

# **Modifications Document REA Number 0300-8UQPKR**

**Grand Renewable Wind Project** 

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# 1.0 Introduction

2.0

Grand Renewable Wind LP has developed a 148.6 MW wind project known as the Grand Renewable Wind Project. The project is located within the County of Haldimand and 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. A Renewable Energy Approval (REA) application was submitted to the Ontario Ministry of the Environment and Climate Change (MOECC) in October 2011 in accordance with the requirements of Ontario Regulation 359/09.

On June 15, 2012, an REA was issued for the construction of the Grand Renewable Wind Project (see **Appendix A**). Since that time, Samsung C&T has completed detailed design and construction of the wind facility. Through the construction phase, it was identified that the alignment of the portion of access road associated with Turbine 53 required minor modifications to allow for the passage of delivery vehicles during the construction phase. As such, the proponent is proposing a minor technical change to the preliminary design. Since the REA is based on the preliminary design, the proponent is seeking a "technical change" amendment to the REA as per Chapter 10 of the Technical Guide to Renewable Energy Approvals (MOECC 2013). This report outlines the proposed technical change amendment and overviews how where it requires modifications to the original REA submission. This report also includes an administrative change to the Proponent's contact information.

This report focuses on the final design for the access road associated with Turbine 53 (also referred to as access road 19) as prepared by Samsung C&T. Figures and drawings related to the realignment of the access road are included in **Appendix B**. To review the preliminary design as submitted to the MOECC as part of the REA application, please visit: http://www.samsungrenewableenergy.ca/haldimand.

# **Proponent Contact Information**

Should there be any questions about these amendments or the project, please contact:

Full Name of Company: Grand Renewable Wind LP

Address: 2050 Derry Road West, 2nd Floor, Mississauga, ON L5N 0B9

**Telephone:** 905-501-5663

**Primary Contact:** Beatrice Ashby

**Email:** b.ashby@samsung.com



Please note that the mailing address of the proponent has changed from the address in the original Renewable Energy Approval. The mailing address provided in this report is the most up-to-date contact information and constitutes an **administrative change**. This change should be reflected in all of the documents affiliated with the Grand Renewable Wind Project.

## Overview of the Technical Change Amendment

3.0

4.0

The basis for this technical change amendment is to provide a safe passage of delivery vehicles during the construction phase on the portion of access road 19 associated with Turbine 53. Following detailed engineering for access road 19 to Turbine 53, it was determined that the proposed alignment of this specific portion of the access road would not provide enough room for delivery vehicles. Based on this assumption, consultation with the MOECC occurred on April 16, 2014 to notify them of the required realignment. A memorandum of relevant details and an outline of due diligence agency consultation were submitted to MOECC on September 12, 2014. On October 21, 2014 the MOECC made the determination that the realignment of a portion of access road 19 was consistent with the definition of a technical change as per Chapter 10 of the Technical Guide to Renewable Energy Approvals (MOECC 2013) and a technical change amendment to the REA would be required. This correspondence is included in **Appendix C**.

This Modifications Document focuses on the change in the alignment of the portion of access road 19 associated with Turbine 53 to allow for the passage of delivery vehicles during the construction phase. Drawings and figures showing the realignment are included in **Appendix B**. Where this access road is discussed in the original REA submission (see **Table 1** below), the content of this Modifications Document serves to amend that information to reflect the current conditions.

# Amendments to the Original REA Submission Package

Based on the original REA submission to the MOECC that was approved on June 15<sup>th</sup>, 2012, **Table 1** outlines which reports in the original REA submission require modification to include the technical change to access road 19. The report(s) and section(s) requiring modification are listed where the proposed change as outlined in this Modification Document would replace the text or figure in the original report.



# TABLE 1: MODIFICATIONS TO THE REA SUBMISSION FOR REALIGNMENT OF THE ACCESS ROAD TO TURBINE 53

Report Section To Be Modified		Overview of Modification		
Project Summary Report	Attachment A, Figure 3.8 and Figure 4.2; Section 4.3.1; Section 4.4.1	The detailed design figure (Figure 2) in Appendix B of this report to replace the alignment of the access road to Turbine 53 shown in Figure 3.8 and Figure 4.2 in Attachment A of the Project Summary Report.  New text in Section 4.3.1 and Section 4.4.1 change 1.72 ha to 1.77 ha		
Project Description Report	Attachment A, Figures 3.8 and 4.2; Section 4.3.2.1	The detailed design figure (Figure 2) in Appendix B of this report to replace the alignment of the access road to Turbine 53 shown in Figure 3.8 and Figure 4.2 in Attachment A of the Project Description Report.  New text in Section 4.3.2.1 – change 1.72 ha to 1.77 ha		
Construction Plan Report	Attachment A, Figures 3.8 and 4.2; Section 3.3.1	The detailed design figure (Figure 2) in Appendix B of this report to replace the alignment of the access road to Turbine 53 shown in Figure 3.8 and Figure 4.2 in Attachment A of the Construction Plan Report.  New text in Section 3.3.1 – change 1.72 ha to 1.77 ha		
Design and Operations Report	Attachment A, Figures 3.8 and 4.2	The detailed design figure (Figure 2) in Appendix B of this report to replace the alignment of the access road to Turbine 53 shown in Figure 3.8 and Figure 4.2 in Attachment A of the Design and Operations Report.		
Decommissioning Plan Report	No changes required	n/a		
Natural Heritage Assessment	As outlined in the NHA Modifications Document	As outlined in the NHA Modifications Document (February 2015) ( <b>Appendix C</b> ). Reconfirmed by the MNRF on February 3, 2015		
Noise Assessment Report	No changes required	n/a		
Wind Turbine Specifications Report	No changes required	n/a		
Stage I Archaeological Assessment	No changes required	n/a		
Stage II Archaeological Assessment	No changes required	n/a		



Report Section To Be Modified		Overview of Modification
Interim Stage 2 Archaeological Assessment	Appendix B 'tile H'	The detailed design figure (Figure 2) in Appendix B of this report to replace the alignment of the access road to Turbine 53 shown in Tile H in Appendix B of the Interim Stage 2 Archaeological Assessment Report
Water Assessment and Water Body Report	Appendix A, Figures 2.8 and 3.8	The detailed design figure (Figure 2) in Appendix B of this report to replace the alignment of the access road to Turbine 53 shown in Figure 2.8 and Figure 3.8 in Appendix A of the Water Assessment and Water Body Report
Water Body Report Addendum	No changes required	n/a
Consultation Report	Section 2.3, Section 3.3, Appendix C and Appendix G	No modifications to this report. Additional consultation undertaken for this REA Amendment as outlined in this Modifications Document.
Heritage Impact Assessment	Figure 4.8	The detailed design figure (Figure 2) in Appendix B of this report to replace the alignment of the access road to Turbine 53 shown in Figure 4.8 of the Heritage Impact Assessment Report
Protected Properties Assessment	No changes required	n/a

# **Environmental Effects**

5.0

There are no additional potential environmental effects as a result of the proposed technical change amendment that were not previously anticipated in original REA application.

Overall mitigation measures proposed to reduce or eliminate potential negative effects to the natural and human environments are documented in the Construction Plan Report, Design and Operations Report, Water Body Report and Natural Heritage Assessment (NHA) Reports provided with the original application.

The Ministry of Natural Resources and Forestry (MNRF) was provided with a NHA Modifications Document on February 2, 2015 This Modification Document provided an overview of changes that occurred in the original NHA confirmed by the MNRF on June 30, 2011. This NHA Modifications Document has been included in Appendix C along with the approval email issued by the MNRF on February 3, 2015 that serves as an addendum to the original confirmation letter.



### **Consultation**

#### 6.1 Ministry of Natural Resources

**6.0** 

Consultation with the MNRF was conducted on April 16, 2014 regarding the proposed technical change to the REA for this project. The MNRF responded on April 23, 2014 and concluded that a re-confirmation letter was not required based on the proposed changes to the project (related to the alignment of access road 19). The MNRF acknowledged that the proposed realignment of the portion of access road 19 to Turbine 53 would not change the Natural Heritage Assessment that formed part of the original REA submission. The correspondence with the MNRF related to this technical change amendment is provided in **Appendix C**.

The MNRF has also been provided with a NHA Modification Document (as outlined in **Section 5.0** above) for review and approval. The purpose of the NHA Modification Document was to amend a woodland/tree compensation commitment related to the removal of vegetation to facilitate the construction of access road 19 and Turbine 53. Approval was issued via email by the MNRF on February 3, 2015 and is included in **Appendix C**.

#### 6.2 Ministry of Tourism, Culture and Sport

Consultation with the Ministry of Tourism, Culture and Sport (MTCS) was conducted on April 17, 2014 regarding the proposed technical change to the REA for this project. In the area where access road 19 required realignment, the Stage 2 Archaeology Report for the project recommended there were no further archaeological concerns. The MTCS responded on April 22, 2014 and concluded that the proposed change to the portion of the access road to Turbine 53 does not affect the original recommendations for this portion of the property. The correspondence with the MTCS related to this technical change amendment is found in **Appendix C**.

The MTCS has also been provided notification of this Modifications Report and the technical change REA amendment submission.

#### 6.3 Other Consultation

A Notice of REA Amendment outlining the proposed technical change will be distributed to all project stakeholders in mid-February 2015. The Notice of REA Amendment will be published in the Brantford Expositor and the Haldimand Press the week of February 16, 2015. A copy of the stakeholder letter and notice are included in **Appendix D**.

# 7.0 Summary

The view of the Proponent, the MTCS and the MNRF is that the above-listed technical change to the access road associated with Turbine 53 will not result in additional potential negative environmental effects to natural features, water bodies or neighbouring residents for which mitigation was not already proposed through preliminary design approved with the original REA application.



# **Appendix A** Renewable Energy Approval





#### **RENEWABLE ENERGY APPROVAL**

NUMBER 0300-8UQPKR Issue Date: June 15, 2012

Grand Renewable Wind LP / Grand Renewable Wind GP

Inc.

55 Standish Court Mississauga, Ontario

L5R 4B2

Project Near Haldimand Road 20

Location: Haldimand County,

N0A 1E0

You have applied in accordance with Section 47.4 of the <u>Environmental Protection Act</u> for approval to engage in a renewable energy project in respect of a Class 4 wind facility consisting of the following:

- the construction, installation, operation, use and retiring of a Class 4 wind facility with a total name plate capacity of 148.6 megawatts.

For the purpose of this renewable energy approval, the following definitions apply:

- "Acoustic Assessment Report" means the report included in the Application and entitled Grand Renewable Energy Park-Noise Assessment Report Revision 2, dated May 29, 2012 prepared by Zephyr North Ltd. and signed by Carl Brothers P.Eng., Zephyr North Ltd, and an addendum entitled Grand Renewable Energy Park — Noise Assessment Report — Revision 2 — Addendum 1 dated May 29, 2012 prepared by Zephyr North Ltd. and signed by Carl Brothers P. Eng., Zephyr North Ltd. May 29, 2012.
- "Acoustic Audit Emission" means an investigative procedure that is compliant with the IEC Standard 61400-11 and consisting of measurements and/or acoustic modelling of noise emissions produced by wind turbine generators, assessed to determine compliance with the manufacturer's noise (acoustic) equipment specifications and emission data of the wind turbine generators, included in the Acoustic Assessment Report;
- 3. "Acoustic Audit Immission" means an investigative procedure consisting of measurements and/or acoustic modelling of all sources of noise emissions due to the operation of the Equipment, assessed to determine compliance with the Noise Performance Limits set out in this Approval;

- 4. "Acoustic Audit Report-Emission" means a report presenting the results of the Acoustic Audit Emission;
- 5. "Acoustic Audit Report-Immission" means a report presenting the results of the Acoustic Audit Immission;
- 6. "Acoustic Audit Report-Transformer Substation" means a report presenting the results of the Acoustic Audit Transformer Substation;
- "Acoustic Audit Transformer Substation" means an investigative procedure consisting of
  measurements and/or acoustic modelling of all noise sources comprising the transformer
  (100/133/166 MVA) assessed to determine compliance with the Sound Power Level specification of
  such transformer described in the Acoustic Assessment Report;
- 8. "Acoustical Consultant" means a person currently active in the field of environmental acoustics and noise/vibration control, who is knowledgeable about Ministry noise guidelines and procedures and has a combination of formal university education, training and experience necessary to assess noise emissions from wind facilities:
- 9. "Act" means the Environmental Protection Act, R.S.O 1990, c.E.19, as amended;
- 10. "Adverse Effect" has the same meaning as in the Act;
- 11. "Application" means the application for a Renewable Energy Approval dated October 3, 2011, and signed by Jeong Tack Lee, President, Grand Renewable Wind GP Inc., on behalf of Grand Renewable Wind LP., and all supporting documentation submitted with the Application, including amended documentation submitted up to the date this Approval is issued;
- 12. "Approval" means this Renewable Energy Approval issued in accordance with Section 47.4 of the Act, including any schedules to it;
- 13. "A-weighting" means the frequency weighting characteristic as specified in the International Electrotechnical Commission (IEC) Standard 61672, and intended to approximate the relative sensitivity of the normal human ear to different frequencies (pitches) of sound. It is denoted as "A";
- 14. "A-weighted Sound Pressure Level" means the Sound Pressure Level modified by application of an A-weighting network. It is measured in decibels, A-weighted, and denoted "dBA";
- 15. "Class 1 Area" means an area with an acoustical environment typical of a major population centre, where the background sound level is dominated by the activities of people, usually road traffic, often referred to as "urban hum";
- 16. "Class 2 Area" means an area with an acoustical environment that has qualities representative of both Class 1 and Class 3 Areas:

- 1. sound levels characteristic of Class 1 during daytime (07:00 to 19:00 or to 23:00 hours);
- 2. low evening and night background sound level defined by natural environment and infrequent human activity starting as early as 19:00 hours (19:00 or 23:00 to 07:00 hours);
- 3. no clearly audible sound from stationary sources other than from those under impact assessment.
- 17. "Class 3 Area" means a rural area with an acoustical environment that is dominated by natural sounds having little or no road traffic, such as the following:
  - 1. a small community with less than 1000 population;
  - 2. agricultural area;
  - 3. a rural recreational area such as a cottage or a resort area; or
  - 4. a wilderness area.
- 18. "Company" means Grand Renewable Wind GP Inc., as general partner for and on behalf of Grand Renewable Wind LP, the partnership under the laws of Ontario, and includes its successors and assignees;
- 19. "Compliance Protocol for Wind Turbine Noise" means the Ministry document entitled, Compliance Protocol for Wind Turbine Noise, Guideline for Acoustic Assessment and Measurement, PIBS# 8540e;
- 20. "Decibel" means a dimensionless measure of Sound Level or Sound Pressure Level, denoted as dB;
- 21. "Director" means a person appointed in writing by the Minister of the Environment pursuant to section 5 of the Act as a Director for the purposes of section 47.5 of the Act;
- 22. "District Manager" means the District Manager of the appropriate local district office of the Ministry where the Facility is geographically located;
- 23. "Equipment" means the 67 wind turbine generators and one (1) transformer substation, identified in this Approval and as further described in the Application, to the extent approved by this Approval;
- 24. "Equivalent Sound Level" is the value of the constant sound level which would result in exposure to the same total A-weighted energy as would the specified time-varying sound, if the constant sound level persisted over an equal time interval. It is denoted L<sub>eq</sub> and is measured in dB A-weighting (dBA);
- 25. "Facility" means the renewable energy generation facility, including the Equipment, as described in this Approval and as further described in the Application, to the extent approved by this Approval;

- 26. "IEC Standard 61400-11" means the International Standard IEC Standard 61400-11, Wind turbine generator systems Part 11: Acoustic noise measurement techniques, 2006;
- 27. "Independent Acoustical Consultant" means an Acoustical Consultant who is not representing the Company and was not involved in preparing the Acoustic Assessment Report. The Independent Acoustical Consultant shall not be retained by the Acoustical Consultant involved in the noise impact assessment;
- 28. "Ministry" means the ministry of the government of Ontario responsible for the Act and includes all officials, employees or other persons acting on its behalf;
- 29. "Noise Guidelines for Wind Farms" means the Ministry document entitled, "Noise Guidelines for Wind Farms Interpretation for Applying MOE NPC Publications to Wind Power Generation Facilities", dated October 2008;
- 30. "Noise Receptor" has the same meaning as in O. Reg. 359/09;
- 31. "O. Reg. 359/09" means Ontario Regulation 359/09 "Renewable Energy Approvals under Part V.0.1 of the Act" made under the Act;
- 32. "Point of Reception" has the same meaning as in the Noise Guidelines for Wind Farms and is subject to the same qualifications described in that document;
- 33. "Sound Level" means the A-weighted Sound Pressure Level;
- 34. "Sound Level Limit" is the limiting value described in terms of the one hour A-weighted Equivalent Sound Level L...;
- 35. "Sound Power Level" means ten times the logarithm to the base of 10 of the ratio of the sound power (Watts) of a noise source to standard reference power of 10<sup>-12</sup> Watts;
- 36. "Sound Pressure" means the instantaneous difference between the actual pressure and the average or barometric pressure at a given location. The unit of measurement is the micro pascal (µPa);
- 37. "Sound Pressure Level" means twenty times the logarithm to the base 10 of the ratio of the effective pressure ( $\mu$ Pa) of a sound to the reference pressure of 20  $\mu$ Pa;
- 38. "UTM" means Universal Transverse Mercator coordinate system.

You are hereby notified that this approval is issued to you subject to the terms and conditions outlined below:

#### TERMS AND CONDITIONS

#### A - GENERAL

- A1. The Company shall construct, install, use, operate, maintain and retire the Facility in accordance with the terms and conditions of this Approval and the Application and in accordance with the following schedules attached hereto:
  - Schedule A Facility Description
  - Schedule B Coordinates of the Equipment and Noise Specifications
- A2. Where there is a conflict between a provision of this Approval and any document submitted by the Company, the conditions in this Approval shall take precedence. Where there is a conflict between one or more of the documents submitted by the Company, the document bearing the most recent date shall take precedence.
- A3. The Company shall ensure a copy of this Approval is:
  - (1) accessible, at all times, by Company staff operating the Facility and;
  - (2) submitted to the clerk of each local municipality and upper-tier municipality in which the Facility is situated.
- A4. If the Company has a publicly accessible website, the Company shall ensure that the Approval and the Application are posted on the Company's publicly accessible website within five (5) business days of receiving this Approval.
- A5. The Company shall, at least six (6) months prior to the anticipated retirement date of the entire Facility, or part of the Facility, review its Decommissioning Plan Report to ensure that it is still accurate. If the Company determines that the Facility cannot be decommissioned in accordance with the Decommissioning Plan Report, the Company shall provide the Director and District Manager a written description of plans for the decommissioning of the Facility.
- A6. The Facility shall be retired in accordance with the Decommissioning Plan Report and any directions provided by the Director or District Manager.
- A7. The Company shall, at least six (6) months prior to the anticipated retirement date of the entire Facility, or part of the Facility, contact the Ministry of Agriculture, Food and Rural Affairs to discuss its plans for the decommissioning of the Facility, including Company's objective to restore the project location to its previous agricultural capacity.
- A8. The Company shall provide the District Manager and the Director at least ten (10) days written notice of the following:
  - (1) the commencement of any construction or installation activities at the project location; and
  - (2) the commencement of the operation of the Facility.

#### **B - EXPIRY OF APPROVAL**

- B1. Construction and installation of the Facility must be completed within three (3) years of the later of:
  - (1) the date this Approval is issued; or
  - (2) if there is a hearing or other litigation in respect of the issuance of this Approval, the date that this hearing or litigation is disposed of, including all appeals.
- B2. This Approval ceases to apply in respect of any portion of the Facility not constructed or installed before the later of the dates identified in Condition B1.

#### **C - NOISE PERFORMANCE LIMITS**

- C1. The Company shall ensure that:
- (1) the Sound Levels from the Equipment, at the Points of Reception identified in the Acoustic Assessment Report, comply with the Sound Level Limits set in the Noise Guidelines for Wind Farms, as applicable, and specifically as stated in the table below:

Wind Speed (m/s) at 10 m height	4	5	6	7	8	9	10
Sound Level Limits, dBA	40	40	40	43	45	49	51

- (2) the Equipment is constructed and installed at either of the following locations:
  - a) at the locations identified in Schedule B of this Approval; or
  - b) at a location that does not vary by more than 10 metres from the locations identified in Schedule B of this Approval and provided that,
    - i) the Equipment will comply with Condition C1 (1); and
    - ii) all setback prohibitions established under O. Reg. 359/09 are complied with.
- (3) the Equipment complies with the noise specifications set out in Schedule B of this Approval.
- C2. If the Company determines that some or all of the Equipment cannot be constructed in accordance with Condition C1 (2), prior to the construction and installation of the Equipment in question, the Company shall apply to the Director for an amendment to the terms and conditions of the Approval.
- C3. Within three (3) months of the completion of the construction of the Facility, the Company shall submit to the Director a written confirmation signed by an individual who has the authority to bind the Company that the UTM coordinates of the "as constructed" Equipment comply with the requirements of Condition C1 (2).

#### D – CONFIRMATION OF VACANT LOT NOISE RECEPTORS

D1. The locations identified as "VLSR" in the Table entitled "VacantLotLocations" in the document prepared by the Company entitled "

\*GRE10-NoiseAssessmentReport-R1-ResultsAndLocationsTable-20111207.xls\* are specified as Noise Receptors for the purposes of paragraph 2 of subsection 54 (1.1) of O. Reg. 359/09 and subclause 35 (1) (a) (ii) of O. Reg. 359/09.

#### E - ACOUSTIC AUDIT - TRANSFORMER SUBSTATION

E1. The Company shall carry out an Acoustic Audit - Transformer Substation of the transformer substation (166 MVA transformer), and shall submit to the District Manager and the Director an Acoustic Audit Report – Transformer Substation prepared by an Independent Acoustical Consultant no later than six (6) months after the commencement of the operation of the Facility.

