

**STAGE 2 ARCHAEOLOGICAL ASSESSMENT
McLEAN'S MOUNTAIN WIND FARM
Part Lots 13-16, Concession 1
Part Lots 12-14, Concession 2
Geographic Township of Howland
Northeastern Manitoulin Island (NEMI)
District of Manitoulin
Original Report**

F-000522-WIN-130-601, F-000520-WIN-130-601
Prepared for

**Northland Power
and
Ministry of Tourism and Culture**

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Previous Licenses for areas within 50 m P027-093-2010 Stage 2
P027-140-2011 Stage 2, P100-016-2009 Stage 1

**License # P027, PIF #P027-142-2011
July 3, 2011**

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Acknowledgments

Scarlett Janusas Archaeological and Heritage Consulting and Education extend our thanks to Mr. Rick Martin of Northland Power for showing us the site and for ensuring that we had the correct alignment of the access roads, delineating the site in the field, and for all his support throughout the project. We also extend our thanks to Kirsten, also of Northland Power, who provided support throughout the project.

Executive Summary

The proponent, Northland Power, retained the services of Scarlett Janusas Archaeological and Heritage Consulting and Education (SJAHCE) to conduct a Stage 2 archaeological resource assessment on new site layouts for two access roads for the McLean Mountain Wind Farm. The access roads will service turbine locations T29 and T34. The access roads cut across part of Lots 13-16, Concession 1 and part of Lots 12-14, Concession 2, geographic Township of Howland, Northeastern Manitoulin and the Islands (NEMI). The access roads were 10 m in width and part of the area traverses and existing farm roadway.

The archaeological assessment was triggered by the Green Energy Act.

A Stage 1 archaeological assessment of a large area encompassing the areas of proposed access road changes was conducted by the Archaeological Survey of the Laurier University in 2009. A Stage 2 archaeological assessment of turbine areas, staging areas, access roads and transmission corridors was conducted by SJAHCE in 2010.

The current Stage 2 archaeological assessment of the study property was conducted under license P027 (Scarlett Janusas, PIF #P027-142-2011) on June 27th, 2011 with good to excellent assessment conditions. None of the area could be ploughed and was therefore subject to a test pitting methodology conducted along the 10 m wide access road in two lines spaced 3 metres apart. The linear length was tested in standard 5 m intervals.

No cultural material was located during the Stage 2 archaeological assessment.

The following is therefore recommended:

- With respect to this specific study area related to the access to, and construction of the access roads which will service turbines 29 and 34 (see Figures 3 and 4 for exact location details), no further archaeological assessment is required.
- 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 Registry or Archaeology Reports referred to in Section 65.1 of the Ontario Heritage Act.
- Should previously undocumented archaeological resources be discovered, they may be an archaeological site and therefore subject to Section 48 (1) of the Ontario Heritage Act. The proponent or person discovering the archaeological resources must cease alteration of the site immediately and engage a licensed consultant archaeologist to carry out archaeological fieldwork, in compliance with sec. 48 (1) of the Ontario Heritage Act.

- The Cemeteries Act, 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.

This archaeological assessment has been conducted under the 2011 Standards and Guidelines for Consultant Archaeologists (Ministry of Tourism and Culture, 2011).

This report is submitted to the Minister of Tourism and Culture as a condition of licensing in accordance with part VI of the Ontario Heritage Act, R.S.O. 1990, c 0.18. The report is reviewed to ensure that it complies with the standards and guidelines that are issued by the Minister, and that the archaeological fieldwork and report recommendations ensure the conservation, protection and preservation of the cultural heritage of Ontario. When all matters relating to archaeological sites within the project area of a development proposal have been addressed to the satisfaction of the Ministry of Tourism and Culture, a letter will be issued by the ministry stating that there are no further concerns with regard to alterations to archaeological sites by the proposed development.

