BOW LAKE WIND FARM
CROWN LAND INTERESTS REPORT

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Prepared for:

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Executive Summary

Nodin Kitagan Limited Partnership and Nodin Kitagan 2 Limited Partnership, by their General Partners Shongwish Nodin Kitagan GP Corp. and Shongwish Nodin Kitagan GP Corp., respectively (the "Proponent") are proposing to develop Phase 1 and Phase 2 of the Bow Lake Wind Farm predominantly on Provincial Crown Land within the unorganized Townships of Smilsky and Peever, in the District of Algoma, Ontario (the "Project"). The Project is located approximately 80 km north of Sault Ste. Marie and roughly six kilometers east of Montreal River Harbour. The Project has three Feed-in Tariff Contracts with the Ontario Power Authority for the sale of electricity generated by the Project.

As part of the Project's design, construction, and operational activities, and understanding the Project falls within the territory of the Batchewana First Nation of Ojibways ("BFN"), the Proponent has engaged directly with the BFN. As a result of these efforts, the BFN:

- Has entered the Project as partner;
- Has entered into various business and relationship agreements with the Proponent to guide Project activities; and
- Has issued a Development and Power Generation Permit, which provides the BFN's approval to construct, operate, repower, and decommission the Project.

The English name of the Project is the *Bow Lake Wind Farm*, however, the BFN know and refer to the Project as *Chinodin Chigumi Nodin Kitagan*.

As proposed, the Project will include 36 wind turbines for a total maximum installed nameplate capacity of up to 58.32 megawatts ("MW"). In addition, the operation of the Project will require 34.5 kilovolt ("kV") above and below ground electrical collector lines and communication lines, pad-mounted transformers, crane pads, two permanent meteorological towers, access roads, an operations and maintenance building, welfare buildings, a transformer station, construction compounds and laydown yards, and other ancillary facilities. The Project will connect to the provincial power grid via existing 115 kV transmission lines located adjacent to the Project's transformer station.

The draft Project Site Plan is provided in the **Appendix A**.

The Proponent retained Stantec Consulting Ltd. ("Stantec") to prepare a Renewable Energy Approval ("REA") Application, as required under Ontario Regulation 359/09 - Renewable Energy Approvals under Part V.0.1 of the Act of the *Environmental Protection Act* ("O. Reg. 359/09"). This Crown Land Interests Report is one component of the Project's approval requirements, and has been prepared in accordance with section 6.9 of the Ontario Ministry of Natural Resources' ("MNR") *Approval and Permitting Requirements Document for Renewable Energy Projects*, September 2009 ("APRD").

The following Table summarizes the requirements of this report as specified by the MNR in the APRD.

Crown Land Interests Report Requirements (as per MNR's Approval and Permitting Requirements Document for Renewable Energy Projects)

Requirements	Completed	Section Reference
The applicant may be required to provide information related, but not limited, to: • Title searches and legal agreements from affected landowners; • Consents from unpatented mining claim holders or agreement from mining lease holders (where surface rights are held) to surrender all or part of leases where required; • Legal agreements with Petroleum lease holders regarding infrastructure; • Mitigation of effects to existing users, including those with licenses, permits or tenure (may require consent/agreement); • Site access controls to mitigate the effects to other resource users or management activities; and • Measures to address compatibility with or effects to existing land use direction.	✓	2 through 6

The Crown Land that constitutes the Project Location is designated as a 'General Use Area' by the MNR's Crown Land Use Policy Atlas. The general land use intent for the lands in which the Project Location will be situated is forest management, mineral exploration, mining, hydroelectric power generation, tourism, Crown land recreation, and public recreation. In addition, all other land uses will be permitted in the area. Specifically, this includes, but is not limited to, activities such as Aggregate Extraction, Commercial Power Generation Development, and Commercial Timber Harvest. The Project has also obtained permits from the BFN allowing for the development, construction, operation, repowering and decommissioning of the Project.

Given these policy directives, and the fact that commercial power generation development is permissible within the Project Location, it has been concluded that the Project is entirely compatible with the land use policy for the area.

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1.0 Introduction

Nodin Kitagan Limited Partnership and Nodin Kitagan 2 Limited Partnership, by their General Partners Shongwish Nodin Kitagan GP Corp. and Shongwish Nodin Kitagan GP Corp., respectively (the "Proponent") are proposing to develop Phase 1 and Phase 2 of the Bow Lake Wind Farm predominantly on Provincial Crown Land within the unorganized Townships of Smilsky and Peever, in the District of Algoma, Ontario (the "Project"). The Project is located approximately 80 km north of Sault Ste. Marie and roughly six kilometers east of Montreal River Harbour. The Project has three Feed-in Tariff Contracts with the Ontario Power Authority for the sale of electricity generated by the Project.

As part of the Project's design, construction, and operational activities, and understanding the Project falls within the territory of the Batchewana First Nation of Ojibways ("BFN"), the Proponent has engaged directly with the BFN. As a result of these efforts, the BFN:

- Has entered the Project as partner;
- Has entered into various business and relationship agreements with the Proponent to guide Project activities; and
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The English name of the Project is the Bow Lake Wind Farm, however, the BFN know and refer to the Project as Chinodin Chigumi Nodin Kitagan.

As proposed, the Project will include 36 wind turbines for a total maximum installed nameplate capacity of 58.32 megawatts ("MW"). In addition to the wind turbines, the operation of the Project will require 34.5 kilovolt ("kV") above and below ground electrical collector and communication lines, pad-mounted transformers, crane pads, two permanent meteorological ("Met") towers, access roads, an operations and maintenance building, welfare buildings, a transformer station, construction compounds and laydown yards and other ancillary facilities. The Project will connect to the provincial power grid via existing 115 kV transmission lines located adjacent to the Project's transformer station.

The Project retained Stantec Consulting Ltd. ("Stantec") to prepare a Renewable Energy Approval ("REA") Application, as required under Ontario Regulation 359/09 - Renewable Energy Approvals under Part V.0.1 of the *Environmental Protection Act* ("O. Reg. 359/09"). Based upon the criteria set out in subsection 6.(3) of O. Reg. 359/09, the Project is classified as a Class 4 Wind Facility and will follow the requirements identified in O. Reg. 359/09 for such a facility.

This Crown Land Interests Report is one component of the Project's approval requirements, and has been prepared in accordance with the Ontario Ministry of Natural Resources ("MNR") Approval and Permitting Requirements Document for Renewable Energy Projects, September 2009 ("APRD").

1.1 BACKGROUND

The Project will be located predominantly on Provincial Crown Land with the exception of a small portion of Project infrastructure that will be located on patent land. The MNR, Sault Ste. Marie District office, granted Applicant of Record ("AoR") status to the Project in 2007, as modified in November 2009 (WP-2006-17 and WP-2006-31). AoR status allows the investigation of the wind energy potential of the Crown lands on which the Project is situated. Work Permits have been obtained from the MNR as required to support installation of three temporary met towers at the Project Location.

As required by the Crown, the Project will apply for a Land Use Permit ("LUP") from the MNR for the necessary land tenure during the construction phase of the Project. The MNR will issue a LUP once the Project has obtained the necessary regulatory approvals, including the REA.

During construction or following completion of the construction activities and commissioning of the wind farm, a Crown Lease application will be made by the Proponent to the MNR for the wind turbine locations, operations and maintenance building, welfare buildings, and permanent Met tower locations. An easement application will be made for the Project roads. The lease and easement agreements will allow generation of wind energy at the Project Location over a 25 year period, including an option to extend this term.

Subject to obtaining the REA approval, the Proponent will apply to the MNR for a grant of patent for the transformer station location, as well as a LUP or easement for the collector and communications system and any additional ancillary Project infrastructure situated beyond the boundaries of the Applicant of Record designated lands.

1.2 BATCHEWANA FIRST NATION OF OJIBWAYS

In addition to being located on Crown Land, the Project falls within the territory of the Batchewana First Nation of Ojibways ("BFN"). The Project has worked closely with the BFN over the past several years, developing a meaningful relationship that respects the interests of both parties. This work has resulted in the issuance of all necessary Project approvals from the BFN permitting the development, construction, operation, repowering and decommissioning of the Project, including:

- Field Exploration Agreements
- Met Tower Authorizations
- Development and Power Generation Permits.

2.0 Title Searches and Legal Agreements

2.1 TITLE SEARCHES

Title and public record searches have been undertaken by the Project. The results of these searches confirm that the Project will be located predominantly on provincial Crown land with the exception of adjoining parcels of patent land described further below (Section 2.1.2). No part of the Project Location will be situated on Federal land. A copy of the title search results along with a map depicting the various existing land tenures in the area are provided in **Appendix C**.

2.1.1 Crown Land

The MNR's Crown Land Use Policy Atlas contains land use policies that have been consolidated from various planning documents, including: District Land Use Guidelines (1983 as revised); local land use area plans; Ontario's Living Legacy Land Use Strategy (1999); and the Guide to Crown Land Use Planning (2011).

According to the Crown Land Use Policy Atlas, the Crown land within the Project Location is located within 'General Use Areas' (Ministry of Natural Resources, 2012a). The MNR is responsible for the management and administration of Crown land and land use policies on these lands. Administration of the Project Location Crown lands is carried out by the MNR Sault Ste. Marie District office.

2.1.2 Patent (Private) Land

Title searches have confirmed that Radon Resources Inc. ("Radon") owns three adjoining parcels of patent land (PINS 31231-0010, 31231-0009, and 31233-0006) in the general area of the site (these are shown on the site plan in **Appendix A** and **Appendix C**).

Radon has granted the Project an option to purchase the entire issued share capital of Radon, including the patent land parcels, subject to contract (please see **Appendix C**). The Project, when and as owner of Radon, will obtain the patent land parcel, as well as the existing aggregate site and associated license. No other approvals are required to acquire this patent land. It is anticipated that aggregate materials will be extracted from this site for construction of roads and foundations in accordance with the applicable *Aggregate Resource Act* license as described in the **Construction Plan Report** (part of the Renewable Energy Approval Application) for the Project.

Additional title searches were conducted via the Teranet database (2012) which identified two additional patent lands locations that are located outside of the Project area and are not required by the Project:

- Cottage – PIN 312330005, west of Bow Lake, approximately 1 km from any Project infrastructure.
- Gartshore Transformer Station – PIN 31231-0019, east of the Gartshore Dam Generating Station.

2.2 LEGAL AGREEMENTS WITH LAND USE RIGHTS HOLDERS

The following three companies have been identified by the Proponent as having existing rights potentially affected by the Project:

- Clergue Forest Management Inc. (“Clergue”)
- Brookfield Renewable Power Inc. (“Brookfield”)
- Great Lakes Power Transmission LP (“GLPT”)

The Project has arrangements in place with these entities regarding shared land and resource use as described below.

2.2.1 Clergue

The Project Location and surrounding area is primarily forested land and is actively harvested by Clergue pursuant to Sustainable Forest Licence No. 542257. This licence was issued by the MNR, which grants Clergue the right to cut and remove timber on and from the area. Overlapping Licence Agreements have been executed between the Project and Clergue, which address the selective clearing required to facilitate construction of the Project and on-going clearing requirements (e.g., dangerous tree removal and tree re-growth trimming at wind turbine and electrical collector line locations) during operations (please see **Appendix C**).

As identified on the Project Site Plan (**Appendix A** and **Appendix C**), there are several existing and approved public multi-use road corridors under Clergue’s Forest Management Plan (“FMP”) approved under the MNR`s Forest Management Planning Process. Upgrades and modifications to existing FMP roads, as well as the development of new public multi-use FMP roads, have been evaluated and approved under the FMP regulatory process. Improvements to the existing FMP roads and construction of the approved FMP Roads are outside the scope of the REA process and thus are not included within the REA suite of documents. A Shared FMP Roads Agreement is in place with Clergue for the construction, use, and maintenance of the FMP roads used by the Project.

2.2.2 Brookfield

Brookfield owns and operates four hydroelectric plants on the Montreal River on lands leased from the Crown under Waterpower Lease Agreements. The Gartshore hydroelectric facility, situated northwest of the Project, is the nearest of these facilities. Portions of Hogg Dam Road and Mackay Road are currently maintained by Brookfield for access to its hydroelectric plants (please see **Appendix C** for the locations of Brookfield leased lands).

The Project and Brookfield have agreed to enter into a road sharing agreement for the maintenance of the shared portions of these existing roads. Correspondence from Brookfield to the MNR indicates that Brookfield, in principle, does not object to the Project's shared use of the existing road subject to the execution of a road sharing agreement.

2.2.3 GLPT

Transmission infrastructure connecting the Brookfield hydroelectric facilities along the Montreal River is operated by GLPT. This infrastructure includes the 115 kV overhead transmission lines that travel adjacent to MacKay Road. The location of this infrastructure is captured within a Land Use Permit held by GLPT.

The Project will connect to these existing 115 kV transmission lines to deliver electricity generated by the Project to the provincial electrical system. GLPT has completed a Connection Impact Assessment ("CIA") to examine the feasibility of connecting the Project. The CIA confirms this can be accomplished without any significant effects. A Connection Cost Recovery Agreement has been executed with GLPT which enables the Project to connect to the GLPT transmission system subject to obtaining all required approvals (please see **Appendix C** for a letter from GLPT confirming the agreement).

2.3 MINING RIGHTS

As discussed in Section 2.1.2, Radon Resources owns three adjoining parcels of land (to be purchased by the Project) all of which have mining claims associated with the parcels. Based upon record searches completed on 17 September 2012, of the Ministry of Northern Development and Mines (Sault Ste. Marie Mining Division), there are no active mining claims in the Townships of Smilsky or Peever (Ministry of Northern Development and Mines, 2012). Through consultation efforts, the Proponent has been made aware of mining claims that are located south of the Project, outside the Townships of Smilsky and Peever which would not be impacted by the Project. The various tenure instruments that will be issued by the MNR for the Project area will grant surface rights to the Project, however mineral rights still remain with the Crown and would continue to be managed in accordance with the *Mining Act*. The Bow Lake Wind Farm would be willing to consult with and work with prospecting and mining companies in accordance with the *Mining Act* such that the wind farm operations and potential future prospecting and mining activities could safely coexist in the vicinity of the Project with appropriate consultation and if appropriate mitigation measures are put in place.

2.4 PETROLEUM RIGHTS

Public records searches completed on 20 July 2012, of the Ontario Oil, Gas and Salt Resource Library, did not identify any petroleum lease holders or petroleum resources in the vicinity of the Project Location (Ministry of Natural Resources, 2012b).

2.5 AGGREGATE

Pending test results, it is anticipated that aggregate material for Project construction will be extracted from three pits and one quarry located in the immediate vicinity of the Project (please see the site plan in **Appendix A**), all permitted under the *Aggregate Resources Act*. One pit (i.e., Radon Pit) is located on private land (Aggregate License #625256), the two other pits have Crown Permits (Permit #'s 625249 and #625250), and the quarry also has a Crown Permit (#625248).

3.0 Existing Users

Through the REA process, the Project has provided all mandatory notices, as required by the MNR and O. Reg. 359/09, to all LUP holders that have been identified by the MNR as potentially having an interest in the Project. In addition, the MNR has also consulted directly with LUP holders to seek feedback regarding the Project (please see **Appendix D** for an example of MNR correspondence).The MNR has provided the following list of tenured users of the general area of the Project and are shown in **Appendix C** as Land Tenure Locations:

- 6 recreational camps
- 3 private cottage owners
- 1 aggregate pit
- 1 trap line
- 1 bear management area
- 2 baitfish holders

The design of the Project layout has avoided the location of the existing tenured use areas. Accordingly, the proposed land tenure area of the Project does not overlap with the surface rights of any of the existing tenure areas described above and under this scenario only comments are required from these users. The potential indirect effects and mitigation measures are described in section 3.1. The proponent has also been made aware of other existing users without licences, permits or tenure and generally includes recreational users (fishing, hunting, hiking, sight-seeing, and ATV/snowmobiling) of the site.

3.1 POTENTIAL EFFECTS AND MITIGATION MEASURES

Recreational users in the vicinity of the Project, tenured uses, and the general public have been provided the opportunity to comment on the Project through various means, including public meetings, email, telephone, and the Project website as far back in time as 2007. Further details of the public consultation completed by the Project can be found in the Consultation Report.

Based upon these consultation efforts, the following concerns/potential effects specifically related to the use of the Crown land at the site and/or impacts to Crown land users of the site have been identified. However, please note that the following includes concerns/potential effects that have been identified by all stakeholders including those other than the LUP holders identified above.

Table 3.1: Potential Effects and Mitigation Measures to Existing Users

Concern / Potential Effect	Mitigation Measures
Disruption to land access	See section 4.0 below
Disturbance to moose hunting resources	Assessments of Moose aquatic feeding areas have been conducted by the MNR and incorporated into Natural Heritage Assessment. The Project will avoid significant aquatic feeding areas and their associated corridors. Sensory disturbance of wildlife, including Moose and Bear, using the area may occur during construction and to a lesser extent during operations as a result of increased on-site human activities (e.g., site preparation, turbine assembly, maintenance activities). However, a certain level of sensory disturbance to wildlife resources in the Project Study Area already exists from ongoing forestry and recreational activities. Studies related to the sensory effects of constructing and operating wind farms on big game resources, carried out in the Western U.S., have shown that there is no significant effect and no reduction in use of the area immediately within wind project locations. These studies indicate that species are either unaffected by this type of development, given their small footprint and preservation of the existing land-use, or that they can readily adapt to the presence of the wind project. The Project is not expected to impact use of the area by Moose or result in a limitation to the available food or cover resources.
Impacts to the "wilderness experience"	Other than a potential short term disruption to wildlife including game species during the construction of the Project (e.g. as a result of noise from construction vehicles), the Project is not anticipated to have a long term negative impact on game species and thus impact hunting and other recreational uses of the site. In addition, other existing uses of the Project area include logging, hydro-electric generation, electricity transmission, mining/quarry, and municipal waste disposal. The introduction of wind turbines in combination with these existing uses is not anticipated to significantly impact the existing "wilderness experience" of the Project area.
Impact to tourism related activities (specifically those related to the Group of Seven)	As part of the Heritage Impact Assessment ("HIA") completed for the Project, an assessment of the potential effects on the tourist industry (from a cultural heritage perspective) was completed. In terms of impact upon the tourism industry, the evidence points to minimal impact. In addition, the assessment included a survey of tourism operators. The findings from respondents to a survey of tourist operators along with other aspects of the assessment indicate no negative impact of the Project upon their business. Indeed, some suggest that it may actually stimulate additional business, as the Project would be one more interesting attraction in the area north of Sault Ste. Marie. A copy of the Heritage and Tourism Impact Assessment for the Bow Lake Wind Farm is provided in Appendix B.
Impacts to the natural environment, especially during construction	A detailed assessment of the potential effects along with mitigation measures, monitoring commitments and contingency plans related to wildlife and wildlife habitat from the construction and operation of the Project is provided within the Natural Heritage Assessment (as part of the Renewable Energy Approval process). This includes an assessment of the potential effects associated with construction activities (including noise, human activity, etc.). As part of the NHA process, we have studied local plant and wildlife species to ensure that any potential impacts of the Project will be prevented or

Table 3.1: Potential Effects and Mitigation Measures to Existing Users

Concern / Potential Effect	Mitigation Measures
	mitigated. Environmental studies are required by the provincial government, and we have conducted field studies on species and/or habitats of birds, amphibians, reptiles, mammals (including bats) and rare vegetation. Consistent with the principles of avoidance, project infrastructure and associated setbacks ensure that environmental constraint areas are avoided to the greatest extent possible. Where appropriate, changes to the project design have been applied.
Noise impacts to existing cottages	• The wind farm was designed to be compliant with the applicable MOE environmental noise guidelines. • A regular maintenance program would largely mitigate potential effects related to noise. • The closest wind turbine to a receptor is approximately 840 m, well beyond the MOE requirement of 550 m.
Potential health impacts from wind turbines	• All turbines have been located more than the required setback distance from all non-participating dwellings as per O. Reg. 359/09. • The wind turbines will be maintained and operated according to applicable industry standards/certifications. Failsafe devices integrated into the wind turbine design are capable of shutting down the turbine operation in the event of excessive wind conditions, rotor imbalance, or malfunction of other turbine components. • Wind turbines will be monitored electronically twenty-four hours a day, seven-days a week, to ensure wind turbine operational are adhered to and any mechanical concerns are addressed quickly. • With adherence to safety policies and procedures and the mitigation measures proposed, there is minimal increased or new risk to public health and safety.
Potential property value impacts	Given the remote location of the Project, property values of nearby areas/communities such as Montreal River and Batchewana Bay are not anticipated to be impacted by the Project. In a general sense, there are conflicting views on the effects of wind power projects on property value. To date, we have not seen any studies that have shown long term decreases in property values.
Removal of land that may be used for other purposes (e.g., mining claims, trapping, recreational uses)	The land base required for the Project can be considered minimal with respect to the amount of Crown land that is available for recreational activities such as hunting and fishing. In addition, existing and proposed public multi-use and FMP roads will be upgraded and/or constructed, thus potentially improving recreational opportunities within the area. However, access to previously inaccessible areas has been minimized to the extent practical through the use of existing roads and trails for Project access. The land area required for each turbine (shown as the turbine laydown area within the site plan) is approximately 2 hectares (4.96 acres) per turbine (total of 178.5 acres for the turbine component of this Project). Although spur roads to each individual turbine may be equipped with a gate, the lease boundaries of the turbines will not be fenced.
The nighttime lighting of the Project will create light pollution.	Federal regulations set by Transport Canada require that all wind projects have navigation lighting to ensure the safety of aircraft in the area. NKLP will work with Transport Canada to minimize the lighting requirements of the Project while still meeting all regulatory requirements in an effort to address stakeholder concerns related to potential light pollution. Unlike the Prince Wind Project, not all turbines for this Project will require navigation lighting.

Table 3.1: Potential Effects and Mitigation Measures to Existing Users

Concern / Potential Effect	Mitigation Measures
Is there a decommissioning plan and will all components be removed?	A Decommissioning Plan Report has been prepared which identifies how NKLP is committed to returning the site to a safe and clean condition after decommissioning in accordance with Ministry of the Environment and Ministry of Natural Resources requirements. The turbine pedestals will be removed to a depth of approximately 1 m below grade, which is essentially sufficient to remove all anchors, conduits, and cables. Removing the pedestals to the depth of 1 m will minimize the potential effects associated with complete removal of the foundation which would exceed the potential effects (e.g., erosion, sedimentation, noise, and ground and vegetation disturbance) of leaving the buried foundation in place.
A comprehensive fire plan should be created to address potential forest fires and impacts to users /infrastructure.	A Forest Fire Prevention Plan has been developed for the Project in accordance with MNR requirements and will be submitted to the Ministry of Natural Resources.
Crown land is meant for the people not industry	Use of Crown land is directed via the policies identified within the Crown Land Use Policy Atlas (developed by the MNR). As identified within the Crown Land Use Policy Atlas, the general land use intent for the lands in which the Project Location will be situated is forest management, mineral exploration, mining, hydroelectric power generation, tourism, Crown land recreation, and public recreation. In addition, all other land uses will be permitted in the area. Specifically, this includes, but is not limited to, activities such as Aggregate Extraction, Commercial Power Generation Development, and Commercial Timber Harvest.

As referenced above, the MNR has also consulted directly with LUP holders to seek feedback regarding the Project. The Sault Ste. Marie District MNR sent a letter dated November 15, 2012, to all LUP Holders, Bait Fish Harvester, Trappers, and Bear Management Area holders asking them to forward any concerns regarding the Project. The contact information for these users could not be released to the Proponent due to privacy restrictions. The MNR office received one response related to concerns about impacts to the natural environment, which is addressed in table 3.1.

4.0 Site Access Controls

Public multi-use roads approved under the Forest Management Planning process ("FMP roads") will be used to access Project infrastructure and where necessary, will be upgraded to support construction and operational activities. The FMP roads include existing FMP roads which have been constructed to support past forestry operations within the Project Location, as well as approved FMP roads that have not yet been constructed, but are approved and included in the Annual Work Schedule of the Forest Management Plan applicable to the Project Location. Construction and upgrading of both existing and approved FMP roads have been evaluated under an existing FMP regulatory process for the area, will be constructed in accordance with FMP requirements.

Additional new public multi-use and Project-specific roads will also be necessary to access some Project infrastructure, and will be designed to minimize the effects on natural features. Where gates exist on these roads, they will remain in place. Project-specific roads such as those connecting public multi-use roads to wind turbine sites will likely be equipped with locked access gates for public safety and security reasons. Existing public roads and new/upgraded FMP roads will not be gated and will remain open for public use. One section of Project-specific roads extending between turbine 2 and turbine 4 is located on Patent lands and may be gated.

To address concerns related to Crown land access during construction, there will be some localized, infrequent and temporary closures of roads for the purposes of ensuring public safety during construction. Temporary closures are anticipated on existing FMP and public multi-use roads during upgrade work to these roads. **Table 4.1** outlines the existing FMP and public multi-use roads in the vicinity of the Project that will be upgraded and the anticipated timeframes when localized and short-term access disruptions will occur based on the current anticipated project schedule. This schedule may change as the development of the project progresses.

Table 4.1: Road Upgrade Timelines

Existing FMP/Public Multi-Use Roads	Anticipated Construction Timeframe
Dump Road upgrades	October 2013 – December 2013
Hogg Dam Road upgrades	November 2013 – April 2014
MacKay Road upgrades	November 2013 – April 2014
Rebecca's Road upgrades	November 2013 – April 2014
Mile 67 Road upgrades (from Rebecca's Road to Mile 67 Bridge)	November 2013 – April 2014
Trim Lake Road upgrades	November 2013 – April 2014

During some road upgrade work, delays may be temporary in nature and limited access may be accommodated through work areas. Where full road closures are required, alternate access routes via existing roads will be described in site signage (where practical and where alternate access routes are available) in order to facilitate continued access for members of the public to Crown lands via existing roads. Site signage would be located at main access points to the Project area such as MacKay Road, Mile 67 Road, and Trim Lake Road.

Tree clearing for new public multi-use, FMP, and Project-specific roads is anticipated to occur between August and December 2013 with road construction occurring between November 2013 and April 2014. Public access will be restricted on new public multi-use, FMP, and Project-specific roads when new roads are under construction. After the road construction is complete, limited public access to new public multi-use, FMP roads may be permitted during the site construction activities. Appropriate signs will be posted on new public multi-use, FMP roads to inform potential users of construction activities and road closures. No public access will be permitted on Project Specific Roads during construction or operations.

