

**APPENDIX A      NATURAL HERITAGE ASSESSMENT ADDENDUM**

Ministry of  
Natural Resources  
Southern Region  
300 Water Street  
4<sup>th</sup> Floor, South Tower  
Peterborough, Ontario K9J 8M5  
Telephone: 705-755-3243  
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Ministère des  
Richesses naturelles



November 28, 2013

Andrea Garcia  
NextEra Energy Canada, ULC  
390 Bay Street, Suite 1720,  
Toronto, ON M5H 2Y2  
[andrea.garcia@nee.com](mailto:andrea.garcia@nee.com)

**RE: Bornish Wind Energy Centre NHA Addendum 4**

Dear Ms. Garcia,

The Ministry of Natural Resources (MNR) has received the document dated November 2013 that describes modifications to the Bornish Wind Energy Centre made subsequent to MNR's letter confirming the Natural Heritage Assessment in respect of the project.

Upon review of the modifications, MNR is satisfied that the Natural Heritage Assessment requirements of Ontario Regulation 359/09 have been met. Please add this letter as an addendum to the confirmation letter issued April 2, 2012, and the re-confirmation letters issued on July 16, 2012, and February 11, 2013 for the Bornish Wind Energy Centre project.

If you wish to discuss this matter further, please contact Lindsay Kingdon at [Lindsay.kingdon@ontario.ca](mailto:Lindsay.kingdon@ontario.ca) or 705-755-3215

Sincerely,

A handwritten signature in black ink, appearing to read "Joe Halloran".

Joe Halloran for  
Kathy Woeller  
Southern Region Land Use Planning Supervisor  
Southern Region MNR

cc Joe Halloran, AI Renewable Energy Coordinator, Southern Region MNR  
Charlotte Moore, Natural Resource Solutions Inc.  
Narren Santos, Environmental Approvals Access & Service Integration Branch, MOE  
Zeljko Romic, Environmental Approvals Access & Service Integration Branch, MOE

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Ministère des  
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December 2, 2013

Andrea Garcia  
NextEra Energy Canada, ULC  
390 Bay Street, Suite 1720  
Toronto, ON M5H 2Y2  
[andrea.garcia@nee.com](mailto:andrea.garcia@nee.com)

**RE: Bornish Wind Energy Centre NHA Addendum V - Parkhill Interconnect  
Addendum**

Dear Ms. Garcia,

The Ministry of Natural Resources (MNR) has received the document dated December 2013 that describes modifications to the Bornish Wind Energy Centre, specifically relating to infrastructure for the Parkhill Interconnect project area, made subsequent to MNR's letter confirming the Natural Heritage Assessment in respect of the project.

Upon review of the modifications, MNR is satisfied that the Natural Heritage Assessment requirements of Ontario Regulation 359/09 have been met. Please add this letter as an addendum to the confirmation letter issued April 2, 2012, and the re-confirmation letters issued on July 16, 2012, February 11, 2013, and November 28, 2013 for the Bornish Wind Energy Centre project.

If you wish to discuss this matter further, please contact Lindsay Kingdon at [Lindsay.kingdon@ontario.ca](mailto:Lindsay.kingdon@ontario.ca) or 705-755-3215.

Sincerely,

A handwritten signature in black ink, appearing to read "Kathy Woeller".

Kathy Woeller  
Southern Region Land Use Planning Supervisor  
Southern Region MNR

cc Joe Halloran, A\ Renewable Energy Coordinator, Southern Region MNR  
Charlotte Moore, Natural Resource Solutions Inc.  
Narren Santos, Environmental Approvals Access & Service Integration Branch, MOE  
Zeljko Romic, Environmental Approvals Access & Service Integration Branch, MOE