#### F - WIND TURBINE ACOUSTIC AUDIT - IMMISSION

- F1. The Company shall carry out an Acoustic Audit Immission of the Sound Levels produced by the operation of the Equipment in accordance with the following:
  - (1) the acoustic audit measurements shall be undertaken in accordance with Part D of the Compliance Protocol for Wind Turbine Noise;
  - (2) the acoustic audit measurements shall be performed by an Independent Acoustical Consultant at three (3) different Points of Reception that have been selected using the following criteria:
    - (a) the Points of Reception should represent the location of the greatest predicted noise impact, i.e., the highest predicted Sound Level; and
    - (b) the Points of Reception should be located in the direction of prevailing winds from the Facility;
  - (3) the acoustic audit measurements shall be performed on two (2) separate occasions within a period of one (1) month that represent the lowest annual ambient Sound Levels, preferably:
    - (a) March and April, and
    - (b) October and November.
- F2. The Company shall submit to the District Manager and the Director an Acoustic Audit Report-Immision, prepared by an Independent Acoustical Consultant, at the following points in time:
  - (1) no later than nine (9) months after the commencement of the operation of the Facility for the first of the two (2) acoustic audit measurements at the three (3) Points of Reception; and
  - (2) no later than fifteen (15) months after the commencement of the operation of the Facility for the second of the two (2) acoustic audit measurements at the three (3) Points of Reception.

#### G - WIND TURBINE ACOUSTIC AUDIT- EMISSION

- G1. The Company shall carry out an Acoustic Audit Emission of the acoustic emissions produced by the operation of the wind turbine generators in accordance with the following:
  - (1) the acoustic emission measurements shall be undertaken in accordance with the IEC Standard 61400-11;
  - (2) the acoustic emission measurements shall be performed by an Independent Acoustical Consultant; and
  - (3) the acoustic emission measurements shall be performed on two (2) of each type of the wind turbine generator used in the Facility. Specifically on two (2) of the wind turbine generators rated at:
    - (a) 2.221 megawatts generating output capacity and
    - (b) 2.126 megawatts generating output capacity.
- G2. The Company shall submit to the District Manager and the Director an Acoustic Audit Report-Emission, prepared in accordance with Section 9 of the IEC Standard 61400-11 by an Independent Acoustical Consultant, no later than six (6) months after the commencement of the operation of the Facility.

#### H - STORMWATER MANAGEMENT

#### **General**

- H1. The Company shall employ best management practices for stormwater management and sediment and erosion control during construction, installation, use, operation, maintenance and retiring of the Facility, as described in the Application including the report entitled Grand Renewable Energy Park Stormwater Management Report, dated February 10, 2011 and signed by Scott Robertson, P. Eng., Associate, Water Resources Project Manager .
- H2. The Company shall design, construct, install, use, operate, maintain and retire stormwater management works that shall cover the transformer substation area and the operation and maintenance building drainage area, for a total area of 59 hectares (ha), in accordance with any plans and specifications set out in this Approval and the Application.
- H3. The stormwater management works shall include the following, all in accordance with the plans and specifications set out in the Application:
  - (1) a Transformer Substation area with an extended detention dry pond;
  - (2) an operation and maintenance building area with a constructed wetland; and

- (3) a vegetated swale / ditch system to divert and control clean stormwater from entering the developed areas within the Transformer Substation and operation and maintenance building areas and to control external flows.
- H4. The Company shall notify the Director prior to making any material changes to the design and specifications described in Condition H3 and the Grand Renewable Energy Park Stormwater Management Report, dated February 10, 2011 and signed by Scott Robertson, P. Eng., Associate, Water Resources Project Manager.

#### **Operation and Maintenance**

- H5. The Company shall ensure that the pond/wetland design minimum liquid retention volume is maintained at all times.
- H6. The Company shall maintain the permanent pool depth to 1.0m within the forebay areas and monitor the accumulation of oil within the forebay or main cell.
- H7. The Company shall inspect the stormwater management works semi-annually, i.e. twice per year, and, if necessary, clean and maintain the works to prevent the excessive build-up of sediments and/or vegetation.
- H8. The Company shall include the following information in the operations and maintenance manual prepared under Condition O and the written records created under Condition P:
  - (1) operating procedures for routine operation of the stormwater management works;
  - (2) the date and results of all inspection, maintenance, and cleaning activities, including an estimate of the quantity of any materials removed; and
  - (3) the date of each spill within the catchment area, including follow-up actions / remedial measures undertaken.

#### **Effluent Visual Operations**

- H9. The Company shall ensure that the effluent from the stormwater management works is essentially free of floating and settle-able solids and does not contain oil or any other substance in amounts sufficient to create a visible film, sheen or foam on the receiving waters.
- H10. The Company shall conduct semi-annual, i.e. twice per year, walking inspections to identify areas of bare soil and/or the formation of erosive gullies, remediative efforts, areas of isolated ponding or sediment build-up.

#### **Monitoring**

- H11. Upon commencement of the operation of the Facility, the Company shall establish and implement a monitoring program for the stormwater management works for a minimum period of five (5) years (with the option to request that the Director reduce the frequency of monitoring after three (3) years of satisfactory performance of the stormwater management works) in accordance with the following:
  - (1) the Company shall take all samples and measurements for the purposes of Condition H10 (2) at a time and in a location characteristic of the quality and quantity of the effluent stream over the time period being monitored;
  - (2) the Company shall collect and analyze the required samples at the sampling points listed in the table below in accordance with the measurement frequency and sample type specified, for each parameter in the table, and create a written record of the monitoring results:

Surface Water Monitoring						
Sample points:						
§ at po	ond/wetland inlets.					
§ at po	ond/wetland effluent discharge points.					
Frequency	Quarterly, i.e. four (4) times per year, at least once for the					
	snowmelt freshet and the remaining within 72hours after a 15mm					
	rainfall event.					
Sample Type	Grab					
Parameters	Total Suspended Solids, Total Phosphorus, Dissolved Oxygen,					
	Oil & Grease, E. Coli, pH and Temperature.					

- (3) the Company's methods and protocols for any sampling, analysis and recording undertaken in accordance with Condition H10 (2) shall conform, in order of precedence, to the methods and protocols specified in the following documents:
  - (a) The Ministry's Procedure F-10-1, "Procedures for Sampling and Analysis Requirements for Municipal and Private Sewage Treatment Works (Liquid Waste Streams Only)", as amended from time to time by more recently published editions.
  - (b) The Ministry's publication "Protocol for the Sampling and Analysis of Industrial/Municipal Wastewater" (January 1999), ISBN 0-7778-1880-9, as amended from time to time by more recently published editions.
  - (c) The publication "Standard Methods for the Examination of Water and Wastewater" (21st edition), as amended from time to time by more recently published editions.
- (4) The Company shall include all written records and information related to, or resulting from, the monitoring activities undertaken in accordance with Condition H10 in the written records created under Condition P.

#### **Annual Reporting**

- H12. By March 31st of each calendar year, the Company shall prepare and submit to the District Manager an annual report for the previous calendar year which summarizes all of the activities undertaken and written records created in accordance with Condition H, including monitoring data collected, data analysis and interpretation of results, and inspection, operations and maintenance activities, as well as recommendations for any preventive, remediative and reactive measures needed to ensure compliance with Condition H and protection of the environment.
- H13. Within six (6) months of the completion of the construction of the Facility, the Company shall provide the District Manager with a stormwater management report that includes a detailed design of the stormwater management works for the collection, transmission, treatment and disposal of stormwater runoff from various catchment areas for the Facility, discharging to existing drainage patterns within the Wardells Creek watershed, and consisting of a vegetated swale / ditch and culvert system. The stormwater management report shall also include an operations manual describing the visual inspections, frequency, and any other activity necessary for the adequate operation of the stormwater management works.

#### I - SEWAGE WORKS OF THE TRANSFORMER SUBSTATION SPILL CONTAINMENT FACILITY

- I1. Prior to the construction of the transformer substation, the Company shall retain an independent Professional Engineer licensed in Ontario, and knowledgeable about electrical transformer substations and their associated sewage works, to prepare a design report on the spill containment facility for the transformer substation that shall contain the following:
  - (1) final design drawings and specifications of the spill containment area and associated sewage works;
  - (2) operation and maintenance procedures for the spill containment facility including an emergency/contingency plan; and
  - (3) a monitoring program, including a groundwater monitoring program if a subsurface disposal system is proposed, which shall contain at a minimum one monitoring well immediately around the spill containment works and one on the property boundary down gradient from the transformer substation.
- I2. The Company shall ensure that the spill containment facility for the transformer substation meets the following requirements:
  - (1) the containment facility shall have an impervious concrete floor and walls sloped toward an outlet, maintaining a freeboard of 0.25 metres terminating approximately 0.30 metres above grade, with an impervious plastic liner or equivalent, and 1.0 metre layer of crushed stoned within;
  - (2) the containment pad shall drain to an oil control device, such as an oil/water separator, a pump-out sump, an oil absorbing material in a canister or a blind sump; and
  - (3) the oil control device shall be equipped with an oil detection system and appropriate sewage appurtenances as necessary (pumpout manhole, submersible pumps, level controllers, floating oil sensors, etc.).

- I3. The Company shall submit the design report for the spill containment facility prepared under Condition No. I1 to the Director and shall not commence the construction of the transformer substation until the Director provides written confirmation verifying that the Director is satisfied with the proposed sewage works.
- I4. The Company shall design, construct and operate the sewage works of the transformer substation spill containment facility such that the concentration of the effluent parameter named in the table below does not exceed the maximum concentration objective shown for that parameter in the effluent, and shall comply with the following requirements:

<b>Effluent Parameters</b>	<b>Maximum Concentration Objective</b>			
Oil and Grease	15mg/L			

- (a) notify the District Manager as soon as reasonably possible of any exceedance of the maximum concentration objective set out in the table above;
- (b) take immediate action to identify the cause of the exceedance; and
- (c) take immediate action to prevent further exceedances.

#### J - WATER TAKING ACTIVITIES

- J1. For foundation dewatering, if the amount of discharge exceeds 50,000 litres per day:
  - (1) the inlet pump head shall be surrounded with clear stone and filter fabric;
  - the discharge must be sampled each day that water is discharged and analyzed for total suspended solids (TSS). In the event that sampling results show that TSS in the discharge water exceeds 25 mg/L, the Company shall implement appropriate measures (settling tank or geosock or similar device) to mitigate these impacts; and,
  - (3) the Company shall regulate the discharge at such a rate that there is no flooding in the receiving water body or dissipate the discharge so that no soil erosion is caused that impacts the receiving water body.
- J2. For stream diversion, if the amount of discharge exceeds 50,000 litres per day and dam and pump technology is used:
  - (1) the Company shall regulate the discharge at such a rate that there is no flooding in the downstream area and no soil erosion or stream channel scouring caused at the point of discharge. The Company shall use a discharge diffuser or other energy dissipation device, if necessary, to mitigate flows which physically alter the stream channel or banks; and,
  - (2) siltation control measures shall be installed at both the taking location upstream of the construction site and (if necessary) the discharge site and shall be sufficient for the volumes pumped. The Company shall take all measures to properly maintain these control devices throughout the construction period.

- J3. For water takings (by tanker) for the purposes of dust suppression, equipment washing, and similar activities:
  - (1) notwithstanding the authorized rate of water taking, this Approval limits the taking of water at any site at the project location for up to 10% of the instantaneous streamflow present on the day or days of taking. The authorized water taking rate may therefore have to be adjusted downward to remain within this 10% maximum;
  - prior to taking water from any site at the project location, the Company shall contact the Long Point Region Conservation Authority to determine if any low water conditions have been declared and are in effect. The Company shall not take water if a Level 2 or Level 3 low water condition has been declared; and,
  - (3) no modification to the existing stream channel by excavation or damming is permitted under this Approval.

#### K - NATURAL HERITAGE PRE- AND POST- CONSTRUCTION MONITORING

#### PRE CONSTRUCTION MONITORING

- K1. The Company shall implement the pre-construction monitoring described in the report included in the Application and entitled Grand Renewable Energy Park Natural Heritage Assessment and Environmental Impact Study, dated October 2011, and prepared by Stantec Consulting Ltd. This shall include:
  - a) Disturbance Monitoring for Woodland Breeding Birds; and
  - b) Disturbance Monitoring for Landbird Migratory Stopover Areas
- K2. If the Company determines that it must deviate from the pre-construction monitoring described in Condition K1, the Company shall contact the Southern Region Renewable Energy Operations Coordinator of the Ministry of Natural Resources and the Director, prior to making any changes to the methodology, and follow any directions provided.

# POST CONSTRUCTION MONITORING, INCLUDING BIRD AND BAT MORTALITY MONITORING

- K3. The Company shall implement the Environmental Effects Monitoring Plan for Wildlife and Wildlife Habitat included as Attachment C to the report included in the Application and entitled Design and Operations Report, dated July 2011, and prepared by Stantec Consulting Ltd. This shall include:
  - a) Disturbance Monitoring for Woodland Breeding Birds;
  - b) Disturbance Monitoring for Landbird Migratory Stopover Areas;
  - c) Visual Monitoring of hydrological conditions in wetlands and significant woodlands; and
  - d) Bird and Bat mortality monitoring.

K4. If the Company determines that it must deviate from the monitoring described in Condition K3, the Company shall contact the Southern Region Renewable Energy Operations Coordinator of the Ministry of Natural Resources and the Director, prior to making any changes to the Environmental Effects Monitoring Plan for Wildlife and Wildlife Habitat, and follow any directions provided.

#### REPORTING AND REVIEW OF RESULTS

- K5. The Company shall contact the Southern Region Renewable Energy Operations Coordinator of the Ministry of Natural Resources and the Director if there are any applicable thresholds as described in the Environmental Effects Monitoring Plan for Wildlife and Wildlife Habitat reached or exceeded as follows:
  - a) 10 bats per turbine per year;
  - b) 18 birds per turbine per year at individual turbines or turbine groups;
  - c) 0.2 raptors per turbine per year (all raptors) across the Facility;
  - d) 0.1 raptors per turbine per year (raptors of provincial conservation concern) across the Facility;
  - e) 10 or more birds at any one turbine during a single monitoring survey; or
  - f) 33 or more birds (including raptors) at multiple turbines during a single monitoring survey.
- K6. The Company shall report mortality levels to the Ministry of Natural Resources for the first three (3) years following the commencement of operation of the Facility, on an annual basis and within three (3) months of the conclusion of the October mortality monitoring, with the exception of the following (threshold references are to the actual number of species observed in the field, prior to correction factors):
  - a) where a single mortality monitoring event exceeds 10 or more birds at any one turbine or 33 or more birds (including raptors) at multiple turbines the mortality event shall be reported to the Ministry of Natural Resources within 48 hours of observation;
  - b) any and all mortality of species at risk (including a species listed on the Species at Risk in Ontario list as Extirpated, Endangered or Threatened under the provincial *Endangered Species Act*, 2007) that occurs shall be reported to the Ministry of Natural Resources within 48 hours of observation;
  - c) where operational mitigation is applied for bats, an additional three (3) years of effectiveness monitoring is required and the Company shall report mortality levels to the Ministry of Natural Resources for three (3) years following the commencement of such operational mitigation on an annual basis and within three (3) months of the conclusion of the October mortality monitoring;
  - d) where operational mitigation is applied for birds, for turbines located outside 120 metres of bird significant wildlife habitat, two (2) years of subsequent mortality and effects monitoring is required for those turbines where a significant annual bird or raptor mortality threshold is exceeded and the Company shall report mortality levels to the Ministry of Natural Resources for two (2) years following the observance of any such exceedance on an annual basis and within three (3) months of the conclusion of the October mortality monitoring.

f) where operational mitigation is applied for birds, for turbines located within 120 metres of bird significant wildlife habitat, three (3) years of effectiveness monitoring for those turbines where the exceedances were observed is required. The Company shall report effectiveness monitoring results to the Ministry of Natural Resources for up to three (3) years following the observance of any such exceedance, on an annual basis and within three (3) months of the conclusion of the effectiveness monitoring.

#### **OPERATIONAL MITIGATION**

- K7. Operational mitigation measures shall be consistent with those identified in the "Bats and Bat Habitats: Guidelines for Wind Power Projects" dated March 2010, and available from the Ministry of Natural Resources, and shall include some or all of the following mitigation measures:
  - a) increasing cut-in speed to 5.5 m/s or feathering wind turbine blades when wind speeds are below 5.5 m/s between sunset and sunrise, from July 15 to September 30 at all turbines; or
  - b) other mitigation measures described in an amended version of the "Bats and Bat Habitats: Guidelines for Wind Power Projects"; or
  - c) where an agreement between the Company and the Ministry of Natural Resources can be reached, an alternate operation mitigation plan agreed to between the Company and the Ministry of Natural Resources.
- K8. Where annual mortality levels exceed 18 birds/turbine/year at individual turbines or turbine groups or 0.2 raptors or vultures/turbine/year across the Facility or 0.1 raptors of provincial conservation concern/turbine/year across the Facility, the Company shall contact the Ministry of Natural Resources to initiate an appropriate response plan that shall include some or all of the following mitigation measures:
  - a) increased reporting frequency to identify potential threshold exceedance;
  - b) additional behavioural studies to determine factors affecting mortality rates;
  - c) periodic shut-down of select turbines;
  - d) blade feathering at specific times of year; or
  - e) an alternate plan agreed to between the Company and the Ministry of Natural Resources.

#### L - TRAFFIC MANAGEMENT PLANNING

- L1. Within three (3) months of receiving this Approval, the Company shall prepare a Traffic Management Plan and provide it to the Municipality of Haldimand County.
- L2. Within three (3) months of having provided the Traffic Management Plan to the Municipality of Haldimand County, the Company shall make reasonable efforts to enter into a Road Users Agreement with the Municipality of Haldimand County.

L3. If a Road Users Agreement has not been signed with the Municipality of Haldimand County within three (3) months of having provided the Traffic Management Plan to the Municipality of Hadlimand County, the Company shall provide a written explanation to the Director as to why this has not occurred.

#### M - ARCHAEOLOGICAL RESOURCES

- M1. The Company shall implement all of the recommendations, if any, for further archaeological fieldwork and for the protection of archaeological sites found in the consultant archaeologist's report included in the Application, and which the Company submitted to the Ministry of Tourism, Culture and Sport in order to comply with clause 22 (2) (b) of O. Reg. 359/09.
- M2. Should any previously undocumented archaeological resources be discovered, the Company shall:
  - (1) cease all alteration of the area in which the resources were discovered immediately;
  - engage a consultant archaeologist to carry out the archaeological fieldwork necessary to further assess the area and to either protect and avoid or excavate any sites in the area in accordance with the *Ontario Heritage Act*, the regulations under that act and the Ministry of Tourism, Culture and Sport's *Standards and Guidelines for Consultant Archaeologists*; and
  - (3) notify the Director as soon as reasonably possible.

#### N - COMMUNITY LIAISON COMMITTEE

- N1. Within three (3) months of receiving this Approval, the Company shall make reasonable efforts to establish a Community Liaison Committee. The Community Liaison Committee shall be a forum to exchange ideas and share concerns with interested residents and members of the public. The Community Liaison Committee shall be established by:
  - (1) publishing a notice in a newspaper with general circulation in each local municipality in which the project location is situated; and
  - (2) posting a notice on the Company's publicly accessible website, if the Company has a website;
    - to notify members of the public about the proposal for a Community Liaison Committee and invite residents living within a one (1) kilometer radius of the Facility that may have an interest in the Facility to participate on the Community Liaison Committee.
- N2. The Company may invite other members of stakeholders to participate in the Community Liaison Committee, including, but not limited to, local municipalities, local conservation authorities, Aboriginal communities, federal or provincial agencies, and local community groups.
- N3. The Community Liaison Committee shall consist of at least one Company representative who shall attend all meetings.
- N4. The purpose of the Community Liaison Committee shall be to:

- (1) act as a liaison facilitating two way communications between the Company and members of the public with respect to issues relating to the construction, installation, use, operation, maintenance and retirement of the Facility;
- (2) provide a forum for the Company to provide regular updates on, and to discuss issues or concerns relating to, the construction, installation, use, operation, maintenance and retirement of the Facility with members of the public; and
- (3) ensure that any issues or concerns resulting from the construction, installation, use, operation, maintenance and retirement of the Facility are discussed and communicated to the Company.
- N5. The Community Liaison Committee shall be deemed to be established on the day the Director is provided with written notice from the Company that representative Community Liaison Committee members have been chosen and a date for a first Community Liaison Committee meeting has been set.
- N6. If a Community Liaison Committee has not been established within three (3) months of receiving this Approval, the Company shall provide a written explanation to the Director as to why this has not occurred.
- N7. The Company shall ensure that the Community Liaison Committee operates for a minimum period of two (2) years from the day it is established. During this two (2) year period, the Company shall ensure that the Community Liaison Committee meets a minimum of two (2) times per year. At the end of this two (2) year period, the Company shall contact the Director to discuss the continued operation of the Community Liaison Committee.
- N8. The Company shall ensure that all Community Liaison Committee meetings are open to the general public.
- N9. The Company shall provide administrative support for the Community Liaison Committee including, at a minimum:
  - (1) providing a meeting space for Community Liaison Committee meetings;
  - (2) providing access to resources, such as a photocopier, stationery, and office supplies, so that the Community Liaison Committee can:
    - (a) prepare and distribute meeting notices;
    - (b) record and distribute minutes of each meeting; and
    - (c) prepare reports about the Community Liaison Committee's activities.
- N10. The Company shall submit any reports of the Community Liaison Committee to the Director and post it on the Company's publicly accessible website, if the Company has a website.

#### O - OPERATION AND MAINTENANCE

- O1. Prior to the commencement of the operation of the Facility, the Company shall prepare a written manual for use by Company staff outlining the operating procedures and a maintenance program for the Equipment that includes as a minimum the following:
  - (1) routine operating and maintenance procedures in accordance with good engineering practices and as recommended by the Equipment suppliers;
  - (2) emergency procedures;
  - (3) procedures for any record keeping activities relating to operation and maintenance of the Equipment; and
  - (4) all appropriate measures to minimize noise emissions from the Equipment.
- O2. The Company shall;
  - (1) update, as required, the manual described in Condition O1; and
  - (2) make the manual described in Condition O1 available for review by the Ministry upon request.
- O3. The Company shall ensure that the Facility is operated and maintained in accordance with the Approval and the manual described in Condition O1.