During the operations phase, infrequent, temporary and localized road closures may be required from time to time during major maintenance activities such as to facilitate large equipment delivery. In order to allow continued access for members of the public to Crown lands, and depending on the timing, duration and nature of the access disruption, alternate access routes via existing roads may be described in site signage (where practical and where alternate access routes are available). If utilized, site signage would be located at main access points to the Project area such as MacKay Road, Mile 67 Road, and Trim Lake Road.

Although upgrades will be made to existing public-multi use roads and new public-multi use roads will be created, thus potentially making access to the site easier for Crown land users, creating access to previously inaccessible areas has been minimized to the extent practical through the use of existing roads and trails for Project related access (e.g., Dump Road).

5.0 Land Use Compatibility

As the government of Ontario made a direct commitment to the generation of renewable electricity by establishing wind power as a part of Ontario's overall electricity supply mix, a special process for the placement of generating facilities on Crown land by private wind energy developers was established. As noted in **section 1.1**, the Proponent has received AoR status for Crown lands in which the Project Location will be situated. The Project has also obtained permits from the BFN allowing for the development, construction, operation, repowering and decommissioning of the Project. Given the policy directives noted below, and the fact that commercial power generation development is permissible within the Project Location, the Project is entirely compatible with the land use policy for the area.

5.1 CROWN LAND USE POLICY ATLAS

The Project Location's current land use has been designated as a 'General Use Area' by the MNR's Crown Land Use Policy Atlas. The general land use intent for the lands in which the Project Location will be situated is forest management, mineral exploration, mining, hydroelectric power generation, tourism, Crown land recreation, and public recreation. In addition, all other land uses will be permitted in the area. Specifically, this includes, but is not limited to, activities such as Aggregate Extraction, Commercial Power Generation Development, and Commercial Timber Harvest.

Given the fact that commercial power generation development is permissible within the Project Location, the Project is deemed to be considered compatible with the overall land use policy for the area. With respect to compatibility with other general land use activities for the site, given the relatively small land base required for Project infrastructure such as turbine foundations and the transformer station and that only Project-specific roads will be gated to limit public access, the Project isn't anticipated to have a net negative impact such as permanent removal of lands for other management objectives such as Crown land recreation, mining, and commercial timber harvest. It could further be argued that management objectives related to tourism/recreation could be improved as a result of improved access opportunities to the area via the upgrades to be made to existing public multi-use roads and the construction/upgrades of FMP roads (however, the design of the Project has been completed in a manner that attempts to minimize the creation of access to previously inaccessible areas). In addition, as described above in section 2.2, the Proponent has entered or will be entering into agreements with existing land use rights holders within the Project area thus further indicating compatibility with existing land users and land uses for the site.

5.2 WILDLIFE MANAGEMENT POLICIES

The Project is located within Provincial Wildlife Management Unit (WMU) 36 (OMNR, 2007). Within WMU 36, provincial policies apply concerning a number of wildlife species and their habitats. These respective species and habitats are considered to have value within the province of Ontario. The provincial wildlife management policies that apply to WMU 36 include:

- Cervid Ecological Framework (OMNR, 2009a);
- Moose Management Policy (OMNR, 2009b);
- Framework for Enhanced Black Bear Management (OMNR, 2009c);
- Forest Management Guidelines for the Provision of Marten Habitat (OMNR, 1996a); and
- Forest Management Guidelines for the Provision of Pileated Woodpecker Habitat (OMNR, 1996b).

The implications of the Project on the Wildlife Management Policies listed above and described below are provided in Section 5.2.1.

Moose Management

The Project is located within Cervid Ecological Zone D2 and three Cervid species are known to occur in Zone D2: Moose, White-tailed Deer and Elk. Elk are not found within the Project area, and therefore, Elk management will not be affected by the Project. Goals for Moose population management include the maintenance of moderate to high population densities through the Moose Management Policy (OMNR, 2009b). The goal of the Moose Management Policy (OMNR, 2009b) within Ontario is to ensure the sustainability of Moose populations and ecosystems they inhabit in order to continue to provide ecological, cultural, economic and social benefits for the people of Ontario. Populations of Moose are managed through the assessment of mortality through harvest, non-hunting and natural mortality.

The management of Moose habitat in the Project area is addressed through the FMP. Moose are found throughout all wildlife management units within the Algoma Forest, including WMU 36. The key components of Moose habitat are semi-mature and mature conifer stands, young deciduous stands, aquatic feeding areas, mineral licks and calving sites. Conifer stands are important in all seasons, providing shelter from weather extremes and predators. During spring and early summer, limiting factors to Moose population success include mineral licks and aquatic feeding areas. Moose habitat management objectives are achieved through the application of the Timber Management Guidelines for the Protection of Moose Habitat (Mudge et. al., 2009).

White-tailed Deer Management

White-tailed Deer are also considered under the Cervid Ecological Framework in Zone D2. Goals for White-tailed Deer management in Zone D2 emphasize maintaining moderate population densities within ecological carrying capacity (OMNR, 2009a).

Within the Project area, the FMP addresses habitat management for White-tailed Deer (OMNR, 2009b). White-tailed Deer in the Algoma Forest are at the northern limit of their range. Winter deer yards occur only in the southern portion of WMU 36 in scattered conifer stands. Severe winters have a significant effect on their survival and reproduction success, through loss of cover, protection and habitat. Critical habitat components for wintering deer are: conifer shelter; early successional stage hardwood stands; openings; and, forest stands containing oak and beech trees which produce acorns and beechnuts. Summer habitat within the Algoma Forest is extensive, and is unlikely to be functioning as a limiting factor in deer population success (Mudge et. al., 2009).

Black Bear Management

The Project area is situated within the highest Black Bear density zone within Ontario, encompassing from 40-60 bears/100km^2 (OMNR, 2009c). The management of Black Bear populations occurs through the harvest of up to 10% of the population. However, MNR recognizes that it is difficult to assess Black Bear population size and trends, and therefore, numerous factors are taken into account which may affect mortality and reproductive success (OMNR, 2009c). Within the Project area, habitat management for Black Bear in forested ecosystems is primarily conducted through the FMP. Black Bears are found throughout the Algoma Forest with ideal habitat consisting of mixed forest with a variety of tree and shrub species of varying age. Bears seek out clearings, power lines, roadsides and pipelines where berries are found. FMP targets include maintaining at least 3500 ha of Black Bear foraging preferred habitats (Mudge et. al., 2009).

Marten Habitat Management

Provincial guidelines for the provision of Marten habitat include: the maintenance of 10-20% of forests which are considered suitable for sustaining Marten populations; ensuring that 50 percent of the original conifer basal area are maintained; canopy closure of at least 50 percent are maintained; core areas are connected by riparian reserves or harvested suitable habitat; gaps greater than 1km are avoided in order to maintain connectivity; and, the retention of logs, stumps and other coarse woody debris on site are encouraged (OMNR, 1996a).

Marten occur at low densities with large home ranges across the majority of the North American coniferous forests. There are a number of important ecological factors which affect Marten, including: maternal den sites (dead and living trees with large cavities), summer resting areas (canopies of large conifer trees), and winter resting and denning areas (coarse woody debris on the ground providing shelter under the snow). Forest management guidelines for Marten also

require that 10-20% of suitable habitat be maintained at the landscape level as practical, which is consistent with provincial guidelines. The FMP for the Algoma Forest includes provisions for Marten habitat by creating core areas which maintain 14% of suitable habitat (Mudge et al., 2009).

Pileated Woodpecker Management

The Pileated Woodpecker was identified as a "provincially featured species" in the Environmental Assessment Board's ruling on timber management on Crown lands in 1994, with specific emphasis on habitats in the Great-lakes St. Lawrence forest of central Ontario. Guidelines for the management of Pileated Woodpecker are expected to be applied in a way that maintains ecological systems and biodiversity for a wide range of species (OMNR, 1996b).

Guidelines for Pileated Woodpecker are applied at two levels: Stand and Landscape. At the Stand level, specific requirements are associated with Pileated Woodpecker habitat including: the retention of cavity trees for nesting (6 cavity trees/ha, at least 1 tree with a DBH >40cm); standing dead trees for foraging (retained where they do not pose a safety risk); and, downed woody debris as important habitat components within forest stands. At a landscape level, the objective of the guidelines is to minimize adverse effects of planned forest management activities on the overall supply of preferred feeding, nesting and roosting habitat (OMNR, 1996b).

Pileated Woodpeckers require a number of ecological factors to ensure population survival including: old to mature forests with dead or declining poplar species; hollow roost trees to avoid predation; and, dead and declining trees along with downed woody debris to provide feeding sites where insects are found. No population targets for Pileated Woodpecker are provided in provincial guidelines; however, the FMP for the Algoma Forest guidelines recommends the retention of greater than 80% of Pileated Woodpecker habitat over a 100 year period (Mudge, et al., 2009).

Species at Risk Management

Management of Species at Risk is also considered in the FMP, although no specific objectives are provided for the management of these species in the Algoma Forest. The target for habitat for Species at Risk within the FMP is 100% of the present level to ensure that habitat for SAR is not reduced as a result of forest management activities (Mudge, et al., 2009). In addition, the FMP recognizes the requirements for the protection of Species at Risk under the Endangered Species Act (ESA, 2007).

Thirteen forest-dependent Species at Risk are considered within the Algoma FMP, including: American Chestnut, Butternut, Eastern Cougar, Golden Eagle, King Rail, Kirtland's Warbler, Wood Turtle, Blanding's Turtle, Flooded Jellyskin, Least Bittern, Peregrine Falcon, Wolverine and Woodland Caribou. However, most of these species are not found in the Project area and

would not be affected by the Project. In the event that any permits are required for the Project, these would be obtained through the ESA process.

Old Forest Preferential Species

A number of additional species were identified as requiring a focused effort, including common species with preference for old forests to meet some of their habitat requirements, including: Canada Lynx, Southern Flying Squirrel, Red-shouldered Hawk, Red-breasted Nuthatch, Ruby-crowned Kinglet, and Black-backed Woodpecker. As the Crown Forest Sustainability Act (CFSA, 1995) requires the conservation of biological diversity during forest management, these species are considered within the plan in order to maintain diversity within the Algoma forest district (Mudge, et al., 2009).

5.2.1 IMPLICATIONS OF THE BOW LAKE WIND FARM ON WILDLIFE MANAGEMENT POLICIES AND PLANS

Population Effects

Potential Project effects on Moose, White-tailed deer, Black Bear, Marten and Pileated Woodpecker populations may occur indirectly from disturbance or although unlikely, directly through mortality (e.g., collision with construction vehicles or turbine blade strikes). Increased traffic within the site may increase the number of human encounters with White-tailed Deer, Moose and Black Bear as well as increasing the potential of direct mortality from increased road traffic, although the effects on populations of these species would be minimal, if any. The use of existing access roads/trails and the installation of gates on Project specific access roads will assist in reducing the number of recreational users to previously inaccessible areas of the site. This will contribute to the policy goals of maintaining the populations of policy species as a result of a non-increase in the hunting pressure and potential for road mortality in the Project area over its current use.

Habitat Effects

The removal of forested vegetation during construction will aid in supporting populations of all policy species by creating openings in the forest canopy, which over time may produce high volumes of soft mast such as raspberries and blackberries, as well as regrowth of saplings, both of which are important components of the Black Bear diet. An increase in early successional communities as regrowth will occur in constructed areas, providing increased feeding habitat for White-tailed Deer and Moose.

Disturbance from temporary construction activity, such as increased traffic, noise, or dust, may result in temporary avoidance of habitats by Moose, White-tailed Deer, Black Bear, American Marten and Pileated Woodpecker. These reductions of use are generally considered temporary and will not affect the long-term use of the area by these species and will not affect the wildlife habitat management policy goals.

6.0 Signatures

This Crown Land Interests Report has been prepared by Stantec for the Proponent in accordance with the MNR's APRD.

This Report has been prepared by Stantec for the sole benefit of the Proponent, and may not be used by any third party without the express written consent of the Proponent. The data presented in this Report are in accordance with Stantec's understanding of the Project as it was presented at the time of the Report.

STANTEC CONSULTING LTD.

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7.0 References

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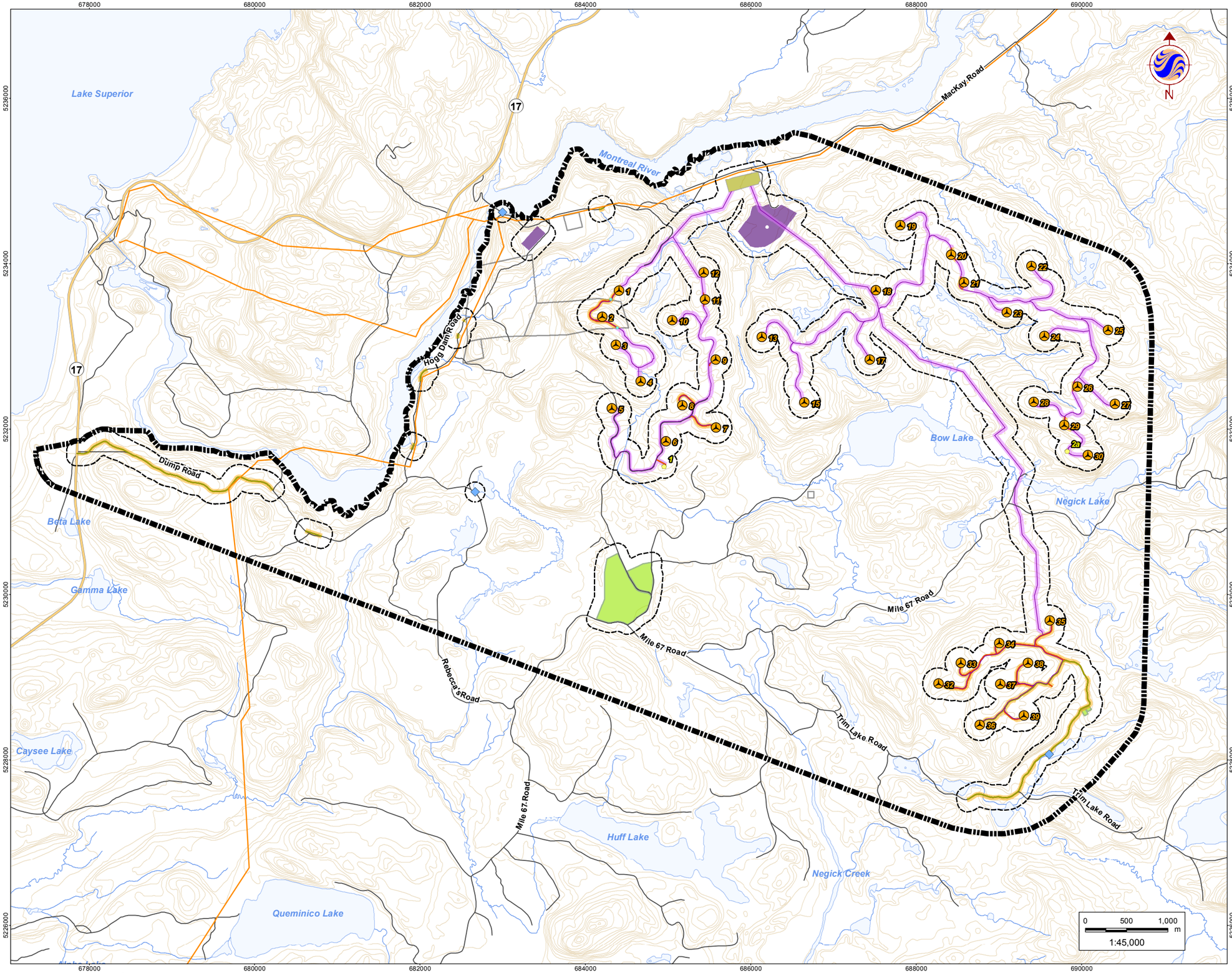
Appendix A

Site Plan



Legend

- Study Area
- 120m Zone of Investigation

Project Components

- Turbine Location
- Gate Location
- Meteorological Tower
- Proposed Water Extraction Location
- Access Road (New)
- Access Road (Upgrade)
- Overhead/Underground Collector Line
- Access Road Corridor
- Collector Line Corridor
- Construction Compound
- Construction Compound & Welfare Building
- Construction Compound & Transformer Station/Operations & Maintenance Building

Existing Features

- Expressway / Highway
- Road
- Elevation Contour
- Existing Transmission Line
- Watercourse
- Waterbody
- Patent Land

Notes

1. Coordinate System: NAD 1983 UTM Zone 16N
2. Base features produced under license with the Ontario Ministry of Natural Resources © Queen's Printer for Ontario, 2013.

Stantec

January 2013
160960771

Client/Project

Bow Lake Wind Farm
Nodin Kitagan Limited Partnership and Nodin Kitagan 2 Limited Partnership, through their General Partners Shongwish Nodin Kitagan GP Corp. and Shongwish Nodin Kitagan 2 GP Corp.

Figure No.

1.0

Title

Project Location & Study Area - Overview

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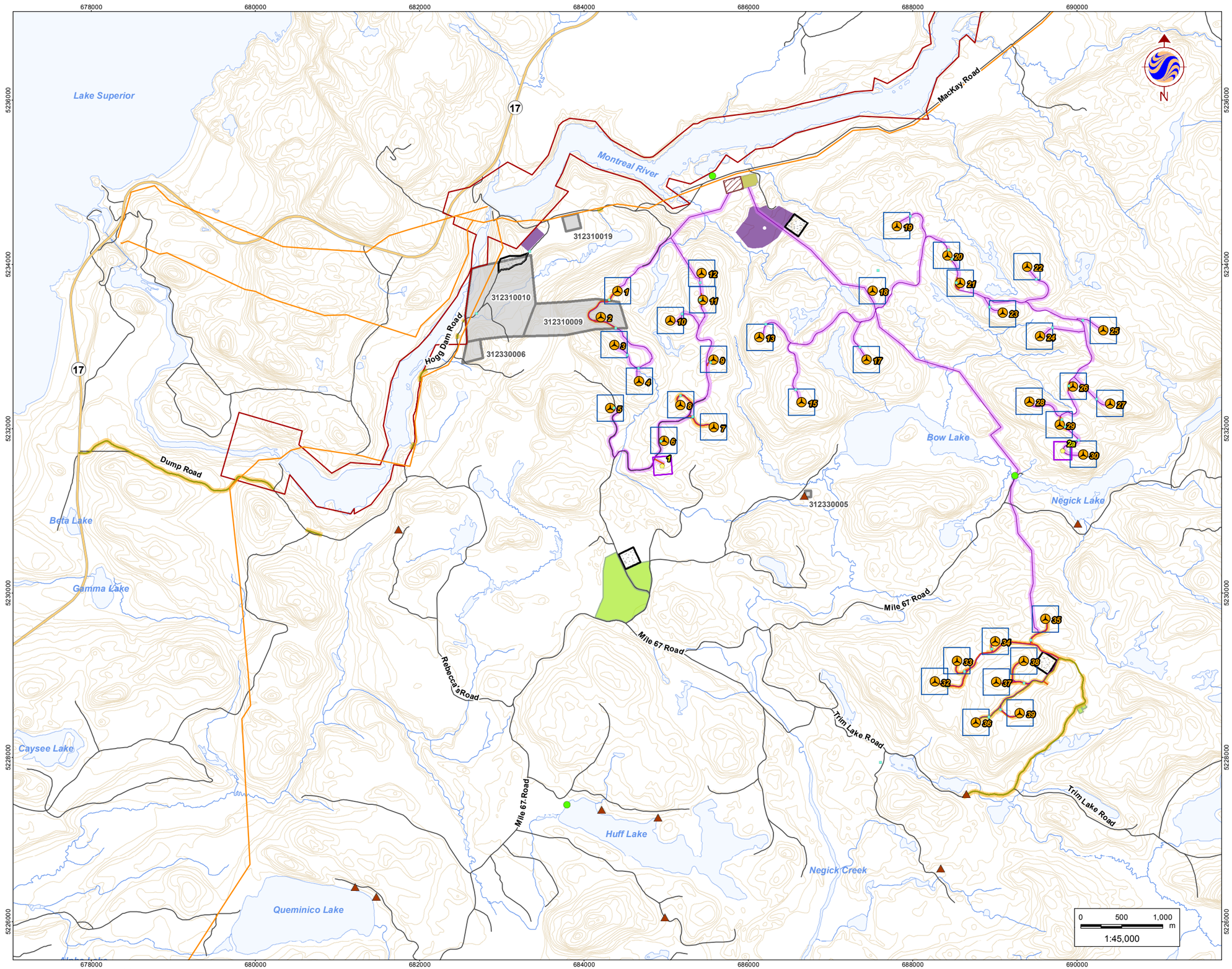
Revised: 2013-01-23 By: pworsell



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Revised: 2013-01-30 By: pworsell

Legend

Project Components

- Turbine Location
- Gate Location
- Meteorological Tower
- Access Road (New)
- Access Road (Upgrade)
- Overhead/Underground Collector Line
- Access Road Corridor (60m Easement)
- Collector Line Corridor (60m Easement)
- Construction Compound
- Construction Compound & Welfare Building
- Construction Compound & Transformer Station
- Turbine Lease Area
- Met Tower Lease/Land Use Permit
- Operations and Maintenance Lease Area

Existing Features

- Crown Land Tenure Location (Lease or LUP)
- Access Point
- Expressway / Highway
- Road
- Elevation Contour
- Existing Transmission Line
- Watercourse
- Waterbody
- Patent Land
- Aggregate Site
- Brookfield Power Lease Area

Notes

1. Coordinate System: NAD 1983 UTM Zone 16N
2. Base features produced under license with the Ontario Ministry of Natural Resources © Queen's Printer for Ontario, 2013.

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January 2013
160960771

Client/Project

Bow Lake Wind Farm
Nodin Kitagan Limited Partnership and Nodin Kitagan 2 Limited Partnership, through their General Partners Shongwish Nodin Kitagan GP Corp. and Shongwish Nodin Kitagan 2 GP Corp.

Figure No.

1.0

Title

Project Location & Study Area - Overview

Appendix B

Heritage Tourism Impact Assessment

Ministry of Tourism, Sport and Culture
Confirmation Letter
February 24, 2012

Ministry of Tourism, Culture & Sport
Culture Division
Culture Services Unit
Programs and Services Branch
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Ministère du Tourisme, de la Culture, et du Sport
Division de culture
Unité des services culturels
Direction des programmes et des services
401, rue Bay, Bureau 1700
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Ontario

February 24, 2012

Kelly Matheson
Bow Lake Phase 1 Wind Farm Limited & Bow Lake Phase 2 Wind Farm Limited
c/o Bluearth Renewables Inc.
Suite 200, 4723-1st Street SW
Calgary, AB T2G 4Y8

RE: **Colloquial Name of Project: Bow Lake Wind Farm Phase 1 and Phase 2**

Location: District of Algoma

OPA Reference Numbers: FIT-FVXCPUV, FIT-F7JOC51, FIT-FYPJVV

MTCS DPR file no.: PLAN-57EA031

Dear Ms. Matheson:

This letter constitutes the Ministry of Tourism, Culture and Sport's written comments as required by s. 23(3)(a) of O. Reg. 359/09 under the *Environmental Protection Act* regarding heritage assessments undertaken for the above projects.

Based on the information contained in the revised report submitted for these projects, the Ministry is satisfied with the heritage assessment. Please note that the Ministry makes no representation or warranty as to the completeness, accuracy or quality of the heritage assessment report. *

The revised *Heritage and Tourism Impact Assessment for Bow Lake Wind Farm Phase 1 and Phase 2* (Feb. 22, 2012) recommends the following:

4.2 Mitigation
Aboriginal Mitigation:

1. (With regard to Batchewana First Nation of the Ojibways). The author of this report will not make recommendations regarding the significance of or need for mitigation of potential effects on BFN cultural heritage.

   As participants in the project, the BFN have recommended that all Bow Lake Project development activities recognize and respect the spirituality of the Bow Lake Site, and the developers follow the spiritual lessons of the ancestors before commencing any of the work contemplated by this project.

   It is recommended that the proponent continue to engage with the BFN to identify and address any concerns they have with respect to potential impacts of the project on their cultural and spiritual heritage.

2. (With regard to the Métis Community). It is understood discussions are ongoing in respect of potential mitigation measures and it is recommended that the proponent continue to consult and work with the Métis to identify and address any concerns they have with respect to potential impacts of the project on their cultural heritage.

Great Lakes Heritage Coast Mitigation:

1. The proponents have set back the wind turbines from the coast by approximately 8 km, with the closest turbine being around 5 km from the coastline. This distance coupled with the clustered (as opposed to linear) siting of the turbines will help to minimize the visibility of the wind turbines from the coast. No further mitigation is recommended.

Lake Superior Provincial Park Mitigation:

1. The distance of the wind turbines from the coast (as described above) as well as the grouping of the turbines will help to reduce the visibility of the wind turbines from this area. No further mitigation is recommended.

Highway 17 Scenic Drive Mitigation:

1. There is no mitigation recommended.

2. Consideration could be given to an interpretive initiative dealing with alternative energy, orchestrated by the proponent with such organizations as the Algoma Kinniabi Travel Association (and the Agawa Canyon Rail/CN). This could be an outdoor interpretive presentation using all weather panels located at pull-off areas which have a view of the turbines. Such an approach supports the Sault Ste. Marie –Think Green – The alternative energy capital of North America –marketing campaign. Potentially hydro electric power as well as the search for uranium could be incorporated into the story of the Wind Farms as a part of the Region's clean energy heritage.

Voyageur Trails Mitigation:

1. There is no mitigation recommended.

Landscapes Associated with the Group of Seven Mitigation:

1. There is no mitigation recommended.

2. The eventual publication of the Waddington research and the McGuffin/Burtch20 research tracking actual sites of the Group of Seven will provide a tangible link between artists and the landscape, regardless of the development of the Bow Lake Wind Project or other industrial activities which have altered the landscape since the paintings were produced.

4.3 Conclusion Regarding the Heritage Resources Impact of Bow Lake Wind Farm

The examination leads to the conclusion that the construction of the planned Wind Farm will have no negative impact on the heritage resources on the Project location as there are no significant heritage resources located on the site that could be affected in any event.