***BORNISH WIND ENERGY CENTRE***  
**Natural Heritage Assessment**  
**Addendum IV Report**

**Prepared for:**  
NextEra Energy Canada, ULC  
390 Bay Street, Suite 1720  
Toronto, ON M5H 2Y2

Project No. 1231

Date: November 2013



**NATURAL RESOURCE SOLUTIONS INC.**  
Aquatic, Terrestrial and Wetland Biologists

**BORNISH WIND ENERGY CENTRE**  
***Natural Heritage Assessment Addendum IV Report***

**Project Team:**

Staff	Role
Andrew Ryckman	Project Manager/Biologist
Charlotte Moore	Terrestrial and Wetland Biologist
Kaitlin Boddaert	GIS Technician

Report submitted on November 28, 2013



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Andrew G. Ryckman

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## 1.0 Project Description

Natural Resource Solutions Inc. (NRSI) was retained in April 2011 by GL-Garrad Hassan on behalf of NextEra Energy Canada, ULC (NextEra) to conduct a natural environment resource assessment in accordance with the Renewable Energy Approval (REA) Regulation, Ontario Regulation 359/09. This assessment included a records review, site investigation, evaluation of significance, and impact assessment of any potentially significant natural features or wildlife habitats at a proposed 72.9MW wind energy generating facility in North Middlesex, Middlesex County Ontario.

The Bornish Wind Energy Centre ('the project') will be owned and operated by Bornish Wind, LP, a wholly-owned subsidiary of NextEra. The project is located in northwestern Middlesex County in the Township of North Middlesex, Ontario (see Figure 1). The Bornish Wind Energy Centre is approximately 3.3km south of the Town of Parkhill, Ontario, with the general project area bound to the north by Nairn/Elginfield Road, to the south by Townsend Line, and to the east and west by Broken Front/Scout Road and Fort Rose Road. A transmission line is proposed to run north along Kerwood Road from the substation to Elginfield Road/Nairn Road. This transmission line is then proposed to continue eastward along Nairn Road to an existing 500 kV line and interconnection facilities located west of Petty Street.

The Bornish Wind Energy Centre is proposed to consist of forty-five GE 1.6-100 (1.62 MW) turbines installed for a total installed capacity of 72.9MW. However, locations for forty-eight turbines will be permitted. The proposed GE 1.6-100 turbine is a 3-bladed, upwind, horizontal-axis turbine. The turbine has a total rotor diameter of 100m, which results in a swept area of 7,854m<sup>2</sup> and is designed to operate at between 9.75 and 16.18 revolutions per minute (rpm). The turbine rotor and nacelle are mounted on top of an 80m tubular tower that is manufactured in sections from steel plates. Each turbine is mounted on a steel reinforced concrete foundation and equipped with a transformer, which is located outside the base of the tower.

As identified in the REA Regulation, the proposed layout of these features is collectively referred to as the 'project location'. For the purposes of this report, NRSI will refer to the areas within 120m of the project location as the 'project area'.

The records review, site investigation, evaluation of significance, and environmental impact study (EIS) for the Bornish Wind Energy Centre were completed by NRSI over the course of 2011/2012 as part of the Natural Heritage Assessment (NHA). As a result of minor changes to the Bornish Wind Energy Centre, several additional reports were prepared to address any changes to the original NHA. Table 1 outlines these reports and their subsequent approval dates.

This Addendum Report was prepared to address an additional minor change to the proposed Bornish Wind Energy Centre project layout, including confirmation that a previously identified natural feature is no longer considered significant. These changes and any potential impacts to the natural heritage features in the Bornish Wind Energy Centre project area as a result of these changes are identified and discussed in the subsequent sections of this report.