#### P - RECORD CREATION AND RETENTION

- P1. The Company shall create written records consisting of the following:
  - (1) an operations log summarizing the operation and maintenance activities of the Facility;
  - (2) within the operations log, a summary of routine and Ministry inspections of the Facility; and
  - (3) a record of any complaint alleging an Adverse Effect caused by the construction, installation, use, operation, maintenance or retirement of the Facility.
- P2. A record described under Condition P1 (3) shall include:
  - (1) a description of the complaint that includes as a minimum the following:
    - (a) the date and time the complaint was made;
    - (b) the name, address and contact information of the person who submitted the complaint;
  - (2) a description of each incident to which the complaint relates that includes as a minimum the following:
  - (a) the date and time of each incident;
    - (b) the duration of each incident;
    - (c) the wind speed and wind direction at the time of each incident;
    - (d) the ID of the Equipment involved in each incident and its output at the time of each incident;
    - (e) the location of the person who submitted the complaint at the time of each incident; and
  - (3) a description of the measures taken to address the cause of each incident to which the complaint relates and to prevent a similar occurrence in the future.
- P3. The Company shall retain, for a minimum of five (5) years from the date of their creation, all records described in Condition P1, and make these records available for review by the Ministry upon request.

#### O - NOTIFICATION OF COMPLAINTS

- Q1. The Company shall notify the District Manager of each complaint within two (2) business days of the receipt of the complaint.
- Q2. The Company shall provide the District Manager with the written records created under Condition P2 within eight (8) business days of the receipt of the complaint.

#### **R - CHANGE OF OWNERSHIP**

- R1. The Company shall notify the Director in writing, and forward a copy of the notification to the District Manager, within thirty (30) days of the occurrence of any of the following changes:
  - (1) the ownership of the Facility;
  - (2) the operator of the Facility;
  - (3) the address of the Company;
  - (4) the partners, where the Company is or at any time becomes a partnership and a copy of the most recent declaration filed under the *Business Names Act*, R.S.O. 1990, c.B.17, as amended, shall be included in the notification; and
  - (5) the name of the corporation where the Company is or at any time becomes a corporation, other than a municipal corporation, and a copy of the most current information filed under the *Corporations Information Act*, R.S.O. 1990, c. C.39, as amended, shall be included in the notification.

#### **S - ABORIGINAL CONSULTATION**

- S1. The Company shall maintain communications with interested Aboriginal communities during the construction, installation, operation, use, and retiring of the facility.
- S2. The Company shall fulfil all commitments made to Aboriginal communities during the construction, installation, and operation of the Facility, including but not limited to, providing the following to interested Aboriginal communities that have requested or may request it:
  - (1) updated non-confidential project information, including the results of monitoring activities undertaken and copies of additional archaeological assessment reports that may be prepared; and;
  - updates on key steps in the construction, installation, and operation phases of the Facility, including notice of the commencement of construction activities at the project location.
- S3. If an interested Aboriginal community requests a meeting to obtain non-confidential information relating to the construction, installation, and operation of the Facility, the Company shall use reasonable efforts to arrange and participate in such a meeting.
- S4. If any archaeological resources of Aboriginal origin are found during the construction of the Facility, the Company shall:

- (1) notify the Six Nations of the Grand River and the Mississaugas of the New Credit and any other Aboriginal community considered likely to be interested or which has expressed an interest in such finds; and,
- (2) arrange and participate in any meeting requested by an interested Aboriginal community to discuss the archaeological find(s) and/or the use of Aboriginal archaeological liaisons.
- S5. The Company shall maintain records of communication with interested Aboriginal communities and make these records available for review by the Ministry upon request.

#### **SCHEDULE A**

#### **Facility Description**

The Facility shall consist of the construction, installation, operation, use and retiring of the following:

- (a) sixty five (65) SWT-2.221-101 wind turbine generators each rated at 2.221 megawatts generating output capacity
- (b) two (2) SWT-2.126-101 wind turbine generators each rated at 2.126 megawatts generating output capacity

with a total name plate capacity of 148.6 megawatts, designated as source ID Nos T1 – T30 and T33 –T69, each with a hub height of 99.5 metres above grade, and sited at the locations shown in Schedule B; and

(c) associated ancillary equipment, systems and technologies including one 166 megawatt transformer substation, on-site access roads, underground cabling and overhead distribution lines,

all in accordance with the Application.

#### **SCHEDULE B**

#### **Coordinates of the Equipment and Noise Specifications**

Coordinates of the Equipment are listed below in UTM, Z17-NAD83 projection:

	Source ID	Sound Power Level (dBA)	Easting (m)	Northing (m)	Source Description
1	T1	105	607,287	4,746,785	SWT-2.221-101
2	T2	105	605,035	4,746,639	SWT-2.221-101
3	T3	105	606,942	4,746,830	SWT-2.221-101
4	T4	105	604,861	4,746,993	SWT-2.221-101
5	T5	105	602,757	4,745,791	SWT-2.221-101
6	T6	105	606,513	4,747,319	SWT-2.221-101
7	T7	105	608,495	4,747,949	SWT-2.221-101
8	T8	105	607,477	4,747,512	SWT-2.221-101
9	Т9	105	600,290	4,745,005	SWT-2.221-101
10	T10	104	593,994	4,748,442	SWT-2.126-101
11	T11	105	603,472	4,748,075	SWT-2.221-101
12	T12	105	601,479	4,747,111	SWT-2.221-101
13	T13	105	594,663	4,751,618	SWT-2.221-101
14	T14	105	603,952	4,750,047	SWT-2.221-101
15	T15	105	608,232	4,749,798	SWT-2.221-101
16	T16	105	594,352	4,749,960	SWT-2.221-101
17	T17	105	598,648	4,747,922	SWT-2.221-101
18	T18	105	587,941	4,753,452	SWT-2.221-101
19	T19	105	606,366	4,749,368	SWT-2.221-101
20	T20	105	592,573	4,749,463	SWT-2.221-101
21	T21	105	602,692	4,746,290	SWT-2.221-101
22	T22	105	601,756	4,751,401	SWT-2.221-101
23	T23	105	591,178	4,751,634	SWT-2.221-101
24	T24	105	592,280	4,749,799	SWT-2.221-101
25	T25	105	599,133	4,750,265	SWT-2.221-101

#### **SCHEDULE B**

continued

	Source ID	Sound Power Level (dBA)	Easting (m)	Northing (m)	Source Description
26	T26	105	607,589	4,749,481	SWT-2.221-101
27	T27	105	598,999	4,748,313	SWT-2.221-101
28	T28	105	591,339	4,752,273	SWT-2.221-101
29	T29	105	599,967	4,750,467	SWT-2.221-101
30	T30	105	606,959	4,749,603	SWT-2.221-101
31	T33	105	589,588	4,755,581	SWT-2.221-101
32	T34	105	589,790	4,753,921	SWT-2.221-101
33	T35	105	602,880	4,749,652	SWT-2.221-101
34	T36	105	590,002	4,755,767	SWT-2.221-101
35	T37	105	602,481	4,749,039	SWT-2.221-101
36	T38	105	602,608	4,749,469	SWT-2.221-101
37	T39	105	603,875	4,749,401	SWT-2.221-101
38	T40	105	604,239	4,749,614	SWT-2.221-101
39	T41	105	590,395	4,753,879	SWT-2.221-101
40	T42	105	600,381	4,750,377	SWT-2.221-101
41	T43	105	588,466	4,752,970	SWT-2.221-101
42	T44	105	599,489	4,748,483	SWT-2.221-101
43	T45	105	590,085	4,753,880	SWT-2.221-101
44	T46	105	590,582	4,751,836	SWT-2.221-101
45	T47	105	604,740	4,750,499	SWT-2.221-101
46	T48	105	594,126	4,750,504	SWT-2.221-101
47	T49	105	608,750	4,749,784	SWT-2.221-101
48	T50	105	609,091	4,749,844	SWT-2.221-101
49	T51	105	601,762	4,745,085	SWT-2.221-101
50	T52	105	599,708	4,748,016	SWT-2.221-101
51	T53	105	600,301	4,748,359	SWT-2.221-101
52	T54	105	607,370	4,746,400	SWT-2.221-101
53	T55	105	600,136	4,746,677	SWT-2.221-101
54	T56	105	598,675	4,750,335	SWT-2.221-101
55	T57	105	606,650	4,751,283	SWT-2.221-101
56	T58	104	589,733	4,750,362	SWT-2.126-101

#### **SCHEDULE B**

continued

	Source ID	Sound Power Level (dBA)	Easting (m)	Northing (m)	Source Description
57	T59	105	614,355	4,748,118	SWT-2.221-101
58	T60	105	614,974	4,747,470	SWT-2.221-101
59	T61	105	614,326	4,747,732	SWT-2.221-101
60	T62	105	614,680	4,748,176	SWT-2.221-101
61	T63	105	614,750	4,747,811	SWT-2.221-101
62	T64	105	614,705	4,747,338	SWT-2.221-101
63	T65	105	611,480	4,747,403	SWT-2.221-101
64	T66	105	611,758	4,747,387	SWT-2.221-101
65	T67	105	612,236	4,747,633	SWT-2.221-101
66	T68	105	602,131	4,748,909	SWT-2.221-101
67	T69	105	606,923	4,747,368	SWT-2.221-101
68	TR300	85	596,520	4,749,103	Transformer: 166 MVA

*The reasons for the imposition of these terms and conditions are as follows:* 

- 1. Conditions A1 and A2 are included to ensure that the Facility is constructed, installed, used, operated, maintained and retired in the manner in which it was described for review and upon which Approval was granted. These conditions are also included to emphasize the precedence of conditions in the Approval and the practice that the Approval is based on the most current document, if several conflicting documents are submitted for review;
- 2. Conditions A3 and A4 are included to require the Company to provide information to the public and the local municipality.
- 3. Conditions A5, A6 and A7 are included to ensure that final retirement of the Facility is completed in an aesthetically pleasing manner, in accordance with Ministry standards, and to ensure long-term protection of the health and safety of the public and the environment.
- 4. Condition A8 is included to require the Company to inform the Ministry of the commencement of activities related to the construction, installation and operation of the Facility.
- 5. Condition B is intended to limit the time period of the Approval.
- 6. Condition C1 is included to provide the minimum performance requirement considered necessary to prevent an Adverse Effect resulting from the operation of the Equipment and to ensure that the noise emissions from the Equipment will be in compliance with applicable limits set in the Noise Guidelines for Wind Farms.
- 7. Conditions C2, C3 and D are included to ensure that the Equipment is constructed, installed, used, operated, maintained and retired in a way that meets the regulatory setback prohibitions set out in O. Reg. 359/09.
- 8. Conditions E, F and G are included to require the Company to gather accurate information so that the environmental noise impact and subsequent compliance with the Act, O. Reg. 359/09, the Noise Guidelines for Wind Farms and this Approval can be verified.
- 9. Conditions H, I, J, K and L are included to ensure that the Facility is constructed, installed, used, operated, maintained and retired in a way that does not result in an Adverse Effect or hazard to the natural environment or any persons.
- 10. Condition M is included to protect archaeological resources that may be found at the project location.
- 11. Condition N is included to ensure continued communication between the Company and the local residents.

- 12. Condition O is included to emphasize that the Equipment must be maintained and operated according to a procedure that will result in compliance with the Act, O. Reg. 359/09 and this Approval.
- 13. Condition P is included to require the Company to keep records and provide information to the Ministry so that compliance with the Act, O. Reg. 359/09 and this Approval can be verified.
- 14. Condition Q is included to ensure that any complaints regarding the construction, installation, use, operation, maintenance or retirement of the Facility are responded to in a timely and efficient manner.
- 15. Condition R is included to ensure that the Facility is operated under the corporate name which appears on the application form submitted for this Approval and to ensure that the Director is informed of any changes.
- 16. Condition S is included to require the Company to ensure continued communication between the Company and Aboriginal communities.

#### NOTICE REGARDING HEARINGS

In accordance with Section 139 of the <u>Environmental Protection Act</u>, within 15 days after the service of this notice, you may by further written notice served upon the Director, the Environmental Review Tribunal and the Environmental Commissioner, require a hearing by the Tribunal.

In accordance with Section 47 of the <u>Environmental Bill of Rights, 1993</u>, the Environmental Commissioner will place notice of your request for a hearing on the Environmental Registry.

Section 142 of the <u>Environmental Protection Act</u> provides that the notice requiring the hearing shall state:

- 1. The portions of the renewable energy approval or each term or condition in the renewable energy approval in respect of which the hearing is required, and;
- 2. The grounds on which you intend to rely at the hearing in relation to each portion appealed.

The signed and dated notice requiring the hearing should also include:

- 3. The name of the appellant;
- 4. The address of the appellant;
- 5. The renewable energy approval number;
- 6. The date of the renewable energy approval;
- 7. The name of the Director;
- 8. The municipality or municipalities within which the project is to be engaged in;

This notice must be served upon:

The Secretary\*
Environmental Review Tribunal
655 Bay Street, 15th Floor
Toronto, Ontario

M5G 1E5

Suite 605
AND Toronto, Ontario
M5S 2B1

The Director Section 47.5,

AND

Section 47.5, Environmental Protection Act

Ministry of the Environment 2 St. Clair Avenue West, Floor 12A

Toronto, Ontario M4V 1L5

\* Further information on the Environmental Review Tribunal's requirements for an appeal can be obtained directly from the Tribunal at: Tel: (416) 314-4600, Fax: (416) 314-4506 or www.ert.gov.on.ca

The Environmental Commissioner

1075 Bay Street, 6th Floor

Under Section 142.1 of the <u>Environmental Protection Act</u>, residents of Ontario may require a hearing by the Environmental Review Tribunal within 15 days after the day on which notice of this decision is published in the Environmental Registry. By accessing the Environmental Registry at www.ebr.gov.on.ca, you can determine when this period ends.

Approval for the above noted renewable energy project is issued to you under Section 47.5 of the <u>Environmental Protection Act</u> subject to the terms and conditions outlined above.

DATED AT TORONTO this 15th day of June, 2012

Vic Schroter, P.Eng.

Director

Section 47.5, Environmental Protection Act

VS/

c: District Manager, MOE Hamilton - District Mark Kozak, Stantec Consulting Ltd.

# **Appendix B Project Location and Project Change Figures**

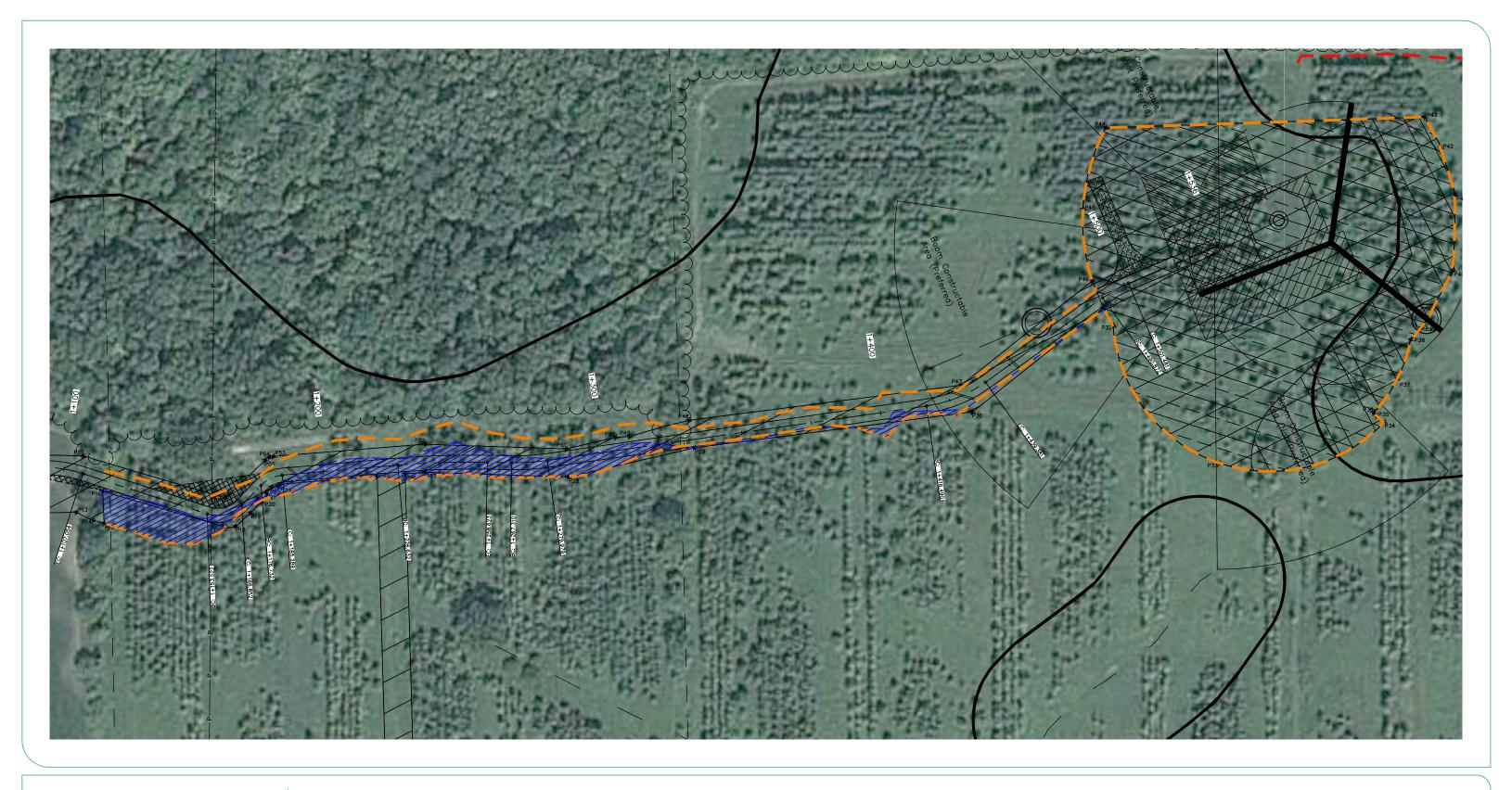




#### **GRAND RENEWABLE WIND LP**



PROJECT: 141209 STATUS: DRAFT DATE: 11/19/2014



GRAND RENEWABLE WIND

TURBINE 53/ACCESS ROAD 19 FIGURE 2

LIMIT OF AREA CLEARED (AREA = 17,650 sq.m. or 1.77 ha)

AREA GREATER THAN 7m ROAD WIDTH

File Location:
g:\cac\138413\05-environmental\03-figures\138413-05-access road verification
2.dwg
September, 11, 2014 3:27 PM

MAP/DRAWING INFORMATION

CREATED BY: GCC CHECKED BY: JP DESIGNED BY: JP





PROJECT: 13 8413

STATUS: DRAFT DATE: 09/11/14

# **Appendix C** *Agency Correspondence*



#### Ministry of the Environment and Climate Change

Ministère de l'Environnement et de l'Action en matière de changement climatique Ontario

Environmental Approvals Branch Direction des autorisations environnementales

2 St. Clair Avenue West

2, avenue St. Clair Ouest

Floor 12A

Étage 12A

Toronto ON M4V 1L5 Tel.: 416 314-8001 Fax: 416 314-8452 Toronto ON M4V 1L5 Tél: 416 314-8001 Téléc.: 416 314-8452

October 21, 2014

Ms. Jennifer Petruniak Dillon Consulting Ltd. ipetruniak@dillon.ca

#### Dear Ms. Petruniak:

Thank you for your letter of September 12, 2014, outlining minor modifications to the access road on the Grand Renewable Wind Project site. Based on the information you have provided, we have determined that the project modifications are consistent with the definition of a "technical change" as per Chapter 10 of the Technical Guide to Renewable Energy Approvals, and thus warrants an amendment, and updates to key documents integral to renewable energy approval #0300-8UQPKR. The ministry acknowledges that you have provided supporting documentation from the Ministry of Natural Resources and Forestry, as well as the Ministry of Tourism, Culture and Sport, and that both ministries are satisfied that your project modifications will not result in additional impacts from a natural and cultural heritage perspectives, and that no additional work is required on these matters.

In order to ensure continued compliance with O. Reg 359/09, please submit an application for an amendment at your earliest convenience. Should you have questions about the amendment process and supporting information requirements, please contact Ramona Afante, Project Evaluator, at 416-325-3306, <a href="mailto:ramona.afante@ontario.ca">ramona.afante@ontario.ca</a>, and for compliance related matters, Geofferey Knapper, Manager, Hamilton District Office at 905-521-7680, <a href="mailto:geoffrey.knapper@ontario.ca">geoffrey.knapper@ontario.ca</a>

Yours sincerely,

Agatha/Garcia-Wright

Director

Environmental Approvals Branch

cc: Vic Schroter, Supervisor, Team 5, MOECC EAB

Geoffrey Knapper, Manager, Hamilton District Office, MOECC

Ramona Afante, Project Evaluator, MOECC EAB

Zeljko Romic, Senior Program Support Coordinator, MOE EAASIB Beatrice Ashby, Senior Manager, Samsung Renewable Energy Inc.



# **NHA Amendment Report**

**Grand Renewable Wind Project** 

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### Introduction

The Grand Renewable Wind Project is located within the County of Haldimand and 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. **Figure 1** (see **Appendix A** for figures) shows the overall study area for the Wind Project Location.

On June 15, 2012, Grand Renewable Wind LP/Grand Renewable Wind GP Inc. was issued a Renewable Energy Approval (REA) to develop and operate a 148.6-megawatt (MW) project to be known as the Grand Renewable Wind Project (REA Number 0300-8UQPKR; see **Appendix B**). This project, together with the 100.0 MW solar project known as the Grand Renewable Solar Project, comprise the Grand Renewable Energy Park (GREP). The solar and wind projects share the transformer substation, an Operations and Maintenance building and the transmission line. For the purposes of the REA, the GREP was divided into the Wind Project location, the Solar Project Location and the Transmission Project Location. The Grand Renewable Solar Project has been issued a separate REA.