The Batchewana First Nation of Ojibways know that spirits are present throughout their territory, including the project area, and it is their belief that the addition of the wind turbines will not impact (positively or negatively) these spirits.

Further, the project will have only limited impact on the resources located in the larger study area (Zone of Visual Impact) as there are very few heritage sites that will be directly affected in any way by towers. One of the better known sites is the site of the Aboriginal pictographs in Lake Superior Provincial Park, where, at a certain angle from the site, wind towers might be seen in the far distance on a clear day. Given the existing visual context (there are also a number of cottages on the island immediately opposite the pictographs which detract from the wilderness setting), and the distance between the pictographs and the wind turbines limiting their visibility, this does not constitute an impact that requires mitigation.

The only other heritage sites identified in the Zone of Visual Impact that have been noted as being of potential interest are painting sites (i.e. sites where original scene of paintings are still recognizable) of the Group of Seven. However, to date, no Group of Seven painting sites have been identified that would be affected by the visibility of the wind turbines, with the exception of the J.E.H. MacDonald painting of the Falls on the Montreal River, however this site has already been significantly altered by industrial (hydroelectric) development since the painting was done. Wind turbines would just be the latest addition of change on the site.

The Ministry is satisfied with these recommendations.

The Section 4.2 *Mitigation* of report also includes a second recommendation related to Lake Superior Provincial Park. While the authors of the report acknowledge that this second recommendation is beyond the scope of the study and is not the responsibility of the proponent, they included it as a consideration for the Park's administration. Therefore, it was not included in the above recommendations.

This letter does not waive any requirements which you may have under the Ontario *Heritage Act*. Also, this letter does not constitute approval of the renewable energy project. Approvals of the project may be required under other statutes and regulations. It is your responsibility to obtain any necessary approvals or licences.

Please feel free to contact me if you have questions or require additional information.

Sincerely,

Paula Kulpa
Team Lead – Land Use Planning (A)

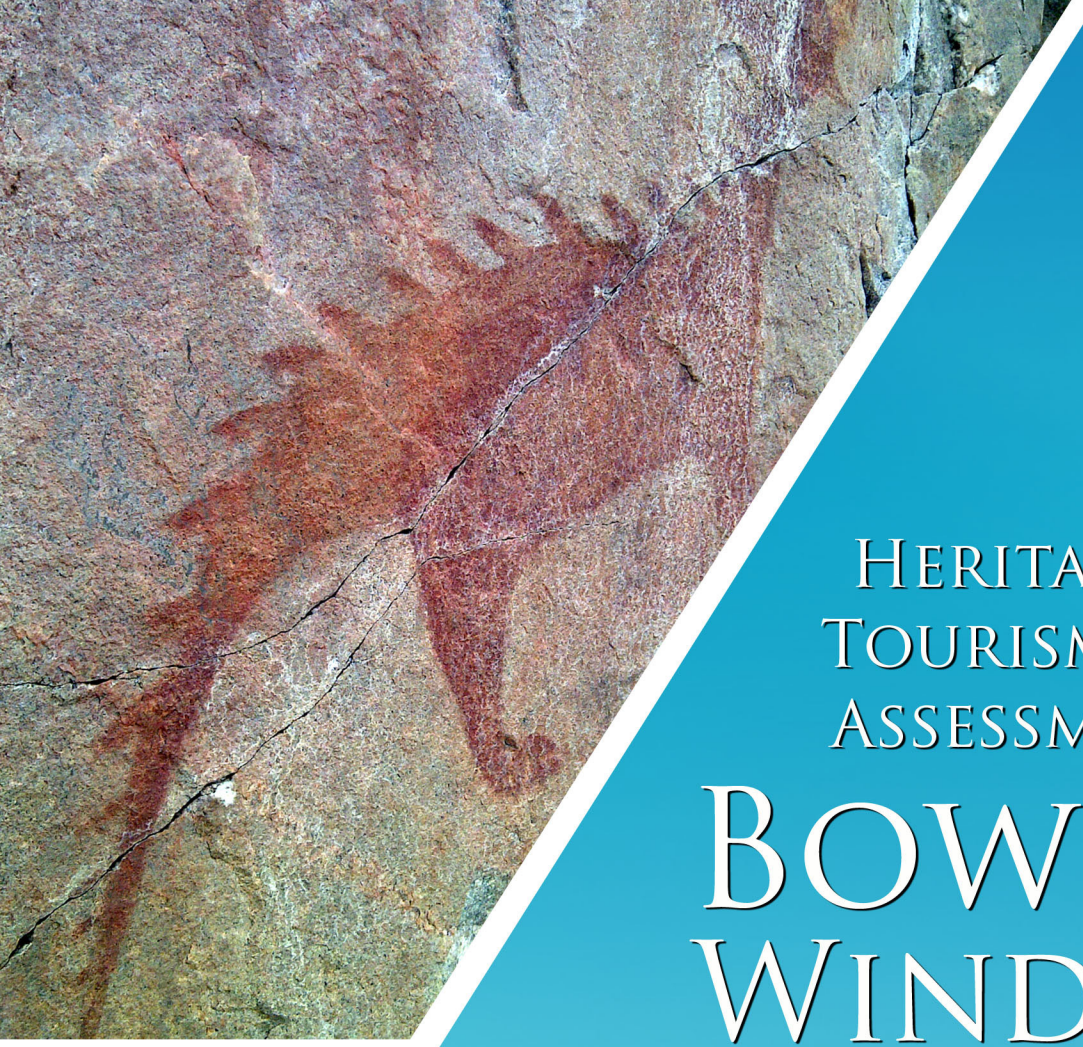
cc. John Stewart
Commonwealth Historic Resource Management Ltd.

Bruce Fountain
TCI Management Consultants

Chris Schiller, Manager
Culture Services Unit, Ministry of Tourism, Culture and Sport

[*] 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.

Heritage and Tourism Impact Assessment Phase 1 and Phase 2 February 2012



Heritage and Tourism Impact Assessment for Bow Lake Wind Farm

Phase 1 and Phase 2

Revised - February 2012

Submitted by:

Commonwealth Historic Resource Management Limited

and

TCI Management Consultants

Cover Photos:
Figure 1. Agawa Point Pictographs. Misshepezhieu, the great horned lynx. Source: Commonwealth Historic Resource Management Limited.
Figure 2. The view southwest from the first viewpoint on the Awausee Trail. Source: Lars Jensen, http://www-personal.umich.edu/~jensenl/visuals/album/2008/superior/

Table of Contents

Chapter 5 Tourism Impact

Executive Summary

The task of this evaluation, commissioned by the proponents of the Bow Lake Wind Farm, is to determine the impact the proposed Wind Farm may have on heritage resources in the study zone, and on tourism opportunities in the region. In addition to determining impact, the purpose for undertaking a heritage assessment is to propose measures where necessary, to avoid, eliminate or mitigate any identified impacts. Tourism in this report has a dual role: it is treated as both a major historic theme defining the character of the area, as well as an ongoing development opportunity.

A two-part approach was used to identify potential cultural heritage impacts. First, an evaluation of the project location ("the property") itself, was undertaken. Subsequently, our approach was to treat the project location as a component of a larger Cultural Landscape and to conduct the identification and assessment of heritage impact taking in a more expansive area than strictly required by the Renewable Energy Approvals (REA) process.

In terms of the property itself, it was determined there are no significant heritage resources on, or abutting, the property that could be negatively affected by development. Our analysis shows no heritage sites on or abutting the property, therefore, there will be no cultural heritage impact, and therefore no mitigation is required. Within a 30 km (approx. 19 miles) zone surrounding the site (the Zone of Visual Impact within which, turbines are likely to be visible on a clear day) there are heritage resources that could possibly be affected (either positively or negatively) by views of wind turbines. Accordingly, the Visual Impact was assessed for features identified. Although the wind project will change the visual landscape in the area, it was concluded that this change does not constitute an impact on any specific cultural heritage resources or regional cultural heritage values that would require mitigation.

As part of the REA process comments on our assessment were forwarded to Commonwealth by the Ministry of Tourism, Culture and Sport (MTCS) as well as Ontario Heritage Trust (OHT). This revised report responds to those reviews (dated November 10, 2011 and January 11, 2012) and are included as Appendix G.

In terms of impact upon the tourism industry, the evidence also points to minimal impact. A full tourism impact assessment is part of this report including a survey of tourism operators. The findings from respondents to a survey of tourist operators along with other aspects of our assessment indicate no negative impact of the Wind Farm upon their business. Indeed, some suggest that it may actually stimulate additional business, as the Wind Farm would be one more interesting attraction in the area north of Sault Ste. Marie.

The conclusion of this assessment is that there is no negative or deleterious heritage impact associated with the project location (Bow Lake Wind Farm development itself). Within the 30 km radius there are features where the turbines will be visible. It is however, our professional opinion that there are no compelling grounds, in terms of negative impact on heritage resources, to stop or alter the Bow Lake Wind Farm Phase 1 and Phase 2 development.

Chapter 1 Introduction to the Development Site

1.1 Overview

Commonwealth Historic Resource Management of Perth, Ontario and TCI Management Consultants of Toronto, Ontario as heritage and tourism experts have been retained by the proponents of the Bow Lake Phase 1 Wind Farm Ltd. and Bow Lake Phase 2 Wind Farm Ltd. to prepare a combined Heritage Impact Assessment (HIA) and a Tourism Impact Assessment (TIA). Commonwealth and TCI have been charged with undertaking an objective and unbiased assessment of the heritage as well as the tourism impacts of the proposed development.

Bow Lake Wind Farm propose to develop up to 36 wind turbine generators and associated infrastructure in an area 80 km (approx. 50 miles) north of Sault Ste. Marie and approximately 6 km (approx. 4 miles) east of Montreal River Harbour. The intention is to undertake development over two phases.

The Heritage Impact Assessment is a requirement as set out as a part of the *Environmental Protection Act* RSO 1990 c.E. 19 Ontario Regulation 359/09 *Renewable Energy Approvals* (REA) under Part V.0.1 of the Act: Protected Properties, Archaeological and Heritage Resources.

The Heritage Impact Assessment must include all heritage resources, which are defined in O. Reg. 359/09 as a "real property that is of cultural heritage value or interest and may include a building, structure, landscape or other feature of real property". Therefore, the HIA must address the entire project location (as defined in the REA regulations) and any heritage resources identified through public consultation. The proponent is to submit a heritage assessment that addresses the requirements set forth in the REA regulations.

1.2 Background

The East and North Shore of the Lake Superior Coast have been identified as high candidate areas for wind generation of electricity. Until recently, the public policy framework did not make development of wind generation of electricity a viable economic option capable of attracting serious private sector investment. However, the Ontario Government in 2009 passed the Green Energy and Green Economy Act, which created market conditions to encourage private sector developers of solar, water, bio-energy and wind energy to pursue the development of these green energy projects in Ontario.

At the same time, it announced a streamlined approvals process providing additional incentive to developers of electricity from green energy sources. This new approval process was named Renewable Energy Approval (REA).

For developers of wind power there was advantage to identify sites that offered:
- consistent strong winds,
- available hilltops (height preferred for improved winds), and
- proximity to the primary high voltage, electrical transmission system.

All of these features are available in the vicinity of Montreal River on the East Shore of Lake Superior. Lake Superior is known as the windiest and most dangerous of the Great Lakes. The lake has a reputa-

tion for this among sailors and has been the location of many shipwrecks. One of the best known of the shipwrecks is the freighter Edmund Fitzgerald that sank, 45 km (28 miles) southwest of the mouth of the Montreal River.

The coastline is dominated by high hills (actually the last visible edge of the Canadian Shield prior to plunging into Lake Superior) that rise up at the shoreline. Lake Superior is 183 metres (600 ft) above sea level. The summits of the hills proposed for Phase 1 and Phase 2 of the development range in height from 440 to 600 metres (approx. 1444 to 1968 ft) above sea level, or approximately 260 to 420 metres (approx. 853 to 1378 ft) above the surface of the lake.

There are four existing dams and operating generating stations and associated primary high voltage transmission lines along the lower section of the Montreal River. Tie-in between the closest wind towers in the proposal to the existing primary transmission electrical lines is approximately 1.5 km (approx. 0.93 mile) in distance requiring Bow Lake to build a new substation next to these lines. All of these factors make this general area attractive to a developer of Wind Farms.

Within the 30 km Zone of Visual Impact north of Montreal River there is no permanent population since this area is within the boundaries of Lake Superior Provincial Park (a natural environment park). To the east of project location there is one populated township, Home, that has a permanent population of 9 persons and 1 permanent dwelling and 8 seasonal residences.

In the townships south of the project location there are 311 residents, 163 permanent dwellings and 457 seasonal dwellings. The majority of this population are located in three townships (Tilley, Fisher and Ryan) which are the most southerly areas of the 30 km distance and beyond from the project location.

In summary, there is no permanent population within the townships where the Wind Farm will be located. There is a small permanent and seasonal population concentrated in the Highway 17 corridor area leading to the project location. Most of the permanent and seasonal population (92%) and (94%) of the permanent residences and (83%) of the seasonal residences are located at a distance from the project location.

POPULATION AND RESIDENCES BY TOWNSHIP ADJACENT THE ZONE OF VISUAL IMPACT				
Township	Population 1994 Last Available Year*	Number of Properties 2011 Data		
		Permanent Residences	Seasonal Residences	Businesses
Tilley	61	46	188	2
Fisher	178	89	139	13
Herrick	4	0	29	1
Ryan	56	20	60	8
Kincaid	1	1	9	0
Slater	4	0	20	2
Rix	7	7	3	23
Home	9	1	8	2
Peever**	0	0	1	8
Smilsky**	0	0	8	0
Obadjiwa Reserve of the Batchewana First Nation (Herrick Township)	NA	NA	NA	NA
	320	**164**	**465**	**59**

** Telephone conversation with the General Manager confirmed 1994 as the last year for data – she advised there has been little change in the permanent population since 1994.*

*** Location of Proposed Bow Lake Wind Farm. Source: Sault Ste. Marie North Planning Board.*

The Bow Lake Wind Farm will be located in the Townships of Smilsky and Peever in the District of Algoma, Ontario, 80 km (approx. 50 miles) north of Sault Ste. Marie and approximately 6 km (approx. 4 miles) east of Montreal River Harbour (a Sault Ste. Marie District Townships Map is included as Appendix F). Neither township has permanent residents and there are only 10 seasonal dwellings within the two townships[1]. The Wind Farm consists of a series of proposed roadways and wind turbines that are entirely surrounded by forest. The nearest major intersection is at Highway 17 and Mackay Road (a road used by Brookfield Renewable Power to service the hydroelectric dams and electrical transmission system on the Montreal River), roughly 3 km (approx. 2 miles) northeast of the lands.

Comprising two phases, the first will consist of up to 12 wind turbine generators and the second phase with up to 24 turbines, with a maximum generation capacity of 60 MW. The majority of the Wind Farm infrastructure including all but one of the 36 proposed turbine locations is located on Crown Land. One turbine is located on Private or Patent Land (see Map Figure 3). The towers are situated on the top of a series of knolls. The highest of the knolls is approximately 600 m (approx. 2000 ft) above sea level. The rising, heavily forested, landscape will provide some visual screening for the towers. The nearest turbine is set back from the coast by about 6 km. The 36 turbines are arranged in clusters, which differs from the layout of the nearest operating wind project in Prince Township, (Sault Ste. Marie) where 126 towers are strung out in linear fashion along the coast on a peninsula, and are very visible to property owners and travelers in the area north of Sault Ste. Marie and across the Lake in the United States.

An overview map of the general development area follows.

1. Sault Ste. Marie North Planning Board.

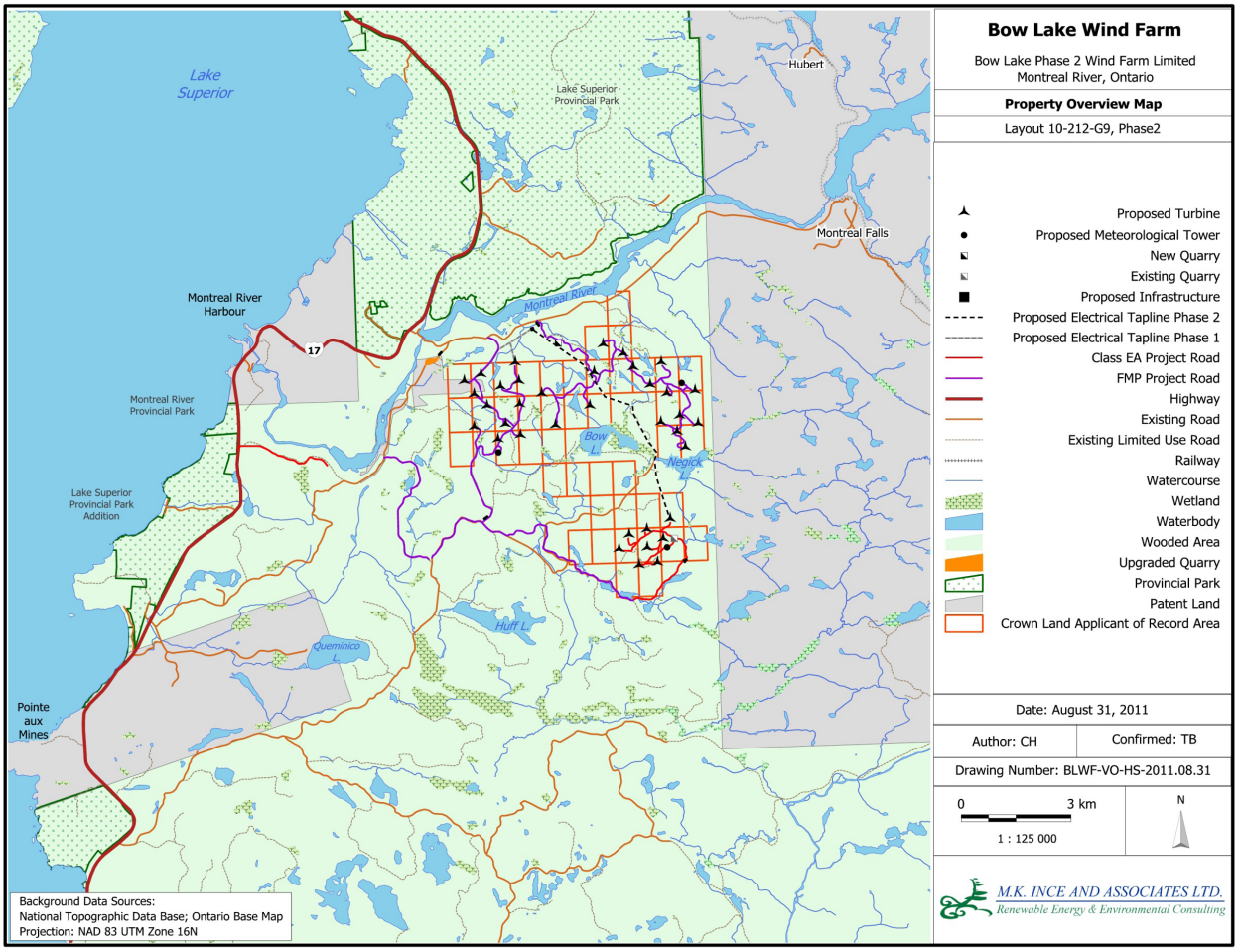


Figure 3. The placement of turbines at the Bow Lake Site. Source: M.K. Ince and Associates Ltd. The placement of wind farms cover an area of 6.5 km (approx. 4 miles) east-west and 6.5 km north-south.

1.3 Assumptions and Caveats

There are certain cautions and caveats permeating this assessment that should be brought to the attention of the reader. These are:

1) Perception of Proliferation of Wind Farms on the North Shore: Throughout the interview process, we heard numerous comments to the effect that the Bow Lake development may be the 'slippery slope' or the 'thin edge of the wedge' of Wind Farm development in the region, and that there could be large numbers of additional Wind Farms developed if Bow Lake were to go ahead (there is a common sentiment that 16 additional developments have been proposed). However, the current reality is that only one other proposal has Feed In Tariff (FIT) approval and the others are in the early stages. Furthermore, there are significant questions about the extent to which any additional developments would be able to fit into the electrical interconnection capacity of the region in any event. Accordingly, as the mandate of this assessment is restricted to assessing the Bow Lake development alone, we do not comment on future Wind Farm proliferation, other than to mention that it was raised as a common concern.

2) Perception of Lack of Effective Provincial Government Policy: Another theme heard frequently throughout the interview process was that provincial government policy was too weak in terms of protecting the north shore of Lake Superior from development of all kinds. A related lament was that the province has not been more active in protecting, interpreting and celebrating the North Shore as the 'Great Lakes Heritage Coast', which might entail policies offering stronger protection from visual encroachment. Be that as it may, it was not the intent of this specific assessment of the Bow Lake development to evaluate or recommend provincial government policy. This specific review of the Bow Lake Wind Farm takes only the current policy context into account.

3) Lack of Timely Input from Art Historians: One of the dimensions of the analysis in this assessment is the extent to which key painting sites of Group of Seven members (who painted throughout the North Shore area) might be affected by the development of the Bow Lake Wind Farm project. Our own research has identified only nine painting sites in the project area that can be specifically geographically identified within the 30 km Zone of Visual Impact (see Table 3.1 in Appendix C) and none of these will suffer any further adverse effects as a result of the development of the project beyond those which have already occurred as a result of other industrial resource development. To augment our assessment, repeated attempts were made to contact knowledgeable art historians and other local experts who may know about any more obscure Group of Seven painting sites that might exist. However, despite repeated attempts, several of the potential knowledge sources either did not respond or declined to provide any information. We were fortunate to have the opportunity to consult with Jim Waddington. He and his wife Susan have researched painting sites in the area for over 35 years and were able to identify 12 pieces in the study area.

While to the best of our knowledge, there are not any additional sites to be assessed, the possibility remains that additional sites revealed by local interests may be identified in the future (for a full discussion see Section 3.9 and Appendix C).

4) Lack of Formal Recognition of the Area's Heritage Resources: One of the difficulties in working in the area and assessing impact is the lack of formal recognition of the area's significant cultural resources. Many of the character defining features of a Cultural Landscape are apparent but lack recognition. The Great Lakes Heritage Coast is a policy document only, with no active implementation plan. The Agawa Pictographs are part of Lake Superior Provincial Park, which is classified as a "Natural Environment" park with protection as set out in the Provincial Parks and Conservation Reserves Act (PPCRA) 2006, c. 12, s. 8 (5). Highway 17 is reported to be one of Canada's most scenic highways but has no management plan, development restrictions, setbacks, or guidelines. The Group of Seven captured the wilderness spirit of Algoma on numerous canvases. As an intangible resource their works support the concept of associative values if there was a designated Cultural Landscape. At some point there may be value in undertaking a complete Cultural Landscape Assessment in the region.

1.4 Definitions

1) Impact: Evaluating impact can broadly be defined as the process of identifying, predicting, evaluating and mitigating the cultural, biological, physical, social, and other relevant effects of the renewable energy project. In the context of protected properties, impact or "alteration" means a change in any manner including the restoring, renovating, repairing or disturbing of the property.[2]

The major impact to features is ***Visual* Impact**. As part of our evaluation three levels of visual impact were established. These were used to assess how features would be impacted by the turbines.

- **No Impact,** indicates that the wind turbines cannot be seen or because of distance are only visible as part of a background.
- **Some Impact** indicates that turbines can be seen but because of distance, terrain, limited opportunity of the viewer and/or forest cover, they are only intermittently visible or can be seen only at night with navigation beacons.
- **High Impact** refers to those locations where the turbines are a dominant feature in the viewshed for at least two seasons and can be seen both day and night times.

2) Heritage Assessment: identifies and evaluates the impact of proposed development and proposes options for avoiding or mitigating impacts to built heritage resources and cultural heritage landscapes. In this report the major potential impacts to heritage resources in the study zone are visual. For this reason we have incorporated Visual Impact as part of the Heritage Assessment. The M.K. Ince and Associates, *Bow Lake Phase 1 and Phase 2 Wind Farm Visual Impact Assessment Report* provides the base data from which the visual assessment was drawn.

3) Zone of Theoretical Visibilty (ZTV) is defined as the area over which a development can theoretically be seen. It provides a digital terrain model which provides three-dimensional frames showing hills and valleys on which the turbines are superimposed. Use of the viewshed or the ZTV maps developed for Bow Lake Wind Farm provide an indication of the visibility of turbines as seen from specific features. Figure 5 on page 17.

4) Visual Setting: includes significant views or vistas to or from the heritage property or feature.

2. Protected Properties, Archaeological and Heritage Resources, Information Bulletin for Applicants, Ontario Regulation 359/09 Renewable Energy Approval.

5) Tourism Impact Assessment (TIA): As stated earlier tourism is a major historic theme in the Algoma District. The assessment carried out follows much the same process as the HIA and will incorporate the cultural/heritage resources identified to determine the economic response, either positive or negative. In a sense, heritage resources are an aspect of the **product** or **experience** that the region has to offer, and tourism impact is more related to the **demand response** of the market to the product available.

6) Cultural Heritage Landscapes. These are geographic areas of heritage significance that human activity has modified and that a community values. Such an area involves a grouping of individual heritage features, such as structures, spaces, archaeological sites, and natural elements, which together form a significant type of heritage form, distinct from its constituent elements or parts.[3] In this report the concept of Cultural Landscape uses the UNESCO definition which, distinguishes three types of Cultural Landscapes:

- **Type 1, Designed Landscapes;** Landscapes which are designed or intentionally created by an individual or group usually at a specific period(s). Where these landscapes survive it is often because of perceived cultural significance. The St. Mary's Power Corporation in Sault Ste. Marie developed by Francis Clergue is one of Ontario's most interesting industrial complexes and could be considered a potential Cultural Landscape.

- **Type 2, Evolved Landscapes;** Landscapes which have evolved, also called vernacular landscapes, can be either inorganically or organically modified over time, integrating changes introduced by new ways of using the site or, new ways of perceiving it. In the Algoma District the introduction of lumbering has led to dramatic changes to the landscape as have hydroelectric dams along the Montreal River.
  - In the UNESCO framework evolved landscapes have two subsets: Continuing Evolved Landscapes are those where the earlier uses and cultural activities are still in practice. These landscapes have a dynamic quality; and,
  - Relic, Evolved Landscape where the original cultural activities have ceased, and the landscape stands as a static reminder of past activities.

