



**RENEWABLE ENERGY APPROVAL  
MODIFICATION REPORT  
SOUTH BRANCH WIND FARM  
SOUTH DUNDAS WINDFARM LP**

**APRIL 2013**

**Project No. 121-22956-00**



## **1. PROJECT BACKGROUND**

The South Branch Wind Farm is a 30 megawatt (MW) wind energy project near Brinston, Ontario in the United Counties of Stormont, Dundas and Glengarry and the United Counties of Leeds & Grenville. Development of the project began in 2007 and the ownership of the project transitioned from Prowind Canada Inc. to EDP Renewables Canada Ltd. (EDPR) in the summer of 2012.

REA documentation was originally prepared by ProWind Canada Inc., however EDPR has recently purchased this project and has assumed responsibility for REA compliance. The REA documents were submitted to the MOE for technical review on April 2, 2012 and were determined to be complete on October 31, 2012.

## **2. SUMMARY OF PROPOSED MODIFICATIONS**

Changes are being proposed (see Attachment A - Original Layout, and Attachment B - Revised Layout) to portions of the collection line and the Operations and Maintenance building location and these are discussed in the following sections. These changes are being proposed to resolve the issue of unnecessary ground disturbance, visual impact, and impact on potential bobolink breeding territory.

### **2.1 Collection Line Modifications for Turbine 9**

- Modify the collection system for Turbine 9 to link to the originally proposed underground collection line that would extend between Turbines 10 and 15.

The area of change would be limited to the Township of South Dundas. Based on the site plan presented in the original REA documentation, the collection line for Turbine 9 (Attachment A) was proposed to travel underground west-southwest for 0.12 kilometers, turning south-southeast and travelling 0.75 kilometers to Gilmour Road, then surfacing and travelling overhead northeast for 0.65 kilometers within the road-right-of-way through the community of Brinston, then south-southeast along Brinston Road for 0.25 kilometers, finally boring underground and travelling southeast for 0.7 kilometers to the inter-connection point. The total length of collection line under the original REA proposal was 2.47 kilometers.

Under the modified collection route (Attachment B), the cable would travel underground only, going east-northeast from Turbine 9 for 0.55 kilometers, tunneling under County Road 16 to the adjacent property line and then travelling southeast for 0.65 kilometers to the original proposed underground collection line extending between Turbines 10 and 15. The total length of collection line under the contemplated revision would be 1.2 kilometers (roughly half the length of the original REA proposal) and would be entirely underground.

The modified collection route would be located entirely on private land. Previously, one section of land was not part of the project location since there was no infrastructure proposed on it. This section of land has now become part of the project location. Separate from the REA process, EDPR will obtain any permits needed from the County for collection line boring under County Road 16.

### **2.2 Collection Line Modifications between Turbines 10 and 8**

- Modify the collection system between Turbines 10 and 8 to reduce total length and impact on potential bobolink habitat.

The area of change would be limited to the Township of South Dundas. Based on the site plan presented in the original REA documentation, the collection line for Turbine 10 (Attachment A) was proposed to travel underground north for 0.7 kilometers, turning northwest to Turbine 8. The total length of collection line based on the original REA proposal was 1.9 kilometers.

Under the modified collection route (Attachment B), the underground cable would travel to Turbine 11 as originally proposed, but would then travel northwest to Turbine 8, halfway between the originally proposed route between Turbines 10 and 11. This revision would result in reduced temporary impacts to hay fields, which have been identified by the MNR as potential bobolink breeding habitat. The total length of collection line under the contemplated revision would be 1.5 kilometers, reducing total collection line length by 0.4 kilometers. The cable is still proposed to be completely underground.

The modified collection route would be located entirely on private land under contract with EDPR and originally included as part of the project location.

### **2.3 Operations and Maintenance Building Location**

- Identify an Operations and Maintenance (O&M) building location within the parcel along Henderson Road and County Road 16.

The REA application identified three potential locations for the O&M building, with the option to utilize any of the three sites. Based on additional work undertaken by EDPR it can now be confirmed that the preferred location is the property located south of Henderson Road and east of County Road 16. The property is large and there are two potential lots that could be used for siting the O&M building (refer to Attachment B).

Lot A is located along the east side of County Road 16, approximately 0.8 miles south of the intersection with Henderson Road. Lot A was previously assessed for archaeological and biological resources as part



of the original Natural Heritage Assessment and Archaeology Heritage Resource Assessment, so this modification report merely provides specification of the lot location.

Lot B is on the south side of Henderson Road approximately 0.3 km from the intersection with County Road 16. Lot B was not previously assessed for archaeological and natural heritage features. However, these assessments have been completed as part of this Modification Report. The determination of the exact footprint of the O&M building within one of the two specified lots will be based on input from the landowner and discussions with the municipality.

### **3. RATIONALE FOR CHANGES**

The local municipality expressed concerns with an additional overhead electrical line in the road right-of-way through the Community of Brinston. The revised route would eliminate the overhead portion of the collection line from Turbine 9, thus benefitting the Community of Brinston, alleviating public concerns, and reducing impact on local residents.

The proposed collection line re-route between Turbines 10 and 8 will reduce overall collection line length. Furthermore, the proposed change will result in fewer temporary impacts to project hay fields in comparison to the original project design. This is due to the fact that a portion of the collection line running through the hay field between Turbines 10 and 11 will be re-routed to the adjacent non-hay field.

All properties included in the revised collection line are used for agricultural production, thus having minimal land use and environmental impacts.

EDPR is not proposing any new infrastructure and is only modifying a portion of the already contemplated collection line, with the change resulting in an overall reduction of total collection line length.

### **4. IMPACT ON STUDIES / REA REPORTS**

#### **4.1 Natural Heritage Assessment**

The Natural Heritage Assessment (NHA) report (included in the REA submission) identified natural features within 120 m of all project facilities. No natural features identified in the NHA would be impacted by the proposed changes. There are no identified natural features requiring assessment on the lands proposed for the revised collection routes or O&M Building.



The project location would need to be modified to account for the additional property used to accommodate the collection line to Turbine 9. However, the MNR deems this to be a minor update to the existing NHA documentation since there will be little impact on the environment with only a corridor required for the collection line. In particular, the MNR notes the modification would reduce potential impact on the community and the environment by reducing temporary disturbance and avoiding potential bobolink habitat.

On February 5, 2013 an addendum letter (Attachment C) was submitted to the MNR outlining the modifications proposed and confirming potential impacts from these modifications. The MNR sent a letter of confirmation regarding the modifications on February 8, 2013. MNR is satisfied that the NHA requirements of Ontario Regulation 359/09 have been met through the modifications. The letter (Attachment C) is an addendum to the confirmation letter issued October 31, 2011 for the South Branch Wind Project.