The Natural Heritage Assessment, and the subsequent REA application for the GREP, was submitted to the MOECC in October 2011 in accordance with the requirements of *Ontario Regulation 359/09*. Although the REA documents submitted as part of the application cover requirements for all aspects of the GREP, the REA issued from the Ministry of the Environment and Climate Change, to which this technical change amendment applies, is based on the wind portion of the project only and does not affect the solar project or the jointly owned portions of both projects. None of the content of this NHA Amendment Report is intended to include information on the solar project or the jointly owned portions related to the project substation, Operations and Maintenance building or transmission line. The portions of the jointly owned project components applicable to the Grand Renewable Wind Project have been constructed as outlined in the original REA application.

As part of the REA technical change amendment being submitted to the Ministry of the Environment and Climate Change (MOECC) for review and approval, the Ministry of Natural Resources and Forestry (MNRF) is consulted to review and determine if a proposed amendment will impact the original NHA. The purpose of this NHA Amendment Report is to overview a proposed technical change amendment related to the access road for Turbine 53 in the context of the Natural Heritage Assessment confirmed by the Ministry of Natural Resources and Forestry on June 30, 2011 (see **Appendix C**). Reconfirmation of the proposed amendment from the MNRF is being sought to include in the REA Modifications Document being submitted to the MOECC.



# **Proponent Contact Information**

Should there be any questions about these amendments or the project, please contact:

Full Name of Company: <u>Grand Renewable Wind LP</u>

Address: 2050 Derry Road West, 2nd Floor, Mississauga, ON L5N 0B9

**Telephone:** 905-501-5663

Primary Contact: Beatrice Ashby

Email: b.ashby@samsung.com



#### 3.0

3.1

## **Overview of the Technical Change Amendment**

The basis for this technical change amendment is to provide safe passage of construction and delivery vehicles on the portion of access road 19 associated with Turbine 53. Following detailed engineering for access road 19 to Turbine 53, it was determined that the proposed alignment of that portion of the access road would not allow for enough clearance for delivery vehicles to safely navigate through the proposed alignment. Based on this, consultation with the MOECC occurred on April 16, 2014 to notify them of the required realignment. A memorandum of relevant details and an outline of due diligence agency consultation was submitted on September 12, 2014. On October 21, 2014 the MOECC made the determination that the realignment of a portion of access road 19 was consistent with the definition of a technical change as per Chapter 10 of the Technical Guide to Renewable Energy Approvals (MOECC 2013) and a technical change amendment to the REA would be required. This correspondence is included in **Appendix D**.

#### Overview of the NHA Amendment Report

The REA Modifications Document being submitted to the MOECC in support of the technical change amendment focuses on the change in the alignment of the portion of access road 19 associated with Turbine 53 to allow for the passage of delivery vehicles. The MNRF has already provided sign off on the change to the alignment of the access road and subsequent slight increase in woodland removal (from 1.74 ha to 1.77 ha) on April 23, 2014. This correspondence is included in **Appendix E**.

This NHA Amendment Report focuses on changes to the original planting location for the offset of the impacts of the removal of woodland required to construct the access road to Turbine 53. Where this planting location is discussed in the original NHA submission, the content of this NHA Amendment Report serves to amend that information to reflect the current conditions. For information purposes, the realignment of the access road for Turbine 53 is shown in **Figure 2** (see **Appendix A**).

This amendment to the NHA is required as the original woodland compensation planting location is no longer available. The original woodland compensation planting was intended to occur within the rows of the plantation to the south of Natural Feature 42 and Turbine 53 (see **Appendix F** for an overview of the vegetation communities (Ecological Land Classification) and natural features in this area from the original NHA submission). Before the Proponent could enter into a dialogue or agreement with the landowner to undertake compensation plantings in this location, the landowner decided to clear the plantation vegetation.

The remainder of this NHA Amendment Report focuses on where amendments to the original Natural Heritage Assessment are required to reflect current conditions and to amend the original commitment related to woodland compensation. This NHA Amendment Report overviews each component of the Natural Heritage Assessment required under Ontario Regulation 359/09 and includes a determination if the proposed amendment alters the original June 24, 2011 NHA submission. Where the proposed amendment alters the original June 24, 2011 NHA submission, the revised text is included.

To review the preliminary design and original REA submission made to the MOECC, including the full Natural Heritage Assessment for this project, please visit: http://www.samsungrenewableenergy.ca/haldimand.



# **Amendments to the Original NHA Submission**

Based on the original NHA submission to the MNRF that was approved on June 30<sup>th</sup>, 2011, **Table 1** outlines where in the original NHA submission modifications are required to reflect the required amendment. The report(s) and section(s) requiring modification are listed where the proposed change as outlined in this Modification Document would replace the text or figure in the original report.

TABLE 1: MODIFICATIONS TO THE NATURAL HERITAGE ASSESSMENT AND ENVIRONMENTAL IMPACT STUDY (GRAND RENEWABLE ENERGY PARK, OCTOBER 2011)

Report Section	Text To Be Modified	Overview of Modification		
1.0 Overview	The proposed amendment does not require any text to be modified.	Not applicable.		
2.0 Renewable Energy Approval Requirements  The proposed amendment does not require any text to be modified.		Not applicable.		
3.0 Records Review	The proposed amendment does not require any text to be modified. The requirements of Ontario Regulation 359/09 have been met for the Grand Renewable Wind Project	Not applicable.		
4.0 Site Investigation	The proposed amendment does not require any text to be modified. The requirements of Ontario Regulation 359/09 have been met for the Grand Renewable Wind Project	Not applicable.		
5.0 Evaluation of Significance	The proposed amendment does not require any text to be modified. The requirements of Ontario Regulation 359/09 have been met for the Grand Renewable Wind Project	Not applicable.		
6.0 Environmental Impact Study 6.1 Environmental Impact Study - Wind	Section 6.1 includes subsections 6.1.1 to 6.1.49. Of these the following require modification:  • 6.1.19 Natural Feature 42  • Section 6.1.19.2 (page	To correct inconsistencies in the NHA report related to the amount of plantation woodland area to be removed, and to update the commitment for woodland compensation, the following amended text is proposed for each area of text referenced as requiring modification.  Changed text has been underlined.		



Report Section	Text To Be Modified	Overview of Modification
	6.60).	6.1.19 Natural Feature 42
	"The construction of the project components, including the	• Section 6.1.19.2 (page 6.60).
	clearance of an area for construction, rotor assembly and laydown will result in the loss of 1.72 ha"	"The construction of the project components, including the clearance of an area for construction, rotor assembly and laydown will result in the loss of 1.77 ha"
	• Section 6.1.19.3 (page	• Section 6.1.19.3 (page 6.63).
	6.63).  "Removal of 1.74 ha of plantation habitat through the construction of Turbine 53 and	"Removal of 1.77 ha of plantation habitat through the construction of Turbine 53 and its associated access road will not adversely impacthese species"
	its associated access road will not adversely impact these	• Section 6.1.19.3 (page 6.64).
	<ul> <li>Section 6.1.19.3 (page 6.64).</li> </ul>	"Additional tree planting to offset the impacts associated with the removal of 1.77 ha of existing cultural plantation will occur within an open field area to the south of Turbine 9."
	"Additional tree planting to offset the impacts associated with the removal of 1.74 ha of existing cultural plantation will occur within the open areas of the plantation."	Note: The revised location for the additional tree planting is outlined in <b>Figure 3</b> of <b>Appendix A</b> o this NHA Amendment Report.
6.0 Environmental Impact Study		
6.2 Environmental Impact Study – Solar	The ground and decorated the second	
6.3 Environmental Impact Study – Transmission Line	The proposed amendment does not require any text to be modified. The requirements of Ontario Regulation 359/09 have been met for the Grand	Not applicable
6.4 Post- Construction Monitoring	Renewable Wind Project.	
6.5 Summary of Impacts and Mitigation		
7.0 Conclusions	The proposed amendment does not require any text to be	Not applicable.



Report Section Text To Be Modified		Overview of Modification
	modified.	
8.0 References Cited	The proposed amendment does not require any text to be modified.	Not applicable.
Appendix A: Figures	Figure 6.8: ELC Vegetation Communities – W8	Figure 6.8. The area labeled as CUP3-12*A to the south of Turbine 53 and its associated access road (outside of the Wind Project Location) was removed by the landowner. In 2014 the land was observed by Dillon Consulting to be cleared, grubbed and is expected to be used for agricultural farming. This area no longer meets the commitment outlined in Section 6.1.19.3 for tree compensation planting.
Appendix B: Tables	Table 6.1 (Page 12 of 25). Row for Natural Feature 42 related to Habitat for Declining Species. Under Mitigation Measures: "Plant additional trees throughout the plantation to offset construction loss."	Revise text indicated to read:  "Plant additional trees in open field area to the south of Turbine 9."
Appendices C to L, inclusive	The proposed amendment does not require any text to be modified.	Not applicable.

#### 4.1 Supporting Statements for Realignment of Access Road to Turbine 53

As outlined in Section 3.1 of this NHA Amendment Report, the realignment of the access road associated with Turbine 53 was determined to not require re-confirmation by the MNRF on April 23, 2014 (see **Appendix E**). For clarity and completeness, we have included supporting statements for this revised alignment of the access road to Turbine 53 as part of the Wind Project Location.



#### Records Review

The 2011 Natural Heritage Assessment included information searched through a Records Review which extended 1 km beyond the previously identified project location (see study area delineation in **Figure 1** of **Appendix A**). The new alignment of Access Road 19 falls within the previous searched area and therefore no changes are required as a result of this proposed amendment and Ontario Regulation 359/09 has been met.

#### Site Investigation

No previously unstudied area of land is within the revised Wind Project Location or applicable adjacent lands. The site investigation work done in support of the NHA submitted to the MNRF on June 24, 2011 continues to be sufficient for the purposes of this amendment. Based on this, there are no changes to the Site Investigation submitted to the MNRF and confirmed on June 30, 2011.

#### **Evaluation of Significance**

This change in alignment of the access road nor the newly proposed planting area, do not influence the previous Evaluation of Significance undertaken for the natural features. The location and nature of previously evaluated significant natural features do not change as a result of this proposed amendment. Based on this, there are no changes to the Evaluation of Significance submitted to the MNRF and confirmed on June 30, 2011.

#### Environmental Impact Study

5.0

There are no additional potential environmental effects as a result of the proposed technical change amendment that were not previously anticipated in original Natural Heritage Assessment Reports and overall mitigation measures proposed to reduce or eliminate potential negative effects to the natural environments are documented in the Natural Heritage Assessment Reports provided with the original application.

# **Supporting Rationale for the Tree Planting Location**

As per the condition in the Natural Heritage Assessment and Environmental Impact Study Report (see Section 6.1.19.3), compensation for removal of the woodland area was part of the commitments made by the Proponent. To minimize or eliminate disturbance effects, the following was proposed:

"Additional tree planting to offset the impacts associated with the removal of 1.74 ha of existing cultural plantation will occur within the open areas of the plantation. A detailed planting plan outlining the species native to Ecoregion 7E and the local area will be prepared through detailed design and implemented following construction."

The planting location is now being proposed to the south of Turbine 9 (see **Figure 3** in **Appendix A**) within a narrow area of cultural meadow and adjacent to an existing mixed plantation (see **Appendix G** for the ELC map included in the original NHA). The benefits of this planting location include:



- The trees will aid in providing a linkage between existing significant wildlife habitat for declining species to the east and west (see **Appendix G** for Figure 13.10 from the original NHA outlining the significant natural features in the general area); and,
- Riparian vegetation for the watercourse that flow through the proposed planting area.

Fulfillment of this tree planting condition, as amended, will be supported by the completion of a planting plan. The commitment to complete the tree planting following construction that is currently in the original NHA does not require amendment.

## 6.0 Summary

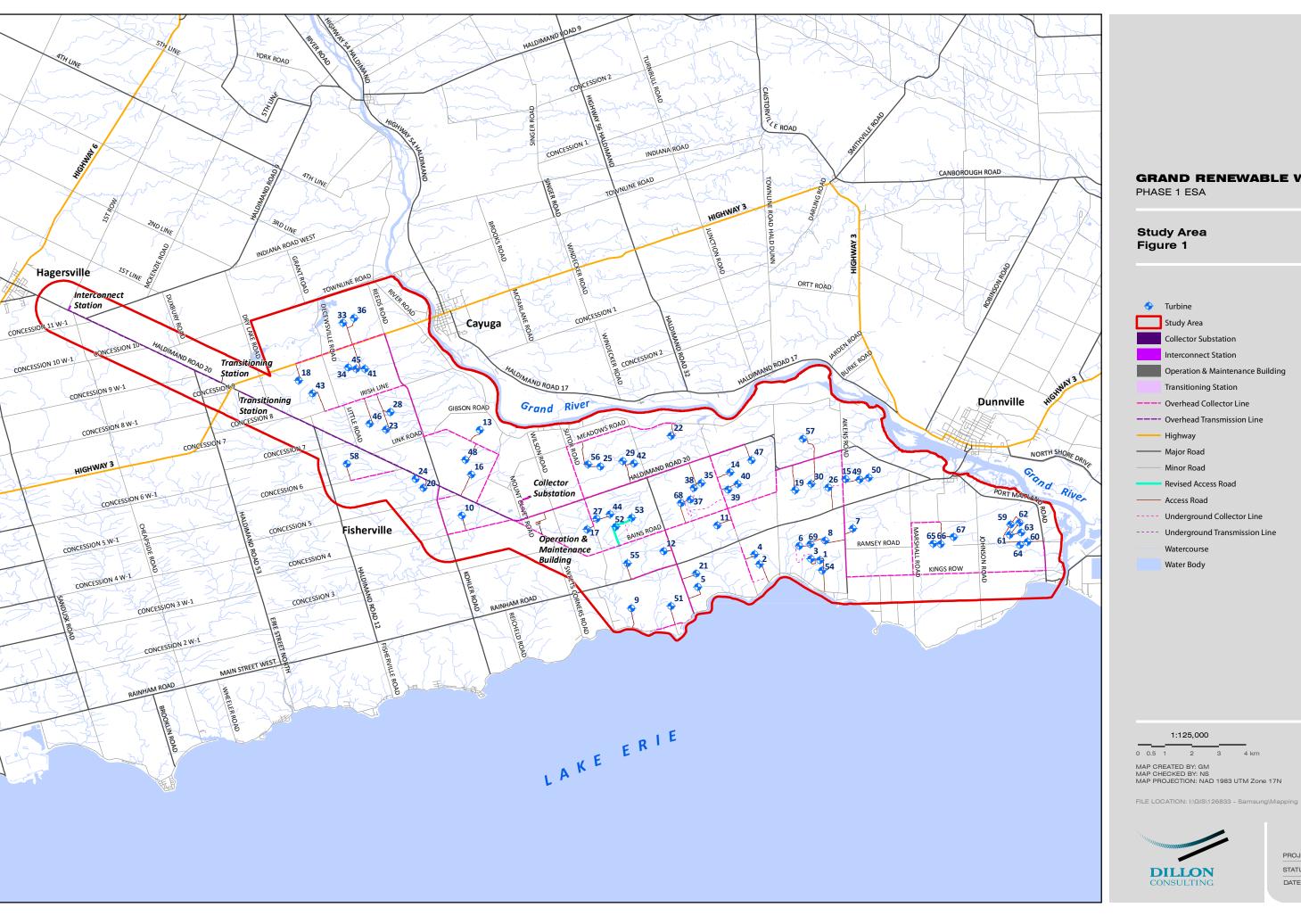
The view of Grand Renewable Wind LP/ Grand Renewable Wind GP Inc. is the above-listed amendment to the NHA supporting the REA for the Grand Renewable Wind Project is an improvement and/or equivalent commitment for the neighbouring residents and the environment. This amendment will not create any new potential negative environmental effects to significant natural features or neighbouring residents. Mitigation measures included in the NHA submission with the preliminary design will continue to be implemented as stated.



# **Appendix A**

**Figures** 

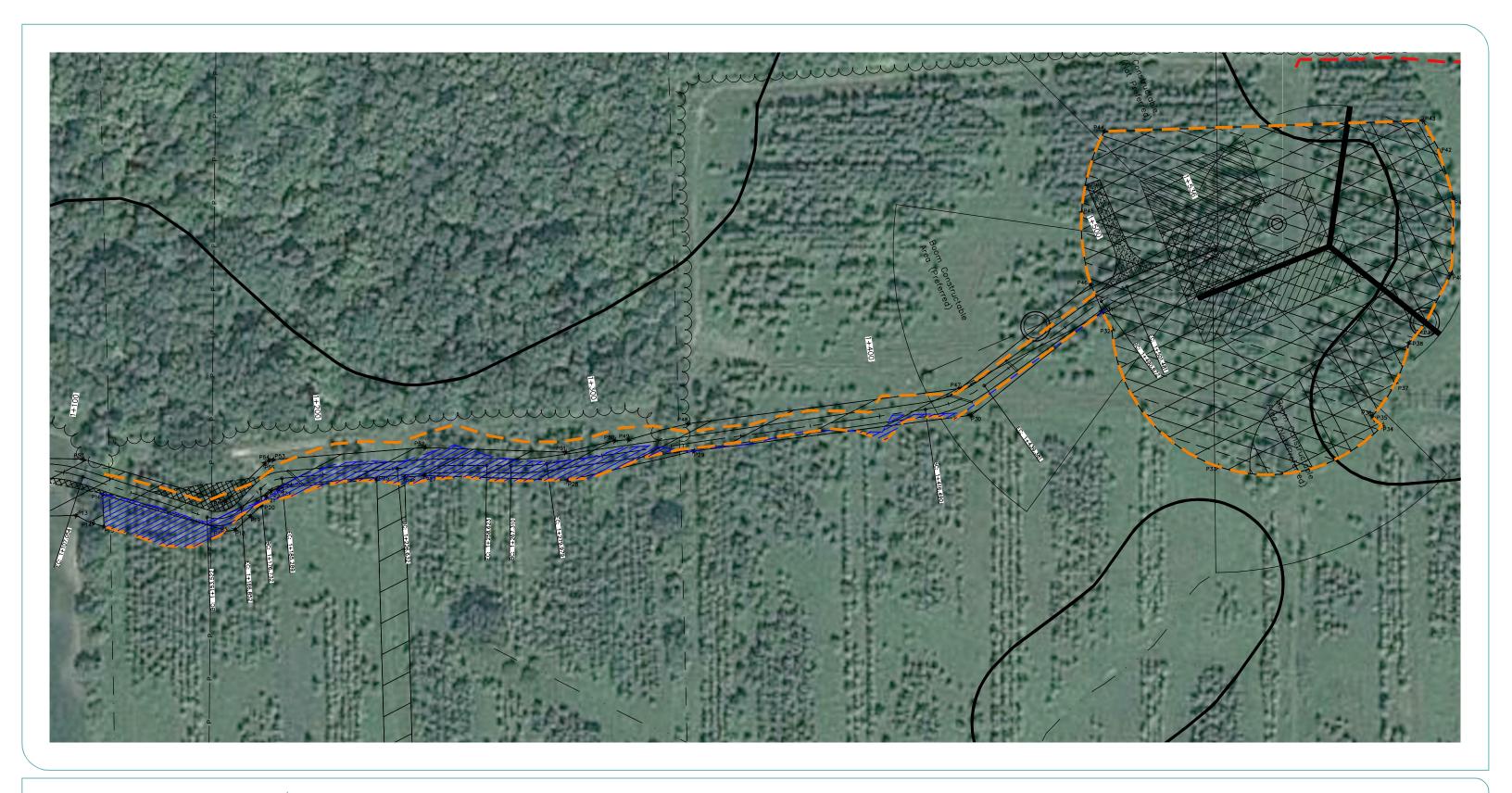




#### **GRAND RENEWABLE WIND LP**



PROJECT: 141209 STATUS: DRAFT DATE: 11/21/2014



GRAND RENEWABLE WIND

TURBINE 53/ACCESS ROAD 19 FIGURE 2

LIMIT OF AREA CLEARED (AREA = 17,650 sq.m. or 1.77 ha)

AREA GREATER THAN 7m ROAD WIDTH

File Location:
g:\cac\138413\05-environmental\03-figures\138413-05-access road verification
2.dwg
September, 11, 2014 3:27 PM

MAP/DRAWING INFORMATION

CREATED BY: GCC CHECKED BY: JP DESIGNED BY: JP





PROJECT: 13 8413

STATUS: DRAFT DATE: 09/11/14



#### **GRAND RENEWABLE WIND LP**

**NEW PLANTING LOCATION** FIGURE 3





MAP DRAWING INFORMATION: DATA PROVIDED BY MNR

MAP CREATED BY: GM MAP CHECKED BY: JP MAP PROJECTION: NAD 1983 UTM Zone 17N





PROJECT: 141209

STATUS: DRAFT

DATE:1/28/2015

# **Appendix B**

Renewable Energy Approval





#### RENEWABLE ENERGY APPROVAL

NUMBER 0300-8UQPKR Issue Date: June 15, 2012

Grand Renewable Wind LP / Grand Renewable Wind GP

Inc.

55 Standish Court Mississauga, Ontario

L5R 4B2

Project Near Haldimand Road 20

Location: Haldimand County,

N0A 1E0

You have applied in accordance with Section 47.4 of the <u>Environmental Protection Act</u> for approval to engage in a renewable energy project in respect of a Class 4 wind facility consisting of the following:

- the construction, installation, operation, use and retiring of a Class 4 wind facility with a total name plate capacity of 148.6 megawatts.