- **Type 3, Associative Cultural Landscapes** are places where the cultural activity that structures the space is not physically apparent. They are difficult to classify as designed or evolved because much of the physical property is not evident. The documentation of associative landscapes becomes evident through literary work, iconographic and archival records and art. The Associative aspect of the Algoma landscape is much less tangible and closely linked to First Nations spiritual significance and a Canadian wilderness ethos.

7) Project Location means when used in relation to a renewable energy project, a part of land and all or part of any building or structure in, on or over which a person is engaged in or proposes to engage in the project and any air space in which a person is engaged in or proposes to engage in the project.[4]

3. Protected Properties, Archaeological and Heritage Resources, Information Bulletin for Applicants, Ontario Regulation 359/09 Renewable Energy Approval.
4. Protected Properties, Archaeological and Heritage Resources, Information Bulletin for Applicants, Ontario Regulation 359/09 Renewable Energy Approval.

8) Conservation: all actions or processes that are aimed at safeguarding the *character-defining elements* of a cultural resource so as to retain its heritage value and extend its physical life. This may involve *"Preservation," "Rehabilitation," "Restoration,"* or a combination of these actions or processes. Reconstruction or reconstitution of a disappeared cultural resource is not considered conservation.[5]

9) Preservation: the action or process of protecting, maintaining, and/or stabilizing the existing materials, form, and integrity of a *historic place* or of an individual component, while protecting its heritage value.

10) Rehabilitation: the action or process of making possible a continuing or compatible contemporary use of a historic place or an individual component, through repair, alterations, and/or additions, while protecting its *heritage value*.

11) Restoration: the action or process of accurately revealing, recovering or representing the state of a *historic place* or of an individual component, as it appeared at a particular period in its history, while protecting its *heritage value.*

12) Heritage Value: the aesthetic, historic, scientific, cultural, social or spiritual importance or significance for past, present or future generations. The *heritage value* of a *historic place* is embodied in its character-defining materials, forms, location, spatial configurations, uses and cultural associations or meanings. In this report, "heritage value" and the term "cultural heritage value or interest" are used interchangeably.

13) Character-defining Elements: the materials, forms, location, spatial configurations, uses and cultural associations or meanings that contribute to the *heritage value* of a *historic place*, which must be retained in order to preserve its *heritage value*.

14) Historic Place: a structure, building, group of buildings, district, landscape, archaeological site or other place in Canada that has been formally recognized for its *heritage value*.

15) Intervention: any action, other than demolition or destruction, that results in a physical change to an element of a *historic place*.

5. (11- 15) Definitions Standards and Guidelines for the Conservation of Historic Places in Canada Parks Canada Agency.

Chapter 2 Study Approach and Methodology

2.1 Approach and Methodology

The task of this evaluation commissioned by the proponents of the Bow Lake Wind Farm is to determine if the planned Wind Farm will have an impact on heritage resources in the project location and/or tourism opportunities in the zone of economic impact. In addition to determining impact, the purpose for undertaking a heritage assessment is to propose measures where necessary, to avoid, eliminate or mitigate any identified impacts. The assessment responds to the requirements set out as a part of the REA regulation (O. Reg 359/09).

2.2 Information Gathering and Consultation

As a first step in our methodology for each of the two key areas of this assessment (heritage and tourism impacts), we undertook data collection, established a chronological time line, and identified the various themes and activities that have shaped the area. A chronology has been developed, which summarizes these themes providing a context for the assessment of features (both historic and current) in the study area. As well, with the opinions of the community, the 'sense of place' was taken into consideration. The following chart illustrates a timeline in summary format. The broad headings suggest themes and were used to respond to O. Reg. 9/06 Criteria (set out in Appendix H). Sources of information included a chronology prepared by the Lake Superior Provincial Park dealing with the Park's evolution. The bulk of material is drawn from Don Steer's self published manuscript *Superior's East Shore: Mamainse to Gargantua* and the 2005 Addenda *Superior's East Shore*. The two part manuscript is over 700 pages of local history. Sources of this material are mainly from interviews and oral history, with additional material from local diaries, newspaper articles and government publications. The complete chronology is found in Appendix A.

Major Historic Periods in the Northern Algoma District

- ABORIGINAL 9000 B.C. - PRESENT
- EUROPEAN EXPLORATION 1622 - 1768
- FUR TRADE 1725 - 1840
- MINING 1845 - 1998
- PARKS & RESERVES 1885 - PRESENT
- TOURISM 1879 - PRESENT
- COMMERCIAL SHIPPING / WATER ACCESS 1889 - PRESENT
- INDUSTRIALIZATION 1894 - PRESENT
- COMMERICAL TIMBER HARVESTING 1902 – PRESENT
- GROUP OF SEVEN 1918-1960
- COASTAL TRANSPORTATION 1924 -1960
- HYDRO ELECTRIC POWER GENERATION 1936 - PRESENT

As well as archival research we undertook a literature search looking into the assessment of wind farms and their impact. We were able to draw a fair amount of information from the recorded summaries of an open house and a public meeting held in Sault Ste. Marie. As part of the consultation process we conducted a series of interviews with local officials, Ministry staff (Ministry of Tourism, Culture & Sport, Ministry of the Environment, and Ministry of Natural Resources) and Batchewana First Nation. We also were able to draw on the archaeological reports prepared for sites located in Lake Superior Provincial Park and at the mouth of the Montreal River undertaken by Thor Conway. As well, an archaeological report of the Bow Lake Property was part of the REA submission. (See Appendices B, C, D, and E).

Evaluating the potential visual impacts to Group of Seven Painting locations was of particular interest. As part of our information gathering and consultation, specific information on painting locations, not already generally known to the public, was sought from experts. As well, a literature and internet search focusing on the Group of Seven work in the Algoma Region provided a list of paintings with names such as Agawa, Algoma and/or North Shore Lake Superior but no additional painting locations were identified (for a detailed discussion of our Group of Seven Investigation Methodology see Appendix C and the Chronology Appendix A). One interesting discovery that arose through this work was that the boundaries of Algoma District were adjusted in 1907. As a result, some paintings that include the name "Algoma" are not actually located in what is considered the Algoma District today.

In terms of a framework or methodology for addressing heritage resources, the project property location itself was assessed based on the *Ontario Regulation* 359/09 19. (1) Table, to determine whether the project location is on a property described in Column 1 of that table. The property was also considered using the criteria as set out in O. Reg. 9/06.

In terms of a framework or methodology for addressing resources within the broader landscape surrounding the project property, we considered this wider study area as exhibiting characteristics of a Cultural Landscape. The set of definitions that UNESCO has developed have broad application and acceptance in analyzing the components of a Cultural Landscape. In order to determine impact a number of the area's resources, which could be considered character defining features, having scenic significance, and historic value were identified.

Integral to the definition of a Cultural Landscape is a determination of its extent and boundaries. For the purposes of this study, the study area was limited by a radial distance of 30 km from the centre of the Wind Farm, as this broadly encompasses the Zone of Theoretical Visibility ("ZTV"), and therefore the extent of any potential impacts to cultural heritage resulting from turbine visibility. The ZTV is discussed further in section 2.5. It is acknowledged that the Algoma District cultural landscape extends beyond these boundaries, but defining it was outside the scope of this study.

UNESCO defines Cultural Landscapes broadly as the result of interaction between humans and their environment, and then goes on to identify three primary categories of Cultural Landscape types. These are: Designed Landscape, Evolved Landscape, and Associative Landscape. See definitions, in Chapter 1.

In categorizing this section of Lake Superior Coast, it must be acknowledged from the chronology that it has characteristics of both evolved and associated landscapes. Over time, the area has gone through various changes, which further helps to classify it, primarily, as a **Continuing, Evolved Landscape.**

2.3 Field Work

The field work and visual assessment reports[6] commissioned by the proponents were used as a starting point for our investigation. There had been considerable field work as part of preparing this document and in response to requests for specific site assessment, stemming from public meetings, prior to our involvement. As a first step, Figure 5 (Zone of Theoretical Visibility) provided an indication of where the turbines could be expected to be seen. Cultural landscape resources were identified through information gathering, map review, and research. Our field work focused around identifying specific features (attributes) which potentially could be impacted within these cultural resources, including Group of Seven painting sites. From our field work no specific features were identified within the project site location. Within the 30 km study area known Group of Seven painting sites were visited by either Commonwealth or by M.K. Ince.

Recognizing it would not be possible to report on more than a few specific sites linked to the Group of Seven due to limited available information of specific painting locations (or limited number of painting sites in the vicinity of the Bow Lake Wind Farm) it was decided a more inclusive approach would be helpful in considering the potential effects of the project on cultural landscape values within the region. In addition to known painting locations, general views and scenic vistas in the area, whether recorded through paintings or other means were visited. On that basis, field work proceeded focusing not only on known Group of Seven painting locations, but also on known viewing stations and lookouts from which the turbines might be visible. A number of these viewpoints had been identified in the M.K. Ince *Visual Impact Assessment Report*, and were confirmed as part of our field work for further consideration in the Heritage Impact Assessment.

2.4 Process of Determining Impact

A three part methodology was used to determine impact.

1) First, looking at the property itself in accordance with legislated requirements. The project site location was then considered as a component of a larger area exhibiting characteristics of a Cultural Landscape, within which views of the Wind Farm were identified.
2) Cultural landscape resources that had been identified during the initial step were assessed. Using *O. Reg. 9/06, Criteria for determining Cultural Heritage Value or Interest*, each of the cultural heritage landscape resources was assessed for Design or Physical value; Historical or Associative value and Contextual Value. Themes identified as part of the chronology were used to identify Historical or Associative Values.
3) Finally, specific features (attributes) within the cultural landscape were identified and impact determined. The Heritage and Tourism Impact Assessment document describes the results of this broader assessment and specific conclusions on cultural landscape impacts. At each of the vantage points the potential visual impact was determined taking into consideration topography, (e.g. Agawa Canyon), line of site, vegetation screening/obstruction (e.g. ACR line in Zone of Visual Impact) and limitations on accessibility or viewing duration (e.g. Montreal River Trestle Bridge). This is described in more detail in section 2.6 Zone of Visual Impact.

The scope of the report was limited to consideration of the visibility of the wind turbines from heritage features – a full Cultural Landscape Assessment for the Algoma was not mandated and is beyond the scope of this assignment.

6. Visual Impact Assessment, M. K. Ince and Associates Ltd, 2011.

2.5 Project Location

For renewable energy projects, *O. Reg. 359/09* defines the project location, as a part of land and all or part of any building or structure in, on or over which the REA applicant engages or proposes to engage in the project and any air space in which a person is engaging in or proposes to engage in the project.[7] Based on this definition, the Bow Lake Wind Farm will be located in the Townships of Smilsky and Peever in the District of Algoma, Ontario, 80 km north of Sault Ste. Marie and approximately 6 km east of Montreal River Harbour, It will be comprised of two phases with up to 36 turbines, with a maximum generation capacity of 60 MW. The majority of the Wind Farm infrastructure including all but one of the 36 proposed turbine locations is located on 45 sections of Crown Land. One turbine is located on Private or Patent Land (see Map Figure 3 on page 6).

In accordance with *O. Reg. 359/09* the project location was assessed and based on historic research and archaeology, there are no known or recorded on-site cultural or heritage features. One small, informal wooden lodge located approximately midway along the most northerly of the proposed access roads might be considered a built feature (Figure 4) . The lodge is recent (within the last 5 years) and not registered with MNR and is therefore not an authorized development. The proponent has recently located and contacted the owner of the lodge, an area resident who has acknowledged that the lodge was not legally built, and who has agreed to have it removed. This lodge sits on an existing forestry track, and is not being considered as part of the REA process. No heritage resources or archaeological features were found on the site that would be impacted by the construction of turbines.

Given that the project location is on Crown Land there are no local designations or local governing bodies whose authorization is required. Crown Land is addressed through Standards and Guidelines for Provincial Heritage Property (Part III.I of the OHA.) Accordingly, it is concluded that the project site is not on a protected location described in Column 1 of the REA Table in Section 19 of the REA regulations. As prescribed, the Ontario Heritage Trust (OHT) was contacted to determine if there are properties within the Townships of Smilsky or Peever or in the area on which the OHT holds easements. The OHT has confirmed that it holds no easements in the area. The response to this request is attached as Appendix G.

Figure 4.
The wooden hunting lodge is a recent feature which is being removed by the owner.

In accordance with *O. Reg. 9/06* no heritage value could be identified at the project location. Using the criteria it was determined that the property has no

7. Protected Properties, Archaeological and Heritage Resources, Information Bulletin for Applicants, Ontario Regulation 359/09 Renewable Energy Approval.

design or physical value: that it has no historical or associative value; and no contextual value. This assessment leads to the conclusion that the construction of either phase of the planned Wind Farm will not have a negative impact on the project location.

2.6 Zone of Visual Impact

Given the overall height of the turbines (150 m/492 ft) and their visibility, and because the project site itself is only a small portion of the overall Zone of Visual Impact, we deemed it prudent to assess the impact of the towers on the surrounding features that have historic cultural and/or scenic significance within that zone. A distance of 30 km radius out from the Bow Lake Wind Farm was used. The distance was established based on a number of comparable studies in Australia, Germany, Scotland, Ireland, Canada and the United States[8]. Beyond the 30 km range the turbines become visually indistinct with negligible impact on the wider landscape during the day[9] (See Figure 5). The visibility of the Bow Lake project is restricted due to the surrounding topography; the (Zone of Theoretical Visibility) analysis shows that beyond 20 km, visibility is significantly reduced. A ZTV for night-time visibility of the Bow Lake Wind Farm has been included in the *Visual Impact Assessment* prepared by M. K. Ince and Associates Ltd, 2011. Based on these models, lights on towers do not extend the ZTV at night, with the exception of night time visibility from the waters off the shore of Lake Superior.

We know from our extensive work that heritage and cultural sites have contextual value and that viewsheds and scenic viewpoints can have heritage and cultural association. The potential cultural heritage locations from which these views can be seen are somewhat different from cultural heritage sites as strictly defined by *O. Reg. 359/09,* in that they are part of a larger geographic area. Historically, these viewpoint locations have been traditional gathering points or stopping points for people.

The wind turbines on the Bow Lake Wind Farm will be visible from certain traditional viewpoints on three historical and well-used corridors through this portion of the Algoma District. These are: 1) Highway 17 (by car); 2) the Algoma Central Railway Corridor (by rail) and 3) the Lake Superior coastal waters (by water). The wind turbines will also be visible from parts of Lake Superior Provincial Park. Each of these three routes and the Park has certain points along the way where travellers traditionally stop. Since the Wind Farm could have the potential to affect views from these features in one way or another, our approach to determining impact required that potential visual impacts from these locations be taken into consideration.

The identification of traditional viewing locations was a matter of judgment by the consultants. Many of the locations had been identified in the *Visual Impact Assessment*[10]. There is no set list of where such viewing locations are to be found, nor any agreed-upon identifying criteria specifying the definition of such sites. Most were noted in the historic research and data collection. Given this situation, the identification of heritage viewscape sites was a matter of the consultant's experience and understanding of the area (including understanding gained through local interviews and consultation) and ultimately, best judgment.

8. The determination of distance (Zone of Theoretical Visibility) varied in the different studies with no formally accepted standard that the authors could find. The Irish example suggested 20 km for blade tips in excess of 100 m and 25 km in areas where landscapes of national or international renown were located. A Scottish report Visual Assessment of Windfarms Best Pratice. provides a matrix based on height indicating a distance of between 23-30 km for wind turbines of 90-100 m. Other studies used relatively shorter distances of 15 km in a study for a wind farm in the mountain region of Maine.
9. The reflection of sunlight off moving wind turbine blades may be noticeable at the 30km distances, even though the turbines are not visible due to distance and/or atmospheric interference.
10. Visual Impact Assessment, M. K. Ince and Associates Ltd, 2011.

Once viewshed site locations were identified, they were assessed using O. Reg. 9/06 to determine their cultural heritage value or interest and identify their heritage attributes in order to determine if they may be impacted by the Wind Farm development. Criteria set out in the regulation provides a means of establishing whether a property is of cultural heritage value or interest. In this case the term property applies to the Cultural Heritage Resources:

1. The property has design value or physical value because it,
    - i. is a rare, unique, representative or early example of a style, type, expression, material or construction method,
    - ii. displays a high degree of craftsmanship or artistic merit, or
    - iii. demonstrates a high degree of technical or scientific achievement.
2. The property has historical value or associative value because it,
    - i. has direct associations with a theme, event, belief, person, activity, organization or institution that is significant to a community,
    - ii. yields, or has the potential to yield, information that contributes to an understanding of a community or culture, or
    - iii. demonstrates or reflects the work or ideas of an architect, artist, builder, designer or theorist who is significant to a community.
3. The property has contextual value because it,
    - i. is important in defining, maintaining or supporting the character of an area,
    - ii. is physically, functionally, visually or historically linked to its surroundings, or
    - iii. is a landmark. O. Reg. 9/06, s. 1 (2).

2.7 Zone of Economic Impact

The Zone of Economic Impact refers to the larger regional area in which economies will be affected by the development. For the purposes of this study, it is considered to extend from the Town of Wawa in the north, down to the City of Sault Ste. Marie. A full discussion of economic impact is a part of the Tourism Impact discussion in Chapter 5.

There will be up to 36 turbines at the Bow Lake Wind Farm. Figure 5 indicates how many of the turbines are potentially visible from any given location. The use of different colours on the Zone of Theoretical Visibility estimates the number of turbines that will be visible and provided a starting point for field work.

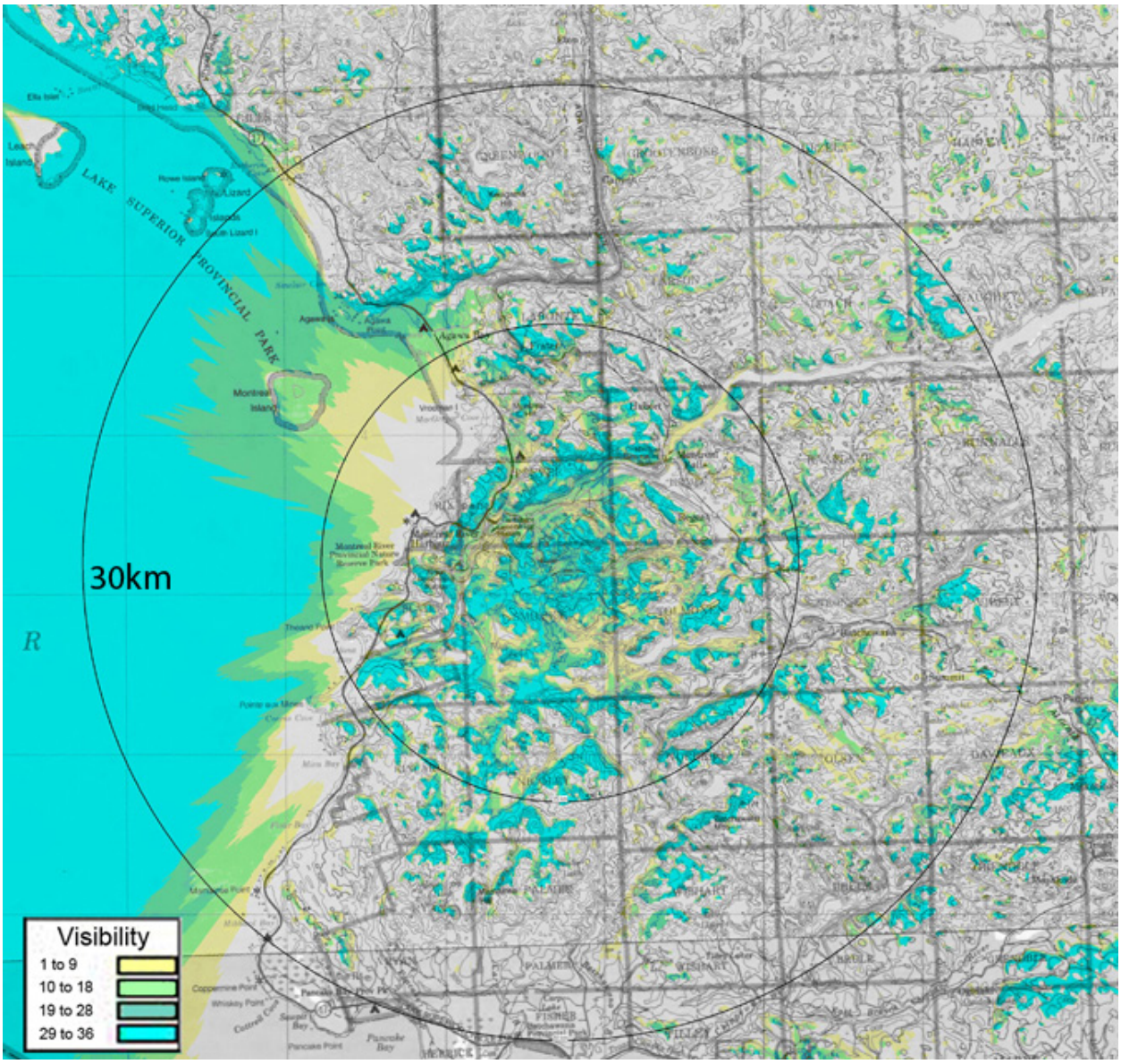


Figure 5. Day-time Zone of Theoretical Visibility (ZTV). The different colours indicated on the ZTV indicate how many turbines are potentially visible from any given location. The ZTV legend indicates the number of turbines visible within the colour band (either based on hub or maximum blade tip height), whilst the two circles give an indication of distance from the site (at 15 km and 30 km). Source: Bow Lake Phase 1 Wind Farm Ltd. and Bow Lake Phase 2 Wind Farm Ltd.

Specific Features Affected	
3.2.1	Shore between beach and Highway 17 from Port aux Mines to Katherine Cove
3.2.2	Montreal Island (part of Provincial Park) & off shore
3.3.1	Montreal River Nature Reserve
3.3.2	Crescent Lake Camp Ground
3.3.3	Agawa Point Lookout
3.3.4	Awausee Trail
3.3.5	Gwayo (Agawa) Point Pictographs
3.3.6	Katherine Cove
3.4.1	Batchawana River Provincial Park
3.4.2	Pancake Bay Provincial Park
3.5.1	Agawa Canyon
3.5.2	Track Between Regent and Rand Stops
3.5.3	Montreal River Trestle Bridge
3.6.1	Alona Bay scenic lookout
3.6.2	Metheany Creek
3.6.3	Gartshore Dam view from Highway
3.6.4	Highway 17 near Kenny Lake LSPP
3.6.5	Mica Bay
3.8.1	Major industrial concentration Four generating stations – Andrews, Hogg, Gartshore, MacKay
3.8.2	Montreal River Valley extending 16 km up from Highway 17 to the trestle Bridge
3.8.3	Upper Montreal River
3.9.1	High Falls (MacKay Dam) *Montreal River Falls*
3.9.2	ACR/CN Railway Corridor between Spruce Lake and Eton. Supposed Group of 7 locations but none identified
3.9.3	Upper Montreal River – *The Solemn Land* J. E. H. MacDonald 1921

Chapter 3 Heritage Resources

As the project property itself does not contain, nor is it adjacent to any heritage properties or easements, this Chapter focuses on the regional area making up the broader cultural landscape. Cultural Resources within the cultural landscape are described and discussed in terms of one or more of the criteria in *O. Reg. 9/06*. As well, the extent to which the Bow Lake Wind Farm Project may be visible from specific features within the cultural landscape was determined. The locations of the specific features considered relevant to the Project are shown in Figure 6.

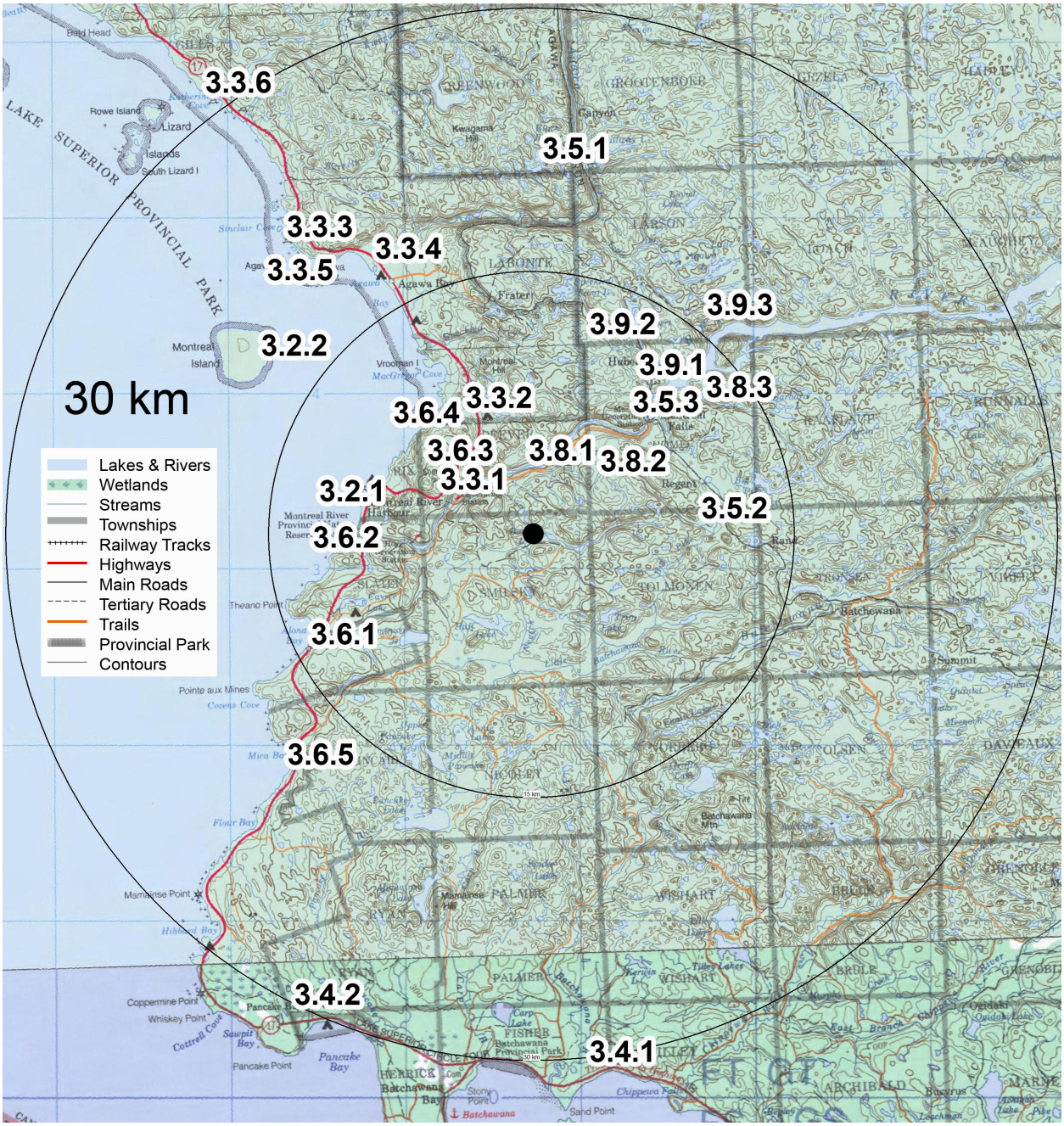


Figure 6. The views from Prominent lookouts and viewpoints (specific features affected) as identified and described in this Chapter are within a 30 km radius out from the Bow Lake Wind Farm Project location.

