for plants species associated with the spring and summer growing periods were completed. As such, some candidate wildlife habitats may have been overlooked, particularly since parts of the project location are proposed within natural features.
- Staff have concerns regarding the identification, delineation and evaluation of wetland features within 120m of the project location; the use of ELC information to identify these areas; whether boundaries have been mapped according to OWES; and the application of the Wetland Characteristics Assessment for REA projects to evaluate these features.
- Additional detail regarding proposed mitigation measures to prevent negative impacts to natural features where the project location is within and/or adjacent to features is needed.

Section	Page #	Wording/ Topic	Comments	How/ Where Concern was Addressed (Comments by Stantec, May 19, 2011)
Section 3.0 Records Review				
3.0	3.1	Constructible area	Ministry staff recommend including a discussion regarding the constructible area concept at the outset of the NHA. This discussion should clarify how this area is established, confirm that the 120m setback from the edge of the project location is from the edge of the construable area, and describe each of the types of activities that would occur within this area and whether they are temporary or permanent in nature.	A description of the constructible area and how it was established, refined and intended to be used / referenced throughout the NHA/EIS has been added to Section 1.2 (page 1.3). Where required to avoid, minimize or mitigate potential impacts, refinements to the constructible area and a conceptual layout of the laydown and crane pads surrounding a typical turbine has also been added to clarify this concept (Figures 13.1 to 16.8).

Section	Page #	Wording/ Topic	Comments	How/ Where Concern was Addressed (Comments by Stantec, May 19, 2011)
3.2.6 – Wildlife Habitat & throughout NHA	3.10	A compilation of background information on known wildlife use of the Study Area was undertaken. Using this information, a preliminary assessment was conducted to identify wildlife habitat features that may be present in or within 120 m of the Project Location to determine whether the area contains confirmed significant wildlife habitat (SWH) or involves a trigger for candidate SWH.	Many of the descriptions of wildlife habitats currently within the records review do not incorporate criteria identified within the Significant Wildlife Habitat Technical Guide (SWHTG) adequately, please provide additional detail and analysis for: • Landbird Migratory Stopover Habitat • Butterfly Stopover Habitat • Habitat for Provincially Rare (S1-S3) species and SC species. • Raptor Nesting Habitat (woodland nesting hawks) separate from Area Sensitive song-birds) • Waterfowl Nesting Habitat These criteria and descriptions should also be utilized to identify potential wildlife habitats that need to be carried forward to Site Investigation.	Criteria from the SWHTG, as well as habitat function and composition information obtained from the Decision Support System, have been added to each of these sections (Section 3.2.6) to assist with identifying potential wildlife habitats within the Study Area. Further discussions regarding how each of these individual wildlife habitats have been addressed are provided in more detail below. Further discussion regarding how these criteria and descriptions were used during site investigation to identify candidate SWH was added to Sections 4.3.4, 4.4.4, 4.5.4.
	3.10	Waterfowl Stopover and Staging Areas, Raptor Winter Feeding and Roosting Areas	Waterfowl stopover and staging and raptor winter feeding and roosting habitats should be discussed separately in the report. The locations of wintering raptors on maps from 1996 should be included as records of habitat, these site specific locations identified within the study area and in relation to the project location need to be assessed on a site specific basis for this habitat as Candidate SWH.	This section was divided to discuss existing records for waterfowl and raptors separately, with specific criteria and descriptions of these habitat features added based on the SWHTG and Decision Support System (Section 3.2.6.1, pages 3.13 to 3.15). The locations of historic short-eared owl sightings from Miles (1996) have been added to Figure 2.2. An assessment of the significance of the habitat within proximity of these sightings has been added to section 4.4.4.4 (page 4.37).
	3.13	Landbird Migratory Stopover Areas	The presence of larger/ extensive forested areas within 5km of Lake Erie can be considered as part of the landscape attributes to support land bird migratory areas. Information regarding these areas should be presented within the records review. Areas should also be identified as candidate significant wildlife habitat within the site investigation report of the NHA and evaluated for significance where the project location is within 120m.	A description of the specific criteria outlined in the SWHTG, as well as habitat function and composition information obtained from the Decision Support System, have been added to recognize woodlands greater than 10 ha in size that occur adjacent to grassland areas and within 5 km of Lake Erie as potential stopover areas for migratory landbirds (Table 4.5 and Section 4.3.4.1, page 4.16).

Section	Page #	Wording/ Topic	Comments	How/ Where Concern was Addressed (Comments by Stantec, May 19, 2011)
	3.14	Migratory Butterfly Stopover Areas	Butterfly stopover habitat, potential habitat exists within this study area as per criteria within the SWHTG which should be identified within the records review. This would include Field/Woodland sites >20ha within 5km of lake Erie. Although no records were found for this habitat it still has the potential to exist within the study area.	A description of the specific criteria outlined in the SWHTG, as well as habitat function and composition information obtained from the Decision Support System, have been added to recognize open fields (grasslands) and woodlands greater than 20 ha in size that occur adjacent to grassland areas and within 5 km of Lake Erie as potential stopover areas for migratory butterflies (Section 4.3.4.1, 4.4.4.1 and 4.5.4.1)
	3.15	Animal Movement Corridors	These features should be considered in relation to identified natural features and wildlife habitats. If deer wintering areas and amphibian breeding habitat are identified for the area then movement corridors for these species should be identified within the NHA and evaluated for significance where required.	Potential movement corridors across the landscape are identified on Figure 9. Potential corridors between features (i.e. as observed at a local scale) that occur along these landscape scale corridors are identified on Figures 10.1 to 12.6.
	3.17	Rare Vegetation Communities	There is at least one plant community identified within the NHIC Bio-diversity Explorer (Graminoid Coastal Meadow Marsh Type) that should be included within the records review. In addition Appendix M of the SWHTG should be referenced as a record for potential rare plant communities for Ecoregion 7E and Haldimand County. Please also include a discussion regarding how Old Growth forests as well as seeps and springs were considered/ identified within this section.	A copy of our NHIC search results were provided to April Nix on March 11, 2011, which was reviewed and confirmed by MNR in an email received March 22, 2011. The Graminoid Coastal Meadow Marsh is the only type of rare vegetation community known to potentially occur within the Study Area based on NHIC data. It was associated with James N. Allen Provincial Park, the coastal area of which occurs outside of the Study Area. Nonetheless, recognition that this community type may occur elsewhere along the Lake Erie shoreline was added to Section 3.2.6.3 (page 3.21). Reference to the existence of 11 rare vegetation community types in Haldimand-Norfolk, as identified in Appendix M of the SWHTG, was also added to this section. Discussion regarding old growth forests and seeps and springs was added to Sections 3.2.6.3 (page 3.22), with recognition that old growth forests are rare in southern Ontario (to be confirmed through ELC) and that seeps/springs may be present.

Section	Page #	Wording/ Topic	Comments	How/ Where Concern was Addressed (Comments by Stantec, May 19, 2011)
	3.17	Area Sensitive Species	This analysis should be broken into two main habitats: Area Sensitive Woodland habitat and Open Country Breeding Bird Habitat. Appendix G should be used in conjunction with Appendix C of the SWHTG for outlining species identified as area sensitive. Appendix Q of the SWHTG, page 350 SWHTG should be used for criteria to delineate these habitats and a description and analysis should be included for each feature within the NHA.	Within the records review, area sensitive species are covered together, with distinction made between the different habitats of grassland and forest species (Section 3.2.6.3, page 3.21). Site investigation results regarding area-sensitive habitat for woodland and grassland bird species are discussed separately in sections 4.3.4.3, 4.4.4.3 and 4.5.4.3. Reference to Appendix G has been added to page 3.21 to account for the 6 additional area sensitive bird species not included in Appendix C of the SWHTG. Of note, our list of area sensitive bird species used to generate Appendix H already incorporated both lists.
	3.17	Specialized Raptor Nesting Habitat	Criteria from Appendix Q page 350 and Table 10-1-3 page 104 of the SWHTG should be used to describe and analyse the study area for this habitat.	Discussion regarding the potential presence of specialized raptor habitat is provided in Section 3.2.6.3 (page 3.22)
	3.18	Species of Conservation Concern	Please include additional detail with respect to Provincially Rare species (S1-S3). The NHIC Biodiversity Explorer may assist in identifying some of these species. Each Provincially Rare / Special Concern species should be described and analysed with linkages made to habitat to support the identification of natural features.	Table 2.2 has been amended to add the provincially rare (S1-S3) species that may potentially be within the Study Area, based on a current list obtained from the NHIC Biodiversity Explorer, which was submitted to the MNR on March 11, 2011 and confirmed to be complete through an email from April Nix (MNR) on March 22, 2010.
3.2.8,	3.20	James N. Allen Provincial Park	Identifying that part(s) of the project location are within 120m of the park boundary should be included within this section. Where projects are within 120m of a provincial park, Ontario parks staff should be contacted directly to obtain additional information pertaining to the values/purpose of the park as a protected area. This information should be identified and discussed within the records review and is necessary to address the requirements within the EIS as per Section 38 of O. Reg 359/09.	Clarification added (page 3.27). Ontario Parks (Melody Cairns) was contacted by email on March 11, 2011 and an "Application to Conduct Research in Ontario Provincial Parks" was submitted on March 22, 2011. Permission to access the Park was provided, however, no additional background information was made available.
Section 4.0 Site Investigation				
4.0 – **Methods**	Entire section	Identification and mapping of natural features	Each natural feature (woodland, wetland, wildlife habitat, etc.) should have its own unique identifier and be addressed separately throughout the site investigation and evaluation of significance. As currently presented and mapped, multiple natural features are captured within a single "feature #" within the NHA. In addition, the extent of the mapping of natural features is generally limited to the area within 120m of the project location, and should include the entire feature. Please	Feature #'s were used to organize contiguous natural features. Unique identifiers have now been added to all woodlands, wetlands and amphibian breeding ponds, grasslands. These #'s were used, as appropriate, to describe wildlife habitat functions within each feature. References were added all tables and figures in the report. Mapping has been revised so that natural features boundaries are no longer 'cropped' to the 120 m adjacent land area, as requested.

Section	Page #	Wording/ Topic	Comments	How/ Where Concern was Addressed (Comments by Stantec, May 19, 2011)
			clarify.	
4.1.1	4.2	Alternative Site Investigation Ministry staff have noted that within the Site Investigation report on page 4.2 of NHA within Section 4.1.1 it states: *"Vegetation communities were first identified through aerial photograph interpretation, and review of existing natural features mapping. The Zone of Investigation surrounding the wind infrastructure (turbine locations, access roads and crane pads, excluding collector lines), solar components and some of the transmission line components Zone of Investigation was traversed on foot and physically inventoried. Physical site investigations were carried out from roadside locations for the wind project collector lines, the remaining portions of the transmission line components and their associated 120 m Zone of Investigation due to the very large number of non-participating landowners, and with the understanding that all work for these project components would be restricted to the already-disturbed, existing road rights-of-way".*	**Note: comments regarding this concern were provided to Stantec/Samsung in an e-mail dated: Feb 15, 2011** Based on this information it would appear that in some areas an alternative site investigation was completed for selected areas of the wind and transmission line project location. The amended O. Reg 359/09 allows for the completion of an alternative investigation of the site only where it is determined that it is not reasonable to conduct a site investigation by visiting the site. Where an alternative investigation of the site was conducted, Section 26(3)7 of O. Reg 359/09 requires the following to be included in the site investigation report: • The dates of the generation of the data used in the site investigation. • An explanation of why the person who conducted the alternative investigation determined that it was not reasonable to conduct the site investigation by visiting the site. As such, the site investigation report should be revised to address these requirements. Ministry staff recommend considering the following changes to address the requirements: **Section 4.1. – Methods** • Identify the type of data used to complete aerial photograph interpretation, and review of natural features mapping and the date that any data used was generated • Identify who was responsible for completing this analysis • Where this analysis was complemented with field checks via roadside /fence line surveys, please explain the methods used for the road side /fence line survey(s). • Identify methods of how landowners were approached/ contacted to obtain access to private property.	Discussion regarding the instances where site investigations and 'alternative site investigations' were performed has been added to Section 4.1.1. Additional information with respect to the contact information and level of effort undertaken to secure access permission to adjacent properties has been provided by Samsung, and is attached. This information is to be treated as confidential as it contains personal and proprietary information. As such, the following note is provided in the attachment: "The following information has been provided at the request of MNR to supplement the alternative site investigation, however, contains personal and proprietary information and is to be treated as confidential. It will not form part of the formal REA Application."

Section	Page #	Wording/ Topic	Comments	How/ Where Concern was Addressed (Comments by Stantec, May 19, 2011)
			Section 4.2. – Results • Identify the areas subject to the alternative site investigation methods. This may be best shown on a map and referenced within the report. • To support the determination that it was not reasonable to conduct the site investigation by visiting the site (due to non-participating landowners), please provide: o List of landowners contacted and contact information o Number of attempts, time/date of contact o Copies of written correspondence and replies (if available) o Results of requests for access to site (landowner responses) o Identify the results of the investigation, such as the identified natural features, ELC communities, etc. (Note: It is understood that much of this information may already be within the site investigation report).	
4.1.4 – Bird Surveys 4.1.5 Bat Surveys	4.4 4.6	Bird studies conducted by Hatch across four seasons between March 2009 and February 2010 Acoustic bat monitoring conducted by Hatch in August and September, 2009.	Based on the information provided for the various Hatch surveys, these studies do not include all of the required information for a site investigation as required within Section 27(3) of O. Reg 359/09. Recognizing that these studies were completed previously by other consultants in support of the renewable energy proposal, Ministry staff recommend including these studies as records within the records review. Also please identify where they were applied to support the identification of natural features in the Site Investigation Report and/or in support of evaluating natural features for significance within the Evaluation of Significance Report.	Through discussions with MNR, the information provided in the Hatch bird report has been included under the Records Review section of the report Section 3.1.1 and 3.2.6, The bat monitoring report has been removed from the NHA/EIS Appendices, as discussed with MNR.
4.1.4	4.4 - 4.6	Bird Surveys, including: • Spring Migration Surveys • Summer Breeding Surveys (09,10) • Fall Migration Surveys • Over-winter Resident Surveys	Additional detail is needed describing how each of these surveys inform the site investigation report, for the purposes of identifying candidate significant wildlife habitat. Clarify if additional survey work be required to evaluate these types of features, and the relation between identified features and the project location?	Bird surveys undertaken by Hatch in 2009 and 2010 have been added to Section 3. Breeding bird surveys undertaken by Stantec in 2010 were used for the identification of breeding birds within the various woodlands and grasslands in the Study Area, which identified the presence of species and habitat for area sensitive and declining birds (Section 4.3., 4.4.4, 4.5.4). Winter raptor monitoring data was also collected in 2011 to supplement previous work by Hatch to identify concentration areas within the Study Area (Section

Section	Page #	Wording/ Topic	Comments	How/ Where Concern was Addressed (Comments by Stantec, May 19, 2011)
				4.1.4, 4.3.4,4.4.4 and 4.5.4)
			Please identify where the investigations were completed including: (as part of the summer 2009 breeding surveys) for bald eagle behavioural watch surveys, crepuscular bird surveys and passerine surveys	Site investigations for breeding bird species that undertaken by Stantec in 2010 are identified on Figure 4. Hatch data is no longer considered 'site investigation; work for the purpose of the NHA/EIS. Additional pre- and post-construction monitoring for bird disturbance and mortality are proposed (EEMP).
		Bat Surveys	In addition please explain how the Hatch (2009) bat monitoring consider known cave features such as those in the Oriskany Sandstone formation at the northern portion of the study area, or bluff formations along the shoreline of Lake Erie?	It is not known how known cave sites were considered by Hatch. However, as discussed in Section 4.3.4.1 (page 4.18), known cave features or potential bat hibernacula were avoided in eth siting of the wind, solar and transmission project components.
4.1.6 and throughout NHA	4.7	Field investigations to identify wildlife habitat located within 120 m of the Project Location were conducted during the vegetation community and vascular plant surveys performed between September and December 2010.	Ministry staff have concerns with the lack of early season flora information provided within the NHA. The review time frame for the collection and identification of plant species should have included a 3-season identification period to account for plants species associated with the spring and summer growing periods. Some of the features were surveyed during the month of December. On this basis snow cover and plant decay would impair the ability to identify herbaceous plants species. This appears to have resulted in an incomplete species listing. Given that parts of the proposed project location are within natural features or are proposed immediately adjacent to natural features the identification of spring-summer flora may have identified additional candidate significant wildlife habitat(s).	The layout of the wind turbines, access roads and collector lines has been amended to avoid encroachment into all significant natural features, with the exception of one plantation (significant woodland). Additional discussion with respect to the rare species potentially found in this area, and their likelihood of occurrence within the Project Location, as discussed in Table 2.2, with specific references provided in Section 4.2.2 where then removal of natural vegetation is proposed (page 4.9). Two turbines were dropped from the proposed plan due to an inability to discount the presence of rare species or other significant wildlife habitat (Turbine 31 and 32). By avoiding the natural features and implementing mitigation measures to protect adjacent vegetation communities, any rare species potentially present adjacent to the project components will be protected. This approach is consistent with the approach recommended by the MNR through correspondence dated March 31, 2011. Additional site investigations were completed within 120 m of any realigned project component (access road, co9llctor line or turbine.

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4.2.5 Wildlife and Wildlife Habitat	4.10	Species of Conservation Concern	Please include additional detail with respect to Provincially Rare species (S1-S3). Each Provincially Rare / Special Concern species should be described and analysed with linkages made to specific habitats to support the identification natural features.	Table 2.2 has been updated to include the rare species identified through a review NHIC data, as well as their habitat requirements and potential presence/absence in or within 120 m of the Project Location.
		Amphibian breeding ponds/ amphibian habitats - salamanders	Please clarify how the work undertaken considered salamanders when identifying candidate significant wildlife habitat(s). Please also include information relating to what was considered as potential salamander habitats.	The identification and assessment of amphibian breeding ponds considered the habitat requirements for frogs and salamanders. Additional details are provided in Sections 4.3.4.3, 4.4.4.3and 4.5.4.3).
(Results) Wetlands 4.3.2 (Wind), 4.4.2 (Solar), 4.5.2 (TC)	4.11, 4.23, 4.31	Identification and delineation of wetlands and wetland boundaries using ELC and OWES. Based on a review of the ELC field cards provided within the Appendix E, staff have identified a number of concerns with the ELC work completed, including: • no soils data • no species composition • some records are unreadable • no spring records are available • species codes are not uniform	**Comments regarding this concern were provided to Stantec /Samsung in an e-mail dated: Feb 15, 2011** Ministry staff have concerns with respect to a number of ELC units within 120m of parts of the project location, specifically for ELC units in features 8,14,15,42, 68, 69,73,74,75 and 76. In the Feb 15 e-mail Ministry staff provided a table that identified each of these areas and what additional information is needed to clarify the type of feature present OR whether the Ministry would consider this area as a wetland feature. This information should be reflected within the NHA.	Additional soils investigations were completed for those ELC communities identified as questionable wetlands by the MNR. This information was added to the ELC cards for these features. Figures 10.1 to 12.6, and Figures 13.1 to 15.6, have been updated accordingly. Additional discussion regarding the identification of wetlands within the Study Area through aerial photography and site investigation is provided in Sections 4.3.2, 4.4.2 and 4.5.2.

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		According to table 5.4, Appendix B of the NHA: "*A 141 m stretch of road will result in the removal of 0.141 ha of fresh-moist ash lowland deciduous forest (FOD 7-2). This feature was identified as a significant woodland and wetland that supports significant wildlife habitat in the form of valleyland, winter deer yard, amphibian breeding ponds, habitat for area-sensitive forest birds and habitat for forest bird species of conservation concern".*	Ministry staff have identified a concern with respect to the proposed access road from turbine 4 to turbine 2 through feature 68. Based on the vegetation information available for this ELC community (FOD7-2) and in the absence of soils and other complete ELC information, it would appear that this area better fits the composition of an ELC wetland community and not a woodland community. Recognising the timelines for the proposed project, Ministry staff recommend that a site visit for this location be organized with Ministry staff to confirm the ELC community for this portion of Feature 68, ASAP. Ron Drabick and Anne Yagi should be contacted to set up a site visit. Ron can be reached at 519-773-4728 or ron.drabick@ontario.ca . Anne can be reached at 519-562-1196 or anne.yagi@ontario.ca Should this site visit confirm that the area is a wetland community, the proposed access road feature would be considered as going through a wetland feature and will require a full OWES evaluation to be completed for the entire wetland feature including complexing.	A site meeting was held with MNR staff on March 15, 2011 to review Feature 69, which was confirmed not to be a wetland. The ELC data card for this feature has been updated. The Project Location in this area has been amended to avoid the need to cross this woodland feature. An alternate access road from the south across existing agricultural fields has been provided, with the collector line being routed westward through an existing residential property to avoid the woodland feature.
Wetlands 4.3.2 (Wind), 4.4.2 (Solar), 4.5.2 (TC)	4.11, 4.23, 4.31	Wetland boundaries	Regarding Feature 10: The proposed access road for turbine 58 near feature 10 crosses a "riparian HR" ELC community. This would appear to be a wetland feature on the eastside of the road while it is unclear on the west side. No ELC data had been provided for the "riparian HR" natural feature. Please clarify.	While an ELC card was completed for this community and originally included in Appendix E, the ELC classification for this community has been amended following discussions with MNR staff on March 15, 2011. This riparian vegetation community has been identified as containing wetland and has added as a separate feature (Natural Feature 90) to the appropriate tables and figures throughout the NHA.

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		Wetland boundaries	With respect to Features 66: Ministry staff note that the access lane for these features crosses a plantation that is riddled with meadow marshes connected to the hedgerow and the swamp at the intersection of the access roads for the two turbines. ELC has only identified the plantation and not the wetland inclusions. Based on the ELC notes, the wetland features should have been identified (the wetland sloughs) separately from the plantation or at least have indicated there were wetland inclusions present. The wetland sloughs should be identified and avoided. The wetland mapping in the woodland directly north of turbine 32 and between the two swamp communities includes an area that has been labelled as CUP 3-2, a white pine plantation. However, in looking at the swoop 2006 aerial photos and the 2010 photos, this area appears very similar in composition to the areas labelled swamp on either side of it. It does not appear this area has been converted to plantation. Please clarify the wetland boundaries in these areas.	A site meeting was held with MNR staff on March 15, 2011 to review Feature 66, which was confirmed to contain small pockets along swales through the plantation that contain wetland species. Site observations, combined with a review of 2006 aerial photographs, were used by the MNR to conservatively map the limits of the wetland features within the cultural plantation, which were received from MNR on March 25, 2011. The boundaries of these wetlands, as identified, have been incorporated onto Figures 10.10 and 13.10, with further discussion provided in Table 5.1 and Section 6.1.31 of the NHA/EIS. In this area, Turbine 32 was dropped and the access road to Turbine 9 was re-routed outside of the cultural plantation to avoid the wetland pockets and make use of an existing, manicured trail through a managed cultural meadow north of the trailer park. Edits to the ELC layer based on site investigations on March 15, 2011 have been made to Figure 6.10.

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			Turbine 9 is within 10m of a wetland swale. There also appear to be two created wetlands (labelled lagoons) within the construction laydown area, based on the 2010 photos. The access road may be within wetland features and no buffering of the natural feature is provided. The proximity of the base of turbine 9, measured from the center, to an adjacent watercourse is about 9m and there appears to be wetland vegetation along this area as well. This turbine is said to be more than 25m from a wetland however Ministry staff have concerns as this would appear to be base on incorrect wetland mapping within the woodland to the west of the turbine. The wetland is located at the extreme west side of the zone of investigation but should have been mapped as extending to the extreme east side of the woodland where the watercourse meets the woodland just west of the turbine base. The identification of features needs to be clarified and adjusted to provide for appropriate setbacks and mitigation measures.	As per comments on-site discussions with MNR staff on March 15, 2011, this swale is a not a wetland due to historic impacts (ploughing, mowing). As identified in the water Report, the swales that drain across the subject property are not considered watercourses under O. Reg. 359/09. As discussed on-site with MNR staff on March 15, 2011, the swamp thicket community originally identified on Figure 6.10 to the west of Turbine 9 actually extends in a narrow band between the CUP3-2 and FOD9-4 communities to the eastern boundary of natural feature. The limits of this wetland have been amended on Figure 10.10 and 13.10 and the location of Turbine 9 adjusted slightly to avoid blade sweep overhanging this wetland community. Mapping completed and incorporated onto Figures 10-12, 13 to15.
		Evans Creek LSW boundaries	Ministry staff also note that the boundaries for the LSW at Lakeshore Rd have not been corrected. This should have been completed as part of the site investigation. The swoop 2006 and provided 2010 photo's indicate the presence of a dug pond, structures around the pond and manicured lawn. An update of the file using OWES would not have identified this area as wetland given what is visible on the aerial photos. Please complete this analysis for these areas.	The wetland boundaries in this area have been amended to reflect the existence of the open aquatic community (dug pond) and manicured lawn area upstream of Lakeshore Road (Figures 10.10 and 13.10). Text in this regard was also added to Section 4.3.2 (page 4.13).
4.3.4 Wildlife Habitat (Wind)	4.13 – 4.17	Landbird Migratory Stopover Areas Butterfly Migratory Stopover Areas	As mentioned previously in records review, landbird migratory stopover habitat and butterfly stopover habitat are not adequately assessed based on site specific habitats associated with the project location. Please clarify using criteria from the SWHTG and identify candidate habitats.	Additional discussion regarding the identification of candidate migratory stopover habitat for landbirds and butterflies has been added to Sections 4.3.4, with Tables 4.5 and 4.6 created to illustrate how these features were identified.
		Colonial Bird Nesting Sites	Ministry staff note that there are numerous swamp habitats identified during the ELC field work, which could contain colonial bird nesting habitats. Please clarify how these habitats were considered. Further, colonial bird colonies include bank and cliff swallows and gull and tern colonies, do any of these habitat types exist in or within 120m of the project location? Please refer to SWHTG for feature based criteria to be used during Site Investigation.	No known colonial sites are located within the Study Area. Colonial bird nesting sites were looked for during field investigations. While these colonies are easily identified and obvious in the field, none were identified in or within 120 m of the Project Location. Discussion was added to Section 4.3.4.1, 4.4.4.1 and 4.5.4.1

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	4.14	Waterfowl Stopover and Staging Areas	Large wetlands such as swamp and marshes should be considered as candidate habitats and further clarification regarding the identification of potential habitat is needed. Fall roosting habitat in swamp or marsh feautres would be an example of inland habitats that would be potentially significant for waterfowl. Please clarify if these habitats were considered within the site investigation.	Three candidate waterfowl stopover areas were identified during the site investigation, based on the habitat characteristics outlined in the SWHTG. These features have been added to Figures 10.7, 10.10 and 10.17, with discussion added to Section 4.3.4.1, 4.4.4.1 and 4.5.4.1. All three features were assumed to be SWH.
	4.14	Raptor Wintering and Roosting Areas	Ministry staff have concerns with the area searches completed by Hatch in 2009. The identification of this type of habitat should follow the criteria within the SWHTG. The habitat needs to be delineated first, any historical concentration areas should be included from records review and the habitat analysed to ensure it still meets the criteria within the site investigation report. All candidate wildlife habitats identified in or within 120m of the project location should then be evaluated using proper study methods during the appropriate time of year.	Supplemental winter raptor field investigations were completed in 2011 to identify species use, density and concentration areas within the Study Area (Section 4.1.5.2) The results of these field investigations have been added to Section 4.3.4.1, 4.4.4.1 and 4.5.4.1 and were used to identify concentration areas and candidate SWH (Figure 9, Figure 16).
	4.15	Reptile Hibernacula	Please clarify how rock piles within hedgerows and fence lines were considered for the purposes of identify candidate significant wildlife habitat.	Hedgerows were surveyed for suitable habitat to support hibernacula during the ELC surveys. Soils in this area are not necessarily rocky and therefore rock piles often observed along the edges of agricultural fields in other areas of the Province were not observed within the Study Area. Text added to Section 4.3.4.1, 4.4.4.1 and 4.5.4.1.
	4.15-4.16	Bat Maternity Roosts	Please clarify where the criteria used to rule out potential bat maternity roosts (density of canopy or subcanopy, height of the stand) came from. Based on the assessment of all the woodlots in the study area, for the identified sites within table 4.3 better rationale is required to dismiss these areas as candidate habitat for bat maternity roosts.	Criteria used came from available literature (Fenton, 1970, Kunz and Lumsden, 2003) since there are no MNR guidelines within the SWHTG or other with respect to the identification of bat maternity roosts (page 4.19). Any potential bat maternity roosts identified during field investigations were identified and the Project Location adjusted so that all project components are located more than 120 m from a potential maternity roost.
Wildlife Habitat 4.3.4.2 (Wind) 4.4.4.2 (Solar) 4.5.4.2 (TC)	4.17 4.26 4.33	Animal Movement Corridors	Individual hedgerows do not appear to have been described and discussed at all in this NHA, or included in mapping. Please clarify how hedgerows were considered as part of the rationale for identifying animal movement corridors.	Due to the open landscape of the Study Area, hedgerows do not represent candidate significant animal movement corridors because these features do not provide the sole animal movement corridor in the Study Area (MNR, 2000). Text in this regard was added to page 4.20. Mitigation of potential impacts of the project components on individual hedgerows (specifically for the movement of species) is addressed in the EIS through the protection of existing hedgerows and implementation of wildlife culverts where access roads cross these features.

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Wildlife Habitat 4.3.4.2 (Wind) 4.4.4.3 (Solar) 4.5.4.3 (TC)	4.18 4.27 4.34	Area Sensitive Species	Point Count surveys should be utilized to evaluate candidate significant wildlife habitats within Section 5.0 of the NHA. The identification of candidate significant wildlife habitats for area sensitive species could include incidental observations (where applicable) to support other criteria. Page 103-104 of the SWHTG suggests woodlands >10ha with at least 4 ha of interior habitat or Appendix Q which identifies that woodlands> 30ha with at least 10ha interior habitat be considered. The use of these criteria would be rationalized based on number and size of woodlands in landscape. Each woodland for this habitat should be described, rationalized and analyzed as a candidate significant wildlife habitat using the SWHTG criteria. Please clarify.	Field investigations undertaken for this project are described in Section 4 of the NHA/EIS. In some cases, these field investigations assist with the identification of candidate significant natural features and in others, are used to evaluate significance. Due to a willingness to maximize efficiencies, these field investigations were often undertaken simultaneously. For example, point counts provide a species list (used for identifying candidate SWH) but also additional details to assist with eth evaluation of breeding bird habitat. Additional details regarding area sensitive species have been added to Section 4.3.4.3, 4.4.3.4, 4.5.3.4 and Tables 4.7. Of note, incidental observations made outside of the breeding season should not imply that potential breeding by this species occurs within the habitat where it was observed (i.e. foraging, migratory).
Wildlife Habitat 4.3.4.3 (Wind)	4.18-4.19	Raptor nesting habitats	Based on the number of raptor observations reported, a number of these woodlands should be considered as candidate significant wildlife habitat for specialized Raptor Nesting habitat. Each of these features should be considered separately from Area Sensitive Songbird habitat and include a description, rationale and analysis. Please clarify.	No specialized raptor nesting habitat was identified during the site investigations. While many raptors were observed in the area, no bald eagle or osprey nests were encountered within 120 m of the Project.
	4.20	Seeps and Springs	Please discuss seeps and springs separately, including information pertaining to the identified feature and its potential as significant wildlife habitat.	A section of seeps and springs is included in Section 4.3.4.3.
Wildlife Habitat 4.3.4.3 (Wind) 4.4.4.4 (Solar) 4.5.4.4 (TC)	4.21 4.29 4.36	Habitat of Species of Conservation Concern – Declining Populations – Grassland Breeding Birds	Field habitats that meet the criteria in App. Q (page 350 and page 104) from the SWHTG should be used in identifying candidate grassland habitats. Each of the habitats that meet the feature-based criteria should be identified separately, and have a description provided that includes the rationale used and an analysis for identify the feature as candidate significant wildlife habitat. Point Count surveys are used during Evaluation of Significance, not during Site Investigation. Bird lists from any previous studies can be used as supporting information but information pertaining to the evaluation of features should be within Section 5.0 of the NHA.	Additional discussion regarding the identification of candidate grassland breeding bird habitat has been added to Sections 4.3.4.3, 4.4.4.3 and 4.5.4.3, with details provided in Table 5.7.
		Other Provincially Rare and Special Concern Species	Please explain how provincially rare and special concern species were considered when conducting the site investigations and whether candidate significant wildlife habitat(s) were identified within 120m of the project location.	Discussion regarding rare species and species of conservation concern is provided in Section 4.3.4.4, 4.4.4.4 and 4.5.4.4
4.4.4.1	4.26	Two Short-eared Owls were observed more than two weeks	Please clarify how the boundaries of this feature were	The grassland area identified on Figures 11.1 and 14.1

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		apart, on December 2 and December 23, 2010, within the 120 m Zone of Investigation northwest of the Solar Project Location.	assigned, and if the full extent of the habitat was mapped. Further, provide the criteria/rationale used to determine the extent of the habitat.	includes the portion of a larger grassland area of at least 30 ha in size located within 120 m of the Project Area. The full extent of these grasslands has been added to these figures.
Evaluation of Significance				
Wetlands 5.1.1 (Methods) 5.2.1 (Wind) 5.3.1 (Solar) 5.4.1 (TC)	 5.2 5.12 5.17 5.20	Wetland features not evaluated by MNR were assessed using a method for wetland Rapid Assessment developed by MNR (December 2010) to provide a set of evaluation criteria focused on wetland attributes relevant to the completion of an Environmental Impact Statement (EIS) for renewable energy projects. The criteria to be evaluated are presented in Appendix C of the *Natural Heritage Assessment Guide for Renewable Energy Projects* (MNR, December 2010).	The evaluation should be identified as the "Wetland Characteristics and Ecological Functions Assessment for Renewable Energy Projects" from the Natural Heritage Assessment Guide. The use of the wording Wetland Rapid Assessment refers to another wetland evaluation protocol not related to Renewalable Energy. A review of Stantec's interpretation of the Wetland Characteristics and Ecological Functions Assessment for Renewable Energy Projects found that the areas where they had proposed a standardized approach using "high med low" values should be changed to a statement of values and in some cases the inclusion of presence/absence values where applicable. This should be addressed in Appendix "B" Table 5.1 Rapid Assessment of Significance for Wetlands.	The title and all references to "wetland rapid assessment" has been revised in the text and tables of the NHA. Table 5.1 has been amended to address concerns raised with respect to the "high med low" values assigned by Stantec. The intent was to provide a qualitative description of the individual functions provided by each wetland, as documented in Section 5.1.1. Noentheless, our approach to the completion of the wetland characterization has been amended to address specific MNR direction. Table 5.1 has been amended to provide further clarification of the characteristics of each wetland community by expanding on the information contained in the table.
		Where the wetland communities extend outside of the 120 m, they were included in the Rapid Assessment to ensure accurate documentation of the features and functions. Only wetland communities contiguous with those inside the 120 m Study Area were assessed.	According to this statement all contiguous units should have been assessed, which was the case for the areas identify within the solar project location and zone of investigation. However with respect to the wind and transmission corridor project locations and zone of investigation, it appears from the mapping that contiguous wetland units were not assessed fully, only the area within the 120-meter adjacent lands. Please clarify. With respect to wetland mapping on the significant natural features mapping (Figures 13 -15), the PSW and LSW boundaries should be shown in addition to the renewable energy significant wetlands.	These mapped wetlands have been revisited, using 2006 air photos and amended accordingly. All contiguous wetlands are identified on Figures 10-12 and 13-15. Existing MNR mapping (PSW, LSW) has been amended and illustrated on Figures 13 – 15, as appropriate.

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		Flood Attenuation - isolated wetlands;	A number of wetlands have been evaluated as isolated wetlands; Ministry staff recognise that isolated wetlands are a rare occurrence within the southern landscape and after reviewing the wetland evaluations in conjunction with ortho-photography these wetlands should have been identified as palustrine. This should be addressed in Appendix "B" Table 5.1 Rapid Assessment of Significance for Wetlands.	Table 5.1 has been revised to amend the description of 'isolated' wetlands to 'palustrine' wetlands.
5.1.2 (Methods) 5.2.2 (Wind) 5.3.2 (Solar) 5.4.2 (TC)	5.7, 5.12 – 5.13	Valleylands	Please clarify whether the criteria from Natural Heritage Assessment Guide or the Natural Heritage Reference Manual is being applied. Further, the sections regarding the evaluation of significance of valleylands should be expanded out to discuss each valleyland in relation to each criteria to determine whether each natural feature is significant or not. This could be provided in a table. The descriptions provided in the NHA need to link back to the appropriate criteria used for each evaluation of significance.	The evaluation of significant valleylands follows the method outlined in the Natural Heritage Reference Manual (MNR, 2000). Table 4.4 has been prepared to identify candidate valleylands, while Table 5.2 provides a summary of the evaluation of significance for each candidate valleyland on a watershed basis. Unique identifiers for these features have been added to Figure 2.1.
5.1.4.1 (Method) 5.2.5 (Wind) 5.3.5 (Solar) 5.4.5 (TC)	5.7, 5.13, 5.18 5.21	Criteria for determining the significance of deer yards is outlined in the Decision Support System Index #28 (MNR, undated). However, MNR has indicated that habitats used by White-tailed Deer in the Niagara Region differ from those used elsewhere in southern Ontario (A. Nix, pers. comm., December 15, 2010). In the Study Area, winter deer yards are therefore considered to be significant if MNR has identified them as such.	Criteria for determining the significance of deer congregation (wintering) areas within ecoregion 7E and management unit 90A in Guelph District should use the following criteria: • Size Class IV (>100 ha) for woodlands • Confirmed wintering deer density • And < 10% of Summer Deer Range. For Management unit 90A in Guelph District the: Total Wintering area = 664ha Total Summer Range = >9000ha Densities can be determined using the Niagara Aerial Deer Surveys provided to Stantec previously. Based on this analysis Features: 7, 31, 32, 47, 81 would be considered as significant deer congregation (wintering) areas. Please also see the attached shape file.	These criteria were added to Section 5.1.4.1 (page 5.8), along with a summary of deer densities estimated to occur within management unit 90A, based on MNR's 2000 data. Section 5.2.5, 5.3.5 and 5.4.5, as well as Figures 13.1 to 15.6 were amended to identify the woodlands considered to be significant deer yards by the MNR that are located within 120 m of the Project.
5.1.4.1 (Method)	5.7	Methods for evaluating significant wildlife habitat.	Feature based criteria are relative to identifying canididate significant wildlife habitats, not for completing evaluations of these habitats. Point Count, Transect, Floristic Studies,	Where available, specific point count data and floristic studies were used to confirm the significant of natural features. Where this information was not readily available,

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			Egg mass/larval counts and Observational Studies completed at the appropriate time of year are examples of methods for evaluating significance of natural features. Please revise and provide additional detail regarding evaluation methods for Bull Frog habitat, Raptor Winter Areas, Turtle Nesting, Area Sensitive Habitats (Songbirds, Grasslands, Raptors), Amphibian Woodland Breeding Habitat and Provincially Rare and SC species. Also please include any addition features identified from revisions to the records review and/or site investigation.	these features were assumed to be significant and the Project layout was amended accordingly to avoid these features. This approach is consistent with the direction provided by MNR on March 31, 2011.
5.1.4.2 (Method) 5.2.5 (Wind) 5.3.5 (Solar) 5.4.5 (TC)	5.9 5.15 5.19 5.21	Amphibian Woodland Breeding Ponds	Please also reference table 5.3 – Vernal pools Evaluation of Significance within this section of the report. The evaluations appear to be based on habitat characteristics only and do not appear to include any species presence/absence information. Were any specific studies for amphibians (frogs, salamanders) completed? Based on the evaluations completed significant woodland breeding ponds are present in features: 8,10, 15, 19, 22, 30, 31, 32, 38, 39, 42, 47, 49, 54, 56, 68, 69, 71, 72, 77	Reference to Table 5.8 has been added (page 5.11). No frog or salamander studies were completed for this Project, as documented in Section 4.1 and the work program approved by the MNR dated August 30, 2010. Figures 13.1 to 15.6 have been amended to identify these vernal pools that occur within 120 m of the Project as significant woodland breeding ponds
5.1.4.3 (Method) 5.2.5 (Wind) 5.3.5 (Solar) 5.4.5 (TC)	5.10 5.14, 5.18 5.22	Animal Movement Corridors	Please identify the source of the criteria being applied, and provide a rationale as to why at least two criteria must be met for features to be considered as significant. Also, each individual animal movement corridor should be discussed in regards to each of the criteria, this could be provided within a table and reference in the body of the report.	Criteria used to identify and evaluated animal movement corridors have been amended in Sections 5.2.5.2, 5.3.5.2 and 5.4.5.2.
Section 5.1.5	5.11	One criteria recommended in the Haldimand County Official Plan was not utilized due to a lack of available information pertaining to managed woodlands, despite requests for this information from the MNR and County of Haldimand.	Please note that while there are managed woodlands that have written management agreements with Trees Ontario and the Haldimand Stewardship Council/Haldimand Woodlot Owners' Association within the study area, none are under agreement with MNR and all previous MNR agreements have expired.	Noted.
5.2.4	5.13	Significant Woodlands – Wind Project Location	Table 5.2 in Appendix B evaluates feature 56 as “not significant”, Ministry staff note that it should be evaluated as “significant” as it has at least 2 ELC communities present and because of proximity to water.	Table 5.2 has been amended – Woodland 56 is considered a significant woodland.
5.5	5.22	Summary of significant natural features	It is noted that Feature 79 is not included within the summary table, although it was determined to be significant woodland. This should be corrected.	Table 5.9 has been amended to include Natural Feature 79 as a significant woodland.
Environmental Impact Study (EIS)				

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EIS	Entire EIS	Wildlife in construction areas	What practices will be utilized to prevent wildlife from entering construction areas? For example if construction work occurs within the breeding season for turtles additional barriers (i.e. silt fencing) should be erected around areas of disturbed soils near natural features to discourage turtles from nesting/laying eggs in these areas. If wildlife is discovered within construction areas what practices will be implemented? Please clarify.	Measures to manage wildlife within and around construction areas is provided in Section 6.1.3.4.
6.1.1 6.1.2.1 6.1.2.2	6.2, 6.5 6.5	Description of the Wind Project – Impacts to Wetlands and Woodlands Within 30 m of wetlands, no excavation will take place; the roadbed material will be placed over the existing surface on geotextile material with equalization culverts to ensure no ponding or disruption of surface water flow… Efforts were made to incorporate the current road network at the site to the greatest extent possible. All components of the Wind Project are sited outside wetland boundaries; therefore there will be no direct loss of wetland habitat or function. Potential indirect effects may arise through changes to wetland hydrology during or after construction… Where components of the Wind Project are sited outside significant woodlands, there will be no direct loss or fragmentation of habitat or habitat function. Potential indirect effects may arise through changes to hydrology during or after construction…	Construction has been proposed within 30 meters of identified wetland edges for a number of wetland features, as well as woodland features; in some instances work has been proposed immediately adjacent to the wetland/ woodland edge. Ministry staff have concerns with respect to potential impacts to natural features given the close proximity of project components. Where accesses roads are proposed within close proximity to wetland/woodland edges as a means of preventing impacts to the edges of these features from changes in drainage, soil compaction, etc., options for addressing these concerns could include incorporating: relocating/shifting project components, setbacks from natural features, buffers, enhancing erosion/sediment mitigation, etc.	A review of the Project Layout was completed following our meeting with the MNR on March 7, 2011. Where feasible, the setback between the proposed access roads and the adjacent wetlands has been increased to a minimum of 5 m. Any areas where this setback is less than 10 m, a naturally vegetated buffer will be established to stabilize soils and appropriate E&S controls installed / maintained to minimize potential erosion. Equalization culverts will also be installed to convey flows and avoid any hydrologic impacts. Given the existing agricultural use of the area, with fields actively farmed beneath the dripline of the woodlands / swamps, the measures proposed and outlined throughout Section 6.1 are sufficient to reduce potential impacts on the adjacent wetlands. Even in cases where existing farm lanes/roads exists less than 5 m from a wetland, the new access roads have been shifted to maintain a minimum setback and allow for naturalization of the existing wetland edge (currently farm access or field). Further details are provided in Section 6.1.3 and the individual EIS sections 6.1.4 to 6.1.44.
	6.1	Dewatering from construction	The EIS and related REA reports (where applicable) should commit to ensuring that water pumped during dewatering activities is directed away from natural features and is not pumped directly into wetlands. Further all potential impacts from dewatering activities that could impact natural features should be identified within the EIS and appropriate mitigation provided including those resulting from detailed engineering design.	Text amended to include direction that all water pumped during dewatering will be directed away from natural features and not directly into wetlands (Section 6.1.3.3, page 6.12). In the event that dewatering is required, specific mitigation measures are identified in section 6.1.3.3 (page 6.12).