For the purpose of this renewable energy approval, the following definitions apply:

- "Acoustic Assessment Report" means the report included in the Application and entitled Grand Renewable Energy Park-Noise Assessment Report Revision 2, dated May 29, 2012 prepared by Zephyr North Ltd. and signed by Carl Brothers P.Eng., Zephyr North Ltd, and an addendum entitled Grand Renewable Energy Park — Noise Assessment Report — Revision 2 — Addendum 1 dated May 29, 2012 prepared by Zephyr North Ltd. and signed by Carl Brothers P. Eng., Zephyr North Ltd. May 29, 2012.
- "Acoustic Audit Emission" means an investigative procedure that is compliant with the IEC Standard 61400-11 and consisting of measurements and/or acoustic modelling of noise emissions produced by wind turbine generators, assessed to determine compliance with the manufacturer's noise (acoustic) equipment specifications and emission data of the wind turbine generators, included in the Acoustic Assessment Report;
- 3. "Acoustic Audit Immission" means an investigative procedure consisting of measurements and/or acoustic modelling of all sources of noise emissions due to the operation of the Equipment, assessed to determine compliance with the Noise Performance Limits set out in this Approval;

- 4. "Acoustic Audit Report-Emission" means a report presenting the results of the Acoustic Audit Emission;
- 5. "Acoustic Audit Report-Immission" means a report presenting the results of the Acoustic Audit Immission;
- 6. "Acoustic Audit Report-Transformer Substation" means a report presenting the results of the Acoustic Audit Transformer Substation;
- "Acoustic Audit Transformer Substation" means an investigative procedure consisting of
  measurements and/or acoustic modelling of all noise sources comprising the transformer
  (100/133/166 MVA) assessed to determine compliance with the Sound Power Level specification of
  such transformer described in the Acoustic Assessment Report;
- 8. "Acoustical Consultant" means a person currently active in the field of environmental acoustics and noise/vibration control, who is knowledgeable about Ministry noise guidelines and procedures and has a combination of formal university education, training and experience necessary to assess noise emissions from wind facilities:
- 9. "Act" means the Environmental Protection Act, R.S.O 1990, c.E.19, as amended;
- 10. "Adverse Effect" has the same meaning as in the Act;
- 11. "Application" means the application for a Renewable Energy Approval dated October 3, 2011, and signed by Jeong Tack Lee, President, Grand Renewable Wind GP Inc., on behalf of Grand Renewable Wind LP., and all supporting documentation submitted with the Application, including amended documentation submitted up to the date this Approval is issued;
- 12. "Approval" means this Renewable Energy Approval issued in accordance with Section 47.4 of the Act, including any schedules to it;
- 13. "A-weighting" means the frequency weighting characteristic as specified in the International Electrotechnical Commission (IEC) Standard 61672, and intended to approximate the relative sensitivity of the normal human ear to different frequencies (pitches) of sound. It is denoted as "A";
- 14. "A-weighted Sound Pressure Level" means the Sound Pressure Level modified by application of an A-weighting network. It is measured in decibels, A-weighted, and denoted "dBA";
- 15. "Class 1 Area" means an area with an acoustical environment typical of a major population centre, where the background sound level is dominated by the activities of people, usually road traffic, often referred to as "urban hum";
- 16. "Class 2 Area" means an area with an acoustical environment that has qualities representative of both Class 1 and Class 3 Areas:

- 1. sound levels characteristic of Class 1 during daytime (07:00 to 19:00 or to 23:00 hours);
- 2. low evening and night background sound level defined by natural environment and infrequent human activity starting as early as 19:00 hours (19:00 or 23:00 to 07:00 hours);
- 3. no clearly audible sound from stationary sources other than from those under impact assessment.
- 17. "Class 3 Area" means a rural area with an acoustical environment that is dominated by natural sounds having little or no road traffic, such as the following:
  - 1. a small community with less than 1000 population;
  - 2. agricultural area;
  - 3. a rural recreational area such as a cottage or a resort area; or
  - 4. a wilderness area.
- 18. "Company" means Grand Renewable Wind GP Inc., as general partner for and on behalf of Grand Renewable Wind LP, the partnership under the laws of Ontario, and includes its successors and assignees;
- 19. "Compliance Protocol for Wind Turbine Noise" means the Ministry document entitled, Compliance Protocol for Wind Turbine Noise, Guideline for Acoustic Assessment and Measurement, PIBS# 8540e;
- 20. "Decibel" means a dimensionless measure of Sound Level or Sound Pressure Level, denoted as dB;
- 21. "Director" means a person appointed in writing by the Minister of the Environment pursuant to section 5 of the Act as a Director for the purposes of section 47.5 of the Act;
- 22. "District Manager" means the District Manager of the appropriate local district office of the Ministry where the Facility is geographically located;
- 23. "Equipment" means the 67 wind turbine generators and one (1) transformer substation, identified in this Approval and as further described in the Application, to the extent approved by this Approval;
- 24. "Equivalent Sound Level" is the value of the constant sound level which would result in exposure to the same total A-weighted energy as would the specified time-varying sound, if the constant sound level persisted over an equal time interval. It is denoted L<sub>eq</sub> and is measured in dB A-weighting (dBA);
- 25. "Facility" means the renewable energy generation facility, including the Equipment, as described in this Approval and as further described in the Application, to the extent approved by this Approval;

- 26. "IEC Standard 61400-11" means the International Standard IEC Standard 61400-11, Wind turbine generator systems Part 11: Acoustic noise measurement techniques, 2006;
- 27. "Independent Acoustical Consultant" means an Acoustical Consultant who is not representing the Company and was not involved in preparing the Acoustic Assessment Report. The Independent Acoustical Consultant shall not be retained by the Acoustical Consultant involved in the noise impact assessment;
- 28. "Ministry" means the ministry of the government of Ontario responsible for the Act and includes all officials, employees or other persons acting on its behalf;
- 29. "Noise Guidelines for Wind Farms" means the Ministry document entitled, "Noise Guidelines for Wind Farms Interpretation for Applying MOE NPC Publications to Wind Power Generation Facilities", dated October 2008;
- 30. "Noise Receptor" has the same meaning as in O. Reg. 359/09;
- 31. "O. Reg. 359/09" means Ontario Regulation 359/09 "Renewable Energy Approvals under Part V.0.1 of the Act" made under the Act;
- 32. "Point of Reception" has the same meaning as in the Noise Guidelines for Wind Farms and is subject to the same qualifications described in that document;
- 33. "Sound Level" means the A-weighted Sound Pressure Level;
- 34. "Sound Level Limit" is the limiting value described in terms of the one hour A-weighted Equivalent Sound Level  $L_{eq}$ ;
- 35. "Sound Power Level" means ten times the logarithm to the base of 10 of the ratio of the sound power (Watts) of a noise source to standard reference power of 10<sup>-12</sup> Watts;
- 36. "Sound Pressure" means the instantaneous difference between the actual pressure and the average or barometric pressure at a given location. The unit of measurement is the micro pascal (µPa);
- 37. "Sound Pressure Level" means twenty times the logarithm to the base 10 of the ratio of the effective pressure ( $\mu$ Pa) of a sound to the reference pressure of 20  $\mu$ Pa;
- 38. "UTM" means Universal Transverse Mercator coordinate system.

You are hereby notified that this approval is issued to you subject to the terms and conditions outlined below:

#### TERMS AND CONDITIONS

#### A - GENERAL

- A1. The Company shall construct, install, use, operate, maintain and retire the Facility in accordance with the terms and conditions of this Approval and the Application and in accordance with the following schedules attached hereto:
  - Schedule A Facility Description
  - Schedule B Coordinates of the Equipment and Noise Specifications
- A2. Where there is a conflict between a provision of this Approval and any document submitted by the Company, the conditions in this Approval shall take precedence. Where there is a conflict between one or more of the documents submitted by the Company, the document bearing the most recent date shall take precedence.
- A3. The Company shall ensure a copy of this Approval is:
  - (1) accessible, at all times, by Company staff operating the Facility and;
  - (2) submitted to the clerk of each local municipality and upper-tier municipality in which the Facility is situated.
- A4. If the Company has a publicly accessible website, the Company shall ensure that the Approval and the Application are posted on the Company's publicly accessible website within five (5) business days of receiving this Approval.
- A5. The Company shall, at least six (6) months prior to the anticipated retirement date of the entire Facility, or part of the Facility, review its Decommissioning Plan Report to ensure that it is still accurate. If the Company determines that the Facility cannot be decommissioned in accordance with the Decommissioning Plan Report, the Company shall provide the Director and District Manager a written description of plans for the decommissioning of the Facility.
- A6. The Facility shall be retired in accordance with the Decommissioning Plan Report and any directions provided by the Director or District Manager.
- A7. The Company shall, at least six (6) months prior to the anticipated retirement date of the entire Facility, or part of the Facility, contact the Ministry of Agriculture, Food and Rural Affairs to discuss its plans for the decommissioning of the Facility, including Company's objective to restore the project location to its previous agricultural capacity.
- A8. The Company shall provide the District Manager and the Director at least ten (10) days written notice of the following:
  - (1) the commencement of any construction or installation activities at the project location; and
  - (2) the commencement of the operation of the Facility.

#### **B - EXPIRY OF APPROVAL**

- B1. Construction and installation of the Facility must be completed within three (3) years of the later of:
  - (1) the date this Approval is issued; or
  - (2) if there is a hearing or other litigation in respect of the issuance of this Approval, the date that this hearing or litigation is disposed of, including all appeals.
- B2. This Approval ceases to apply in respect of any portion of the Facility not constructed or installed before the later of the dates identified in Condition B1.

#### **C - NOISE PERFORMANCE LIMITS**

- C1. The Company shall ensure that:
- (1) the Sound Levels from the Equipment, at the Points of Reception identified in the Acoustic Assessment Report, comply with the Sound Level Limits set in the Noise Guidelines for Wind Farms, as applicable, and specifically as stated in the table below:

Wind Speed (m/s) at 10 m height	4	5	6	7	8	9	10
Sound Level Limits, dBA	40	40	40	43	45	49	51

- (2) the Equipment is constructed and installed at either of the following locations:
  - a) at the locations identified in Schedule B of this Approval; or
  - b) at a location that does not vary by more than 10 metres from the locations identified in Schedule B of this Approval and provided that,
    - i) the Equipment will comply with Condition C1 (1); and
    - ii) all setback prohibitions established under O. Reg. 359/09 are complied with.
- (3) the Equipment complies with the noise specifications set out in Schedule B of this Approval.
- C2. If the Company determines that some or all of the Equipment cannot be constructed in accordance with Condition C1 (2), prior to the construction and installation of the Equipment in question, the Company shall apply to the Director for an amendment to the terms and conditions of the Approval.
- C3. Within three (3) months of the completion of the construction of the Facility, the Company shall submit to the Director a written confirmation signed by an individual who has the authority to bind the Company that the UTM coordinates of the "as constructed" Equipment comply with the requirements of Condition C1 (2).

#### D – CONFIRMATION OF VACANT LOT NOISE RECEPTORS

D1. The locations identified as "VLSR" in the Table entitled "VacantLotLocations" in the document prepared by the Company entitled "

\*GRE10-NoiseAssessmentReport-R1-ResultsAndLocationsTable-20111207.xls\* are specified as Noise Receptors for the purposes of paragraph 2 of subsection 54 (1.1) of O. Reg. 359/09 and subclause 35 (1) (a) (ii) of O. Reg. 359/09.

#### E - ACOUSTIC AUDIT - TRANSFORMER SUBSTATION

E1. The Company shall carry out an Acoustic Audit - Transformer Substation of the transformer substation (166 MVA transformer), and shall submit to the District Manager and the Director an Acoustic Audit Report – Transformer Substation prepared by an Independent Acoustical Consultant no later than six (6) months after the commencement of the operation of the Facility.

#### F - WIND TURBINE ACOUSTIC AUDIT - IMMISSION

- F1. The Company shall carry out an Acoustic Audit Immission of the Sound Levels produced by the operation of the Equipment in accordance with the following:
  - (1) the acoustic audit measurements shall be undertaken in accordance with Part D of the Compliance Protocol for Wind Turbine Noise;
  - (2) the acoustic audit measurements shall be performed by an Independent Acoustical Consultant at three (3) different Points of Reception that have been selected using the following criteria:
    - (a) the Points of Reception should represent the location of the greatest predicted noise impact, i.e., the highest predicted Sound Level; and
    - (b) the Points of Reception should be located in the direction of prevailing winds from the Facility;
  - (3) the acoustic audit measurements shall be performed on two (2) separate occasions within a period of one (1) month that represent the lowest annual ambient Sound Levels, preferably:
    - (a) March and April, and
    - (b) October and November.
- F2. The Company shall submit to the District Manager and the Director an Acoustic Audit Report-Immision, prepared by an Independent Acoustical Consultant, at the following points in time:
  - (1) no later than nine (9) months after the commencement of the operation of the Facility for the first of the two (2) acoustic audit measurements at the three (3) Points of Reception; and
  - (2) no later than fifteen (15) months after the commencement of the operation of the Facility for the second of the two (2) acoustic audit measurements at the three (3) Points of Reception.

#### G - WIND TURBINE ACOUSTIC AUDIT- EMISSION

- G1. The Company shall carry out an Acoustic Audit Emission of the acoustic emissions produced by the operation of the wind turbine generators in accordance with the following:
  - (1) the acoustic emission measurements shall be undertaken in accordance with the IEC Standard 61400-11;
  - (2) the acoustic emission measurements shall be performed by an Independent Acoustical Consultant; and
  - (3) the acoustic emission measurements shall be performed on two (2) of each type of the wind turbine generator used in the Facility. Specifically on two (2) of the wind turbine generators rated at:
    - (a) 2.221 megawatts generating output capacity and
    - (b) 2.126 megawatts generating output capacity.
- G2. The Company shall submit to the District Manager and the Director an Acoustic Audit Report-Emission, prepared in accordance with Section 9 of the IEC Standard 61400-11 by an Independent Acoustical Consultant, no later than six (6) months after the commencement of the operation of the Facility.

#### H - STORMWATER MANAGEMENT

#### **General**

- H1. The Company shall employ best management practices for stormwater management and sediment and erosion control during construction, installation, use, operation, maintenance and retiring of the Facility, as described in the Application including the report entitled Grand Renewable Energy Park Stormwater Management Report, dated February 10, 2011 and signed by Scott Robertson, P. Eng., Associate, Water Resources Project Manager .
- H2. The Company shall design, construct, install, use, operate, maintain and retire stormwater management works that shall cover the transformer substation area and the operation and maintenance building drainage area, for a total area of 59 hectares (ha), in accordance with any plans and specifications set out in this Approval and the Application.
- H3. The stormwater management works shall include the following, all in accordance with the plans and specifications set out in the Application:
  - (1) a Transformer Substation area with an extended detention dry pond;
  - (2) an operation and maintenance building area with a constructed wetland; and

- (3) a vegetated swale / ditch system to divert and control clean stormwater from entering the developed areas within the Transformer Substation and operation and maintenance building areas and to control external flows.
- H4. The Company shall notify the Director prior to making any material changes to the design and specifications described in Condition H3 and the Grand Renewable Energy Park Stormwater Management Report, dated February 10, 2011 and signed by Scott Robertson, P. Eng., Associate, Water Resources Project Manager.

#### **Operation and Maintenance**

- H5. The Company shall ensure that the pond/wetland design minimum liquid retention volume is maintained at all times.
- H6. The Company shall maintain the permanent pool depth to 1.0m within the forebay areas and monitor the accumulation of oil within the forebay or main cell.
- H7. The Company shall inspect the stormwater management works semi-annually, i.e. twice per year, and, if necessary, clean and maintain the works to prevent the excessive build-up of sediments and/or vegetation.
- H8. The Company shall include the following information in the operations and maintenance manual prepared under Condition O and the written records created under Condition P:
  - (1) operating procedures for routine operation of the stormwater management works;
  - (2) the date and results of all inspection, maintenance, and cleaning activities, including an estimate of the quantity of any materials removed; and
  - (3) the date of each spill within the catchment area, including follow-up actions / remedial measures undertaken.

#### **Effluent Visual Operations**

- H9. The Company shall ensure that the effluent from the stormwater management works is essentially free of floating and settle-able solids and does not contain oil or any other substance in amounts sufficient to create a visible film, sheen or foam on the receiving waters.
- H10. The Company shall conduct semi-annual, i.e. twice per year, walking inspections to identify areas of bare soil and/or the formation of erosive gullies, remediative efforts, areas of isolated ponding or sediment build-up.

#### **Monitoring**

- H11. Upon commencement of the operation of the Facility, the Company shall establish and implement a monitoring program for the stormwater management works for a minimum period of five (5) years (with the option to request that the Director reduce the frequency of monitoring after three (3) years of satisfactory performance of the stormwater management works) in accordance with the following:
  - (1) the Company shall take all samples and measurements for the purposes of Condition H10 (2) at a time and in a location characteristic of the quality and quantity of the effluent stream over the time period being monitored;
  - (2) the Company shall collect and analyze the required samples at the sampling points listed in the table below in accordance with the measurement frequency and sample type specified, for each parameter in the table, and create a written record of the monitoring results:

Surface Water Monitoring					
Sample points:	Sample points:				
§ at po	§ at pond/wetland inlets.				
§ at po	§ at pond/wetland effluent discharge points.				
Frequency	Quarterly, i.e. four (4) times per year, at least once for the				
	snowmelt freshet and the remaining within 72hours after a 15mm				
	rainfall event.				
Sample Type	Grab				
Parameters	Total Suspended Solids, Total Phosphorus, Dissolved Oxygen,				
	Oil & Grease, E. Coli, pH and Temperature.				

- (3) the Company's methods and protocols for any sampling, analysis and recording undertaken in accordance with Condition H10 (2) shall conform, in order of precedence, to the methods and protocols specified in the following documents:
  - (a) The Ministry's Procedure F-10-1, "Procedures for Sampling and Analysis Requirements for Municipal and Private Sewage Treatment Works (Liquid Waste Streams Only)", as amended from time to time by more recently published editions.
  - (b) The Ministry's publication "Protocol for the Sampling and Analysis of Industrial/Municipal Wastewater" (January 1999), ISBN 0-7778-1880-9, as amended from time to time by more recently published editions.
  - (c) The publication "Standard Methods for the Examination of Water and Wastewater" (21st edition), as amended from time to time by more recently published editions.
- (4) The Company shall include all written records and information related to, or resulting from, the monitoring activities undertaken in accordance with Condition H10 in the written records created under Condition P.

#### **Annual Reporting**

- H12. By March 31st of each calendar year, the Company shall prepare and submit to the District Manager an annual report for the previous calendar year which summarizes all of the activities undertaken and written records created in accordance with Condition H, including monitoring data collected, data analysis and interpretation of results, and inspection, operations and maintenance activities, as well as recommendations for any preventive, remediative and reactive measures needed to ensure compliance with Condition H and protection of the environment.
- H13. Within six (6) months of the completion of the construction of the Facility, the Company shall provide the District Manager with a stormwater management report that includes a detailed design of the stormwater management works for the collection, transmission, treatment and disposal of stormwater runoff from various catchment areas for the Facility, discharging to existing drainage patterns within the Wardells Creek watershed, and consisting of a vegetated swale / ditch and culvert system. The stormwater management report shall also include an operations manual describing the visual inspections, frequency, and any other activity necessary for the adequate operation of the stormwater management works.

#### I - SEWAGE WORKS OF THE TRANSFORMER SUBSTATION SPILL CONTAINMENT FACILITY

- I1. Prior to the construction of the transformer substation, the Company shall retain an independent Professional Engineer licensed in Ontario, and knowledgeable about electrical transformer substations and their associated sewage works, to prepare a design report on the spill containment facility for the transformer substation that shall contain the following:
  - (1) final design drawings and specifications of the spill containment area and associated sewage works;
  - (2) operation and maintenance procedures for the spill containment facility including an emergency/contingency plan; and
  - (3) a monitoring program, including a groundwater monitoring program if a subsurface disposal system is proposed, which shall contain at a minimum one monitoring well immediately around the spill containment works and one on the property boundary down gradient from the transformer substation.
- I2. The Company shall ensure that the spill containment facility for the transformer substation meets the following requirements:
  - (1) the containment facility shall have an impervious concrete floor and walls sloped toward an outlet, maintaining a freeboard of 0.25 metres terminating approximately 0.30 metres above grade, with an impervious plastic liner or equivalent, and 1.0 metre layer of crushed stoned within;
  - (2) the containment pad shall drain to an oil control device, such as an oil/water separator, a pump-out sump, an oil absorbing material in a canister or a blind sump; and
  - (3) the oil control device shall be equipped with an oil detection system and appropriate sewage appurtenances as necessary (pumpout manhole, submersible pumps, level controllers, floating oil sensors, etc.).

- I3. The Company shall submit the design report for the spill containment facility prepared under Condition No. I1 to the Director and shall not commence the construction of the transformer substation until the Director provides written confirmation verifying that the Director is satisfied with the proposed sewage works.
- I4. The Company shall design, construct and operate the sewage works of the transformer substation spill containment facility such that the concentration of the effluent parameter named in the table below does not exceed the maximum concentration objective shown for that parameter in the effluent, and shall comply with the following requirements:

Effluent Parameters	Maximum Concentration Objective		
Oil and Grease	15mg/L		

- (a) notify the District Manager as soon as reasonably possible of any exceedance of the maximum concentration objective set out in the table above;
- (b) take immediate action to identify the cause of the exceedance; and
- (c) take immediate action to prevent further exceedances.

#### J - WATER TAKING ACTIVITIES

- J1. For foundation dewatering, if the amount of discharge exceeds 50,000 litres per day:
  - (1) the inlet pump head shall be surrounded with clear stone and filter fabric;
  - the discharge must be sampled each day that water is discharged and analyzed for total suspended solids (TSS). In the event that sampling results show that TSS in the discharge water exceeds 25 mg/L, the Company shall implement appropriate measures (settling tank or geosock or similar device) to mitigate these impacts; and,
  - (3) the Company shall regulate the discharge at such a rate that there is no flooding in the receiving water body or dissipate the discharge so that no soil erosion is caused that impacts the receiving water body.
- J2. For stream diversion, if the amount of discharge exceeds 50,000 litres per day and dam and pump technology is used:
  - (1) the Company shall regulate the discharge at such a rate that there is no flooding in the downstream area and no soil erosion or stream channel scouring caused at the point of discharge. The Company shall use a discharge diffuser or other energy dissipation device, if necessary, to mitigate flows which physically alter the stream channel or banks; and,
  - (2) siltation control measures shall be installed at both the taking location upstream of the construction site and (if necessary) the discharge site and shall be sufficient for the volumes pumped. The Company shall take all measures to properly maintain these control devices throughout the construction period.