3.1 FIRST NATIONS

In dealing with requirements for public notice the MOE identified six First Nations Organizations which required consideration as groups potentially affected by the Wind Farm proposal.[11] These included; the Batchewana First Nation, Garden River First Nation, Michipicoten First Nation, Chapleau Ojibway First Nations (Montreal River trade route) and the Historic Sault Ste. Marie Métis Community and Métis Nation of Ontario. The following discusses First Nations and Métis cultural heritage interests in the context of the proposed Wind Farm.

Ojibway people and their ancestors are known to have inhabited the Lake Superior region since at least 9000B.C.[12] There are a number of known Ojibway cultural sites, primarily on or close to the shoreline. The Gwayo (Agawa) and Montreal River mouths served as focal points for Anishnabek families for thousands of years. Extensive archaeology carried out in the 1970s has documented these settlements. Among the sites are 'Pukaskwa pits', depressions dug into cobble beaches as sites for vision quests or shelters. Another record of occupation and one of the most significant heritage resources is the presence of red ochre pictographs at Gwayo (Agawa) Bay in Lake Superior Provincial Park.

Batchewana First Nation of the Ojibways
The Batchewana First Nation (BFN) of the Ojibways assert that their original territory extended from the area around Bawating (area around the Sault Rapids) and up the coast of Lake Superior to the lands ceded by the Superior Chiefs (Pukaskwa), including islands in the Lake and to the north and north east beyond the height of land.

As a project participant, the BFN is supportive of the project. The BFN is planning to conduct its own project assessments. All of the lands of the BFN have spiritual significance. While the Gwayo (Agawa) pictographs represent one spiritually important and active ceremony site that the BFN have used since time immemorial and continue to use today, the BFN place great spiritual value over their entire territory, of which the pictographs are only one part.

Figure 7. (Feature 3.3.5) Gwayo (Agawa) Point Pictographs. Misshepezhieu, the great horned lynx. At present, cabins on Agawa island overlook the pictographs and detract from the wilderness view. Source: CHRML.

Gwayo (Agawa) Point Pictographs
The pictographs are an integral part of the spiritual beliefs of First Nations People in this area. This is a sacred site where generations of Ojibway came to record their dreams and spirits in red ochre. The sacred site depicts great occasions and some of the spiritual beliefs of the Ojibway people.

One of the most elaborate paintings tells the story of the crossing of Lake Superior by more than 50 men in 4 or 5 canoes, led by Chief Myeegun; their crossing protected by Mishepezhieu, the great horned lynx of Lake Superior.

The Pictographs are 21 km from the Bow Lake Site and can only be accessed when Lake Superior is calm. There will be only a partial view of the turbines limited to the far end (southern) of the rock face.

11. April 30, 2010 Letter from Doris Dumais, Director Environmental Assessment & Approvals Branch, Ministry of Environment sent to Kevin O'Donovan of Bow Lake Wind Farm.
12. A summary timeline documents their association with the area as part of the chronology.

The BFN know that spirits are present throughout their territory, and it is their belief that the addition of the wind turbines will not impact (positively or negatively) these spirits. BFN wants to make sure that the development of this project seeks to uphold the spiritual traditions of BFN people. In respecting the wishes of the Batchewana First Nations the author of this report will not make recommendations regarding the significance of or need for mitigation of potential effects on BFN cultural heritage.

As participants in the project, the BFN have recommended that all Bow Lake Project development activities recognize and respect the spirituality of the Bow Lake Site, and the developers follow the spiritual lessons of the ancestors before commencing any of the work contemplated by this project. It is recommended that the proponent continue to engage with the BFN to identify and address any concerns they have with respect to potential impacts of the project on their cultural and spiritual heritage.

Métis

The history and heritage of the Sault Ste. Marie and the District of Algoma cannot be complete without reference to the role and contributions of the Métis people in the area.

The Métis people of Canada and the United States trace their descent to mixed European and First Nations parentage. The fathers from the francophone side were traders and voyageurs associated with the fur trade of the Northwest Company based in Montréal. Most Métis in Sault Ste. Marie and eastern and northern shores of Lake Superior are from this line of descendants.

As well as the francophone lineage there is an Anglophone line descended from most often Scottish men involved as traders or early settlers in Canada for the Hudson Bay Company headquartered in England and operated from Hudson Bay.

Distinctions between these two linguistic lines have coalesced over time into a unified single national Métis tradition culture and organization.

The Montréal based Northwest Company was the predominate fur trading organization in the Great Lakes region. They established the first trading posts on the eastern and northern coastline of the Lakes Superior. Posts included Sault Ste. Marie, Batchawana, Montreal River, Michipicoten River (1714), Pic River and Nipigon River along the eastern and northern coastline of Lake Superior. The purpose of the trading posts was to discourage the inland First Nations from trading with the British based Hudson Bay Company since the Michipicoten River permitted travel to James Bay by the Missinaibi and the Moose Rivers.

Alexander Henry the Younger (1764-1814) reported to his employer the Northwest Company that the fifteen districts in "Indian Country" had a total population of 1090 men, 368 women and 569 children (there were no European women in "Indian Country" and the children were of Métis or First Nations origins).

The lives and the activities of the First Nations of the region and the Métis who followed are interlinked but separate and distinct. The present population of Métis within the Economic Zone is 740. The Ontario Métis Nation believes that the Métis may represent the largest Aboriginal population in the area.

Within the Economic Zone of the project (but outside of the Zone of Visual Impact), and therefore not impacted, is an important Heritage site for the Métis. In October 1993 a Métis hunter (Steve Powley) shot a bull moose near Goulais Bay north of Sault Ste. Marie and identified the kill with an ear tag that provided details of the kill including his Ontario Métis number and indicating the fact he was harvesting meat for the winter. Later the same day, Ontario Conservation Officers appeared at this home where he was charged with not processing an Ontario Outdoor Card (hunting license). The Ontario Ministry of Natural Resources is responsible for the regulation of moose hunting and has stipulations regarding the harvesting of moose in various assigned areas of the province. It has conducted an annual lottery for hunters so only lottery qualified hunters are eligible for the hunt. First Nations (status Indians) are exempt from enforcement of these requirements.

The case which went to the Supreme Court of Canada supported the original judgment where the judge ruled that a person who is identified as a Métis and is accepted by the Métis community were legally exercising their Aboriginal right to hunt and dismissed the charges against Mr. Powley. The Supreme Court also established a ten-point test to be applied in determining the Aboriginal rights of the Métis. The Powley decision was a major event in Canada for the Métis as it recognized the Métis across Canada have a distinct existence and protects their Aboriginal hunting rights.

It is understood discussions are ongoing in respect of potential mitigation measures and it is recommended that the proponent continue to consult and work with the Métis to identify and address any concerns they have with respect to potential impacts of the project on their cultural heritage.

3.2 THE GREAT LAKES HERITAGE COAST - LAKE SUPERIOR

Design or Physical Value[13]
Lake Superior is the largest of the five Great Lakes. It is world's third largest lake by volume and its surface is 82,400 square km (approx. 51200 square miles). Canada's second smallest province Nova Scotia (55,283 km^2) would fit into Lake Superior 1.5 times.

The lake's physical features along the Eastern and Northern Coast feature a rugged rocky coastline with occasional stone beaches or rare sand beaches. Typically, this coastline rises sharply out the water into medium to tall hills hundreds of metres above the waters of Lake Superior. This dramatic relationship of the water to the land represents the visible edge of the Canadian Shield.

Historical or Associative Value
Lake Superior has been (and is recovering as) an important source of native/sport and commercial fishing. Increasing numbers of boat owners (power and sail) are using Lake Superior plus there is a major growth of kayak and canoe users of the coastal shoreline and offshore islands in the area. Historically the lake supports themes of: fur trade, tourism, and commercial shipping/water access.

Contextual Value
The Great Lakes Heritage Coast is a landmark, one of nine featured areas determined by the MNR in *Ontario Living Legacy Land Use Strategy, 1999*.[14] Each of these featured areas warrants a special policy statement that identifies the Great Lakes coast for special planning and management consideration with the intent of protecting the significant natural, cultural, and recreational values of the coast.

13. Criteria set out in O. Reg. 9/06
14. This document was updated 2011. Ministry of Natural Resources Guide for Crown Land Use Planning, First Edition March 2011. Part II is the official source of provincial level policies for EMAs, among other designations.

These management considerations are intended to apply to all Crown lands, waters, lakebeds, Crown islands and intervening coastal areas along the Great lakes shoreline from Port Severn in Georgian Bay, through the North Channel of Lake Huron, to the international border south of Thunder Bay on Lake Superior. The boundary of Heritage Coast varies in width along the shoreline. Along Lake Superior the inland boundary generally follows Highway 17. Just north of Montreal River it follows the inland boundaries of Lake Superior Provincial Park. The Heritage Coast does not apply to Aboriginal land or privately owned lands. The heritage coast boundary borders the southern edge of Highway 17; hence the Bow Lake project location is not within the designated area of the coast.

Visibility from Specific Features:

3.2.1 Lake Superior Coast

The section of the Lake Superior Coast is rugged, indented with pronounced wave motion, with a gently sloping beach area rising fairly sharply into a series of steep, sloping knolls, thickly vegetated with tall trees. Because of local landforms and vegetation, the Wind Farm will be screened from view throughout much of the area from which the turbines will theoretically be visible. The Wind Farm can be viewed from the shore in a very few locations:

- At the end of Point aux Mines at the south end of Alona Bay (a few hundred metres of shoreline);
- Along a short section north of Point Mamainse (a few hundred metres, and only the tips of a few turbines from over 25 km away);
- Around Agawa Bay to just beyond Agawa Point (approximately 9 km of shoreline);
- A short section of shoreline near Katherine Cove (approximately 2 km of shoreline, but difficult visibility due to distance of approximately 27 km).

3.2.2 Montreal Island and Offshore

There are two protected harbours within the study zone. They are mainly used by commercial fishing operators and are located at Montreal River Harbour and Mamainse. Land form and vegetation will screen views near shore. However, views from off-shore are panoramic and even at 30 km out, the turbines will be visible.

3.3 LAKE SUPERIOR PROVINCIAL PARK

Design or Physical Value

The Park, one of the largest accessible in Ontario, is a 155,659 hectare Natural Environment Park located on the eastern shore of Lake Superior about 140 km north of Sault Ste. Marie. The Park was established in 1944 to protect a significant area of Lake Superior Shoreline. It is representative of Ontario Parks, demonstrating technical and scientific achievement.

Historical or Associative Value

Within the Park there are a number of Aboriginal sites as well as the remains of fur trading posts, commercial fishing, mining and early tourist operators. Traces of logging and forestry industries are interpreted where commercial logging in the Park was permitted until 1980. As with most parks established in this era, there was a concerted effort to remove signs of civilization and return the Park as much as possible to a natural state. As a result many of the former uses and related heritage and cultural resources were eliminated.

Contextual Value
The Park is classified as a "Natural Environment" park and considered the area's major feature and attraction. Although it interprets past uses, there is very little physical evidence left of these uses. Views of the turbines from the Park will constitute a visual intrusion. The impact is related to the lessening of sense of wilderness and the associative values of the Cultural Landscape. The southern boundary of the Park borders the Montreal River and the proposed Wind Farm will be one of its closest neighbours. The turbines will be noticeable mainly at the southern entrance to the Park along Highway 17 where the land rises and the road corridor creates a viewshed over the Montreal River directly to the Wind Farm.

Visibility from Specific Features:
3.3.1 In 2002 the *Provincial Parks Act* regulated the Lake Superior Provincial Park additions. There are three components to the park addition; 1) McGregor Cove natural heritage area. 2) The Montreal River Nature Preserve accessed only by water is a protected property less than a kilometre south of the Park. It is a provincially managed site, just below the Wind Farm next to Montreal River Harbour. Montreal River Nature Reserve heritage area and, 3) parcels of Crown land along the Lake Superior shoreline south of the Superior Headlands that add to the ecological significance of Lake Superior Provincial Park. With the steep grade and heavily wooded area the Montreal River Reserve is not visually affected by the Wind Farm.

3.3.2 Crescent Lake Camp Ground
Crescent Lake Camp Ground is about 5 km away from the nearest turbine. Views from across Crescent Lake looking south towards the turbines and the camp ground are panoramic. Views from the camp ground itself are obscured by trees and terrain. See Figure 8.

3.3.3 Agawa Point Lookout
Agawa Point Lookout offers views in an arc to the south-east through the south-west over Agawa Bay and scenic views of the Agawa River and Canyon extending in an arc from the north-east through the south-east. The Wind Farm is visible on the skyline as concentrated grouping. The scenic lookouts are located about 16 km from the Bow Lake Wind Farm. See Figure 9.

3.3.4 Awausee Trail
The scenic Awausee Trail has a panoramic vista south to the Bow Lake project site approximately 16 km away. The wind turbines will be visible from places along the trail. See Figure 10.

3.3.5 Gwayo (Agawa) Point Pictographs
The Gwayo (Agawa) Point Pictographs are an integral part of the spiritual beliefs of First Nations People in this area. This is a sacred site where generations of Ojibway came to record their dreams and spirits in red ochre. The sacred site depicts great occasions and some of the spirituality of the Ojibway people. The Pictographs are 21 km from the Bow Lake Site and can only be accessed when Lake Superior is calm. There will be only a partial view of the turbines from this feature, limited to the far end (southern) of the rock face. See Figure 11.

3.3.6 Katherine Cove Picnic Area and Lookout
Katherine Cove Picnic Area and Lookout is approximately 30 km from the centre of the Bow Lake Wind Farm development. The lookout is located a short distance from the picnic area and features panoramic views in an arc extending from the east to the south-west. Theoretically the Wind Farm will be visible from this location, however given the distance the wind turbines are likely to be difficult to discern on the distant horizon. See Figure 12.

Figure 8. (Feature 3.3.2) The view is representative of views from one the closest campsite areas to the Wind Farm, Crescent Lake Camp Ground located in the Lake Superior Provincial Park. The photograph was taken from the frozen lake surface looking south towards the wind farm and campground (views from the camp ground itself are obscured by tree growth). Distance to nearest turbine is around 5 km.

Figure 9. (Feature 3.3.3) Agawa Point Lookout is a defined viewing area in Lake Superior Provincial Park on Highway 17. The Wind Farm is visible on the skyline as a concentrated grouping 16 km away.

Figure 10. (Feature 3.3.4) View from the Awausee hiking trail illustrates panoramic views from clearer points on the trail. Distance to the nearest turbine is approximately 16 km.

Figure 11. (Feature 3.3.5) Views out to the Wind Farm are limited to the southern end of the viewing ledge of the Gwayo (Agawa) Point Pictographs. It is estimated that 7-9 turbines will be seen by people visiting the pictographs.

Figure 12. (Feature 3.3.6) Katherine Cove Picnic Area and Lookout is one of the many scenic stops along Highway 17 in the Lake Superior Provincial Park. Any views towards Bow Lake would be largely obscured by trees but clear views would be similar to those illustrated by the Figure 10 - Awausee Trail.

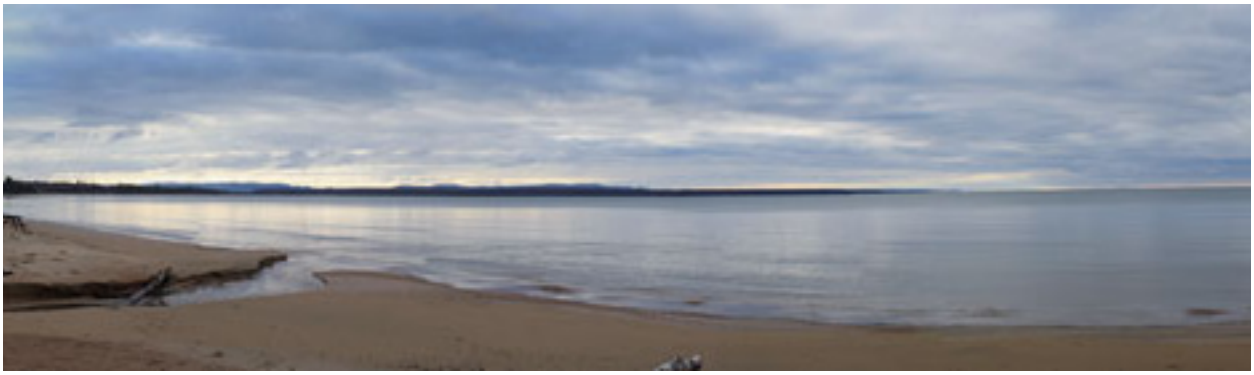


Figure 13. (Feature 3.4.1) Batchawana River Provincial Park extends north following the Batchawana River Valley. The principle view from the shoreline overlooks Lake Superior. Distance to the nearest turbine from the shore is approximately 30 km.

Figure 14. (Figure 3.4.2) Pancake Bay Provincial Park. The principle view is of the bay and shoreline and Lake Superior. Distance to the nearest turbine is approximately 30 km.

3.4 OTHER PROVINCIAL PARKS WITHIN 30 KM AREA

The Batchawana River Provincial Park extends for about 75 km roughly east-west through a cross section of habitats. It includes a variety of features, such as numerous rapids, islands, shifting stream channels and a 13 km long canyon. Along the way the waterway passes terraces from glacial lakes and rivers, shoreline wetlands, and bottom land forests. Self sustaining brook trout populations occur along the waterway. The forests include yellow birch, white pine, and eastern hemlock at the northern edge of its range.

Pancake Bay Provincial Park is 30 km away, just inside the Zone of Visual Impact. Both parks support the character of the area.

Visibility from Specific Features:

3.4.1 Batchawana River Provincial Park

There are no views of the wind turbines from Batchewana River Provincial Park. See Figure 13.

3.4.2 Pancake Bay Provincial Park

There are no views of the wind turbines from Pancake Bay Provincial Park. See Figure 14.

3.5 ALGOMA CENTRAL RAILWAY CORRIDOR

Design or Physical Value

The Algoma Central Railway (ACR) was originally named the Algoma Central and Hudson Bay Railway. It was part of Francis Clergue's vision for a major integrated industrial complex concentration in Sault Ste. Marie, which would also be the terminus of the railway. Electrical power was generated from the St. Mary's Rapids, timber was harvested in the area and moved by rail (ACR) and a paper and steel mill were built with the ACR supplying steel to the expanding economies of western Canada.

Historical or Associative Value

The Algoma Central Railway (ACR) corridor was constructed between 1899 and 1914. In 1913 the Province granted Clergue 78 townships, later reduced to 38, along the corridor to the Algoma Central Railway. The railway reached Hawk Junction (Wawa area) in 1911 and its northern terminus at Hearst in 1914. The routing intersected the three major west/east national railroads of the period:

- Canadian Pacific (Franz – Mile 195)
- Grand Trunk (now CN)(Oba – Mile 245)
- Canadian Northern (now Ontario Northland Railway) (Hearst –Mile 296)

The construction of the railway was considered by government to be the critical first step in the development of Sault Ste. Marie and the District of Algoma.

The motivation for the railway was resource-based: a railway was required in order to transport logs to the pulp mill in Sault Ste. Marie and iron ore from the Michipicoten area to the proposed steel mill at Sault Ste. Marie. Later the railway corridor would be used to provide materials and equipment for the construction of hydro dams on the Montreal River (1936-1948).

Contextual Value

The railway is a landmark supporting themes of mining, tourism, and idustrialization. The discovery of iron ore in the Wawa area provided southbound cargo, beside timber and pulp. Passenger service was provided the length of the railway and continues including the dedication of Agawa Canyon Tour Train which provides a one day trip though the Algoma "wilderness" including a stop in the scenic Agawa Canyon with cliffs 150 metres in height. At this time the combined annual regular passenger service and the Agawa Canyon Tour service carries about 25,000 passengers annually – down from a high of approximately 100,000 in the early 1980s.

The ACR was purchased by the Canadian National Railway in 2006. In 2011 the railway, with the financial assistance of the Ontario and City of Sault Ste. Marie Governments, invested more than $10 million in refurbishing the Agawa Canyon train.

Visibility from Specific Features:

3.5.1 Agawa Canyon

The Agawa Canyon park is one of the feature stops of the tourist train. There are no views of the Wind Farm from Agawa Canyon or from viewing locations, and only intermittent views from the rail line either north or south within the study zone. See Figure 15.

3.5.2 Track Between Regent and Rand Stops

The ACR/CN runs through the Bow Lake study zone for approximately 78 km (Spruce Lake – Mile 71 to Eton Mile 120). Vegetation and terrain effectively limit views of the turbines. See Figure 16.

3.5.3 Montreal River Trestle Bridge

There is a prime panoramic view from the trestle bridge over the Montreal River dam, 6 km away from the nearest turbine. In a recent discussion, Rail officials estimate at the trains speed there could be potentially 90 seconds for a passenger on the viewing side of the train to catch a glimpse of the turbines. It is difficult to see how this brief glimpse (that only half of the passengers may see in any event) could have any impact on either the marketing of the attraction or the actual visitor experience itself. See Figure 17.

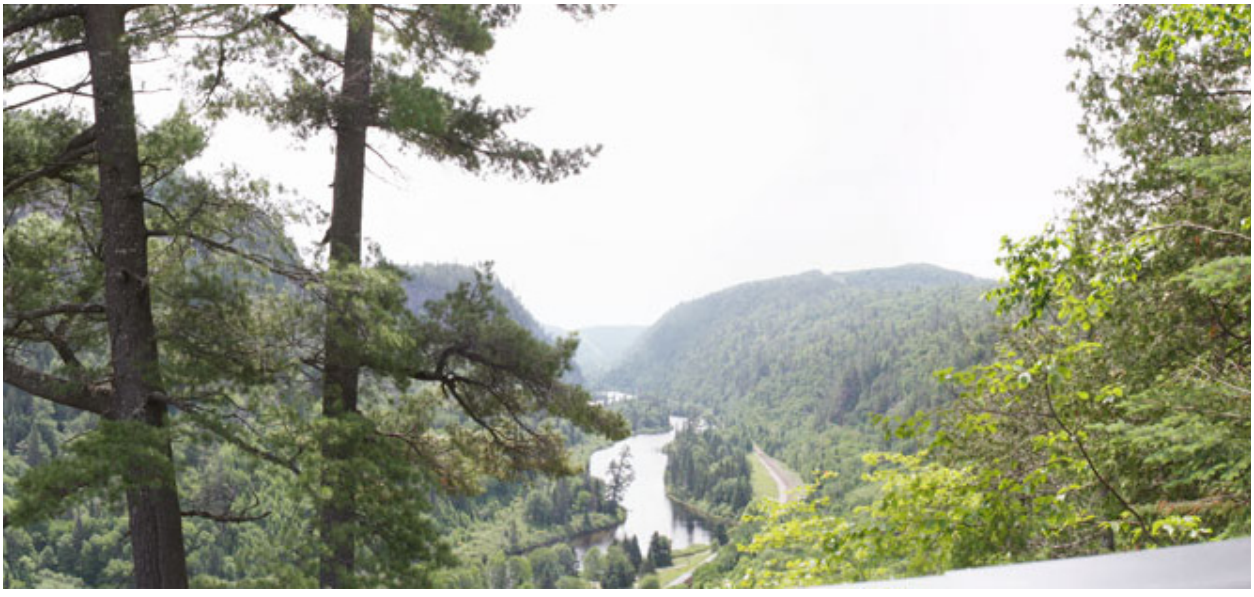


Figure 15. (Feature 3.5.1) Agawa Canyon. Distance to the nearest turbine is 20km.

Figure 16. (Feature 3.5.2) The view from the Algoma Central Railway line south of the Montreal River (track between Regent and Rand stops) illustrates the constraining effects of tree growth on long range visibility. Distance to nearest turbine is 8 km but in fact, no turbines would be visible from this location. The image illustrates the difficulty of finding views through the treeline towards Bow Lake from anywhere except for major river crossings or lakes.

Figure 17. (Feature 3.5.3) The view is from the Algoma Central Railway line at the Montreal River crossing. Distance to the nearest turbine is approximately 6 km.

3.6 Highway 17 Scenic Drive (The TransCanada Highway)

Design or Physical Value
Arguably the most scenic highway in Ontario, this 580 km route snakes around the east and north shores of Lake Superior, passing through some the most picturesque terrain seen in this province. The route begins in Sault Ste. Marie, north towards the Montreal River. As the highway passes over the first range of mountains near Highway 552, there are good views of Batchawana Bay and low ranges of rounded, forested large hills extend westerly.

The highway closely hugs the shore of Lake Superior for over 100 km, sandwiched between Lake Superior, and the mountains which lay a short distance inland. At Montreal River, the coastline becomes too rugged for the highway to pass through, and the road abruptly doglegs and begins to ascend up through the hills as it enters Lake Superior Provincial Park. After a relatively flat section around the Agawa River, the highway once again is forced away from the coast, and up through the mountains. For the next 100 km, the highway briefly returns to the coast on several occasions, but for the most part is inland.

Historical or Associative Value
Recognizing the importance of bringing additional tourists into this area of scenic quality, the Ontario Government elected to connect and designate the road linking Sault Ste. Marie, crossing Montreal River to Thunder Bay as the TransCanada Highway despite higher costs.