STAGE 2 ARCHAEOLOGICAL ASSESSMENT
McLEAN'S MOUNTAIN WIND FARM
Part of Lots 13-16, Concession 1
Part of 12-14, Concession 2
Geographic Township of Howland
Northeastern Manitoulin and Islands (NEMI)
District of Manitoulin
Original Report

1.0 PURPOSE – Development Context

The proponent retained the services of Scarlett Janusas Archaeological and Heritage Consulting and Education (SJAHCE) to conduct a Stage 2 archaeological resource assessment on a proposed realignment of two access roads in the McLean Mountain Wind Farm project. Both access roads originate from Townline Road and follow an existing farm lane, where they then split: one goes to the area of Turbine 29, and the other goes to the area of Turbine 34. The access road crosses part of Lots 13 – 16, Concession 1, and, part of Lots 12-14, Concession 2, in the geographic Township of Howland. Only those areas of archaeological potential along the proposed access routes were subject to archaeological assessment. Figures 1 and 2 illustrate the general location of the study areas, and Figures 3 and 4 illustrates the location of the proposed two access roads. In addition, an alternative to the south of the most northern access road, is a gravel ridge. Only areas of archaeological potential were assessed.

Access roads were 10 metre widths and differed in length depending on the location (see Figure 3 and 4).

The archaeological assessment was triggered by the Green Energy Act. The FIT numbers for this project are: F-000522-WIN-130-601, and F-000520-WIN-130-601.

A Stage 1 archaeological assessment of the entire McLean Mountain Wind Farm area was conducted by the Archaeological Survey of Laurentian University in 2009 (PIF P100-016-2009). A Stage 2 archaeological assessment of the former layout and areas of archaeological potential was conducted in 2010 by SJAHCE (P027-093-2010). A Stage 2 archaeological assessment was conducted in May 2011 for the realignment of three access roads and one easement. The assessment was conducted by SJAHCE in 2011 (P027-140-2011). The current Stage 2 archaeological assessment is conducted under PIF P027-142-2011.

The current Stage 2 archaeological assessment was conducted under license P027 held by Scarlett Janusas on June 27th, 2011 under excellent conditions (high of 24 degrees C and sunny).

This archaeological assessment has been conducted under the 2011 Standards and Guidelines for Consulting Archaeologists (Ministry of Tourism and Culture, 2011).