- J3. For water takings (by tanker) for the purposes of dust suppression, equipment washing, and similar activities:
  - (1) notwithstanding the authorized rate of water taking, this Approval limits the taking of water at any site at the project location for up to 10% of the instantaneous streamflow present on the day or days of taking. The authorized water taking rate may therefore have to be adjusted downward to remain within this 10% maximum;
  - prior to taking water from any site at the project location, the Company shall contact the Long Point Region Conservation Authority to determine if any low water conditions have been declared and are in effect. The Company shall not take water if a Level 2 or Level 3 low water condition has been declared; and,
  - (3) no modification to the existing stream channel by excavation or damming is permitted under this Approval.

#### K - NATURAL HERITAGE PRE- AND POST- CONSTRUCTION MONITORING

#### PRE CONSTRUCTION MONITORING

- K1. The Company shall implement the pre-construction monitoring described in the report included in the Application and entitled Grand Renewable Energy Park Natural Heritage Assessment and Environmental Impact Study, dated October 2011, and prepared by Stantec Consulting Ltd. This shall include:
  - a) Disturbance Monitoring for Woodland Breeding Birds; and
  - b) Disturbance Monitoring for Landbird Migratory Stopover Areas
- K2. If the Company determines that it must deviate from the pre-construction monitoring described in Condition K1, the Company shall contact the Southern Region Renewable Energy Operations Coordinator of the Ministry of Natural Resources and the Director, prior to making any changes to the methodology, and follow any directions provided.

# POST CONSTRUCTION MONITORING, INCLUDING BIRD AND BAT MORTALITY MONITORING

- K3. The Company shall implement the Environmental Effects Monitoring Plan for Wildlife and Wildlife Habitat included as Attachment C to the report included in the Application and entitled Design and Operations Report, dated July 2011, and prepared by Stantec Consulting Ltd. This shall include:
  - a) Disturbance Monitoring for Woodland Breeding Birds;
  - b) Disturbance Monitoring for Landbird Migratory Stopover Areas;
  - c) Visual Monitoring of hydrological conditions in wetlands and significant woodlands; and
  - d) Bird and Bat mortality monitoring.

K4. If the Company determines that it must deviate from the monitoring described in Condition K3, the Company shall contact the Southern Region Renewable Energy Operations Coordinator of the Ministry of Natural Resources and the Director, prior to making any changes to the Environmental Effects Monitoring Plan for Wildlife and Wildlife Habitat, and follow any directions provided.

#### REPORTING AND REVIEW OF RESULTS

- K5. The Company shall contact the Southern Region Renewable Energy Operations Coordinator of the Ministry of Natural Resources and the Director if there are any applicable thresholds as described in the Environmental Effects Monitoring Plan for Wildlife and Wildlife Habitat reached or exceeded as follows:
  - a) 10 bats per turbine per year;
  - b) 18 birds per turbine per year at individual turbines or turbine groups;
  - c) 0.2 raptors per turbine per year (all raptors) across the Facility;
  - d) 0.1 raptors per turbine per year (raptors of provincial conservation concern) across the Facility;
  - e) 10 or more birds at any one turbine during a single monitoring survey; or
  - f) 33 or more birds (including raptors) at multiple turbines during a single monitoring survey.
- K6. The Company shall report mortality levels to the Ministry of Natural Resources for the first three (3) years following the commencement of operation of the Facility, on an annual basis and within three (3) months of the conclusion of the October mortality monitoring, with the exception of the following (threshold references are to the actual number of species observed in the field, prior to correction factors):
  - a) where a single mortality monitoring event exceeds 10 or more birds at any one turbine or 33 or more birds (including raptors) at multiple turbines the mortality event shall be reported to the Ministry of Natural Resources within 48 hours of observation;
  - b) any and all mortality of species at risk (including a species listed on the Species at Risk in Ontario list as Extirpated, Endangered or Threatened under the provincial *Endangered Species Act*, 2007) that occurs shall be reported to the Ministry of Natural Resources within 48 hours of observation;
  - c) where operational mitigation is applied for bats, an additional three (3) years of effectiveness monitoring is required and the Company shall report mortality levels to the Ministry of Natural Resources for three (3) years following the commencement of such operational mitigation on an annual basis and within three (3) months of the conclusion of the October mortality monitoring;
  - d) where operational mitigation is applied for birds, for turbines located outside 120 metres of bird significant wildlife habitat, two (2) years of subsequent mortality and effects monitoring is required for those turbines where a significant annual bird or raptor mortality threshold is exceeded and the Company shall report mortality levels to the Ministry of Natural Resources for two (2) years following the observance of any such exceedance on an annual basis and within three (3) months of the conclusion of the October mortality monitoring.

f) where operational mitigation is applied for birds, for turbines located within 120 metres of bird significant wildlife habitat, three (3) years of effectiveness monitoring for those turbines where the exceedances were observed is required. The Company shall report effectiveness monitoring results to the Ministry of Natural Resources for up to three (3) years following the observance of any such exceedance, on an annual basis and within three (3) months of the conclusion of the effectiveness monitoring.

#### **OPERATIONAL MITIGATION**

- K7. Operational mitigation measures shall be consistent with those identified in the "Bats and Bat Habitats: Guidelines for Wind Power Projects" dated March 2010, and available from the Ministry of Natural Resources, and shall include some or all of the following mitigation measures:
  - a) increasing cut-in speed to 5.5 m/s or feathering wind turbine blades when wind speeds are below 5.5 m/s between sunset and sunrise, from July 15 to September 30 at all turbines; or
  - b) other mitigation measures described in an amended version of the "Bats and Bat Habitats: Guidelines for Wind Power Projects"; or
  - c) where an agreement between the Company and the Ministry of Natural Resources can be reached, an alternate operation mitigation plan agreed to between the Company and the Ministry of Natural Resources.
- K8. Where annual mortality levels exceed 18 birds/turbine/year at individual turbines or turbine groups or 0.2 raptors or vultures/turbine/year across the Facility or 0.1 raptors of provincial conservation concern/turbine/year across the Facility, the Company shall contact the Ministry of Natural Resources to initiate an appropriate response plan that shall include some or all of the following mitigation measures:
  - a) increased reporting frequency to identify potential threshold exceedance;
  - b) additional behavioural studies to determine factors affecting mortality rates;
  - c) periodic shut-down of select turbines;
  - d) blade feathering at specific times of year; or
  - e) an alternate plan agreed to between the Company and the Ministry of Natural Resources.

#### L - TRAFFIC MANAGEMENT PLANNING

- L1. Within three (3) months of receiving this Approval, the Company shall prepare a Traffic Management Plan and provide it to the Municipality of Haldimand County.
- L2. Within three (3) months of having provided the Traffic Management Plan to the Municipality of Haldimand County, the Company shall make reasonable efforts to enter into a Road Users Agreement with the Municipality of Haldimand County.

L3. If a Road Users Agreement has not been signed with the Municipality of Haldimand County within three (3) months of having provided the Traffic Management Plan to the Municipality of Hadlimand County, the Company shall provide a written explanation to the Director as to why this has not occurred.

#### M - ARCHAEOLOGICAL RESOURCES

- M1. The Company shall implement all of the recommendations, if any, for further archaeological fieldwork and for the protection of archaeological sites found in the consultant archaeologist's report included in the Application, and which the Company submitted to the Ministry of Tourism, Culture and Sport in order to comply with clause 22 (2) (b) of O. Reg. 359/09.
- M2. Should any previously undocumented archaeological resources be discovered, the Company shall:
  - (1) cease all alteration of the area in which the resources were discovered immediately;
  - engage a consultant archaeologist to carry out the archaeological fieldwork necessary to further assess the area and to either protect and avoid or excavate any sites in the area in accordance with the *Ontario Heritage Act*, the regulations under that act and the Ministry of Tourism, Culture and Sport's *Standards and Guidelines for Consultant Archaeologists*; and
  - (3) notify the Director as soon as reasonably possible.

#### N - COMMUNITY LIAISON COMMITTEE

- N1. Within three (3) months of receiving this Approval, the Company shall make reasonable efforts to establish a Community Liaison Committee. The Community Liaison Committee shall be a forum to exchange ideas and share concerns with interested residents and members of the public. The Community Liaison Committee shall be established by:
  - (1) publishing a notice in a newspaper with general circulation in each local municipality in which the project location is situated; and
  - (2) posting a notice on the Company's publicly accessible website, if the Company has a website;
    - to notify members of the public about the proposal for a Community Liaison Committee and invite residents living within a one (1) kilometer radius of the Facility that may have an interest in the Facility to participate on the Community Liaison Committee.
- N2. The Company may invite other members of stakeholders to participate in the Community Liaison Committee, including, but not limited to, local municipalities, local conservation authorities, Aboriginal communities, federal or provincial agencies, and local community groups.
- N3. The Community Liaison Committee shall consist of at least one Company representative who shall attend all meetings.
- N4. The purpose of the Community Liaison Committee shall be to:

- (1) act as a liaison facilitating two way communications between the Company and members of the public with respect to issues relating to the construction, installation, use, operation, maintenance and retirement of the Facility;
- (2) provide a forum for the Company to provide regular updates on, and to discuss issues or concerns relating to, the construction, installation, use, operation, maintenance and retirement of the Facility with members of the public; and
- (3) ensure that any issues or concerns resulting from the construction, installation, use, operation, maintenance and retirement of the Facility are discussed and communicated to the Company.
- N5. The Community Liaison Committee shall be deemed to be established on the day the Director is provided with written notice from the Company that representative Community Liaison Committee members have been chosen and a date for a first Community Liaison Committee meeting has been set.
- N6. If a Community Liaison Committee has not been established within three (3) months of receiving this Approval, the Company shall provide a written explanation to the Director as to why this has not occurred.
- N7. The Company shall ensure that the Community Liaison Committee operates for a minimum period of two (2) years from the day it is established. During this two (2) year period, the Company shall ensure that the Community Liaison Committee meets a minimum of two (2) times per year. At the end of this two (2) year period, the Company shall contact the Director to discuss the continued operation of the Community Liaison Committee.
- N8. The Company shall ensure that all Community Liaison Committee meetings are open to the general public.
- N9. The Company shall provide administrative support for the Community Liaison Committee including, at a minimum:
  - (1) providing a meeting space for Community Liaison Committee meetings;
  - (2) providing access to resources, such as a photocopier, stationery, and office supplies, so that the Community Liaison Committee can:
    - (a) prepare and distribute meeting notices;
    - (b) record and distribute minutes of each meeting; and
    - (c) prepare reports about the Community Liaison Committee's activities.
- N10. The Company shall submit any reports of the Community Liaison Committee to the Director and post it on the Company's publicly accessible website, if the Company has a website.

#### O - OPERATION AND MAINTENANCE

- O1. Prior to the commencement of the operation of the Facility, the Company shall prepare a written manual for use by Company staff outlining the operating procedures and a maintenance program for the Equipment that includes as a minimum the following:
  - (1) routine operating and maintenance procedures in accordance with good engineering practices and as recommended by the Equipment suppliers;
  - (2) emergency procedures;
  - (3) procedures for any record keeping activities relating to operation and maintenance of the Equipment; and
  - (4) all appropriate measures to minimize noise emissions from the Equipment.
- O2. The Company shall;
  - (1) update, as required, the manual described in Condition O1; and
  - (2) make the manual described in Condition O1 available for review by the Ministry upon request.
- O3. The Company shall ensure that the Facility is operated and maintained in accordance with the Approval and the manual described in Condition O1.

#### P - RECORD CREATION AND RETENTION

- P1. The Company shall create written records consisting of the following:
  - (1) an operations log summarizing the operation and maintenance activities of the Facility;
  - (2) within the operations log, a summary of routine and Ministry inspections of the Facility; and
  - (3) a record of any complaint alleging an Adverse Effect caused by the construction, installation, use, operation, maintenance or retirement of the Facility.
- P2. A record described under Condition P1 (3) shall include:
  - (1) a description of the complaint that includes as a minimum the following:
    - (a) the date and time the complaint was made;
    - (b) the name, address and contact information of the person who submitted the complaint;
  - (2) a description of each incident to which the complaint relates that includes as a minimum the following:
  - (a) the date and time of each incident;
    - (b) the duration of each incident;
    - (c) the wind speed and wind direction at the time of each incident;
    - (d) the ID of the Equipment involved in each incident and its output at the time of each incident;
    - (e) the location of the person who submitted the complaint at the time of each incident; and
  - (3) a description of the measures taken to address the cause of each incident to which the complaint relates and to prevent a similar occurrence in the future.
- P3. The Company shall retain, for a minimum of five (5) years from the date of their creation, all records described in Condition P1, and make these records available for review by the Ministry upon request.

#### O - NOTIFICATION OF COMPLAINTS

- Q1. The Company shall notify the District Manager of each complaint within two (2) business days of the receipt of the complaint.
- Q2. The Company shall provide the District Manager with the written records created under Condition P2 within eight (8) business days of the receipt of the complaint.

#### **R - CHANGE OF OWNERSHIP**

- R1. The Company shall notify the Director in writing, and forward a copy of the notification to the District Manager, within thirty (30) days of the occurrence of any of the following changes:
  - (1) the ownership of the Facility;
  - (2) the operator of the Facility;
  - (3) the address of the Company;
  - (4) the partners, where the Company is or at any time becomes a partnership and a copy of the most recent declaration filed under the *Business Names Act*, R.S.O. 1990, c.B.17, as amended, shall be included in the notification; and
  - (5) the name of the corporation where the Company is or at any time becomes a corporation, other than a municipal corporation, and a copy of the most current information filed under the *Corporations Information Act*, R.S.O. 1990, c. C.39, as amended, shall be included in the notification.

#### **S - ABORIGINAL CONSULTATION**

- S1. The Company shall maintain communications with interested Aboriginal communities during the construction, installation, operation, use, and retiring of the facility.
- S2. The Company shall fulfil all commitments made to Aboriginal communities during the construction, installation, and operation of the Facility, including but not limited to, providing the following to interested Aboriginal communities that have requested or may request it:
  - (1) updated non-confidential project information, including the results of monitoring activities undertaken and copies of additional archaeological assessment reports that may be prepared; and;
  - updates on key steps in the construction, installation, and operation phases of the Facility, including notice of the commencement of construction activities at the project location.
- S3. If an interested Aboriginal community requests a meeting to obtain non-confidential information relating to the construction, installation, and operation of the Facility, the Company shall use reasonable efforts to arrange and participate in such a meeting.
- S4. If any archaeological resources of Aboriginal origin are found during the construction of the Facility, the Company shall:

- (1) notify the Six Nations of the Grand River and the Mississaugas of the New Credit and any other Aboriginal community considered likely to be interested or which has expressed an interest in such finds; and,
- (2) arrange and participate in any meeting requested by an interested Aboriginal community to discuss the archaeological find(s) and/or the use of Aboriginal archaeological liaisons.
- S5. The Company shall maintain records of communication with interested Aboriginal communities and make these records available for review by the Ministry upon request.

#### **SCHEDULE A**

#### **Facility Description**

The Facility shall consist of the construction, installation, operation, use and retiring of the following:

- (a) sixty five (65) SWT-2.221-101 wind turbine generators each rated at 2.221 megawatts generating output capacity
- (b) two (2) SWT-2.126-101 wind turbine generators each rated at 2.126 megawatts generating output capacity

with a total name plate capacity of 148.6 megawatts, designated as source ID Nos T1 – T30 and T33 –T69, each with a hub height of 99.5 metres above grade, and sited at the locations shown in Schedule B; and

(c) associated ancillary equipment, systems and technologies including one 166 megawatt transformer substation, on-site access roads, underground cabling and overhead distribution lines,

all in accordance with the Application.

### **SCHEDULE B**

### **Coordinates of the Equipment and Noise Specifications**

Coordinates of the Equipment are listed below in UTM, Z17-NAD83 projection:

	Source ID	Sound Power Level (dBA)	Easting (m)	Northing (m)	Source Description
1	T1	105	607,287	4,746,785	SWT-2.221-101
2	T2	105	605,035	4,746,639	SWT-2.221-101
3	T3	105	606,942	4,746,830	SWT-2.221-101
4	T4	105	604,861	4,746,993	SWT-2.221-101
5	T5	105	602,757	4,745,791	SWT-2.221-101
6	T6	105	606,513	4,747,319	SWT-2.221-101
7	T7	105	608,495	4,747,949	SWT-2.221-101
8	T8	105	607,477	4,747,512	SWT-2.221-101
9	Т9	105	600,290	4,745,005	SWT-2.221-101
10	T10	104	593,994	4,748,442	SWT-2.126-101
11	T11	105	603,472	4,748,075	SWT-2.221-101
12	T12	105	601,479	4,747,111	SWT-2.221-101
13	T13	105	594,663	4,751,618	SWT-2.221-101
14	T14	105	603,952	4,750,047	SWT-2.221-101
15	T15	105	608,232	4,749,798	SWT-2.221-101
16	T16	105	594,352	4,749,960	SWT-2.221-101
17	T17	105	598,648	4,747,922	SWT-2.221-101
18	T18	105	587,941	4,753,452	SWT-2.221-101
19	T19	105	606,366	4,749,368	SWT-2.221-101
20	T20	105	592,573	4,749,463	SWT-2.221-101
21	T21	105	602,692	4,746,290	SWT-2.221-101
22	T22	105	601,756	4,751,401	SWT-2.221-101
23	T23	105	591,178	4,751,634	SWT-2.221-101
24	T24	105	592,280	4,749,799	SWT-2.221-101
25	T25	105	599,133	4,750,265	SWT-2.221-101

### **SCHEDULE B**

continued

	Source ID	Sound Power Level (dBA)	Easting (m)	Northing (m)	Source Description
26	T26	105	607,589	4,749,481	SWT-2.221-101
27	T27	105	598,999	4,748,313	SWT-2.221-101
28	T28	105	591,339	4,752,273	SWT-2.221-101
29	T29	105	599,967	4,750,467	SWT-2.221-101
30	T30	105	606,959	4,749,603	SWT-2.221-101
31	T33	105	589,588	4,755,581	SWT-2.221-101
32	T34	105	589,790	4,753,921	SWT-2.221-101
33	T35	105	602,880	4,749,652	SWT-2.221-101
34	T36	105	590,002	4,755,767	SWT-2.221-101
35	T37	105	602,481	4,749,039	SWT-2.221-101
36	T38	105	602,608	4,749,469	SWT-2.221-101
37	T39	105	603,875	4,749,401	SWT-2.221-101
38	T40	105	604,239	4,749,614	SWT-2.221-101
39	T41	105	590,395	4,753,879	SWT-2.221-101
40	T42	105	600,381	4,750,377	SWT-2.221-101
41	T43	105	588,466	4,752,970	SWT-2.221-101
42	T44	105	599,489	4,748,483	SWT-2.221-101
43	T45	105	590,085	4,753,880	SWT-2.221-101
44	T46	105	590,582	4,751,836	SWT-2.221-101
45	T47	105	604,740	4,750,499	SWT-2.221-101
46	T48	105	594,126	4,750,504	SWT-2.221-101
47	T49	105	608,750	4,749,784	SWT-2.221-101
48	T50	105	609,091	4,749,844	SWT-2.221-101
49	T51	105	601,762	4,745,085	SWT-2.221-101
50	T52	105	599,708	4,748,016	SWT-2.221-101
51	T53	105	600,301	4,748,359	SWT-2.221-101
52	T54	105	607,370	4,746,400	SWT-2.221-101
53	T55	105	600,136	4,746,677	SWT-2.221-101
54	T56	105	598,675	4,750,335	SWT-2.221-101
55	T57	105	606,650	4,751,283	SWT-2.221-101
56	T58	104	589,733	4,750,362	SWT-2.126-101

#### **SCHEDULE B**

continued

	Source ID	Sound Power Level (dBA)	Easting (m)	Northing (m)	Source Description
57	T59	105	614,355	4,748,118	SWT-2.221-101
58	T60	105	614,974	4,747,470	SWT-2.221-101
59	T61	105	614,326	4,747,732	SWT-2.221-101
60	T62	105	614,680	4,748,176	SWT-2.221-101
61	T63	105	614,750	4,747,811	SWT-2.221-101
62	T64	105	614,705	4,747,338	SWT-2.221-101
63	T65	105	611,480	4,747,403	SWT-2.221-101
64	T66	105	611,758	4,747,387	SWT-2.221-101
65	T67	105	612,236	4,747,633	SWT-2.221-101
66	T68	105	602,131	4,748,909	SWT-2.221-101
67	T69	105	606,923	4,747,368	SWT-2.221-101
68	TR300	85	596,520	4,749,103	Transformer: 166 MVA

*The reasons for the imposition of these terms and conditions are as follows:* 

- 1. Conditions A1 and A2 are included to ensure that the Facility is constructed, installed, used, operated, maintained and retired in the manner in which it was described for review and upon which Approval was granted. These conditions are also included to emphasize the precedence of conditions in the Approval and the practice that the Approval is based on the most current document, if several conflicting documents are submitted for review;
- 2. Conditions A3 and A4 are included to require the Company to provide information to the public and the local municipality.
- 3. Conditions A5, A6 and A7 are included to ensure that final retirement of the Facility is completed in an aesthetically pleasing manner, in accordance with Ministry standards, and to ensure long-term protection of the health and safety of the public and the environment.
- 4. Condition A8 is included to require the Company to inform the Ministry of the commencement of activities related to the construction, installation and operation of the Facility.
- 5. Condition B is intended to limit the time period of the Approval.
- 6. Condition C1 is included to provide the minimum performance requirement considered necessary to prevent an Adverse Effect resulting from the operation of the Equipment and to ensure that the noise emissions from the Equipment will be in compliance with applicable limits set in the Noise Guidelines for Wind Farms.
- 7. Conditions C2, C3 and D are included to ensure that the Equipment is constructed, installed, used, operated, maintained and retired in a way that meets the regulatory setback prohibitions set out in O. Reg. 359/09.
- 8. Conditions E, F and G are included to require the Company to gather accurate information so that the environmental noise impact and subsequent compliance with the Act, O. Reg. 359/09, the Noise Guidelines for Wind Farms and this Approval can be verified.
- 9. Conditions H, I, J, K and L are included to ensure that the Facility is constructed, installed, used, operated, maintained and retired in a way that does not result in an Adverse Effect or hazard to the natural environment or any persons.
- 10. Condition M is included to protect archaeological resources that may be found at the project location.
- 11. Condition N is included to ensure continued communication between the Company and the local residents.