Contextual Value
The TransCanada Highway is the main (only) north/south road transportation corridor across this region of Northern Ontario. Distant Highway 101 (Timmins to Wawa) and Highway 11 (North Bay to Nipigon) or 144 (Thessalon to Chapleau) or 144 (Sudbury to Timmins) provide the only alternative routes in this very large area. There are few other roads in the study zone area.

- The Mackay Road used by Brookfield Renewable Power to provide access to service their power generation and transmission facilities along the lower portions of the Montreal River.
- The "Bush" roads (e.g. Mile 67) which are primarily forest services roads which permit access by four-wheel-drive vehicles at the driver's risk.
- Within Lake Superior Provincial Park the "Frater Road" provides access to the ACR/CN stop of the same name.

The simulation of *Visual Impact Assessment* prepared by M. K. Ince and Associates Ltd. 2011, indicates that the Wind Farm can theoretically be viewed from Highway 17 at a few short sections. In most cases, because of local landforms and vegetation much of the views of the Wind Farm along the above noted sections will be screened from view. The mobility of viewers also lessens what is seen.

Visibility from Specific Features:
The turbines will be visible from the following locations:

3.6.1 Alona Bay Scenic Lookout
From the hills just north of Alona Bay (over a section approximately 2 km in length). See Figure 18.

3.6.2 Metheany Creek

From the area immediately adjacent to the Montreal River Provincial Nature Reserve (less than 1 km), southwest of the Gartshore Dam (extending approximately 3 km). See Figure 19.

3.6.3 Gartshore Dam

North of the Gartshore Dam to just inside the Provincial Park boundary (extending approximately 5 km). See Figure 20.

3.6.4 Highway 17 Near Kenny Lake

Near Kenny Lake around Agawa Bay to just beyond Agawa Point (extending approximately 16 km). See Figure 21.

3.6.5 Mica Bay

From Mica Bay, approximately 18 km from the turbines. See Figure 22.

Figure 18. (Feature 3.6.1) View from Highway 17, north of Alona Bay. Distance to the nearest turbine is approximately 11 km. There is no potential of visibility from this location.

Figure 19. (Feature 3.6.2) This represents a transitory view from Highway 17 near Metheany Creek, South West of the site and towards Bow Lake.

Figure 20. (Feature 3.6.3) Highway 17 overlooking Gartshore Dam. The view is representative of the intermittent views from Highway 17 afforded by gaps in the tree line. At 2 km this is one of the closest views of the Wind Farm from Highway 17.

Figure 21. (Feature 3.6.4) View from Highway 17 Bridge across Kenny Lake and representative of views from this stretch of Highway 17 and the surrounding area. Distance is approximately 5 km to nearest turbine. Single spruce trees spiking up above the forest canopy distort the perspective and reduce the turbines intrusiveness. The rendering has been significantly lightened to ensure that the turbines are clearly visible.

Figure 22. (Feature 3.6.5) Mica Bay from Highway 17. Inset: View North with Mica Bay to the west. Views from Highway 17 towards Bow Lake are restricted by local topography.

3.7 Voyageur Trail

There are early concept plans for extending Voyageur Trail (a trail across Northern Ontario) from the present end of the trail in the Goulais Bay area to connect to the existing trail system of Lake Superior Provincial Park. This idea may or may not involve the study area since crossing of the Montreal River may present a challenge.

The Voyageur Trail does not have a defined route, and while it may be intended as a commemorative development, as a potential future development it does not hold current cultural heritage value. The wind turbines may be visible from various locations accessible by the numerous "bush" roads in the region, however these are not assessed as specific cultural heritage features and therefore views were not included.

3.8 The Montreal River and Hydro Electric Generation

Design or Physical Value
In 1929, a 112 mile transmission line was constructed from High Falls on the Michipicoten River to Sault Ste. Marie following the general alignment of the ACR corridor. It exhibits a high degree of technical achievement. The ACR sold the power rights to the area which included the Montreal River to Great Lakes Power in 1926. In 1936, Great Lakes Power constructed the MacKay Dam and generating station at the Upper Falls at mile 92 of the ACR. In 1937 the Andrews Dam and Generating Station on the Lower Falls Dam was completed and serviced from the ACR with the development of a temporary winter road along the south side of the river. In 1958 Gartshore Dam and Generating Station was constructed at the Middle Falls and the Hogg Generating Station and Dam, three miles downstream of the Gartshore Station, was completed in 1965. The road extending from High Falls to Highway 17 was developed by Great Lakes Power in 1955 - 1956.

Historical or Associative Value
Hydro electric power generation is a major development theme in the Algoma Region.

Contextual Value
Great Lakes Power leased land from the ACR at High Falls and constructed a townsite including a number of temporary bunkhouses and more permanent structures for employees operating the Montreal River generating stations and for patrolling the transmission lines. The Great Lakes Power townsite was disassembled in 2002, but there are still cabins at the railhead. The character of the area is supported by this industrial landscape.

Visibility from Specific Features:

3.8.1 Major industrial Concentration

There are four hydro generating stations and associated dams and primary transmission lines and substations in the lower 20 km section of the Montreal River. These facilities are part of Brookfield Renewable Power. The complex of stations borders the Wind Farm and compliment the interpretative theme of industrialization. Views from these structures are panoramic. See Figure 23.

3.8.2 Montreal River Valley

The Montreal River was an important access route to the interior in the past and was used extensively by First Nations for trade and transportation. It provided the Cree in the Chapleau area access to Lake

Superior allowing trade with the tribes of Lake Superior and beyond. It also provided the transportation route for First Nations moving from summer camps on Lake Superior (fishing) to inland locations (hunting) for the winter months. With the introduction of dams the valley environment was totally altered. The turbines will be shielded from view by vegetation and topography at many locations along the valley, however there will be panoramic views from some locations, many of which are difficult to access by the public. See Figure 25.

3.8.3 Upper Montreal River (Lake)

The upper flooded portion of the Montreal River beyond the fourth dam (McKay) and the ACR/CN railway bridge, has three tourist operators with facilities within the study zone plus other seasonal residents. Again as a drowned landscape its character has been altered. Looking south towards the turbines views are interrupted by the trestle bridge. See Figure 27.

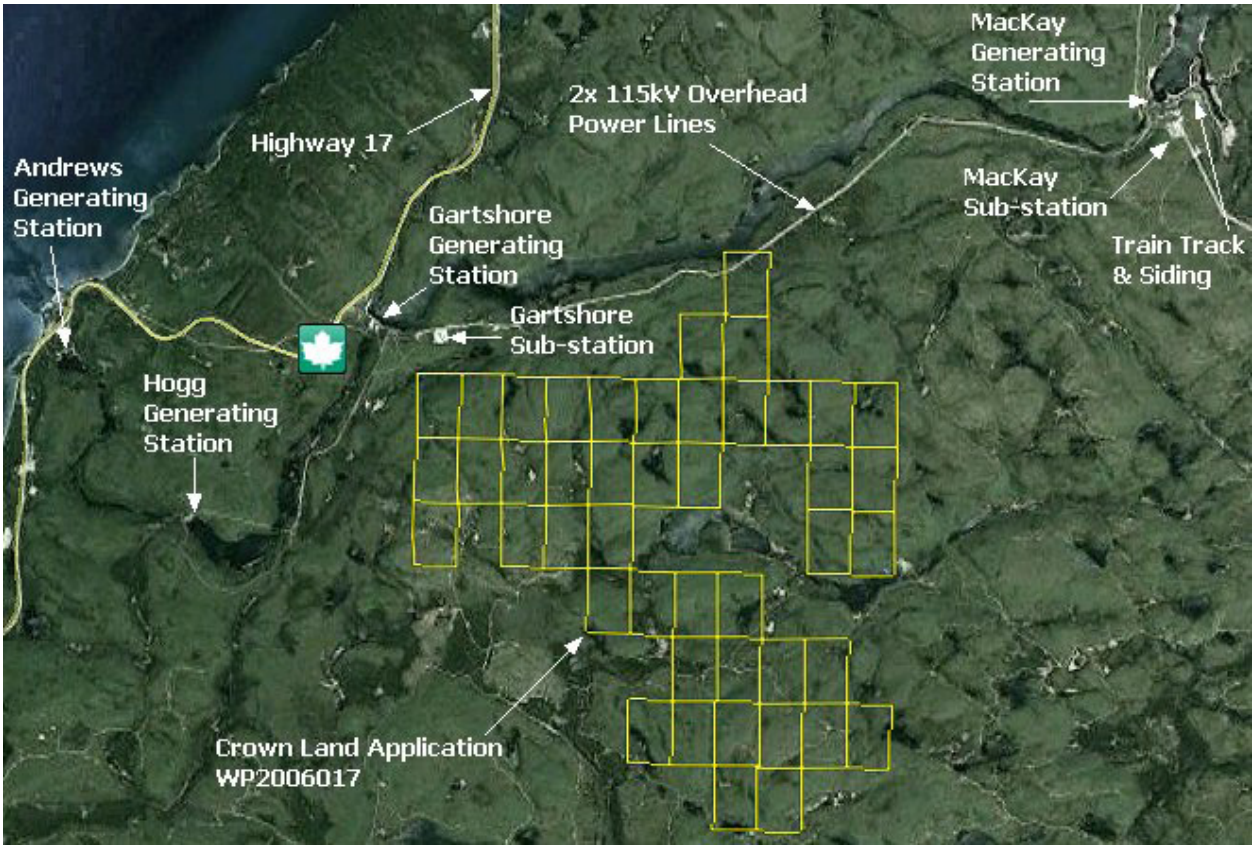


Figure 23. (Feature 3.8.1 & 3.8.2) The hydro electric dams along the river are serviced by two 115kV high-voltage transmission circuits running east-west immediately north of the site, and on toward the 230kV substation at the MacKay dam and generating station. The Wind Farm is proposed to connect into these existing high-voltage lines which lie less than 1km from the edge of the site.

3.9 Landscapes Associated with the Group of Seven

Coming together in Toronto, Frank Carmichael, Lawren Harris, A.Y. Jackson, Franz Johnston, Arthur Lismer, J.E.H. MacDonald and F.H. Varley set out to give Canada a truly national form of painting. Spurred on by an association with Tom Thomson (1877-1917), these artists sought inspiration initially in the rugged northern Ontario landscape. They later expanded their horizons, making all of Canada their territory. Their first exhibition as a group, in 1920, was controversial, but their bold style attracted attention to Canadian painting and eventually won an enthusiastic following.[15]

Design or Physical Value
Design or physical value is not applicable.

Historical or Associative Value
The character and reputation of the Lake Superior as home to unpredictable natural forces with dramatic natural beauty has inspired First Nations legends and artists and later poets, writers, song-writers and visual artists including the members of the Group of Seven who were drawn to the area for inspiration and are one of Algoma's associative values and supports themes of tourism.[16]

As part of the federal government's policy to help market northern parts of the Province, members of what would become the Group of Seven were sponsored by the ACR to paint in the region. Their work is an extraordinary expression of the areas grandeur, capturing on canvas beautiful landscapes throughout the region. Many are generic, while others are a detailed view of the areas many land-marks.[17]

Members of the Group had been painting in Algoma District since 1918. However, it was not until 1920, that J.E.H. MacDonald, Lawren Harris, A.Y. Jackson, Arthur Lismer, Franklin Carmichael, F.H. Varley and Frank Johnston held their first exhibit in Toronto and officially formed this now famous group. This Canadian art movement was started by a loose association of acquaintances who were inspired by the scenic beauty of the Canadian wilderness. Their work helped to define Canadian culture and identity.

From the period 1918 through 1921, members of the Group of Seven made regular trips to the Algoma Region. The first excursion in 1918 included Lawren Harris, J. E. H. MacDonald, Dr. MacCallum, and Frank Johnston; they headed north to ACR mile 113 where they made their first stop at the Agawa Canyon. Arrangements had been made with the ACR to provide them with a rail car which could be left on sidings and gave them a base from which to work. From the Agawa Canyon they moved down the line to Hubert north of the Montreal River, and then on to Batchawana.

Contextual Value
The discussion surrounding the Group of Seven and the potential for wind turbines to be visible from the original site of inspiration for specific pieces of art has been brought forward by the Ministry of Tourism, Culture & Sport and during our research. Accordingly a concerted effort was made to identify

15. Historic Sites and Monuments Board of Canada. 10365 Islington Ave. Kleinburg, Ontario. Designation Date:18/5/1974
16. A master's thesis by Landon French *The Identification of Associative Cultural Landscapes: Eastern Georgian Bay Case Study* Heritage Conservation Program School of Canadian Studies Carleton University 1997. provided background for approaching our assessment. Focusing on the Group of Seven as well as other landscape artists working in Eastern Georgian Bay the thesis attempted to apply Parks Canada model for the identification of cultural landscapes as a case study for associative cultural landscapes.
17. Lynda Jessup's *The Group of Seven and Tourist Landscape in Western Canada*, or *The More Things Change*… Journal of Canadian Studies Volume 37 No. 1 2002; provided an interesting assessment of the emergence of mass tourism and the role of both government and tourist industry in fostering the Group's art as a truly Canadian expression and as a state-coordinated industry in Canada in the 1920s.

Group of Seven painting locations in the project area, and subsequently to assess the potential visibility of the wind turbines from those locations. While the results of the research and assessment are presented here, a more detailed description of our investigation and methodology on this topic is provided in Appendix C.

Algoma region paintings ascribed to Group of Seven artists include: Frank Johnston's *Agawa Canyon Territory Algoma* (n.d.); Lawren Harris's *Montreal River* (1920), and *Montreal River Algoma* (1918); A. Y. Jackson's *First Snow Algoma* (1919-1920); J. E. H. MacDonald's *Agawa Canyon Algoma* (1925-1929), *Algoma Waterfall* (1920), and *The Wild River* (1919) which was painted below the falls of the Montreal River prior to it being developed for hydro electric power. Other paintings by J. E. H. MacDonald include *Batchawana Rapid* (1920), *The Little Falls* (1919), and *The Little Falls Sketch* (1918). The Group of Seven subsequently painted a number of different landscapes in the Algoma region which can be attributed to specific locations including J. E. H MacDonald's *Mist Fantasy Sand River Algoma* (c. 1922), and Franklin Carmichael's *Jackknife Village* (1926).

Any number of artists have captured parts of the Algoma Region including Paul Kane, who painted at Michipicoten in the 1840s. Other artists include William Armstrong. Throughout history the work of great landscape artists have documented views and serve the purpose (perhaps unintentionally) of recording a point in time. Many of these landscape views have been altered over time which has no impact on the paintings.

Visibility from Specific Features:
Based on publicly available background information, the known Group of Seven painting locations in the vicinity of Bow Lake Wind Farm are listed in Table 3.1

The visual impact upon four[18] of these painted landscapes was determined based on work completed for the *Visual Impact Assessment* completed by M.K. Ince for the Bow Lake Wind Farm. It was determined that the views from these locations will not be significantly impacted by the development of the Bow Lake Wind Farm.

Information on less well-known confirmed painting locations not already generally known to the public was sought from numerous experts. While no new specific painting locations were identified, Jim and Sue Waddington were helpful in providing some additional insight into painting locations in the area based on their experience in the region. About 150 of the 270 Group of Seven painting locations that the Waddington's have identified can be found in the District of Algoma or former District of Algoma areas.

The Waddington's have undertaken research in the area of the proposed Bow Lake Wind Farm particularly north of the Montreal River. In the study area (the 30 km Zone of Visual Impact) they have identified the locations of 12 paintings that can be attributed to the Group of Seven.

Discussion with Jim Waddington indicated that two of the 12 paintings are large vista paintings (*Montreal Falls* and *Solemn Land*, both by J. E. H. MacDonald), which were also identified from other sources. Another vista painting is MacDonald's *Agawa River Algoma* (The McMichael Canadian Art Collection) that contains a hilltop vista. The Agawa River is north of the proposed Wind Farm, and construction of the Wind Farm would not impact this vista. A. Y. Jackson's *First Snow* (The McMichael Canadian Art

18. *Algoma Canyon*, A.Y. Jackson, (n.d.), *Algoma Hill*, Lawren Harris, 1920, *Montreal River Falls*, J.E.H. MacDonald, 1920, *The Solemn Land*, J.E.H. MacDonald, 1920.

Collection) was also identified by the Waddington's as a large vista view in the study area, however it looks away from the proposed wind farm location.

The other paintings identified by the Waddington's in the area north of Montreal River are described by them as small non-vista paintings (detail views), and as such the proposed Bow Lake Wind Farm would be outside of the viewscape of the paintings. An example of this type of painting would be MacDonald's *The Little Falls*. A consolidated summary of known or potential painting locations and the potential visibility of wind turbines from those locations is provided in Table 3.1.

Figure 24. J.E.H. MacDonald, *Falls Montreal River*, 1920, site of the ACR/CN rail bridge crossing of the Montreal River. This view has been totally changed with the construction of the Mackay hydro-electric generating station.

Figure 25. The present day view down the Montreal River bears no resemblance to the J.E.H. MacDonald, painting from1920.

Figure 26. J.E.H. MacDonald, The Solemn Land, 1921. Looking North from the Trestle Bridge over the Montreal River.

Figure 27. The present day view from the railway Trestle Bridge looking north.

Table 3.1

A Listing of the Group of Seven Paintings located in the 30 Km Visual Impact Zone and Adjacent Areas of Northern Algoma and the Lake Superior North Shore				
Artist	**Painting Title + Date**	**Confirmed Inside the 30 km Zone of Visual Impact**	**Northern Areas of Algoma and Lake Superior North Shore**	**Notes Painting Type Visual Impact**
A. J. Casson	October Lake Superior (1928)		√	***Vista*** **No Impact** - distant from Bow Lake
Lawren Harris	Algoma Hill at mile 81 ACR (1920)		√	**No Impact** - distant from Bow Lake
	Montreal River (1920)	√		***Vista*** **No Impact**
	Montreal River Algoma (1918)	√		***Vista*** **No Impact**
	Above Lake Superior (1922)		√	***Vista*** **No Impact** - distant from Bow Lake
	Afternoon Sun Lake Superior (1926)		√	***Vista*** **No Impact** - distant from Bow Lake
	North Shore Lake Superior (1926)		√	***Vista*** **No Impact**
A.Y. Jackson	Algoma Canyon (ACR Rail Line near Rand) (1919)	√		***Vista*** **No Impact**
	First Snow Algoma (1919-1920)		√	***Vista*** **No Impact** - distant from Bow Lake
	Algoma in November (1935)		√	***Vista*** **No Impact** - distant from Bow Lake
Frank Johnson	Agawa Canyon Territory Algoma (no date)		√	**No Impact**
	Fire Swept Algoma (1920)		√	***Vista*** Location not identified
	The Fire Ranger (1920)		√	***Vista*** Location not identified
Arthur Lismer	Forest Algoma (1922)		√	**No Impact**
	October North Shore Lake Superior (1927)		√	**No Impact**
J.E.H. MacDonald	Agawa Canyon Algoma (1925-1929)	√		**No Impact** – Canyon Floor
	Agawa River Algoma (1919)	√		***Vista*** **No Impact**
	Algoma Waterfall (1920)	√		**No Impact**
	Batchewana Rapid (1920)		√	**No Impact** Just outside the Zone of Visual Impact but recognized as a important painting
	Montreal River Falls (1920)	√		***Vista*** **No Impact** - not in viewscape - extensive electrical generation and Transmission infrastructure have occurred since the time of the painting
	The Little Falls, Sketch (1918)		√	**No Impact**

Artist	Painting Title + Date	Confirmed Inside the 30 km Zone of Visual Impact	Northern Areas of Algoma and Lake Superior North Shore	Notes Painting Type Visual Impact
	Mist Fantasy Sand River Algoma (1922)		√	**No Impact**
	Rowanberries Algoma (1922)		√	**No Impact** Location not identified
	The Little Falls (1919)	√		**No Impact**
	The Solemn Land (1921)	√		***Vista*** **No Impact** Electrical generation dam at the painting site and the subsequent raising of the dam's level (twice) has created a large reservoir altering the water' component in the picture's viewgraph
	The Wild River (1919)	√		**No Impact** Location not identified

Those parts of this Heritage and Tourism Impact Assessment Report dealing with the Group of Seven and other established artists who painted in the area of the proposed Bow Lake Wind Farm were reviewed by Jim Waddington. In summary he concluded:

- All of the large vista paintings by the Group of Seven in the Zone of Visual Impact that he is familiar with are identified in the report.
- In his view, none of Group of Seven paintings that is he is familiar with in the general area contain in their viewscape any direct imposition of the proposed wind turbines.
- There remains a possibility that the sites of other paintings or sketches by the Group of Seven and other artists will be identified by others in the future.

Specific comments on the most well-known vista paintings are provided below.

3.9.1 Montreal River High Falls (MacKay Dam)

Various references[19] claim there are between 44-58 painting sites along the rail line. Paintings that were completed by the Group of Seven and that can be attributed to locations along the Montreal River include: Lawren Harris's *Montreal River* (1920), and *Montreal River Algoma* (1918); and, J. E. H. MacDonald's *The Wild River* (1919). The impact of the Bow Lake Wind Farm on the sites is insignificant as the views have previously been significantly altered with the construction of the hydro-electric dams and generating stations. See Figure 24 and Figure 25.

3.9.2 ACR/CN Railway Corridor

Any painting sites along the ACR/CN Railway corridor are unlikely to be affected by the turbines as terrain and vegetation will obscure views of the turbines. See Figure 16.

3.9.3 Upper Montreal River - *The Solemn Land*

The Solemn Land by J. E. H. MacDonald was painted looking north over the upper Montreal River from the trestle bridge. Views of the Wind Farm are in the opposite direction and have no impact. See Figure 26 and Figure 27.

19. Save Ontario's Algoma Region (SOAR) Web Site reported as part of the Public Meetings, in May 2011 references to the number of painting sites in the Region. No locations were provided.

"

Chapter 4 Mitigation and Conclusions

4.1 Impact Assessment Framework and Summary

The assessment responds to the requirements set out as a part of the Renewable Energy Approvals regulation (O. Reg 359/09). While heritage resources and tourism impact are clearly related to one another, they have been treated separately in this assessment in order to focus upon each aspect individually. (In a sense, heritage resources are an aspect of the **product** or **experience** that the region has to offer. Tourism impact in the Algoma District is also an aspect of the product; It is also related to the **demand response** of the market to the product available). The assessment of heritage impacts and mitigation measures are discussed here. Tourism is discussed in Chapter 5.

In the previous chapter, each of the cultural heritage landscape resources was assessed for Design or Physical Value, Historical or Associate Value and Contextual Value using Ontario Regulation 9/06 Criteria for determining cultural heritage value or interest. Themes identified as part of the heritage assessment research were used to identify Historical or Associative Value. A detailed discussion of these themes, significant to Algoma District, can be found in Appendix A. Table 4.1 provides a summary of impact to the various features of the identified cultural landscape resources.

An attempt has been made to describe the extent to which the visibility of the wind turbines from the specific features identified in Chapter 3 constitutes a change on a particular site by defining three levels of visual change as follows:

- **No Impact,** indicates that the wind turbines cannot be seen or are only visible as part of a background.
- **Some Impact** indicates that turbines can be seen but because of distance, limited opportunity of the viewer and/or forest cover, they are only intermittently visible or can be seen only at night with red navigation beacons.
- **High Impact** refers to those locations where the turbines are a dominant feature in the viewshed for at least two seasons and can be seen both day and night times.

The impact assessments for each of the specific features identified in Chapter 3 are summarized in Table 4.1. It is worth underlining that the categories above describe the extent of visual change, but do not necessarily ascribe a positive or negative value to the nature of that change. The extent to which a visual change may be positive or negative and may require mitigation is discussed in section 4.2.

Table 4.1 Heritage Resource Impact Assessment Matrix

HERITAGE RESOURCE IMPACT ASSESSMENT MATRIX FOR BOW LAKE WIND FARM PHASE 1 & PHASE 2							
CULTURAL LANDSCAPE RESOURCES	ONTARIO REGULATION 9/06 CRITERIA FOR DETERMINING CULTURAL HERITAGE VALUE OR INTEREST			DESCRIPTION			
	Design or Physical Value	Historical or Associative Value	Contextual Value	Specific Feature(s) Affected	Closest view to Turbines	Visual Impact	Proposed Mitigation Action
3.1 First Nations	First Nations are doing their own assessment						
3.2 Great Lakes Heritage Coast	N/A	Associated with theme(s): Fur Trade, Tourism, Commercial Shipping/ Water Access.	Landmark	3.2.1 Shore between beach and Highway 17 from Port aux Mines to Katherine Cove	5 km	**No impact** - Only sporadic views of Turbines in a very few locations	Clustering of turbines. Staggered in groups set back from the coast
				3.2.2 Montreal Island (part of Provincial Park) & off shore		**High Impact** - Views from off- shore are panoramic	
3.3 Lake Superior Provincial Park	Scientific achieve-ment	Associated with theme(s): Tourism, Parks and Reserves.	Landmark	3.3.1 Montreal River Nature Reserve	6 km	**No Impact** - No views	None
				3.3.2 Crescent Lake Camp Ground	5 km	**Some impact** – Panoramic views are a feature from stationary view-points across open lake. Vegetative distort perspective from the camp-ground	Clustering of turbines. Staggered in groups set back.
				3.3.3 Agawa Point Lookout	16 km	**Some impact** - Intermittent views through openings in forest cover	
				3.3.4 Awausee Trail	16 km	**Some impact** - Intermittent views through openings in forest cover	
				3.3.5 Gwayo (Agawa) Point Pictographs	18 km	**Some impact** - visible in the southern portions of the viewing edge accessibility limited by Lake Superior wave conditions	First Nations feel that the turbines will not affect (positively or negatively) the spirits and heritage of their lands, including this site.
				3.3.6 Kather-ine Cove	30 km	**No Impact** Theoretically visible	

HERITAGE RESOURCE IMPACT ASSESSMENT MATRIX FOR BOW LAKE WIND FARM PHASE 1 & PHASE 2							
CULTURAL LANDSCAPE RESOURCES	ONTARIO REGULATION 9/06 CRITERIA FOR DETERMINING CULTURAL HERITAGE VALUE OR INTEREST			DESCRIPTION			
	Design or Physical Value	Historical or Associative Value	Contextual Value	Specific Feature(s) Affected	Closest view to Turbines	Visual Impact	Proposed Mitigation Action
3.4 Other Provincial Park within the 30 km area	N/A	Associated with theme: Parks and Reserves.	Supports character	3.4.1 Batchawana River Provincial Park	Closest 15 km	**No impact** - Park is located in the Batchawana River valley. Rising topography to the north blocks views. Theoretically potential of seeing 1-2 turbine blades at most.	None
				3.4.2 Pancake Bay Provincial Park	30 km	**No Impact** Theoretically visible but with distance, topography and vegetation no views of turbines could be seen.	
3.5 Algoma Central Railway	Technical achievement	Direct association with theme(s): Mining, Tourism, and Industrialization.	Landmark	3.5.1 Agawa Canyon	16 km	**No Impact** – the turbines can not be seen from the canyon	None
				3.5.2 Track Between Regent and Rand Stops	8 km	**No Impact** – Forest cover and topography prevent views.	
				3.5.3 Montreal River Trestle Bridge	6 km	**High Impact** – panoramic view of the turbines. Views from train on down- river side for approx. 90 seconds as train crosses bridge. On a train is the only way the majority of public will experience this view.	The turbines will provide a point of interest as part of the ACR interpretation. The dam and hydro electric are already a feature being pointed out on the tour.