Figure 1
Location of Project in Northern Ontario

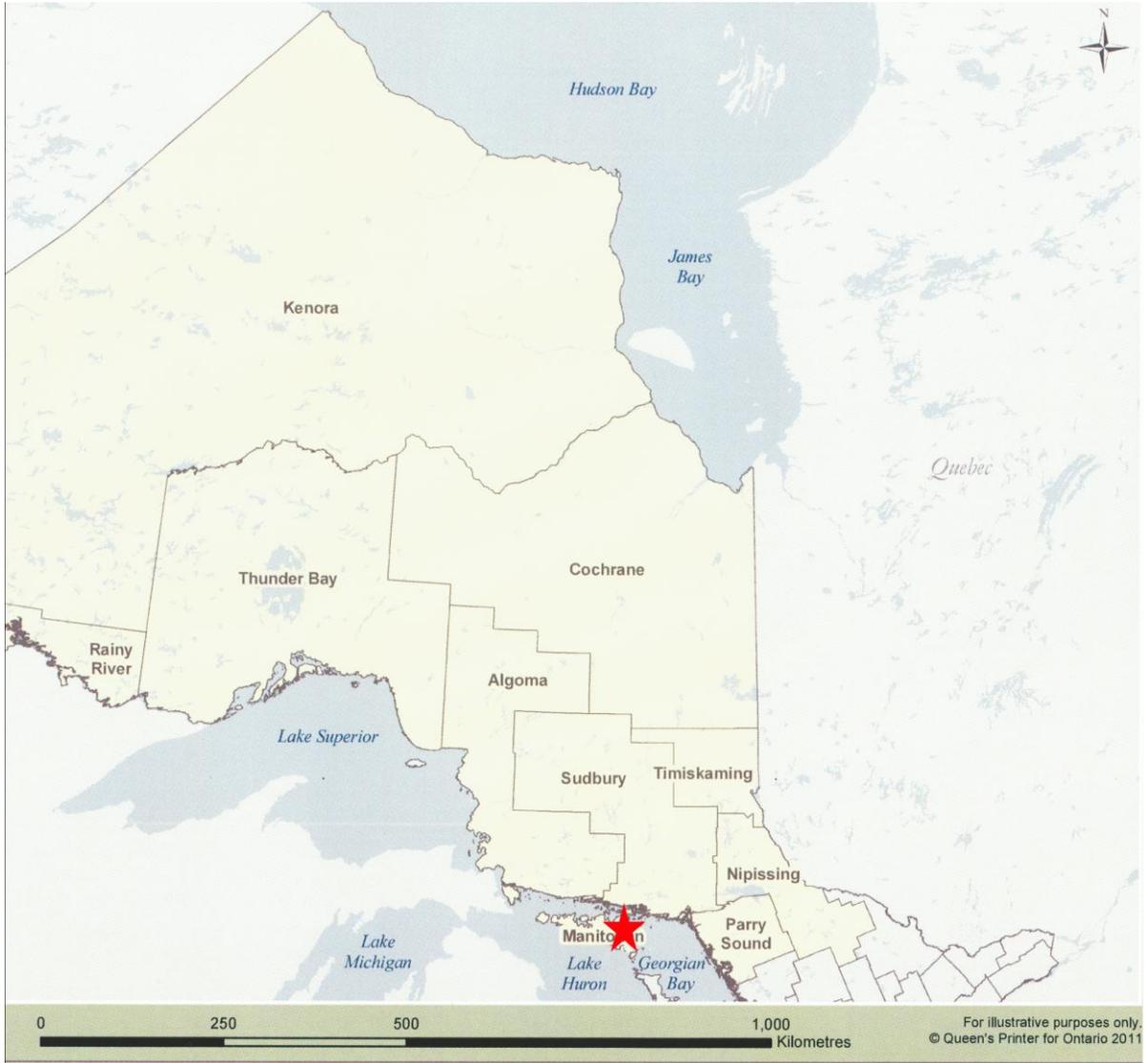


Figure 2
Location of Project Area on Manitoulin Island