- 12. Condition O is included to emphasize that the Equipment must be maintained and operated according to a procedure that will result in compliance with the Act, O. Reg. 359/09 and this Approval.
- 13. Condition P is included to require the Company to keep records and provide information to the Ministry so that compliance with the Act, O. Reg. 359/09 and this Approval can be verified.
- 14. Condition Q is included to ensure that any complaints regarding the construction, installation, use, operation, maintenance or retirement of the Facility are responded to in a timely and efficient manner.
- 15. Condition R is included to ensure that the Facility is operated under the corporate name which appears on the application form submitted for this Approval and to ensure that the Director is informed of any changes.
- 16. Condition S is included to require the Company to ensure continued communication between the Company and Aboriginal communities.

#### NOTICE REGARDING HEARINGS

In accordance with Section 139 of the <u>Environmental Protection Act</u>, within 15 days after the service of this notice, you may by further written notice served upon the Director, the Environmental Review Tribunal and the Environmental Commissioner, require a hearing by the Tribunal.

In accordance with Section 47 of the <u>Environmental Bill of Rights, 1993</u>, the Environmental Commissioner will place notice of your request for a hearing on the Environmental Registry.

Section 142 of the <u>Environmental Protection Act</u> provides that the notice requiring the hearing shall state:

- 1. The portions of the renewable energy approval or each term or condition in the renewable energy approval in respect of which the hearing is required, and;
- 2. The grounds on which you intend to rely at the hearing in relation to each portion appealed.

The signed and dated notice requiring the hearing should also include:

- 3. The name of the appellant;
- 4. The address of the appellant;
- 5. The renewable energy approval number;
- 6. The date of the renewable energy approval;
- 7. The name of the Director;
- 8. The municipality or municipalities within which the project is to be engaged in;

This notice must be served upon:

The Secretary\*
Environmental Review Tribunal
655 Bay Street, 15th Floor
Toronto, Ontario

M5G 1E5

Suite 605
AND Toronto, Ontario
M5S 2B1

The Director Section 47.5.

AND

Section 47.5, Environmental Protection Act

Ministry of the Environment 2 St. Clair Avenue West, Floor 12A

Toronto, Ontario M4V 1L5

\* Further information on the Environmental Review Tribunal's requirements for an appeal can be obtained directly from the Tribunal at: Tel: (416) 314-4600, Fax: (416) 314-4506 or www.ert.gov.on.ca

The Environmental Commissioner

1075 Bay Street, 6th Floor

Under Section 142.1 of the <u>Environmental Protection Act</u>, residents of Ontario may require a hearing by the Environmental Review Tribunal within 15 days after the day on which notice of this decision is published in the Environmental Registry. By accessing the Environmental Registry at www.ebr.gov.on.ca, you can determine when this period ends.

Approval for the above noted renewable energy project is issued to you under Section 47.5 of the <u>Environmental Protection Act</u> subject to the terms and conditions outlined above.

DATED AT TORONTO this 15th day of June, 2012

Vic Schroter, P.Eng.

Director

Section 47.5, Environmental Protection Act

VS/

c: District Manager, MOE Hamilton - District Mark Kozak, Stantec Consulting Ltd.

# **Appendix C**

Original NHA Confirmation Letter June 30, 2011



#### 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



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:

- 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.
- 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.
- 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.
- 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

# **Appendix D** *MOECC Correspondence*



#### Ministry of the Environment and Climate Change

Ministère de l'Environnement et de l'Action en matière de changement climatique Ontario

Environmental Approvals Branch Direction des autorisations environnementales

2 St. Clair Avenue West

2, avenue St. Clair Ouest

Floor 12A

Étage 12A

Toronto ON M4V 1L5 Tel.: 416 314-8001 Fax: 416 314-8452 Toronto ON M4V 1L5 Tél: 416 314-8001 Téléc.: 416 314-8452

October 21, 2014

Ms. Jennifer Petruniak Dillon Consulting Ltd. ipetruniak@dillon.ca

#### Dear Ms. Petruniak:

Thank you for your letter of September 12, 2014, outlining minor modifications to the access road on the Grand Renewable Wind Project site. Based on the information you have provided, we have determined that the project modifications are consistent with the definition of a "technical change" as per Chapter 10 of the Technical Guide to Renewable Energy Approvals, and thus warrants an amendment, and updates to key documents integral to renewable energy approval #0300-8UQPKR. The ministry acknowledges that you have provided supporting documentation from the Ministry of Natural Resources and Forestry, as well as the Ministry of Tourism, Culture and Sport, and that both ministries are satisfied that your project modifications will not result in additional impacts from a natural and cultural heritage perspectives, and that no additional work is required on these matters.

In order to ensure continued compliance with O. Reg 359/09, please submit an application for an amendment at your earliest convenience. Should you have questions about the amendment process and supporting information requirements, please contact Ramona Afante, Project Evaluator, at 416-325-3306, <a href="mailto:ramona.afante@ontario.ca">ramona.afante@ontario.ca</a>, and for compliance related matters, Geofferey Knapper, Manager, Hamilton District Office at 905-521-7680, <a href="mailto:geoffrey.knapper@ontario.ca">geoffrey.knapper@ontario.ca</a>

Yours sincerely,

Agatha/Garcia-Wright

Director

Environmental Approvals Branch

cc: Vic Schroter, Supervisor, Team 5, MOECC EAB

Geoffrey Knapper, Manager, Hamilton District Office, MOECC

Ramona Afante, Project Evaluator, MOECC EAB

Zeljko Romic, Senior Program Support Coordinator, MOE EAASIB Beatrice Ashby, Senior Manager, Samsung Renewable Energy Inc.

# **Appendix E** *MNRF Correspondence*



From: Halloran, Joe (MNR) < Joe. Halloran@ontario.ca>

Sent: Wednesday, April 23, 2014 2:03 PM

Subject: RE: \*urgent\* GRW LP - access road 19 between turbines 52/53

Follow Up Flag: Follow up Flag Status: Completed

Categories: Meeting

#### Hi Beatrice,

In the review of the documentation provided to MNR on April 16, 2014, regarding the proposed change to the Grand Renewable Energy Project, a re-confirmation letter is not required.

As outlined in the documentation, the proposed change will result in the relocation of the access road. The Natural Heritage Assessment and subsequent addendums still apply, particularly Section 6.6.19 (Natural Heritage Feature 42) of the Environmental Impact Study.

Cheers,

Joe Halloran A\Renewable Energy Program Coordinator Southern Region Ph: 705-755-5353 joe.halloran@ontario.ca

From: AshbyBeatrice [mailto:b.ashby@samsung.com]

Sent: April 23, 2014 11:45 AM To: Halloran, Joe (MNR) Cc: Afante, Ramona (ENE)

Subject: RE: \*urgent\* GRW LP - access road 19 between turbines 52/53

Joe - thanks very much for this!

From: Halloran, Joe (MNR) [mailto:Joe.Halloran@ontario.ca]

Sent: April-23-14 11:40 AM

To: AshbyBeatrice

Cc: Afante, Ramona (ENE)

Subject: RE: \*urgent\* GRW LP - access road 19 between turbines 52/53

Hi Beatrice,

I will get a response back to you by the end of day, noting the tight timeframe regarding tree removals (May 1).

Cheers,

Joe Halloran

A\Renewable Energy Program Coordinator

Southern Region Ph: 705-755-5353 joe.halloran@ontario.ca

From: AshbyBeatrice [mailto:b.ashby@samsung.com]

Sent: April 22, 2014 9:54 AM To: Halloran, Joe (MNR) Cc: 'AshbyBeatrice'

Subject: RE: \*urgent\* GRW LP - access road 19 between turbines 52/53

Importance: High

Hi Joe,

I have attached a response from NTCS on the matter below. The attached shows a more refined 'new' area (in yellow). Can you please provide your conclusion? We need to understand MNR's position in order to process the REA amendment with MOE.

Many thanks!

Bea

From: AshbyBeatrice [mailto:b.ashby@samsung.com]

Sent: April-17-14 10:47 AM

To: 'AshbyBeatrice'; joe.halloran@ontario.ca

Cc: ariel.b@samsung.com

Subject: RE: \*urgent\* GRW LP - access road 19 between turbines 52/53

Hi Joe - please let us know if you have any questions on the below inquiry. We look forward to your quidance.

Cheers, Bea

From: AshbyBeatrice [mailto:b.ashby@samsung.com]

Sent: April-16-14 3:14 PM To: 'ioe.halloran@ontario.ca'

Cc: 'AshbyBeatrice'; 'ariel.b@samsung.com'

Subject: FW: \*urgent\* GRW LP - access road 19 between turbines 52/53

#### Hi Joe.

I hope all is well with you. I wanted to ask MNRs position on below inquiry to the MOE today regarding the Grand Renewable Wind Project. As you will see from the aerial snap shot below a curve in one of our access roads (Access road #19, turbines 52 & 53) is not achievable for delivery of turbine components. We are still reviewing possibilities but this area will likely be confirmed as too narrow. The constructible area is 10m wide. We are contemplating an option marked by the yellow box below. We have investigated this option and understand that there will not be any impacts to current AA or NHA studies based on below assumption but would like to ask your opinion of below. I have attached Figure 6.8 (GRW LP NHA Report) and enclosed a link to the Project website where you will be able to find the NHA Report in its entirety:

http://www.samsungrenewableenergy.ca/haldimand

Please let me know if you are available to discuss this week.

Many Thanks in advance,

**Beatrice** 



Beatrice Ashby| Senior Manager| Renewable Energy Approval| Samsung Renewable Energy Inc.

55 Standish Court, 9th Floor, Mississauga, ON L5R 4B2, Canada T: 905.501.5663 M: 416.888.2190

SRE Confidential Communication

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From: Schroter, Vic (ENE) [mailto:Vic.Schroter@ontario.ca]

Sent: April-16-14 1:37 PM

To: AshbyBeatrice

Cc: <u>ariel.b@samsung.com</u>; Afante, Ramona (ENE); Romic, Zeljko (ENE) Subject: RE: \*urgent\* GRW LP - access road 19 between turbines 52/53

#### Bea

I am forwarding this to Ramona. She is a Senior Project Evaluator in my team and will take the lead on GREP wind.

#### **Thanks**

#### Vic Schroter

Supervisor, Team 5 (Renewable Energy), Phone: (416) 314-8573, vic.schroter@ontario.ca

From: AshbyBeatrice [mailto:b.ashby@samsung.com]

Sent: April 16, 2014 8:52 AM To: Schroter, Vic (ENE)

Cc: ariel.b@samsung.com; 'AshbyBeatrice'

Subject: \*urgent\* GRW LP - access road 19 between turbines 52/53

#### Dear Vic.

I hope this message finds you well.

We would like to meet with you to discuss the image below. The below image shows a curve in the road that is not achievable for delivery of turbine components. We are still reviewing possibilities but this area will likely be confirmed as too narrow. The constructible area is 10m wide. This is access road 19 between turbines 52/53. We are contemplating an option marked by the yellow box below. We have investigated this option and understand that there will not be any impacts to current AA or NHA studies based on below assumption.

Please advise of convenient time to meet (this week if possible) and we will adjust our schedules to accommodate.

Many Thanks in advance!

Bea



SAMSUNG

Beatrice Ashby| Senior Manager| Renewable Energy Approval| Samsung Renewable Energy Inc.

55 Standish Court, 9th Floor, Mississauga, ON L5R 4B2, Canada T: 905.501.5663 M: 416.888.2190

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think green before you print

# **Appendix F**

**Original NHA Figures – Turbine 53** 







Proposed Turbine Location Access Road Overhead Collector Line --- Underground Collector Line Solar Project Location Solar Lands AREA Transmission Line Overhead Transmission Line • • • • Underground Transmission Line

Electrical Transmission Component

Constructable Area

Wind Project Location

Railway

Abandoned Railway

Transmission Line (MNR) Watercourse (MNR)

Waterbody (MNR)

Natural Feature Vegetation Community (ELC)

Potential Bobolink Habitat

 $\triangle$ Bobolink Sited  $\triangle$ 

No Bobolink Sited

FOD – Deciduous Forest
FOD1-1 – Dry-fresh Red Oak Deciduous Forest
FOD2-1 – Dry-fresh Cak – Red Maple Deciduous Forest
FOD2-2 – Dry-fresh Oak – Red Maple Deciduous Forest
FOD2-2 – Dry-fresh Oak – Hickory Deciduous Forest
FOD3-1 – Dry-fresh Oak – Hardwood Deciduous Forest
FOD3-1 – Dry-fresh Polar Deciduous Forest
FOD4-2 – Dry-fresh Wight Ash Deciduous Forest
FOD4-2 – Dry-fresh Wight Ash Deciduous Forest
FOD5-3 – Dry-fresh Sugar Maple – Beech Deciduous Forest
FOD5-3 – Dry-fresh Sugar Maple – Oak Deciduous Forest
FOD5-3 – Dry-fresh Sugar Maple – Oak Deciduous Forest
FOD5-3 – Dry-fresh Sugar Maple – Nithe Ash Deciduous Forest
FOD5-11 - Dry-fresh Sugar Maple – Oak – Beech Deciduous Forest
FOD5-11 - Dry-fresh Sugar Maple – Lowland Ash Deciduous Forest
FOD6-1 – Fresh-moist Sugar Maple – Lowland Ash Deciduous Forest
FOD6-6 – Fresh-moist Sugar Maple – Hickory Deciduous Forest
FOD6-6 – Fresh-moist Sugar Maple – Hickory Deciduous Forest
FOD7-1 – Fresh-moist Sugar Maple – Hickory Deciduous Forest
FOD7-1 – Fresh-moist Sugar Maple – Howland Deciduous Forest
FOD7-1 – Fresh-moist Sugar Maple – Hickory Deciduous Forest
FOD7-1 – Fresh-moist Sugar Maple – Hickory Deciduous Forest
FOD7-1 – Fresh-moist Sugar Maple – Hickory Deciduous Forest
FOD7-1 – Fresh-moist Sugar Maple – Hickory Deciduous Forest
FOD7-1 – Fresh-moist Sugar Maple – Hickory Deciduous Forest
FOD9-3 – Fresh-moist Sugar Maple – Maple Peciduous Forest
FOD9-4 – Fresh-moist Sugar Maple – Hickory Deciduous Forest
FOD9-6 – Fresh-moist Sugar Maple – Maple Peciduous Forest
FOD9-6 – Fresh-moist Sugar Maple – Maple Peciduous Forest
FOD9-6 – Fresh-moist Sugar Maple – Maple Peciduous Forest
FOD9-6 – Fresh-moist Sugar Maple – Maple Peciduous Forest
FOD9-6 – Fresh-moist Sugar Maple – Maple Peciduous Forest
FOD9-6 – Fresh-moist Sugar Maple – Maple Peciduous Forest
FOD9-6 – Fresh-moist Sugar Maple – Maple Peciduous Forest
FOD9-6 – Fresh-moi

CUP3-13\* - White Spruce Coniferous Plantation
CUM1 - Mineral Cultural Meadow
CUS1-1 - Hawthorn Cultural Savannah
CUT1 - Hawthorn Cultural Savannah
CUT1 - Mineral Cultural Thicket
CUT1-1 - Sumac Cultural Thicket
CUT1-1 - Sumac Cultural Thicket
CUT1-7 - European Buckthorn - Sweet Cherry Cultural thicket
CUV1-1 - Mineral Cultural Woodland
CUW1-1 - Red Cedar Mineral Cultural Woodland
CUW1-3 - Ash - Sumac Mineral Cultural Woodland
CUW1-5\* - Norway Maple Mineral Cultural Woodland
CUW1-6\* - White Elm Cultural Woodland
CUW1-7\* - Red maple Mineral Cultural Woodland
CUW1-7\* - Red maple Mineral Cultural Woodland
CUW1-7\* - Red maple Mineral Cultural Woodland
CUW1-7\* - White Elm Cultural Woodland
CUW1-7\* - White Pine Cultural Woodland

Swamp Communities (SW)
SWD - Deciduous Swamp
SWD1-1 - Swamp Oak Mineral Deciduous Swamp
SWD1-2 - Bur Oak Mineral Deciduous Swamp
SWD2-2 - Green Ash Mineral Deciduous Swamp
SWD2-3\* - Ash - Hardwood Mineral Deciduous Swamp
SWD2-3\* - Ash - Hardwood Mineral Deciduous Swamp
SWD2-4\* - Green Ash - Red Maple Mineral Deciduous Swamp
SWD3-1 - Red Maple Mineral Deciduous Swamp

SWD3-2 – Silver Maple Mineral Deciduous Swamp SWD3-3 – Swamp Maple Mineral Deciduous Swamp

SWT2 – Mineral Thicket Swamp
SWT2.4 – Buttonbush Mineral Thicket Swamp
SWT2.5 – Red Osier Dogwood Mineral Thicket Swamp
SWT2.8 – Siky Dogwood Mineral Thicket Swamp
SWT2.9 – Gray Dogwood Mineral Thicket Swamp
SWT2.14\* - Willow – Dogwood Mineral Thicket Swamp
SWT2.13\* - Willow – Dogwood Mineral Thicket Swamp
SWT2.15\* - Red Maple Mineral Thicket Swamp
SWT2.15\* - Red Maple Mineral Thicket Swamp
SWT3.7 – Winterberry Organic Thicket Swamp

Marsh Communities (MA)
MANU2 – Mineral Meadow Marsh
MANU2 – Preed Canary Grass Mineral Meadow Marsh
MANU2 - Jewelweed Mineral Meadow Marsh
MANU2 - Jewelweed Mineral Meadow Marsh
MANU2 - To-Forb Mineral Meadow Marsh
MANU2 - To-Cartal Mineral Meadow Marsh
MASU - To-Cartal Mineral Shallow Marsh
MASU - To-Cartal Mineral Meadow Marsh
MASU- Recutal Mineral Shallow Marsh

Open Water (OA) OA – Open Aquation

Shallow Water (SA) SAM1-2 – Duckweed Mixed Shallow Aquatic

HR – Hedgerow D – Disturbed Res - Residential

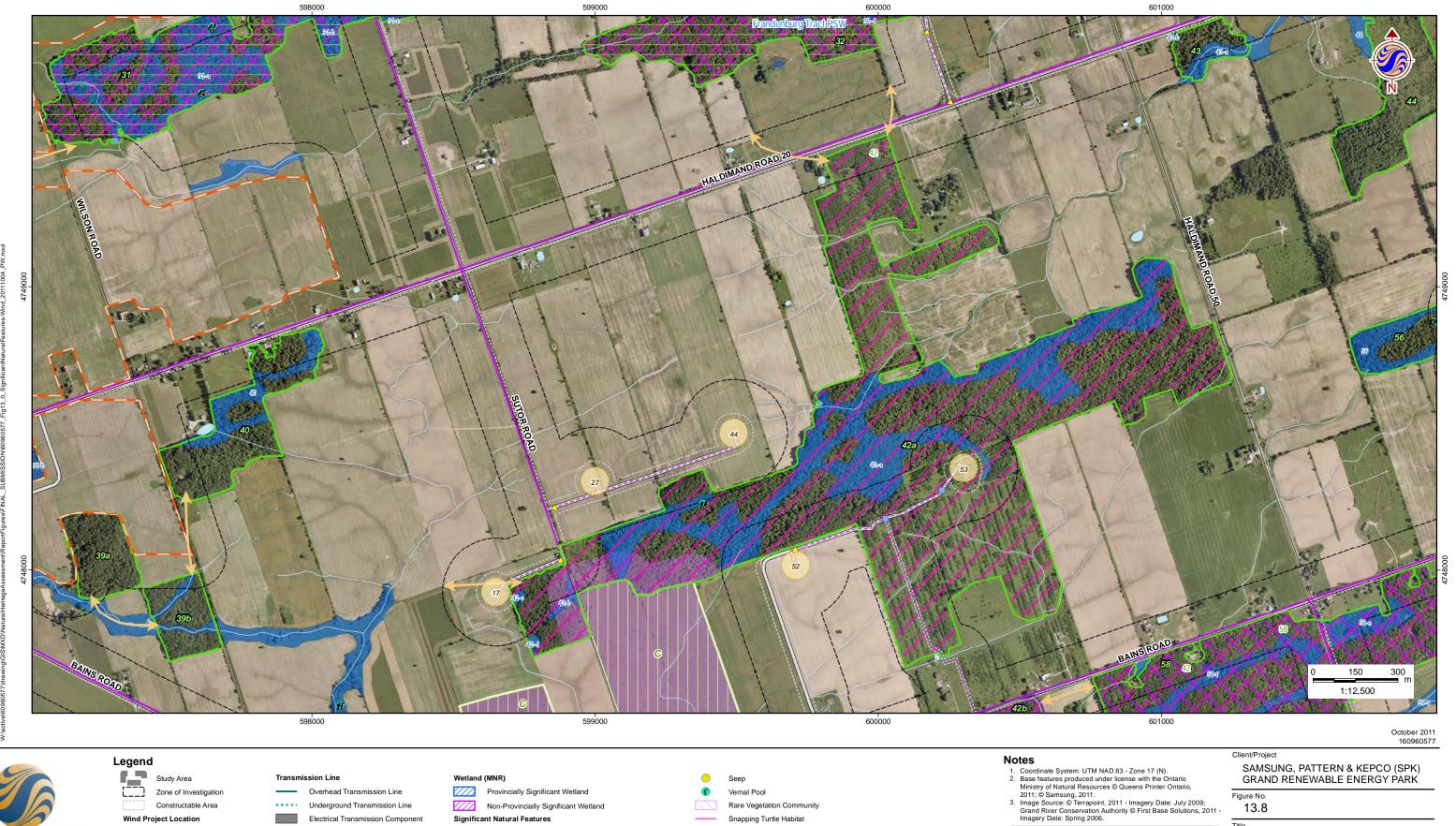
Image Source: © Terrapoint, 2011 - Imagery Date: July 2009; Grand River Conservation Authority © First Base Solutions, 2011 -