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	6.2	Turbine laydown (prior to turbine erection) will take place adjacent to the access roads and, along with crane pads with dimensions of approximately 20 m x 40 m, have been incorporated into the Wind Project Location design by designating a 50 m wide "constructible area" for the access roads.	While it is understood that crane pads will be installed within the constructible area please describe how the crane pads will be installed. Are these pads temporary or permanent installations? Is excavation or dewatering required for the installation crane pads? What are potential impacts to natural features from the construction of the crane pads? Please clarify.	Text amended to included description of crane pad construction and duration, including comment that no dewatering / excavation is proposed and crane pads are to be removed following construction (page 6.2). A typical turbine installation plan has been provided in Appendix K.
6.1.2.1	6.5	Potential Impacts Wetlands - indirect effects may arise through changes to wetland hydrology during or after construction.	A review of road layout makes no mention of culvert placement along access roads to maintain wetland hydrology flow in drainage crossing areas. While Table 6.1 does generally identify consideration of equalization culverts in some areas, specific details regarding culverts have not been provided. If flow is disrupted in these areas it could well have an effect on wetlands within the watershed. Please clarify. Culverts should also be considered in relation to mitigating impacts to wildlife habitats and wildlife movement, including for amphibians. Additional site details regarding the placement of culverts along existing and proposed access road should be provided within the EIS.	Equalization culverts have been proposed along all of the access roads where existing swales or watercourses occur to convey flows and prevent flooding. The size and location of these culverts have been determined by our engineers and have been added to figures. Sizing details are also provided in Appendix J. Wildlife friendly culverts have been proposed where a proposed access road crosses between two natural features (page 6.13). Wildlife culverts have not been proposed where access roads run parallel to a natural feature or through agricultural fields. These culverts are intended as mitigation measures where traffic mortality may be anticipated. Due to low traffic volumes, slow rates of speed and daytime use of these roads, overall road mortality is not anticipated to be significant. The location of the proposed access road culverts have been identified on Figures 13.1 to 13.8.
6.1.2.3	6.6	Rare Vegetation Species & Communities	As mentioned previously, Ministry staff have concerns regarding the potential impacts for rare vegetation species and communities, as plant surveys were completed from September – December 2010, and spring-summer flora surveys have not been completed. Particularly for those areas where the removal of vegetation is proposed. Options for addressing these concerns could include: completing spring flora surveys, relocating/shifting project components outside of natural features, setbacks from natural features, buffers, etc.	As noted above, the layout of the wind turbines, access roads and collector lines has been amended to avoid encroachment into all significant natural features, with the exception of one plantation (significant woodland). Additional discussion with respect to the rare species potentially found in this area, and their likelihood of occurrence within the Project Location, as discussed in Table 2.2, with specific references provided in Section 4.2.2 where then removal of natural vegetation is proposed (page 4.9).
6.1.3, et al.	Entire EIS	Commitment to implement proposed mitigation measures	Throughout the EIS it is stated that certain mitigation measures "should occur" under certain circumstances. Please revise the NHA to commit that the proposed	For clarification, the EIS recommendations have been revised to 'commit' to the proposed mitigation measures, as suggested (Section 6).

Section	Page #	Wording/ Topic	Comments	How/ Where Concern was Addressed (Comments by Stantec, May 19, 2011)
			mitigation measures "will occur" under those certain circumstances.	
6.1.3.2 et al.	6.9 & Entire EIS	Mitigation and Net Effects *If a nest is located, a designated buffer will be marked off…*	It is requested that a specific buffer distance be identified within the EIS, or that a protocol for determining the buffer be discussed within the EIS. Please make this change to all applicable sections of the EIS.	The following comments has been added: "To the extent practical, tree and/or brush clearing would be completed prior to or after the breeding season for migratory birds (May 1 to July 23). Currently, construction is planned for fall 2011. However, should clearing be required during the breeding bird season, prior to construction, surveys will be undertaken to identify the presence/absence of nesting birds or breeding habitat. If a nest is located, a designated buffer will be marked off within which no construction activity will be allowed while the nest is active. The radius of the buffer width ranges from 5- 60 m depending on the species. Buffer widths are based on the species sensitivity and on buffer width recommendations that have been reviewed and approved by Environment Canada."
	6.9 & Entire EIS	Regular monitoring of the limits of clearing will be employed to ensure the objective of minimal disturbance. Should monitoring reveal that clearing occurred beyond defined limits, mitigation action will be taken that could include rehabilitation of the disturbed area.	Please specify what other mitigation actions that would be taken other then rehabilitation of the disturbed area under these circumstances? Ministry staff recommend that if clearing occurs beyond defined limits, mitigation including at a minimum, the rehabilitation of the disturbed area occurs to the pre-disturbance conditions of the site. Preferably the improvement of habitat features is supported wherever possible.	Additional measures include the rehabilitation of the disturbed area to the pre-disturbance conditions of the site, with input from a qualified ecologist. Only species native to Ecoregion 7E will be used (Section 6.1.3.1)
	6.9 & Entire EIS	Rehabilitation of laydown areas	Please specifically identify all areas where reseeding/replanting to natural vegetation is proposed within the EIS. All reseeding/ replanting should use species native to Ecoregion 7E. Preferably these species should also be native to the site/ surrounding natural features.	Section 6.1.3.5 identifies the situations where naturalization or restoring of natural vegetation cover is proposed (page 6.14). These areas are limited to Feature 42 (plantation), hedgerow crossings and buffer areas along access roads within 10 m of a natural feature. Further discussion is provided in each relevant section of the EIS and illustrated in Appendix I.
6.1.5.2 et al.	6.14 & Entire EIS	Management of sediments and erosion from construction…	Are areas adjacent or within to the proposed construction area at risk to sediment/erosion? How have these areas been identified? Are there other mitigation tools proposed to minimize erosion impacts or provide for re-vegetation where erosion does occur in these areas? Please clarify.	Discussion regarding the susceptibility of the Project Area to erosion, based on topography, soils, proximity to natural features, etc., is provided in section 6.1.3.2 (page 6.11). Specific erosion and sedimentation controls recommended for use during construction for this project are identified, the specific selection, location and sizing of which will be completed by engineers during the detailed design process.

Section	Page #	Wording/ Topic	Comments	How/ Where Concern was Addressed (Comments by Stantec, May 19, 2011)
		Project components are planned within the 120 m zone of influence of the amphibian woodland breeding pools.	Proposed mitigation only addresses potential impacts to frogs…please clarify if there are any potential impacts to salamanders and how the proposed mitigation addresses these impacts. Please make these changes to this section and every subsequent section where it is repeated within the EIS.	Potential impacts and proposed mitigation measures are intended to target all amphibians (frogs and salamanders) , with consideration for potential impacts identified in Section 6.1.2.3. No amphibian surveys were completed as part of the NHA/EIS but vernal pools were assumed to provide SWH and were avoiding during eth siting of the Project. Wildlife culverts proposed, for example, are intended to provide passage for frogs and salamanders (page 6.13)
6.1.7 Natural Feature 10	6.18	Concerns regarding access road for turbine 58	Proposed access road crosses a “riparian HR” ELC community. This would appear to be a wetland on the eastside of the road, unclear on the west. No ELC data has been provided for the “riparian HR” natural feature. No discussion in table 6.1 regarding use of culverts for this area has been included. Swale exists north of “riparian HR” this does not appear to have been identified or mitigated. Use of culvert would be wise to prevent pooling and maintain hydrology. Please clarify Please also clarify if the access lane beside or replacing the hedgerow in this location.	The existing farm road / culvert measures 6.1 m across, which is wide enough to allow for the construction of a 5 m access road while avoiding the wetland. All works associated with the access road will be located outside of this wetland feature. See details on Figure I-3 and discussion provided in Section 6.1.44. Table 6.1 has been updated to include additional mitigation measures, including the use of equalization culverts. The access road to Turbine 58 will use the existing culvert crossing location and will follow along the west side of the existing hedgerow, which will remain. Only a small section of the hedgerow will be removed where the access road crosses to eth east.
6.1.10 Natural Feature 19	6.25	Concerns regarding wetland delineation in these areas, potential impacts to adjacent features and drainage	Please clarify the extent of the construction/laydown areas and how close they will be in proximity to adjacent natural features. Turbine 24 is within a narrow field 50 – 100m wide, and while Ministry staff recognise that it will be difficult to accommodate a minimum 10m buffer on each side, given potential impacts a buffer is recommended.	Revised constructible area to increase setbacks from adjacent wetland and woodland features. In this case, the constructible area was set at a minimum of 5 m from woodland and 10 m from wetland, discussion of which provided in section 6.1.10 (page 6.34) and illustrated on Figure I-4. Noted. The location of this turbine and associated access road was selected to provide a greater setback from the adjacent wetland to the Project components than the woodland, while ensuring all components occur outside of the wetland. Further discussion regarding the impacts of Turbine 24 and its access roads has been added to Section 6.1.11.

Section	Page #	Wording/ Topic	Comments	How/ Where Concern was Addressed (Comments by Stantec, May 19, 2011)
			Please address whether potential impacts to sensitive / declining species could be affected in this area due to potential interior woodland area reductions by the turbine placement. Please describe in more detail potential impacts to drainage and how specific mitigation measures will be implemented to prevent these impacts.	Turbine 24 will be located within an open agricultural field surrounded by woodland on 3 sides, however, no loss of interior forest habitat will occur as a result of the placement of Turbine 24. Additional discussion in this regard has been provided in Section 6.1.10. The location and sizing of culverts for the access roads have been provided in Appendix J. A culvert has been added near Haldimand Rd 20 where a drainage features flows east to west (Figure I-4) in order to maintain flows to the downstream wetland and to prevent flooding upstream of the access. E&S controls will be installed during construction in this area. Additional details have been added to section 6.1.11.
6.1.12.1 Natural Feature 22	6.31	The location of Turbine 16 appears to be proposed on top of an darin/swale that drains into feature 22 and supports other features through the areas	Please clarify how the impacts from the location of the turbine base being placed on top of a drain/ swale, which flows into feature 22 and supports other adjacent features, is being mitigated to ensure no negative impacts from surface water drainage changes occur?	The location of Turbine 16 has been adjusted to increase separation from this overland flow route (Figure 13.4). Site grading beneath the turbine will ensure that overland flows through this area, with culverts proposed beneath the access road, will continue to be conveyed to Feature 22. Discussion added / clarified in section 6.1.13.3.
6.1.13 Natural Feature 28	6.33	Concerns regarding impacts to surface water flows/ drainage	Clearing appears to be proposed within a low lying wet area within the construction/ laydown sites and within 17m of the turbine base. The swale also wraps around the turbine base location. There is also a swale that crosses the access road and then runs parallel to the access road; it appears part of the access road is on the swale. Please provide additional detail regarding how drainage will be maintained in this area, and how the proposed mitigation methods will be specifically implemented to accomplish this.	Flows currently conveyed by this swale will continue during construction and operation of the turbines. To avoid flooding and disturbance during construction n, this swale will be realigned, seeded and stabilized prior to construction (Section 6.1.14, page 6.44)
6.1.17.2 Natural Feature 34	6.44	Measures taken to ensure the protection of the watercourse that supports Snapping Turtle (Water Assessment Report, Stantec 2011) will ensure the preservation of habitat characteristics needed for Snapping Turtle movement.	As MNR staff do not review the Water Report, please clarify what these measures include.	The project layout has been amended so that no crossing of Feature 34 is required. Therefore, no crossing of the watercourse where historic snapping turtle observations have been reported is required (Figure 13.7)
6.1.22.1 Natural Feature 51	6.55	Distance to wetland feature	Table shows access road (west) within 1m of a significant woodland and overlapping a significant wetland. Report states “Construction is planned within the 120 m zone of influence of the wetland. A minimum 57m setback is planned between the wetland edge and any physical structure on the ground (excluding the turbine blade airspace)”.	Access roads have been amended so that a 1 m minimum setback is maintained from all woodlands and a 5 m setback is maintained from all wetlands. No part of the Wind Project is located in, on or over a wetland.

Section	Page #	Wording/ Topic	Comments	How/ Where Concern was Addressed (Comments by Stantec, May 19, 2011)
			Please clarify	
6.1.30.2 Natural Feature 66	6.71 & Entire EIS	The required 10 m wide construction zone over the 1472 m length of the access road within the cultural plantation component of the woodland will result in the loss of approximately 1.472 ha of woodland, plus 0.028 ha for the turbine base and a temporary removal of 0.49 ha for the 70 m x 70 m crane pad…	Please identify the specific areas where the removal of natural features is proposed. How is the removal of natural vegetation within natural features to be mitigated for the project? Please clarify.	Turbine 32 has been dropped from the Project Layout. As such, no removal of natural vegetation is proposed in this area. Turbine 9 will be constructed within an existing cultural meadow that is maintained (mowed) outside of all natural features (Figure I-12).
		With respect to Turbine 51	Project components are adjacent the wetland, additional mitigation (buffer) is needed. Please also clarify if culverts are proposed for this area to maintain drainage patterns/swales.	The location of Turbine 51 has been amended to accommodate greater setbacks from the adjacent wetland / woodland, while maintaining appropriate structural and noise setbacks. The base of the turbine is located 52 m from the wetland within an existing agricultural field.
6.1.44 Grassland habitats	6.100	No separate unique identifiers for each grassland habitat, insufficient detail for potential impacts and mitigation.	Please provide unique identifiers for each of the grassland habitats identified. Please discuss the potential impact to each feature individually based on the values for each habitat and provide appropriate mitigation for any potential negative environmental effects.	Unique identifiers have been identified for each contiguous grassland feature greater than 30 ha in size (Figures13.4, 13.5, 13.8, 13.9 and 14.1) the significance of which have been identified and summarized in Table 5.7.
6.1.46 James N. Allen Provincial Park	6.104	James N. Allen Provincial Park	The EIS needs to identify potential negative environmental effects and mitigation of the features, functions, values and ecological integrity of the provincial park as a protected area. An analysis should also include an assessment of the potential impacts of the project on the ability of the provincial park to fulfil its role in the protected area system, the integrity of the protected area as a whole, as well as the features, functions and values associated with the provincial park.	Access to the site was granted by the MNR to supplement our alternative site investigations originally completed along Kings Row. The EIS for James N. Allen Provincial Park, including an assessment of the impacts of the Project on the Park and its ability to fulfill its role in the protected area system (Section 6.1.50).
6.2.1 Description of Solar Project	6.105	A 6m wide berm will be constructed to provide a landscaping barrier for landowners of adjacent residences….	Please clarify whether the berm is to be vegetated and whether native species will be used. Further are there any proposed impacts to natural features from/by the berm?	The proposed perimeter berm will be vegetated with native grasses (page 6.147). The berm is only located within 30 m of a natural feature in two locations (Feature 38 and 40), where it occurs on the opposite side of Haldimand Road 20. Additional details have been added to Section 6.2.1 and 6.2.3. No impacts on natural features are anticipated as a result of the berms.
	6.106	Minimal change from the existing grades is anticipated but some grading will be performed to accommodate the construction of internal solar module access roads. The solar farm land area will be graded by earth moving equipment to the elevations determined by the grading plans (Construction Report, under separate cover).	Please provide additional detail regarding the extent of the grading changes proposed, including an analysis on pre-existing to post-construction conditions.	Additional detail with respect to grading proposed for this site is provided in Section 6.2.1 and 6.2.3.1, with further details to be provided during detailed design.
6.2.3.1 Direct impacts to natural features	6.111	The lands located adjacent to the wetlands will be naturalized to create a vegetated buffer between the wetlands and Solar Project Location.	Please identify areas where naturalized buffers will be added. What species will be used in these areas? How wide is the buffer area? Ministry staff recommend that	Vegetated buffers will be established around Feature 30, 31 38, 39 and 41, with examples illustrated around the O&M building and transformer stations on Figures I6 and I-7.

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– significant wetlands			species native to Ecoregion 7E, preferably these species should also be native to the site/ surrounding natural features should be used.	Discussion is provided in Section 6.2.3.1 (page 6.147)
		No significant grading is proposed on the solar lands and existing drainage patterns will be maintained, ensuring any surface water flows currently draining to the various wetlands will be maintained.	Please clarify how this will be accomplished and the degree of grading proposed.	Additional detail with respect to grading proposed for this site is provided in Section 6.2.1 and 6.2.3.1, with further details to be provided during detailed design.
6.2.3.1 Direct impacts to natural features – significant wildlife habitats	6.113	Two security fences are proposed along the western limit of the Solar Project Location that would cross the identified animal movement corridor between Natural Feature 29 and 30.	Ministry staff have concerns regarding the limitation of wildlife movement to the west from natural feature 30. It is recommended that the fencing be adjusted to maintain both eastern and western movement along these corridors.	A gap in the fence along the access road is proposed to accommodate east-west deer movement through the site while maintaining security of the solar project components.
6.2.3.6 and 6.3.3.6 Erosion and Sediment Controls	6.117 and 6.141	Appropriate erosion and sediment controls should be employed during all phases of construction to minimize the potential deposition of silt and sediment within the receiving systems as a result of site grading works.	Please clarify what the specific erosion and sediment control measures are to manage silt and sediments as a result of grading/ construction.	Erosion and sediment control options are outlined in Section 6.2.3.6, with the specific measures to be designed and sited by engineers during detailed design.
6.3.4 Net Effects	6.141	With respect to the Collector Substation, a minimum setback of 31 m will be maintained from the adjacent wetland and woodland (Natural Feature 30). The O&M facility will maintain a 30 m setback from the wetland and woodland feature (Natural Feature 38). The buffer areas between these facilities and the natural features will be naturalized with native plant species intended to be maintained as a 30 m vegetated buffer zone in perpetuity.	Please identify areas where naturalized buffers will be added. What species will be used in these areas? How large is the buffer area? Will the entire 30/31m setback be replanted? Ministry staff would recommend that native species to ecoregion 7E, preferably to the local area should be used.	The entire buffer area will be vegetated with species native to Ecoregion 7E (See Figure I-6).
Environmental Effects Monitoring Plan				
2.1	2.1	Purpose of EEMP	Ministry staff recommend that the mortality monitoring of the EEMP be in a separate plan and the disturbance monitoring proposed be included part of the EIS.	Noted.
2.2.3 2.2.4 2.2.5	2.5 – 2.8	Breeding and Grassland Bird Surveys, Amphibian Breeding Habitat, Wetland and Woodland Hydrology	Each of these proposed monitoring initiatives/ plans warrant further consideration and revisions based on additional details/ revisions to the NHA.	Pending
2.2.1	2.2	Page 2.2 “Mortality monitoring within minimally-vegetated portions (i.e., Visibility Classes 1 and 2 [MNR, 2010a]) of a 50 m search area radius from the base of 30% (21 of 69) wind turbines” –	30% of 69 turbines should be 23 turbines as a sample size not 21	Of note, 30% of 69 **is** 21 – 23 represents 1/3 (33%)
	2.3	Followed by periodic checking to determine the rate of removal…	This should indicate that this checking will be done on the same schedule as the carcass searches (every 3-4 days)	Pending
	2.4	Page 2.4 “The overall Ps for the facility will be calculated as the average of Ps1 through Ps9”	Please clarify where the 9 is coming from.	Pending

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		Observed fatalities will be photographed, and the species, GPS coordinates, substrate, carcass conditions, and distance and direction to the nearest turbine will be recorded along with the date, time and searcher."	The sex and injuries of carcasses also needs to be included within the data collection	Pending
2.2.2	2.5	"Persons handling bat carcasses will take reasonable precautions (e.g., gloves, tools etc.) to protect their personal health."	Ministry staff recommend including rabies vaccinations	Pending
			Please clarify what data will be recorded in the Se and Sc trials – e.g. species used, visibility class, weather… Please also clarify of how many trial carcasses will be placed at any one time to avoid bias and flooding the system with carcasses.	Pending
3.1	3.2		Ministry staff recommend that the mitigation section for birds should indicate the required number of years of monitoring required (as per the guidelines) should the threshold be reached.	Pending

General Comments/ Observations:				
	Entire NHA	Formatting, spelling, etc.	Ministry staff have noticed a number of spelling/ formatting errors within the NHA that should be corrected.	Noted and Revised. Track changes showing the new text added to the NHA/EIS to address comments in this table have been left in the document to assist with MNR's review.
	Entire NHA	Content pertaining to endangered/ threatened species	Please remove the information pertaining to Endangered or Threatened species and place this information in a separate species-at-risk report that will be provided to MNR under separate cover.	Information pertaining to Endangered and Threatened species have been removed. Recognition that Endangered and Threatened species are beyond the scope of the NHA/EIS remains in the report.
Records Review				
3.2.1.1 3.2.1.2 3.2.2	3.3 – 3.4	Soils, Geology, Watershed Conditions	These topics are beyond the scope of what is required for receiving MNR's confirmation as such Ministry staff would request that these topics be removed from the NHA. Where Geological features are relevant to the identification of natural features please provide this clarification.	These sections have been left in the NHA for information purposes to provide context for the identification of potential wildlife habitat and valleyland features, as follows: • Area soils data is relevant to the identification of possible wildlife habitat, plant species and overall characterization of the landscape and as such, we feel that this information is relevant to the discussion. • The geological information provided provides the context for potential wildlife habitat features to be

Section	Page #	Wording/ Topic	Comments	How/ Where Concern was Addressed (Comments by Stantec, May 19, 2011)
				considered during the completion fo field investigations, such as caves or karst topography. • General watershed information is relevant to the identification of Conservation Authorities to be contacted in accordance with O. Reg 359/09, and more specific information pertaining to local catchments in relation to the overall watershed is relevant for the identification and evaluation of valleylands.
3.2.4.4	3.10	Several of the unevaluated wetlands identified by the MNR, GRCA and LPRCA along the Lake Erie shoreline, lower reaches of the Grand River and various minor tributaries to Lake Erie would also be considered coastal wetlands. These wetlands are identified on **Figure 2 (Appendix A)**.	MNR has not identified any unevaluated wetlands within the study area; please clarify this statement to reflect this.	Revised to delete "MNR" (page 3.9).
3.2.6.3	3.17	Rare Vegetation Communities	A comparison of orthophotography flown in the early summer of 2010, to the 2006 leaf off orthophotography may have identified additional locations with rare vegetation communities within the study area.	Noted.
3.3	3.21	Records Review Summary	Please expand the summary to include all wildlife habitats identified in the SWHTG that may have linkage to habitat within the study area based on criteria provided within the SWHTG. As presented the list is incomplete and eliminates potential features without proper consideration of criteria or field assessment that would be completed during Site Investigation.	The summary of Section 3 has been amended to include all wildlife habitats with the possibility of occurring within the Study Area.
Site Investigation				
4.1.2 –	4.2	Woodland features were compared to the definition of woodlands provided in O. Reg. 359/09, whereby any land that contained (or appeared to contain) (per hectare) at least (i) 1,000 trees of any size, (ii) 750 trees over 5 cm in diameter, (iii) 500 trees over 12 cm or (iv) 250 trees over 20 cm was considered a woodland in accordance with the REA definition. Treed areas were also compared to the definition of woodland provided in the *Natural Heritage Reference Manual* (MNR, 2010) and as revised in O. Reg. 359/09 as of January 1, 2011	According to Section 3.2.7 of the NHA Samsung has elected to apply to amended definition of woodlands from O. Reg 359/09. However based on the description of 4.1.2 the original definition from O. Reg 359/09 was applied and then the results were only compared to the amended definition. Please clarify.	Woodland definition in section 4.1.2 has been amended to reflect the definition as amended by O. Reg. 521/10, which is consistent with the definition noted throughout the remainder of the NHA/EIS.
4.1.5	4.6	Bat Surveys	~~The revised~~ ***As outlined within the*** *Bats and Bat Habitats: Guidelines for Wind Power Projects* (MNR, March 2010) ***Section 26 of O. Reg 359/09*** requires a physical search of the air, land and water within 120m of the Project Location	Revised.

Section	Page #	Wording/ Topic	Comments	How/ Where Concern was Addressed (Comments by Stantec, May 19, 2011)
			to determine…	
4.2.3	4.9	Vegetation Communities: The Winterberry – Buttonbush Mineral Thicket Swamp (SWT2-14*)	The suspected rare community should be confirmed with NHIC staff.	To be discussed later but assumed significant and to be treated as significant for this project.
4.3.4.5	4.22	Wildlife habitat summary	Please expand the summary to include all wildlife habitats identified in the SWHTG that have been identified as candidate significant wildlife habitat in or within 120m of the project location criteria provided within the SWHTG. As presented the list is incomplete and eliminates potential features without proper consideration of criteria or field assessment that would be completed during Site Investigation or prior to completing evaluations of the feature's significance.	The summary of Section 4.3 has been amended to include all wildlife habitats observed within the Study Area for which an evaluation of significance is required.
4.3.6	4.22	Summary of Natural Features - Wind	Please indicate how many/which unevaluated wetlands were identified as part of the site investigation and require evaluations for the Wind Project location and Zone of Investigation.	A total of 149 wetlands were identified during site investigation (Table 5.1).
Evaluation of Significance				
5.1.4.1	5.8	Turtle Nesting Areas Criteria for determining the significance of **Bullfrog** breeding habitat…	This section is incomplete (and mentions bullfrog habitat under the turtle nesting areas section). Please Clarify	Amended. Turtle and bullfrog habitat discussed separately.
5.2.3 and 5.4.3	5.13, 5.20		***There are no Life Science ANSIs located within 120 m and no Earth Science ANSIs located within 50 m of the Wind Project location.***	Amended.
5.5.3	5.24		An Environmental Impact Study is required to identify and assess any negative environmental effects and develop mitigation measures to the above-noted significant features that occur ***in*** **or** within 120 m of the Project Location.	Amended.
Environmental Impact Study (EIS)				
6.1.1	6.3	With the following seven exceptions, turbines, access roads and the collection system have been located outside of naturally vegetated areas:	With the following seven exceptions, turbines, access roads and the collection system have been located outside of natural~~ly vegetated areas~~ ***features***:	Amended.
Appendix B, Table 4.3	B.11 B.20	Feature 29 has open water area, likely from abandoned quarry "Edge assessment" listed under Species of Note column	Has an analysis been completed for abandoned quarries? Will this be discussed in a report supporting other APRD requirements? Please clarify if this is correct.	Noted.

Project Name: Grand Renewable Energy Park (GREP)
Proponent: Samsung Renewable Energy Inc.
Consultant: Stantec
Date Received: May 20, 2011

***** Please make the following revisions to the sections and figures identified with the NHA, Environmental Impact Study and Environmental Effects Monitoring Plan. Some other recommendations to improve/ enhance the NHA have been provided within a separate section below.**

Overview - Summary of Comments/ Concerns:

- Further refinement of Winter Raptor Concentration Areas candidate significant wildlife habitats (CSWH) is required and if significant monitoring plans need to be incorporated into the EIS and EEMP
- Additional clarification is needed for Feature 42 relating to two CSWHs - declining breeding bird species and woodland amphibian breeding habitat
- Revisions are also need to the EIS and EEMP in relation to proposed pre and post construction monitoring and proposed mitigation measures for turtles.

Section	Page #	Wording/ Topic	Comments	How/ Where Concern was Addressed
Required Changes				
4.1.5.2 (SI-M) 4.3.4.1 (SI-W 4.4.4.1 (SI-S) 4.5.4.1 (SI-T) 5.1.4.1 (EOS-M) 5.2.5.1 (EOS-W) 5.3.5.1 (EOS-S) 5.4.5.1 (EOS-T) 6.1.3.4 (EIS) + specific feature adjacent/within (where applicable) EEMP Section 2.2	4.7, 4.17, 4.32 4.43 5.9 5.16 5.23 5.28 6.13 2.2	Winter Raptor Concentration (Feeding and Roosting) Areas	**Site Investigation:** The identified candidate habitats need to be refined to sites specific habitats, rather then areas, and should be assigned unique identifiers. An area based approach does not satisfy the requirements O. Reg 359/09. The way this habitat is currently presented within this NHA would suggest that there is potential for direct impacts on the winter raptor habitat as the identified polygon does have parts of the project location within the delineated (area) habitat boundary. The feature based habitat criteria considered at site investigation for this habitat type includes: woodland/field combination >20ha (minimum), large sites are more sig. than smaller sites, site should not be disturbed (field should be idled or lightly grazed), more significant sites have good perching habitat and fields with less snow accumulation and if there is known information sites with a history of use are more significant. Further the wintering Short-eared Owl habitat would also be part of this habitat and should be included/ integrated. If the site specific habitats are within or within 120m of project location then they should be identified as candidate SWH within the Site Investigation. **Evaluation of Significance:** Where parts of the project location are <u>within</u> candidate habitat a full evaluation of significance (EOS) is required. Where a Wind Turbine is proposed within 120m of the candidate habitat, a full EOS procedure is required or must be initiated pre-construction, refer to EIS. This will include reporting on the following: • A summary of the method/ procedures used to evaluate the habitat; this should include information pertaining to the methods used to complete winter raptor surveys for the habitat(s) and the results of these surveys. • Identify the species associated with each habitat(s) and discuss their habitat requirements. • Name and qualifications of those who completed the procedures • The dates of the beginning and completion of the evaluation • Whether this information meets the criteria and what the determination is regarding the significance of the habitat Where other Project Infrastructure roads, lines, cables, buildings, lay down areas of the project location are <u>adjacent</u> (within 120m) of candidate (winter raptor) significant wildlife habitats, these habitats can be treated as significant and described within the EOS report with detail outlining potential wildlife species expected to use the habitat. **EIS:** If project Infrastructure is located <u>within</u> a significant (winter raptor) wildlife habitat(s) direct effects to the habitat (loss, fragmentation, etc) and potential behavioural avoidance impacts should be identified and discussed within the EIS. In order to address these concerns mitigation of direct impacts and disturbance monitoring should be identified/discussed within the EIS and monitoring incorporated into the EEMP (i.e. repeat of EOS method post construction). Where sites are <u>adjacent</u> (within 120m) of a wind turbine potential behavioural avoidance impacts are to be identified and discussed within the EIS. In order to address these concerns preconstruction studies are required in order to establish base line information (if an EOS study was not previously completed).	

Section	Page #	Wording/ Topic	Comments	How/ Where Concern was Addressed
			Post construction monitoring should also be identified/discussed within the EIS and incorporated into the EEMP (i.e. repeat of the EIS preconstruction method or EOS study implemented post construction). Habitat specific surveys should include transect based area searches along woodland and fields (including edges/ hedgerows) throughout the habitat area(s). Surveys should occur at least once per week during January and February, and should identify the species observed using each separate habitat(s) and the number of individuals observed. Reports regarding monitoring should be submitted to MNR for review/ discussion on observations and next steps. **EEMP:** Where sites are in or within 120m of a turbine post construction monitoring is required and should be included within the EEMP. The post construction monitoring program should repeat studies completed as part of the evaluation of significance and/or the preconstruction monitoring completed as part of the EIS.	
4.3.4.3 (EOS-W)	4.24	Feature 42 Amphibian Woodland Breeding Habitat	**Site Investigation:** Please clarify (map) the extent of the amphibian woodland breeding habitat associated with vernal pool 12. MNR staff recommend the habitat be properly mapped with the vernal pool and surrounding woodland habitat, using the ELC polygons that surround the vernal pool and woodland to delineate the habitat. If this extent of this habitat included parts of the project location a complete EOS is required and additional mitigation would need to be included within the EIS and possibly the EEMP.	
4.3.4.4 (EOS-W) 6.1.19 (EIS-W) 2.2 & 3.2 (EEMP)	4.26 6.56	Feature 42 Habitat for Declining Woodland (bird) Species	**Evaluation of Significance:** As Feature 42 is identified as a candidate significant wildlife habitat within the site investigation report and parts of the project location are located within the habitat the NHA must include a complete EOS. This will include reporting on the following: • A summary of the method/ procedures used to evaluate the habitat; this should include information pertaining to the methods (i.e. site specific point count survey) used to complete declining bird species surveys for each habitat(s) (including timing, duration and intensity) and the results of these surveys. • Identify the species associated with each habitat(s) and discuss their habitat requirements. • Name and qualifications of those who completed the procedures • The dates of the beginning and completion of the evaluation • Whether this information meets the criteria and what the determination is regarding the significance of the habitat **EIS:** As several components of the project location (wind turbine 53, access road and connector lines) are within the significant wildlife habitat, Section 6.1.19 and Table 6.1 and 6.2 need additional detail/ clarification with respect to potential negative environmental effects due to developing directly within the habitat of declining woodland (bird) species. More specifically this should include: • Information about how the proposed development could impact the specific bird species and the function of the habitat for these species. • What and how much habitat will be removed, • How the habitat would be replaced/improved • Whether the development of the project would cause barriers to bird movement, • Whether the woodland would be fragmented **EEMP:** Behaviour avoidance/ disturbance monitoring for this habitat should be a repeat of point survey methods (EOS method) during post construction monitoring. Where the results of EOS baseline information is minimal, then Ministry staff recommend a pre-construction survey should be re-done to confirm the species use and abundance associated with the habitat (which should be reported in the EIS section of the NHA) prior construction occurring.	
6.1.3.4 EIS	6.14	Protection of turtles and their nests if found/ disturbed during construction.	Similar to the provisions included for protecting the nests of birds during the breeding bird season, Ministry staff recommend including provisions providing for the protection of turtles nests if discovered within the construction area, as well as a commitment to precautionary avoid areas which may contain hibernating turtles are discovered during construction activities in the winter. Some suggested language/ text is provided below: *"Potential disturbance effects to turtles would be minimized through avoiding construction activities in areas where turtles may be encountered during sensitive periods (i.e. breeding season). While no parts of the project location are located within or adjacent to significant wildlife habitat for turtle nesting or wintering, the project location is adjacent to a number of wetlands (assumed significant for the purposes of this project) and water bodies which turtles may use or be founded within at different times of year.* *To the extent practical, construction activities should not occur during the breeding/nesting season for turtles. However, should construction activities occur during these periods, additional barriers (i.e. silt fencing) should be erected around areas of disturbed soils in areas adjacent to wetland/ water course*	

Section	Page #	Wording/ Topic	Comments	How/ Where Concern was Addressed
			features to discourage turtles from nesting/laying eggs in these areas. Should a turtle nest be encountered a buffer will be established and the nest will be protected from construction activities (such as with a wire cage) and monitored until the nest is no longer active. *Precautions will also be taken to avoid any areas that could contain hibernating turtles during construction activities occurring during the winter".*	
EIS – Table 6.1		Table 6.1 – Amphibian Breeding Pools	MNR staff note that there are numerous mentions of direct impact via road mortality. This should be changed to an indirect impact as there are no direct impacts on the habitat specifically as the roads are adjacent to the habitat, and as such mortality to individuals would be considered an indirect effect.	
6.2.3.1(EIS)	6.148	Fencing of solar project	Page 6.148 states that the animal movement corridor between features 29 and 30 "has also been maintained westward, where fencing will remain open along the access road / transmission line (although closed off around the solar project components) to allow movement of larger mammals, as requested by the MNR, while ensuring safety restrictions to the solar panels are maintained". Ministry staff are encouraged by this commitment, however the "opening" in the fencing does not appear to have been included on the mapping (Figures 11.1,14.1 and I-6). Please clarify the mapping.	
EIS/EEMP		Land bird preconstruction monitoring	Details regarding preconstruction monitoring for significant land bird migratory stopover areas needs to be included within the EIS. Post construction monitoring should be included within the EEMP and describes/ referenced in the EIS.	
		Area Sensitive and Declining Species Habitats	Area Sensitive and Declining Species Breeding Bird habitat - EIS and EEMP does not need to monitor these habitats unless infrastructure is going to be within the habitat, therefore this work should be scoped down to only included those directly impacted habitats, such as Feature 42.	
Other General Recommendations for Consideration….				
Site Investigation Report		Type, composition, attributes, function	Ministry staff acknowledge that this information is provided/included within the NHA to address Section 26(3)2. of O Reg 359/09, however the site investigation report does not specifically identify/summarize the type, composition, attributes, function for each natural feature. The report could be structured differently or include a small table within the text of the report for each feature that provides this information specifically or directs you to where this information is located in the report. This would enhance the clarity of the report, specifically in terms of how Section 26(3)2. of O Reg 359/09 is addressed.	
4.3.4.5	4.27	Table 2.2 – 13 (potential) plant species that could be present in study area….	It is understood that no parts of the project location are located within ELC communities that would serve as potential habitats for these plant species and that the proposed EIS mitigation does address concerns with potential adjacent to habitats supporting these species and that this is acknowledged within the EIS at a high level. However, it is recommended that the site investigation report more clearly identify which features these ELC communities are located within. Further, these features should then be discussed as being located adjacent to the project location within the EOS. Finally the EIS should then recognise these features and identify the measures undertaken to ensure no impacts to rare plant species will occur from the construction of the project (i.e. staying out of features, the proposed setbacks & buffers, sedimentation & erosion controls, etc.)	
4.3.4.3	4.21	Following up with NHIC for identified candidate rare ELC communities	Please ensure that you follow-up and provide the information identified information within the report to NHIC. Copying district staff on any correspondence relating to this is recommended for documentation purposes.	
6.1.31.1	6.92	Collector line associate with T9 &51	Ministry staff note that the collector line is not include with the table for Feature 66 but rather is discussed separately in Section 6.1.45 on page 6.130 of the EIS. As the collector line is adjacent to a identified significant waterfowl stopover area associated with Feature 66, it is recommended that this be clarified within the EIS by including the waterfowl stopover area on the table for Feature 66 on page 6.92 and include a reference that the collector line is address within the another part of the EIS (section 6.1.45). As currently presented it would appear when reading page 6.92 that the habitat and collector line were overlooked/missed in the EIS.	
Site Investigation and EOS		Identification and evaluation of significant wildlife habitat	The organization of information as it relates to the identification of candidate significant wildlife habitat and evaluation of candidate habitats to determine significance could still be improved. Feature or habitat based criteria are relative to identifying candidate significant wildlife habitat. Other types of studies such as Point Count, Transect, Floristic Studies, Egg mass/larval counts and Observational Studies completed at the appropriate time of year are methods for evaluating the significance of candidate habitats. The criteria to be confirmed as part of the evaluation of significance are related to abundance and diversity of wildlife inhabiting a candidate significant wildlife habitat. Evaluation of Significance methods for confirming significant wildlife habitat need to follow proper procedures and include better/ more detailed descriptions about the characteristics of the feature that make it significant. This would allow for a more apparent link to the mitigation and monitoring proposed within the EIS and how it relates to the specifics of habitat and species using the habitat to provide descriptions of potential negative effects to the habitat and its function.	
EEMP		Organization of the EEMP	Ministry staff would prefer that post construction monitoring proposed to address EIS behaviour/disturbances effects be presented separately within the EEMP from required mortality monitoring programs for birds and bats.	