Figure 3
Location of Proposed Access Roads

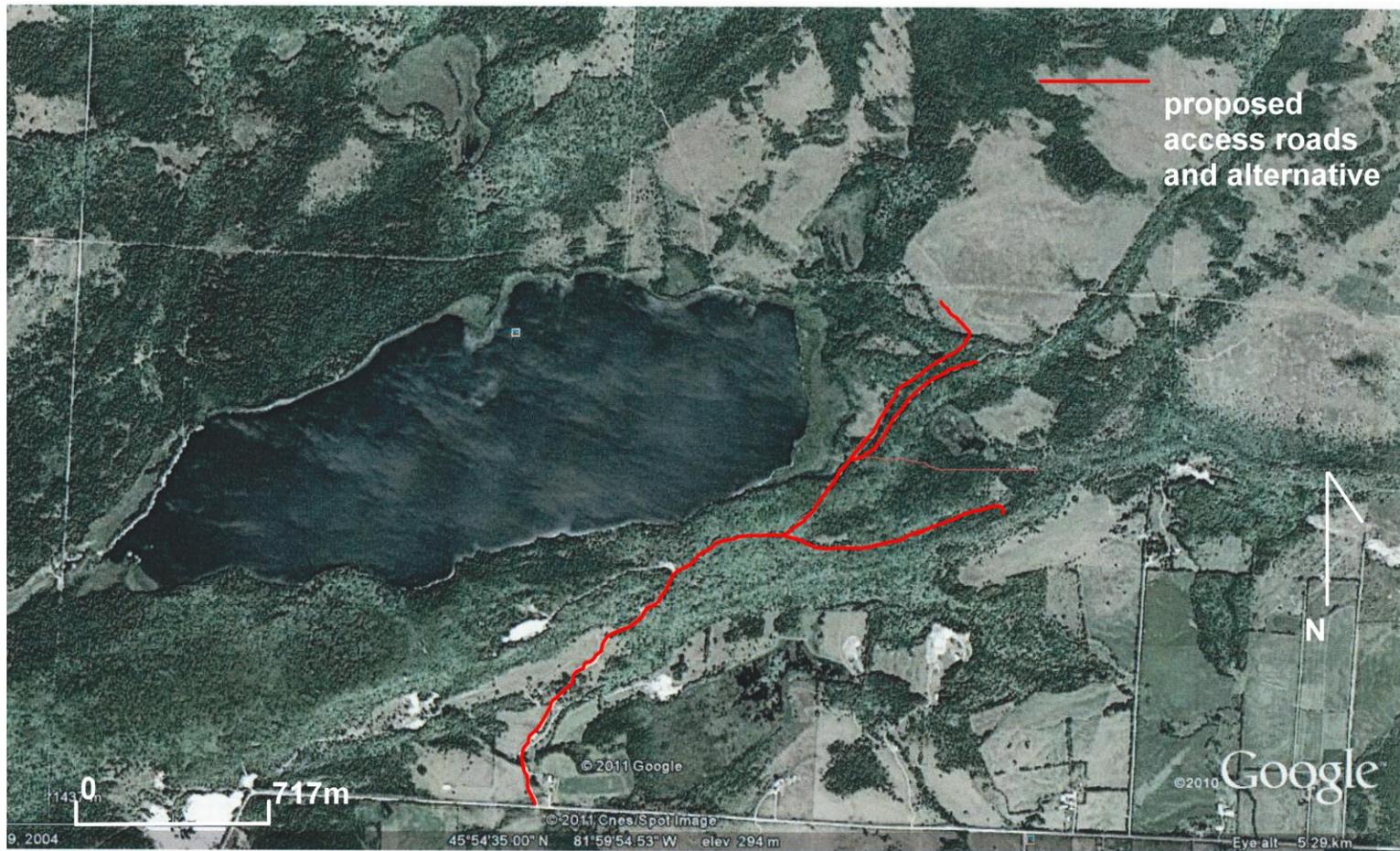
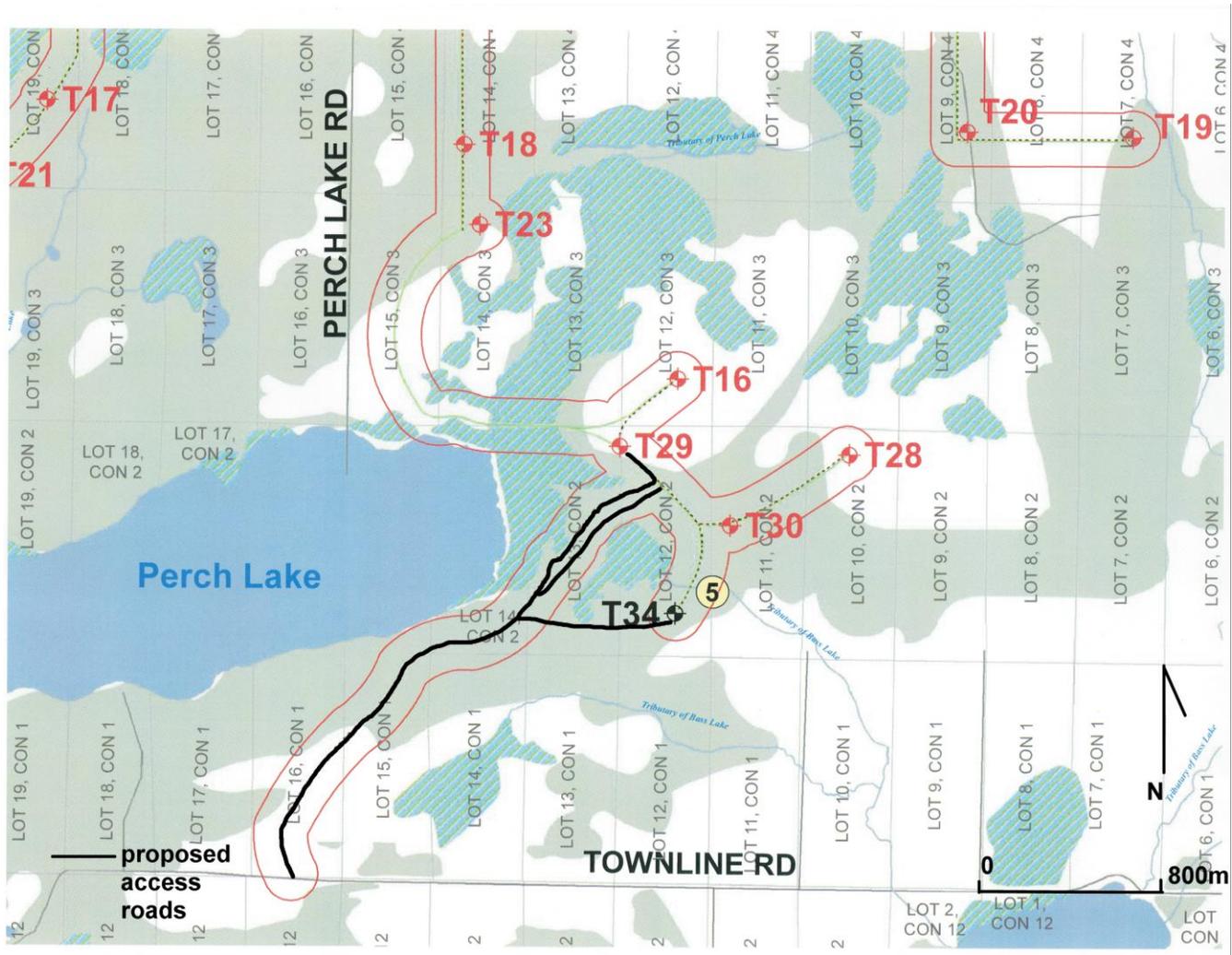