**Table 1. Natural Heritage Assessment Reports Approved for the Bornish Wind Energy Centre**

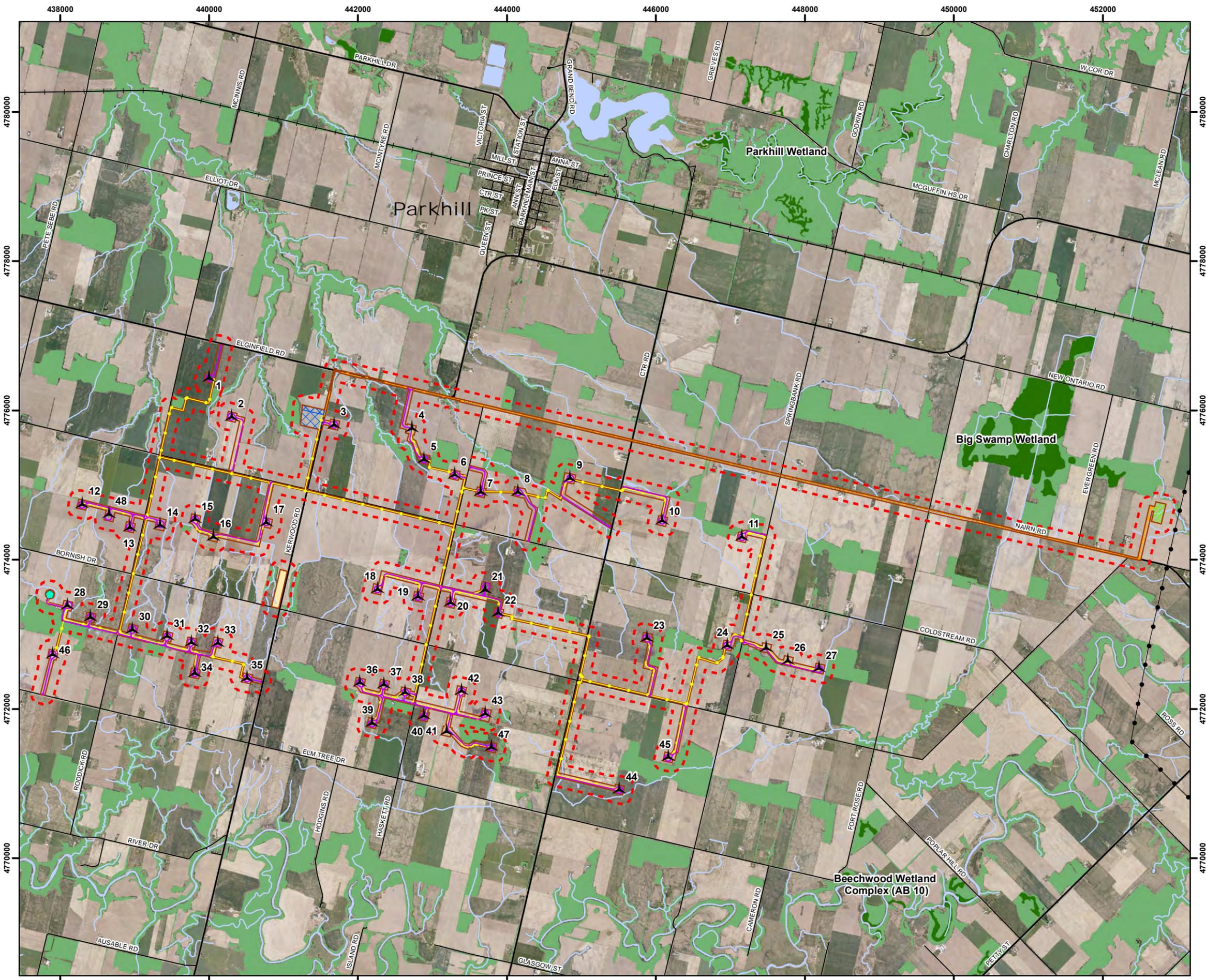
NHA Report	Approval Date
Natural Heritage Assessment	April 2, 2012
Natural Heritage Assessment Addendum Report	July 16, 2012
Natural Heritage Assessment Addendum II Report	February 11, 2013
Natural Heritage Assessment Addendum III Report	Not pursued – no confirmation issued