Friedl, Susanne

From: Boos, John (MNR) <john.boos@ontario.ca>
Sent: Thursday, June 23, 2011 4:35 PM
To: Powell, Chris
Cc: Taylor, Andrew; Nix, April (MNR); m.dawson@samsungrenewableenergy.ca
Subject: RE: Samsung - Winter Raptor Results

Chris,

In reality there are lots of wildlife habitats in a Landscape but only the best representative sites are significant as described in the SWHTG.
Therefore if the site you have identified is the largest, best representative and you have determined numerous species using and a species of conservation concern, this is good work. As mentioned there are lots of habitats, but if the description does not meet the criteria then they are not considered significant sites. The significant sites are the ones that provide a stable habitat based on present land uses, these are sites where high fidelity will be realized.

Therefore if your descriptions of the habitat and species use have followed the SWHTG, there should be no problem in supporting your findings.

Regards,

John Boos
Renewable Energy Field Advisor - Biologist
705-755-1748
-----Original Message-----
From: Powell, Chris [mailto:Chris.Powell@stantec.com]
Sent: June 23, 2011 4:15 PM
To: Boos, John (MNR)
Cc: Taylor, Andrew; Nix, April (MNR); Marnie Dawson (m.dawson@samsungrenewableenergy.ca)
Subject: Samsung - Winter Raptor Results
Importance: High

John,

Further to my voice message, Andrew and I have reviewed the field results against the candidate features for winter raptors and only 1 of the 3 features seems to support any kind of significant populations. Of over 300 raptors observed during our surveys, only the feature adjacent to the Solar lands would be considered significant (SEOW, RTHA, NOHA, RLHA).

This is a case where the species use doesn't seem to coincide with the habitat descriptions in the SWHTG, and visa versa.

Before submission, we wanted to confirm that this is something that you can support and to discuss the implications for this area. I understand that you are out of the office tomorrow so it would be much appreciated if you could give us a quick call before you leave today.

Chris

GUELPH: 519-836-6050 ext. 295

Chris Powell, M.A.
Project Manager / Environmental Planner
Stantec Consulting Ltd.
49 Frederick Street
Kitchener ON N2H 6M7
Ph: (519) 585-7416
Fx: (519) 579-4239
Cell: (519) 501-2368
chris.powell@stantec.com
www.stantec.com

Friedl, Susanne

From: Powell, Chris
Sent: Friday, June 24, 2011 6:08 PM
To: Nix, April (MNR)
Cc: m.dawson@samsungrenewableenergy.ca
Subject: SAMSUNG NHA REVISIONS - JUNE 24, 2011

April,

Below is access information for the FTP site within which you will find a complete version of the NHA revised to address MNR's comments dated June 17, 2011. These changes include the following:

1. Revised identification and assessment of winter raptor feeding and roosting areas, which reduced the 'area of concentration' previously identified down to individual habitat features per discussions with John Boos and the SWHTG. Mapping revisions to identify candidate habitat features and to confirm that the one feature is considered SWH for winter raptors has been provided, as well as a new table ("5.NEW" – for now) showing how each feature was evaluated.

2. Additional text describing the extent and composition of amphibian habitat associated with vernal pool 12. As discussed, due to the small size of this feature, mapping revisions were not possible. We trust that the text clarifies the vernal pool habitat and confirms that the plantation area adjacent to Turbine 53 is not part of the breeding habitat

3. Additional information pertaining to the specific declining bird species observed within feature 42a and how the loss of 1.74 ha of plantation will not affect these species.

4. Added suggested blurb regarding turtle nests during construction

5. Revised impacts associated with road mortality from direct to indirect

6. Revised the solar fence and incorporated comments through discussions / emails with Anne Yagi, including an update to Figure 17 and I6 showing the corrdiro maintained through the solar farm for deer

7. Updates to the EIS monitoring requirements (pulled from EEMP)

We trust that this information is sufficient to provide the letter of confirmation for this Project. The final version of the report will be cleaned up and references checked, figures and table numbering confirmed and other formatting will be improved. A final copy of the final version to be circulated to the public will be provided to the MNR.

If you have any questions, please give me a call.

Thanks,

Chris

From: CORPFTP@temp.stantec.com [mailto:CORPFTP@temp.stantec.com]
Sent: Friday, June 24, 2011 5:08 PM
To: Powell, Chris
Subject: Stantec FTP Confirmation - SAMSUNG NHA REVISIONS - JUNE 24, 2011

Your request has been successfully created.

Please use the automatic login link below to access your site. You have also been provided a manual link, username and password in case your computer disables the automatic login link.

NOTE: FTP Sites are not included in Stantec daily backups and are only intended to be used as a means of transferring large files between offices, clients, etc.

Automatic Login

FTP site link: ftp://s0708150811:7835660@ftptmp.stantec.com
By clicking on the link above (or pasting the link into Windows Explorer) you will be automatically logged into your FTP site.

Manual Login

FTP link: ftp://ftptmp.stantec.com
Login name: s0708150811
Password: 7835660
Disk Quota: 2GB
Expiry Date: 7/8/2011

If your site has not expired and you require a onetime 2 week extension, please contact the IT Service Center.

If you require more than 2 weeks, please request an FTP Project Directory. Information on the FTP Project Directory request procedure is posted in the StanNet Help Center.

Project Name: Grand Renewable Energy Park (GREP)
Proponent: Samsung Renewable Energy Inc.
Consultant: Stantec
Date Received: Feb 1, 2011

***** Please make the following revisions to the sections and figures identified with the NHA, Environmental Impact Study and Environmental Effects Monitoring Plan. Comments of a general nature, are included after the table.**

Environmental Effects Monitoring Plan				
2.1	2.1	Purpose of EEMP	Ministry staff recommend that the mortality monitoring of the EEMP be in a separate plan and the disturbance monitoring proposed be included part of the EIS.	Noted. The intent of including both mortality and disturbance monitoring is to create a standalone document that can be used by those implementing the monitoring recommendations. The different components are clearly identified within the EEMP. The content and format of the EEMP, as submitted and revised, is consistent with previously approved EEMP documents.
2.2.3 2.2.4 2.2.5	2.5 – 2.8	Breeding and Grassland Bird Surveys, Amphibian Breeding Habitat, Wetland and Woodland Hydrology	Each of these proposed monitoring initiatives/ plans warrant further consideration and revisions based on additional details/ revisions to the NHA.	The EEMP has been amended to reflect changes in the layout of the Project, evaluation of significance and impact assessment included in the NHA/EIS. Specifically, amphibian monitoring has been removed (as it was determined through changes in the layout and consultation with MNR that impacts would not be anticipated). As well, migratory bird disturbance monitoring has been added for those SWH along the Lake Erie shoreline that occur within 120 m of a turbine. There are 4 significant migratory bird stopover features within 120 m of a proposed turbine, with multiple transects proposed where multiple turbine grouping are located adjacent to the feature.
2.2.1	2.2	Page 2.2 “Mortality monitoring within minimally-vegetated portions (i.e., Visibility Classes 1 and 2 [MNR, 2010a]) of a 50 m search area radius from the base of 30% (21 of 69) wind turbines” –	30% of 69 turbines should be 23 turbines as a sample size not 21	Of note, 30% of 69 **is** 21 – 23 represents 1/3 (33%). With amendments to the Project layout, we are still proposing mortality monitoring at 21 turbines – 30% of 67 = 20.1 (21 turbines)
	2.3	Followed by periodic checking to determine the rate of removal…	This should indicate that this checking will be done on the same schedule as the carcass searches (every 3-4 days)	Clarification added to page 2.3 to confirm frequency.
	2.4	Page 2.4 “The overall Ps for the facility will be calculated as the average of Ps1 through Ps9”	Please clarify where the 9 is coming from.	The document should read: “...average of Ps1 through Ps21”, where 21 is the number of turbines surveyed (page 2.4).
		Observed fatalities will be photographed, and the species, GPS coordinates, substrate, carcass conditions, and	The sex and injuries of carcasses also needs to be included within the data collection	Clarification has been added to confirm that this information will be collected (page 2.4)

		distance and direction to the nearest turbine will be recorded along with the date, time and searcher."		
2.2.2	2.5	"Persons handling bat carcasses will take reasonable precautions (e.g., gloves, tools etc.) to protect their personal health."	Ministry staff recommend including rabies vaccinations	Noted. This recommendation will be reviewed in accordance with Stantec's environmental health and safety policies and any amendments to our "Safe Work Practices" to incorporate this additional level of precaution will be considered.
			Please clarify what data will be recorded in the Se and Sc trials – e.g. species used, visibility class, weather… Please also clarify of how many trial carcasses will be placed at any one time to avoid bias and flooding the system with carcasses.	Clarification with respect to the data to be collected during the Se and Sc surveys has been added to the document (page 2.3) 20 bird/bat carcasses spread over a sub-set of turbines across the large Study Area will not flood the system as suggested, nor will it introduce bias as these surveys are repeated every month and monitored for a period of 2 weeks. This may be a concern within a small Study Area congested with turbines, however, such is not the case with this Project. In addition, more significant carcass availability can likely be found along the various roads throughout the study area.
3.1	3.2		Ministry staff recommend that the mitigation section for birds should indicate the required number of years of monitoring required (as per the guidelines) should the threshold be reached.	Clarification on the duration of monitoring should operational mitigation be required at individual turbines has been added in accordance with the guidelines (see page 3.2).

Ministry of Natural Resources

Ministère des Richesses naturelles

Guelph District
1 Stone Road West
Guelph, Ontario
N1G 4Y2

Telephone: (519) 826-4955
Facsimile: (519) 826-4929

Ontario

June 30, 2011

Marnie Dawson
Manager - Renewable Energy Approvals
Samsung Renewable Energy Inc.
55 Standish Court, 9th Floor
Mississauga ON, L5R 4B2

Dear Ms. Dawson,

Subject: Grand Renewable Energy Park Natural Heritage Assessment and Environmental Impact Study

In accordance with the Ministry of the Environment's (MOE's) Renewable Energy Approvals (REA) Regulation (O.Reg.359/09), the Ministry of Natural Resources (MNR) has reviewed the natural heritage assessment and environmental impact study for the Grand Renewable Energy Park in Halidmand County submitted by Samsung Renewable Energy Inc. on June 24, 2011.

The project consists of a 151.1 MW (nameplate capacity) wind project, a 100 MW (nameplate capacity) solar project located on privately owned and Ontario Realty Corporation (ORC) managed lands and a transmission line to convey electricity to the existing power grid. According to subsection 6(3) of O. Reg. 359/09, the wind component of the project is classified as a Class 4 Wind Facility and the solar component of the project is classified as a Class 3 Solar Facility.

In accordance with Section 28(2) and 38(2)(b) of the REA regulation, MNR provides the following confirmations following review of the natural heritage assessment:

1. The MNR confirms that the determination of the existence of natural features and the boundaries of natural features was made using applicable evaluation criteria or procedures established or accepted by MNR.

2. The MNR confirms that the site investigation and records review were conducted using applicable evaluation criteria or procedures established or accepted by MNR, if no natural features were identified.

3. The MNR confirms that the evaluation of the significance or provincial significance of the natural features was conducted using applicable evaluation criteria or procedures established or accepted by MNR.

4. The MNR confirms that the project location is not in a provincial park or conservation reserve.

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

In addition to the NHA, the Environmental Effects Monitoring Plans that address post-construction monitoring and mitigation for birds and bats have been prepared and must be implemented. These post-construction monitoring plans have been prepared in accordance with MNR Guidelines and reviewed and commented on by MNR staff on March 1, 2011.

This confirmation letter is valid for the project as proposed in the natural heritage assessment and environmental impact study, including those sections describing the Environmental Effects Monitoring Plan and Construction Plan Report. Should any changes be made to the proposed project that would alter the NHA, MNR may need to undertake additional review of the NHA.

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

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

Please be aware that your project is subject to additional legislative approvals as outlined in the Ministry of Natural Resources' *Approvals and Permitting Requirements Document*. These approvals are required prior to the construction of your renewable energy facility.

If you wish to discuss any part of this confirmation or additional comments provided, please contact April Nix, Renewable Energy Planning Ecologist at 519-826-4939 or at april.nix@ontario.ca.

Sincerely,

Ian Hagman
District Manager
Guelph District MNR

cc. Jim Beal, Renewable Energy Provincial Field Program Coordinator, Regional Operations Division, MNR
Andrea Fleischhauer, (A)Southern Region Renewable Energy Coordinator, Regional Operations Division, MNR
Narren Santos, Environmental Assessment and Approvals Branch, MOE
Chris Powell, Project Manager / Environmental Planner, Stantec

MOE and MNR Regulatory Requirements for Projects Under the Korean Consortium Green Energy Investment

77 Grenville Street, 9th Floor – Large Boardroom

Agenda

10:00am – 12:00pm	Ministry of the Environment's Renewable Energy Approval (REA) Requirements Discussion (MOE – Lead)
12:00pm – 1:00pm	Lunch
1:00pm – 3:00pm	Ministry of Natural Resources Requirements Discussion – KC Properties (MNR- Lead)

All Attendees

Ing, Pearl (MEI) <Pearl.Ing@

Hagen Lee <hklee@sai.samsu

Zohrab Mawani <z.mawani@

Dumais, Doris (ENE) <Doris.I

Mahmood, Mansoor (ENE) <M

Boysen, Eric (MNR) <eric.boy

Cain, Ken (MNR) <ken.cain@

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Chander, Sunita (MEI) <Sunit

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Nadolny, Rob

Kim Sachtleben <kim.sachtlel

Hagman, Ian (MNR) <ian.hag

Wyatt, Valerie

Wind Turbine Facilities

Summary of Renewable Energy Approval Requirements

		Class 1 Land Based Turbine ≤ 3kW	Class 2 Land Based Turbine 3 > 50kW	Class 3 Land Turbine >50 kW and <102 dBA	Class 4 Land Turbine 102 to 107 dBA	Class 4 Land Turbine >107 dBA	Class 5 Off-Shore Turbine Facility
Plans & Reports	No REA	X					
	REA Required		X	X	X	X	X
	Project Description Report		X	X	X	X	X
	Construction Plan Report			X	X	X	X
	Design and Operations Report			X	X	X	X
	Decommissioning Plan Report			X	X	X	X
Consultation	Project Notice		X	X	X	X	X
	Meeting Notice(s)			X	X	X	X
	Public Consultation			X	X	X	X
	Municipal Consultation			X	X	X	X
	Aboriginal Consultation			X	X	X	X
	Consultation Report			X	X	X	X
Heritage & Protected Areas	Cultural Heritage Features			X	X	X	X
	Archaeological Features			X	X	X	X
	Natural Features			X	X	X	X
	Water Bodies			X	X	X	X
	Provincial Policy Plans			X	X	X	X
Technical	Wind Turbine Specifications Report			X	X	X	X
	Must meet noise matrix				X		
	Noise Study Report always Required					X	X
	Offshore Wind Facility Report						X
Setbacks & Mitigation	Parcel Boundary Setback			hub height	hub height	hub height	
	Lower Parcel Boundary Setback with Study			blade + 10m	blade + 10m	blade + 10m	
	Road/railway right of way setback			blade + 10m	blade + 10m	blade + 10m	
	Minimum Noise Setback				550 m	550 m	
	Lower Noise setback with Mitigation				road noise	road noise	

Please note the Ministry of the Environment's Approvals Program requires that all undertakings requiring approval under ministry legislation are carried out in accordance with the Acts and applicable Regulations and Guidelines administered by the ministry. For reference purposes this table outlines the information required for wind facilities contained in the Renewable Energy Approval regulation (O.Reg.359/09). Applicants are expected to refer to O.Reg.359/09 and submit applications that contain all the required information. A copy of O.Reg.359/09 can be found at the following website: www.e-laws.gov.on.ca/html/source/regs/english/2009/elaws_src_regs_r09359_e.htm

For more information on the Renewable Energy Approval visit the Ministry of the Environment online at www.ene.gov.on.ca and/or the Renewable Energy Facilitation Office online at www.mei.gov.on.ca/en/energy/renewable/index.php?page=refo_office or by telephone at 1-877-440-REFO (7336)

Provided by MOE
May 6/2010

Solar Facilities

Summary of Renewable Energy Approval Requirements

		Class 1: **All** ≤ 10 kW	Class 2 **Roof/wall > 10 kW**	Class 3 **Ground > 10 kW**
Plans & Reports	No REA	X	X	
	REA Required			X
	Project Description Report			X
	Construction Plan Report			X
	Design and Operations Report			X
	Decommissioning Plan Report			X
Consultation	Project Notice			X
	Meeting Notice(s)			X
	Public Consultation			X
	Municipal Consultation			X
	Aboriginal Consultation			X
	Consultation Report			X
Heritage & Protected Areas	Cultural Heritage Features			X
	Archaeological Features			X
	Natural Features			X
	Water Bodies			X
	Provincial Policy Plans			X
Technical	Site-specific Noise Study Report			X

Please note the Ministry of the Environment's Approvals Program requires that all undertakings requiring approval under ministry legislation are carried out in accordance with the Acts and applicable Regulations and Guidelines administered by the ministry. For reference purposes this table outlines the information required for solar facilities contained in the Renewable Energy Approval regulation (O.Reg.359/09). Applicants are expected to refer to O.Reg.359/09 and submit applications that contain all the required information. A copy of O.Reg.359/09 can be found at the following website: www.e-laws.gov.on.ca/html/source/regs/english/2009/elaws_src_regs_r09359_e.htm

Applicants are also encouraged to check with their municipal building department about whether a building permit is required.

For more information on the Renewable Energy Approval visit the Ministry of the Environment online at www.ene.gov.on.ca and/or the Renewable Energy Facilitation Office online at www.mei.gov.on.ca/en/energy/renewable/index.php?page=refo_office or by telephone at 1-877-440-REFO (7336)

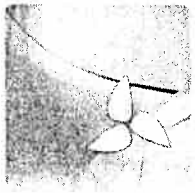
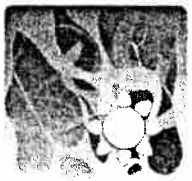
Provided by MOE
May 6/2010

Renewable Energy Approval Process

Doris Dumais, Director, Approvals Program
Environmental Assessment and Approvals Branch
Ministry of the Environment
May 3, 2010

Provided by MOE May 6/2010

This Presentation Will...


Provide an overview of the Renewable Energy Approval (REA) process and requirements for renewable energy projects in Ontario.

Context

- The *Green Energy and Green Economy Act* received Royal Assent on May 14, 2009.
- Renewable Energy Approval Regulation under the *Environmental Protection Act* (O. Reg. 359/09) brought into force on September 24, 2009.
- The Renewable Energy Approval (REA) is a coordinated environmental approval for renewable energy generation projects.

Key Features of the *Green Energy Act*

- Renewable Energy Facilitation Office - One-window contact and advocate for Developers, Coordinate, track, monitor progress of projects
- Feed in Tariff (FIT) – set revenue stream for Developers, REA will be a requirement of their "Notice to Proceed" for the FIT contract
- Renewable Energy Approval (REA)

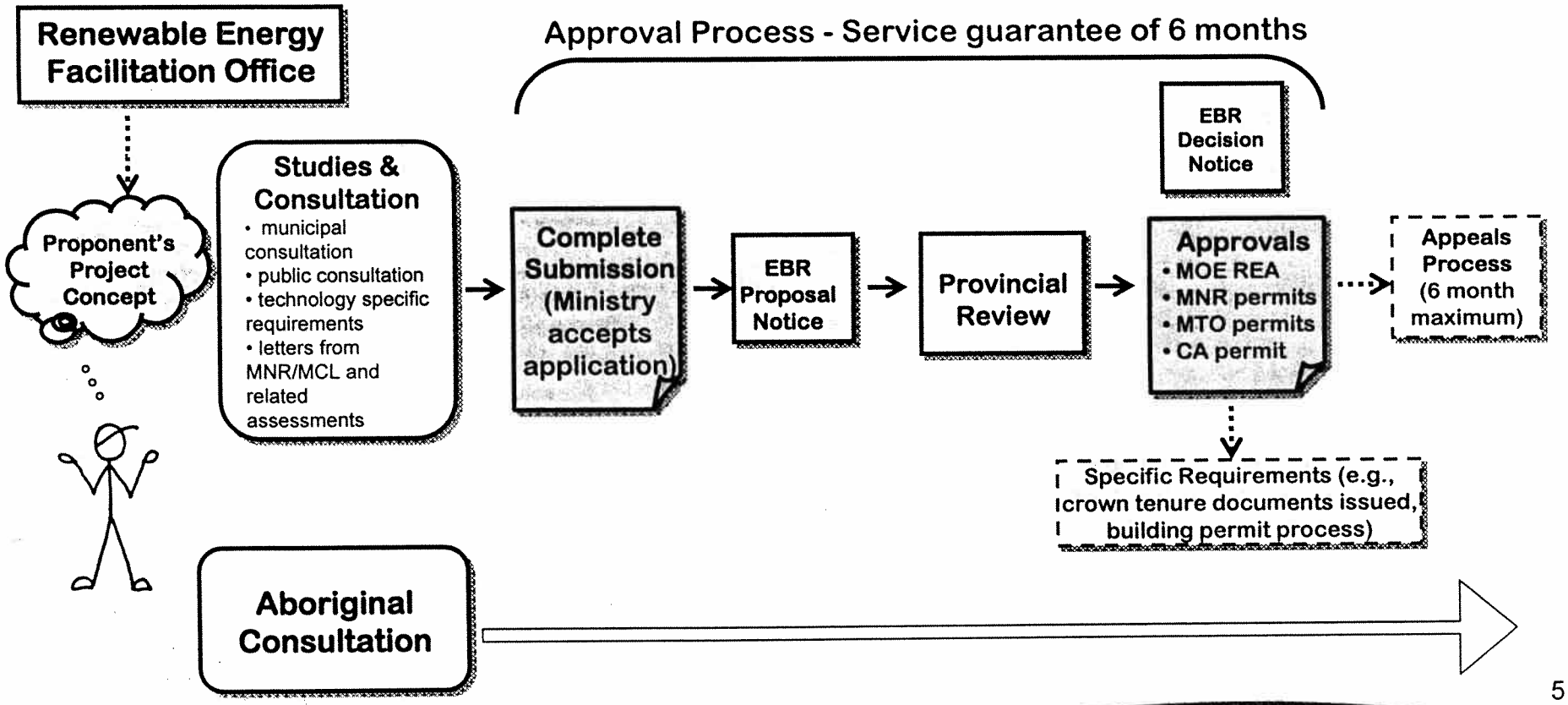
  – Streamlined environmental approval process for projects with an approval service guarantee coordinated with MOE, MNR, MTO, MTC and Conservation Authorities

  - up front province identification of aboriginal communities that applicants must consult (coordinated with MEI, MNR, MOE, MAA)

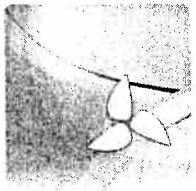
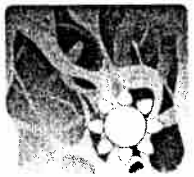
REA Process Principles: Concepts for an Efficient and Effective Approval Process

- **Emitter Accountability** as applicants are responsible for their emissions and must meet MOE requirements. A Complete Submission is required in order for applications to be accepted.
- **Regulatory Efficiency** as MOE commitment to approval process review for improvement and enhancement via guidance, screening applications, new ways of doing business and outreach to the regulated community
- **Enhanced coordination** of application reviews through all required ministries and REFO.
- **Focused Review** with MOE staff following an established review standard to produce, review or audit technical information. MOE must demonstrate a fair and consistent approach and hold applicants accountable.

Renewable Energy Approval Process



REA Application Submission Potential Requirements*

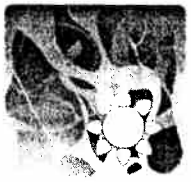




- Project Description Report
- Construction Plan
- Design and Operations Plan
- Decommissioning Plan
- Public Notice
- Consultation Report (including summaries of local Aboriginal, public and municipal consultation)
- Cultural Heritage Summary
- Natural Heritage Summary
- Water Bodies Summary
- Provincial Policy Plan Summary

*Table 1 of Regulation 359/09

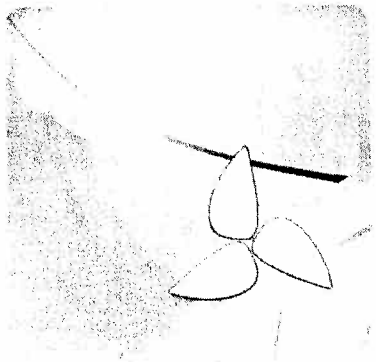
What's In, What's Out

- **Wind Facilities**
  - Over 3kW but less than 50kW (streamlined requirements)
  - Over 50kW (including setbacks)
  - All off-shore wind projects



- **Solar Facilities**
  - Ground mounted over 10kW
  - No approval required for rooftop or wall mounted of any size
  - Prime agricultural land restrictions within the FIT contract

- **Bio-energy Facilities**
  - Defined in the Green Energy Act as biomass, biogas or biofuel
  - Can be anaerobic digestion or thermal treatment facilities
  - No approval required for farm-based operations addressed under the Nutrient Management Act
- **Waterpower Facilities**
  - Does not require an REA; existing Class EA and MOE/MNR approvals still apply

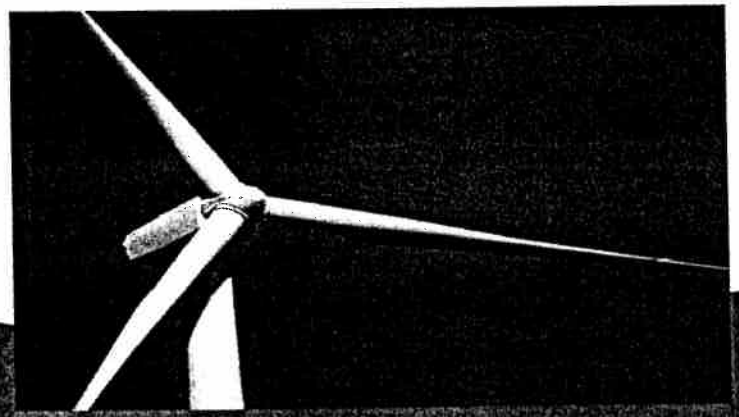


Wind Project Requirements

- REA is required for all wind projects >3kW
- Application requirements (studies, reports as applicable)
- Noise Study
- Receptor setbacks, property and road setbacks
- Natural heritage provisions
  - Development prohibitions – surface water, Areas of Natural and Scientific Interest (ANSI)
- Cultural heritage provisions

Wind Projects Noise Receptor Setbacks

- Applicants can conduct a noise study to move closer than the setback in the matrix, up to a minimum of 550m
- Only exception for the 550m noise setback is demonstrated ambient noise levels due to road traffic that exceeds 40dBA
- The setback does not apply to participating receptors
- A noise receptor is "participating" if a part of the facility is located on their property and there is some kind of agreement between the receptor and the facility owner



Wind Project Noise Matrix

- Provides how far large projects will have to be located from residences and other receptors, including a **minimum setback of 550 m**

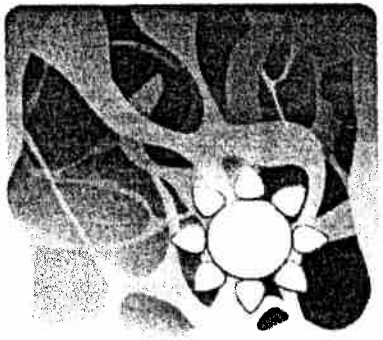
Number of Wind Turbines	Setback in metres (m) from closest Point of Reception corresponding to wind turbine Sound Power Levels in decibels (dBA)				
	102 dBA	103 - 104 dBA	105 dBA	106 - 107 dBA	> 107 dBA
1 – 5 turbines	550 m	600 m	850 m	950 m	Noise study required
6 - 10 turbines	650 m	700 m	1000 m	1200 m	
11 - 25 turbines	750 m	850 m	1250 m	1500 m	
26+ turbines	Noise study required				

Proposed setbacks in the noise matrix are consistent with the Ministry of the Environment's *Noise Guidelines for Wind Farms* (October 2008) and the noise level limit of 40 dBA at the Point of Reception regardless of wind speed.

Wind Project Property and Road Setbacks

- Setbacks from property lines equal to, or greater than the hub height (approx. 80m)
  - Applicants can submit a property line assessment to reduce the setback to a minimum of blade length plus 10m

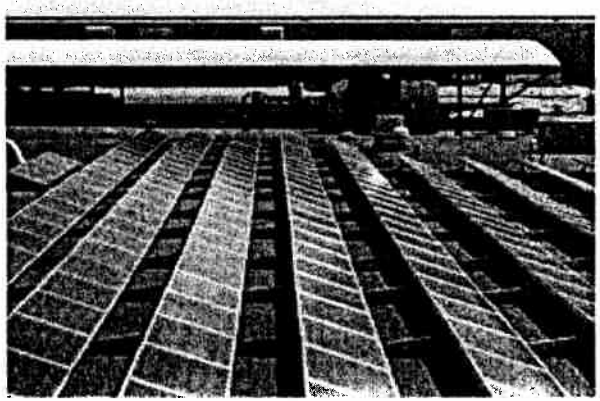
- Setbacks from roads/railways equal to or greater than blade length plus 10 M (approx. 50m)
  - Developed in coordination with MTO

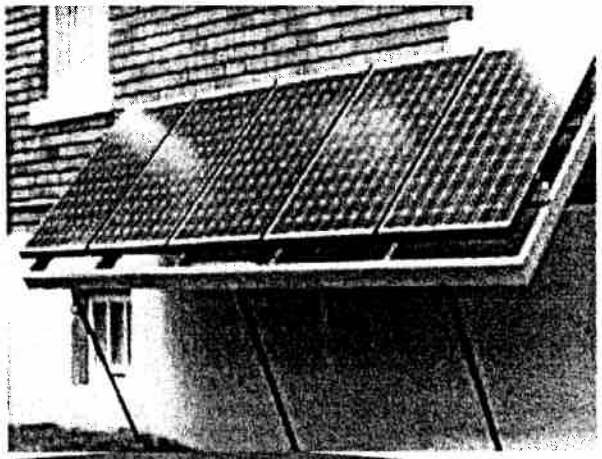


Solar Project Requirements

- REA is required for all ground mounted solar projects >10 kW
- Applications requirements (studies, reports as applicable)
- Noise study
- Natural heritage provisions - Development prohibitions – surface water, Areas of Natural and Scientific Interest (ANSI), setbacks from significant woodlots, etc.
- Cultural heritage provisions

Solar Projects Noise Study





- Applicants are required to submit a noise study as part of their application for a REA
- The noise study must assess the potential impacts at nearby receptors (e.g. residence) from sound emitted by electrical equipment (e.g. inverters, transformers)
- The application and noise study is required to demonstrate that the solar facility, as designed, can meet a 40 decibel noise level

Biomass Project Requirements

Anaerobic Digestion Facilities: **3 Classes** based on location and types of waste feed material

- **Operational Requirements:**

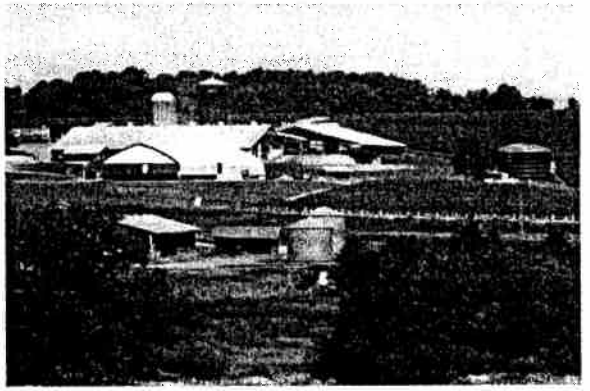
Class 1 and 2 On Farm Anaerobic Digestion Facilities

- **250m** from nearest odour receptor; or
- **125m** from nearest odour receptor, if generating ≤ 500 kW, and following 4 Best Mgmt Practices (BMPs); or
- **No prescribed setbacks, if generating > 500 kW and submit the following studies:** Emission Summary and Dispersion Modelling Rpt; Noise, and Odour Studies

Class 2 Anaerobic Digestion Facilities must submit:

- Effluent Management Plan Rpt; Hydrogeological Assessment Rpt; and Surface Water Assessment Rpt

Biomass Project Requirements (cont'd)



Anaerobic Digestion Facilities – Class 3:

Must be designed: With a gas storage cover as prescribed by the regulation and a high efficiency flare system; and

Must submit: Effluent Management Plan Report; Emission Summary and Dispersion Modelling Rpt; Hydrogeological Assessment Rpt; Noise Study; Odour Study; and Surface Water Assessment Rpt

(All Class 2 and 3 Anaerobic Digestion Facilities are subject to Financial Assurance requirements)

Biogas facilities include:

- Generation facilities using biogas produced offsite

- Generation facilities using biogas produced onsite through means other than anaerobic digestion, such as landfill gas capture

These facilities must submit: Noise study; Emission Summary and Dispersion Modelling Rpt; and Odour study

Biomass Project Requirements (cont'd)

Thermal Treatment: 3 classes based on types of feed material and the location

- **Operational Requirements**

  Class 1 (woodwaste only, any location) must submit:

  Effluent Management Plan Rpt; Emission Summary and Dispersion Modelling Rpt (if not located on-farm); Noise Study (if not located on-farm); and Surface Water Assessment Rpt

  Class 2 (any biomass, on-farm) must submit:

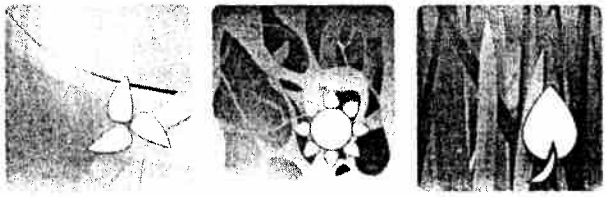
  Effluent Management Plan Rpt; and Surface Water Assessment Rpt

  Class 3 (any biomass, off-farm) must submit:

  Effluent Management Plan Rpt; Emission Summary and Dispersion Modelling Rpt; Hydrogeological Assessment Rpt; Noise Study; and Surface Water Assessment Rpt

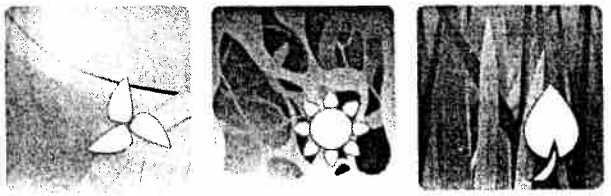
All Class 2 and 3 Thermal Treatment Facilities are subject to Financial Assurance requirements

Additional Reports



- Depending on the type of renewable energy technology, project size, or other features of the facility design, additional technical reports may be required as part the REA application. These include:
  - Effluent Management Plan Report
  - Emission Summary and Dispersion Modelling Report
  - Environmental Impact Study Report
  - Hydrogeological Assessment Report
  - Noise Study
  - Odour Study
  - Property Line Setback Assessment Report
  - Surface Water Assessment Report
  - Water Bodies Report

Project Description Report

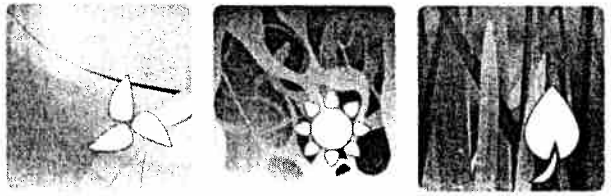


- Describes the scope and scale of the project, environmental impacts expected to be encountered and mitigation taken as part of the project
- Draft report required by the Ministry of the Environment at the beginning of the process to help determine required aboriginal consultation
- Draft report will be the key document throughout consultation with Aboriginal, public, municipal parties.
- Typical content could include:

  Project description in terms of energy sources, renewable energy generation facility class, project activities, nameplate capacity and land ownership.

  Description of any potential environmental effects on heritage and archaeological resources, natural heritage resources, local resources and infrastructure and areas protected under the provincial plans and policies.

Construction Plan Report

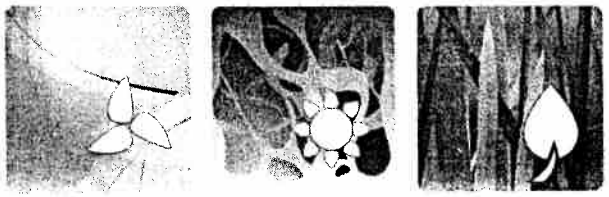


- Describes the construction and installation activities as well as mitigation strategies for any potential negative environmental effects
- Typical content could include:
  - How excavation activities will be conducted to prevent stormwater impacts
  - How dust and noise impacts will be minimized or mitigated
  - How any waste generated during construction will be managed
  - Details on how all generation equipment and construction materials will be transported onto the site
- This is an important draft report for municipal consultation

Design & Operations Report

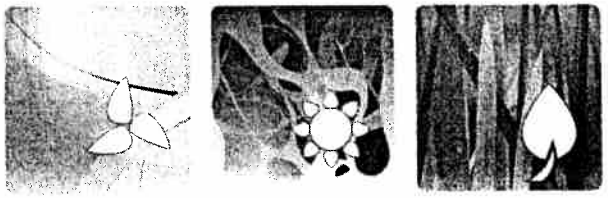
- Principal technical document providing the details of the project design and engineering
- Report contents:
  - Site Plan
  - Facility Design Plan
  - Facility Operations Plan
  - Environmental Effects Monitoring Plan
  - Emergency Response and Communications Plan
- Purpose of the report is to show how the facility will:
  - meet requirements of O. Reg. 359/09 such as setback distances
  - be designed to avoid and mitigate environmental effects
- Report refers to conclusions drawn in other technical reports

Decommissioning Plan Report



- Outlines how the facility will be decommissioned at the end of the project life
- Typical content will include:
  - Procedures for dismantling or demolishing the facility, including decommissioning during construction (abandonment of project); decommissioning after ceasing operation;
  - Restoration of lands negatively affected by the facility; and
  - Procedures for managing excess materials and waste that will be generated during the decommissioning activities.
- Will include financial assurance requirements if a bio-energy facility
  - Ministry of the Environment has the authority to ask for financial assurance for a project as a condition of approval
- This is another draft report that will be important in municipal consultation

Consultation Report



- Outlines consultation with the public, Aboriginal communities* and local municipalities and boards in accordance with the consultation requirements outlined in the REA Regulation 359/09.
- Typical content will include:
  - Documentation of applicant requirements to: notify the public of meetings, record meeting results with interested and affected stakeholders, and outline changes made to the project design as a result of consultation.
  - Ensure interested and affected parties understand they can submit comments directly to the MOE through the Environmental Registry when the application is posted, and that their comments will be considered by the MOE prior to making a decision on the application.

* An Aboriginal consultation guidance document is currently being developed.

Guidance For Proponents

- Plain language guide, *Provincial Approvals for Renewable Energy Projects*, available on the Ministry website: http://www.ene.gov.on.ca/en/business/green-energy/docs/REP_Guide.pdf
- Six technical bulletins have been posted for a 90-day comment period (Mar 1 – May 30) EBR Registry Number 010-9235: www.ebr.gov.on.ca
- Technical bulletins describe contents of major reports required as part of an application under O.Reg.359/09
  - Project Description Report
  - Design and Operations Report
  - Construction Plan Report
  - Decommissioning Plan Report
  - Setback requirements for wind turbines
  - Consultation Report

More Information

- **MOE website** has general information and detailed application requirements.
  - Fact sheets describing technology specific requirements, the consultation process, and a jurisdictional comparison.
  - *Guide: Provincial Approvals for Renewable Energy Projects*
  - Technical Bulletins on the EBR for consultation (more to follow)

- **Proponents considering project application for approval -** contact the MOE, Environmental Assessment and Approvals Branch: eaabgen.moe@ontario.ca

- **MEI's Renewable Energy Facilitation Office (REFO)** has general information on all aspects of bringing a renewable energy project to life.
  - www.ontario.ca/greenenergyprojects.
  - 1-877-440-REFO (7336)
  - REFO@ontario.ca

Stantec Consulting Ltd.
Suite 1 - 70 Southgate Drive
Guelph ON N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

June 4, 2010
File: 160960577 / 161010624

Ministry of the Environment
Environmental Assessment and Approvals Branch
12A Floor
2 St. Clair Avenue West
Toronto, ON M4V 1L5

Attention: **Doris Dumais, Director, Approvals Program**

Reference: **Grand Renewable Energy Park**
Draft Project Description

Dear Ms. Dumais:

Please find enclosed the Draft Project Description for the proposed Grand Renewable Energy Park.