Figure 4
Proposed Access Roads to Turbines 29 and 34



This report is submitted to the Minister of Tourism and Culture as a condition of licensing in accordance with part VI of the Ontario Heritage Act, R.S.O. 1990, c 0.18. The report is reviewed to ensure that it complies with the standards and guidelines that are issued by the Minister, and that the archaeological fieldwork and report recommendations ensure the conservation, protection and preservation of the cultural heritage of Ontario. When all matters relating to archaeological sites within the project area of a development proposal have been addressed to the satisfaction of the Ministry of Tourism and Culture, a letter will be issued by the ministry stating that there are no further concerns with regard to alterations to archaeological sites by the proposed development.

2.0 Study Methods

2.1 Stage 1 Summary (Background Research)

A summary of the background research and recommendations are presented below from the 2009 Stage 1 background research report prepared by Archaeological Survey of Laurentian University (2009:21):

1. The majority of the project area has low potential, and well removed above most permanent water, is mostly high plateau with near surface bedrock, has no evidence of eskers or similar features, and the vast majority does not contain useable toolstone.
2. The stream draining Perch Lake to Honora Bay is permanent water, has moderate to high archaeological potential, and if an access road is built across, a Stage 2 survey and test pitting is required.
3. The transmission line crossing east of Little Current may require excavation for transmission towers, and a Stage 2 survey, as noted above.
4. In conclusion, because Stage 1 assessment has indicated three predictors for high potential for archaeological sites..., namely proximity to several existing sites and suitable toolstone deposits, and two locations with permanent water, some Stage 2 investigations of those areas are recommend [sic] if development proceeds.

SJAHCE determined that based on the proximity of the wetlands, Perch Lake, intermittent streams, small plateaus, a gravel ridge, and an escarpment face; parts of the access road realignment were subject to Stage 2 archaeological assessment.

2.2 Stage 2 (Field Assessment)

None of the areas archaeologically assessed were agricultural properties that could be ploughed. The areas either consisted of pasture with high rock content, with bedrock very close to the surface, exposed bedrock, scrub areas, or woodlot. Assessment therefore consisted of using a test pitting methodology, conducted in 5 metre intervals.

Test pits were a minimum of 30 cms in diameter and were excavated either to refusal (bedrock) or into 5 cms of sterile subsoil. If features were encountered, during the test pitting, no deeper testing was done but the feature recorded and photographed (no features were encountered). Soils from the test pits were screened through 6 mm mesh, and holes were backfilled. Each test pit was examined for stratigraphy and presence of cultural features.

If any positive test pits were encountered (that is, containing archaeological artifacts or cultural features), and it was not obvious that the find would proceed to a Stage 3 assessment, 8 additional test pits spaced at no more than 2 m intervals from the positive test pit would be used to assess the positive find and a one metre square excavated over the positive test pit. If sufficient positive test pits were found in the normal 5 m grid pattern to warrant proceeding to Stage 3, the above was not conducted.

Finds from the test pitting assessment were recorded using a GARMIN GPSmap 60CSx, with an accuracy of 2 m or less. Photographic documentation of field conditions and finds were maintained throughout the project, in addition to field notes. Any artifacts recovered were bagged and tagged according to provenience, tied to a permanent datum, and returned to the lab for processing.

3.0 RESULTS

The following discusses each of the three areas of archaeological assessment. Permission to access the properties and recover artifacts should any be located was provided by the proponent prior to the assessment. Assessment was conducted on June 27th, 2011. The weather was warm and sunny with a high of 24° C. Conditions were deemed good to excellent for purposes of archaeological assessment.