HERITAGE RESOURCE IMPACT ASSESSMENT MATRIX FOR BOW LAKE WIND FARM PHASE 1 & PHASE 2							
CULTURAL LANDSCAPE RESOURCES	ONTARIO REGULATION 9/06 CRITERIA FOR DETERMINING CULTURAL HERITAGE VALUE OR INTEREST			DESCRIPTION			
	Design or Physical Value	Historical or Associative Value	Contextual Value	Specific Feature(s) Affected	Closest view to Turbines	Visual Impact	Proposed Mitigation Action
3.6 Highway 17 Scenic Drive	Technical, Scientific, and Artistic merit.	Direct assoc. with theme(s): Tourism, Industrialization, and Transportation.	Landmark	3.6.1 Alona Bay scenic lookout	11 km	**Some Impact** - From the lookout views are dominant to the south but looking north towards the turbines, forest cover provides screening.	Clustering of turbines. Staggered in groups set back.
				3.6.2 Metheany Creek	5 km	**Some Impact** – Visibility is limited. Vegetation and terrain restrict views.	
				3.6.3 Gartshore Dam view from Highway	2 km	**High Impact** – Multiple turbines visible. Visibility from moving vehicle is fleeting. Foreground vegetation and terrain restrict views.	Clustering of turbines. Staggered in groups set back will reduce the visibility but all turbines will be visible.
				3.6.4 Highway 17 near Kenny Lake LSPP	5 km	**High Impact** – Dominant feature in the viewshed looking south along straight stretch of Highway 17.	Clustering of turbines. Staggered in groups.
				3.6.5 Mica Bay	18 km	**No Impact** - Visibility is limited. Vegetation and terrain restrict views.	None
3.7 Voyageur Trail	Not assessed						

HERITAGE RESOURCE IMPACT ASSESSMENT MATRIX FOR BOW LAKE WIND FARM PHASE 1 & PHASE 2							
CULTURAL LANDSCAPE RESOURCES	ONTARIO REGULATION 9/06 CRITERIA FOR DETERMINING CULTURAL HERITAGE VALUE OR INTEREST			DESCRIPTION			
	Design or Physical Value	Historical or Associative Value	Contextual Value	Specific Feature(s) Affected	Closest view to Turbines	Visual Impact	Proposed Mitigation Action
3.8. Montreal River Hydro Electric Stations	Technical and Scientific	Direct assoc. with theme(s): Industrialization and Hydro Electric Power Generation.	Landmark and Supports Character.	3.8.1 Major industrial concentration Four generating stations – Andrews, Hogg, Gartshore, MacKay	Less than 2 km	**High Impact** – Multiple turbines visible. Dominant perspectives as the viewer looks south moving along the road between stations	Opportunity for interpretive experience
				3.8.2 Montreal River Valley extending 16 km up from Highway 17 to the trestle Bridge	Borders the property	**High Impact** – Multiple turbines visible. Because of terrain and vegetation there are no panoramic views	No mitigation recommended, supports the theme of industrialization.
				3.8.3 Upper Montreal River	7 km	**Some Impact** - Land form modified with the damming and flooding of river valley. Views of the trestle bridge are the dominant feature with turbines in background	Clustering of turbines. Staggered in groups.
3.9 Lands Associated with the Group of Seven	N/A	Demonstrates artists work, and Tourism.	Supports Character Defining Landmarks	3.9.1 High Falls (MacKay Dam) *Montreal River Falls*	7 km	**No Impact** – view has been totally altered with the construction of the MacKay hydro –electric generating station	None
				3.9.2 ACR/CN Railway Corridor between Spruce Lake and Eton. Supposed Group of 7 locations but none identified	30 km radius	**No Impact** – Forest cover and topography restrict views	None
				3.9.3 Upper Montreal River – *The Solemn Land* J. E. H. MacDonald 1921	6 km	**No Impact** – The view from the trestle bridge looking north has been altered with the construction of the dam.	None

4.2 Mitigation

4.2.1 Mitigation of Visual Change

In the circumstance where wind turbine visibility leads to a change to an existing view from all of the Cultural Landscape features identified in the foregoing sections, the extent to which that change constitutes a positive or negative impact on each site can vary. Some users of the landscape may experience the visual change as beautiful, symbolic of environmental stewardship, in line with the region's industrial history, or in some other positive manner and as such an enhancement to their experience. Others may experience the change as symbolic of industrial development, a departure from an 'unchanged' landscape or in some other negative manner. In all instances, the landscape users will be viewing the wind turbines along with the other historical and present-day industrial development in the region (forestry, mining, quarrying, power generation) that also represent influences that have altered the character of the landscape.

Given this natural range of human perception, it is difficult to generalize a need for mitigation based solely on the simple degree of visibility of the wind turbines. To the extent that some people will feel that the visibility of the wind turbines detracts from the wilderness ethos of the area, mitigation opportunities are limited due to the size of the turbines themselves and their requirement to be located in open areas, of higher elevation in order to produce energy efficiently.

One potential mitigation option may be to move turbines to less prominent (e.g. lower or more sheltered) locations within the project area, which would reduce their overall visibility within the region. However, wind turbines must be sited where the wind resource is strongest, and due to factors like the angle and turbulence of inflowing wind, turbines must be sited above the treeline, ideally on ridges or plateaus, where their blades access the strongest and most laminar (undisturbed) wind flows. In addition, wind turbines must be sited away from a suite of environmental features, including sensitive habitats, certain wetland features, and watercourses, which often occupy a significant portion of lower-lying areas.

The Bow Lake Wind Farm Project site was chosen for several reasons, including the overall strength of the area's wind resource, and access to elevated, unobstructed locations to harness that resource. Within the Project area, turbine site selection has been undertaken very carefully, taking into account technical limitations (e.g. air inflow angles), environmental constraints (e.g. setbacks to water bodies), access to power transmission, and other factors such as existing industrial and recreational use of the project area. The proposed layout of the turbines represents an optimization of these factors.

The site selection and layout plays a large role in attempts to mitigate by reducing visibility. Rather than being on the coast, the turbines are set-back 6 - 8 km along a section of recessed shoreline, at the mouth of Montreal River Harbour. The turbines are staggered in random clusters up into the hills framing the Montreal River Valley. The rolling hills rising up from the lake and along the Montreal River Valley provide a degree of screening as does the heavily wooded character. The concentration of turbines in random clusters also limits the extent and duration of viewsheds.

Based on the foregoing, moving the turbines to locations of reduced prominence, such as low-lying or obstructed areas, is not a practicable mitigation measure from either an environmental or renewable energy production perspective.

Similarly, moving the Project to another location within the region would not likely mitigate any impacts the project may have on wilderness ethos, as the project would still be subject to the same technical and environmental constraints, and would likely still remain visible from certain vantage points which may hold some cultural landscape values to certain people.

Developing access to the power grid would introduce other factors which would have extensive impact on the environment. The Wind Farm would not impart a visible change on the terrestrial landscape if moved offshore, although this would result in a visual change to the coastal area, which may or may not be considered a visual improvement relative to terrestrial development. In any event, movement of the Wind Farm offshore is not an option from a regulatory perspective (there is currently a moratorium on offshore wind development in Ontario) or from a contractual perspective (the provincial agreements governing sale of the power from the Project does not provide for offshore production).

Full mitigation of the visibility of the wind turbines can only be achieved by not building the wind project. However this is not a reasonable approach for a number of reasons:

1. Firstly, given the subjective character of the perceived cultural heritage impact in question, the magnitude of this kind of mitigation is not commensurate with the potential impacts being considered. Further, not building the Project would reduce the environmental and economic benefits derived from the Project itself, both locally and regionally.

2. The Ontario government has demonstrated a clear mandate to encourage the development of renewable energy in the province in order to clean up its energy generation mix, while nurturing the growth of green industry and green economy as entrenched in the *Green Energy and Green Economy Act*.

3. The Project has been awarded three Feed-In Tariff contracts by the Ontario Power Authority, and as such is well positioned to contribute to the Government's initiatives towards reducing the environmental impact of Ontario energy supply mix, while driving economic growth in the Province and the region through its domestic (local and provincial) content requirements.

In summary, it is not recommending that the foregoing mitigation activities are appropriate to address concerns regarding potential impacts of the Project on visual change or impact to the Cultural Landscape for the following reasons:

- The character of the impact that the visibility of the wind turbines have on cultural heritage (eg. associative values of the wilderness landscape) is not absolute, but rather it is subjective and therefore can be perceived as positive, neutral, or negative;
- None of the mitigation options are commensurate with the scale and scope of the contemplated potential impact; and,
- None of the mitigation options allow for the realization of the local economic and environmental benefits associated with the Project.

For clarity and completeness, the foregoing framework has been applied to each of the specific features of the Cultural Landscape identified in Chapter 3 and Table 4.1, and specific conclusions and recommendations for mitigation are discussed below. Only a few of the proposals for mitigation are specific to the proponents while others are more appropriately directed to the responsible agency.

These recommendations go beyond the scope of the study or the responsibility of the proponents, but are included here as suggestions for additional investigation that would guide sustainable development in the region.

Aboriginal Mitigation:
1. (With regard to Batchewana First Nation of the Ojibways). The author of this report will not make recommendations regarding the significance of or need for mitigation of potential effects on BFN cultural heritage.

As participants in the project, the BFN have recommended that all Bow Lake Project development activities recognize and respect the spirituality of the Bow Lake Site, and the developers follow the spiritual lessons of the ancestors before commencing any of the work contemplated by this project. It is recommended that the proponent continue to engage with the BFN to identify and address any concerns they have with respect to potential impacts of the project on their cultural and spiritual heritage.

2. (With regard to the Métis Community). It is understood discussions are ongoing in respect of potential mitigation measures and it is recommended that the proponent continue to consult and work with the Métis to identify and address any concerns they have with respect to potential impacts of the project on their cultural heritage.

Great Lakes Heritage Coast Mitigation:
1. The proponents have set back the wind turbines from the coast by approximately 8 km, with the closest turbine being around 5 km from the coastline. This distance coupled with the clustered (as opposed to linear) siting of the turbines will help to minimize the visibility of the wind turbines from the coast. No further mitigation is recommended.

Lake Superior Provincial Park Mitigation:
1. The distance of the wind turbines from the coast (as described above) as well as the grouping of the turbines will help to reduce the visibility of the wind turbines from this area. No further mitigation is recommended.

2. Lake Superior Provincial Park has a very well presented interpretive program which chronicles the various layers of cultural and industrial activity that took place in the park along with a very creative and well received nature interpretation program. The management of the Park has ensured that the cultural and natural values of much of this area is documented, including extensive archaeology. In keeping with the concept of a Cultural Landscape, which has continued to evolve and change. Consideration should be given to include the Wind Farm in the Park's interpretation as another development in this process.

Highway 17 Scenic Drive Mitigation:
1. There is no mitigation recommended.

2. Consideration could be given to an interpretive initiative dealing with alternative energy, orchestrated by the proponent with such organizations as the Algoma Kinniabi Travel Association (and the Agawa Canyon Rail/CN). This could be an outdoor interpretive presentation using all weather panels located at pull-off areas which have a view of the turbines. Such an approach supports the Sault Ste.

Marie –Think Green – The alternative energy capital of North America –marketing campaign. Potentially hydro electric power as well as the search for uranium could be incorporated into the story of the Wind Farms as a part of the Region's clean energy heritage.

Voyageur Trails Mitigation:
1. There is no mitigation recommended.

Landscapes Associated with the Group of Seven Mitigation:
1. There is no mitigation recommended.
2. The eventual publication of the Waddington research and the McGuffin/Burtch[20] research tracking actual sites of the Group of Seven will provide a tangible link between artists and the landscape, regardless of the development of the Bow Lake Wind Project or other industrial activities which have altered the landscape since the paintings were produced.

4.3 Conclusion Regarding the Heritage Resources Impact of Bow Lake Wind Farm

The examination leads to the conclusion that the construction of the planned Wind Farm will have no negative impact on the heritage resources on the Project location as there are no significant heritage resources located on the site that could be affected in any event.

The Batchewana First Nation of Ojibways know that spirits are present throughout their territory, including the project area, and it is their belief that the addition of the wind turbines will not impact (positively or negatively) these spirits.

Further, the project will have only limited impact on the resources located in the larger study area (Zone of Visual Impact) as there are very few heritage sites that will be directly affected in any way by towers. One of the better known sites is the site of the Aboriginal pictographs in Lake Superior Provincial Park, where, at a certain angle from the site, wind towers might be seen in the far distance on a clear day. Given the existing visual context (there are also a number of cottages on the island immediately opposite the pictographs which detract from the wilderness setting), and the distance between the pictographs and the wind turbines limiting their visibility, this does not constitute an impact that requires mitigation.

The only other heritage sites identified in the Zone of Visual Impact that have been noted as being of potential interest are painting sites (i.e. sites where original scene of paintings are still recognizable) of the Group of Seven. However, to date, no Group of Seven painting sites have been identified that would be affected by the visibility of the wind turbines, with the exception of the J.E.H. MacDonald painting of the *Falls on the Montreal River,* however this site has already been significantly altered by industrial (hydroelectric) development since the painting was done. Wind turbines would just be the latest addition of change on the site.

20. For a detailed discussion of the McGuffin/Burtch research see Appendix C. Also youtube.com documents 1 & 2.

Chapter 5 Tourism Impact

5.1 Context

International Tourism Trends

As an internationally traded service, inbound tourism has become a major world trade category. The overall export income generated by inbound tourism including passenger travel, exceeded US $ 1 trillion in 2010.

Globally, as an export category tourism ranks fourth worldwide after fuels, chemicals and automotive products. For many developing countries tourism is one of the main sources of foreign exchange income and the number one export category, creating much-needed employment opportunities for development.

Tourism contribution to worldwide gross domestic product (GDP) is estimated to be on the order of 5%. Tourism's contribution to employment trends tends to be slightly higher; it is estimated that in the order of 6 to 7% of overall number of jobs worldwide direct and indirect are related to tourism.

For advanced, diversified economies, the contribution of tourism to GDP ranges from 2% for in countries where tourism is a comparably small sector, to over 10% for countries where tourism is an important component of the economy.[21]

Recent World Travel Trends - Summary Highlights[22]

- In response to an improved global economy new record figures for international trips were established in 2010 – up 5% in 2010.
- There was a boom in emerging tourism markets - Brazil lead in tourism growth in 2010 up by 40% from the previous year.
- North America is slowly picking up from 2009 downturn –there is low growth outbound; high single growth inbound.
- Canada and Mexico are performing well in tourism compared to the United States in terms of percentage growth.

Canadian Tourism Trends

Tourism is an important economic driver in every region of Canada. The sector directly employed 622,900 people in 2008. Total tourism spending of $C 74.7 billion in 2008 represented a 1.9% increase over 2007. Tourism's share in the economy was 2% of GDP or $C 30.3 billion in 2008.

Recent Canadian Travel Trends–Summary Highlights[23]

- Tourist receipts in the period 2002 to 2008 had a compound growth rate of 4.2% - the second lowest of the top 20 member countries of the United Nations World Travel Organization - the

21. United Nations World Tourism Organization (UNWTO) –Tourism Highlights–2010 Edition Page 1
22. I TB World Travel Trends Report 2010/2011, March 9, 2011, presented ITB Berlin, Convention 2011
23. Industry Canada Tourism Industry Overview, September 2009

United States had the lowest growth during the period of 3.68%.

- The number of international travelers entering Canada peaked in 1999 at approximately 50,000,000 travelers - figures for the most recent available year 2008 indicate a decline of approximately 22,000,000 visitors to Canada during the period 1999 to 2008 – these were largely American visitors.
- In 2008, American travelers to Canada represented 83% of the total visitors to Canada.
- The ratio of United States travelers to Canada versus other international travelers has remained roughly the same in the period 1999 to 2008.
- Growth in Canadian tourism is coming from internal Canadian domestic travelers.

Profile of Tourism in Sault Ste. Marie and Algoma

Organizations

There are two tourism organizations covering Sault Ste. Marie and District of Algoma. Individual tourism operators may belong to one or both organizations.

- Inside City of Sault Ste. Marie - Tourism Sault Ste. Marie.
- Outside the City of Sault Ste. Marie - Algoma Kinniwabi Travel Association –this is contiguous with the boundaries of Ontario's Regional Tourism Organization (RTO) 13B area. Northern Ontario is RTO- 13 and it is divided into three separate zones including Northeastern Ontario (RTO 13A), Algoma and parts of District of Cochrane are the North Central Zone (RTO 13B) and Northwestern Ontario (RTO 13C)

Sault Ste. Marie and the surrounding Algoma District report a decline in economic activity, population and tourism activity for the past 20 years. Major primary industries in Sault Ste. Marie have been restructured, changed owners and emerged with smaller employment and leaner operations. A portion of the lost jobs has been replaced by new service related and new types of manufacturing jobs. The tourism sector emerged from this turbulence with new recognition of its economic importance as an important supporting, private sector, economic, pillar in the area.

Recent Sault Ste. Marie and Algoma District Travel Trends[24]

- Reduction of 11% of all visitors to between 2006 (1,138,793) and 2009 (1,010,304).
- US visitors are down by one-third (175,000) between 2006 (536,077) and 2009 (361,633)
- Overseas travelers to the area have declined by 45% between 2006 (13,140) and 2009 (7,183)
- Incoming US visitor traffic across the Sault Ste. Marie International Bridge between 2007 and 2010 has declined by 24%
- A greater dependency upon Northern Ontario based visitors – up 17% in four years from 357,200 in 2006 to 418,100 in 2009.
- Reduced attendance at key Sault Ste. Marie attractions between 2005 and 2010 – Agawa Canyon Train Tour attendance down 43%, Provincial Parks in the region down 3.8% and Canadian Bushplane Heritage Centre down 12%. Ontario Travel Information Centre visits – down 46%, Sault Ste. Marie International Bridge – traffic down 24%.
- In the past 5 years the Sault Ste. Marie hotel market has seen a 15% decline in occupied hotel rooms.

24. Information in this section has been provided by the Sault Ste. Marie Economic Development Corporation based on other studies that they have commissioned.

5.2 Transportation

Vehicle Traffic in the Highway 17 Corridor[25]

Highway 17 (The Trans Canada) brings the largest number of persons into the general area of the proposed development. Nearly 2 million persons a year travel the Highway 17 corridor.

Considering the annual average daily traffic [AADT] (2007) with an average of 2.1 persons per vehicles means (2,512 vehicles x 2.1 passengers per car x 365 days) = 1,925,448 travelers per year are moving through this transportation corridor.

Summer traffic (July/August 2007) volumes in the Highway 17 corridor increases volumes by 935 vehicle per day or 27% compared to the other ten months. This translates to (935 vehicles x 2.1 passengers per vehicle x 62 days) = 121,750 (rounded) additional persons are passing through the Highway 17 corridor during the months of July and August compared to the other ten months of the year.

An average of 5,300 persons a day travel through the Zone of Visual Impact using Highway 17 annually. During the prime tourism months of July and August the number of travelers in the highway corridor increases by 35% or an additional 1,900 persons daily.

During the prime summer tourism period of July and August there is a reduction of 31,000 vehicles in the section of Highway 17 from the turn-off at the Lake Superior Provincial Park Visitor Centre at Agawa Bay and the next traffic count location at Wawa 80 km distant.

Reasons for this drop-off of traffic volume cannot be fully explained, but a plausible explanation might suggest that a high portion of these 500 daily vehicles stop their northward journey at this point or slightly beyond as the driver and passengers have decided they only want to focus on the coastal features of Lake Superior and are not prepared to go farther northward as the highway moves away from the Lake Superior coastline for the next 250 km until Marathon. Logically most drivers and vehicles that in this category return to Sault Ste. Marie as their destination. This points out the priority which tourists give the scenic features of the Lake Superior coastline drive.

Review of the summer daily traffic volumes at various points along the Highway 17 corridor between 1999 (the last big tourism year) and 2007 (the most recent year for which information is available) indicates a decrease of vehicles on Highway 17 of 3% in the Sault Ste. Marie to Wawa section. Some of the highlights of the data noted a general decline overall in travel between Sault Ste. Marie and Wawa but slight increases in summer time traffic in the areas within the study zone for the 2007 data.

- Pancake Bay Park + 3%
- Montreal River Bridge + 9%
- Agawa Bay +20%

Of interest is the fact that recent numbers indicate that overall summer traffic has declined in the Sault Ste. Marie/Wawa corridor in comparing the 1999 and 2007 data.

- Sault Ste. Marie – 21%
- Batchewana Bay – 10%
- Wawa – 26%

25. Provincial Highway Traffic Volumes, 1988–2007, Ontario Ministry of Transportation

The ACR/CN Corridor

Portions of the Algoma Central Railway/ Canadian National Railway run for 78 km (the railway is not straight due to the nature of topography of this area of Algoma) through the Bow Lake Zone of Visual Impact or Study Zone from mile 71 through to mile 120 on the railroad.

The ACR/CN operates a regular passenger service from Sault Ste. Marie to Hearst, a distance of 476 km. Annually, the train carries approximately 6,000 passengers. The company receives a subsidy from the Government of Canada to support the service.

In keeping with the needs of the passengers the ACR/CN train stops as required either by notification of the train staff or by waiting passengers who flag the train down for a stop to get on or off the train. The train's baggage car often carries required supplies for passengers and tourist operators along the route or recreational equipment such as all-terrain vehicles and canoes that are off or on loaded as required by passengers. It is a unique and special experience riding this train.

The ACR/CN also operates the Agawa Canyon Tour Train that brings during the May to October season approximately 25,000 passengers, who are carried north from Sault Ste. Marie into the picturesque Agawa Canyon. At this point the train stops and lets the passengers disembark to explore the canyon floor area or to climb to several waterfalls. Agawa Canyon is the site of several Group of Seven paintings. The site is outside of the Bow Lake Zone of Visual Impact but within the Zone of Economic Impact.

In the past, the ACR Canyon Tour Train carried in excess of 100,000 passengers annually. Passenger loads on the tour peaked in 1981. In response to the decline in passengers the Governments of Canada, Ontario and the City of Sault Ste. Marie have jointly invested more than $10 million in a refurbished and upgraded train equipped with GPS activated narrative commentary available in five languages for passengers.

Additionally, other services have been upgraded on the train and the time spent in the canyon by passengers increased in response to customer market research studies. This is the first season for the refurbished train and passenger numbers are not available at this time. The Agawa Canyon Tour train is regarded as a major regional tourism asset and one of the foundations for future growth in the tourism sector.

During the entire history of the ACR/CN Railway it has marketed and sold the train ride into Algoma as a "wilderness experience".

Other Transportation Modes - Marine

Water transport that was the original and only transportation corridor to access this area of Lake Superior for thousands of years used by First Nations, explorers and the voyageurs. Sailing ships followed and then stream driven ships from the 1870s.

There has not been regular scheduled passenger ship service along the marine corridor of the eastern and northern coasts of Lake Superior since the 1930s. Railways, along with construction of the highway around Lake Superior, replaced passenger ship service.

In the past decade, there has been a few small specialty cruise ships that have entered Lake Superior, often with predominantly European passengers but they are not a regular feature in Lake Superior. In the past, small passenger ships have visited the Nipigon Bay area of Lake Superior. Interests in the Wawa area are attempting to have vessels visit that area of Lake Superior as well.

Conversations with area tourism operators noted an increase in the presence of larger power and sail-boats entering from the lower Great Lakes for cruising the Lake Superior coast in July and August. The boaters are often seeking the solitude and undeveloped wilderness coast that Lake Superior provides.

Particular note should be made of the increasing numbers of canoe and kayak enthusiasts using the eastern and northern shores of Lake Superior. This expanded interest has prompted the establishment of several dedicated outfitters in this area of the Lake Superior coast focused on this group's needs for providing outfitters services and guided trips in the area. The number of annual travelers using the marine corridor section of Lake Superior within the Zone of Visual Impact at this time is small in area south of Montreal River. There is a greater number of canoe and kayak users found in Agawa Bay area (inside the Zone of Visual Impact) of Lake Superior Provincial Park . The largest number of canoe and kayak user are found northward along the Park's coastline to Wawa. These numbers are more significant but are also small. The main concentration of these users are found in the area north of the Michipcoten River up to and including Pukaskwa National Park.

Canoe and kayak users of the marine corridor will be the largest group to view the Bow Lake Study Zone from the marine corridor along the coast of Lake Superior. Outfitters in the general area speak of this portion of Lake Superior offering a competitive advantage (compared to the American coastline of Lake Superior) but having the advantage of greater public ownership of the coastal areas and a greater number of bays and islands offering shelter to this group of travelers.

From the perspective of a Lake Superior vantage point, this user group will experience the greatest Visual Impact associated from the Bow Lake Wind Farm. Night view impairments from the wind farm are a major concern of this user group according to outfitters serving this segment.