#### **4.2 Water Assessment**

As identified in the Water Assessment Report, there are two water features that the revised collection route to Turbine 9 would cross. Both water features were determined to be 'dry ditches' and are not considered a water body under the REA Regulation, and are thus not protected. The South Nation Conservation Authority will be contacted to determine if a permit to cross these features is required. The remainder of the land is agricultural land used for growing various row crops. The only temporary impact would be an approximate 10 meter wide swath along the collection route.

The two impacted water features are currently included on the maps and discussed in the Water Assessment Report and thus there would be no impact to the report.

#### **4.3 Archaeological and Heritage Resources Assessment**

Archaeological Research Associates Ltd conducted Stage 1 and Stage 2 Archaeological Assessments of the proposed changes. There were no archaeological resources identified in the area of the proposed changes (collection line and O&M building). A truncated version of this report is included as Attachment D, and was submitted to MTCS on January 22, 2013. No archeological resources were discovered during this assessment, and EDPR received a Letter of Concurrence from MTCS on February 8, 2013 (Attachment D).

#### **4.4 Site Plan**

The Site Plan has been updated to reflect the proposed changes and is included as Attachment B. The site plan shows both potential lots for the O&M building.

The following REA reports and studies were reviewed as to whether changes were required due to the modifications. Any changes to the reports have been addressed by issuance of this Modification Report.

REA Reports & Studies	Change (Yes/No)	Discussion of change / Justification for 'no' change
<b>REA REPORTS</b>		
Project Description Report	Yes (minor)	The table and figures need to be updated to show the revised collection line layout and O&M building location: <ul style="list-style-type: none"> <li>Figures – revise layout</li> <li>Table 4 – add additional land parcel</li> </ul>
Construction Plan Report	Yes (minor)	The figure and section need to be updated to show the revised collection line layout and O&M building location. Construction is not affected since underground cable installation is currently described and the O&M building was accounted for. <ul style="list-style-type: none"> <li>Figure 2 – revise layout</li> <li>Section 3.10 - confirm O&amp;M building location</li> </ul>
Design & Operations Report	Yes (minor)	The figure and section need to be updated to show the revised collection line layout and O&M building location, construction is not affected since underground cable installation is currently described and the O&M building was accounted for. <ul style="list-style-type: none"> <li>Figure 2 – revise layout</li> <li>Table 1 – add additional land parcel</li> <li>Section 2.5.2 - confirm O&amp;M building location</li> </ul>
Decommissioning Plan Report	Yes (minor)	Figure 2 needs to be updated but otherwise there are no specific collection system or O&M building locations discussions that require updating due to the modifications.
Consultation Report	No	There are no specific descriptions of the collection system or O&M building location in the consultation report.
<b>ADDITIONAL REPORTS</b>		
Project Drawings	Yes	Modified to show new layout of the collection system changes and the O&M building location.
Turbine Specifications Report	No	There are no changes proposed to the turbines and this report will not require any modifications.
<b>Natural Heritage Assessment Report</b> Records Review, Site Investigation, Evaluation of Significance and Environmental Impact Study	Yes	Addendum letter to address potential impacts was completed and submitted to MNR for review and is included in Attachment C. The letter of concurrence from MNR is provided in Attachment C.
<b>Water Assessment Report</b> Records Review, Site Investigation and Environmental Impact Study	No	No modifications to the reports since there are no defined watercourses within 120 m of the proposed modifications to the collection system or O&M building. The water features (dry ditch) near Turbine 9 were identified in the original report submitted in the REA documentation.
Archaeology and Natural Heritage Resource Assessment Report	Yes	Addendum report to address potential impacts was completed and is included in Attachment D. The letter of confirmation from MTCS for the modification is included in Attachment D.
Noise Assessment Report	No	No modifications required since the collection line and O&M building are not sources of noise for this project.
Impact Study on CBC Digital TV Broadcasting	No	No modifications required since the collection line and O&M building do not impact broadcasting and were accounted for in the original report.

REA Reports & Studies	Change (Yes/No)	Discussion of change / Justification for 'no' change
Radio Communication, Radar and Seismo-acoustic System Impact Assessment	No	No modifications required since the collection line and O&M building do not interfere with these systems for this project.
Abutting Property Assessment Report	No	No modifications required since the collection line and O&M building meet required setbacks.

### 5. NEW MITIGATION MEASURES

The changes proposed are minor in nature and will result in reduced impact on the environment than the original proposal. Provided the mitigation measures in the NHA and Archaeological Reports are followed, there are no negative impacts anticipated and no further mitigation measures needed for the proposed collection line changes or for the confirmation of the O&M building location. Based on this, MTCS and MNR have confirmed the modifications would be considered minor updates.

### 6. SUMMARY AND CONCLUSIONS

The proposed modifications to the collection line and confirmation of the location for the O&M building have been adequately studied. Following the studies and discussions with MTCS and MNR it was determined that the modifications would not result in increased negative environmental effects beyond those identified during the original REA documentation and consultation. The modifications to the collection line would result in less environmental impact than the originally proposed overhead collection line for Turbine 9 and the underground cable between Turbines 10 and 8.