3.1 Townline Road to Turbine 29 Access Road

The access road begins at Townline Road for both Turbines 29 and 34, and then divides further to the north. For purposes of this study, the proposed access road is assigned to Turbine 29. Approximately 40% of the proposed access road follows an existing farm roadway (Photograph 1). This roadway is approximately 3 metres in width for most of its length, although there are areas along a steep embankment where the roadway is 5 to 6 metres in width (Photograph 2). Two lines on either side of the laneway were subject to test pitting conducted in 5 metre intervals. Only those areas deemed to exhibit archaeological potential were assessed. For example, there is a farm pond located near Townline Road, and this area was assessed. Along a plateau area, there was a small intermittent stream, and the area 50 m on either side of this area, and including the plateau area, were assessed in 5 m intervals (Photograph 3). The area near a wet meadow was assessed in 5 m intervals (Photograph 4). Areas where a small isolated elevation occurred were also subject to test pitting assessment. Areas within 50 m of any wetlands or other water bodies were also assessed using a test pitting methodology. Test pits ranged in depth from 10 to 25 cms, and were either gravelly or organic topsoil. No cultural materials were located during the test pitting survey.

Photograph 1
Test Pitting Near Townline Road facing South



Photograph 2
Widening of Road facing Southwest



Photograph 3
Area of Intermittent Stream and Small Plateau facing Northeast



Photograph 4
Test Pitting Adjacent to Wet Meadow facing Southwest



3.2 Alternative Access Road – Gravel Ridge

An agent for the proponent accompanied SJAHCE for most of the archaeological assessment, ensuring that the correct access route was being archaeologically assessed. The agent requested that the gravel ridge, which parallels part of the access road to Turbine 29, also be subject to archaeological assessment. The gravel ridge runs at a higher elevation than areas to the northwest or southeast of it. The ridge is used as a snowmobile/recreational vehicle trail. Two lines were established at a distance of 4 metres from each other, and test pits followed the standard 5 m interval grid. Photograph 5 illustrates testing along the ridge. The test pits were gravelly in nature, and no deeper than 18 cms. No cultural materials were located during the assessment of this ridge.

Photograph 5
Test Pitting along Gravel Ridge facing Northeast



3.3 Access Road Cut Off to Turbine 34

The route was well flagged for the access road, and for some distance paralleled a limestone scarp face (top side of the scarp). Testing was conducted only along the scarp face as it was the only area of archaeological potential (Photograph 6). Test pits were shallow with bedrock being close to the surface. No cultural materials were located during the archaeological assessment of this area.

Photograph 6
Test Pitting Adjacent to Scarp



Table 1 presents the UTM locations of the photographs. Figure 5 illustrates the locations of the photographs and their orientation.

Table 1
UTM Coordinates for Photographs

Photograph Number	UTM Coordinates	Direction of Photograph
1		Southeast
2		Southeast
3		Northeast
4		Easterly
5		Northeast
6		West