This document provides a summary of the Project as required by Ontario Regulation 359/09 - Renewable Energy Approvals under Part V.0.1 of the Act of the *Environmental Protection Act* ("the Regulation").

In accordance with subsection 14.(1)(b) of the Regulation, we respectfully request that you provide a list of aboriginal communities who have or may have constitutionally protected aboriginal or treaty rights that may be adversely impacted by the project, or otherwise may be interested in any negative environmental effects of the project.

In the event that you have any questions, please do not hesitate to contact the undersigned. We look forward to your response and look forward to working with Ministry staff throughout the permitting and approvals process.

Sincerely,

STANTEC CONSULTING LTD.

Rob Nadolny
Senior Project Manager
Tel: (519) 836-6050
Fax: (519) 836-2493
Rob.nadolny@stantec.com

Attachment: Draft Project Description

CC. Adam Rosso, Samsung Renewable Energy Inc.

Stantec Consulting Ltd.
Suite 1 - 70 Southgate Drive
Guelph ON N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

June 24, 2010
File: 160960577 / 161010624

Ministry of the Environment
Environmental Assessment and Approvals Branch
12A Floor
2 St. Clair Avenue West
Toronto, ON M4V 1L5

Attention: **Doris Dumais, Director, Approvals Program**

Reference: **Grand Renewable Energy Park**
Draft Project Description – Version 2

Dear Ms. Dumais:

Please find enclosed the Draft Project Description Report – Version 2 for the proposed Grand Renewable Energy Park.

This document provides a summary of the Project as required by Ontario Regulation 359/09 - Renewable Energy Approvals under Part V.0.1 of the Act of the *Environmental Protection Act* ("the Regulation"). Draft Project Description Report - Version 2 has been updated to include additional information related to Project setbacks and the identification of potential environmental effects.

In accordance with subsection 14.(1)(b) of the Regulation, we respectfully request that you provide a list of aboriginal communities who have or may have constitutionally protected aboriginal or treaty rights that may be adversely impacted by the project, or otherwise may be interested in any negative environmental effects of the project.

In the event that you have any questions, please do not hesitate to contact the undersigned. We look forward to your response and look forward to working with Ministry staff throughout the permitting and approvals process.

Sincerely,

STANTEC CONSULTING LTD.

Rob Nadolny
Senior Project Manager
Tel: (519) 836-6050
Fax: (519) 836-2493
Rob.nadolny@stantec.com

Attachment: Draft Project Description – Version 2

CC. Adam Rosso, Samsung Renewable Energy Inc.

Ministry of the Environment

Environmental Assessment and Approvals Branch

2 St. Clair Avenue West
Floor 12A
Toronto ON M4V 1L5
Tel.: 416 314-8001
Fax: 416 314-8452

Ministère de l'Environnement

Direction des évaluations et des autorisations environnementales

2, avenue St. Clair Ouest
Étage 12A
Toronto ON M4V 1L5
Tél. : 416 314-8001
Téléc. : 416 314-8452

Ontario

September 23, 2010

MOE File #: WC-10-WSF-0049

Mr. Adam Rosso
Samsung Renewable Energy Inc.
55 Standish Court
Mississauga ON L5R 4B2

Dear Mr. Rosso:

RE: Director's Aboriginal Communities List - Grand Renewable Energy Park

The Ontario Ministry of the Environment (Ministry) has reviewed the information provided in the *Draft of the Project Description Report* (PDR) received for the *Grand Renewable Energy Park.* The Ministry has reviewed the anticipated environmental effects of the project (as described in the PDR) relative to its current understanding of the interests of aboriginal communities in the area.

In accordance with section 14 of Ontario Regulation 359/09 "Renewable Energy Approvals under Part V.0.1 of the Act" (O. Reg. 359/09) made under the *Environmental Protection Act*, please find below the list of aboriginal communities who, in the opinion of the Director:

i) have or may have constitutionally protected aboriginal or treaty rights that may be adversely impacted by the project (s.14(b)(i)):

Aboriginal Community **Common Name:** **Reserve Name:** **Contact Information:**
Six Nations of the Grand River Six Nations (Part) 40 PO BOX 5000 Ohsweken ON N0A 1M0 Phone (519) 445-2201 Fax (519) 445-4208
Six Nations of the Grand River Haudenosaunee Confederacy Council RR2 Oshwken ON NOA 1MO Phone (519) 755-2769

Mississaugas of the Credit First Nation Mississaugas of the New Credit New Credit (Part) 40A RR 6 Hagersville ON N0A 1H0 Phone (905) 768-1133 Fax (905) 768-1225
Oneida Nation of the Thames Oneida 41 RR 2 Southwold ON N0L 2G0 Phone (519) 652-3244 Fax (519) 652-9287
Wahta Mohawks Wahta Mohawk Territory PO BOX 260 Bala ON P0C 1A0 Phone (705) 762-2354 Fax (705) 762-5744
Mohawks of the Bay of Quinte Tyendinaga Mohawks Tyendinaga Mohawk Territory RR 1 Deseronto ON K0K 1X0 Phone (613) 396-3424 Fax (613) 396-3627
Mohawks of Akwesasne Akwesasne (Part) 59 PO BOX 579 Cornwall ON K6H 5T3 Phone (613) 575-2250 Fax (613) 575-2181

OR

ii) otherwise may be interested in any negative environmental effects of the project (s.14(b)(ii)):

Aboriginal Community **Common Name:** **Reserve Name:** **Contact Information:**
Grand River Métis Council 76 Buttonwood Drive Kitchener ON N2M 4R1

Métis Nation of Ontario
Consultation Unit
500 Old St. Patrick St, Unit 3
Ottawa ON K1N 9G4

NOTE: None of the foregoing should be taken to imply approval of this project or the contents of the PDR. This letter only addresses the requirement of the Director to provide a list of aboriginal commuities to you as required pursuant to section 14 of O. Reg. 359/09. You should also be aware that information upon which the above list of aboriginal communities is based is subject to change. Aborginal communities can make assertions at any time, and other developments, for example the discovery of Aboriginal archaeological resources, can occur that may require additional aboriginal communities to be notified. Should this happen, the Ministry will contact you. Similarly, if you recieve any feedback from any aboriginal communities not included in this list, as part of your consultation, the Ministry would appreciate being notified.

Please contact Narren Santos at (416) 314-8442 should you have any questions or require additional information.

Sincerely,

Doris Dumais
Director
Environmental Assessment Approvals Branch
Ministry of Environment

cc: Mansoor Mahmood, Renewable Energy Team, Ministry of the Environment
Joe de Laronde, Aboriginal Affairs Branch, Ministry of the Environment

Friedl, Susanne

From: Adam Rosso <a.rosso@samsungrenewableenergy.ca>
Sent: Wednesday, December 22, 2010 4:06 PM
To: Dumais, Doris (ENE); Mahmood, Mansoor (ENE)
Cc: Ing, Pearl (MEI); Chander, Sunita (MEI); Jim.Salmon@ZephyrNorth.com; Galajda, Larry; Nadolny, Rob; Kozak, Mark; B Edwards; Byun Hyo-In; Daniel Choi; GY Yoo (gy.yoo@samsung.com); Hagen Lee (hagen.lee@samsung.com); Jang (jang7070 @samsung.com); KC Kim; Marnie Dawson; Min Park; Ryan Kim; Zohrab Mawani; ???; Brad Hillman; Colin Edwards (colin.edwards@patternenergy.com); Jody Law; Kim Sachtleben
Subject: Crystallization - Grand Renewable Energy Park
Attachments: image001.jpg; Samsung Newsletter2010.12.8.pdf; GREP Crystillization Table.xls; Preliminary Turbine Layout.pdf

Follow Up Flag: Follow up
Flag Status: Flagged

Hello Doris;

Samsung Renewable Energy and Pattern Energy would like to submit the following attachments as required material to crystallize our wind turbine layout for our Grand Renewable Energy Park.

SRE is planning on sending the attached newsletter to approximately 5300 stakeholders within our project area. According to our mail distributor, the newsletter will be at the households on December 28th, 2010. The newsletter is attached and named "Samsung Newsletter2010.12.8.pdf".

The Preliminary Layout Map, attached "Preliminary Turbine Layout.pdf" will be uploaded to our website between now and the newsletter arrival date. The map is designed to the specifications outlined by the MOE.

The attached table is a list of all turbines located adjacent to our project named "GREP Crystallization Table.xls.

If you notice any deficiencies in our submission please notify us as soon as possible.

Thanks Kindly;

SAMSUNG
Renewable Energy Inc.

Adam Rosso, P.Eng., M.Sc.
Manager, Business Development
C: 416.389.8942
T: 905.285.1872
E: a.rosso@samsungrenewableenergy.ca

CONTACT RECORD

NAME(S):	Lynne Bosquet	**PROJECT NO.:**	160960577
	Environmental Officer	**REPRESENTING:**	MOE
TELEPHONE:	905-521-7657	**DATE/TIME:**	Jan 18, 2011
RE:	Samsung (GREP)	**RECORDED BY:**	Mark Kozak

☐ **CALL RECEIVED** ☒ **CALL PLACED** ☐ **MEETING**

NOTES:

Call was made to obtain information regarding the closed South Cayuga Landfill. Lynne indicated the site received a C of A in 1973 (#A110307) and that the site is now closed. Additional information about the landfill would have to be obtained via a Freedom of Information Act request.

NO.	FOLLOW-UP TASK	TIMING	BY	DONE

Ministry of the Environment

Environmental Assessment and Approvals Branch

2 St. Clair Avenue West
Floor 12A
Toronto ON M4V 1L5
Tel.: 416 314-8001
Fax: 416 314-8452

Ministère de l'Environnement

Direction des évaluations et des autorisations environnementales

2, avenue St. Clair Ouest
Étage 12A
Toronto ON M4V 1L5
Tél. : 416 314-8001
Téléc. : 416 314-8452

Ontario

March 2, 2011

Mr. Hagen Lee
Samsung Renewable Energy Inc.
55 Standish Court
Mississauga ON L5R 4B2

Dear Mr. Lee:

Thank you for the February 25, 2011 follow up email requesting clarification on the Aboriginal Consultation requirements for Samsung Renewable Energy's (Samsung) proposed Grand Renewable Energy Park.

In accordance with requirements set out in the Renewable Energy Approval Regulation (O.Reg.359/09), all of the Aboriginal communities identified in the section 14 list provided to Samsung on September 23, 2010, should receive project notices and be provided with the required project documentation, reports and summaries.

I am however aware that the Ministry of Energy has already provided Samsung with some guidance relating to Aboriginal consultation with respect to the 1701 Treaty communities specifically. My understanding is that Samsung was advised that the most proximate 1701 Treaty communities (Six Nations of the Grand River and Oneida Nations of the Thames) should be proactively engaged through follow-up, meetings, etc. However, for the more distant 1701 Treaty communities, Samsung was advised that they need only follow-up (via meetings, etc.) if the community responds and/or approaches Samsung.

I trust this clarifies your queries. Please do not hesitate to contact me should you have any further questions.

Yours sincerely,

Doris Dumais
Director – Approvals Program
Environmental Assessment and Approvals Branch

C: Pearl Ing, Director, Renewable Energy Facilitation Office, Ministry of Energy
Marnie Dawson, Samsung Renewable Energy Inc.

Stantec Consulting Ltd.
Suite 1 - 70 Southgate Drive
Guelph ON N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

June 23, 2011
File: 160960577

Environmental Assessment and Approvals Branch
Ministry of the Environment
2 St. Clair West, Floor 12A
Toronto, ON M4V 1L5

Attention: Doris Dumais, Director

Dear Ms. Dumais:

Reference: Crystallization – Grand Renewable Energy Park

On December 22, 2010, Samsung Renewable Energy (Samsung) submitted a draft site plan to the Ministry of the Environment (MOE) in order to "crystallize" the turbine layout for the proposed Grand Renewable Energy Park (the Project) to be located in Haldimand County. In accordance with Section 54 of O. Reg. 359/09, a Renewable Energy Approval (REA) application must be submitted within six months of the date the draft site plan was issued. However, the Director may extend the six-month period if the Director is of the opinion that the proponent has made all reasonable efforts to submit an application within the six-month period, but is not able to do so due to circumstances beyond the proponent's control.

Due to the following unforeseen circumstances beyond Samsung's control and based on the proposed schedule moving forward, Samsung respectfully requests to extend the period in which the draft site plan is considered "crystallized" until March 1, 2012.

- Samsung has experienced significant weather delays related to the completion of Stage II Archaeological Assessments of the Project Location.

- Additional on-site investigations related to the Natural Heritage Assessment/Environmental Impact Study (NHA/EIS) have been requested by the Ministry of Natural Resources (MNR). On-site investigations were completed in early June 2011.

- Samsung has experienced a delay in receiving confirmation of the NHA/EIS from the MNR. It is currently anticipated that confirmation of the NHA/EIS will be received in July 2011.

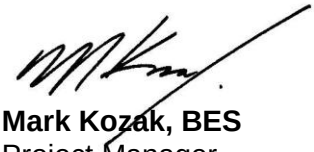
Based on the circumstances detailed above and the remaining activities to be completed as per the requirements of O. Reg. 359/09 including the completion of a second public meeting, Samsung anticipates submitting its REA application to the MOE in early 2012.

Reference: Crystallization – Grand Renewable Energy Park

Thank you for your attention to this matter.

Sincerely,

STANTEC CONSULTING LTD.



Mark Kozak, BES
Project Manager
Tel: (519) 836-6050
Fax: (519) 836-2493
mark.kozak@stantec.com

c. Marnie Dawson, Samsung Renewable Energy
Narren Santos, Ministry of the Environment
Mansoor Mahmood, Ministry of the Environment

Ministry of the Environment

Environmental Assessment and
Approvals Branch

2 St. Clair Avenue West
Floor 12A
Toronto ON M4V 1L5
Tel.: 416 314-8001
Fax: 416 314-8452

Ministère de l'Environnement

Direction des évaluations et des
autorisations environnementales

2, avenue St. Clair Ouest
Étage 12A
Toronto ON M4V 1L5
Tél. : 416 314-8001
Téléc. : 416 314-8452

Ontario

June 29, 2011

Mr. Mark Kozak
Stantec Consulting Ltd.
70 Southgate Drive, Suite 1
Guelph ON N1G 4P5

Dear Mr. Kozak:

Thank you for your letter dated June 23, 2011 in which Samsung Renewable Energy (Samsung) requests an extension to the time required to submit an REA application to the Ministry for the Grand Renewable Energy Park in order to continue to have paragraph 4 of subsection 54 (1.2) of O. Reg. 359/09 apply to the project.

I have considered your request for a time extension for the Grand Renewable Energy Park and am of the view that Samsung has made all reasonable efforts to submit an REA application within the six-month period referred to in subsection 54 (1.5) of O. Reg. 359/09 but is not able to do so due the fact that the archaeological work has not yet been completed in accordance with the Ministry of Culture's requirements and final confirmation and / or comments from the Ministry of Natural Resources on the natural heritage assessment are not expected until July 2011.

As such, this letter serves as confirmation of my decision to extend the six-month period in accordance with subsection 54 (1.6) of O. Reg. 359/09. As requested, the extension will be until March 1, 2012.

In order to continue to have paragraph 4 of subsection 54 (1.2) of O. Reg. 359/09 apply to the Grand Renewable Energy Park, Samsung must submit an REA application to the Ministry within this extended time period.

Please note that if Samsung does not submit an REA application to the Ministry on or before March 1, 2012, paragraph 4 of subsection 54 (1.2) of O. Reg. 359/09 ceases to apply to the Grand Renewable Energy Park.

Sincerely,

Doris Dumais
Director
Environmental Assessment and Approvals Branch

c: Marnie Dawson, Samsung Renewable Energy

Stantec Consulting Ltd.
Suite 1 - 70 Southgate Drive
Guelph ON N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

July 20, 2011
File: 160960577

Ministry of the Environment
Environmental Assessment and Approvals Branch
2 St. Clair Avenue West – Floor 12A
Toronto, Ontario M4V 1L5

Attention: Ms. Doris Dumais, Director – Approvals Program

Dear: Ms. Dumais

Reference: Grand Renewable Energy Park – Notice of Public Meeting

Samsung C&T (Samsung), Pattern Energy (Pattern), and Korea Power Electric Corporation (KEPCO) (together, these companies referred to herein as "SPK") are proposing to develop, construct, and operate a wind and solar energy project as part of the Grand Renewable Energy Park, in Haldimand County. SPK is planning to engage in this renewable energy project in respect of which the issuance of Renewable Energy Approvals (REA) is required. The proposal to engage in the project and the project itself are subject to the provisions of the *Environmental Protection Act (ACT)* Part V.0.1 and Ontario Regulation 359/09 (O Reg. 359/09)).

In accordance with section 15.(6)5 of O. Reg. 359/09, Stantec is pleased to provide you with a copy of the Notice of Public Meeting for the Grand Renewable Energy Park public meeting to be held on September 22, 2011. A copy of this Notice has been distributed to all stakeholders and aboriginal communities as required by O. Reg. 359/09.

Sincerely,

STANTEC CONSULTING LTD.

Mark Kozak, BES
Project Manager
Tel: (519) 836-6050
Fax: (519) 836-2493
mark.kozak@stantec.com

Attachment: Notice of Public Meeting

c. Adam Rosso, Samsung Renewable Energy Inc.

NOTICE OF PUBLIC MEETING

To be held by Samsung Renewable Energy Inc. Regarding a Proposal to Engage in a Renewable Energy Project

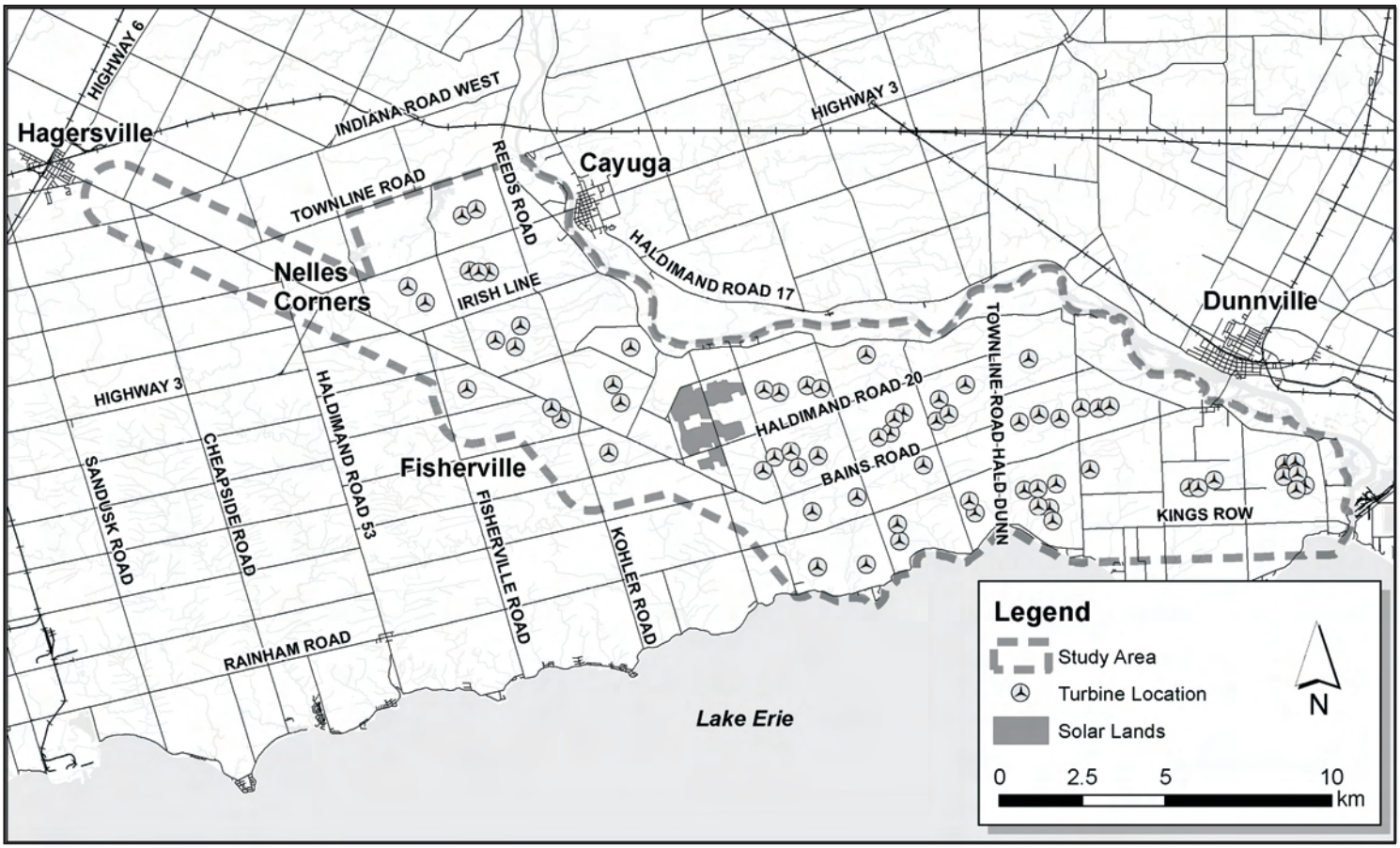
Project Name: Grand Renewable Energy Park
Project Location: County of Haldimand, Ontario
Dated at County of Haldimand this the 20th day of July, 2011

Samsung C&T (Samsung), Pattern Energy (Pattern), and Korea Power Electric Corporation (KEPCO), (together, these companies referred to herein as "SPK") are proposing to develop, construct, and operate a wind and solar energy project as part of the Grand Renewable Energy Park, in Haldimand County. SPK is planning to engage in this renewable energy project in respect of which the issuance of renewable energy approvals is required. The proposal to engage in the project and the project itself are subject to the provisions of the Environmental Protection Act (ACT) Part V.0.1 and Ontario Regulation 359/09 (Regulation). This notice is being distributed in accordance with section 15 of the Regulation prior to an application being submitted and assessed for completeness by the Ministry of the Environment.

Meeting Information:

DATE: September 22, 2011
TIME: 5:00 to 8:00 PM
PLACE: Cayuga Kinsmen Community Centre
15 Thorburn Street, Cayuga, Ontario

Project Description:
Pursuant to the Act and Regulation, the facility, in respect of which the project is to be engaged in, is a Class 4 Wind Facility and a Class 3 Solar Facility. If approved, this facility would have a total maximum nameplate capacity of 148.6 MW for the wind project and 100 MW nameplate capacity for the solar project. The project location is described in the map below.



Documents for Public Inspection:
The Draft Project Description Report describes the project as a wind facility consisting of sixty-seven (67) Siemens SWT-2.3-101 wind turbines, approximately 425,000 photovoltaic (PV) solar panels, a collector sub-station, interconnect station and Operations and Maintenance building, approximately 20 km of 230 kV transmission lines along Haldimand Road 20, and approximately 82 km of new overhead and/or underground 34.5 kV collector lines along public roads. A written copy of the Draft Project Description Report will be made available for public inspection starting on July 23, 2011 at the following locations:

Dunnville Library
317 Chestnut St
Dunnville, Ontario N1A 2H4
905-774-4240

Selkirk Library
34 Main Street West
Selkirk, Ontario N0A 1P0
905-776-2127

Hagersville Library
13 Alma St. North
Hagersville, Ontario N0A 1H0
905-768-5941

Haldimand County-Cayuga Administration Building
45 Munsee Street North
P. O. Box 400
Cayuga, Ontario N0A 1E0
905-318-5932

Further, the applicant has obtained or prepared, as the case may be, supporting documents in order to comply with the requirements of the Act and Regulation. Written copies of the draft supporting documents will be made available for public inspection starting on July 23, 2011 to September 22, 2011 at the locations identified above and on the project website (www.SamsungRenewableEnergy.ca).

Project Contacts and Information:
To learn more about the project proposal, public meetings, and to communicate concerns, please contact the project team via e-mail at GrandRenewable@SamsungRenewableEnergy.ca or by phone at 1-877-536-6050 or 1-519-836-6050 (Collect). Comments and questions can also be directed by mail to the following (comments must be received prior to or on September 22, 2011):

Stantec Consulting Ltd.
Attn: Rob Nadolny
Suite 1, 70 Southgate Drive
Guelph, Ontario N1G 4P5

Friedl, Susanne

From: de Carteret Feit, Kendra
Sent: Monday, June 07, 2010 10:36 AM
To: Kozak, Mark; Nadolny, Rob
Subject: FW: Grand Renewable Energy Park - preliminary assessment result

Follow Up Flag: Follow up
Flag Status: Flagged

From: Yao,Lillian [Ontario] [mailto:Lillian.Yao@ec.gc.ca] **On Behalf Of** Weather Radars Contact,National Radar Program [Ontario]
Sent: Monday, June 07, 2010 10:34 AM
To: de Carteret Feit, Kendra
Subject: Grand Renewable Energy Park - preliminary assessment result

Thank you for contacting the Meteorological Service of Canada regarding your wind energy intention in Haldimand County, Ontario.

Our preliminary assessment of the information you provided to us via your previous email indicates that any interference that may be created by your project will be minimal. As a consequence, we have no concerns at this time.

If you change your plans regarding turbine number, height, placement or materials, please contact us at: weatherradars@ec.gc.ca.

Best regards,
Lillian Yao
Observing Systems and Engineering
Meteorological Service of Canada
Fax: 416 739-5721

From: de Carteret Feit, Kendra [mailto:Kendra.Feit@stantec.com]
Sent: June 4, 2010 3:02 PM
To: Weather Radars Contact,National Radar Program [Ontario]
Subject: Grand Renewable Energy Park

Good afternoon –

Please find attached a letter and notice regarding the proposed Grand Renewable Energy Park.

Thank-you,
Kendra de Carteret Feit, on behalf of
Rob Nadolny
Senior Project Manager
Stantec
Ph: (519) 836-6050 Ext. 242
Fx: (519) 836-2493
rob.nadolny@stantec.com
stantec.com

Transmittal

Stantec Consulting Ltd.
2781 Lancaster Road,
Ottawa, ON K1B 1A7
Tel: (613) 738-0708
Fax: (613) 738-0721

To:	Wai Kok	From:	Colin Varley
Company:	Ministry of Culture	☐	For Your Information
Address:	400 University Avenue Toronto, ON M7A 2R9	☐	For Your Approval
		x	For Your Review
Phone:	416-314-7123	☐	As Requested
Date:	August 26, 2010		
File:	161010624, CIF # P002-208-2010		
Delivery:	Courier		

Reference: Stage 1 Archaeological Assessment, Samsung Grand Renewable Energy Park, Haldimand County, ON

Wai,

Please find enclosed final reports for the above. If you have any questions please do not hesitate to contact me at your earliest convenience.

Attachments:

Copies	Doc Date	CIF #	Description
3	August 24, 2010	P002-208-2010	FINAL REPORT, Stage 1 Archaeological Assessment, Grand Renewable Energy Park, Haldimand County, Ontario

Regards

STANTEC CONSULTING LTD.

Colin Varley, M.A., R.P.A.
Senior Archaeologist and Heritage Planning Consultant
Tel: (613) 738-6078
Fax: (613) 738-0721
Colin.Varley@Stantec.com

c. File

Friedl, Susanne

From: Uchiyama, Christienne
Sent: Wednesday, February 09, 2011 11:55 AM
To: Schiller, Chris (MTC)
Cc: donna.ratchford@ontario.ca; rajesh.khetarpal@ontario.ca; mariflor.toneatto@ontario.ca; m.dawson@samsungrenewableenergy.ca; a.rosso@samsungrenewableenergy.ca; Nadolny, Rob; Kozak, Mark; Varley, Colin
Subject: Samsung Grand Renewable Energy Park - Heritage Assessment and Protected Properties Report

Follow Up Flag: Follow up
Flag Status: Flagged

Dear Mr. Schiller,

Please find below instructions for downloading electronic versions of the Heritage Assessment and Protected Properties Reports for the Samsung Grand Renewable Energy Park in the County of Haldimand, Ontario for review by your unit.

Are you able to provide, at this time, an estimated review completion date? The proponent, Samsung Renewable Energy, would like to request an expedited review, preferably by February 18th.

Please advise as to which Heritage Planner hardcopies of the reports should be directed. Don't hesitate to contact me should you have any questions regarding the reports.

Regards,

Christienne Uchiyama
Archaeologist and Heritage Planning Consultant
200 - 2781 Lancaster Road
Ottawa ON K1B 1A7
Ph: (613) 738-0708 Ext. 3278
Fx: (613) 738-0721
Cell: (613) 327-0427
Christienne.Uchiyama@stantec.com
stantec.com

Automatic Login

FTP site link: ftp://s0215105846:3636411@ftptmp.stantec.com
By clicking on the link above (or pasting the link into Windows Explorer) you will be automatically logged into your FTP site.

Manual Login

FTP link: ftp://ftptmp.stantec.com
Login name: s0215105846
Password: 3636411
Disk Quota: 2GB
Expiry Date: 3/1/2011

Friedl, Susanne

From: Varley, Colin
Sent: Wednesday, February 09, 2011 4:55 PM
To: Prowse, Shari (MTC)
Cc: Marnie Dawson; 'a.rosso@samsungrenewableenergy.ca'; Nadolny, Rob; Kozak, Mark
Subject: FW: Stantec FTP Confirmation - REVISED STAGE 2 AA REPORT -SPK GREP

Follow Up Flag: Follow up
Flag Status: Completed

Categories: Green Category

Shari,

Please see below a link to download our revised Interim Stage 2 AA report for the SPK Grand Renewable Energy Project.

Regards,

Colin

Automatic Login

FTP site link: ftp://s0223144512:1646787@ftptmp.stantec.com
By clicking on the link above (or pasting the link into Windows Explorer) you will be automatically logged into your FTP site.

Manual Login

FTP link: ftp://ftptmp.stantec.com
Login name: s0223144512
Password: 1646787
Disk Quota: 2GB
Expiry Date: 2/23/2011

If your site has not expired and you require a onetime 2 week extension, please contact the IT Service Center.

If you require more than 2 weeks, please request an FTP Project Directory. Information on the FTP Project Directory request procedure is posted in the StanNet Help Center.

Ministry of Tourism and Culture

Culture Services Unit
Programs and Services Branch
401 Bay Street, Suite 1700
Toronto ON M7A 0A7

Tel. 416 314-3108
Fax: 416 314 7175

Ministère du Tourisme et de la Culture

Unité des services culturels
Direction des programmes et des services
401, rue Bay, Bureau 1700
Toronto ON M7A 0A7
Tél. : 416 314-3108
Téléc. : 416 314 7175

Ontario

February 16, 2011

Christienne Uchiyama
Archaeologist and Heritage Planning Consultant
200 - 2781 Lancaster Road
Ottawa, Ontario
K1B 1A7

Dear Ms. Uchiyama,

RE: Heritage Assessment for Grand Renewable Energy Park

Various Lots located within the area bounded by Townline Road, Haldimand Road 20, Grand River, and Lake Erie, County of Haldimand

MTC file no. 28EA021

We hereby acknowledge receipt of the Heritage Assessment (consisting of two documents: a *Protected Properties Report* and a *Heritage Impact Assessment Report*) for the above-referenced project, as part of the *Environmental Protection Act's* Renewal Energy Approvals (REA) process under Ontario Regulation 359/09.

The Ministry of Tourism and Culture's interest in this proposed project relates to our mandate of conserving, protecting and preserving Ontario's heritage, including cultural heritage landscapes, built heritage resources and archaeological sites.

We have reviewed the report submitted and have the following comments on the documents:

Protected Properties Report

General Comments
The report states that a total of ten provincially designated properties were located within the general Project area. These properties are designated by the municipality, not the province, therefore “provincially” designated should be changed to “municipally” designated where it appears on pages ii, 1, 3, 15 of the report.

Section 1 – Introduction
Including images/schematic drawings and descriptions of what the various project components look like, particularly the turbines and solar panels, would benefit the reviewer’s understanding of the project and its potential impacts.

Section 4 – Protected Properties

At the time the report was written, no comments had yet been received from the Ontario Heritage Trust (OHT) regarding whether there were any OHT easement properties in the study area. Confirmation regarding the existence of OHT easement properties within the study area is required.

While the report identifies distances between wind turbine locations and protected heritage properties, the report must clearly state whether any of the identified protected properties are on or abut a parcel of land on which the project situated. The "project location" includes the location of all infrastructure associated with the project, such as transmission lines, collectors, transformers, etc. Therefore the location of these project components should also appear in a site plan map in the report.

Section 5 – Impact Assessment and Recommended Mitigation
The report includes analysis of potential negative impacts to the designated heritage properties. Tables 5-1, 5-3, and 5-4 state that views will not be altered or obstructed by the proposed project as a result of distance and the treed nature of the site. This finding would benefit from supporting diagrams or visual aids.

Section 8 – References
The References section of the report cites the following document: *Ontario Provincial Policy Statement, Mandatory Standards and Guidelines for Provincial Heritage Properties, under Part III.1 of the Ontario Heritage Act, 2005*. Clarification about what document this is referring to is required.

Heritage Impact Assessment Report

Section 1 – Introduction
As with the Ministry's comments on the *Protected Properties Report*, including images/schematic drawings and descriptions of the project components is requested to aid the reviewer's understanding of the project and its potential impacts.

Section 1.2 "Assessment Methodology" states that available historical maps were used to identify the locations of 19th century buildings, along with census records. Were any other "screening criteria" used?

The report indicates resources within a radius of 1km of solar panels, wind turbines and access roads were assessed. However, other project infrastructure (such as transmission lines, collectors, transformers, etc.) must also be assessed for impacts on heritage resources. The location of these project components should also appear in a site plan map in the report.

Section 2 – Project Area
This section should include a description of the general topography/geography of the area. The Grand River, which is designated as a Canadian Heritage River, bounds one side of the project area. How does the Grand River contribute to the surrounding area and historical context?

Section 4 – Built Heritage Resources
For each subsection it states that the accompanying table provides a "summary of evaluation"; however each table instead includes a description of the property, but not a summary of cultural heritage value, for each of the identified heritage properties. It is suggested that a statement explaining the cultural heritage value or interest of the property and a description of the heritage attributes of the property appears for every property entered in the summary tables.

Due to the size of the photographs in the tables, it is difficult to see some of the structures. Larger photos are requested.

Many of the subsections cite tree cover or distance from wind turbine locations as a reason the wind turbines will not be invasive. In other instances, the report states that structures are not expected to suffer "impact of significant magnitude". As mentioned above, these findings would benefit from supporting diagrams or visual aids. It may not be necessary to illustrate this for each property where tree cover or distance is cited; rather, providing visual modelling illustrating an average two storey house with wind turbines and solar panels (to scale) at various positions and distances could be sufficient information to demonstrate visual impacts. Similar illustrations should be provided to show how tree cover affects visibility.

A number of cemeteries are identified as heritage resources and evaluated for impacts (Area 4, 9, 11, 12, 13, 14). As cemeteries are public spaces, their heritage attributes should not be limited to view of the cemeteries from the roadway, and the consideration/evaluation of impacts should also consider potential impacts to views from and within the cemeteries.

The discussion of the Lakeshore Road Cultural Heritage Landscape states that "Project components will not be visible from the majority of locations along the road." More specific description of the extent of the project's visibility is required. The report could also include further analysis and photographs of this CHL that is shown to extend several kilometres along the lakefront.

In Area 16, the report discusses the farmhouse at 665 Port Maitland Road, stating that "in terms of contextual relationships, the property's relationship with the Grand River is considered to be of heritage value." This implies that the property also meets criterion 3(ii) of O. Reg 9/06. Therefore in summarizing the cultural heritage value of this property, its contextual value should also be included alongside its design value.

This letter does not waive any requirements which you may have under the *Ontario Heritage Act*. Also, this letter does not constitute approval of the renewable energy project. Approvals of the project may be required under other statutes and regulations. It is your responsibility to obtain any necessary approvals or licences.

The above are comments from the Ministry of Tourism and Culture on the submitted report. These recommendations should be incorporated into a report to be resubmitted to the Ministry of Tourism and Culture. The revised report may be submitted electronically as a pdf. Once the report is finalized and MTC has issued a letter of acceptance, hard copies of the report may follow.

Please contact the undersigned if you have any questions or wish to discuss these comments further.

Sincerely,

Laura Hatcher
Heritage Planner
laura.hatcher2@ontario.ca

Ministry of Tourism and Culture
Culture Programs Unit
Programs & Services Br.
900 Highbury Avenue
London, ON N5Y 1A4
Tel: 519-675-6898
Fax: 519-675-7777
e-mail: shari.prowse@ontario.ca

Ministre du Tourisme et de la Culture
Unité des programmes culturels
Direction des programmes et des services
900, av. Highbury
London, ON N5Y 1A4
Tél: 519-675-6898
Téléc: 519-675-7777
e-mail: shari.prowse@ontario.ca

March 15, 2011

Ms. Marnie Dawson
Manager, Renewable Energy Approvals
Samsung Renewable Energy
55 Standish Court
Mississauga ON L5R 4B2
m.dawson@samsungrenewableenergy.ca

RE: Grand Renewable Energy Park, Haldimand County, Ontario, Licence/PIF # P002-208-2010, P002-211-2010 and P218-012-2010, MTC File HD00565

Dear Proponent:

This letter constitutes written comments from the Ministry of Tourism and Culture (the "Ministry") regarding archaeological assessments undertaken to date for the above project. Based on the information that has been provided to us, we understand that KC/Samsung has completed work on 90% of the land related to the GREP project. When your Stage 2 archaeological assessment is completed, the Ministry will provide a final letter containing the written comments required by clause 22(3)(a) of O. Reg. 359/09 under the *Environmental Protection Act* for the REA application submission.

Based on the information contained in the reports you have submitted for this project to date, the Ministry considers that the partial Stage 2 archaeological assessment completed thus far is in compliance with the *Ontario Heritage Act's* licensing requirements, including the licence terms and conditions and the Ministry's 1993 Archaeological Assessment Technical Guidelines. For greater certainty, the Ministry's comments herein are interim and do not constitute "written comments provided by the Ministry" for the purposes of clause 22(3)(a) of O. Reg. 359/09. Please note that the Ministry makes no representation or warranty as to the completeness, accuracy or quality of the Reports.*

The reports recommend the following:

Stage 1 Report (Licence/PIF # P002-208-2010), Received August 27, 2010, Addendum Received February 25, 2011

It is Stantec's professional opinion that most parts of the Project area demonstrate potential for the presence of significant archaeological deposits of integrity. It should be anticipated for Project component siting exercises that Stage 2 Archaeological Assessment is likely to be

required for most locations of project-related infrastructure construction, including all turbine pads, access roads, underground cable links, construction offices, laydown areas and temporary storage areas and any other areas where soil disturbances into and below the topsoil may occur.

Stage 2 archaeological survey generally takes two forms: pedestrian survey and test pit excavation survey. Pedestrian survey, the preferred methodology, requires that the area to be surveyed be ploughed as if the ground were to be cultivated and allowed to weather through one hard or several light rainfalls. After weathering the ground is walked at a slow pace and the locations of artifacts recorded using a Geographic Positioning System (GPS). During a pedestrian survey only diagnostic artifacts are collected; all others are left in situ.

If ploughing is not technically feasible in some locations due to the nature and extent of existing ground cover or other conditions, Stage 2 assessment will need to be completed using a test pit excavation strategy. In this instance standard archaeological test pits of 30 x 30 cm or greater are excavated and all excavated soils passed through screens of 6 mm mesh. During test pit survey all artifacts encountered are retained. In either case the survey interval will be at no more than 5 m. During Stage 2 assessment all field activities will be recorded using a GPS.

Stantec cautions, however, that it is possible that deeply buried archaeological resources, could still exist within the limits of the proposed project and that the following standard conditions will continue to apply:

- *Should human remains be identified during operations, all work in the vicinity of the discovery will be suspended immediately. Notification will be made to the Ontario Provincial Police, or local police, who will conduct a site investigation and contact the district coroner. Notification must also be made to the Ministry of Tourism and Culture and the Registrar of Cemeteries, Cemeteries Regulation Unit, Ministry of Small Business and Consumer Services.*

- *Should other cultural heritage values (archaeological or historical materials or features) be identified during operations, all work in the vicinity of the discovery will be suspended and the Ministry of Tourism and Culture archaeologist contacted. This condition provides for the potential for deeply buried or enigmatic local site areas that are not typically identified in archaeological field assessments.*

Stage 2 Report (Licence/PIF # P002-211-2010), February 28, 2011, Received March 1, 2011

Stage 2 AA of the GREP to date by Stantec has resulted in the documentation of 165 archaeological resources, including 45 archaeological sites which have been registered with the MTC and of 50 artifact clusters and 70 isolated findspots.

Stage 2 Archaeological Assessment at Solar Woodlot

Given the identification of several archaeological resources within 250 m of the Solar Woodlot it is recommended that if the woodlot area is required for Project related components that the area that was test pit surveyed at 10 m intervals be re-tested to a 5 m interval. These extra test pits can be excavated between the existing test pits.

Sites Requiring Stage 3 Archaeological Assessment

Stage 2 AA of the GREP to date by Stantec has resulted in the documentation of 45 registered archaeological sites which will require further archaeological assessment (Table 4-1). At minimum all 45 sites will require Stage 3 AA in order to determine the extent of each archaeological resource, and to further refine our understanding of the age, cultural association and cultural heritage value of the sites Stage 3 AA will also determine what appropriate mitigation options, such as avoidance or excavation, are available at each site location. Based on current calculations of site area it is anticipated that Stage 3 AA of the 45 sites will encompass an area of approximately 104,000 square metres, or 10.4 ha of the 359 ha assessed.