**Attachment A**  
**Original Layout in REA**

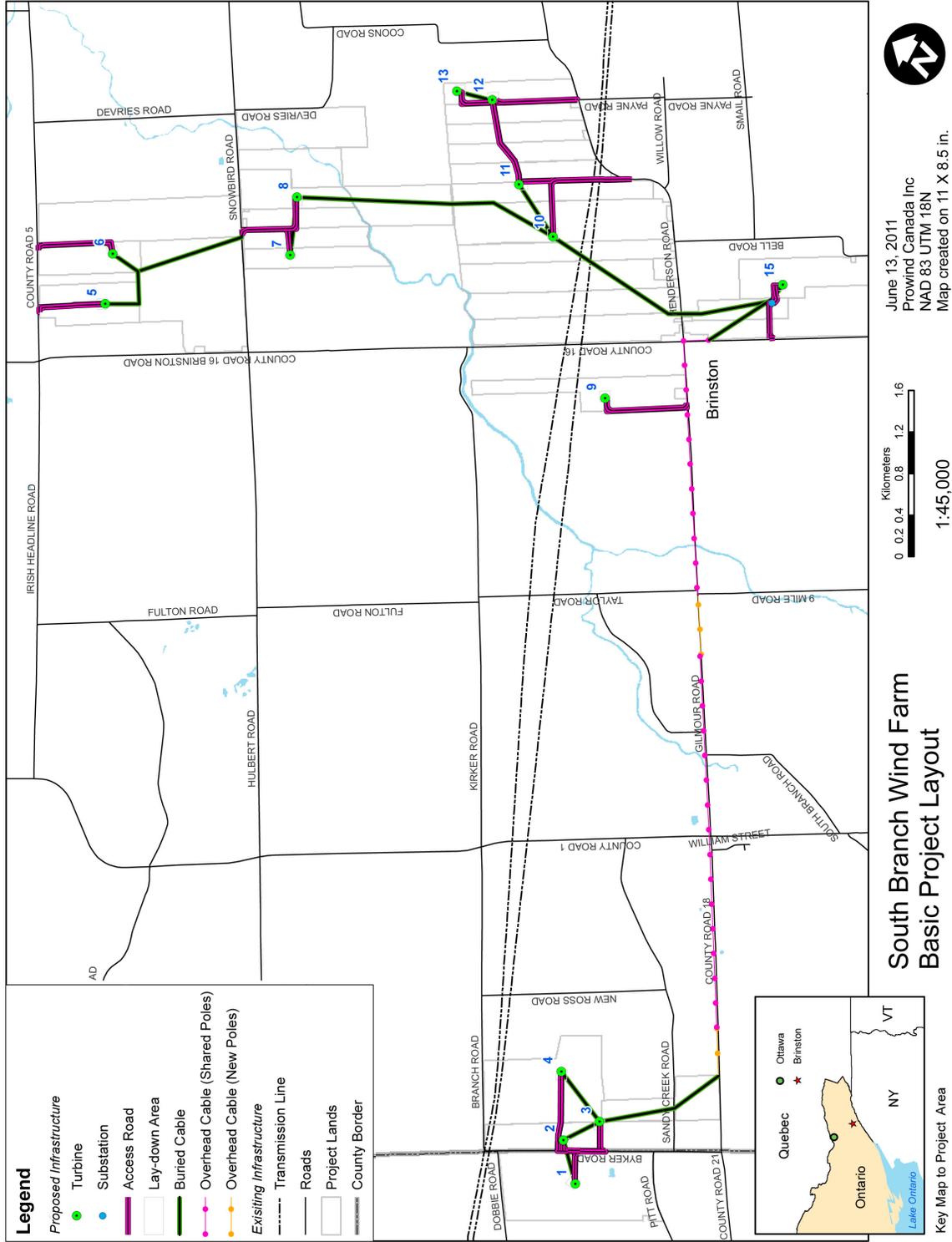
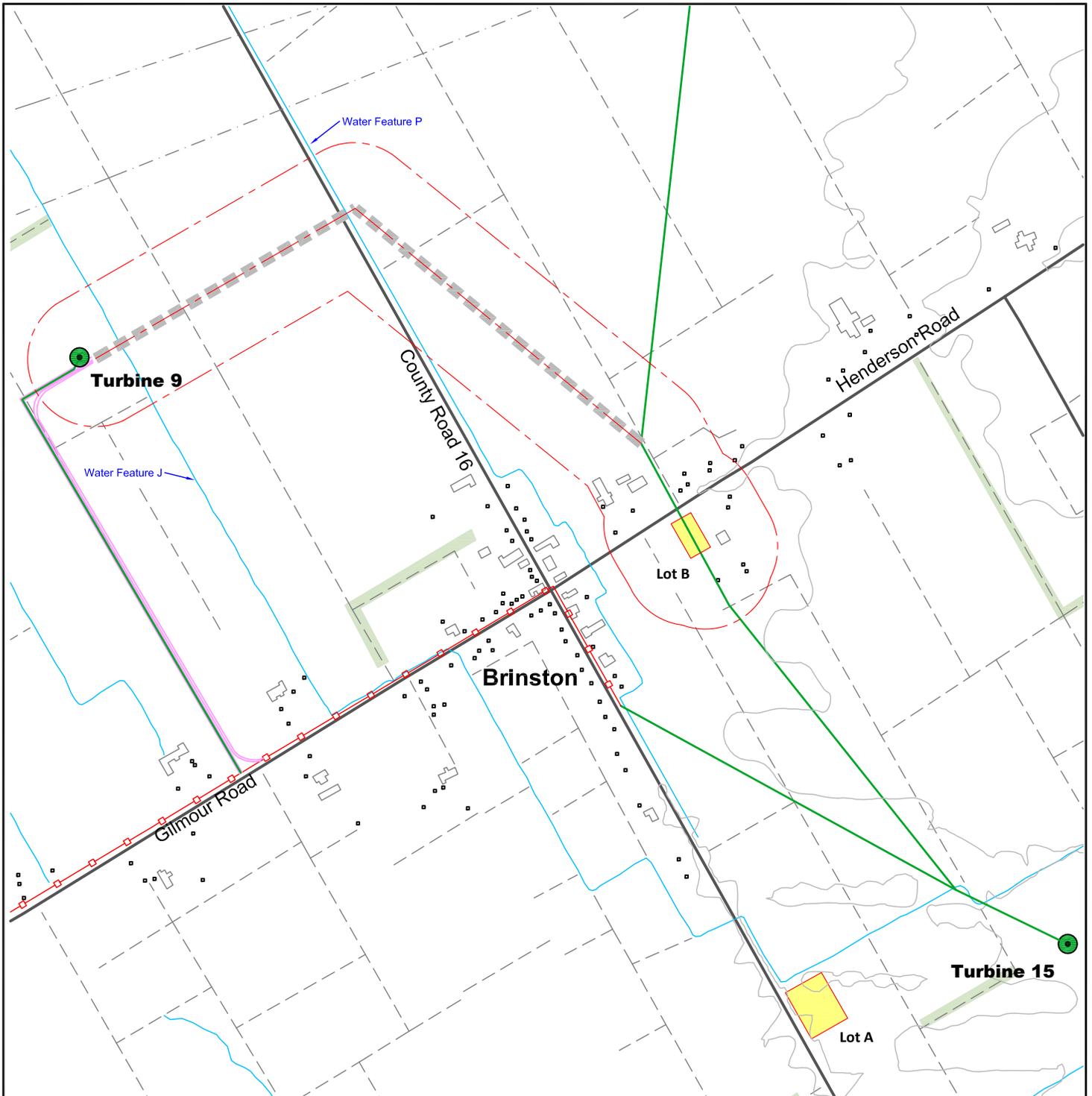


FIGURE 2 SOUTH BRANCH WIND FARM BASIC PROJECT LAYOUT



**Attachment B**  
**Proposed Layout Modifications**



**LEGEND**

-  TURBINE
-  BURIED CABLE
-  OVERHEAD CABLE
-  ACCESS ROADS
-  REVISED UNDERGROUND COLLECTION
-  120 m AREA OF INFLUENCE
-  PROPOSED O&M BUILDING LOT LOCATIONS
-  WATERCOURSE



BASE MAPPING: OBM 1:10000 BASE MAPPING, NAD 13, ZONE 18.