Figure 5
Location of Photographs

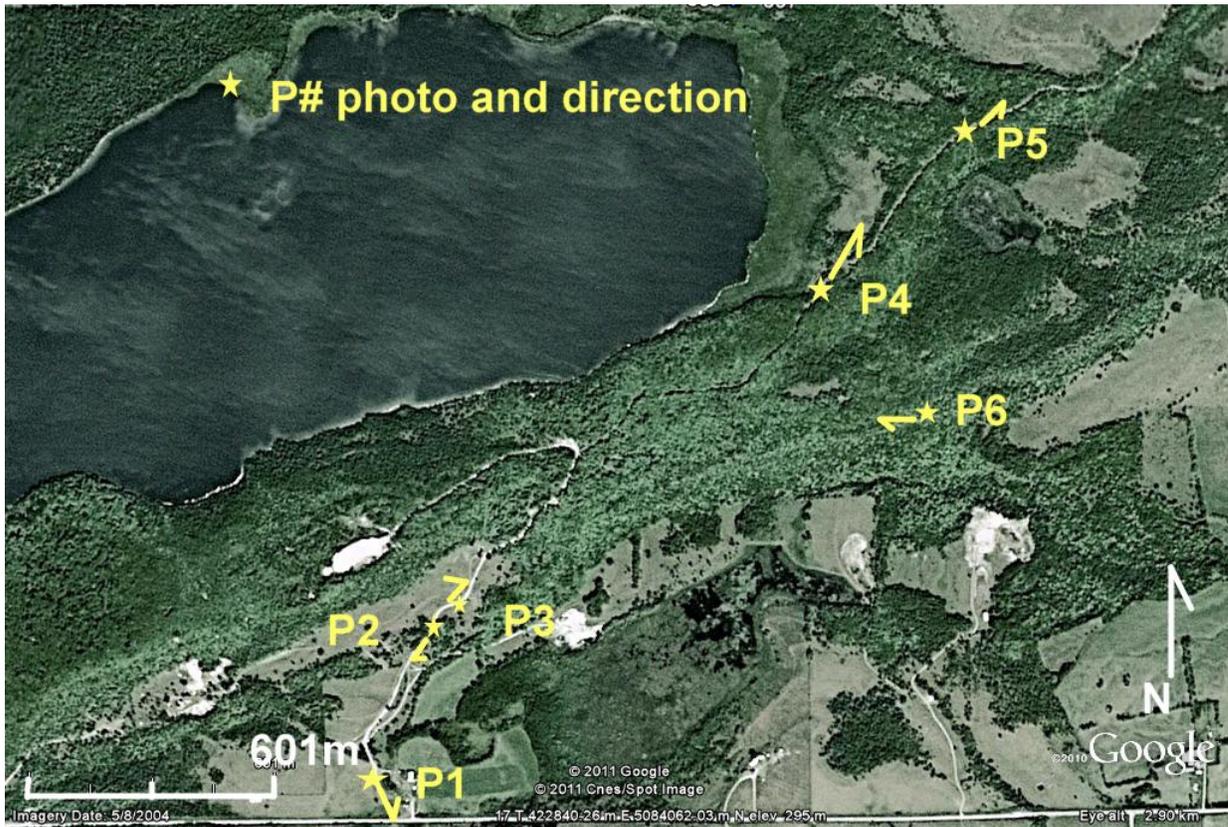
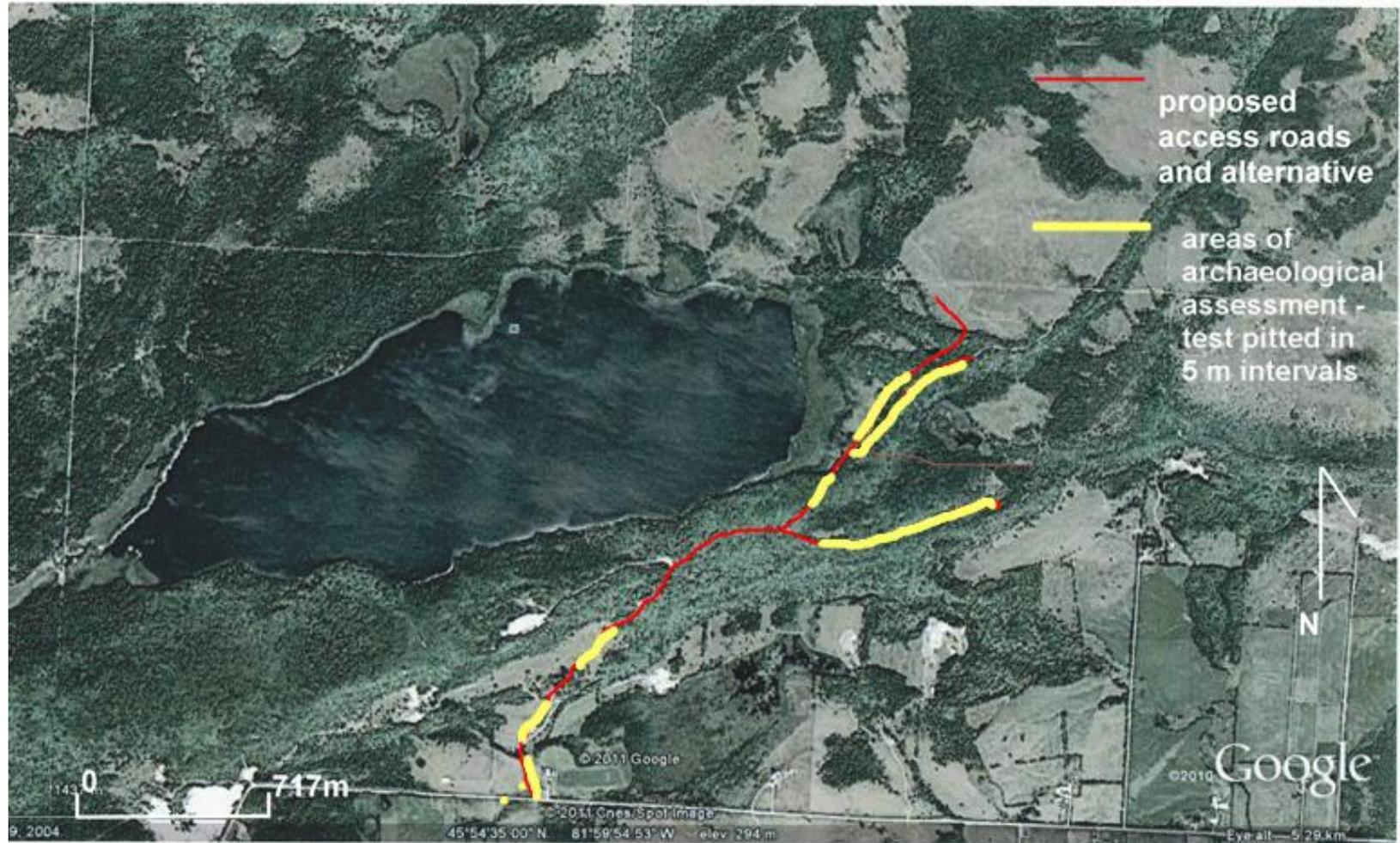