Table 4-1 Archaeological Sites Requiring Further Assessment

GREP Site #	Location	Borden #	Easting	Northing	# Tools/ Diagnostics	# non-Tools	Total # Artifacts	Cultural Period	Dimensions (in m)	Site Area (m^2)
1	T36	AfGx-710	589964	4755625	0	11	11	Indeterminate	25 x 20	500
2	T46	AfGx-711	590521	4752280	2	3	5	Indeterminate	35 x 20	581
3	T46	AfGx-712	590603	4752068	0	32	32	Indeterminate	65 x 30	1950
4	T23	AfGx-713	591237	4751861	0	22	22	Indeterminate	25 x 25	509
5	T23	AfGx-714	591145	4752137	0	28	28	Indeterminate	30 x 30	733
6	T23	AfGx-715	591097	4752326	0	32	32	Indeterminate	55 x 35	1571
7	T28	AfGx-716	591169	4752307	0	11	11	Indeterminate	25 x 25	535
8	T28	AfGx-717	591295	4752310	0	25	25	Indeterminate	35 x 25	659
9	T28	AfGx-718	591339	4752251	2	9	11	Indeterminate	35 x 20	508
10	T23	AfGx-719	590901	4752878	0	25	25	Indeterminate	60 x 30	1423
11	T20	AfGx-720	592626	4749531	3	114	117	Early Woodland	90 x 90	6939
12	SF1	AfGw-137	596156	4748772	2	16	18	Late Palaeo-Indian/ Early Woodland	40 x 40	641
13	SF1	AfGw-138	596243	4748449	9	89	98	Middle/Late Archaic, Middle Woodland	150 x 110	12309
14	SF1	AfGw-139	596237	4748626	2	47	49	Late Archaic	145 x 115	4188
15	T13	AfGw-140	596811	4748748	n/a	n/a	n/a	Indeterminate	20 x 20	303
16	SF2	AfGw-141	596644	4748742	10		10	19th Century Historic	55 x 55	1026
17	SF1	AfGw-142	596286	4748783	2	18	20	Late Archaic	90 x 55	3036
18	SF1	AfGw-143	596176	4748858	2	29	31	Early Archaic	115 x 50	3320
19	SF1	AfGw-144	596014	4749261	2	18	20	Early Woodland	110 x 110	9788
20	SF1	AfGw-145	596198	4749235	1	86	87	Indeterminate	50 x 50	1763
21	SF3	AfGw-146	597043	4749303	1	10	11	Indeterminate	35 x 35	1140

22	SF3	AfGw-147	596901	4749626	6	206	212	Late Woodland	250 x 160	29376
23	SF7	AfGw-148	597046	4749740	0	18	18	Indeterminate	70 x 40	2132
24	SF7	AfGw-149	597206	4749996	2	63	65	Late Archaic	75 x 50	3750
25	SF8	AfGw-150	597512	4750457	1	30	31	Indeterminate	40 x 30	1014
26	SF8	AfGw-151	597431	4750516	2	0	2	Middle Archaic	10 x 10	92
27	SF8	AfGw-152	597405	4750435	0	36	36	Indeterminate	40 x 35	1145
28	SF7	AfGw-153	596799	4750597	1	28	29	Late Palaeo-Indian	60 x 40	2193
29	SF5	AfGw-154	596309	4750150	2	14	16	Indeterminate	105 x 40	2723
30	SF4	AfGw-155	596193	4750040	1	10	11	Indeterminate	60 x 30	767
31	SF4	AfGw-156	596052	4750102	1	18	19	Indeterminate	50 x 40	898
32	SF4	AfGw-157	595992	4750003	2	11	13	Middle Archaic	30 x 30	473
33	SF4	AfGw-158	596044	4749943	6	35	41	Early Woodland	40 x 30	367
34	SF4	AfGw-159	596142	4749695	0	14	14	Indeterminate	20 x 20	341
35	SF4	AfGW-160	596174	4749580	0	5	5	Indeterminate	10 x 10	100
36	SF4	AfGw-161	596313	4749612	1	49	50	Indeterminate	80 x 50	3393
37	SF4	AfGw-162	596328	4749533	0	27	27	Indeterminate	25 x 25	564
38	SW	AfGw-163	596603	4749418	0	10	10	Indeterminate	10 x 10	100
39	SF1	AfGw-164	596123	4749106	1	0	1	Early Archaic	10 x 10	100
40	SF4	AfGw-165	596105	4750015	2	2	4	Late Palaeo-Indian	20 x 20	227
41	SF6	AfGw-166	596722	4750265	1	0	1	Early Archaic	10 x 10	100
42	T55	AfGw-167	600123	4746735	1	0	1	Late Palaeo-Indian	10 x 10	100
43	T34	AfGx-721	589820	4753974	1	0	1	Early Archaic	10 x 10	100
44	T13	AfGw-184	594647	4751614	0	62	62	Indeterminate	20 x 25	364
45	T10	AfGx-732	594689	4751585	0	16	16	Indeterminate	20 x 25	389
					Total # Artifacts		1349		Total m2	104230

Stage 3 AA (the Archaeological Site Assessment) of the 45 identified sites will be conducted according to the 2010 Standards and Guidelines for Consultant Archaeologists. The following standards for Stage 3 AA work will apply:

- *Before carrying out fieldwork, review all relevant reports of previous fieldwork on the archaeological site or for that property;*
- *Carry out the archaeological site assessment when weather and lighting conditions permit good visibility of all parts of the archaeological site. Do not carry out the archaeological site assessment when weather and lighting conditions (e.g., snow cover, frozen ground, excessive rain or drought, heavy fog) reduce the ability to identify and document any part of the archaeological site;*
- *Using GPS record the locations of the following:*
  - *a central fixed point within the archaeological site*
  - *a permanent datum that can be tied to a development map; and*
- *Provide representative photographs of all field conditions (e.g., ploughed field, pasture or woodlot, disturbances).*

For each site located using pedestrian survey methodology the Stage 3 AA will be composed of two elements: a controlled surface pick-up (CSP) of artifacts on the surface of ploughed fields and test unit excavation. A CSP is a detailed survey of the ground surface in open fields that

allows for precise recording of artifact locations and the collection of a representative sample of artifacts, including non-diagnostic artifacts. The following standards for Stage 3 AA CSP will apply:

- *If ground surface visibility has decreased in the time between the Stage 2 survey and the Stage 3 CSP, ensure that the site area is re-cultivated and weathered;*
- *Accurately map the location of all artifacts on the ground surface using a total station, transit and tape, stadia rod, or GPS unit. Record and catalogue artifacts by their mapped location, recording any relevant information (e.g., spatial relationship of diagnostics, artifact concentration areas). Tie this map to the general site GPS readings by recording a central point in the scatter;*
- *For very large and dense surface scatters, conduct a full CSP by grid units (maximum 5 m by 5 m units) over the archaeological site. Record and catalogue artifacts with their grid unit designation.*
- *Ensure that decisions regarding the type and number of artifacts collected strike a balance between gathering enough artifacts to document the archaeological site and leaving enough in place to relocate the site if required (e.g., to conduct further assessment, define a protected area or conduct excavation);*
- *Collect all formal artifact types and diagnostic categories, including, for 19th century archaeological sites, all refined ceramic sherds; and*
- *Collect a representative sample of non-diagnostic artifacts, taking into consideration the archaeological site type, type and frequency of non-diagnostic artifacts, and the likelihood that further fieldwork will be required.*

Based on the results of the Stage 2 AA, use of a grid unit CSP will likely need to be conducted at AfGx-720, AfGw-144 and AfGw-147 due to their size and artifact densities. All other sites should not require grid unit CSP.

The second component of the Stage 3 AA, test unit excavation, will be required at all identified archaeological sites, including AfGw-163, the site located through test pit survey. The purpose of the test unit excavation is to document the extent of buried artifacts, cultural features, soil stratigraphy and structures and to recover a representative sample of artifacts from across the archaeological site. The interval of the Stage 3 AA grid (of either 5 m or 10 m intervals) will be dependent on the age, type and nature of each identified site. Specific guidelines for this interval are provides in the 2010 Standards and Guidelines for Consultant Archaeologists. The following standards for Stage 3 AA test unit excavation will apply:

- *Excavate by 1 m square units;*
- *To determine the placement of test units, establish a grid on the site based on the permanent datum to at least the accuracy of transit and tape measurements. Placing test units in unmeasured, estimated locations is not acceptable;*
- *Excavate test units by hand. Do not use heavy machinery (e.g., gas-powered augers, backhoes) except to remove sterile or recent fill covering confirmed, deeply buried or sealed archaeological sites;*
- *Excavate test units by systematic levels (stratigraphic or standardized);*
- *Excavate test units into the first 5 cm of subsoil, unless excavation uncovers a cultural feature;*

- *If test unit excavation uncovers a cultural feature, do not excavate into feature fill. Instead:*
    - *Record the exposed plan of the feature.*
    - *Place geotextile fabric over the unit floor and backfill the unit;*
- *Screen all excavated soil through mesh with an aperture of no greater than 6 mm. For confirmed single component Paleo-Indian and Early Archaic archaeological sites, for a sample of units (at least 20% of the total number of units in sandy soil and at least 10% of the total number of units in heavy soil), screen the entire contents of each unit through mesh with an aperture of no greater than 3 mm; and*
- *Unless otherwise specified collect and retain all artifacts. Record and catalogue them by their corresponding grid unit designation.*

Based on the results of the Stage 2 AA there are seven sites that are presently believed to be single component Palaeo-Indian or Early Archaic sites: AfGw-143; AfGw-153: AfGw-164; AfGw-165; AfGw-166: AfGw-167; and AfGx-721. All seven of these sites are located in what are considered to be heavy soils. For these seven sites 10% of the total number of test units excavated (specific number to be determined based on Table 3.1 in the 2010 Standards and Guideline for Consultant Archaeologists) will need to be screened using 3 mm mesh.

The 2010 Standards and Guideline for Consultant Archaeologists also make special Stage 3 AA provisions for large sites and Late Woodland village sites. At present we cannot determine whether the Late Woodland site AfGw-147 in Solar Fields 3 and 6 represents a Late Woodland village site or a smaller special purpose site. As such it does not qualify for the special provisions of the Late Woodland village, but it does qualify as a large site. Accordingly, this one site may only require excavation of 50% of the required total test units, as determined by Table 3.1 of the 2010 Standards and Guideline for Consultant Archaeologists. This determination will only be able to be made in the field after the initiation of the Stage 3 AA and these provisions should be kept in mind during that work.

It should be anticipated that several of the sites will likely require Stage 4 mitigative excavations in the event that project design cannot avoid the sites. Sites of already identified cultural heritage value and interest include all sites with Palaeo-Indian or Early Archaic components, and the Late Woodland site.

With the large number of Aboriginal archaeological sites documented through the Stage 2 AA it is expected that the involvement of First Nations in subsequent Stage 3 and/or Stage 4 AA will increase beyond the current level of the Stage 2 AA. Ongoing Aboriginal consultation will be part of the overall Project development, for archaeological resources and for other environmental components, and is a requirement of the 2010 Standards and Guideline for Consultant Archaeologists. It is recommended that Aboriginal Engagement be carried out as required by the Standards and Guidelines and as outlined in the bulletin Engaging Aboriginal Communities in Archaeology.

Resources Not Requiring Stage 3 Archaeological Assessment

A total of 50 artifact clusters (CL) and 70 isolated findspots (IF) were also documented at Project components during the Stage 2 AA (Table 4-2). None of these resources meet the criteria for sufficient Cultural heritage value or interest as per the 2010 Standards and Guideline for Consultant Archaeologists. None of these resources require further archaeological assessment. Details regarding all identified artifacts (e.g., Scraper 1-5) can be found in the Artifact Catalogue in Appendix B.

Table 4-2 Archaeological Resources Not Requiring Further Assessment

GREP Site #	Location	Easting	Northing	# Tools	# Lithic Flakes	Total # Artifacts	Material Type	Tool Size (in mm)	Cultural Period	Dimensions (in m)	Figure #	Plate #	Comments
CL 1	SF1	596255	4749292	0	2	2	n/a	n/a	Indeterminate	25 X 5	3-1	n/a	
CL 2	SF1	596378	4749049	2	0	2	Bois Blanc	36 x 22 28 x 21	Late Archaic	25 X 10	3-1	2, 4	Point 2-5 Point 2-6
CL 3	SF1	596145	4749020	0	2	2	n/a	n/a	Indeterminate	5 X 5	3-1	n/a	
CL 4	SF1	596136	4748931	0	3	3	n/a	n/a	Indeterminate	60 X 35	3-1	n/a	
CL 5	SF1	596076	4749054	0	4	4	n/a	n/a	Indeterminate	60 X 15	3-1	n/a	
CL 6	SF1	596124	4748835	0	4	4	n/a	n/a	Indeterminate	65 X 40	3-2	n/a	
CL 7	SF1	596270	4748611	1	3	4	Bois Blanc	49 x 31 x 17	Indeterminate	40 X 40	3-2	n/a	Tool 2-1
CL 8	SF1	596504	4748588	1	1	2	Bois Blanc	40 x 26	Early Woodland	35 x 10	3-2	3	Point 2-4
CL 9	SF2	596802	4748763	2	0	2	Bois Blanc	59 x 46 x 24	Indeterminate	35 x 10	3-2	n/a	Core (not kept) , Core 1-4
CL 10	SF2	596509	4749027	0	3	3	n/a	n/a	Indeterminate	10 x 10	3-2	n/a	
CL 11	SF3	596986	4748618	0	2	2	n/a	n/a	Indeterminate	25 x 10	3-3	n/a	
CL 12	SF3	597107	4749098	0	12	12	n/a	n/a	Indeterminate	160 x 70	3-3	n/a	
CL 13	SF3	597062	4749468	1	1	2	Bois Blanc	60 x 66 x 18	Indeterminate	40 x 10	3-3	n/a	Axe 2-1
CL 14	SF4	595986	4749523	0	2	2	n/a	n/a	Indeterminate	25 x 25	3-4	n/a	
CL 15	SF4	596294	4749544	0	7	7	n/a	n/a	Indeterminate	35 X 20	3-4	n/a	
CL 16	SF4	596138	4749583	0	2	2	n/a	n/a	Indeterminate	35 x 15	3-4	n/a	
CL 17	SF4	596271	4749572	0	7	7	n/a	n/a	Indeterminate	30 x 25	3-4	n/a	
CL 18	SF4	596222	4749715	1	2	3	Bois Blanc	28 x 22	Indeterminate	35 x 25	3-4	5	Point 1-15
CL 19	SF4	596169	4750079	1	1	2	Bois Blanc	43 x 28	Late Archaic	40 x 25	3-4	2	Point 2-13
CL 20	SF4	596171	4750142	0	3	3	n/a	n/a	Indeterminate	30 x 10	3-4	n/a	
CL 21	SF4	596102	4749942	0	7	7	n/a	n/a	Indeterminate	65 x 45	3-4	n/a	
CL 22	SF4	596231	4749820	0	3	3	n/a	n/a	Indeterminate	60 x 30	3-4	n/a	
CL 23	SF4	596098	4749815	1	2	3	Bois Blanc	56 x 47 x 17	Indeterminate	45 x 10	3-4	n/a	Core 1-3
CL 24	SF4	596041	4749749	0	6	6	n/a	n/a	Indeterminate	55 x 30	3-4	n/a	
CL 25	SF4	595959	4749714	0	7	7	n/a	n/a	Indeterminate	40 X 30	3-4	n/a	
CL 26	SF5	596444	4749751	0	5	5	n/a	n/a	Indeterminate	40 x 25	3-4	n/a	
CL 27	SF5	596338	4750019	1	1	2	Bois Blanc	27 x 24	Indeterminate	30 x 15	3-4	n/a	Scraper 1-5
CL 28	SF6	596685	4750254	2	0	2	Bois Blanc	36 x 24 x 12 27 x 24	Indeterminate	35 x 20	3-5	5	Core 1-5 Graver 1-1
CL 29	SF7	597032	4749983	0	4	4	n/a	n/a	Indeterminate	30 x 20	3-5	n/a	
CL 30	SF7	597099	4749984	0	6	6	n/a	n/a	Indeterminate	30 x 15	3-5	n/a	
CL 31	SF7	597015	4750305	1	1	2	Bois Blanc	36 x 23	Middle Woodland	40 x 20	3-6	3	Point 1-30
CL 32	SF7	597203	4749883	0	2	2	n/a	n/a	Indeterminate	30 x 15	3-6	n/a	

GREP Site #	Location	Easting	Northing	# Tools	# Lithic Flakes	Total # Artifacts	Material Type	Tool Size (in mm)	Cultural Period	Dimensions (in m)	Figure #	Plate #	Comments
CL 33	SF7	597104	4749687	0	3	3	n/a	n/a	Indeterminate	30 x 10	3-5	n/a	
CL 34	SF7	596893	4750628	1	3	4	prob. Local	64 x 42	Indeterminate	50 x 20	3-6	n/a	Biface 1-10
CL 35	SF8	597470	4750503	0	2	2	n/a	n/a	Indeterminate	25 x 10	3-6	n/a	
CL 36	SF8	597537	4750415	0	2	2	n/a	n/a	Indeterminate	25 x 10	3-6	n/a	
CL 37	SF1	596388	4748416	1	1	2	prob. Local	50 x 38	Indeterminate	25 x 10	3-2	n/a	Biface 2-1
CL 38	SF1	596388	4748482	1	1	2	Bois Blanc	43 x 36	Indeterminate	30 x 15	3-2	4	Point 2-10
CL 39	SF1	596322	4748466	0	3	3	n/a	n/a	Indeterminate	25 x 15	3-2	n/a	
CL 40	T23	591178	4752032	0	2	2	n/a	n/a	Indeterminate	30 x 10	3-9	n/a	
CL 41	T23	591119	4752236	0	5	5	n/a	n/a	Indeterminate	40 x 20	3-9	n/a	
CL 42	T46	590594	4752117	0	2	2	n/a	n/a	Indeterminate	35 x 15	3-9	n/a	
CL 43	T13	594711	4751650	0	3	3	n/a	n/a	Indeterminate	15 x 10	3-11	n/a	
CL 44	T48	594469	4750961	0	2	2	n/a	n/a	Indeterminate	20 x 10	3-12	n/a	
CL 45	T48	594120	4750435	0	6	6	n/a	n/a	Indeterminate	20 x 15	3-12	n/a	
CL 46	T16	594409	4750003	0	3	3	n/a	n/a	Indeterminate	25 x 25	3-13	n/a	
CL 47	T16	594358	4749899	0	2	2	n/a	n/a	Indeterminate	25 x 25	3-13	n/a	
CL 48	T16	594390	4749953	0	2	2	n/a	n/a	Indeterminate	25 x 25	3-13	n/a	
CL 49	T19	606258	4750182	0	6	6	n/a		Indeterminate	85 x 10	3-17	n/a	
CL 50	T36	589998	4755730	0	3	3	n/a	n/a	Indeterminate	50 x 25	3-8	n/a	
IF 1	SF1	596042	4749141	1	0	1	Bois Blanc	49 x 37	Indeterminate	n/a	3-1	5	Biface 1-1
IF 2	SF1	596033	4749102	0	1	1	n/a	n/a	Indeterminate	n/a	3-1	n/a	Isolated lithic flake
IF 3	SF1	596335	4749021	0	1	1	n/a	n/a	Indeterminate	n/a	3-1	n/a	Isolated lithic flake
IF 4	SF1	596462	4748417	1	0	1	Bois Blanc	49 x 37	Indeterminate	n/a	3-2	5	Scraper 2-2
IF 5	SF1	596408	4748428	1	0	1	Bois Blanc	42 x 32	Indeterminate	n/a	3-2	4	Point 2-11
IF 6	SF1	596172	4748742	1	0	1	Bois Blanc	38 x 37	Indeterminate	n/a	3-2	n/a	Biface 1-2
IF 7	SF1	596132	4748742	0	1	1	n/a	n/a	Indeterminate	n/a	3-2	n/a	Isolated lithic flake
IF 8	SF1	596353	4748964	0	1	1	n/a	n/a	Indeterminate	n/a	3-2	n/a	Isolated lithic flake
IF 9	SF1	596245	4748575	0	1	1	n/a	n/a	Indeterminate	n/a	3-2	n/a	Isolated lithic flake
IF 10	SF1	596260	4748649	0	1	1	n/a	n/a	Indeterminate	n/a	3-2	n/a	Isolated lithic flake
IF 11	SF1	596341	4748641	0	1	1	n/a	n/a	Indeterminate	n/a	3-2	n/a	Isolated lithic flake
IF 12	SF1	596385	4748597	1	0	1	Bois Blanc	30 x 29	Indeterminate	n/a	3-2	n/a	Biface 2-2
IF 13	SF2	596545	4748637	1	0	1	Bois Blanc	46 x 35	Late Archaic	n/a	3-2	2	Point 2-17
IF 14	SF2	596547	4748647	1	0	1	Bois Blanc	38 x 32	Indeterminate	n/a	3-2	4	Point 1-13

GREP Site #	Location	Easting	Northing	# Tools	# Lithic Flakes	Total # Artifacts	Material Type	Tool Size (in mm)	Cultural Period	Dimensions (in m)	Figure #	Plate #	Comments
IF 15	SF2	596616	4748820	0	1	1	n/a	n/a	Indeterminate	n/a	3-2	n/a	Isolated lithic flake
IF 16	SF2	596679	4748825	0	1	1	n/a	n/a	Indeterminate	n/a	3-2	n/a	Isolated lithic flake
IF 17	SF2	596812	4748729	0	1	1	n/a	n/a	Indeterminate	n/a	3-2	n/a	Isolated lithic flake
IF 18	SF2	596707	4748741	1	0	1	n/a	25 x 30 x 26	Indeterminate	n/a	3-3	n/a	Grndstn2-1
IF 19	SF2	596719	4748737	1	0	1	Bois Blanc	27 x 19	Late Archaic	n/a	3-3	2	Point 2-18
IF 20	SF2	596731	4748722	1	0	1	n/a	n/a	Euro-Canadian	n/a	3-3	6	19th century smoking pipe
IF 21	SF2	596507	4749146	1	0	1	Bois Blanc	46 x 22	Early Woodland	n/a	3-3	3	Point 1-12
IF 22	SF3	597124	4748771	0	1	1	n/a	n/a	Indeterminate	n/a	3-3	n/a	Isolated lithic flake
IF 23	SF3	596802	4749182	1	0	1	Bois Blanc	38 x 21	Indeterminate	n/a	3-3	n/a	Biface 2-5
IF 24	SF3	597087	4749190	1	0	1	Bois Blanc	36 x 22	Indeterminate	n/a	3-3	n/a	Tool 2-2
IF 25	SF3	597157	4749264	1	0	1	Bois Blanc	36 x 24	Indeterminate	n/a	3-3	4	Point 2-12
IF 26	SF3	597004	4749262	0	1	1	n/a	n/a	Indeterminate	n/a	3-3	n/a	Isolated lithic flake
IF 27	SF3	596946	4749205	0	1	1	n/a	n/a	Indeterminate	n/a	3-3	n/a	Isolated lithic flake
IF 28	SF3	596975	4749436	0	1	1	n/a	n/a	Indeterminate	n/a	3-3	n/a	Isolated lithic flake
IF 29	SF4	596368	4749536	1	0	1	Bois Blanc	38 x 32 mm	Indeterminate	n/a	3-4	n/a	Biface 1-3
IF 30	SF4	596126	4749476	0	1	1	n/a	n/a	Indeterminate	n/a	3-4	n/a	Isolated lithic flake
IF 31	SF4	596193	4749487	0	1	1	n/a	n/a	Indeterminate	n/a	3-4	n/a	Isolated lithic flake
IF 32	SF4	596284	4749660	0	1	1	n/a	n/a	Indeterminate	n/a	3-4	n/a	Isolated lithic flake
IF 33	SF4	596165	4749694	0	1	1	n/a	n/a	Indeterminate	n/a	3-4	n/a	Isolated lithic flake
IF 34	SF4	596247	4749751	1	0	1	Bois Blanc	36 x 22	Middle Woodland	n/a	3-4	3	Point 1-14
IF 35	SF4	596298	4749839	1	0	1	Bois Blanc	35 x 28	Early Woodland	n/a	3-4	3	Point 1-16
IF 36	SF4	596153	4750039	0	1	1	n/a	n/a	Indeterminate	n/a	3-4	n/a	Isolated lithic flake
IF 37	SF4	596150	4749857	0	1	1	n/a	n/a	Indeterminate	n/a	3-4	n/a	Isolated lithic flake
IF 38	SF4	596060	4749694	0	1	1	n/a	n/a	Indeterminate	n/a	3-4	n/a	Isolated lithic flake
IF 39	SF5	596591	4749651	0	1	1	n/a	n/a	Indeterminate	n/a	3-4	n/a	Isolated lithic flake
IF 40	SF5	596265	4750195	0	1	1	n/a	n/a	Indeterminate	n/a	3-4	n/a	Isolated lithic flake
IF 41	SF5	596717	4749694	0	1	1	n/a	n/a	Indeterminate	n/a	3-4	n/a	Isolated lithic flake
IF 42	SF6	596749	4749673	0	1	1	n/a	n/a	Indeterminate	n/a	3-5	n/a	Isolated lithic flake
IF 43	SF6	596767	4749716	0	1	1	n/a	n/a	Indeterminate	n/a	3-5	n/a	Isolated lithic flake
IF 44	SF6	596752	4749764	1	0	1	Bois Blanc	44 x 28	Late Archaic	n/a	3-5	2	Point 1-27
IF 45	SF6	596948	4749752	0	1	1	n/a	n/a	Indeterminate	n/a	3-5	n/a	Isolated lithic flake
IF 46	SF6	596685	4750179	1	0	1	Bois Blanc	53 x 27	Late Archaic	n/a	3-5	2	Point 1-19
IF 47	SF6	596788	4750316	0	1	1	n/a	n/a	Indeterminate	n/a	3-5	n/a	Isolated lithic flake

GREP Site #	Location	Easting	Northing	# Tools	# Lithic Flakes	Total # Artifacts	Material Type	Tool Size (in mm)	Cultural Period	Dimensions (in m)	Figure #	Plate #	Comments
IF 48	SF7	597293	4750032	1	0	1	Bois Blanc	41 x 27	Indeterminate	n/a	3-6	4	Point 1-22
IF 49	SF8	597665	4750148	1	0	1	Bois Blanc	56 x 33	Late Archaic	n/a	3-6	2	Point 1-23
IF 50	SF7	596916	4750590	1	0	1	Bois Blanc	31 x 26	Indeterminate	n/a	3-6	4	Point 1-26
IF 51	SF8	597607	4750174	1	0	1	Bois Blanc	43 x 24	Middle Woodland	n/a	3-6	3	Point 1-24
IF 52	SF8	597600	4750269	1	0	1	Bois Blanc	31 x 16	Late Archaic	n/a	3-6	2	Point 1-29
IF 53	SF8	597564	4750589	0	1	1	n/a	n/a	Indeterminate	n/a	3-6	n/a	Isolated lithic flake
IF 54	SF8	597396	4750478	0	1	1	n/a	n/a	Indeterminate	n/a	3-6	n/a	Isolated lithic flake
IF 55	SF1	596424	4748473	0	1	1	n/a	n/a	Indeterminate	n/a	3-2	n/a	Isolated lithic flake
IF 56	T36	589886	4755449	0	1	1	n/a	n/a	Indeterminate	n/a	3-8	n/a	Isolated lithic flake
IF 57	T45	590112	4753820	0	1	1	n/a	n/a	Indeterminate	n/a	3-8	n/a	Isolated lithic flake
IF 58	T23	591151	4752114	0	1	1	n/a	n/a	Indeterminate	n/a	3-9	n/a	Isolated lithic flake
IF 59	T23	591227	4751891	0	1	1	n/a	n/a	Indeterminate	n/a	3-9	n/a	Isolated lithic flake
IF 60	T23	591095	4752272	0	1	1	n/a	n/a	Indeterminate	n/a	3-9	n/a	Isolated lithic flake
IF 61	T28	591277	4752296	0	1	1	n/a	n/a	Indeterminate	n/a	3-9	n/a	Isolated lithic flake
IF 62	T20	592615	4749466	0	1	1	n/a	n/a	Indeterminate	n/a	3-10	n/a	Isolated lithic flake
IF 63	T16	594290	4749960	0	1	1	n/a	n/a	Indeterminate	n/a	3-13	n/a	Isolated lithic flake
IF 64	T12	601602	4747206	1	0	1	Bois Blanc	40 x 33	Indeterminate	n/a	3-15	5	Biface 2-7
IF 65	T12	601497	4747141	1	0	1	Bois Blanc	46 x 23	Indeterminate	n/a	3-15	n/a	Biface 2-6
IF 66	T19	606321	4749345	0	1	1	n/a	n/a	Indeterminate	n/a	3-17	n/a	Isolated lithic flake
IF 67	T40	604246	4749585	0	1	1	n/a	n/a	Indeterminate	n/a	3-17	n/a	Isolated lithic flake
IF 68	T40	604256	4749554	1	0	1	Bois Blanc	26 x 29	Indeterminate	n/a	3-17	4	Point 2-23
IF 69	T55	600236	4746268	1	0	1	Bois Blanc	44 x 25	Late Archaic	n/a	3-15	2	Point 2-22
IF 70	T55	600232	4746205	0	1	1	n/a	n/a	Indeterminate	n/a	3-15	n/a	Isolated lithic flake

Advice on Compliance with Legislation

At the close of the 2010 field season Stage 2 AA had not been completed for access roads and turbine pads for 16 turbine installations. All of these areas are slated to be assessed using a pedestrian survey methodology. The total area left to be assessed is 61 ha, or approximately 14% of the total of 420 ha that Stantec was scheduled to assess. It is anticipated that the remaining Stage 2 AA will require about 12 person days of field time to complete. It is recommended that the remaining Stage 2 and 3 assessment work for this project be completed as required under the Ontario Heritage Act and that the Ministry of Tourism and Culture provide concurrence with the recommendations made within this report by accepting it into the Ontario Public Register Archaeology Reports.

Stantec cautions, however, that it is possible that deeply buried archaeological resources, could still exist within the limits of the proposed project and that the following standard conditions will continue to apply:

- *It is an offence under Sections 48 and 69 of the Ontario Heritage Act for any party other than a licensed archaeologist to make any alteration to a known archaeological site or to remove any artifact or other physical evidence of past human use or activity from the site, until such time as a licensed archaeologist has completed archaeological fieldwork on the site, submitted a report to the Minister stating that the site has no further cultural heritage value or interest , and the report has been filed in the Ontario Public Register of Archaeology Reports referred to in Section 65.1 of the Ontario Heritage Act;*
- *Should previously undocumented archaeological resources be discovered, they may be a new archaeological site and therefore subject discovering the archaeological resources must cease alteration of the site immediately and engage a licensed consultant archaeologist to carry out archaeological fieldwork, in compliance with Section 48 (1) of the Ontario Heritage Act; and*
- *The Cemeteries Act, R.S.O. 1990 c. C.4 and the Funeral, Burial and Cremation Services Act, 2002, S.O. 2002, c.33 (when proclaimed in force) require that any person discovering human remains must notify the police or coroner and the Registrar of Cemeteries at the Ministry of Consumer Services.*

Stage 2 Report (Licence/PIF # P218-012-2010), February 2011, Received February 4, 2011

The Stage 2 archaeological assessment of a portion of the proposed project was undertaken by Golder, on behalf of Stantec, in order to meet the requirements of an environmental assessment conducted under the Renewable Energy Act, as outlined in Ontario Regulation 359/09 section 22(3). The Stage 2 Assessment was conducted from December 2nd, 2010 to December 22nd, 2010 and January 2nd, 2011 to January 3rd, 2011. This work was conducted under archaeological consulting licence P218, issued to Scott Martin, Ph.D., by the Ontario Ministry of Tourism and Culture. The Stage 2 assessment focused upon the proposed wind turbine and solar lands layout, including turbine sites, collector cable routes, access roads, construction roads, transmission lines, laydown areas and substations. A total of approximately 75 hectares was subject to Stage 2 archaeological assessment.

The remainder of the project area, consisting entirely of ploughed agricultural fields (total of approximately102 hectares), will be assessed when weather conditions allow using the pedestrian survey method at five metre intervals. In total, 20 turbine locations, 11 access road or collector

cable routes and two portions of solar panel lands still need to be assessed. This remaining work is estimated to take a crew of 6 individuals, three field days, after which time the Stage 2 assessment will be complete.

The Stage 2 archaeological assessment resulted in the identification of 55 locations, comprising 54 pre-contact Aboriginal sites and one historic Euro-Canadian site. In summary, 25 of the 55 archaeological locations identified within the study area are recommended for Stage 3 assessment. It is recommended that these sites be subject to a Stage 3 archaeological investigation to further evaluate their cultural heritage value or interest.

The following recommendations are made concerning these locations.

Sites Recommended for Stage 3 Assessment

Table 3 lists the pre-contact Aboriginal sites requiring Stage 3 assessment. Of the 54 pre-contact Aboriginal archaeological locations recorded, 25 of them are being recommended for further archaeological assessment.

Table 1: Pre-contact Aboriginal Sites Requiring Stage 3 Archaeological Assessment

Site Name	Borden Number	Cultural Affiliation	Date
Location 2	AfGw-168	pre-contact Aboriginal	indeterminate
Location 5	AfGw-169	pre-contact Aboriginal	indeterminate
Location 12	AfGw-170	pre-contact Aboriginal	c. 3780-3200 B.C.
Location 15	AfGw-171	pre-contact Aboriginal	indeterminate
Location 16	AfGw-172	pre-contact Aboriginal	indeterminate
Location 17	AfGw-173	pre-contact Aboriginal	indeterminate
Location 18	AfGw-174	pre-contact Aboriginal	indeterminate
Location 21	AfGw-175	pre-contact Aboriginal	indeterminate
Location 24	AfGw-176	pre-contact Aboriginal	indeterminate
Location 29	AfGw-177	pre-contact Aboriginal	indeterminate
Location 30	AfGw-178	pre-contact Aboriginal	indeterminate
Location 34	AfGw-179	pre-contact Aboriginal	c. 500 B.C. - A.D. 1
Location 38	AfGw-180	pre-contact Aboriginal	indeterminate
Location 39	AfGx-722	pre-contact Aboriginal	indeterminate
Location 41	AfGw-182	pre-contact Aboriginal	indeterminate
Location 44	AfGw-183	pre-contact Aboriginal	indeterminate
Location 45	AfGx-723	pre-contact Aboriginal	indeterminate
Location 46	AfGx-724	pre-contact Aboriginal	indeterminate
Location 47	AfGx-725	pre-contact Aboriginal	indeterminate
Location 48	AfGx-726	pre-contact Aboriginal	indeterminate
Location 49	AfGx-727	pre-contact Aboriginal	indeterminate
Location 50	AfGx-728	pre-contact Aboriginal	indeterminate

Site Name	Borden Number	Cultural Affiliation	Date
Location 51	AfGx-729	pre-contact Aboriginal	indeterminate
Location 52	AfGx-730	pre-contact Aboriginal	indeterminate
Location 53	AfGx-731	pre-contact Aboriginal	indeterminate

Sites Not Requiring any Further Archaeological Assessment

Table 4 lists the pre-contact Aboriginal sites not requiring Stage 3 assessment. Of the 54 pre-contact Aboriginal archaeological locations recorded, 29 of them have been sufficiently documented and require no further archaeological assessment.

Table 2: Pre-contact Aboriginal Sites Not Requiring Any Further Archaeological Assessment

Site Name	Borden Number	Cultural Affiliation	Date
Location 1	none	pre-contact Aboriginal	indeterminate
Location 3	none	pre-contact Aboriginal	indeterminate
Location 4	none	pre-contact Aboriginal	indeterminate
Location 6	none	pre-contact Aboriginal	indeterminate
Location 7	none	pre-contact Aboriginal	indeterminate
Location 8	none	pre-contact Aboriginal	indeterminate
Location 9	none	pre-contact Aboriginal	indeterminate
Location 10	none	pre-contact Aboriginal	indeterminate
Location 11	none	pre-contact Aboriginal	indeterminate
Location 13	none	pre-contact Aboriginal	indeterminate
Location 14	none	pre-contact Aboriginal	indeterminate
Location 19	none	pre-contact Aboriginal	indeterminate
Location 20	none	pre-contact Aboriginal	indeterminate
Location 22	none	pre-contact Aboriginal	indeterminate
Location 23	none	pre-contact Aboriginal	indeterminate
Location 25	none	pre-contact Aboriginal	indeterminate
Location 26	none	pre-contact Aboriginal	indeterminate
Location 27	none	pre-contact Aboriginal	indeterminate
Location 28	none	pre-contact Aboriginal	indeterminate
Location 31	none	pre-contact Aboriginal	indeterminate
Location 32	none	pre-contact Aboriginal	indeterminate
Location 33	none	pre-contact Aboriginal	indeterminate
Location 35	none	pre-contact Aboriginal	indeterminate
Location 36	none	pre-contact Aboriginal	indeterminate
Location 37	none	pre-contact Aboriginal	indeterminate
Location 42	none	pre-contact Aboriginal	indeterminate

Site Name	Borden Number	Cultural Affiliation	Date
Location 43	none	pre-contact Aboriginal	indeterminate
Location 54	none	pre-contact Aboriginal	indeterminate
Location 55	none	pre-contact Aboriginal	indeterminate

Table 5 lists the single historic Euro-Canadian site not requiring Stage 3 assessment. Of the one Historic Euro-Canadian archaeological location recorded, zero of them are being recommended for further archaeological assessment.

Table 3: Historic Euro-Canadian Sites Not Requiring Any Further Archaeological Assessment

Site Name	Borden Number	Cultural Affiliation	Date
Location 40	AfGw-181	historic Euro-Canadian	Late 19th Century

In summary, 25 of the 55 archaeological locations identified within the study area are recommended for Stage 3 assessment since they are judged to be of cultural heritage value or interest requiring further documentation.

This assessment was undertaken in order to meet the requirements of an environmental assessment conducted under the Renewable Energy Approval (REA) process, as outlined in Ontario Regulation 359/09 section 22(3). The Ontario Ministry of Tourism and Culture is asked to review the results presented and to accept this report into the Ontario Public Register of Archaeological Reports. Additional archaeological assessment is still required and so the archaeological sites recommended for further archaeological fieldwork remain subject to Section 48(1) of the Ontario Heritage Act and may not be altered, or have artifacts removed, except by a person holding an archaeological licence.

This report is submitted to the Minister of Culture as a condition of licensing in accordance with Part VI of the Ontario Heritage Act, R.S.O. 1990, c 0.18. The report is reviewed to ensure that the licensed consultant archaeologist has met the terms and conditions of their archaeological licence, and that the archaeological fieldwork and report recommendations ensure the conservation, protection and preservation of the cultural heritage of Ontario.

Should previously undocumented archaeological resources be discovered, they may be a new archaeological site and therefore subject to Section 48(1) of the Ontario Heritage Act. The proponent or person discovering the archaeological resources must cease alteration of the site immediately and engage a licensed consultant archaeologist to carry out archaeological fieldwork, in compliance with sec. 48(1) of the Ontario Heritage Act.

The Cemeteries Act requires that any person discovering human remains must notify the police or coroner and the Registrar of Cemeteries, Ministry of Consumer Services.

With respect to the areas assessed to date, and based on the information provided to the Ministry, the Ministry is satisfied with these recommendations.

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

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

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

Sincerely,

Shari Prowse
Archaeology Review Officer

cc. Dr. Scott Martin, Golder Associates
Mr. Colin Varley, Stantec Consulting Ltd.
Mr. Rob Nadolny, Senior Project Manager, Stantec Consulting Ltd.

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

Friedl, Susanne

From: Uchiyama, Christienne
Sent: Thursday, March 17, 2011 10:54 AM
To: Hatcher, Laura (MTC)
Cc: Varley, Colin; Kozak, Mark; Nadolny, Rob; m.dawson@samsungrenewableenergy.ca
Subject: FW: Stantec FTP Confirmation - SAMSUNG GREP - HERITAGE ASSESSMENTS

Follow Up Flag: Follow up
Flag Status: Flagged

Hi Laura,

Please find below instructions for downloading the revised Heritage Assessment and Protected Properties Reports for the Samsung Grand Renewable Energy Project in Haldimand County (MTC file no. 28EA021). We trust that we have addressed all of the comments from your letter dated February 16th.

Please don't hesitate to contact me should you have any questions or concerns regarding the revised reports.

Regards,
Chris

Christienne Uchiyama
Archaeologist and Heritage Planning Consultant
200 - 2781 Lancaster Road
Ottawa ON K1B 1A7
Ph: (613) 738-0708 Ext. 3278
Fx: (613) 738-0721
Cell: (613) 327-0427
Christienne.Uchiyama@stantec.com
stantec.com

Automatic Login

FTP site link: ftp://s0331082156:6829724@ftptmp.stantec.com
By clicking on the link above (or pasting the link into Windows Explorer) you will be automatically logged into your FTP site.