Figure 1

# Bornish Wind Energy Centre Project Area and Natural Features

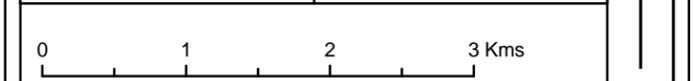
### Legend

- Project Area (120m Buffer)
- ▲ Turbine
- ◆ MET Station
- Access Road
- Collector System
- Interconnection Line
- Project Location
- Staging Area
- Switchyard
- Point of Interconnect
- Existing Transmission Line
- Railroad
- Primary Road
- Secondary Road
- Intermittent Watercourse
- Permanent Watercourse
- Open Aquatic
- Provincially Significant Wetland (PSW)
- Other Wetland
- Wooded



Map Produced by Natural Resource Solutions Inc. This map is proprietary and confidential and must not be duplicated or distributed by any means without express written permission of NRSI. Source: Data provided by MNR. Copyright: Queen's Printer Ontario. Imagery: SWOOP 2006.

Project: 1231 Date: October 21, 2013	NAD83 - UTM Zone 17 Scale: 1:50,000 (11x17")
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## 2.0 Staff Roles

The requirements of the REA process indicate that the name and qualifications of staff participating in the NHA should be provided. This staffing information is provided in the Bornish Wind Energy Centre NHA (NRSI 2012a) and the qualifications and roles of key staff participating in the addendum to the Bornish Wind Energy Centre NHA have been outlined below.

### Andrew Ryckman, B.Sc.

Andrew is a Terrestrial and Wetland Biologist with 8 years of environmental experience. He routinely manages the natural heritage aspects of renewable energy projects, with specific expertise relating to bats and herpetofauna. Andrew is certified in the Ecological Land Classification (ELC) system (2010), and has successfully completed a Bat Conservation International (BCI) Acoustic Monitoring Workshop (2008).

Andrew's role was to act as the project manager, overseeing all aspects of the Natural Heritage Assessment, including all associated field work and reporting. He was the main contact point for agency staff and assisted with the preparation of all corresponding reports including this Addendum Report.

### Charlotte Moore, Candidate M.E.S.

Charlotte is a Terrestrial and Wetland Biologist with 3 years of experience in butterfly ecology and various other environmental projects. Charlotte has completed her Bachelor of Environmental Studies and is a candidate for a Master of Environmental Studies (2013) at the University of Waterloo. Other environmental projects Charlotte has worked on include the use of ELC, bat habitat assessments, breeding bird surveys and reptile studies. Charlotte is certified in the Ontario Wetland Evaluation System (2012) and ELC system for southern Ontario (2013).

Charlotte coordinated the field work for the project and assisted with all aspects of the NHA.

### Kaitlin Boddaert, GIS-UP

Kaitlin specializes in delivering mapping services using GIS applications and assists with NRSI's spatial technologies. Her project experience includes, but is not limited to; the collection and creation of various datasets, the geocoding of addresses, the use of AutoCAD with integration into GIS, and the use of hard and soft data through scanning and georeferencing into digital format. Kaitlin has produced various digital maps and datasets for publication, and in addition to her experience in environmental studies she has education and experience in the field of urban planning and is familiar with municipal mapping and procedures.

Kaitlin's role in the Project was as GIS technician. She reviewed and collected all available background mapping sources, digitized information gathered from site investigations, and integrated this information to generate this project's mapping.

### **3.0 Overview of Project Changes**

Since the approval of NHA and subsequent NHA Addendum and Addendum II reports, a single minor change has been made to the project layout, resulting in a re-examination of the considerations made as part of the Bornish Wind Energy Facility NHA.

The proposed change to the project layout includes the addition of an alternate road to follow the property line south of T38. This additional project location would overlap agricultural row crops and have no direct impact on any natural features or wildlife habitats, based on a revision to previously delineated wetland boundaries, which is discussed in more detail below.

A visual overlay of the differences between the layout approved as part of the NHA Addendum Report (NRSI 2012b) submission and the currently proposed footprint of the access road as part of this Addendum Report is provided on Figure 2.

Since the Bornish Wind Energy Centre Addendum II Report approval, there has not been any newly obtained information relating to candidate significant wildlife habitat and there have not been any additional changes in the project layout aside from those discussed in this report.