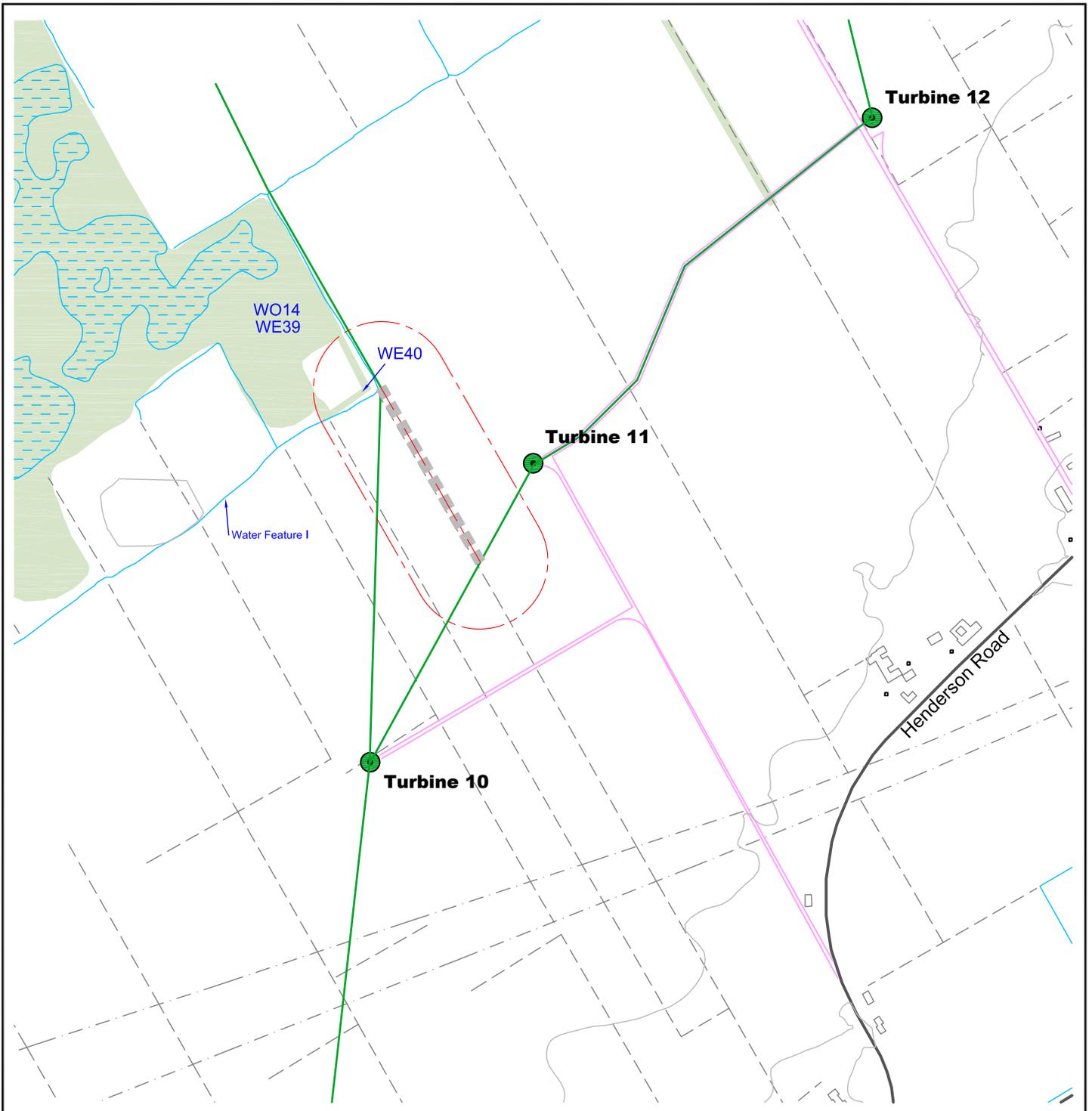
# SITE PLAN (LOCATION 1)

NATURAL ENVIRONMENT ADDENDUM  
 SOUTH BRANCH WIND FARM  
 For EDP Renewables North America LLC

DATE: DECEMBER 2012	SCALE: 1:10000
PROJECT: 121-22956-00	REF. NO.: 121-22956-00 SP



FIGURE  
**2**



**LEGEND**

-  TURBINE
-  BURIED CABLE
-  ACCESS ROADS
-  REVISED UNDERGROUND COLLECTION
-  120 m AREA OF INFLUENCE
-  WOODLAND (WO)
-  WETLAND (WE)
-  WATERCOURSE



BASE MAPPING: OBM 1:10000 BASE MAPPING, NAD 13, ZONE 18.

## SITE PLAN (LOCATION 2)

NATURAL ENVIRONMENT ADDENDUM  
 SOUTH BRANCH WIND FARM  
 For EDP Renewables North America LLC

DATE: DECEMBER 2012

SCALE: 1:10000

PROJECT: 121-22956-00

REF. NO.: 121-22956-00 SP



**GENIVAR**

FIGURE

**3**



**Attachment C**  
**Addendum Letter to MNR for Modifications**  
**MNR Letter of Confirmation for Modifications**

**Renewable Energy Approval  
Addendum Report  
South Branch Wind Farm  
South Dundas Windfarm LP  
February 2013**

Prepared for:  
Jon VanDerZee  
EDP Renewables North America LLC  
Environmental Affairs  
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Portland, Oregon  
97204

Prepared by:  
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Project No. 121-22956-00

Distribution:  
1 e Client  
1 c File

Project No. 121-22956-00

February 5, 2013

Amy Cameron  
Coordinator Renewable Energy Operations Team  
Southern Region Planning Unit  
Ministry of Natural Resources  
300 Water Street, P.O. Box 7000  
Peterborough, ON, K9J 8M5

On behalf of:

Jon VanDerZee  
EDP Renewables North America LLC  
Environmental Affairs  
53 SW Yamhill Street  
Portland, Oregon, 97204

**Re: Renewable Energy Approval Addendum Report  
South Branch Wind Farm  
Brinston and surrounding area, Ontario**

Dear Ms. Cameron:

We are pleased to submit the following information on behalf of EDP Renewables North America LLC in response to a request for proposal, pertaining to proposed changes to the revised underground collection system for the South Branch Wind Farm. Following is a determination of the potential impacts associated with the proposed changes, and strategies to eliminate or mitigate these impacts.