Manual Login

FTP link: ftp://ftptmp.stantec.com
Login name: s0331082156
Password: 6829724
Disk Quota: 2GB
Expiry Date: 3/31/2011

From: Toneatto, Mariflor (MTC)
Sent: March 25, 2011 2:33 PM
To: Ing, Pearl (MEI); Dumais, Doris (ENE)
Cc: Ratchford, Donna (MTC); Armstrong, Peter (MTC); Schiller, Chris (MTC); Jakob, Marlo (MTC)
Subject: KC Samsung - MTC Letter

Hi Pearl and Doris,

Just to confirm our telephone discussion this afternoon, the interim comments letter to Samsung dated March 15th enables Samsung to initiate their final public consultations process, with the understanding that the remaining Stage 2 archaeological assessment work will be completed, and a final MTC comments letter will be issued to support the submission of their REA Application.

Pearl, thank you for following up with KC/Samsung to relay this information.

Regards,

Mariflor

Mariflor Toneatto
Manager, Culture Programs Unit
Ministry of Tourism and Culture
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Ministère du Tourisme et de la Culture

Unité des services culturels
Direction des programmes et des services
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Ontario

April 1, 2011

Christienne Uchiyama
Archaeologist and Heritage Planning Consultant
200 - 2781 Lancaster Road
Ottawa, Ontario
K1B 1A7

Dear Ms. Uchiyama,

RE: Heritage Assessment for Grand Renewable Energy Park

Various Lots located within the area bounded by Townline Road, Haldimand Road 20, Grand River, and Lake Erie, County of Haldimand

MTC file no. 28EA021

We hereby acknowledge receipt of the revised Heritage Assessment (consisting of two documents: a *Protected Properties Report* and a *Heritage Impact Assessment Report*) for the above-referenced project, as part of the *Environmental Protection Act's* Renewal Energy Approvals (REA) process under Ontario Regulation 359/09.

We have reviewed the reports and have no further comments on the *Protected Properties Report*, and the following comments on the ***Heritage Impact Assessment Report***:

Section 4.6 of the heritage impact assessment shows an electrical transmission component on Figure 4-6. This section discusses the visual impact of the solar panels on the surrounding heritage resources, but does not discuss the impact of the electrical transmission component. Information about the appearance and impact of this transmission component should be included in the report.

Section 4.6 also mentions the use of berms as an effective way to limit the visibility of the solar panels. This mitigation measure was not mentioned in the previous version of the report. Was this mitigation strategy introduced as a result of considerations of the project's impacts on heritage resources? If so, it is suggested that this mitigation strategy is presented in the results and recommendations section of the report, as it demonstrates the proponent will be taking measures to mitigate project impacts on heritage resources.

Thank you for providing additional images and information regarding the Lakeshore Road CHL (Section 4.10). The report would benefit from presenting further information on the character defining elements of this CHL, and discussion of impacts. While it is understood that the road is sheltered by a dense tree canopy in many places, which will limit views of distant project

infrastructure when the viewer is located beneath the canopy, photo 6 in this section shows a more open view across the waterfront from one portion of the CHL to another section. Are views of this type also important character defining attributes of this CHL? If so, it is requested that they are identified as such in the report, along with visual modelling of project infrastructure from key vantage points.

The above are comments from the Ministry of Tourism and Culture on the submitted report. These recommendations should be incorporated into a report to be resubmitted to the Ministry of Tourism and Culture. The revised report may be submitted electronically as a pdf. Once the report is finalized and MTC has issued a letter of acceptance, hard copies of the report may follow.

Please contact the undersigned if you have any questions or wish to discuss these comments further.

Sincerely,

Laura Hatcher
Heritage Planner
laura.hatcher2@ontario.ca

Ministry of Tourism and Culture

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Toronto ON M7A 0A7

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Ontario

April 1, 2011

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Archaeologist and Heritage Planning Consultant
200 - 2781 Lancaster Road
Ottawa, Ontario
K1B 1A7

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MTC file no. 28EA021

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Please contact the undersigned if you have any questions or wish to discuss these comments further.

Sincerely,

Laura Hatcher
Heritage Planner
laura.hatcher2@ontario.ca

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Ontario

April 19, 2011

Marnie Dawson
Manager, Renewable Energy Approvals
Samsung Renewable Energy
55 Standish Court
Mississauga, Ontario
L5R 4B2

RE: **Grand Renewable Energy Park**

Various Lots located within the area bounded by Townline Road, Haldimand Road 20, Grand River, and Lake Erie, County of Haldimand

MTC DPR file no. 28EA021

Dear Ms. Dawson:

This letter constitutes the Ministry of Tourism and Culture's written comments as required by s. 23(3)(a) of O. Reg. 359/09 under the *Environmental Protection Act* regarding heritage assessments undertaken for the above project.

Based on the information contained in the reports you have submitted for this project, the Ministry is satisfied with the heritage assessments. Please note that the Ministry makes no representation or warranty as to the completeness, accuracy or quality of the heritage assessment reports. *

The reports recommend the following:

Protected Properties Assessment Section 6: Study Results and Recommendations:

A total of four (4) municipally designated properties were identified within a reasonable zone of influence of Project components (Figure 4-1). Each of these properties has been assessed for potential Project-related negative impacts. Evaluation of impacts included: destruction, alteration, shadows, isolation, direct or indirect obstruction of views, and change in land use.

No potential negative impacts of significant magnitude have been identified.

Heritage Impact Assessment Section 5: Study Results and Recommendations:

A total of 85 properties and seven cultural landscapes within the Project's zone of influence were evaluated as being significant in terms of their heritage value. All of the significant properties and cultural landscapes were assessed for potential Project-related negative impacts.

No significant resources will be destroyed by the proposed Project.

No significant resources will be altered by the proposed Project.

No significant resources will have shadows cast on them by the proposed Project.

No significant resources will be isolated by the proposed Project.

No views of significant resources and/or their value-defining features will be obscured in an invasive manner.

Based on the current Site Plan, no further mitigation is recommended.

The Ministry is satisfied with these recommendations.

This letter does not waive any requirements which you may have under the Ontario *Heritage Act*. Also, this letter does not constitute approval of the renewable energy project. Approvals of the project may be required under other statutes and regulations. It is your responsibility to obtain any necessary approvals or licences.

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

Sincerely,

Laura Hatcher
Heritage Planner

cc. Christienne Uchiyama, Archaeologist and Heritage Planning Consultant
Stantec

Colin Varley, Senior Archaeologist and Heritage Planning Consultant
Stantec

Chris Schiller, Manager, Culture Services Unit
Programs and Services Branch, Ministry of Tourism and Culture

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

Transmittal

Stantec Consulting Ltd.
200 - 2781 Lancaster Road
Ottawa ON K1B 1A7
Tel: (613) 738-0708
Fax: (613) 738-0721

To:	Laura Hatcher	From:	Christienne Uchiyama
Company:	Ministry of Tourism and Culture	☐	For Your Information
		☐	For Your Approval
Address:	401 Bay Street, Suite 1700 Toronto, ON M7A 0A7	☐	For Your Review
		x	As Requested
Phone:	416 314-3108		
Date:	April 25, 2011		
File:	MTC file no.28EA021		
Delivery:	Courier		

Reference: **Grand Renewable Energy Park, Protected Properties Assessment and Heritage Impact Assessment**

Attachment:

Copies	Doc Date	Pages	Description
3	March 15, 2011	23, plus appendices	Final Report: Protected Properties Assessment, Grand Renewable Energy Project, Haldimand County, ON
3	April 11, 2011	111, plus appendices	Final Report: Heritage Impact Assessment, Grand Renewable Energy Project, Haldimand County, ON

Please find enclosed three (3) hardcopies and a CD containing electronic copies of the Protected Properties Report and the Heritage Impact Assessment for the Grand Renewable Energy Park in Haldimand County, Ontario. Please do not hesitate to contact me should you have any questions or concerns.

STANTEC CONSULTING LTD.

Christienne Uchiyama
Archaeologist and Heritage Planning Consultant
Tel: (613) 738-0708
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Christienne.Uchiyama@stantec.com

c. file

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Ontario

July 25, 2011

Dr. Scott Martin
Golder Associates Ltd.
309 Exeter Road, Unit #1
London, Ontario N6L 1C1

RE: Review of the Archaeological Assessment Report Entitled, "Stage 2 Archaeological Assessment, Samsung Grand Renewable Energy Park, Various Lots, Concession 1N-3N and 1S-5S, The Earl Tract, The Haldimand Tract and the Sheehan Tract, Dunn Townships, Concessions 1-9, Rainham Township, Concessions 1 N, 1S, 2, 3 and The Jones Tract, North Cayuga Township, Concessions 3-7 and the Fradenburgh Tract, South Cayuga Township and Concessions 1-12, Walpole Township, Haldimand County, Ontario", July 2011, Received July 11, 2011, Licence/PIF # P218-098-2010 and P218-023-2011, MTC File HD00565

Dear Dr. Martin:

This office has reviewed the above-mentioned report which has been submitted to this Ministry as a condition of licensing in accordance with Part VI of the Ontario Heritage Act, R.S.O. 1990, c 0.18. This review is to ensure that the licensed professional consultant archaeologist has met the terms and conditions of their archaeological licence, that archaeological sites have been identified and documented according to the 1993 technical guidelines set by the Ministry and that the archaeological fieldwork and report recommendations ensure the conservation, protection and preservation of the cultural heritage of Ontario.*

In reviewing this report, specific issues have been identified that need to be addressed. These include:

The number of archaeological sites reported to have been found on Page i and 1 is inconsistent with what was reported on Page 116. Clarify.

The report will require information regarding archaeological sites found (e.g. Borden number, name, cultural affiliation, recommendations for additional assessment) within the projects lands not documented within this report subsequent to the Stage 1 background research.

For the Early Archaic sites, Location 66 and Location 88, it is recommended that for a sample of units (at least 20% of the total number of units in sandy soil and at least 10% of the total number of units in heavy soil), screen the entire contents of each unit through mesh with an aperture of no greater than 3 mm.

It is not clear why Stage 3 is recommended for Location 109, an isolated early Late Woodland projectile point, and not other locations with isolated projectile points, for example, Location 87, Location 136 and Location 149. Clarify.

On Page 50, Location 118 is referred to as Location 110 and on Page 68 Location 166 is referred to as Location 156. Clarify.

Location 155 does not appear to be mapped. In order to facilitate the review of the report, identify within the sections discussing each site the map it is illustrated on.

For each archaeological site, confirm if intensification occurred when artifacts were identified. This was not always indicated. For example, it is mentioned for Location 174 but not for Location 173 or for Location 177.

This letter does not constitute the Ministry's written comments for the purposes of O. Reg 359/09.

A revised report must be received by the Ministry on or prior to 90 calendar days. Please note that licensees who fail to file reports by the specified report filing deadline will be in violation of the terms and conditions of their licence.

If the revised report will also require an expedited review, please include a request for expedited review upon submission.

I trust this information is of assistance. Should you require any further information regarding this matter, please feel free to contact me.

Sincerely,

Shari Prowse
Archaeology Review Officer

cc. Archaeology Licence Office

* In no way will the Ministry be liable for any harm, damages, costs, expenses, losses, claims or actions that may result: (a) if the 2 Report(s) or its recommendations are discovered to be inaccurate, incomplete, misleading or fraudulent; or (b) from the issuance of this letter. Further measures may need to be taken in the event that additional artifacts or archaeological sites are identified or the Report(s) is otherwise found to be inaccurate, incomplete, misleading or fraudulent.

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Ontario

July 25, 2011

Mr. Colin Varley
Stantec Consulting Ltd.
2781 Lancaster Road
Ottawa, ON K2B 1A7

Re: Review of the Archaeological Assessment Report Entitled, "Final Report, Stage 2 Archaeological Assessment, SPK Grand Renewable Energy Park, Haldimand County, Ontario, Cayuga Township – Lot 39, Concession 1 South; Lot 25, Concession 5 South Rainham Township – Lot 8, Concession 6; Lot 24, Concession 1, Dunn Township – Lot 4, Concession 1 North of Rainham Road; Lots 7-9, Concession 1North of Rainham Road; Lots 15-17, Concession 2, South of Rainham Road; Lots 21-24, Concession 2, South of Rainham Road", July 6, 2011, Received July 11, 2011, Licence/PIF # P002-222-2011, MTC File HD00565

Dear Mr. Varley,

This office has reviewed the above-mentioned report, which has been submitted to this Ministry as a condition of licensing in accordance with Part VI of the Ontario Heritage Act, R.S.O. 1990, c 0.18. This review is to ensure that the licensed professional consultant archaeologist has met the terms and conditions of their archaeological licence, that archaeological sites have been identified and documented according to the 2011 Standards and Guidelines for Consultant Archaeologists set by the Ministry, and that the archaeological fieldwork and report recommendations ensure the conservation, protection and preservation of the cultural heritage of Ontario.*

In reviewing this report, specific issues have been identified that need to be addressed. These include:

The report refers to requirements of the 2010 Standards and Guidelines; however, the Standards and Guidelines that are currently in force are the 2011 Standards and Guidelines for Consultant Archaeologists. Revise the report accordingly.

As per Section 7.4 Standard 5f, the Cover Letter is required to provide the PIF #s of other reports (projects) undertaken for this development.

As per Section 7.5.1 Standard 1d, the Cover Page is required to indicate the type of report (i.e. original, revised, preliminary).

As per Section 7.5, the report is required to contain the sections listed in the first column of Table 7.1. The information required in each section and the sections themselves must be provided

separately (e.g. Map and Images go in their own sections as well as "Field Methods" and "Records and Finds" from the section "Stage 2 Assessment Methodology and Reroc(sci) of Finds"). To avoid confusion and facilitate review, it is recommended that you use the same titles as listed in Table 7.1 to identify the required sections.

As per Section 7.8.2 Standard 3, the detailed site location information and mapping for all archaeological sites must be submitted separately as supplementary information.

Section 2.2 Standard 2 of the 2011 Standards and Guidelines provides criteria for determining when an archaeological site requires Stage 3 assessment, not when archaeological resources are defined as archaeological sites with cultural heritage value and interest. Archaeological resources must have cultural heritage value and interest to meet the definition of "artifact" and "archaeological site" under the *Ontario Heritage Act*. The artifact clusters and artifact findspots detailed in the report do meet the definition of archaeological sites. Revise report accordingly.

As per Section 7.8.1 Standard 1a and 1b, the report will require images of those areas with low or no archaeological potential or disturbed. Some of these are missing from the report. For example, photographs of all the areas marked as disturbed in Figure 3-6 and drainage channel bisected the T41 pad were not provided in the report.

As per Section 7.5.12 Standard 1, the scale of the regional map (Figure 2-1) must be no larger than 1:50,000 and no smaller than 1:25,000.

As per Section 7.8.1 Standard 3, the report will need to provide estimates (in metric as per Section 7.5 Standard 2) and of the percentages of the areas assessed based on the applicable categories described in Section 7.8.1 Standard 3a-c.

As per Section 7.8.1 Standard 2, the report is required to confirm that standards for the various survey methods were met. For pedestrian survey this is found in Section 2.1.1 Standards 1-9 and for test pit survey this is found in Section 2.1.2 Standards 1-9. For example, in terms of those areas subject to test pit method of assessment, it must be demonstrated that the property met the criteria for ploughing not being possible as per Section 2.1.2 Standard 1 of the 2011 Standards and Guidelines. This was not done for all areas subject to test pitting, for example, the "unploughed lawn area" mentioned on Page 26, and a "small turn around area" mentioned on Page 28. If it cannot be demonstrated that ploughing is not possible or the lands should have been subject to a pedestrian survey instead, these areas must be ploughed, allowed to weather and subject to pedestrian survey.

As per Section 2.1.1 Standard 5, if surface visibility is below 80%, (e.g. due to crop stubble), ensure the land is reploughed and weathered before survey. It is not clear based on statements regarding the assessment at the edge of Complex 3 where Cluster #56 is located (Page 22), if the visibility was sufficient for the Stage 2 pedestrian survey. Please clarify. Also, it is indicated that the corn stalks were removed through raking to assist in the Stage 2 intensification. This is not an accepted standard or guideline of increasing surface visibility as it may move artifacts along with the debris. As such, the site area for Cluster # 56 must be reploughed, allowed to weather, and be subject to an intensified pedestrian survey as per Section 2.1.1 Standard 7.

As per Section 2.1.3, Standard 2a and 2b when artifacts are found during a test pit survey, for example Cluster #58 and #59, you may excavate a maximum 8 additional test pits and one or more test units or, Option B, excavate additional 1 metre test units within 5 metres of the positive test pit. Neither option was chosen. Please clarify.

The report will need to provide information regarding archaeological sites found (e.g. Borden number, name, cultural affiliation, recommendations for additional assessment) within the projects lands not documented within this report subsequent to the Stage 1 background research.

The figures illustrating the area assessed and methods used and results will need to differentiate between what was surveyed under PIF P002-222-2011 and what was surveyed previously under P002-211-2010. Survey conducted previously by other consultants should also be illustrated where it impacts (e.g. where it overlaps or is adjacent to) the areas assessed as documented within this report.

As per Section 7.8.2 Standard 2, provide an inventory of the documentary report generated in the field (e.g. photographs, maps, field notes).

This letter does not constitute the Ministry's written comments for the purposes of O. Reg 359/09.

A revised report must be received by the Ministry on or prior to 90 calendar days. Please note that licensees who fail to file reports by the specified report filing deadline will be in violation of the terms and conditions of their licence.

If the revised report will also require an expedited review, please include a request for expedited review upon submission.

I trust this information is of assistance. Should you require any further information regarding this matter, please feel free to contact me.

Sincerely,

Shari Prowse
Archaeology Review Officer

cc. MTC Archaeology Licence Office

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

Transmittal

Stantec Consulting Ltd.
2781 Lancaster Road,
Ottawa, ON K1B 1A7
Tel: (613) 738-0708
Fax: (613) 738-0721

To:	Wai Kok	From:	Colin Varley (License #P002)
Company:	Ministry of Tourism and Culture	Date:	August 4, 2011
Address:	Culture Programs Unit 401 Bay Street, Suite 1700 Toronto, ON M7A 0A7	File:	161010624
		Delivery:	Courier
Phone:	416-212-5107		

Reference: **PIF # P002-222-2011 Stage 2 Archaeological Assessment, SPK Grand Renewable Energy Park, Haldimand County, Ontario, Cayuga Township – Lot 39, Concession 1 South; Lot 25, Concession 5 South Rainham Township – Lot 8, Concession 6; Lot 24, Concession 1 Dunn Township – Lot 4, Concession 1 North of Rainham Road; Lots 7-9, Concession 1 North of Rainham Road; Lots 15-17, Concession 2 South of Rainham Road; Lots 21-24, Concession 2 South of Rainham Road – REVISED REPORT**

Please find enclosed reports for the above noted project and for the following proponent and approval authority. Other PIFs undertaken for this development include Stantec PIFs P002-208-2010 and P002-211-2010 and Golder PIFs P218-012-2010 and P218-123-2011.

Samsung Renewable Energy Inc., Adam Rosso, 55 Standish Court, Mississauga, ON L5R 4B2, Tel: 905-285-1872 Fax: 905-819-1852 Email: a.rosso@samsungrenewableenergy.ca

Ministry of the Environment – Approvals Program, Doris Dumais – Director, 2 St. Clair Ave West 12th floor, Toronto, Ontario M4V 1M2 ph: 416-314-8171 fax: 416-314-8457 doris.dumais@ontario.ca Renewable Energy Approvals (O. Reg. 359/09)

Attachment:

Copies	Report Type	Doc Date	Pages	Description
3	Revised	August 4, 2011	56 +2 Appendices	Final Report, Stage 2 Archaeological Assessment, SPK Grand Renewable Energy Park, Haldimand County, Ontario

I, the undersigned, hereby declare that, to the best of my knowledge, the information in this report and submitted in support of this report is complete and accurate in every way, and I am aware of the penalties against providing false information under section 69 of the *Ontario Heritage Act*.

STANTEC CONSULTING LTD.

Colin Varley, M.A., R.P.A.
Senior Archaeologist and Heritage Planning Consultant
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c. File; Marnie Dawson, Samsung Renewable Energy Inc.

One Team. Infinite Solutions.

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Ontario

September 21, 2011

Kyoung Chun Kim
Manager, Renewable Energy Approvals
Samsung Renewable Energy
55 Standish Court
Mississauga ON L5R 4B2
kc1206.kim@samsung.com

RE: Grand Renewable Energy Park, Haldimand County, Ontario, Licence/PIF # P002-208-2010, P002-211-2010, P002-222-2011, P218-012-2010, P218-098-2011 and P218-023-2011, MTC File HD00565

Dear Proponent:

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

Based on the information contained in the report(s) you have submitted for this project, the Ministry believes the archaeological assessment complies with the *Ontario Heritage Act's* licensing requirements, including the licence terms and conditions and the Ministry's 1993 Archaeological Assessment Technical Guidelines or the 2011 Standards and Guidelines for Consultant Archaeologists (whichever apply). Please note that the Ministry makes no representation or warranty as to the completeness, accuracy or quality of the report(s).*

The reports recommend the following:

Stage 1 Report (Licence/PIF # P002-208-2010), Received August 27, 2010, Addendum Received February 25, 2011

It is Stantec's professional opinion that most parts of the Project area demonstrate potential for the presence of significant archaeological deposits of integrity. It should be anticipated for Project component siting exercises that Stage 2 Archaeological Assessment is likely to be required for most locations of project-related infrastructure construction, including all turbine pads, access roads, underground cable links, construction offices, laydown areas and temporary storage areas and any other areas where soil disturbances into and below the topsoil may occur.

Stage 2 archaeological survey generally takes two forms: pedestrian survey and test pit excavation survey. Pedestrian survey, the preferred methodology, requires that the area to be surveyed be ploughed as if the ground were to be cultivated and allowed to weather through one hard or several light rainfalls. After weathering the ground is walked at a slow pace and the locations of artifacts recorded using a Geographic Positioning System (GPS). During a pedestrian survey only diagnostic artifacts are collected; all others are left in situ.

If ploughing is not technically feasible in some locations due to the nature and extent of existing ground cover or other conditions, Stage 2 assessment will need to be completed using a test pit excavation strategy. In this instance standard archaeological test pits of 30 x 30 cm or greater are excavated and all excavated soils passed through screens of 6 mm mesh. During test pit survey all artifacts encountered are retained. In either case the survey interval will be at no more than 5 m. During Stage 2 assessment all field activities will be recorded using a GPS.

Stantec cautions, however, that it is possible that deeply buried archaeological resources, could still exist within the limits of the proposed project and that the following standard conditions will continue to apply:

- Should human remains be identified during operations, all work in the vicinity of the discovery will be suspended immediately. Notification will be made to the Ontario Provincial Police, or local police, who will conduct a site investigation and contact the district coroner. Notification must also be made to the Ministry of Tourism and Culture and the Registrar of Cemeteries, Cemeteries Regulation Unit, Ministry of Small Business and Consumer Services.

- Should other cultural heritage values (archaeological or historical materials or features) be identified during operations, all work in the vicinity of the discovery will be suspended and the Ministry of Tourism and Culture archaeologist contacted. This condition provides for the potential for deeply buried or enigmatic local site areas that are not typically identified in archaeological field assessments.

Stage 2 Report (Licence/PIF # P002-211-2010), Revised Report, February 28, 2011, Received March 1, 2011

Stage 2 AA of the GREP to date by Stantec has resulted in the documentation of 165 archaeological resources, including 45 archaeological sites which have been registered with the MTC and of 50 artifact clusters and 70 isolated findspots.

Stage 2 Archaeological Assessment at Solar Woodlot

Given the identification of several archaeological resources within 250 m of the Solar Woodlot it is recommended that if the woodlot area is required for Project related components that the area that was test pit surveyed at 10 m intervals be re-tested to a 5 m interval. These extra test pits can be excavated between the existing test pits.

Sites Requiring Stage 3 Archaeological Assessment

Stage 2 AA of the GREP to date by Stantec has resulted in the documentation of 45 registered archaeological sites which will require further archaeological assessment (Table 4-1). At minimum all 45 sites will require Stage 3 AA in order to determine the extent of each archaeological resource, and to further refine our understanding of the age, cultural association and cultural heritage value of the sites. Stage 3 AA will also determine what appropriate mitigation options, such as avoidance or excavation, are available at each site location. Based on current calculations of site area it is anticipated that Stage 3 AA of the 45 sites will encompass an area of approximately 104,000 square metres, or 10.4 ha of the 359 ha assessed.

Table 4-1 Archaeological Sites Requiring Further Assessment

GREP Site #	Location	Borden #	Easting	Northing	# Tools/ Diagnostics	# non-Tools	Total # Artifacts	Cultural Period	Dimensions (in m)	Site Area (m^2)
1	T36	AfGx-710	589964	4755625	0	11	11	Indeterminate	25 x 20	500
2	T46	AfGx-711	590521	4752280	2	3	5	Indeterminate	35 x 20	581
3	T46	AfGx-712	590603	4752068	0	32	32	Indeterminate	65 x 30	1950
4	T23	AfGx-713	591237	4751861	0	22	22	Indeterminate	25 x 25	509
5	T23	AfGx-714	591145	4752137	0	28	28	Indeterminate	30 x 30	733
6	T23	AfGx-715	591097	4752326	0	32	32	Indeterminate	55 x 35	1571
7	T28	AfGx-716	591169	4752307	0	11	11	Indeterminate	25 x 25	535
8	T28	AfGx-717	591295	4752310	0	25	25	Indeterminate	35 x 25	659
9	T28	AfGx-718	591339	4752251	2	9	11	Indeterminate	35 x 20	508
10	T23	AfGx-719	590901	4752878	0	25	25	Indeterminate	60 x 30	1423
11	T20	AfGx-720	592626	4749531	3	114	117	Early Woodland	90 x 90	6939
12	SF1	AfGw-137	596156	4748772	2	16	18	Late Palaeo-Indian/ Early Woodland	40 x 40	641
13	SF1	AfGw-138	596243	4748449	9	89	98	Middle/Late Archaic, Middle Woodland	150 x 110	12309
14	SF1	AfGw-139	596237	4748626	2	47	49	Late Archaic	145 x 115	4188
15	T13	AfGw-140	596811	4748748	n/a	n/a	n/a	Indeterminate	20 x 20	303
16	SF2	AfGw-141	596644	4748742	10		10	19th Century Historic	55 x 55	1026
17	SF1	AfGw-142	596286	4748783	2	18	20	Late Archaic	90 x 55	3036
18	SF1	AfGw-143	596176	4748858	2	29	31	Early Archaic	115 x 50	3320
19	SF1	AfGw-144	596014	4749261	2	18	20	Early Woodland	110 x 110	9788
20	SF1	AfGw-145	596198	4749235	1	86	87	Indeterminate	50 x 50	1763

21	SF3	AfGw-146	597043	4749303	1	10	11	Indeterminate	35 x 35	1140
22	SF3	AfGw-147	596901	4749626	6	206	212	Late Woodland	250 x 160	29376
23	SF7	AfGw-148	597046	4749740	0	18	18	Indeterminate	70 x 40	2132
24	SF7	AfGw-149	597206	4749996	2	63	65	Late Archaic	75 x 50	3750
25	SF8	AfGw-150	597512	4750457	1	30	31	Indeterminate	40 x 30	1014
26	SF8	AfGw-151	597431	4750516	2	0	2	Middle Archaic	10 x 10	92
27	SF8	AfGw-152	597405	4750435	0	36	36	Indeterminate	40 x 35	1145
28	SF7	AfGw-153	596799	4750597	1	28	29	Late Palaeo-Indian	60 x 40	2193
29	SF5	AfGw-154	596309	4750150	2	14	16	Indeterminate	105 x 40	2723
30	SF4	AfGw-155	596193	4750040	1	10	11	Indeterminate	60 x 30	767
31	SF4	AfGw-156	596052	4750102	1	18	19	Indeterminate	50 x 40	898
32	SF4	AfGw-157	595992	4750003	2	11	13	Middle Archaic	30 x 30	473
33	SF4	AfGw-158	596044	4749943	6	35	41	Early Woodland	40 x 30	367
34	SF4	AfGw-159	596142	4749695	0	14	14	Indeterminate	20 x 20	341
35	SF4	AfGW-160	596174	4749580	0	5	5	Indeterminate	10 x 10	100
36	SF4	AfGw-161	596313	4749612	1	49	50	Indeterminate	80 x 50	3393
37	SF4	AfGw-162	596328	4749533	0	27	27	Indeterminate	25 x 25	564
38	SW	AfGw-163	596603	4749418	0	10	10	Indeterminate	10 x 10	100
39	SF1	AfGw-164	596123	4749106	1	0	1	Early Archaic	10 x 10	100
40	SF4	AfGw-165	596105	4750015	2	2	4	Late Palaeo-Indian	20 x 20	227
41	SF6	AfGw-166	596722	4750265	1	0	1	Early Archaic	10 x 10	100
42	T55	AfGw-167	600123	4746735	1	0	1	Late Palaeo-Indian	10 x 10	100
43	T34	AfGx-721	589820	4753974	1	0	1	Early Archaic	10 x 10	100
44	T13	AfGw-184	594647	4751614	0	62	62	Indeterminate	20 x 25	364
45	T10	AfGx-732	594689	4751585	0	16	16	Indeterminate	20 x 25	389
						Total # Artifacts	1349		Total m2	104230

Stage 3 AA (the Archaeological Site Assessment) of the 45 identified sites will be conducted according to the 2010. Standards and Guidelines for Consultant Archaeologists. The following standards for Stage 3 AA work will apply:

- Before carrying out fieldwork, review all relevant reports of previous fieldwork on the archaeological site or for that property;
- Carry out the archaeological site assessment when weather and lighting conditions permit good visibility of all parts of the archaeological site. Do not carry out the archaeological site assessment when weather and lighting conditions (e.g., snow cover, frozen ground, excessive rain or drought, heavy fog) reduce the ability to identify and document any part of the archaeological site;
- Using GPS record the locations of the following:
  - a central fixed point within the archaeological site
  - a permanent datum that can be tied to a development map; and
- Provide representative photographs of all field conditions (e.g., ploughed field, pasture or woodlot, disturbances).

For each site located using pedestrian survey methodology the Stage 3 AA will be composed of two elements: a controlled surface pick-up (CSP) of artifacts on the surface of ploughed fields and test unit excavation. A CSP is a detailed survey of the ground surface in open fields that allows for precise recording of artifact locations and the collection of a representative sample of artifacts, including non-diagnostic artifacts. The following standards for Stage 3 AA CSP will apply:

- If ground surface visibility has decreased in the time between the Stage 2 survey and the Stage 3 CSP, ensure that the site area is re-cultivated and weathered;
- Accurately map the location of all artifacts on the ground surface using a total station, transit and tape, stadia rod, or GPS unit. Record and catalogue artifacts by their mapped location, recording any relevant information (e.g., spatial relationship of diagnostics, artifact concentration areas). Tie this map to the general site GPS readings by recording a central point in the scatter;
- For very large and dense surface scatters, conduct a full CSP by grid units (maximum 5 m by 5 m units) over the archaeological site. Record and catalogue artifacts with their grid unit designation.
- Ensure that decisions regarding the type and number of artifacts collected strike a balance between gathering enough artifacts to document the archaeological site and leaving enough in place to relocate the site if required (e.g., to conduct further assessment, define a protected area or conduct excavation);
- Collect all formal artifact types and diagnostic categories, including, for 19th century archaeological sites, all refined ceramic sherds; and
- Collect a representative sample of non-diagnostic artifacts, taking into consideration the archaeological site type, type and frequency of non-diagnostic artifacts, and the likelihood that further fieldwork will be required.

Based on the results of the Stage 2 AA, use of a grid unit CSP will likely need to be conducted at AfGx-720, AfGw-144 and AfGw-147 due to their size and artifact densities. All other sites should not require grid unit CSP.

The second component of the Stage 3 AA, test unit excavation, will be required at all identified archaeological sites, including AfGw-163, the site located through test pit survey. The purpose of the test unit excavation is to document the extent of buried artifacts, cultural features, soil stratigraphy and structures and to recover a representative sample of artifacts from across the archaeological site. The interval of the Stage 3 AA grid (of either 5 m or 10 m intervals) will be dependent on the age, type and nature of each identified site. Specific guidelines for this interval are provides in the 2010 Standards and Guidelines for Consultant Archaeologists. The following standards for Stage 3 AA test unit excavation will apply:

- Excavate by 1 m square units;
- To determine the placement of test units, establish a grid on the site based on the permanent datum to at least the accuracy of transit and tape measurements. Placing test units in unmeasured, estimated locations is not acceptable;
- Excavate test units by hand. Do not use heavy machinery (e.g., gas-powered augers, backhoes) except to remove sterile or recent fill covering confirmed, deeply buried or sealed archaeological sites;

- Excavate test units by systematic levels (stratigraphic or standardized);
- Excavate test units into the first 5 cm of subsoil, unless excavation uncovers a cultural feature;
- If test unit excavation uncovers a cultural feature, do not excavate into feature fill. Instead:
    - Record the exposed plan of the feature.
    - Place geotextile fabric over the unit floor and backfill the unit;
- Screen all excavated soil through mesh with an aperture of no greater than 6 mm. For confirmed single component Paleo-Indian and Early Archaic archaeological sites, for a sample of units (at least 20% of the total number of units in sandy soil and at least 10% of the total number of units in heavy soil), screen the entire contents of each unit through mesh with an aperture of no greater than 3 mm; and
- Unless otherwise specified collect and retain all artifacts. Record and catalogue them by their corresponding grid unit designation.

Based on the results of the Stage 2 AA there are seven sites that are presently believed to be single component Palaeo-Indian or Early Archaic sites: AfGw-143; AfGw-153: AfGw-164; AfGw-165; AfGw-166: AfGw-167; and AfGx-721. All seven of these sites are located in what are considered to be heavy soils. For these seven sites 10% of the total number of test units excavated (specific number to be determined based on Table 3.1 in the 2010 Standards and Guideline for Consultant Archaeologists) will need to be screened using 3 mm mesh.

The 2010 Standards and Guideline for Consultant Archaeologists also make special Stage 3 AA provisions for large sites and Late Woodland village sites. At present we cannot determine whether the Late Woodland site AfGw-147 in Solar Fields 3 and 6 represents a Late Woodland village site or a smaller special purpose site. As such it does not qualify for the special provisions of the Late Woodland village, but it does qualify as a large site. Accordingly, this one site may only require excavation of 50% of the required total test units, as determined by Table 3.1 of the 2010 Standards and Guideline for Consultant Archaeologists. This determination will only be able to be made in the field after the initiation of the Stage 3 AA and these provisions should be kept in mind during that work.

It should be anticipated that several of the sites will likely require Stage 4 mitigative excavations in the event that project design cannot avoid the sites. Sites of already identified cultural heritage value and interest include all sites with Palaeo-Indian or Early Archaic components, and the Late Woodland site.

With the large number of Aboriginal archaeological sites documented through the Stage 2 AA it is expected that the involvement of First Nations in subsequent Stage 3 and/or Stage 4 AA will increase beyond the current level of the Stage 2 AA. Ongoing Aboriginal consultation will be part of the overall Project development, for archaeological resources and for other environmental components, and is a requirement of the 2010 Standards and Guideline for Consultant Archaeologists. It is recommended that Aboriginal Engagement be carried out as required by the Standards and Guidelines and as outlined in the bulletin Engaging Aboriginal Communities in Archaeology.

Resources Not Requiring Stage 3 Archaeological Assessment

A total of 50 artifact clusters (CL) and 70 isolated findspots (IF) were also documented at Project components during the Stage 2 AA (Table 4-2). None of these resources meet the criteria for sufficient Cultural heritage value or interest as per the 2010 Standards and Guideline for Consultant Archaeologists. None of these resources require further archaeological assessment. Details regarding all identified artifacts (e.g., Scraper 1-5) can be found in the Artifact Catalogue in Appendix B.