Figure 6 illustrates the areas of archaeological assessment and methodology.

Figure 6
Assessment Area and Methodology



4.0 RECOMMENDATIONS

No cultural material was located during the Stage 2 archaeological assessment.

The following is therefore recommended:

- With respect to this specific study area related to the access to, and construction of the access roads which will service turbines 29 and 34 (see Figures 3 and 4 for exact location details), no further archaeological assessment is required.
- 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 Registry or Archaeology Reports referred to in Section 65.1 of the Ontario Heritage Act.
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5.0 REFERENCES CITED AND CONSULTED

Archaeological Survey of Laurentian University

2009 Report on Stage 1 Archaeological Assessment of the Manitoulin Island Wind Farm, by Northland Power, in Northeast Manitoulin and the Island. P-100-016-2009. On file with the Ministry of Tourism and Culture, Public Registry.

Government of Ontario

2009 **The Green Energy Act.**

1990a **The Ontario Heritage Act R.S.O. 1990.** Ontario Regulation 9/06, made under the Ontario Heritage Act. Criteria for Determining Cultural Heritage Value or Interest. Queen's Printer, Toronto.

1990b **The Environmental Assessment Act. R.S.O. 1990, C. E18.**

1990c **The Planning Act. R.S.O. 1990.**

Ministry of Culture

2004 Draft Standards and Guidelines for Consulting Archaeologists. Ministry of Culture.

Ministry of Tourism and Culture

2011a **Standards and Guidelines for Consulting Archaeologists.** Ministry of Tourism and Culture.

Scarlett Janusas Archaeological and Heritage Consulting and Education

2010 Stage 2 Archaeological Resource Assessment McLean's Mountain Wind Farm, Part of Lots 21 and 22, Concession 12; Part of Lot 3, Concession 8, Part of Lot 20, Concession 11; Part of Lot 9, Concession 6; Part of Lots 7-8, Concession 5; Part of Lot 7, Concession 4; Part of Lots 11-13, Concession 2; Part of Lot 14, Concession 3; Part of lot 19-20, Concession 4; Part of Lot 31, Concession 1; Part of Lots 22,-23,25-26, Concession 12, Geographic Township of Howland, Northeastern Manitoulin and the Islands (NEMI), District of Manitoulin. P027-093-2010. On file with Ministry of Tourism and Culture.

2011a Stage 2 Archaeological Resource Assessment McLean's Mountain Wind Farm Addendum. Received by MTC January 26, 2011. On file with Ministry of Tourism and Culture.

2011b Stage 2 Archaeological Assessment, McLean's Mountain Wind Farm, Part Lots 12-15, Concession 3, Geographic Township of Howland, Part Lot 24, Concession 12, Geographic Township of Bidwell and Goat Island (formerly known as Mink Island area), Northeastern Manitoulin and the Islands (NEMI), District of Manitoulin. P027-140-2011. Submitted to Ministry of Tourism and Culture.