## Introduction

The South Branch Wind Farm is a proposed wind energy generation facility with a nameplate capacity of up to 30 MW. The project is classified as a Class 4 wind facility in Ontario Regulation 359/09 (O.Reg. 359/09), defined as an on-shore wind facility with a nameplate capacity greater than 50 kW, and a sound power level greater than 102 dBA. The South Branch Wind Farm project has addressed the Renewable Energy Approval (REA) requirements and the necessary documents, completed by Prowind Canada (2011), have been submitted to the Ministry of the Environment (MOE) for approval. Relevant approval documents can be found at Prowind Canada's website.

The Project Location, herein referred to as 'the Site' is located in Eastern Ontario, approximately 40 km southeast of Ottawa. The project is proposed on privately owned, agricultural land as well as municipal easements surrounding Brinston. The project turbines are located in two main areas; the western area along Byker Road, and the eastern area along County Road 16 (Brinston Road). Refer to Figure 1 and Figure 2 within the Draft South Branch Wind Farm Project Description Report, Version 3.1 (Prowind Canada, 2011a).

The information presented within this addendum report proposes a different collection route for Turbine 9, a change within the eastern portion of the collection route, and a building footprint area east of Brinston, south of Henderson Road. Refer to Figure 1 for Site location details. It is our understanding that the municipality and others are supporting the shift in this route to now have the collection system cross properties and not be within the road right-of-way.

The Natural Heritage Features surrounding the Site are detailed in a Draft South Branch Wind Farm Natural Heritage Assessment Report ("NHA Report"; Prowind Canada, 2011b), which included the required Records Review, Site Investigation, Evaluation of Significance, and Environmental Impact Study phases. Changes to the Site plan require a determination of potential impact to any Natural Features found within 120 m of the proposed infrastructure.

For the purposes of this exercise, the Site has been divided into two portions: The western portion of the Site (Location 1), which includes the proposed building footprint south of Henderson Road and the changes to the proposed underground collection system route to Turbine 9, and the eastern portion of the Site (Location 2), comprised of the changes to the proposed underground collection system route linking Turbine 10 and Turbine 11. Refer to Figure 2 and Figure 3.

## Location 1

Appendix E of the NHA Report includes mapping of the Site and the 120 m area of influence using the Ecological Land Classification System (Lee et al. 1998). The proposed building footprint area south of Henderson Road (Refer to Figure 2) was determined to be entirely within Anthropogenic or Agricultural Land uses. The NHA Report also determines that there are no Natural Heritage Features, as defined by subsection 1(1) of O.Reg. 359/09, within 120 m of the proposed building footprint area. As such, no mitigative measures are proposed for this location.

Based on the Site plan presented in the original REA documentation, the collection line for Turbine 9 (Refer to NHA Report) was proposed to travel underground west-southwest for 0.12 kilometers, turning south-southeast and traveling 0.75 kilometers within the road-right-of-way through the community of Brinston, then south-southeast along Brinston Road for 0.25 kilometers to the inter-connection point. The total length of collection line under the original proposal was 2.47 kilometers. Under the modified collection route (Refer to Figure 2), the cable would travel underground only, going east-northeast from Turbine 9 for 0.55 kilometers to the original proposed underground collection line extending between Turbines 10 and 15. The total length of collection line under the contemplated revision in this area would be 1.2 kilometers and would be entirely underground.

A review of aerial photography suggests that the proposed route consists entirely of open agricultural land uses. To accommodate this new route, the underground collection system will cross two (2) additional mapped water features not contemplated in the original site plan. The Draft South Branch Wind Farm Water Assessment Report (Prowind Canada, 2011c) identifies these two mapped water features as Water Feature J, and Water Feature P.

Section 1 (1) of the REA Regulation (Ontario, 2009) defines a “water body” as a lake, a permanent stream, an intermittent stream or a seepage area but does not include:

- grassed waterways;
- temporary channels for surface drainage, such as furrows or shallow channels that can be tilled and driven through;
- rock chutes and spillways;
- roadside ditches that do not contain a permanent or intermittent stream;
- temporarily ponded areas that are normally farmed;
- dugout ponds, or
- artificial bodies of water intended for the storage, treatment or recirculation of runoff from farm animal yards, manure storage facilities and sites and outdoor confinement areas.

Both water features were determined to be ‘dry ditches’ (Prowind Canada, 2011c) and are not considered a water body under the REA Regulation, and are thus not protected. Even though not afforded protection under the regulation, and in addition to the general mitigation measures outlined within the NHA Report, the following mitigative measures will be implemented:

- Minimize area of disturbance on the construction site surrounding the feature during pre- and post-construction phases;
- Implement an erosion, sedimentation control plan; and,
- Minimize dust generation through standard best management practices.

The NHA Report also determines that there are no other Natural Heritage Features, as defined by subsection 1(1) of O.Reg. 359/09 within 120 m of the proposed footprint area. As such, no further mitigative measures are proposed for the proposed building or revised underground collection route. The South Nation Conservation Authority will be contacted to determine if a permit to cross these features is required.

## Location 2

Appendix E of the NHA Report includes mapping of the Site and the 120 m area of influence using the Ecological Land Classification System (Lee et al. 1998). The proposed revised underground collection route footprint in Location 2 (Refer to Figure 3) was determined to be entirely within Agricultural Land use areas. The NHA Report did; however, determine that there were several Natural Heritage Features, as defined by subsection 1(1) of O.Reg. 359/09 within 120 m of the proposed development footprint area to the north: two wetlands (as defined within the NHA Report as WE39, and WE40), and one woodland (as defined within the NHA Report as WO14).

Wetland 39 (WE39) and Wetland 40 (WE40) were assumed significant within the NHA Report. The proposed changes to the underground collection route connect to the original underground collection route approximately 5 m from the determined boundaries of these wetlands. The total distance from this feature will not change, and provided the mitigation measures outlined within the NHA Report are followed, no negative impacts on this feature from the change in route are anticipated.

Woodland 14 (WO14) was identified as significant by the Kemptville Ontario Ministry of Natural Resources (OMNR). The proposed changes to underground collection route connect to the approved proposed underground collection route approximately 5 m from the determined woodland boundary. The distance of the proposed route vs. the approved total distance from this feature will not change, and provided the mitigation measures outlined within the NHA Report are followed, no negative impacts on this feature from the change in route are anticipated.