Table 4-2 Archaeological Resources Not Requiring Further Assessment

GREP Site #	Location	Easting	Northing	# Tools	# Lithic Flakes	Total # Artifacts	Material Type	Tool Size (in mm)	Cultural Period	Dimensions (in m)	Figure #	Plate #	Comments
CL 1	SF1	596255	4749292	0	2	2	n/a	n/a	Indeterminate	25 X 5	3-1	n/a	
CL 2	SF1	596378	4749049	2	0	2	Bois Blanc	36 x 22 28 x 21	Late Archaic	25 X 10	3-1	2, 4	Point 2-5 Point 2-6
CL 3	SF1	596145	4749020	0	2	2	n/a	n/a	Indeterminate	5 X 5	3-1	n/a	
CL 4	SF1	596136	4748931	0	3	3	n/a	n/a	Indeterminate	60 X 35	3-1	n/a	
CL 5	SF1	596076	4749054	0	4	4	n/a	n/a	Indeterminate	60 X 15	3-1	n/a	
CL 6	SF1	596124	4748835	0	4	4	n/a	n/a	Indeterminate	65 X 40	3-2	n/a	
CL 7	SF1	596270	4748611	1	3	4	Bois Blanc	49 x 31 x 17	Indeterminate	40 X 40	3-2	n/a	Tool 2-1
CL 8	SF1	596504	4748588	1	1	2	Bois Blanc	40 x 26	Early Woodland	35 x 10	3-2	3	Point 2-4
CL 9	SF2	596802	4748763	2	0	2	Bois Blanc	59 x 46 x 24	Indeterminate	35 x 10	3-2	n/a	Core (not kept) , Core 1-4
CL 10	SF2	596509	4749027	0	3	3	n/a	n/a	Indeterminate	10 x 10	3-2	n/a	
CL 11	SF3	596986	4748618	0	2	2	n/a	n/a	Indeterminate	25 x 10	3-3	n/a	
CL 12	SF3	597107	4749098	0	12	12	n/a	n/a	Indeterminate	160 x 70	3-3	n/a	
CL 13	SF3	597062	4749468	1	1	2	Bois Blanc	60 x 66 x 18	Indeterminate	40 x 10	3-3	n/a	Axe 2-1
CL 14	SF4	595986	4749523	0	2	2	n/a	n/a	Indeterminate	25 x 25	3-4	n/a	
CL 15	SF4	596294	4749544	0	7	7	n/a	n/a	Indeterminate	35 X 20	3-4	n/a	
CL 16	SF4	596138	4749583	0	2	2	n/a	n/a	Indeterminate	35 x 15	3-4	n/a	
CL 17	SF4	596271	4749572	0	7	7	n/a	n/a	Indeterminate	30 x 25	3-4	n/a	
CL 18	SF4	596222	4749715	1	2	3	Bois Blanc	28 x 22	Indeterminate	35 x 25	3-4	5	Point 1-15
CL 19	SF4	596169	4750079	1	1	2	Bois Blanc	43 x 28	Late Archaic	40 x 25	3-4	2	Point 2-13
CL 20	SF4	596171	4750142	0	3	3	n/a	n/a	Indeterminate	30 x 10	3-4	n/a	
CL 21	SF4	596102	4749942	0	7	7	n/a	n/a	Indeterminate	65 x 45	3-4	n/a	
CL 22	SF4	596231	4749820	0	3	3	n/a	n/a	Indeterminate	60 x 30	3-4	n/a	
CL 23	SF4	596098	4749815	1	2	3	Bois Blanc	56 x 47 x 17	Indeterminate	45 x 10	3-4	n/a	Core 1-3
CL 24	SF4	596041	4749749	0	6	6	n/a	n/a	Indeterminate	55 x 30	3-4	n/a	
CL 25	SF4	595959	4749714	0	7	7	n/a	n/a	Indeterminate	40 X 30	3-4	n/a	
CL 26	SF5	596444	4749751	0	5	5	n/a	n/a	Indeterminate	40 x 25	3-4	n/a	
CL 27	SF5	596338	4750019	1	1	2	Bois Blanc	27 x 24	Indeterminate	30 x 15	3-4	n/a	Scraper 1-5
CL 28	SF6	596685	4750254	2	0	2	Bois Blanc	36 x 24 x 12 27 x 24	Indeterminate	35 x 20	3-5	5	Core 1-5 Graver 1-1
CL 29	SF7	597032	4749983	0	4	4	n/a	n/a	Indeterminate	30 x 20	3-5	n/a	
CL 30	SF7	597099	4749984	0	6	6	n/a	n/a	Indeterminate	30 x 15	3-5	n/a	
CL 31	SF7	597015	4750305	1	1	2	Bois Blanc	36 x 23	Middle Woodland	40 x 20	3-6	3	Point 1-30
CL 32	SF7	597203	4749883	0	2	2	n/a	n/a	Indeterminate	30 x 15	3-6	n/a	

GREP Site #	Location	Easting	Northing	# Tools	# Lithic Flakes	Total # Artifacts	Material Type	Tool Size (in mm)	Cultural Period	Dimensions (in m)	Figure #	Plate #	Comments
CL 33	SF7	597104	4749687	0	3	3	n/a	n/a	Indeterminate	30 x 10	3-5	n/a	
CL 34	SF7	596893	4750628	1	3	4	prob. Local	64 x 42	Indeterminate	50 x 20	3-6	n/a	Biface 1-10
CL 35	SF8	597470	4750503	0	2	2	n/a	n/a	Indeterminate	25 x 10	3-6	n/a	
CL 36	SF8	597537	4750415	0	2	2	n/a	n/a	Indeterminate	25 x 10	3-6	n/a	
CL 37	SF1	596388	4748416	1	1	2	prob. Local	50 x 38	Indeterminate	25 x 10	3-2	n/a	Biface 2-1
CL 38	SF1	596388	4748482	1	1	2	Bois Blanc	43 x 36	Indeterminate	30 x 15	3-2	4	Point 2-10
CL 39	SF1	596322	4748466	0	3	3	n/a	n/a	Indeterminate	25 x 15	3-2	n/a	
CL 40	T23	591178	4752032	0	2	2	n/a	n/a	Indeterminate	30 x 10	3-9	n/a	
CL 41	T23	591119	4752236	0	5	5	n/a	n/a	Indeterminate	40 x 20	3-9	n/a	
CL 42	T46	590594	4752117	0	2	2	n/a	n/a	Indeterminate	35 x 15	3-9	n/a	
CL 43	T13	594711	4751650	0	3	3	n/a	n/a	Indeterminate	15 x 10	3-11	n/a	
CL 44	T48	594469	4750961	0	2	2	n/a	n/a	Indeterminate	20 x 10	3-12	n/a	
CL 45	T48	594120	4750435	0	6	6	n/a	n/a	Indeterminate	20 x 15	3-12	n/a	
CL 46	T16	594409	4750003	0	3	3	n/a	n/a	Indeterminate	25 x 25	3-13	n/a	
CL 47	T16	594358	4749899	0	2	2	n/a	n/a	Indeterminate	25 x 25	3-13	n/a	
CL 48	T16	594390	4749953	0	2	2	n/a	n/a	Indeterminate	25 x 25	3-13	n/a	
CL 49	T19	606258	4750182	0	6	6	n/a		Indeterminate	85 x 10	3-17	n/a	
CL 50	T36	589998	4755730	0	3	3	n/a	n/a	Indeterminate	50 x 25	3-8	n/a	
IF 1	SF1	596042	4749141	1	0	1	Bois Blanc	49 x 37	Indeterminate	n/a	3-1	5	Biface 1-1
IF 2	SF1	596033	4749102	0	1	1	n/a	n/a	Indeterminate	n/a	3-1	n/a	Isolated lithic flake
IF 3	SF1	596335	4749021	0	1	1	n/a	n/a	Indeterminate	n/a	3-1	n/a	Isolated lithic flake
IF 4	SF1	596462	4748417	1	0	1	Bois Blanc	49 x 37	Indeterminate	n/a	3-2	5	Scraper 2-2
IF 5	SF1	596408	4748428	1	0	1	Bois Blanc	42 x 32	Indeterminate	n/a	3-2	4	Point 2-11
IF 6	SF1	596172	4748742	1	0	1	Bois Blanc	38 x 37	Indeterminate	n/a	3-2	n/a	Biface 1-2
IF 7	SF1	596132	4748742	0	1	1	n/a	n/a	Indeterminate	n/a	3-2	n/a	Isolated lithic flake
IF 8	SF1	596353	4748964	0	1	1	n/a	n/a	Indeterminate	n/a	3-2	n/a	Isolated lithic flake
IF 9	SF1	596245	4748575	0	1	1	n/a	n/a	Indeterminate	n/a	3-2	n/a	Isolated lithic flake
IF 10	SF1	596260	4748649	0	1	1	n/a	n/a	Indeterminate	n/a	3-2	n/a	Isolated lithic flake
IF 11	SF1	596341	4748641	0	1	1	n/a	n/a	Indeterminate	n/a	3-2	n/a	Isolated lithic flake
IF 12	SF1	596385	4748597	1	0	1	Bois Blanc	30 x 29	Indeterminate	n/a	3-2	n/a	Biface 2-2
IF 13	SF2	596545	4748637	1	0	1	Bois Blanc	46 x 35	Late Archaic	n/a	3-2	2	Point 2-17
IF 14	SF2	596547	4748647	1	0	1	Bois Blanc	38 x 32	Indeterminate	n/a	3-2	4	Point 1-13

GREP Site #	Location	Easting	Northing	# Tools	# Lithic Flakes	Total # Artifacts	Material Type	Tool Size (in mm)	Cultural Period	Dimensions (in m)	Figure #	Plate #	Comments
IF 15	SF2	596616	4748820	0	1	1	n/a	n/a	Indeterminate	n/a	3-2	n/a	Isolated lithic flake
IF 16	SF2	596679	4748825	0	1	1	n/a	n/a	Indeterminate	n/a	3-2	n/a	Isolated lithic flake
IF 17	SF2	596812	4748729	0	1	1	n/a	n/a	Indeterminate	n/a	3-2	n/a	Isolated lithic flake
IF 18	SF2	596707	4748741	1	0	1	n/a	25 x 30 x 26	Indeterminate	n/a	3-3	n/a	Grndstn2-1
IF 19	SF2	596719	4748737	1	0	1	Bois Blanc	27 x 19	Late Archaic	n/a	3-3	2	Point 2-18
IF 20	SF2	596731	4748722	1	0	1	n/a	n/a	Euro-Canadian	n/a	3-3	6	19th century smoking pipe
IF 21	SF2	596507	4749146	1	0	1	Bois Blanc	46 x 22	Early Woodland	n/a	3-3	3	Point 1-12
IF 22	SF3	597124	4748771	0	1	1	n/a	n/a	Indeterminate	n/a	3-3	n/a	Isolated lithic flake
IF 23	SF3	596802	4749182	1	0	1	Bois Blanc	38 x 21	Indeterminate	n/a	3-3	n/a	Biface 2-5
IF 24	SF3	597087	4749190	1	0	1	Bois Blanc	36 x 22	Indeterminate	n/a	3-3	n/a	Tool 2-2
IF 25	SF3	597157	4749264	1	0	1	Bois Blanc	36 x 24	Indeterminate	n/a	3-3	4	Point 2-12
IF 26	SF3	597004	4749262	0	1	1	n/a	n/a	Indeterminate	n/a	3-3	n/a	Isolated lithic flake
IF 27	SF3	596946	4749205	0	1	1	n/a	n/a	Indeterminate	n/a	3-3	n/a	Isolated lithic flake
IF 28	SF3	596975	4749436	0	1	1	n/a	n/a	Indeterminate	n/a	3-3	n/a	Isolated lithic flake
IF 29	SF4	596368	4749536	1	0	1	Bois Blanc	38 x 32 mm	Indeterminate	n/a	3-4	n/a	Biface 1-3
IF 30	SF4	596126	4749476	0	1	1	n/a	n/a	Indeterminate	n/a	3-4	n/a	Isolated lithic flake
IF 31	SF4	596193	4749487	0	1	1	n/a	n/a	Indeterminate	n/a	3-4	n/a	Isolated lithic flake
IF 32	SF4	596284	4749660	0	1	1	n/a	n/a	Indeterminate	n/a	3-4	n/a	Isolated lithic flake
IF 33	SF4	596165	4749694	0	1	1	n/a	n/a	Indeterminate	n/a	3-4	n/a	Isolated lithic flake
IF 34	SF4	596247	4749751	1	0	1	Bois Blanc	36 x 22	Middle Woodland	n/a	3-4	3	Point 1-14
IF 35	SF4	596298	4749839	1	0	1	Bois Blanc	35 x 28	Early Woodland	n/a	3-4	3	Point 1-16
IF 36	SF4	596153	4750039	0	1	1	n/a	n/a	Indeterminate	n/a	3-4	n/a	Isolated lithic flake
IF 37	SF4	596150	4749857	0	1	1	n/a	n/a	Indeterminate	n/a	3-4	n/a	Isolated lithic flake
IF 38	SF4	596060	4749694	0	1	1	n/a	n/a	Indeterminate	n/a	3-4	n/a	Isolated lithic flake
IF 39	SF5	596591	4749651	0	1	1	n/a	n/a	Indeterminate	n/a	3-4	n/a	Isolated lithic flake
IF 40	SF5	596265	4750195	0	1	1	n/a	n/a	Indeterminate	n/a	3-4	n/a	Isolated lithic flake
IF 41	SF5	596717	4749694	0	1	1	n/a	n/a	Indeterminate	n/a	3-5	n/a	Isolated lithic flake
IF 42	SF6	596749	4749673	0	1	1	n/a	n/a	Indeterminate	n/a	3-5	n/a	Isolated lithic flake
IF 43	SF6	596767	4749716	0	1	1	n/a	n/a	Indeterminate	n/a	3-5	n/a	Isolated lithic flake
IF 44	SF6	596752	4749764	1	0	1	Bois Blanc	44 x 28	Late Archaic	n/a	3-5	2	Point 1-27
IF 45	SF6	596948	4749752	0	1	1	n/a	n/a	Indeterminate	n/a	3-5	n/a	Isolated lithic flake
IF 46	SF6	596685	4750179	1	0	1	Bois Blanc	53 x 27	Late Archaic	n/a	3-5	2	Point 1-19
IF 47	SF6	596788	4750316	0	1	1	n/a	n/a	Indeterminate	n/a	3-5	n/a	Isolated lithic flake

GREP Site #	Location	Easting	Northing	# Tools	# Lithic Flakes	Total # Artifacts	Material Type	Tool Size (in mm)	Cultural Period	Dimensions (in m)	Figure #	Plate #	Comments
IF 48	SF7	597293	4750032	1	0	1	Bois Blanc	41 x 27	Indeterminate	n/a	3-6	4	Point 1-22
IF 49	SF8	597665	4750148	1	0	1	Bois Blanc	56 x 33	Late Archaic	n/a	3-6	2	Point 1-23
IF 50	SF7	596916	4750590	1	0	1	Bois Blanc	31 x 26	Indeterminate	n/a	3-6	4	Point 1-26
IF 51	SF8	597607	4750174	1	0	1	Bois Blanc	43 x 24	Middle Woodland	n/a	3-6	3	Point 1-24
IF 52	SF8	597600	4750269	1	0	1	Bois Blanc	31 x 16	Late Archaic	n/a	3-6	2	Point 1-29
IF 53	SF8	597564	4750589	0	1	1	n/a	n/a	Indeterminate	n/a	3-6	n/a	Isolated lithic flake
IF 54	SF8	597396	4750478	0	1	1	n/a	n/a	Indeterminate	n/a	3-6	n/a	Isolated lithic flake
IF 55	SF1	596424	4748473	0	1	1	n/a	n/a	Indeterminate	n/a	3-2	n/a	Isolated lithic flake
IF 56	T36	589886	4755449	0	1	1	n/a	n/a	Indeterminate	n/a	3-8	n/a	Isolated lithic flake
IF 57	T45	590112	4753820	0	1	1	n/a	n/a	Indeterminate	n/a	3-8	n/a	Isolated lithic flake
IF 58	T23	591151	4752114	0	1	1	n/a	n/a	Indeterminate	n/a	3-9	n/a	Isolated lithic flake
IF 59	T23	591227	4751891	0	1	1	n/a	n/a	Indeterminate	n/a	3-9	n/a	Isolated lithic flake
IF 60	T23	591095	4752272	0	1	1	n/a	n/a	Indeterminate	n/a	3-9	n/a	Isolated lithic flake
IF 61	T28	591277	4752296	0	1	1	n/a	n/a	Indeterminate	n/a	3-9	n/a	Isolated lithic flake
IF 62	T20	592615	4749466	0	1	1	n/a	n/a	Indeterminate	n/a	3-10	n/a	Isolated lithic flake
IF 63	T16	594290	4749960	0	1	1	n/a	n/a	Indeterminate	n/a	3-13	n/a	Isolated lithic flake
IF 64	T12	601602	4747206	1	0	1	Bois Blanc	40 x 33	Indeterminate	n/a	3-15	5	Biface 2-7
IF 65	T12	601497	4747141	1	0	1	Bois Blanc	46 x 23	Indeterminate	n/a	3-15	n/a	Biface 2-6
IF 66	T19	606321	4749345	0	1	1	n/a	n/a	Indeterminate	n/a	3-17	n/a	Isolated lithic flake
IF 67	T40	604246	4749585	0	1	1	n/a	n/a	Indeterminate	n/a	3-17	n/a	Isolated lithic flake
IF 68	T40	604256	4749554	1	0	1	Bois Blanc	26 x 29	Indeterminate	n/a	3-17	4	Point 2-23
IF 69	T55	600236	4746268	1	0	1	Bois Blanc	44 x 25	Late Archaic	n/a	3-15	2	Point 2-22
IF 70	T55	600232	4746205	0	1	1	n/a	n/a	Indeterminate	n/a	3-15	n/a	Isolated lithic flake

Advice on Compliance with Legislation

At the close of the 2010 field season Stage 2 AA had not been completed for access roads and turbine pads for 16 turbine installations. All of these areas are slated to be assessed using a pedestrian survey methodology. The total area left to be assessed is 61 ha, or approximately 14% of the total of 420 ha that Stantec was scheduled to assess. It is anticipated that the remaining Stage 2 AA will require about 12 person days of field time to complete. It is recommended that the remaining Stage 2 and 3 assessment work for this project be completed as required under the Ontario Heritage Act and that the Ministry of Tourism and Culture provide concurrence with the recommendations made within this report by accepting it into the Ontario Public Register Archaeology Reports.

Stantec cautions, however, that it is possible that deeply buried archaeological resources, could still exist within the limits of the proposed project and that the following standard conditions will continue to apply:

- It is an offence under Sections 48 and 69 of the Ontario Heritage Act for any party other than a licensed archaeologist to make any alteration to a known archaeological site or to remove any artifact or other physical evidence of past human use or activity from the site, until such time as a licensed archaeologist has completed archaeological fieldwork on the site, submitted a report to the Minister stating that the site has no further cultural heritage value or interest , and the report has been filed in the Ontario Public Register of Archaeology Reports referred to in Section 65.1 of the Ontario Heritage Act;
- Should previously undocumented archaeological resources be discovered, they may be a new archaeological site and therefore subject discovering the archaeological resources must cease alteration of the site immediately and engage a licensed consultant archaeologist to carry out archaeological fieldwork, in compliance with Section 48 (1) of the Ontario Heritage Act; and
- The Cemeteries Act, R.S.O. 1990 c. C.4 and the Funeral, Burial and Cremation Services Act, 2002, S.O. 2002, c.33 (when proclaimed in force) require that any person discovering human remains must notify the police or coroner and the Registrar of Cemeteries at the Ministry of Consumer Services.

Stage 2 Report (Licence/PIF # P218-012-2010), Revised Report, February 2011, Received February 4, 2011

The Stage 2 archaeological assessment of a portion of the proposed project was undertaken by Golder, on behalf of Stantec, in order to meet the requirements of an environmental assessment conducted under the Renewable Energy Act, as outlined in Ontario Regulation 359/09 section 22(3). The Stage 2 Assessment was conducted from December 2nd, 2010 to December 22nd, 2010 and January 2nd, 2011 to January 3rd, 2011. This work was conducted under archaeological consulting licence P218, issued to Scott Martin, Ph.D., by the Ontario Ministry of Tourism and Culture. The Stage 2 assessment focused upon the proposed wind turbine and solar lands layout, including turbine sites, collector cable routes, access roads, construction roads, transmission lines, laydown areas and substations. A total of approximately 75 hectares was subject to Stage 2 archaeological assessment.

The remainder of the project area, consisting entirely of ploughed agricultural fields (total of approximately102 hectares), will be assessed when weather conditions allow using the pedestrian survey method at five metre intervals. In total, 20 turbine locations, 11 access road or collector cable routes and two portions of solar panel lands still need to be assessed. This remaining work is estimated to take a crew of 6 individuals, three field days, after which time the Stage 2 assessment will be complete.

The Stage 2 archaeological assessment resulted in the identification of 55 locations, comprising 54 pre-contact Aboriginal sites and one historic Euro-Canadian site. In summary, 25 of the 55 archaeological locations identified within the study area are recommended for Stage 3 assessment. It is recommended that these sites be subject to a Stage 3 archaeological investigation to further evaluate their cultural heritage value or interest.

The following recommendations are made concerning these locations.

Sites Recommended for Stage 3 Assessment

Table 3 lists the pre-contact Aboriginal sites requiring Stage 3 assessment. Of the 54 pre-contact Aboriginal archaeological locations recorded, 25 of them are being recommended for further archaeological assessment.

Table 3: Pre-contact Aboriginal Sites Requiring Stage 3 Archaeological Assessment

Site Name	Borden Number	Cultural Affiliation	Date
Location 2	AfGw-168	pre-contact Aboriginal	indeterminate
Location 5	AfGw-169	pre-contact Aboriginal	indeterminate
Location 12	AfGw-170	pre-contact Aboriginal	c. 3780-3200 B.C.
Location 15	AfGw-171	pre-contact Aboriginal	indeterminate
Location 16	AfGw-172	pre-contact Aboriginal	indeterminate
Location 17	AfGw-173	pre-contact Aboriginal	indeterminate
Location 18	AfGw-174	pre-contact Aboriginal	indeterminate
Location 21	AfGw-175	pre-contact Aboriginal	indeterminate
Location 24	AfGw-176	pre-contact Aboriginal	indeterminate
Location 29	AfGw-177	pre-contact Aboriginal	indeterminate
Location 30	AfGw-178	pre-contact Aboriginal	indeterminate
Location 34	AfGw-179	pre-contact Aboriginal	c. 500 B.C. - A.D. 1
Location 38	AfGw-180	pre-contact Aboriginal	indeterminate
Location 39	AfGx-722	pre-contact Aboriginal	indeterminate
Location 41	AfGw-182	pre-contact Aboriginal	indeterminate
Location 44	AfGw-183	pre-contact Aboriginal	indeterminate
Location 45	AfGx-723	pre-contact Aboriginal	indeterminate
Location 46	AfGx-724	pre-contact Aboriginal	indeterminate
Location 47	AfGx-725	pre-contact Aboriginal	indeterminate

Site Name	Borden Number	Cultural Affiliation	Date
Location 48	AfGx-726	pre-contact Aboriginal	indeterminate
Location 49	AfGx-727	pre-contact Aboriginal	indeterminate
Location 50	AfGx-728	pre-contact Aboriginal	indeterminate
Location 51	AfGx-729	pre-contact Aboriginal	indeterminate
Location 52	AfGx-730	pre-contact Aboriginal	indeterminate
Location 53	AfGx-731	pre-contact Aboriginal	indeterminate

Sites Not Requiring any Further Archaeological Assessment

Table 4 lists the pre-contact Aboriginal sites not requiring Stage 3 assessment. Of the 54 pre-contact Aboriginal archaeological locations recorded, 29 of them have been sufficiently documented and require no further archaeological assessment.

Table 4: Pre-contact Aboriginal Sites Not Requiring Any Further Archaeological Assessment

Site Name	Borden Number	Cultural Affiliation	Date
Location 1	none	pre-contact Aboriginal	indeterminate
Location 3	none	pre-contact Aboriginal	indeterminate
Location 4	none	pre-contact Aboriginal	indeterminate
Location 6	none	pre-contact Aboriginal	indeterminate
Location 7	none	pre-contact Aboriginal	indeterminate
Location 8	none	pre-contact Aboriginal	indeterminate
Location 9	none	pre-contact Aboriginal	indeterminate
Location 10	none	pre-contact Aboriginal	indeterminate
Location 11	none	pre-contact Aboriginal	indeterminate
Location 13	none	pre-contact Aboriginal	indeterminate
Location 14	none	pre-contact Aboriginal	indeterminate
Location 19	none	pre-contact Aboriginal	indeterminate
Location 20	none	pre-contact Aboriginal	indeterminate
Location 22	none	pre-contact Aboriginal	indeterminate
Location 23	none	pre-contact Aboriginal	indeterminate
Location 25	none	pre-contact Aboriginal	indeterminate
Location 26	none	pre-contact Aboriginal	indeterminate
Location 27	none	pre-contact Aboriginal	indeterminate
Location 28	none	pre-contact Aboriginal	indeterminate
Location 31	none	pre-contact Aboriginal	indeterminate
Location 32	none	pre-contact Aboriginal	indeterminate
Location 33	none	pre-contact Aboriginal	indeterminate
Location 35	none	pre-contact Aboriginal	indeterminate

Site Name	Borden Number	Cultural Affiliation	Date
Location 36	none	pre-contact Aboriginal	indeterminate
Location 37	none	pre-contact Aboriginal	indeterminate
Location 42	none	pre-contact Aboriginal	indeterminate
Location 43	none	pre-contact Aboriginal	indeterminate
Location 54	none	pre-contact Aboriginal	indeterminate
Location 55	none	pre-contact Aboriginal	indeterminate

Table 5 lists the single historic Euro-Canadian site not requiring Stage 3 assessment. Of the one Historic Euro-Canadian archaeological location recorded, zero of them are being recommended for further archaeological assessment.

Table 5: Historic Euro-Canadian Sites Not Requiring Any Further Archaeological Assessment

Site Name	Borden Number	Cultural Affiliation	Date
Location 40	AfGw-181	historic Euro-Canadian	Late 19th Century

In summary, 25 of the 55 archaeological locations identified within the study area are recommended for Stage 3 assessment since they are judged to be of cultural heritage value or interest requiring further documentation.

This assessment was undertaken in order to meet the requirements of an environmental assessment conducted under the Renewable Energy Approval (REA) process, as outlined in Ontario Regulation 359/09 section 22(3). The Ontario Ministry of Tourism and Culture is asked to review the results presented and to accept this report into the Ontario Public Register of Archaeological Reports. Additional archaeological assessment is still required and so the archaeological sites recommended for further archaeological fieldwork remain subject to Section 48(1) of the Ontario Heritage Act and may not be altered, or have artifacts removed, except by a person holding an archaeological licence.

This report is submitted to the Minister of Culture as a condition of licensing in accordance with Part VI of the Ontario Heritage Act, R.S.O. 1990, c 0.18. The report is reviewed to ensure that the licensed consultant archaeologist has met the terms and conditions of their archaeological licence, and that the archaeological fieldwork and report recommendations ensure the conservation, protection and preservation of the cultural heritage of Ontario.

Should previously undocumented archaeological resources be discovered, they may be a new archaeological site and therefore subject to Section 48(1) of the Ontario Heritage Act. The proponent or person discovering the archaeological resources must cease alteration of the site immediately and engage a licensed consultant archaeologist to carry out archaeological fieldwork, in compliance with sec. 48(1) of the Ontario Heritage Act.

The Cemeteries Act requires that any person discovering human remains must notify the police or coroner and the Registrar of Cemeteries, Ministry of Consumer Services.

Stage 2 Report (Licence/PIF # P002-222-2011), Revised Report, September 20, 2011, Received September 20, 2011

The Stage 2 AA completed by Stantec in 2011 resulted in the identification and recording of 30 archaeological sites consisting of several hundred discrete pre-contact period artifacts, including 12 formal or expedient tools (11 projectile points, or "arrowheads" and one core). One other archaeological site was discovered where the density of lithic flakes was too high to record individually. For 21 of these (Table 6-1), represented by 8 artifact clusters and 13 isolated find spots, the cultural heritage value or interest has been sufficiently documented and assessed at Stage 2, therefore, no further archaeological assessment of these is required or recommended.

Table 6-1 Archaeological Sites Not Requiring Stage 3 Assessment

GREP Site #	Location	Borden #	# Tools	# Lithic Flakes	Total # Artifacts	Cultural Period	Dimensions (in m)	Figure #	Plate #
CL 51	T41	n/a	0	5	5	Indeterminate	25 X 5	4-1	n/a
CL 52	T58	n/a	0	4	4	Indeterminate	35 x 20	4-3	n/a
CL 53	C 3	n/a	0	3	3	Indeterminate	25 x 10	4-6	n/a
CL 54	T12	n/a	0	5	5	Indeterminate	15 x 10	4-8	n/a
CL 55	T12	n/a	0	5	5	Indeterminate	20 x 6	4-8	n/a
CL 56	C 3	AfGv-128	1	1	2	Early Woodland	5 x 5	4-6	1
CL 57	T23	AfGx-901	0	6	6	Indeterminate	10 x 10	4-9	n/a
CL 58	T23	AfGx-902	0	5	5	Indeterminate	10 x 10	4-9	n/a
IF 71	T41	n/a	0	1	1	Indeterminate	n/a	4-1	n/a
IF 72	T41	n/a	0	1	1	Indeterminate	n/a	4-1	n/a
IF 73	T41	AfGx-906	1	0	1	Middle Archaic	n/a	4-1	n/a
IF 74	T65	n/a	0	1	1	Indeterminate	n/a	4-2	n/a
IF 75	T30	n/a	0	1	1	Indeterminate	n/a	4-5	n/a
IF 76	T58	AfGx-903	1	0	1	Poss. Late Archaic	n/a	4-3	1
IF 77	T58	n/a	1	1	1	Indeterminate	n/a	4-3	1
IF 78	T58	n/a	1	0	1	Indeterminate	n/a	4-3	1
IF 79	T58	AfGx-904	1	0	1	Late Archaic	n/a	4-3	1
IF 80	T58	n/a	0	1	1	Indeterminate	n/a	4-3	n/a
IF 81	T58	AfGx-905	1	0	1	Late Archaic	n/a	4-3	1
IF 82	T12	n/a	0	1	1	Indeterminate	n/a	4-3	n/a
IF 83	T12	n/a	0	1	1	Indeterminate	n/a	3-3	n/a

A Stage 3 AA (the Archaeological Site Assessment) is recommended for the remaining nine (9) archaeological sites as they have further cultural heritage value and interest that needs to be documented beyond Stage 2AA: AfGx-768; AfGx-769; AfGx-770; AfGx-771; AfGx-772; AfGv-124; AfGv-125; AfGv-127; and AfGw-229. These will be conducted according to the 2011 Standards and Guidelines for Consultant Archaeologists. For each site that was located using pedestrian survey methodology the Stage 3 AA will be composed of three elements: historical documentation, a controlled surface pick-up (CSP) of artifacts on the surface of ploughed fields and test unit excavation.

A CSP is a detailed survey of the ground surface in open fields that allows for precise recording of artifact locations and the collection of a representative sample of artifacts, including non-diagnostic artifacts. Based on the Stage 2 AA use of a grid unit CSP may need to be conducted at AfGx-768 and -769 due to their size and artifact densities. No other sites should require grid unit CSP. Dependent upon when CSP occurs, fields where visibility has decreased since the Stage 2 AA may require reploughing and weathering prior to CSP.

Test unit excavation will be required at all identified archaeological sites. The purpose of the test unit excavation is to document the extent of buried artifacts, cultural features, soil stratigraphy and structures and to recover a representative sample of artifacts from across the archaeological site. As no sites identified during the Stage 2 AA will require the use of 3 mm mesh screens all soil will be screened though 6 mm mesh. Each site identified as requiring Stage 3 AA will need to have test units excavated at 5 m intervals and additional supplementary test units excavated as per Table 6.2 below.

Archaeological sites requiring Stage 3 AA have been identified on Project components at Turbine 41, Turbine 66, Turbine 51, Turbine 58, Turbine 65, Turbines 23 and 28 (from the 2010 Stage 2 AA) and Turbine 10 (from the 2010 Stage 2 AA). Project components at Complex 3 (Turbines 59-64), Turbine 12, and Turbines 15, 49 and 50 do not contain archaeological resources requiring Stage 3 AA. In the event that the extra area to the west of the current T23/28 access road is required for the Project it will need to be ploughed, allowed to weather and then surveyed using a pedestrian survey methodology.

At present no construction activities related to Project infrastructure are planned to occur prior to completion any required Stage 3 AA. No archaeological sites were found during the assessment of Turbines 15, 49 and 50 (Figure 4-7) and their associated access road, as such, it is recommended that this area requires no further archaeological assessment.

With the large number of Aboriginal archaeological sites documented through the Stage 2 AA it is expected that the involvement of First Nations in subsequent Stage 3 and/or Stage 4 AA will increase beyond the current level of the Stage 2 AA. Ongoing Aboriginal consultation will be part of the overall Project development, for archaeological resources and for other environmental components, and is a requirement of the 2011 Standards and Guideline for Consultant Archaeologists. It is recommended that Aboriginal Engagement be carried out as required by the Standards and Guidelines and as outlined in the bulletin Engaging Aboriginal Communities in Archaeology.

Table 6-2 Stage 3 Recommendations for Archaeological Sites Identified During the Stage 2 AA

GREP Identifier	Borden #	Site Type	Cultural Heritage Value Sufficiently Documented?	Stage 3 AA Required?	Stage 3 AA Strategy Recommended
Site 46	AfGx-768	Plough-disturbed, large single component lithic scatter; recommendation to proceed to Stage 4 likely	No	Yes	-documentary research of land use and occupation, where available -replough field as necessary; conduct CSP -place grids over areas of concentrations and excavate 1 m test units at 5 m interval across grids; excavate an additional 20% of grid unit total between areas of concentration; excavate an additional 10% of initial grid total on periphery of surface scatter
Site 47	AfGx-769	Plough-disturbed, large single component lithic scatter; recommendation to proceed to Stage 4 likely	No	Yes	-documentary research of land use and occupation, where available -replough field as necessary; conduct CSP -place grids over areas of concentrations and excavate 1 m test units at 5 m interval across grids; excavate an additional 20% of grid unit total between areas of concentration; excavate an additional 10% of initial grid total on periphery of surface scatter
Site 48	AfGv-124	Small precontact site: level of cultural heritage value or interest sufficient for recommendation to proceed to Stage 4 unclear	No	Yes	-documentary research of land use and occupation, where available -replough field as necessary; conduct CSP -excavate test units in 5 m grid across site; excavate an additional 20% of grid unit total in areas of interest within the site extent
Site 49	AfGv-125	Small precontact site: level of cultural heritage value or interest sufficient for recommendation to proceed to Stage 4 unclear	No	Yes	-documentary research of land use and occupation, where available -replough field as necessary; conduct CSP -excavate test units in 5 m grid across site; excavate an additional 20% of grid unit total in areas of interest within the site extent
Site 50	AfGw-229	Small precontact site: level of cultural heritage value or interest sufficient for recommendation to proceed to Stage 4 unclear	No	Yes	-documentary research of land use and occupation, where available -replough field as necessary; conduct CSP -excavate test units in 5 m grid across site; excavate an additional 20% of grid unit total in areas of interest within the site extent
Site 51	AfGx-770	Small precontact site: level of cultural heritage value or interest sufficient for recommendation to proceed to Stage 4 unclear	No	Yes	-documentary research of land use and occupation, where available -replough field as necessary; conduct CSP -excavate test units in 5 m grid across site; excavate an additional 20% of grid unit total in areas of interest within the site extent
Site 52	AfGx-771	Small precontact site: level of cultural heritage value or interest sufficient for recommendation to proceed to Stage 4 unclear	No	Yes	-documentary research of land use and occupation, where available -replough field as necessary; conduct CSP -excavate test units in 5 m grid across site; excavate an additional 20% of grid unit total in areas of interest within the site extent

Site 53	AfGx-772	Small precontact site: level of cultural heritage value or interest sufficient for recommendation to proceed to Stage 4 unclear	No	Yes	-documentary research of land use and occupation, where available -replough field as necessary; conduct CSP -excavate test units in 5 m grid across site; excavate an additional 20% of grid unit total in areas of interest within the site extent
Site 54	AfGv-127	Small precontact site: level of cultural heritage value or interest sufficient for recommendation to proceed to Stage 4 unclear	No	Yes	-documentary research of land use and occupation, where available -replough field as necessary; conduct CSP -excavate test units in 5 m grid across site; excavate an additional 20% of grid unit total in areas of interest within the site extent

Stage 2 Report (Licence/PIF # P218-098-2010 and P218-023-2011), Revised Report, July 28, 2011, Received August 2, 2011

A Stage 1 archaeological background study was previously conducted on behalf of Samsung by Stantec for a project area located in the Geographic Townships of Dunn, Rainham, South Cayuga, North Cayuga and Walpole in Haldimand County, Ontario. This area is proposed to be the site of approximately 67 wind turbines, at least three areas of solar panels and project-related infrastructure comprising the Grand Renewable Energy Park.

The Stage 1 archaeological assessment resulted in the determination that the potential for pre-contact Aboriginal and Euro-Canadian sites was deemed to be moderate to high. As a result, Stage 2 archaeological assessment was recommended for any areas to be impacted by turbine or solar panel construction, access road corridor construction or other infrastructure construction related activities.

During the winter of 2010 and 2011, Stage 2 archaeological assessment of a portion of the proposed project area was undertaken by Golder on behalf of Stantec (Golder 2011). The winter 2010-2011 Stage 2 assessment focused upon the proposed wind turbine and solar lands layout, including turbine sites, collector cable routes, access road corridors, construction roads, transmission lines, laydown areas and substations. A total of approximately 75 hectares was subject to Stage 2 archaeological assessment, consisting of approximately 34 hectares of land that could not be ploughed and, therefore, was assessed using the test pit method at an interval of five metres as well as approximately 40.5 hectares of ploughed fields, assessed using the standard pedestrian survey method at an interval of five metres. The Stage 2 archaeological assessment conducted by Golder in winter 2010-2011 resulted in the identification of 55 locations, comprising 54 pre-contact Aboriginal sites and one historic Euro-Canadian site. In summary, 25 of the 55 archaeological locations identified within the study area in winter 2010-2011 were recommended for Stage 3 assessment to further evaluate their cultural heritage value or interest.

During the spring and summer of 2011, Stage 2 archaeological assessment of the remainder of the portion of the proposed project area to be assessed by Golder Associates Ltd. was undertaken and is the subject of this report (Figure 1). The spring and summer 2011 Stage 2 assessment focused on 22 turbine locations, 25 access road corridors or collector cable routes and three portions of solar panel lands. A total of approximately 160 hectares of ploughed agricultural fields was subject to Stage 2 archaeological assessment using the standard pedestrian survey method at an interval of five metres. Additionally, a small area of approximately 10 metres by 40 metres was

assessed using the test pit method at an interval of five metres. The Stage 2 archaeological assessment conducted by Golder in the spring and summer of 2011 resulted in the identification of a further 128 locations, all of which are pre-contact Aboriginal sites. In order to further evaluate their cultural heritage value or interest, 48 of the 128 archaeological locations identified within the study area in the spring and summer of 2011 are recommended for Stage 3 assessment.

Recommendations are made concerning these locations in the subsections below.

Sites Recommended for Stage 3 Assessment

Table 4 lists the pre-contact Aboriginal sites requiring Stage 3 assessment. Of the 128 pre-contact Aboriginal archaeological locations recorded in the spring and summer of 2011, 48 of them are being recommended for further archaeological assessment.

Table 1: Pre-contact Aboriginal Sites Requiring Stage 3 Archaeological Assessment

Site Name	Borden Number	Cultural Affiliation	Date
Location 58	AfGw-188	pre-contact Aboriginal	indeterminate
Location 59	AfGw-189	pre-contact Aboriginal	indeterminate
Location 64	AfGw-190	pre-contact Aboriginal	c. 500-100 B.C.
Location 65	AfGw-191	pre-contact Aboriginal	indeterminate
Location 66	AfGw-192	pre-contact Aboriginal	c. 8000-6910 B.C.
Location 68	AfGw-193	pre-contact Aboriginal	indeterminate
Location 69	AfGw-194	pre-contact Aboriginal	indeterminate
Location 70	AfGw-195	pre-contact Aboriginal	indeterminate
Location 71	AfGw-196	pre-contact Aboriginal	c. 1000-500 B.C.
Location 72	AfGw-197	pre-contact Aboriginal	indeterminate
Location 73	AfGw-198	pre-contact Aboriginal	c. 1800-1300 B.C.
Location 78	AfGw-199	pre-contact Aboriginal	indeterminate
Location 79	AfGw-200	pre-contact Aboriginal	c. 1800-1300 B.C.
Location 81	AfGw-201	pre-contact Aboriginal	indeterminate
Location 82	AfGw-202	pre-contact Aboriginal	c. 3780-3200 B.C.
Location 85	AfGw-203	pre-contact Aboriginal	indeterminate
Location 86	AfGw-204	pre-contact Aboriginal	indeterminate
Location 88	AfGw-206	pre-contact Aboriginal	c. 8600-8000 B.C.
Location 89	AfGw-207	pre-contact Aboriginal	indeterminate
Location 91	AfGw-208	pre-contact Aboriginal	c. 3780-3200 B.C.
Location 98	AfGw-226	pre-contact Aboriginal	indeterminate
Location 99	AfGw-227	pre-contact Aboriginal	indeterminate
Location 104	AfGw-209	pre-contact Aboriginal	indeterminate
Location 105	AfGw-210	pre-contact Aboriginal	indeterminate
Location 109	AfGw-211	pre-contact Aboriginal	c. A.D. 500-1000

Site Name	Borden Number	Cultural Affiliation	Date
Location 110	AfGw-212	pre-contact Aboriginal	indeterminate
Location 111	AfGw-213	pre-contact Aboriginal	c. A.D. 500-Contact
Location 114	AfGw-214	pre-contact Aboriginal	indeterminate
Location 115	AfGw-215	pre-contact Aboriginal	indeterminate
Location 118	AfGw-216	pre-contact Aboriginal	c. 4340-3960 B.C.
Location 119	AfGw-217	pre-contact Aboriginal	indeterminate
Location 122	AfGw-218	pre-contact Aboriginal	indeterminate
Location 123	AfGw-219	pre-contact Aboriginal	indeterminate
Location 124	AfGw-220	pre-contact Aboriginal	indeterminate
Location 125	AfGw-221	pre-contact Aboriginal	indeterminate
Location 126	AfGw-222	pre-contact Aboriginal	c. 3780-3200 B.C.
Location 127	AfGw-228	pre-contact Aboriginal	indeterminate
Location 129	AfGw-223	pre-contact Aboriginal	indeterminate
Location 131	AfGx-737	pre-contact Aboriginal	indeterminate
Location 132	AfGx-738	pre-contact Aboriginal	indeterminate
Location 137	AfGx-741	pre-contact Aboriginal	indeterminate
Location 140	AfGx-742	pre-contact Aboriginal	indeterminate
Location 152	AfGw-225	pre-contact Aboriginal	indeterminate
Location 155	AfGw-241	pre-contact Aboriginal	indeterminate
Location 157	AfGw-242	pre-contact Aboriginal	indeterminate
Location 163	AfGw-244	pre-contact Aboriginal	indeterminate
Location 165	AfGw-246	pre-contact Aboriginal	indeterminate
Location 176	AfGw-249	pre-contact Aboriginal	indeterminate

Sites Not Requiring any Further Archaeological Assessment

Table 5 lists the pre-contact Aboriginal sites not requiring Stage 3 assessment. Of the 128 pre-contact Aboriginal archaeological locations recorded in the spring and summer of 2011, 80 of them have been sufficiently documented and require no further archaeological assessment.

Table 2: Pre-contact Aboriginal Sites Not Requiring Any Further Archaeological Assessment

Site Name	Borden Number	Cultural Affiliation	Date
Location 56	none	pre-contact Aboriginal	indeterminate
Location 57	none	pre-contact Aboriginal	indeterminate
Location 60	none	pre-contact Aboriginal	indeterminate
Location 61	AfGw-230	pre-contact Aboriginal	indeterminate
Location 62	none	pre-contact Aboriginal	indeterminate
Location 63	none	pre-contact Aboriginal	indeterminate
Location 67	none	pre-contact Aboriginal	indeterminate
Location 74	none	pre-contact Aboriginal	indeterminate

Site Name	Borden Number	Cultural Affiliation	Date
Location 75	none	pre-contact Aboriginal	indeterminate
Location 76	AfGw-231	pre-contact Aboriginal	indeterminate
Location 77	AfGw-232	pre-contact Aboriginal	indeterminate
Location 80	none	pre-contact Aboriginal	indeterminate
Location 83	none	pre-contact Aboriginal	indeterminate
Location 84	none	pre-contact Aboriginal	indeterminate
Location 87	AfGw-205	pre-contact Aboriginal	c. 1000-500 B.C.
Location 90	none	pre-contact Aboriginal	indeterminate
Location 92	none	pre-contact Aboriginal	indeterminate
Location 93	none	pre-contact Aboriginal	indeterminate
Location 94	none	pre-contact Aboriginal	indeterminate
Location 95	none	pre-contact Aboriginal	indeterminate
Location 96	none	pre-contact Aboriginal	indeterminate
Location 97	none	pre-contact Aboriginal	indeterminate
Location 100	none	pre-contact Aboriginal	indeterminate
Location 101	none	pre-contact Aboriginal	indeterminate
Location 102	none	pre-contact Aboriginal	indeterminate
Location 103	none	pre-contact Aboriginal	indeterminate
Location 106	AfGw-233	pre-contact Aboriginal	indeterminate
Location 107	none	pre-contact Aboriginal	indeterminate
Location 108	AfGw-234	pre-contact Aboriginal	indeterminate
Location 112	AfGw-235	pre-contact Aboriginal	indeterminate
Location 113	AfGw-236	pre-contact Aboriginal	indeterminate
Location 116	none	pre-contact Aboriginal	indeterminate
Location 117	none	pre-contact Aboriginal	indeterminate
Location 120	AfGw-237	pre-contact Aboriginal	indeterminate
Location 121	AfGw-238	pre-contact Aboriginal	indeterminate
Location 128	none	pre-contact Aboriginal	indeterminate
Location 130	none	pre-contact Aboriginal	indeterminate
Location 133	none	pre-contact Aboriginal	indeterminate
Location 134	AfGx-739	pre-contact Aboriginal	indeterminate
Location 135	AfGx-854	pre-contact Aboriginal	indeterminate
Location 136	AfGx-740	pre-contact Aboriginal	c. 3780-3200 B.C.
Location 138	AfGx-855	pre-contact Aboriginal	indeterminate
Location 139	none	pre-contact Aboriginal	indeterminate
Location 141	none	pre-contact Aboriginal	indeterminate
Location 142	none	pre-contact Aboriginal	indeterminate
Location 143	none	pre-contact Aboriginal	indeterminate
Location 144	none	pre-contact Aboriginal	indeterminate

Site Name	Borden Number	Cultural Affiliation	Date
Location 145	none	pre-contact Aboriginal	indeterminate
Location 146	none	pre-contact Aboriginal	indeterminate
Location 147	none	pre-contact Aboriginal	indeterminate
Location 148	none	pre-contact Aboriginal	indeterminate
Location 149	AfGw-224	pre-contact Aboriginal	c. 1000-500 B.C.
Location 150	AfGw-239	pre-contact Aboriginal	indeterminate
Location 151	none	pre-contact Aboriginal	indeterminate
Location 153	AfGw-240	pre-contact Aboriginal	indeterminate
Location 154	none	pre-contact Aboriginal	indeterminate
Location 156	none	pre-contact Aboriginal	indeterminate
Location 158	AfGw-243	pre-contact Aboriginal	indeterminate
Location 159	none	pre-contact Aboriginal	indeterminate
Location 160	none	pre-contact Aboriginal	indeterminate
Location 161	none	pre-contact Aboriginal	indeterminate
Location 162	none	pre-contact Aboriginal	indeterminate
Location 164	AfGw-245	pre-contact Aboriginal	indeterminate
Location 166	none	pre-contact Aboriginal	indeterminate
Location 167	none	pre-contact Aboriginal	indeterminate
Location 168	none	pre-contact Aboriginal	indeterminate
Location 169	none	pre-contact Aboriginal	indeterminate
Location 170	none	pre-contact Aboriginal	indeterminate
Location 171	none	pre-contact Aboriginal	indeterminate
Location 172	none	pre-contact Aboriginal	indeterminate
Location 173	AfGw-248	pre-contact Aboriginal	indeterminate
Location 174	none	pre-contact Aboriginal	indeterminate
Location 175	none	pre-contact Aboriginal	indeterminate
Location 177	none	pre-contact Aboriginal	indeterminate
Location 178	none	pre-contact Aboriginal	indeterminate
Location 179	AfGw-250	pre-contact Aboriginal	indeterminate
Location 180	AfGw-251	pre-contact Aboriginal	indeterminate
Location 181	none	pre-contact Aboriginal	indeterminate
Location 182	none	pre-contact Aboriginal	indeterminate
Location 183	none	pre-contact Aboriginal	indeterminate

In summary, 48 of the 128 archaeological locations identified within the study area in the spring and summer of 2011 are recommended for Stage 3 assessment since they are judged to be of cultural heritage value or interest requiring further documentation.