Figure No

**ELC VEGETATION COMMUNITIES - W8** 

6.8 Imagery Date: Spring 2006





Wind Project Location

Proposed Turbine Location Access Road

Overhead Collector Line ---- Underground Collector Line

Solar Project Location

Solar Lands

Electrical Transmission Component

Existing Features

Transmission Line (MNR)

Watercourse (MNR) Waterbody (MNR)

Non-Provincially Significant Wetland

Significant Natural Features

Significant Woodland Significant Wetland

Significant Valleyland Significant Wildlife Habitat

Deer Wintering Area Habitat for Declining/Area-Sensitive Grassland Species Winter Raptor Roosting & Feeding Area

Rare Vegetation Community

Snapping Turtle Habitat Animal Movement Corridor

Waterfowl Stopover Migratory Landbird Habitat

Habitat for Declining Woodland Species Area-Senstitive Species Woodland Habitat

Short-Eared Owl Habitat Culverts

Wildlife & Flow Culvert

Other Culvert

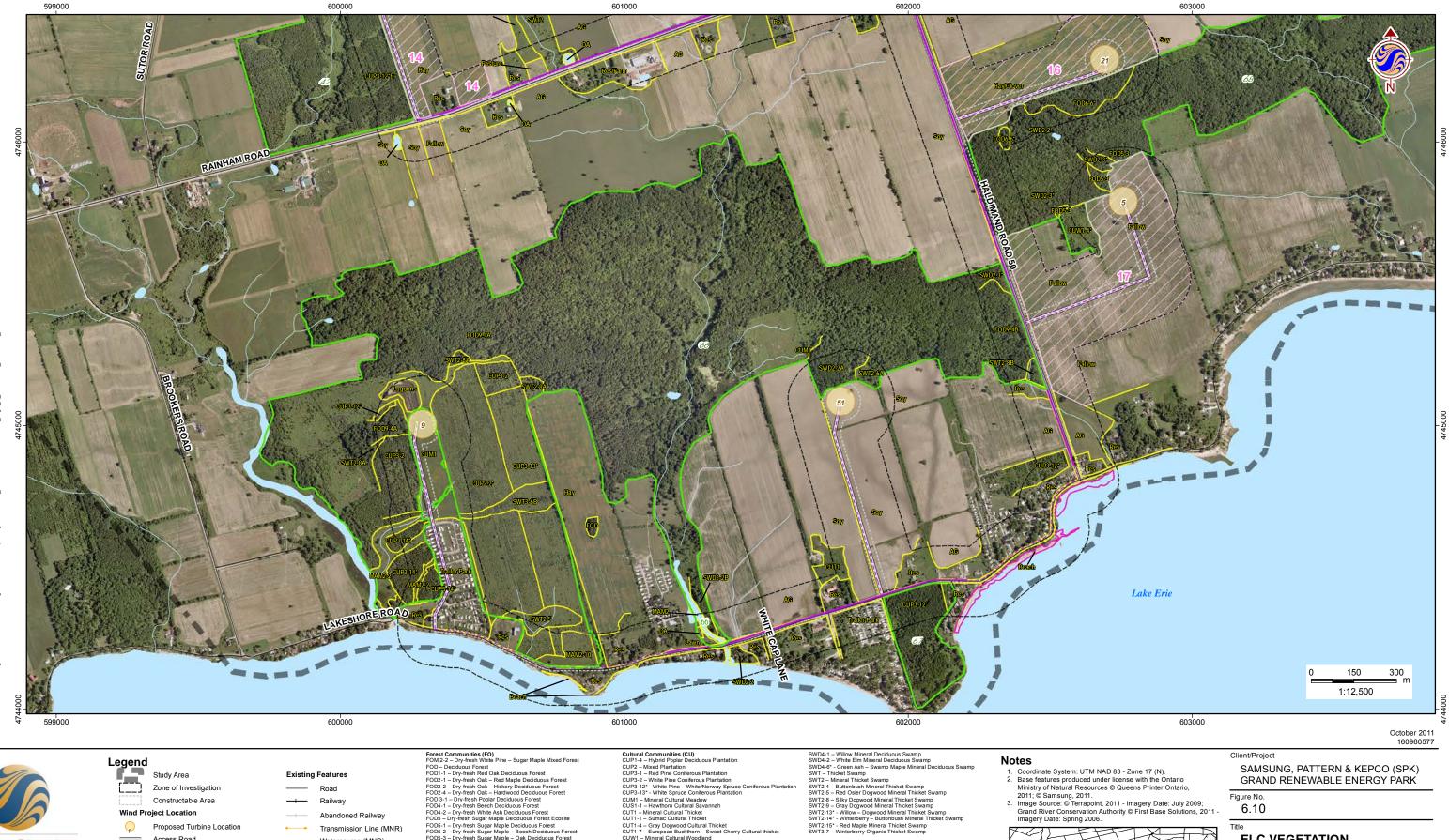


SIGNIFICANT NATURAL **FEATURES - W8** 

# **Appendix G**

**Original NHA Figures – Turbine 9** 







Wind Project Location Proposed Turbine Location Access Road Overhead Collector Line --- Underground Collector Line Solar Project Location Solar Lands Transmission Line

Electrical Transmission Component

Zone of Investigation

Constructable Area

AREA Overhead Transmission Line • • • • Underground Transmission Line

Potential Bobolink Habitat

Vegetation Community (ELC)

Bobolink Sited  $\triangle$ 

No Bobolink Sited

Abandoned Railway

Watercourse (MNR)

Waterbody (MNR)

Natural Feature

Transmission Line (MNR)

FOD – Deciduous Forest
FOD1-1 – Dry-fresh Red Oak Deciduous Forest
FOD2-1 – Dry-fresh Cak – Red Maple Deciduous Forest
FOD2-2 – Dry-fresh Oak – Red Maple Deciduous Forest
FOD2-2 – Dry-fresh Oak – Hickory Deciduous Forest
FOD3-1 – Dry-fresh Oak – Hardwood Deciduous Forest
FOD3-1 – Dry-fresh Polar Deciduous Forest
FOD4-2 – Dry-fresh Wight Ash Deciduous Forest
FOD4-2 – Dry-fresh Wight Ash Deciduous Forest
FOD5-3 – Dry-fresh Sugar Maple – Beech Deciduous Forest
FOD5-3 – Dry-fresh Sugar Maple – Oak Deciduous Forest
FOD5-3 – Dry-fresh Sugar Maple – Oak Deciduous Forest
FOD5-3 – Dry-fresh Sugar Maple – Nithe Ash Deciduous Forest
FOD5-11 - Dry-fresh Sugar Maple – Oak – Beech Deciduous Forest
FOD5-11 - Dry-fresh Sugar Maple – Lowland Ash Deciduous Forest
FOD6-1 – Fresh-moist Sugar Maple – Lowland Ash Deciduous Forest
FOD6-6 – Fresh-moist Sugar Maple – Hickory Deciduous Forest
FOD6-6 – Fresh-moist Sugar Maple – Hickory Deciduous Forest
FOD7-1 – Fresh-moist Sugar Maple – Hickory Deciduous Forest
FOD7-1 – Fresh-moist Sugar Maple – Howland Deciduous Forest
FOD7-1 – Fresh-moist Sugar Maple – Hickory Deciduous Forest
FOD7-1 – Fresh-moist Sugar Maple – Hickory Deciduous Forest
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FOD9-6 – Fresh-moist Sugar Maple – Maple Peciduous Forest
FOD9-6 – Fresh-moi

CUP3-12\* - White Pine Coniferous Plantation
CUP3-12\* - White Pine — White/Norway Spruce Cor
CUP3-13\* - White Spruce Coniferous Plantation

CUP3-13\* - White Spruce Coniferous Plantation
CUM1 - Mineral Cultural Meadow
CUS1-1 - Hawthorn Cultural Savannah
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SWD3-1 - Red Maple Mineral Deciduous Swamp SWD3-2 – Silver Maple Mineral Deciduous Swamp SWD3-3 – Swamp Maple Mineral Deciduous Swamp

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MANU2 – Mineral Meadow Marsh
MANU2 – Preed Canary Grass Mineral Meadow Marsh
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MANU2 - Jewelweed Mineral Meadow Marsh
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MASU - To-Cartal Mineral Meadow Marsh
MASU- Recutal Mineral Shallow Marsh Open Water (OA) OA – Open Aquation Shallow Water (SA) SAM1-2 – Duckweed Mixed Shallow Aquatic

HR – Hedgerow D – Disturbed Res - Residential

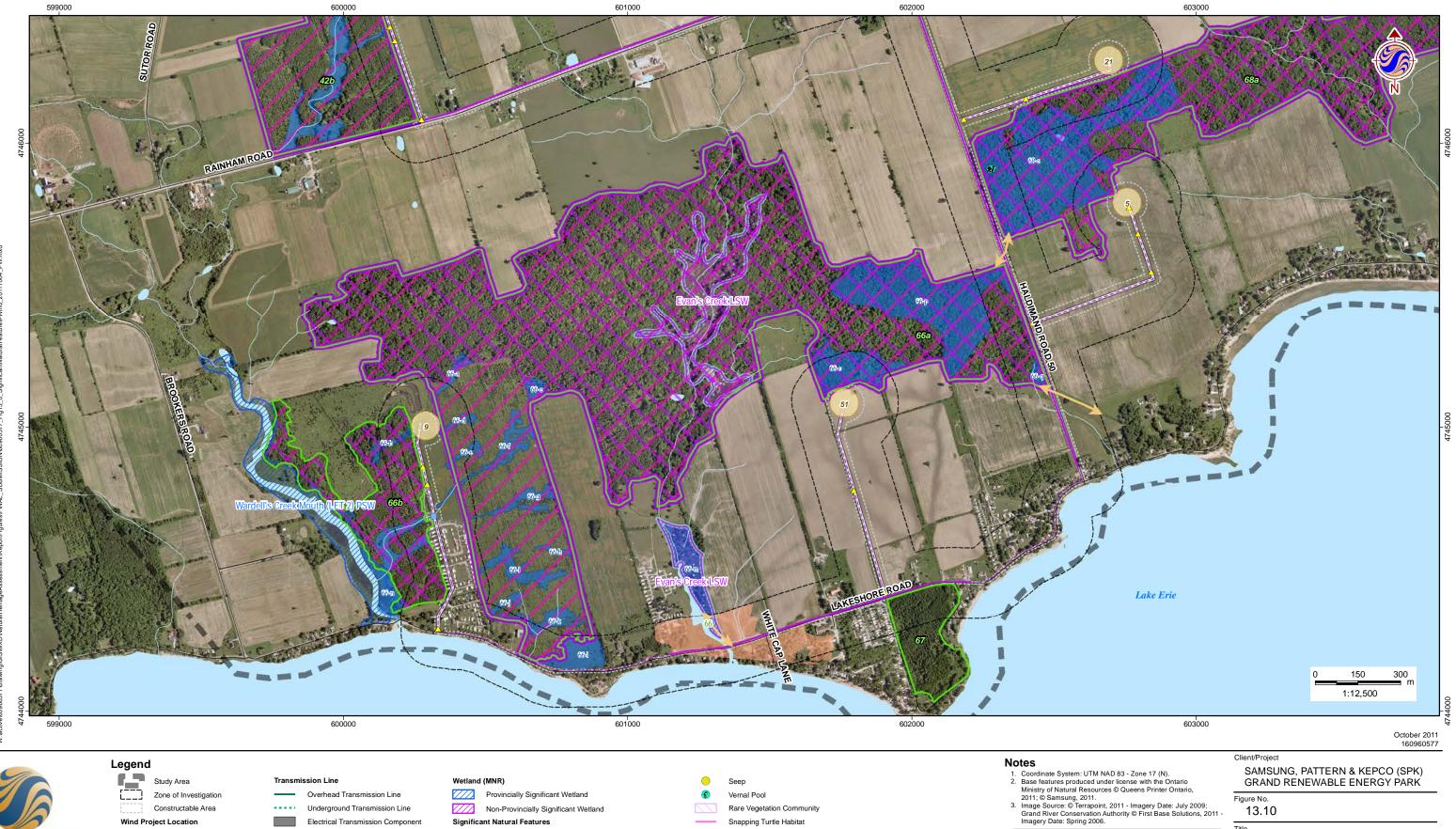
2. Base features produced under license with the Ontario Ministry of Natural Resources © Queens Printer Ontario, 2011; © Samsung, 2011.

 Image Source: © Terrapoint, 2011 - Imagery Date: July 2009; Grand River Conservation Authority © First Base Solutions, 2011 -Imagery Date: Spring 2006



Figure No. 6.10

**ELC VEGETATION COMMUNITIES - W10** 





Zone of Investigation Constructable Area

Wind Project Location

Proposed Turbine Location Access Road

Overhead Collector Line ---- Underground Collector Line

Solar Project Location

Solar Lands

Overhead Transmission Line Underground Transmission Line

Electrical Transmission Component

Waterbody (MNR)

Transmission Line (MNR) Watercourse (MNR)

Provincially Significant Wetland Non-Provincially Significant Wetland

#### Significant Natural Features

Significant Woodland Significant Wetland

#### Significant Valleyland Significant Wildlife Habitat

Deer Wintering Area Habitat for Declining/Area-Sensitive Grassland Species

Winter Raptor Roosting & Feeding Area

Vernal Pool

Rare Vegetation Community

Snapping Turtle Habitat Animal Movement Corridor

Waterfowl Stopover

Migratory Landbird Habitat Habitat for Declining Woodland Species

Area-Senstitive Species Woodland Habitat Short-Eared Owl Habitat

Wildlife & Flow Culvert

Other Culvert



Figure No. 13.10

SIGNIFICANT NATURAL **FEATURES - W10** 



Petruniak, Jennifer <jpetruniak@dillon.ca>

## RE: Submission of Minor AMendment for the Grand Renewable Wind Project

1 message

Milian, Kazia (MNRF) <kazia.milian@ontario.ca>

Tue, Feb 3, 2015 at 3:57 PM

To: "Petruniak, Jennifer" <jpetruniak@dillon.ca>

Cc: Beatrice Ashby <b.ashby@samsung.com>, Ariel Bautista <ariel.bautista@samsungrenewableenergy.ca>, Heather Zurbrigg <hzurbrigg@dillon.ca>, 141209 <141209@dillon.ca>, "Myschowoda, Clairissa (MNRF)" <Clairissa.Myschowoda@ontario.ca>

#### Hi Jennifer

Based on the information you have provided, we agree with your assessment that the proposed changes to the NHA report, Environmental Impact Study – wind, related to the amount of plantation woodland area to be removed, and to update the amount and location of woodland compensation is consistent with the proponent's established commitment to minimize or eliminate disturbance effects of the project.

Upon review of the modifications, MNRF is satisfied that the Natural Heritage Assessment requirements of Ontario Regulation 359/09 have been met. Please add this email as an addendum to the confirmation letter issued June 30, 20111 for Grand Renewable Wind Project.

Thank you,

Kazía Mílían

A/Supervisor, Land Use Planning Unit

Southern Region Resources Section

Ministry of Natural Resources and Forestry

phone: 705-755-3268

e-mail: kazia.milian@ontario.ca

From: Ariel Bautista <ariel.b@samsung.com>
Sent: Tuesday, April 22, 2014 9:49 AM

Subject: Re: RE: GRW confirmation from MTCS request

Thank you very much Andrea for your quick response. As always, it is greatly appreciated!

Ariel

---Original Message---

Sender: Williams, Andrea (MTCS)/Andrea. Williams@ontario.ca

Date: 2014/04/22 09:41 (GMT-04:00)

Subject : RE: GRW confirmation from MTCS request

#### Good morning, Ariel:

This ministry has had the opportunity to review the proposed refinements to your project as outlined your email. The assessment of the area proposed to be impacted was documented in the Stage 2 report under PIFs P218-098-2010 and P218-023-2011, which has been entered into the Ontario Public Register of Archaeology reports. The report recommended that there were no further archaeological concerns for that area.

The proposed changes to the access road and collector line for Turbine 53 do not affect the original recommendations for this portion of the property.

This 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.

I trust this is of assistance. Should you require any further information regarding this matter, please feel free to contact me.

Thank you, Andrea

#### **Andrea Williams**

Archaeology Review Officer Archaeology Program Unit Ministry of Tourism, Culture and Sport 401 Bay Street, Suite 1700 Toronto, Ontario M7A 0A7 416-314-2120 Andrea.Williams@ontario.ca

From: Ariel Bautista [mailto:ariel.b@samsung.com]

Sent: April 17, 2014 6:30 PM

To: Williams, Andrea (MTCS); Sherratt, Jim (MTCS)

Cc: b.ashby@samsung.com

Subject: GRW confirmation from MTCS request

Importance: High

Dear Andrea and Jim,

I hope you are both well. With respect to the Grand Renewable Wind LP project, we are looking at making an adjustment to an access road between Turbines 52 and 53 and are seeking MTCS confirmation that this is acceptable from an archaeology perspective.

Attached is a page from the cleared Stage 2 report (page 450) which shows the areas surveyed and findings.

Below is a zoomed in image of the area we are interested in. The Blue line represents the zone where Stage 2 was completed. This blue area was provided by the archaeologists.

The pink represents where our REA limit is and where our access road and collector line will reside.

The yellow line represents approximately where our new REA limit will be. Essentially, the turn will be made wider.

Right click have to deventioal pictures. To help pre lect your privacy, Outbook prevented automatic deventioal of this picture from the Internet.

#### Request:

Stage 2 Clearance was achieved, and from the Stage 2 archaeology reports do not show any archaeology sites in the area being proposed for expansion.

We would like MTCS to confirm, from an archaeological perspective, that there is no concern with us expanding our REA limit within the stage 2 areas studied and shown above.

Please feel free to call me to discuss further.

Sincerely,

Ariel Bautista Manager, Project Development

Samsung Renewable Energy Inc. 55 Standish Court, 9th Floor Mississauga, ON L5R 4B2 Tel: 905-501-5666 Cel: 647-866-4769 ariel.b@samsung.com

# **Appendix D** *Notice of REA Amendment*



#### NOTICE OF APPLICATION FOR REA AMENDMENT

For the Grand Renewable Wind Project

By Grand Renewable Wind LP/Grand Renewable Wind GP Inc.

REA Number: 0300-8UQPKR

**OPA Reference Number:** F-002453-WIN-KC1-601 **Project Location:** County of Haldimand, Ontario

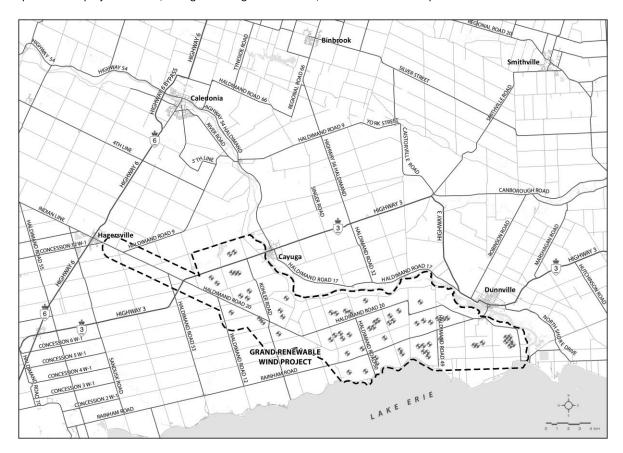
Dated at: The County of Haldimand this 11 day of February 2015

Grand Renewable Wind LP is proposing a minor technical change to the Grand Renewable Wind Project. The project is subject to the provisions of the *Environmental Protection Act (Act)* Part V.0.1 and Ontario Regulation 359/09 (Regulation). This notice must be distributed in accordance with the Regulation. This notice is being distributed to inform the public of a **proposed change to the project**. The project location is described in the map below.

#### **Project Description and Proposed Changes:**

Pursuant to the Act and Regulation, the project is classified as a Class 4 Wind Facility. An application has been made to the Ministry of the Environment and Climate Change for a minor technical change to the project. This minor technical change consists of a minor realignment to a portion of access road associated with Turbine 53. The purpose of the realignment from the original application is to allow for the safe passage of construction and delivery vehicles during the construction phase.

If approved with these changes, the facility would still have a nameplate capacity 148.6 megawatts (MW) for the wind component. The project location, taking the change into account, is described in the map below.



#### **Documents for Public Inspection:**

Completion of a Modifications Document was undertaken by Grand Renewable Wind LP to document where revision to the original REA application is required to incorporate this technical change application. This Modifications Document serves to update the supporting documents that are required to form part of the application submitted to the Ministry of the Environment and Climate Change. Written copies of the Modifications Document will be made available for public inspection on February 17, 2015 on the project website at http://www.samsungrenewableenergy.ca/haldimand.

#### **Ongoing Communication:**

Grand Renewable Wind LP is committed to maintaining communication with local stakeholders and community members. Haldimand County staff and elected council, regulatory agencies, local residents and Aboriginal communities will be notified of Project activities through newspaper advertisements, a mailing to the above-mentioned parties and a notice posted on the Project's website, www.samsungrenewableenergy.ca/haldimand.

To learn more about the application for a technical change REA amendment, or to communicate concerns, please contact:

Beatrice Ashby Tel: 905-501-5663

Email: b.ashby@samsung.com

Grand Renewable Wind LP 2050 Derry Road West 2nd Floor Mississauga, ON L5N 0B9