The Draft South Branch Wind Farm Water Assessment Report (Prowind Canada, 2011c) identifies a mapped watercourse within 120 m of the proposed route, Water Feature I, an intermittent stream considered a waterbody under Section 1 (1) of the REA Regulation (Ontario, 2009). The proposed changes to the underground collection route connect to the approved proposed underground collection route approximately 5 m from the watercourse boundary. The total distance from this feature will increase, and provided the mitigation measures outlined within the NHA Report are followed, no negative impacts on this feature from the change in the route are anticipated.

### Affect on Species at Risk

Based on the South Branch Species at Risk report and the Overall Benefit Permit Application currently being submitted to the Kemptville District OMNR (care of Erin Thompson, Species at Risk Biologist), it has been determined that Bobolink (*Dolichonyx oryzivorus*) have the potential to nest in suitable hay field habitat within the project area. While a small number of Eastern Meadowlark (*Sturnella magna*) were observed during baseline surveys, all were outside of the infrastructure footprint, including the footprint of these proposed design revisions.

The proposed revision to the underground collection routes will result in fewer temporary impacts to the agricultural fields with potential habitat for the above noted species, as compared to the original project design. A portion of the collection line running through the hayed field between Turbines 10 and 11 will be re-routed to the adjacent non-hay field, thus reducing the potential impact area by approximately 0.2 km, or 0.06 hectares when including cable trench width. No hayed fields are currently located along the revised collection route to Turbine 9, nor in the location of the proposed Operations and Maintenance Building south of Henderson Road.

The removal of 0.2 km of underground collection from the hayed field between Turbines 10 and 11 will result in the reduction of temporary impact compared to the original design. Permanent impacts for which the proponent is applying to secure compensatory habitat will remain the same.

## Conclusions

The South Branch Wind Farm is a Class 4 wind facility under Ontario Regulation 359/09, and has received a notice of completeness from the Ministry of Environment for submittal of an application under the Renewable Energy Approval requirements

Given the modifications presented herein, GENIVAR Inc. presents the following key findings:

- The proposed changes at Location 1 are located within Anthropogenic or Agricultural Land uses, and require the crossing of two mapped water features (water features J and P within Prowind Canada's reports). The water features are not considered water bodies under O.Reg. 359/09. Provided the mitigation measures outlined within the NHA Reports are followed, no negative impacts from the proposed changes to the collection line route or operations building location are anticipated. No further mitigative measures are proposed for this location. The South Nation Conservation Authority will be contacted to determine if a permit to cross these features is required.
- The proposed changes at Location 2 were located entirely within Agricultural Land use areas. Two wetlands (WE39, and WE40), one woodland (WO14), and one waterbody (water feature I) were noted within 120 m of the revised route. The proposed change to, infrastructure locations will not result in increased encroachment on these identified natural features. Provided the mitigation measures outlined within the NHA Reports are followed, no negative impacts from the change in the route at Location 2 are anticipated. No further mitigative measures are proposed for this location.

## Closure

This report has been prepared by GENIVAR Inc. The assessment represents the conditions at the subject property only at the time of the assessment completed and outlined within Prowind Canada's reports, and is based on the information referenced and contained in the report. The conclusions presented herein respecting current conditions represent the best judgment of the assessors based on current environmental standards. GENIVAR Inc. attests that to the best of our knowledge, the information presented in this report is accurate. The use of this report for other projects without written permission of the client and GENIVAR Inc. is solely at the user's own risk. This report must be reviewed and approved by the relevant regulating agencies prior to being relied on for planning and/or construction purposes.

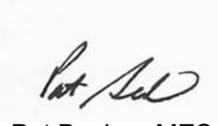
Thank you for the opportunity to complete this report. We trust that this information is satisfactory for your current requirements. Please contact us if we can be of further assistance.

Yours truly,  
**GENIVAR Inc.**  
Prepared by:



Dan Reeves, M.Sc.  
Project Biologist

Reviewed by:



Pat Becker, MES  
Project Manager

DJR:nah

## References

- Government of Ontario (Ontario). 2009. Ontario Regulation 359/09. Renewable Energy Approvals under Part V.0.1 of the Environmental Protection Act. Available online: [http://www.e-laws.gov.on.ca/html/regs/english/elaws\\_regs\\_090359\\_e.htm#BK53](http://www.e-laws.gov.on.ca/html/regs/english/elaws_regs_090359_e.htm#BK53). Accessed December 2012.
- Lee, H.T., Bakowsky, W.D., Riley, J., Bowles, J., Puddister, M., Uhlig, P., and S. McMurray. 1998. Ecological Land Classification for Southern Ontario: First Approximation and Its Application. Ontario Ministry of Natural Resources, Southcentral Science Section, Science Development and Transfer Branch. SCSS Field Guide FG-02.
- Prowind Canada. 2011a. Draft South Branch Wind Farm Project Description Report, Version 3.1. 35 pp.
- Prowind Canada. 2011b. Draft South Branch Wind Farm Natural Heritage Assessment Report. 70 pp.
- Prowind Canada. 2011c. Draft South Branch Wind Farm Water Assessment Report. 28 pp.

Ministry of  
Natural Resources  
Renewable Energy Operations Team  
300 Water Street  
4<sup>th</sup> Floor, South Tower  
Peterborough, Ontario K9J 8M5

Ministère des  
Richesses naturelles



February 8, 2013

EDP Renewables Canada Ltd.  
110 Spadina Avenue  
Suite 609  
Toronto, ON M5V 2K4

**RE: Modifications to South Branch Wind Project**

Dear Ken Little:

The Ministry of Natural Resources (MNR) has received the memo dated February 5, 2013 that describes modifications to the South Branch Wind Project location 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 October 31, 2011 for the South Branch Wind Project.

If you wish to discuss any part of this letter, please contact Jim Beal at [Jim.Beal@Ontario.ca](mailto:Jim.Beal@Ontario.ca) or 705-755-3203.

Sincerely,

A handwritten signature in black ink, appearing to read "Sharon Rew".

Sharon Rew  
A/Planning Manager  
Southern Region MNR

cc Jim Beal, Southern Region Renewable Energy Coordinator, MNR  
Amy Cameron, Renewable Energy Planning Ecologist, MNR  
Ken Durst, Kemptville District Manager, MNR  
Narren Santos, Environmental Approvals Access & Service Integration Branch, MOE  
Zeljko Romic, Environmental Approvals Access & Service Integration Branch, MOE



**Attachment D**  
**Stage 1 and 2 Archeology Assessment for Modifications**  
**MTCS Letter of Concurrence for Modifications**



Archaeological  
Research  
Associates Ltd.