The Ontario Ministry of Tourism and Culture is asked to review the results presented and to accept this report into the Ontario Public Register of Archaeological Reports. Additional

archaeological assessment is still required; hence the archaeological sites recommended for further archaeological fieldwork remain subject to Section 48(1) of the *Ontario Heritage Act* and may not be altered, or have artifacts removed, except by a person holding an archaeological licence.

This report is submitted to the Minister of Tourism and Culture as a condition of licensing in accordance with Part VI of the *Ontario Heritage Act*, R.S.O. 1990, c 0.18. The report is reviewed to ensure that it complies with the standards and guidelines that are issued by the Minister, and that the archaeological fieldwork and report recommendations ensure the conservation, protection and preservation of the cultural heritage of Ontario. When all matters relating to archaeological sites within the project area of a development proposal have been addressed to the satisfaction of the Ministry of Tourism and Culture, a letter will be issued by the ministry stating that there are no further concerns with regard to alterations to archaeological sites by the proposed development.

It is an offence under Sections 48 and 69 of the *Ontario Heritage Act* for any party other than a licensed archaeologist to make any alteration to a known archaeological site or to remove any artifact or other physical evidence of past human use or activity from the site, until such time as a licensed archaeologist has completed fieldwork on the site, submitted a report to the Minister stating that the site has no further cultural heritage value or interest, and the report has been filed in the Ontario Public Register of Archaeology Reports referred to in Section 65.1 of the *Ontario Heritage Act*.

Should previously undocumented archaeological resources be discovered, they may be a new archaeological site and therefore subject to Section 48(1) of the *Ontario Heritage Act*. The proponent or person discovering the archaeological resources must cease alteration of the site immediately and engage a licensed consultant archaeologist to carry out archaeological fieldwork, in compliance with Section 48(1) of the *Ontario Heritage Act*.

The *Cemeteries Act*, R.S.O. 1990 c. C.4 and the *Funeral, Burial and Cremation Services Act*, 2002, S.O. 2002, c. 33 (when proclaimed in force) require that any person discovering human remains must notify the police or coroner and the Registrar of Cemeteries at the Ministry of Consumer Services.

Stage 2 Report (Licence/PIF # P218-098-2010 and P218-023-2011), Addendum, September 2, 2011, Received September 6, 2011

In summary, the Stage 2 archaeological assessment of the Turbine 47 study area did not result in the identification of any archaeological resources of cultural heritage value or interest and no further archaeological assessment is recommended.

The Ontario Ministry of Tourism and Culture is asked to review the results and recommendations presented herein and accept this as an addendum to the Revised Stage 2 Archaeological Assessment Report (Report Number: 10-1136-0072-R03).

The Ministry is satisfied with these recommendations.

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

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

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

Sincerely,

Shari Prowse
Archaeology Review Officer

cc. Dr. Scott Martin, Golder Associates
Mr. Colin Varley, Stantec Consulting Ltd.
Mr. Rob Nadolny, Senior Project Manager, Stantec Consulting Ltd.

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

Friedl, Susanne

From: Uchiyama, Christienne
Sent: Thursday, March 17, 2011 10:54 AM
To: Hatcher, Laura (MTC)
Cc: Varley, Colin; Kozak, Mark; Nadolny, Rob; m.dawson@samsungrenewableenergy.ca
Subject: FW: Stantec FTP Confirmation - SAMSUNG GREP - HERITAGE ASSESSMENTS

Follow Up Flag: Follow up
Flag Status: Flagged

Hi Laura,

Please find below instructions for downloading the revised Heritage Assessment and Protected Properties Reports for the Samsung Grand Renewable Energy Project in Haldimand County (MTC file no. 28EA021). We trust that we have addressed all of the comments from your letter dated February 16th.

Please don't hesitate to contact me should you have any questions or concerns regarding the revised reports.

Regards,
Chris

Christienne Uchiyama
Archaeologist and Heritage Planning Consultant
200 - 2781 Lancaster Road
Ottawa ON K1B 1A7
Ph: (613) 738-0708 Ext. 3278
Fx: (613) 738-0721
Cell: (613) 327-0427
Christienne.Uchiyama@stantec.com
stantec.com

Automatic Login

FTP site link: ftp://s0331082156:6829724@ftptmp.stantec.com
By clicking on the link above (or pasting the link into Windows Explorer) you will be automatically logged into your FTP site.

Manual Login

FTP link: ftp://ftptmp.stantec.com
Login name: s0331082156
Password: 6829724
Disk Quota: 2GB
Expiry Date: 3/31/2011

Friedl, Susanne

From: de Carteret Feit, Kendra
Sent: Tuesday, August 31, 2010 8:42 AM
To: Nadolny, Rob; Kozak, Mark
Subject: FW: Grand Renewable Energy Park

Follow Up Flag: Follow up
Flag Status: Flagged

-----Original Message-----
From: Alex Beckstead [mailto:alex.beckstead@rcmp-grc.gc.ca]
Sent: Tuesday, August 31, 2010 8:39 AM
To: de Carteret Feit, Kendra
Subject: Re: Grand Renewable Energy Park

Kendra,

Sorry for the delay in my response. I have analyzed the proposed wind project and do not see any potential interference problems resulting from a wind farm in the area you have outlined. If the location of the boundaries shifts, please keep me informed.

Thank you.

Alex Beckstead
Radio Spectrum Engineer - Ingénieur du spectre radio Mobile Communication Services - Services de communication mobile RCMP - GRC
tel.: 613-949-4519
fax.: 613-998-7528
alex.beckstead@rcmp-grc.gc.ca

>>> "de Carteret Feit, Kendra" <Kendra.Feit@stantec.com> 6/4/2010 2:51 PM >>>
Good afternoon -

Please find attached a letter and notice regarding the proposed Grand Renewable Energy Park.

Thank-you,

Kendra de Carteret Feit, on behalf of

Rob Nadolny
Senior Project Manager
Stantec

Ph: (519) 836-6050 Ext. 242
Fx: (519) 836-2493
rob.nadolny@stantec.com

stantec.com <http://www.stantec.com>

ü Please consider the environment before printing this email.

Friedl, Susanne

From: Nadolny, Rob
Sent: Thursday, June 10, 2010 3:47 PM
To: Kozak, Mark
Subject: FW: Grand Renewable Energy Park, Haldimand County, NEATS 24026
Attachments: NWP_App_Guide_EN.pdf

Follow Up Flag: Follow up
Flag Status: Flagged

From: EnviroOnt [mailto:EnviroOnt@tc.gc.ca]
Sent: Thursday, June 10, 2010 2:17 PM
To: Nadolny, Rob
Subject: Grand Renewable Energy Park, Haldimand County, NEATS 24026

Thank you for your letter regarding the above referenced environmental assessment. Please in future forward correspondence on this environmental assessment to the undersigned.

We have reviewed the information, and note the following:

Transport Canada is responsible for the administration of the *Navigable Waters Protection Act,* which prohibits the construction or placement of any "works" in navigable waters without first obtaining approval. If any of the related project elements or activities related may cross or affect a potentially navigable waterway, you are requested to prepare and submit an application in accordance with the requirements as outlined in the attached Application Guide. Any questions about the NWPA application process should be directed to the Navigable Waters Protection Program at 1-866-821-6631 or NWPontario-PENontario@tc.gc.ca.

<<NWP_App_Guide_EN.pdf>>

Transport Canada is also responsible for the administration of the *Railway Safety Act* to ensure the safe operation of railways. The Act addresses the construction and alteration of railway works, the operation and maintenance of railway equipment and certain non-railway operations affecting railway safety. Pursuant to the Notice of *Railway Works Regulations,* the project proponent will be required to give notice of the proposed project to the following persons: the railway whose line is to be crossed, the municipality in which the crossing works are to be located and the authority having responsibility for the road in question. An approval may be required for certain railway works that depart from engineering standards set under the regulations or where an objection has been filed against the work. Any questions about the *Railway Safety Act* and the Notice of *Railway Works Regulations* should be directed to Luciano Martin, Manager of Engineering, at (416) 973-2326.

You may also wish to review the Act and Regulations by accessing the following Internet sites:

Railway Safety Act: http://www.tc.gc.ca/acts-regulations/acts/1985s4-32/menu.htm

Notice of Railway Works Regulations: http://laws.justice.gc.ca/en/SOR-91-103/

Please note that certain approvals under the *Navigable Waters Protection Act* or *Railway Safety Act* trigger the requirement for a federal environmental assessment under the Canadian Environmental Assessment Act. You may therefore wish to consider incorporating CEAA requirements into your provincial environmental assessment.

Regards,

Environmental Assessment Coordinator
Transport Canada, Ontario Region
Environment & Engineering (PHE)
4900 Yonge St., 4th Fl., Toronto, ON M2N 6A5
Email: EnviroOnt@tc.gc.ca

Please consider the environment before printing this email.

Friedl, Susanne

From: Nadolny, Rob
Sent: Wednesday, June 16, 2010 2:30 PM
To: Kozak, Mark
Subject: FW: Grand Renewable Energy Park, Haldimand County, NEATS 24026
Attachments: Obstruction clearance Form.PDF; CARs 621.19.12 - Marking and Lighting of Wind Turbines and Windfarms.pdf

Follow Up Flag: Follow up
Flag Status: Completed

Categories: Red Category

From: EnviroOnt [mailto:EnviroOnt@tc.gc.ca]
Sent: Wednesday, June 16, 2010 2:29 PM
To: Nadolny, Rob
Cc: Aerodromes Ontario
Subject: RE: Grand Renewable Energy Park, Haldimand County, NEATS 24026

Dear Mr. Nadolny,

Further to our e-mail of June 10, 2010 (below), please be advised that obstacles such as wind turbines must be assessed for lighting and marking requirements in accordance with Canadian Aviation Regulations (CARs) 621.19.

Wind turbine and wind farm proponents should complete an Aeronautical Obstruction Clearance Form which is available on the Transport Canada Ontario Region website at www.tc.gc.ca/Ontario/eng/air/civil-aviation/aerodromes.htm, and also attached to this message. If you require further information regarding CARs, please contact Aerodromes and Air Navigation Ontario Region at 416-952-1623 or by email at aerodromes.ontario@tc.gc.ca

<<Obstruction clearance Form.PDF>> <<CARs 621.19.12 - Marking and Lighting of Wind Turbines and Windfarms.pdf>>

Regards,

Environmental Assessment Coordinator
Transport Canada, Ontario Region
Environment & Engineering (PHE)
4900 Yonge St., 4th Fl., Toronto, ON M2N 6A5
Email: EnviroOnt@tc.gc.ca

From: EnviroOnt

Sent: Thursday, June 10, 2010 2:17 PM
To: 'rob.nadolny@stantec.com'
Subject: Grand Renewable Energy Park, Haldimand County, NEATS 24026

Thank you for your letter regarding the above referenced environmental assessment. Please in future forward correspondence on this environmental assessment to the undersigned.

We have reviewed the information, and note the following:

Transport Canada is responsible for the administration of the *Navigable Waters Protection Act,* which prohibits the construction or placement of any "works" in navigable waters without first obtaining approval. If any of the related project elements or activities related may cross or affect a potentially navigable waterway, you are requested to prepare and submit an application in accordance with the requirements as outlined in the attached Application Guide. Any questions about the NWPA application process should be directed to the Navigable Waters Protection Program at 1-866-821-6631 or NWPontario-PENontario@tc.gc.ca.

<< File: NWP_App_Guide_EN.pdf >>

Transport Canada is also responsible for the administration of the *Railway Safety Act* to ensure the safe operation of railways. The Act addresses the construction and alteration of railway works, the operation and maintenance of railway equipment and certain non-railway operations affecting railway safety. Pursuant to the Notice of *Railway Works Regulations,* the project proponent will be required to give notice of the proposed project to the following persons: the railway whose line is to be crossed, the municipality in which the crossing works are to be located and the authority having responsibility for the road in question. An approval may be required for certain railway works that depart from engineering standards set under the regulations or where an objection has been filed against the work. Any questions about the *Railway Safety Act* and the Notice of *Railway Works Regulations* should be directed to Luciano Martin, Manager of Engineering, at (416) 973-2326.

You may also wish to review the Act and Regulations by accessing the following Internet sites:

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Notice of Railway Works Regulations: http://laws.justice.gc.ca/en/SOR-91-103/

Please note that certain approvals under the *Navigable Waters Protection Act* or *Railway Safety Act* trigger the requirement for a federal environmental assessment under the Canadian Environmental Assessment Act. You may therefore wish to consider incorporating CEAA requirements into your provincial environmental assessment.

Regards,

Environmental Assessment Coordinator
Transport Canada, Ontario Region
Environment & Engineering (PHE)
4900 Yonge St., 4th Fl., Toronto, ON M2N 6A5
Email: EnviroOnt@tc.gc.ca

Transport Canada / Transports Canada

TC File No./Ref No. — TC n° du dossier/N° de réf.

AERONAUTICAL OBSTRUCTION CLEARANCE FORM

FORMULAIRE D'AUTORISATION D'OBSTACLE AÉRIEN

TO BE COMPLETED BY APPLICANT — À REMPLIR PAR LE REQUÉRANT

Operator's Name — Nom de l'opérateur: Samsung Renewable Energy Inc.

Operator's Address — Adresse de l'opérateur: 55 Standish Court, Mississauga, ON

Operator's Contact — Agent de liaison de l'opérateur: Adam Rosso

Contact's Telephone No. — N° de téléphone de liaison: 905-285-1872

Applicant's Name — Nom du requérant: Samsung Renewable Energy Inc.

Address — Adresse: 55 Standish Court

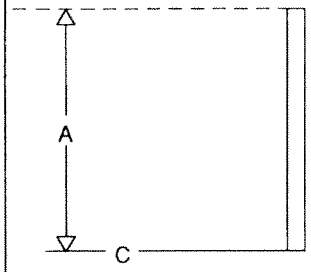
City — Ville: Mississauga | Province: ON | Postal — Code — postal: L5R 4B2 | Telephone No. — N° de téléphone: 905-285-1872

Contact — Personne ressource: Adam Rosso | Telephone No. — N° de téléphone:

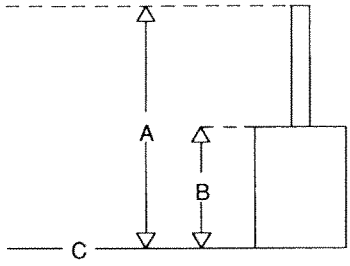
Nearest city / town to proposed facility — Ville la plus proche de la structure proposée: Dunnville, ON

Geographic coordinates of structure — Coordonnées géographiques de la structure: see attached table | ° ' " N Latitude / Latitude N | ° ' " W Longitude / Longitude O

TOWERS / ANTENNAS — TOURS / ANTENNES



BUILDING OR OTHER STRUCTURE — BÂTIMENT OU AUTRE STRUCTURE



		Feet — Pieds	Meters — Mètres
A	Height above ground / Hauteur au-dessus du sol		100
B	Building height / Hauteur du bâtiment		N/A
C	Ground elevation above sea level / Hauteur du sol au-dessus du niveau de la mer		178-220

List any tall adjacent buildings and structures which may overshadow the proposed structure (Attach sketch)

Faire une liste indiquant les structures et bâtiments avoisinants plus haut que le bâtiment projeté (Inclure un diagramme)

New struc. — Nouv. struc.: [X] Yes / Oui [ ] No / Non

Add. to exist. struc. incl. total hght. — Ajout à un bâti. exis. incl. hauteur total:

Proposed Construction — Date — de construction proposée: 2011-2012

TYPE OF STRUCTURE (narrative description and function) — GENRE DE STRUCTURE (description narrative et fonction)

69 wind turbines with a hub height of 100 m each. Blade length is 49 m each.

Signature (of applicant) (du requérant): mark Kozak on behalf of Samsung | Date (Y-A – M – D-J): 2011/01/17

TRANSPORT CANADA USE ONLY — À L'USAGE DE TRANSPORTS CANADA

REGIONAL MANAGER TECHNICAL SERVICES (as required) — GESTIONNAIRE RÉGIONAL — SERVICES TECHNIQUES (si nécessaire)

Comments — Commentaires

(Y-A – M – D-J)

Signature | Date

AERONAUTICAL ASSESSMENT — ÉVALUATION

Site acceptable — Emplacement acceptable: [ ] Yes / Oui [ ] No / Non (if no reason / si non, pourquoi)

Lighting as per TP382 required — Balisage lumineux tel que demandé au TP382: [ ] Yes / Oui [ ] No / Non or / ou

Painting as per TP382 required — Balisage peint tel que demandé au TP382: [ ] Yes / Oui [ ] No / Non or / ou

Temporary lighting required — Nécessité d'un balisage lumineux temporaire: [ ] Yes / Oui [ ] No / Non (if yes type / si oui, de quel genre)

Advise Transport Canada in writing 90 days before construction / Avertir Transports Canada par écrit 90 jours avant la construction: [ ] when construction starts / au commencement de la construction [ ] and on completion / et à la fin des travaux [ ] Valid to / Valide jusqu'au

Regional Supt. Standards and Procedures: / Surintendant régional — Normes et procédures : | Signature | Date (Y-A – M – D-J)

26-0427 (04-91)

Canada

Turbine ID	X	Y	DATUM
1	607287	4746785	UTM NAD83, Zone 17
2	605035	4746639	UTM NAD83, Zone 17
3	606942	4746830	UTM NAD83, Zone 17
4	604861	4746993	UTM NAD83, Zone 17
5	602757	4745791	UTM NAD83, Zone 17
6	606513	4747319	UTM NAD83, Zone 17
7	608495	4747949	UTM NAD83, Zone 17
8	607477	4747512	UTM NAD83, Zone 17
9	600283	4745004	UTM NAD83, Zone 17
10	593994	4748442	UTM NAD83, Zone 17
11	603472	4748075	UTM NAD83, Zone 17
12	601479	4747111	UTM NAD83, Zone 17
13	594663	4751618	UTM NAD83, Zone 17
14	603952	4750047	UTM NAD83, Zone 17
15	608232	4749798	UTM NAD83, Zone 17
16	594379	4749955	UTM NAD83, Zone 17
17	598651	4747922	UTM NAD83, Zone 17
18	587941	4753452	UTM NAD83, Zone 17
19	606357	4749366	UTM NAD83, Zone 17
20	592562	4749469	UTM NAD83, Zone 17
21	602672	4746244	UTM NAD83, Zone 17
22	601756	4751401	UTM NAD83, Zone 17
23	591178	4751634	UTM NAD83, Zone 17
24	592285	4749800	UTM NAD83, Zone 17
25	599130	4750267	UTM NAD83, Zone 17
26	607589	4749481	UTM NAD83, Zone 17
27	598999	4748313	UTM NAD83, Zone 17
28	591339	4752273	UTM NAD83, Zone 17
29	599967	4750467	UTM NAD83, Zone 17
30	606959	4749603	UTM NAD83, Zone 17
31	601833	4751073	UTM NAD83, Zone 17
32	600555	4745188	UTM NAD83, Zone 17
33	589588	4755581	UTM NAD83, Zone 17
34	589790	4753921	UTM NAD83, Zone 17
35	602880	4749652	UTM NAD83, Zone 17
36	590002	4755767	UTM NAD83, Zone 17
37	602481	4749039	UTM NAD83, Zone 17
38	602608	4749469	UTM NAD83, Zone 17
39	603875	4749401	UTM NAD83, Zone 17
40	604239	4749614	UTM NAD83, Zone 17
41	590395	4753879	UTM NAD83, Zone 17
42	600381	4750377	UTM NAD83, Zone 17
43	588466	4752970	UTM NAD83, Zone 17
44	599489	4748483	UTM NAD83, Zone 17
45	590085	4753880	UTM NAD83, Zone 17
46	590582	4751836	UTM NAD83, Zone 17

47	604740	4750499	UTM NAD83, Zone 17
48	594126	4750504	UTM NAD83, Zone 17
49	608750	4749784	UTM NAD83, Zone 17
50	609091	4749844	UTM NAD83, Zone 17
51	601762	4745085	UTM NAD83, Zone 17
52	599708	4748016	UTM NAD83, Zone 17
53	600301	4748359	UTM NAD83, Zone 17
54	607370	4746400	UTM NAD83, Zone 17
55	600136	4746677	UTM NAD83, Zone 17
56	598686	4750284	UTM NAD83, Zone 17
57	606647	4751294	UTM NAD83, Zone 17
58	589733	4750362	UTM NAD83, Zone 17
59	614345	4748206	UTM NAD83, Zone 17
60	614974	4747470	UTM NAD83, Zone 17
61	614326	4747732	UTM NAD83, Zone 17
62	614680	4748176	UTM NAD83, Zone 17
63	614750	4747811	UTM NAD83, Zone 17
64	614705	4747338	UTM NAD83, Zone 17
65	611480	4747403	UTM NAD83, Zone 17
66	611758	4747387	UTM NAD83, Zone 17
67	612236	4747633	UTM NAD83, Zone 17
68	602131	4748909	UTM NAD83, Zone 17
69	606923	4747368	UTM NAD83, Zone 17

Transport Canada Transports Canada

Aeronautical Obstruction Clearance
Wind Turbine Coordinates Spreadsheet

Turbine information						Upon completion		
Turbine Number	LAT dd mm ss.ss	LONG -ddd mm ss.ss	Ground Elevation (Feet)	Structure Height (Feet)	Total Height (Feet)	Lighted Y/N	Painted Y/N	Construction Date
1	42 51 58.05	-79 41 11.71	620.2	493.8	1114	N	Y	2011/2012
2	42 51 54.44	-79 42 51.03	634.8	493.8	1129	Y	Y	2011/2012
3	42 51 59.68	-79 41 26.88	610.3	493.8	1105	N	Y	2011/2012
4	42 52 06.00	-79 42 58.46	643.0	493.8	1137	N	Y	2011/2012
5	42 51 28.07	-79 44 31.96	600.4	493.8	1095	Y	Y	2011/2012
6	42 52 15.74	-79 41 45.44	616.9	493.8	1111	Y	Y	2011/2012
7	42 52 35.16	-79 40 17.67	623.4	493.8	1118	Y	Y	2011/2012
8	42 52 21.51	-79 41 02.83	643.0	493.8	1137	N	Y	2011/2012
9	42 51 03.78	-79 46 21.15	590.5	493.8	1085	Y	Y	2011/2012
10	42 52 58.06	-79 50 56.43	656.2	493.8	1150	Y	Y	2011/2012
11	42 52 41.75	-79 43 58.94	646.3	493.8	1141	N	Y	2011/2012
12	42 52 11.47	-79 45 27.40	620.7	493.8	1115	N	Y	2011/2012
13	42 54 40.70	-79 50 25.01	672.6	493.8	1167	Y	Y	2011/2012
14	42 53 45.43	-79 43 36.48	653.9	493.8	1148	N	Y	2011/2012
15	42 53 35.22	-79 40 27.98	610.1	493.8	1104	N	Y	2011/2012
16	42 53 47.10	-79 50 39.73	656.2	493.8	1150	Y	Y	2011/2012
17	42 52 39.09	-79 47 31.63	643.0	493.8	1137	Y	Y	2011/2012
18	42 55 43.04	-79 55 20.39	688.4	493.8	1183	Y	Y	2011/2012
19	42 53 22.22	-79 41 50.53	623.4	493.8	1118	Y	Y	2011/2012
20	42 53 31.77	-79 51 58.45	659.4	493.8	1154	Y	Y	2011/2012
21	42 51 44.28	-79 44 34.49	607.0	493.8	1101	N	Y	2011/2012
22	42 54 30.38	-79 45 12.40	602.8	493.8	1097	Y	Y	2011/2012
23	42 54 42.75	-79 52 58.67	689.0	493.8	1183	N	Y	2011/2012
24	42 53 42.79	-79 52 11.17	656.2	493.8	1150	N	Y	2011/2012
25	42 53 54.80	-79 47 08.77	633.4	493.8	1128	N	Y	2011/2012
26	42 53 25.27	-79 40 56.54	604.7	493.8	1099	N	Y	2011/2012
27	42 52 51.60	-79 47 15.92	652.7	493.8	1147	N	Y	2011/2012
28	42 55 03.39	-79 52 51.20	676.7	493.8	1171	Y	Y	2011/2012
29	42 54 00.96	-79 46 31.87	623.4	493.8	1118	Y	Y	2011/2012
30	42 53 29.54	-79 41 24.23	606.9	493.8	1101	N	Y	2011/2012
33	42 56 51.36	-79 54 06.51	661.2	493.8	1155	N	Y	2011/2012
34	42 55 57.47	-79 53 58.56	689.0	493.8	1183	N	Y	2011/2012
35	42 53 33.15	-79 44 23.99	659.4	493.8	1154	N	Y	2011/2012
36	42 56 57.21	-79 53 48.14	672.6	493.8	1167	Y	Y	2011/2012
37	42 53 13.48	-79 44 41.98	656.2	493.8	1150	N	Y	2011/2012
38	42 53 27.35	-79 44 36.10	659.4	493.8	1154	N	Y	2011/2012
39	42 53 24.53	-79 43 40.30	646.3	493.8	1141	Y	Y	2011/2012
40	42 53 31.26	-79 43 24.11	639.8	493.8	1134	N	Y	2011/2012
41	42 55 55.85	-79 53 31.90	682.4	493.8	1177	Y	Y	2011/2012
42	42 53 57.85	-79 46 13.68	613.5	493.8	1108	N	Y	2011/2012
43	42 55 27.20	-79 54 57.51	698.7	493.8	1193	N	Y	2011/2012
44	42 52 56.88	-79 46 54.22	656.2	493.8	1150	N	Y	2011/2012
45	42 55 56.01	-79 53 45.57	685.7	493.8	1180	N	Y	2011/2012
46	42 54 49.55	-79 53 24.84	689.0	493.8	1183	N	Y	2011/2012
47	42 53 59.69	-79 43 01.44	621.5	493.8	1116	Y	Y	2011/2012
48	42 54 04.83	-79 50 49.36	670.5	493.8	1165	N	Y	2011/2012
49	42 53 34.50	-79 40 05.16	607.0	493.8	1101	N	Y	2011/2012

Turbine information						Upon completion		
Turbine Number	LAT dd mm ss.ss	LONG -ddd mm ss.ss	Ground Elevation (Feet)	Structure Height (Feet)	Total Height (Feet)	Lighted Y/N	Painted Y/N	Construction Date
50	42 53 36.27	-79 39 50.09	605.2	493.8	1100	Y	Y	2011/2012
51	42 51 05.67	-79 45 16.25	597.1	493.8	1091	Y	Y	2011/2012
52	42 52 41.64	-79 46 44.86	645.1	493.8	1139	N	Y	2011/2012
53	42 52 52.48	-79 46 18.51	643.0	493.8	1137	**Y**	Y	2011/2012
54	42 51 45.52	-79 41 08.31	607.0	493.8	1101	Y	Y	2011/2012
55	42 51 58.04	-79 46 26.86	611.7	493.8	1106	Y	Y	2011/2012
56	42 53 57.28	-79 47 28.92	646.3	493.8	1141	Y	Y	2011/2012
57	42 54 24.15	-79 41 36.70	596.9	493.8	1091	Y	Y	2011/2012
58	42 54 02.13	-79 54 03.13	675.9	493.8	1170	Y	Y	2011/2012
59	42 52 37.56	-79 35 59.32	596.0	493.8	1090	N	Y	2011/2012
60	42 52 16.22	-79 35 32.52	603.8	493.8	1098	Y	Y	2011/2012
61	42 52 25.06	-79 36 00.88	600.4	493.8	1095	N	Y	2011/2012
62	42 52 39.26	-79 35 44.96	597.3	493.8	1092	Y	Y	2011/2012
63	42 52 27.39	-79 35 42.14	605.7	493.8	1100	N	Y	2011/2012
64	42 52 12.09	-79 35 44.47	597.1	493.8	1091	N	Y	2011/2012
65	42 52 15.91	-79 38 06.52	620.1	493.8	1114	N	Y	2011/2012
66	42 52 15.25	-79 37 54.29	616.8	493.8	1111	N	Y	2011/2012
67	42 52 22.97	-79 37 33.05	616.5	493.8	1111	Y	Y	2011/2012
68	42 53 09.43	-79 44 57.49	656.2	493.8	1150	***Y***	Y	2011/2012
69	42 52 17.13	-79 41 27.35	626.6	493.8	1121	N	Y	2011/2012

From: Regis Dastous [mailto:IMCEAEX-_O=YRH+20ORGANIZATION_OU=EXCHANGE+20ADMINISTRATIVE+20GROUP+20+28FYDIBOHF23SPDLT+29_CN=RECIPIENTS_CN=REGIS+20DASTOUS@yrh.com]
Sent: Tuesday, August 16, 2011 1:28 PM
To: aerodromes.ontario@tc.gc.ca
Cc: Lucking, Michael
Subject: Aeronautical Obstacle Clearance Form, Grand Renewable Energy Park Project

Hi Michael,

Please find attached the latest and final version of the Samsung's Grand Renewable Energy Park in southern Ontario. There are not many changes from the last one, only 2 wind turbines have been taken out and a few others have been moved by a few meters. I include a new application form, since number of wind turbine is not the same, along with a new spreadsheet and a new 1:50k map.

As mentioned in my last week E-mail, this application is made considering only this Samsung GREP wind farm, since a grouped application with the other neighboring wind farms was not practically feasible.

Please review the proposed lighting scenario and do not hesitate to contact me if you have any question.

Best regards

Régis d'Astous

Yves R. Hamel et Associés Inc.
424 Guy, Suite 102
Montréal, Qc, Canada
H3J 1S6

Tél: +1 (514) 934-3024 Ext:237
Fax: +1 (514) 934-2245
mailto: rdastous@yrh.com

RDIMS: # 6932766

Transport Canada / Transports Canada

APPENDIX C TO CAR 621.19 - ANNEXE C RAC 621.19

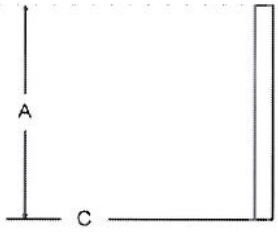
AERONAUTICAL OBSTRUCTION CLEARANCE FORM / FORMULAIRE D'AUTORISATION D'OBSTACLE AÉRIEN

TC File No./Ref No. – TC n° du dossier/N° de réf.: 2011-630

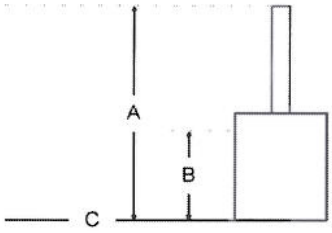
TO BE COMPLETED BY APPLICANT – À REMPLIR PAR LE REQUÉRANT

Operator's Name – Nom de l'opérateur: Samsung Renewable Energy Inc.		
Operator's Address – Adresse de l'opérateur: 55 Standish Court, Mississauga, On L5R 4B2		
Operator's Contact – Agent de liaison de l'opérateur: Adam Rosso		
Contact's Telephone No. – N° de téléphone de liaison: 905-285-1872	Contact's FAX No. – N° de télécopieur de liaison	Contact's Email Address – Adresse électronique de liaison: a.rosso@samsungrenewableenergy.ca
Applicant's Name – Nom du requérant: Régis d'Astous	Address – Adresse: 424 Guy St. Suite 102	
City – Ville: Montréal	Province/Territory - Province/Territoire: Québec	Postal – Code – postal: H3J 1S6
Applicant's Telephone No. – N° de téléphone du requérant: 514-934-3024	Applicant's FAX No. – N° de télécopieur du requérant: 514-934-2245	Applicant's Email Address – Adresse électronique du requérant: rdastous@yrh.com
Nearest city / town to proposed facility – Ville la plus proche de la structure proposée: Dunnville, On.	Geographic coordinates of structure – coordonnées géographiques de la structure: ° ' " N Latitude / Latitude N; ° ' " W Longtitude / Longtitude O	☐ NAD27 ☑ NAD83 ☐ WGS84

TOWERS / ANTENNAS – TOURS / ANTENNES



BUILDING OR OTHER STRUCTURE – BÂTIMENT OU AUTRE STRUCTURE



		Feet – Pieds	Meters – Mètres
A	Height above ground – Hauteur au-dessus du sol	494	105.5
B	Building height – Hauteur du bâtiment		
C	Ground elevation above sea level – Hauteur du sol au-dessus du niveau de la mer	See Spreadshe	

List any tall adjacent buildings and structures which may shield the proposed structure (Attach sketch)

Faire une liste indiquant les structures et bâtiments avoisinants plus haut que le bâtiment projeté (Inclure un diagramme)

New struc. – Nouv. struc.	Add. to exist. struc. incl. total hght. – Ajout à un bâti. exis. incl. hauteur total	Proposed Construction – Date – de construction proposée
☑ Yes / Oui ☐ No / Non		2011-2012

TYPE OF STRUCTURE (narrative description and function) – GENRE DE STRUCTURE (description narrative et fonction)

Wind farm consisting of 67 wind turbines Siemens 2.3-101, with a hub height of 100 m and a 50.5 m rotor radius, for a total structure height of 150.5 m above ground.

Signature (of applicant / du requérant) ▶ Régis d'Astous — Date (Y/A-M-D/J): 2011-08-16

TRANSPORT CANADA USE ONLY – À L'USAGE DE TRANSPORTS CANADA

AERONAUTICAL ASSESSMENT – ÉVALUATION AÉRONAUTIQUE

Site acceptable – Emplacement acceptable: ☐ Yes / Oui ☐ No / Non (if no, reason / si non, pourquoi) N/A — This form does not constitute authority for construction.

Lighting as per (TP382) required – Balisage lumineux tel que demandé au (TP382): ☑ Yes / Oui ☐ No / Non or / ou PLEASE LIGHT TURBINES # 6, 19, 20, 39, 53 and 68 IN ADDITION TO SUBMITTED LIGHTING PROPOSAL

Painting as per (TP382) required – Balisage peint tel que demandé au (TP382): ☐ Yes / Oui ☑ No / Non or / ou

Temporary lighting required – Nécessité d'un balisage lumineux temporaire: ☑ Yes / Oui ☐ No / Non (if yes, type / si oui, de quel genre)

RECEIVED AOUT AUG 16 2011 AERONAUTICS AND AERODROMES

Advise Transport Canada in writing 90 days before construction / Avertir Transports Canada par écrit 90 jours avant la construction ▶ ☐ when construction starts / au commencement de la construction ☐ and on completion / et à la fin des travaux ☐ Valid to / Valide jusqu'au

Civil Aviation Inspector (as required) – Inspecteur Aviation Civile (si nécessaire)
Comments – Commentaires

Signature — (Y/A-M-D/J) 2011-09-15 Date

Regional Manager Aerodrome Safety / Gestionaire Régional Sécurité des aérodromes ▶ Signature — Date (Y/A-M-D/J)

26-0427 (0005-01)

Canada

dc

Friedl, Susanne

From: Nadolny, Rob
Sent: Wednesday, June 16, 2010 2:30 PM
To: Kozak, Mark
Subject: FW: Grand Renewable Energy Park, Haldimand County, NEATS 24026
Attachments: Obstruction clearance Form.PDF; CARs 621.19.12 - Marking and Lighting of Wind Turbines and Windfarms.pdf

Follow Up Flag: Follow up
Flag Status: Completed

Categories: Red Category

From: EnviroOnt [mailto:EnviroOnt@tc.gc.ca]
Sent: Wednesday, June 16, 2010 2:29 PM
To: Nadolny, Rob
Cc: Aerodromes Ontario
Subject: RE: Grand Renewable Energy Park, Haldimand County, NEATS 24026

Dear Mr. Nadolny,

Further to our e-mail of June 10, 2010 (below), please be advised that obstacles such as wind turbines must be assessed for lighting and marking requirements in accordance with Canadian Aviation Regulations (CARs) 621.19.

Wind turbine and wind farm proponents should complete an Aeronautical Obstruction Clearance Form which is available on the Transport Canada Ontario Region website at www.tc.gc.ca/Ontario/eng/air/civil-aviation/aerodromes.htm, and also attached to this message. If you require further information regarding CARs, please contact Aerodromes and Air Navigation Ontario Region at 416-952-1623 or by email at aerodromes.ontario@tc.gc.ca

<<Obstruction clearance Form.PDF>> <<CARs 621.19.12 - Marking and Lighting of Wind Turbines and Windfarms.pdf>>

Regards,

Environmental Assessment Coordinator
Transport Canada, Ontario Region
Environment & Engineering (PHE)
4900 Yonge St., 4th Fl., Toronto, ON M2N 6A5
Email: EnviroOnt@tc.gc.ca

From: EnviroOnt

Sent: Thursday, June 10, 2010 2:17 PM
To: 'rob.nadolny@stantec.com'
Subject: Grand Renewable Energy Park, Haldimand County, NEATS 24026

Thank you for your letter regarding the above referenced environmental assessment. Please in future forward correspondence on this environmental assessment to the undersigned.

We have reviewed the information, and note the following:

Transport Canada is responsible for the administration of the *Navigable Waters Protection Act,* which prohibits the construction or placement of any "works" in navigable waters without first obtaining approval. If any of the related project elements or activities related may cross or affect a potentially navigable waterway, you are requested to prepare and submit an application in accordance with the requirements as outlined in the attached Application Guide. Any questions about the NWPA application process should be directed to the Navigable Waters Protection Program at 1-866-821-6631 or NWPontario-PENontario@tc.gc.ca.

<< File: NWP_App_Guide_EN.pdf >>

Transport Canada is also responsible for the administration of the *Railway Safety Act* to ensure the safe operation of railways. The Act addresses the construction and alteration of railway works, the operation and maintenance of railway equipment and certain non-railway operations affecting railway safety. Pursuant to the Notice of *Railway Works Regulations,* the project proponent will be required to give notice of the proposed project to the following persons: the railway whose line is to be crossed, the municipality in which the crossing works are to be located and the authority having responsibility for the road in question. An approval may be required for certain railway works that depart from engineering standards set under the regulations or where an objection has been filed against the work. Any questions about the *Railway Safety Act* and the Notice of *Railway Works Regulations* should be directed to Luciano Martin, Manager of Engineering, at (416) 973-2326.

You may also wish to review the Act and Regulations by accessing the following Internet sites:

Railway Safety Act: http://www.tc.gc.ca/acts-regulations/acts/1985s4-32/menu.htm

Notice of Railway Works Regulations: http://laws.justice.gc.ca/en/SOR-91-103/

Please note that certain approvals under the *Navigable Waters Protection Act* or *Railway Safety Act* trigger the requirement for a federal environmental assessment under the Canadian Environmental Assessment Act. You may therefore wish to consider incorporating CEAA requirements into your provincial environmental assessment.

Regards,

Environmental Assessment Coordinator
Transport Canada, Ontario Region
Environment & Engineering (PHE)
4900 Yonge St., 4th Fl., Toronto, ON M2N 6A5
Email: EnviroOnt@tc.gc.ca