154 Otonabee Drive, Kitchener, ON N2C 1L7  
Tel: (519) 804-2291  
Fax: (519) 286-0493  
248 Ruby St., Midland, ON L4R 2L4  
Tel: (705) 526-9518  
Fax: (705) 526-4541

**Stage 1 and 2 Archaeological Assessments  
South Branch Wind Farm – Additional Lands  
(FIT-FT3B1IC)  
Parts of Lot 18, Concession 5 and Lots A, 15, 18–20,  
Concession 6, Geographic Township of Matilda  
(Former Dundas County), Township of  
South Dundas, United Counties of Stormont,  
Dundas and Glengarry, Ontario**

Prepared for  
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&  
**South Dundas Wind Farm LP**  
&  
**The Ministry of Tourism, Culture and Sport**

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**P.J. Racher, M.A., CAHP**  
**MTCS Licence #P007**  
Project #P007-426  
PIF #P007-426-2012

**21/01/2013**

**Original Report**

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## EXECUTIVE SUMMARY

Under a contract awarded by GENIVAR Inc. in October 2012, Archaeological Research Associates carried out Stage 1 and 2 archaeological assessments of lands with the potential to be impacted by the proposed South Branch Wind Farm in the Township of South Dundas, United Counties of Stormont, Dundas and Glengarry, Ontario. Specifically, the Stage 1 and 2 assessments encompassed additional lands required for revised underground collector lines located in the vicinity of County Road 16 and Henderson Road. This report documents the background research and fieldwork involved in these assessments, and presents conclusions and recommendations pertaining to archaeological concerns within these areas. The assessments were completed as a component of a Renewable Energy Approval application, in compliance with the requirements set out in Section 22 of Ontario Regulation 359/09 made under the *Environmental Protection Act*.

The proponent, South Dundas Wind Farm LP, has secured a 30 MW contract to sell power to the Ontario Power Authority under the Feed-in-Tariff program (FIT-FT3B1IC), and is preparing their Renewable Energy Approval application in accordance with the requirements set out in Ontario Regulation 359/09 made under Part V.0.1 of the *Environmental Protection Act* (Horizon Wind Farms 2013). Development of the project began in 2007, and South Dundas Wind Farm LP acquired an interest in the project in Summer 2012 and is leading the continued development of the project. The proposed Class 4 wind facility will consist of up to 14 wind turbines, access roads, a substation, an operations and maintenance building (constructed or renovated), a storage shed, a combination of underground and above ground cabling to connect the turbines to the substation, and above ground cabling to connect the substation to the electrical utility line.

The majority of the project location for the South Branch Wind Farm was previously assessed. A Stage 1 assessment encompassing a 353 ha block of lands in the eastern part of the project location was conducted in April 2009 under licence #P058, PIF #P058-452-2009 (AMICK 2009a:5). Another Stage 1 assessment encompassing a 1,342.8 ha block of lands in the western part of the project location was conducted in April 2009 under licence #P058, PIF #P058-440-2009 (AMICK 2009b:6). These assessments identified numerous areas of archaeological potential, and the project location was recommended for Stage 2 assessment.

In December 2010 and from April–June 2011, Archaeological Research Associates Ld. carried out Stage 1 and 2 archaeological assessments of all previously un-assessed lands with the potential to be impacted by the original design of the project. The work was carried out under licence #P007, PIF #P007-264-2010 (Stage 1) and #P007-300-2011 (Stage 2). The results of the Stage 1 assessment indicated that the majority of the study area had clear potential for Pre-Contact and Euro-Canadian archaeological sites. The Stage 2 assessment, completed under optimal conditions, resulted in the identification of two Euro-Canadian findspots (the Doyle site; BfFu-4 and the Shaver Site; BfFu-5). The Shaver site (BfFu-5) was found to be of further cultural heritage value or interest, and was recommended for Stage 3 assessment. In order to avoid impacts to this site or its 20 m protective buffer, however, the proponent modified the project location (a buffer zone of 1.88 km now exists between the site and the project location).

Following the completion of the original investigations, it was determined that additional Stage 1 and 2 assessments were required for revised underground collector lines located in the vicinity of County Road 16 and Henderson Road. The majority of these lands were included in the earlier Stage 1 assessments conducted under licence #P058, PIF #P058-440-2009 and licence #P007, PIF #P007-264-2010, but a small parcel west of County Road 16 was not previously assessed. All of the remaining additional lands also required Stage 2 archaeological assessment.

The Stage 1 and 2 archaeological assessments were conducted in December 2012 under licence #P007, PIF #P007-426-2012. The assessments comprised 1) a V-shaped corridor traversing County Road 16 (the ‘western parcel’), 2) a rectilinear parcel south of Henderson Road (the ‘central parcel’), and 3) a rectilinear corridor north of Henderson Road (the ‘eastern parcel’).

The results of the Stage 1 archaeological assessment indicated that the previously un-assessed part of the study area west of County Road 16 consisted primarily of lands with archaeological potential. Areas of no archaeological potential were only identified within the County Road 16 Right-of-Way, where past construction activities had resulted in disturbance. The identified areas of archaeological potential clearly warranted further assessment.

The Stage 2 property assessment encompassed all areas of archaeological potential within the study area. Legal permission to enter and conduct all necessary fieldwork activities on project lands was granted by the property owners. This assessment, completed under optimal conditions, did not result in the discovery of any archaeological materials. Based on these findings, Archaeological Research Associates Ltd. recommends that no further archaeological assessment be required within the additional lands for the South Branch Wind Farm.

In the event that the project location is modified in the future (i.e. it is altered to accommodate new proposed infrastructure), further archaeological work may be required. A *Letter of Review and Acceptance into the Provincial Register of Reports* is requested, as provided for in Section 65.1 of the *Ontario Heritage Act*.

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## GLOSSARY OF ABBREVIATIONS

ARA – Archaeological Research Associates Ltd.  
CHVI – Cultural Heritage Value or Interest  
FIT – Feed-in Tariff  
MTC – (Former) Ministry of Tourism and Culture  
MTCS – Ministry of Tourism, Culture and Sport  
PIF – Project Information Form  
O. Reg. – Ontario Regulation  
REA – Renewable Energy Approval  
ROW – Right-of-Way

## PERSONNEL

**Project Director:** P.J. Racher, M.A., CAHP (MTCS Licence #P007)  
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**Licensee Revision:** P.J. Racher

#### 4.0 SYNTHESIS OF CONCLUSIONS AND RECOMMENDATIONS

The Stage 1 and 2 archaeological assessments of lands with the potential to be impacted by the proposed South Branch Wind Farm in the Township of South Dundas, United Counties of Stormont, Dundas and Glengarry were completed in December 2012. Specifically, the Stage 1 and 2 assessments encompassed additional lands required for revised underground collector lines located in the vicinity of County Road 16 and Henderson Road (see Appendix A).

The assessments comprised 1) a V-shaped corridor traversing County Road 16 (the ‘western parcel’), 2) a rectilinear parcel south of Henderson Road (the ‘central parcel’), and 3) a rectilinear corridor north of Henderson Road (the ‘eastern parcel’). Only part of this study area was subjected to Stage 1 assessment (a small parcel west of County Road 16), as all of the other lands were assessed under licence #P058, PIF #P058-440-2009 and licence #P007, PIF #P007-264-2010. Legal permission to enter and conduct all necessary fieldwork activities on project lands was granted by the property owners.

The results of the Stage 1 archaeological assessment indicated that the previously un-assessed part of the study area west of County Road 16 consisted primarily of lands with archaeological potential. Areas of no archaeological potential were only identified within the County Road 16 ROW, where past construction activities had resulted in disturbance. The identified areas of archaeological potential clearly warranted further assessment.

The Stage 2 property assessment encompassed all areas of archaeological potential within the study area. Legal permission to enter and conduct all necessary fieldwork activities on project lands was granted by the property owners. This assessment, completed under optimal conditions, did not result in the discovery of any archaeological materials. Based on these findings, ARA recommends that no further archaeological assessment be required within the additional lands for the South Branch Wind Farm.

In the event that the project location is modified in the future (i.e. it is altered to accommodate new proposed infrastructure), further archaeological work may be required. A *Letter of Review and Acceptance into the Provincial Register of Reports* is requested, as provided for in Section 65.1 of the *Ontario Heritage Act*.

## 5.0 ADVICE ON COMPLIANCE WITH LEGISLATION

Section 7.5.9 of the *Standards and Guidelines for Consultant Archaeologists* requires that the following information be provided for the benefit of the proponent and approval authority in the land use planning and development process (MTC 2011:126–127):

- This report is submitted to the Minister of Tourism, Culture and Sport as a condition of licensing in accordance with Part VI of the *Ontario Heritage Act*, R.S.O. 1990, c 0.18. The report is reviewed to ensure that it complies with the standards and guidelines that are issued by the Minister, and that the archaeological fieldwork and report recommendations ensure the conservation, protection and preservation of the cultural heritage of Ontario. When all matters relating to archaeological sites within the project area of a development proposal have been addressed to the satisfaction of the Ministry of Tourism, Culture and Sport, a letter will be issued by the ministry stating that there are no further concerns with regard to alterations to archaeological sites by the proposed development.
- It is an offence under Sections 48 and 69 of the *Ontario Heritage Act* for any party other than a licensed archaeologist to make any alteration to a known archaeological site or to remove any artifact or other physical evidence of past human use or activity from the site, until such time as a licensed archaeologist has completed archaeological fieldwork on the site, submitted a report to the Minister stating that the site has no further cultural heritage value or interest, and the report has been filed in the Ontario Public Register of Archaeology Reports referred to in Section 65.1 of the *Ontario Heritage Act*.
- Should previously undocumented archaeological resources be discovered, they may be a new archaeological site and therefore subject to Section 48 (1) of the *Ontario Heritage Act*. The proponent or person discovering the archaeological resources must cease alteration of the site immediately and engage a licensed consultant archaeologist to carry out archaeological fieldwork, in compliance with Section 48 (1) of the *Ontario Heritage Act*.
- The *Cemeteries Act*, R.S.O. 1990 c. C.4 and the *Funeral, Burial and Cremation Services Act*, 2002, S.O. 2002, c.33 (when proclaimed in force) require that any person discovering human remains must notify the police or coroner and the Registrar of Cemeteries at the Ministry of Consumer Services.

Ministry of Tourism, Culture and Sport

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February 8, 2013

Paul Racher  
Archaeological Research Associates Ltd.  
154 Otonabee Drive  
Kitchener, ON N2C 1L7

Dear Mr. Racher,

**RE: Review and Entry into the Ontario Public Register of Archaeological Reports: Archaeological Assessment Report Entitled, *Stage 1 and 2 Archaeological Assessments South Branch Wind Farm–Additional Lands(FIT-FT3B1IC)Parts of Lot 18, Concession 5 and Lots A, 15, 18–20, Concession 6, Geographic Township of Matilda (Former Dundas County), Township of South Dundas, United Counties of Stormont, Dundas and Glengarry, Ontario, Dated January 21, 2013, Filed by MTCS Toronto Office January 23, 2013, MTCS Project Information Form Number P007-426-2012, MTCS File Number HD00375***

This office has reviewed the above-mentioned report, which has been submitted to this ministry as a condition of licensing in accordance with Part VI of the Ontario Heritage Act, R.S.O. 1990, c 0.18.<sup>1</sup> This review has been carried out in order to determine whether the licensed professional consultant archaeologist has met the terms and conditions of their licence, that the licensee assessed the property and documented archaeological resources using a process that accords with the 2011 *Standards and Guidelines for Consultant Archaeologists* set by the ministry, and that the archaeological fieldwork and report recommendations are consistent with the conservation, protection and preservation of the cultural heritage of Ontario.

The report documents the assessment of the study area as depicted in Maps 18-21 of the above titled report and recommends the following:

The results of the Stage 1 archaeological assessment indicated that the previously un-assessed part of the study area west of County Road 16 consisted primarily of lands with archaeological potential. Areas of no archaeological potential were only identified within the County Road 16 ROW, where past construction activities had

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

resulted in disturbance. The identified areas of archaeological potential clearly warranted further assessment.

Judging from the results of the Stage 2 property assessment, the study area appears to be devoid of any significant archaeological remains. Based on these findings, ARA recommends that no further archaeological assessment be required within these parts of the project location.

Based on the information contained in the report, the ministry is satisfied that the fieldwork and reporting for the archaeological assessment are consistent with the ministry's 2011 *Standards and Guidelines for Consultant Archaeologists* and the terms and conditions for archaeological licences. This report has been entered into the Ontario Public Register of Archaeological Reports. Please note that the ministry makes no representation or warranty as to the completeness, accuracy or quality of reports in the register.

Should you require any further information regarding this matter, please feel free to contact me.

Sincerely,

Paige Campbell  
Archaeology Review Officer

cc. Mr. Jon VanDerZee, EDP Renewables North America  
Ms. Kristina Rudzki, Ministry of the Environment