5.3 Regional Economic Impact

The last year for which data is available for the economic impact of tourism in the District of Algoma is 2001. In 2001 tourism expenditures totaled $228 million in the District. Other key indicators include:

	Direct	Indirect	Induced	Total
GDP	$81 million	$83 million	$64 million	$228 million
Wages & Salaries	$62 million	$50 million	$33 million	$144 million
Jobs	3,524	1,820	1,300	6,644

Source: Sault Ste. Marie Economic Development Coorporation.

The Sault Ste. Marie and area tourism sector has always been highly dependent on the arrival of American visitors mainly from the states within a 6 to 8 hour drive (Michigan, Ohio, Indiana, Illinois, and Wisconsin). The number of U.S. visitors to Canada peaked in 1999; ten years later, there has been a steady decline of American visitors. This relates to socio-economic and political related issues at play in the United States during the period.

The drop in number of visitors to Sault Ste. Marie and Algoma is comparable to the experience of most other Ontario and Canadian tourism regions or localities, particularly border communities.

In Sault Ste Marie and Algoma area this reduction in visitors to Canada has had negative economic impact. Visits to the area by Americans have declined by one-third to the area. Customer traffic is down with all areas of business serving the visitor market including hotel and motel occupancy and tourism attractions including the ACR/CN Agawa Canyon Tour which previously attracted almost five times the number of passengers compared to the recent records.

5.4 The Tourism Operators Survey

Introduction

In conjunction with the heritage impact assessment the study includes the impact of the proposed Bow Lake Wind Farm on tourism in Sault Ste. Marie and Algoma district. Included in the plan was the undertaking of an online opinion survey of the tourist operators in the area.

The survey was Internet based and employed Survey Monkey a widely used supplier of survey tools. The survey design had three parts including:

- About the business type
- About the businesses' customers, clients or guests
- About their views regarding wind farms, focusing on the Bow Lake proposal.

There were 25 questions with the provision that many of the questions permitted the respondent to provide comments. The project proponent had no input to the design or the identification of the organizations and persons who were invited to participate in the survey. The time to complete the survey as estimated to be 10 to 15 minutes with the view that the survey period (August) represented the tourist operators most busy times.

Any commercially confidential information provided was for the use and amalgamated analysis of TCI Management Consultants only. In the cases where respondents provided their own comments and views that could be identified the consultants removed any information that might lead to the source.

In cooperation with the Algoma Kinniwabi Tourist Association approximately 100 operators were contacted in Sault Ste. Marie and the area north to Wawa. (No operators were excluded – the intention of the survey was to provide each tourist business with an opportunity to provide their thoughts.) The list included both members and nonmembers of the Association. The survey was launched August 10, 2011 and was in the field until August 24. The consultants and the Association undertook three follow-up efforts seeking additional participation at various stages.

The results of the online questionnaire is reproduced in Appendix D of this Report.

Results

The combined follow-up effort resulted in only 15 responses from the tourist operators. It should be identified that the survey took place during one of the busiest periods of the tourist operators' year.

Nevertheless the somewhat disappointing participation rate may indicate that the matter of the Bow Lake Wind Farm proposal is not an urgent priority for most of the tourist operators.

Some of the highlights from the survey's results follow,

- The majority of the participants had their businesses along the Highway 17 corridor and the Lake Superior coastline - 68%.
- A business profile of the participants indicated that 92% are self or family owned businesses, 67% of the participants live on the business site, 65% operate 12 months a year of operations and 88% have been in business for more than 10 years.
- In regard to customers more than 50% reported that returning customers represented more than 56% of their business.
- The largest reason why customers return to the tourism operations location was reported the scenic beauty of the Lake Superior coast and associated vistas - this was reflected in 100% of all the participants - high rankings to outdoor activities (80%) were given to canoeing and kayaking rest and recreation and hiking (73%).
- Respondents indicated (68%) that the Agawa pictographs were the most important heritage asset in the area and only 40% identified the role of the Group of Seven was a heritage asset in the area.
- Familiarity and awareness of the Bow Lake wind farm proposal was identified by 52% of the respondents.
- In regard to issues of concern about the proposal, 80% identified the loss of part of the wilderness experience in the area, a further 73% were concerned about the impact on wildlife while 63% were concerned about the interruption of scenic vistas, Visual Impact from the wind towers and the required warning lights impact on the night skies of the region - 59%.
- However, despite these concerns, 60% of the respondents indicated they believed the Bow Lake proposal would have no impact on their business while 20% felt their business would go down as a result of its' development.
- In a summary statement on respondent's attitude to the Bow Lake Wind Farm 33% identified there be no impact, 26% indicated they were somewhat concerned, 20% were concerned and fearful for their business while 20% thought it might actually be good for their business.

Analysis and Implications

With the low participation rate among tourist operators we are unable to identify if a higher participation rate would produce different results. It is apparent that the subject invokes passionate and informed opinions among a minority of tourist operators in the area. Some of the participants identified that their opinions may not represent the opinions of their customers. It is apparent that the potential implications of additional wind farms between Sault Ste. Marie and the proposed Bow Lake Wind Farm location will likely continue to be the subject of debate and strong opinions among the tourist operators in the area.

5.5 The Importance of the Wilderness Experience

The ability of tourist visitors to access the wilderness areas north of Sault Ste. Marie and to enjoy that experience is a critical element in the marketing and the products offered by the tourist operators in the region. This core value asset and product has been the historic keystone of marketing tourism in Algoma and is unlikely to change.

This access to wilderness has been essential to the development of new types of tourism products that are being offered by tourism operators in the area. These include,

- Canoe and kayak outfitters and tour operators
- Climbing instruction and guiding
- Eco-tourism adventures
- Landscape painting

Several tourism operators in the area noted the competitive advantage which this Canadian section of Lake Superior coastline has in comparison to the American coastline section of Lake Superior in providing a "wilderness experience". The remarkable features are the fact that the Canadian side has a much higher percent of public ownership than the American side. The other factor is the nature of the Canadian Lake Superior coastline offers more shelter for recreational marine users of the Lake by offering more sheltering bays and islands are very desired user feature given the reputation of Lake Superior sudden and often violent weather conditions.

The impact of a single wind farm such as Bow Lake is considered to be minimal. However, it is worth noting that concerns were raised about the development of multiple wind farms in the region. Tourism stakeholders in the area north of Sault Ste. Marie to Wawa may wish to initiate a dialogue on the capacity of the area to absorb additional wind farm installations without compromising significantly the "wilderness experience" product that operators believe is a critical in their ability to attract customers.

5.6 Conclusion

Tourism is an economically important industry in Sault Ste. Marie and Algoma District. As a percent of the regional economy tourism it is the most important contributor to jobs and economic activity within the Zone of Visual Impact and a very important economic contributor within the Zone of Economic Impact of the proposed Bow Lake Wind Farm.

The tourism sector of the economy in the District of Algoma has been economically challenged for more than a decade largely because of the reduction by one-third of the number of American tourists visiting the area. The loss of U.S. visitors to Algoma is comparable to similar percent reductions in other Ontario tourism regions and similar to the total Canadian tourism numbers for international visitors to Canada.

Many complex and related issues contribute to the reasons for this decline but most of these issues are external to the tourism operators in Algoma ability to influence directly.

Historically, the tourism product offered by most of the operators in the region relates to providing

some type of access to a wilderness related experience. This experience expectation can vary among customers from mild to extreme experiences – from a comfortable train ride to a park-like setting in the Agawa Canyon to a blue water kayaker seeking thrills and excitement in the heavy seas of Lake Superior. Hunting and fishing continue as primary attractions for the area.

The survey of tourism operators in the Economic Zone was not conclusive. First, a relatively small proportion of operators chose to respond to the survey. This by itself may indicate a lack of interest or perceived urgency regarding the issue. Second, as many respondents were concerned about the potential negative impact on their business, some believed that the Wind Farm proposal would be positive for their business and offered an interpretive opportunity. For the most part, operators were also uncertain as to how their customers would respond to a Wind Farm operating in the area.

The primary concern for the tourism operators in the District of Algoma appears to be one of determining the overall capacity of the land base within the Economic Zone to absorb multiple Wind Farm operations without compromising the wilderness experience of their customers.

Based upon this evidence, our conclusion regarding the impact of the Bow Lake Wind Farm upon the tourism industry within the Zone of Economic Impact is that it will have essentially a minimal effect. There are many issues of much greater concern that have had and will continue to have much greater impact upon the industry in the longer term. Most of these are beyond the ability of local operators to influence.

Appendix A Chronology

The document provides a chronology of the Lake Superior shore focusing on the Montreal River and the Bow Lake site extending approximately in a 30-35km radius. It attempts at a record of events in history organized by subject which were instrumental in shaping the area and the settlement pattern. The time frame is supplemented with occasional references to events of national significance but this is essentially a look at the roots of the area.

Sources of information included a chronology prepared by the Lake Superior Provincial Park and dealing with the Park's evolution. The bulk of material is drawn from a Don Steer's self published manuscript *Superior's East Shore: Mamainse to Gargantua*[1] and the 2005 *Addenda Superior's East Shore*. The two part manuscript is over 700 pages of local history. Sources of this material are mainly from interviews and oral history, with additional material from local diaries, newspaper articles and government publications.

Aboriginal[2]

9000 B.C. - 500 A.D.

- 880 B.C. Artefacts found at the Pic River suggest nomadic hunters/fishermen of the Shield Archaic culture may have inhabited during this period.
- 500 B.C. Earliest Aboriginal artefacts uncovered have been carbon dated and identified as coming from Laurel culture.
- 500 B.C. - 500 A.D Middle Woodland Aboriginals of the Algonquian culture occupied the area and traded with tribes from Southern Ontario, Michigan, North-western Ontario and Manitoba. Summer settlements were on Lake Superior's shore and winter camps were at inland hunting grounds.

1622 - 1850

- 500-1622 Terminal Woodland Aboriginals (c. AD 900-1650) maintained their culture until contact with the Europeans.
- Montreal and Agawa Rivers are a transportation route for Aboriginals into the interior areas including the Cree in the Chapleau area.
- Within the Lake Superior Provincial Park there are 28 known sites from Ojibwa and pre-Ojibwa periods. Ojibwa called the lake "Gichigami" meaning "big water."
- 1763 The Proclamation Act (Royal proclamation) is passed by the British Government. It recognizes that the consent of First Nations is required in any negotiations for their lands.
- 1800 Techniques for dating rock paintings suggest that was the latest of the Agawa Rock pictographs were painted around this time by Myeengun. No dates are available for first paintings but evidence exists that the site was used for many years and some figures repainted numerous times.
- 1850 The Robinson-Superior Treaty was negotiated with the Chippewas of the Sault Ste. Marie area and gave the Crown, "the shoreline of Lake Superior, including islands from Batchewana Bay to the Pigeon River, inland as far as the height of land." (Surtees, R.J. Indian Land Surrenders in Ontario 1763-1867. Ottawa: Department of Indian and Northern Affairs, 1984).

1. Unless noted otherwise all entries are taken from: Steer, Don *'Superiors East Shore Mamainse to Gargantua'* 1995.
2. Unless noted otherwise all entries under the Aboriginal Heading are taken from *Superior Stories: A Chronology of Man in Lake Superior Provincial Park,* Ministry of Natural Resources Publication 1986.

1859 - 1937

- 1859 The Pennefather Treaty was signed June 9, at Gros Cap by Chiefs and Warriors of Batchewana and Goulais Bay bands of Indians, acting for and on behalf of respective bands.
- 1876 The Indian Act of Canada was created to integrate Indians in Canada into mainstream culture. The act allowed the Canadian government control over how Indians lived – health, education, and lands.
- 1879 Disease ravaged the Agawa Indian band. By 1894 only "a few families" remained.
- 1879 Forest and Stream, Rod and Gun published an account of a fishing trip includes notes regarding the Pictographs describing the loss of part of the rock face and stating - that frost has ruined the best of the pictures and they are "gone forever".
- 1905 Treaty No. 9 (James Bay Treaty) was created in response to petitions from Cree and Ojibwa people of Northern Ontario.
- 1937 Initials are painted in black and green over a part of the Agawa pictographs.

1951 - Present

- 1951 Canadian government re-works the Indian Act, reducing government control on reserves and giving a measure of self-government to bands. The Act continues to be amended.
- 1958 The pictographs at Agawa Rock were re-discovered by Selwyn Dewdney. Henry Rowe Schoolcraft wrote of their existence in 1850, but the rock painting received little attention until Mr. Dewdney's research revealed the importance of the pictographs as historical records of the areas early inhabitants.
- 1967 Official opening of Agawa Rock Indian Pictographs.
- 1970 MNR records showed Pictograph visitors averaged 164 per day in summer of 1970 and 183 per day in 1971.
- 1975 Complete survey of Lake Superior Provincial Park cataloguing historic and pre-historic sites.
- 1975-78 Archaeology carried out by Thor Conway documents settlement of Agawa Band for thousands of years at Agawa River and along the coast.
- 1981 Agawa Pictographs re-opened on October 18th, after extensive trail work and new interpretive signage. A memorial plaque to Selwyn Dewdneym (spiritual leader) was also installed.
- According to Thor Conway[3] the Pictographs are the equivalent to Stonehenge, a one of a kind, regionally important concentration documenting past, spiritual activities.

European Exploration[4]

- 1535 Jacques Cartier heard tales of the "Glorious Kingdom of the Saguenay" and the "Great Sea" to the west, prompting further exploration of Canada by other Europeans.
- 1622 Etienne Brule at Sault Ste. Marie. Believed to be first European to view Lake Superior, Brule opened the way for fur traders and explorers over the next 100 years.
- 1625-1700 Mapping of Lake Superior. The earliest map of Lake Superior dates from 1656. By 1700 the basic shape and character of the Lake was recorded.
- 1768 Alexander Henry, one of many fur traders/explorers, who travelled extensively in Algoma District spent the winter at the Michipicoten Post, later that year partnered with Alexander

3. Conway Thor Spirits on Stone The Agawa Pictographs 1990.
4. Unless noted otherwise all entries under the Exploration heading are taken from *Superior Stories: A Chronology of Man in Lake Superior Provincial Park* Ministry of Natural Resources Publication n.d.

Baxter to mine silver found in copper ore on the Shores of Lake Superior.
- 1735 First decked vessel to sail Lake Superior, built a Pointe aux Pins (10 miles West of Sault Ste. Marie) in shipyard of Denis de LaRonde.
- 1867 Canadian Confederation.
- 1912 Boundaries of what today is the Province of Ontario were set. Approximately 80% of the province's land is what we know as Northern Ontario.

Fur Trade[5]
- 1725 Michipicoten Post established by French and subsequently until c.1903 when Hudson's Bay Company ceased operation there.
- 1823 Although no firm date is available for the establishment of the Hudson's Bay Company post at the mouth of the Agawa River, Bayfield's 1823 chart of Lake Superior shows a "trading post" here. Shifting of the river caused the post to be moved 3 times prior to its closing in 1894. Independent traders remained at the post for another 4 years.
- 1840s Aggressive trapping lead to a substantial decline of the beaver and many other fur-bearing animals.
- 1900s[6]-2011 The growth of fur farming changed the business but much of Northern Canada, the fur trade remains a significant part of the economy. There are approximately 80,000 trappers in Canada, (based on Trapping Licenses) whom about half are Indigenous peoples.

Commercial Fishing[7]
- 1834 American Fur Company began first commercial fishing operations in the area.
- 1871 Booth Packing Company (later Booth Fisheries and Dominion Fisheries) established commercial fishing stations at Michipicoten Island and the Lizard Islands.
- 1909 Boundary Waters Treaty between the United States and Canada is established to provide principles and protocol to follow while solving issues related to using the waters they share. This established the International Joint Commission.
- 1930 -60 Fishing communities at Agawa Bay and Gargantua Harbour grew as a result of the Depression.
- 1950-60 Lamprey made their way into Lake Superior in the mid 1940s, depleting the lake trout population by the late 50s. Commercial fishing operations as well as tourist lodges folded as a result.
- 1972 Water Quality Agreement between United States and Canada.
- 1986 Ruffe (small spiny perch, foreign to Lake Superior) were first collected in fish surveys. It is capable of explosive population and affects the food chain because it competes with native fish for food and habitat.
- 2010, 89 non-native aquatic species[8] have been found in Lake Superior. These include; Eurasian watermilfoil, sea lamprey,[9] round goby, New Zealand mudsnail, zebra mussels, and most recently, the fish disease Viral Hemorrhagic Septicemia (VHS).

5. Unless noted otherwise all entries under the Fur Trade heading are taken from *Superior Stories: A Chronology of Man in Lake Superior Provincial Park* Ministry of Natural Resources Publication n.d.
6. www.fur.ca/files/fur_trade_at_a_glance.pdf, Canadas Fur Trade at a Glance Fur Institute of Canada.
7. Unless noted otherwise all entries under the Commercial Fishing heading are taken from *Superior Stories: A Chronology of Man in Lake Superior Provincial Park* Ministry of Natural Resources Publication n.d.
8. www.seagrant.umn.edu/publications/Lake Superior Fisheries History June 1989.
9. www.lssu.edu/bpac/LakeSuperiorAquaticInvasiveSpeciesCompletePreventionPlan.pdf.

Mining[10]

- 1845 Copper claim staking rush on Lake Superior. Discovery of copper at various spots led to a rush of claims at Michipicoten and along Lake Superior's shore.
- 1847 First report[11] of uranium ore in Canada on the Shore of Lake Superior (Alona Bay area) by Capt. B.A. Stanard who brought a sample to Toronto scientist John Le Conte, who considered it to be very close to pitchblende and named it "corasite." It was later confirmed by scientists to be a form of pitchblende.
- 1854 Michipicoten Island "Indian War". Copper miners were driven off Michipicoten Island by local natives who felt sacred ground was being desecrated.
- 1948 Discovery[12] of a uranium-bearing deposit at Theano point. (100 years after Stanard's discovery in the neighbouring Alona Bay area).
- 1960s – 70s Ranwick Mine, formerly a Uranium mine, became a tourist attraction at Montreal River where guests could tour part of the underground mine adit.
- Last operating mine in Wawa closed in 1998

Tourism

- 1879 Forest and Stream, Rod and Gun published account of a fishing trip on the Agawa River regarding trout fishing, bringing the first influx of sportsmen into the area. Author also notes that frost has ruined the best of the Agawa Pictographs and they are "gone forever".
- 1909 A.C.R advertising brochure targeted to "tired humanity" tourists to take a break from the city and heat to where there is rest and shade.
- 1912 A.C.R. advertised[13] camping and scouting locations along the track to promote regional tourism including: On Mongoose Lake (Painted in 1920 by Group of Seven member J.E.H. McDonald), Lake Mitchell, and the Montreal and Agawa Rivers. Sidings located along the ACR include Batchewana, Montreal River, Agawa Canyon, Rand, Chippewa Station, and Hubert Confirm with CN/historic map of the route.
- 1915 First name Bussineau, established the first tourist[14] establishment, the Agawana Lodge, at the Meadows ACR Right of Way.
- 1918-22[15] Lawren Harris (*Montreal River, Algoma Hill* [scene near Mitchell Lake]), J.E.H. MacDonald (*Algoma Waterfall, Agawa Canyon, On Mongoose Lake, Mouth of the Coppermine River*) and Frank Johnston (*Canyon*) made the first of the Group of Seven boxcar excursions along the A.C.R. The painting forays continued for four years and included A.Y. Jackson (*First Snow*) and Arthur Lismer on subsequent trips. The artists lived in their boxcar on A.C.R. sidings at Batchewana, Hubert and Agawa and travelled to nearby locations via handcar on foot or by canoe.
- 1920 A.C.R. and Hudson Bay Railway advertising brochure describes along the A.C.R. as a "Primeval Paradise for Sportsman."[16]
- 1921 Beaver Rock Lodge at MacGregor Cove, opened by Earl and Catherine Devlin, was one of the areas earliest tourist operations.

10. Unless noted otherwise all entries under the Mining heading are taken from *Superior Stories: A Chronology of Man in Lake Superior Provincial Park* Ministry of Natural Resources Publication n.d.
11. "Rediscover First Uranium Find" Northern Miner (April 21, 1949).
12. "Rich Uranium Find North of Sault." Northern Miner November 4 1948.
13. 'www.usaskstudies.coop/socialeconomy/files/LLL_Final_Reports/Report_CL5_03_NO_opp.pdf ' *Algoma Central Railway: Wilderness Tourism by Rail Opportunity Study* Coalition for Algoma Passenger Trains Malone Given Parsons Ltd. 2007.
14. 'www.usaskstudies.coop/socialeconomy/files/LLL_Final_Reports/Report_CL5_03_NO_opp.pdf ' *Algoma Central Railway: Wilderness Tourism by Rail Opportunity Study* Coalition for Algoma Passenger Trains Malone Given Parsons Ltd. 2007.
15. Mellen, Peter 'The Group of Seven" McCLelland and Stewart 1970 Toronto.
16. 'www.usaskstudies.coop/socialeconomy/files/LLL_Final_Reports/Report_CL5_03_NO_opp.pdf ' *Algoma Central Railway: Wilderness Tourism by Rail Opportunity Study* Coalition for Algoma Passenger Trains Malone Given Parsons Ltd. 2007.

- 1924 Camp Oswin (Sand Lake Lodge) opened.
- Lake Superior Circle Route Tour, 1300-miles by highway around Lake Superior, including Highway 17 through Montreal River Harbour, Agawa Bay in Lake Superior Provincial Park.
- 2011 A.C.R. advertising features: Agawa Canyon Tour Train, Snow Train, Tour of the Line, Snowmobile Excursions, Passenger Service, Wilderness by Rail (ecotourism), Lodges Along the Line.

Parks and Reserves[17]

- 1885 Canada's First National Park, Banff, was "set aside for the benefit of Canadian People."
- 1893 Algonquin Provincial Park (Canada's oldest Provincial Park) was created.
- 1944 Lake Superior Provincial Park was created through an Order in Council. Original boundaries were modified to accommodate mining in the north and hydro generation to the south.
- 1958, 60 campsites cleared at the Agawa Bay Campgrounds in Lake Superior Provincial Park.
- 1967 Lake Superior Provincial Park was classified as a natural environment park in which emphasis was given to the education and recreation benefit of people.
- Montreal River Provincial Nature Reserve[18] created in 1970.
- Batchewana River Provincial Park created in 2004 (Waterway Class).
- 1995 Lake Superior Provincial Park Management Plan was approved,[19] setting policies and direction for the park and the park is extended to include the Northwest Portion of Peever Township.
- 1999 Lake Superior Provincial Park was identified in Ontario's Living Legacy Land Use Strategy.
- 2002 Lake Superior Provincial Park addition. The addition encompasses approximately 50 km2 and was regulated under the Provincial Parks Act.
- 2000s Lake Superior Provincial Park encompasses 1600 square kilometres, over 100km of hiking trails, eco-activities (kayaking, canoeing, nature observation.) and a Visitor Centre.

Rail[20]

- 1880s Canadian Pacific Railway is constructed, bringing settlers to the lake's western North Shore.
- 1899 Clergue began construction of the Algoma Central Railway (A.C.R.)
- 1904 A.C.R. built trestle bridge over the Montreal River.
- 1912 A.C.R. reaches Hawk Junction.
- 1914 A.C.R. reaches Hearst.
- 1919 Prince of Whales (later King Edward VIII) visited Canada and included a tour on the A.C.R. A.C.R. checked and re-checked the Montreal River Bridge to ensure the prince`s safety.
- 1952 Development of Canyon Park was started with an area between the mainline and Agawa River, cleared for picnic grounds.
- 1958 A.C.R. was the first railway to convert to diesel power. After carrying mostly timber, saw, Native tribes (back and forth between summer and winter hunting grounds), and lumberjacks for many years, passengers were now more commonly sportsmen looking for adventure.
- 1970 A.C.R. drew record crowd of 1200 people for Agawa Canyon Colour Tour.
- 1972 Agawa Canyon Tour Train (#3 & #4) was launched.
- 2011 ACR/CN Agawa Canyon Tour Train - refurbished

17. Unless noted otherwise all entries under the Parks and Reserves heading are taken from *Superior Stories: A Chronology of Man in Lake Superior Provincial Park* Ministry of Natural Resources Publication n.d.
18. www.ontarioparks.com/english/planning_pdf/mont/mont-ims-1994.pdf.
19. www.e-laws.gov.on.ca/html/source/regs/english/2004/elaws_src_regs_r04178_e.htm.
20. Unless noted otherwise all entries under the Rail heading: www.agawacanyontourtrain.com/acrhistory. Algoma Central Railway History.

Commercial Shipping

- 1889 A lighthouse was built at Gargantua Harbour and was tended for three generations by the Miron family until it was replaced by an automatic beacon in 1948.
- 1900 A.C.R. started their fleet of ships on Lake Superior.
- 1903-04 Passenger boats, Manitou (1903) and Caribou (1904) conducted passenger and freight runs between Owen Sound and Michipicoten, until 1942. They were an important link to the outside world for isolated shoreline communities.[21]
- 1909 The steamer Colombus caught fire while docked at Gargantua Harbour. Her lines were cut and she drifted out to sink 75 feet from shore where her hull still rests.
- 1959 St. Lawrence Seaway opens, introducing salt-water shipping (and later non-indigenous species).

Industrialization

- 1894 Francis H. Clergue took over the Sault Ste. Marie Water, Light and Power Company. The Clergue Empire was responsible for establishing the industrial foundation of much of the Algoma District and developed; a steel mill, a pulp mill, two railways, two power and light utilities, a street car system and a fleet of steamships.[22]
- 1980s Montreal River Hilltop towers. Belonging to: CNCP (telecommunications), Great Lakes Power, Environment Canada, Bell Canada, and OPP.
- 2000s Doppler weather radar installation in Montreal River Harbour (CWGJ - 47.24778°N 84.59583°W).

Commercial Timber Harvesting

- 1902 White pine was being cut in Algoma Hills to supply boom logs for rafting pulpwood to the Sault Ste. Marie mill.
- 1918 Licenses for pulp, white birch and white pine issued in Agawa area. Initially logging operations were carried out on the shoreline but by 1918 the Agawa River drive was in progress.
- 1933 Logging operations commenced at Mijinimungshing Lake. Logs were stored on the lake, driven through Anjigami Lake to Michipicoten River, down to Lake Superior.
- 1971 Why Wilderness: A Report on Mismanagement in Lake Superior Provincial Park by Bruce Littlejohn and Douglas Pimlott, brought attention to controversy over logging in Provincial Parks. Resulting in 50% of the park lands being protected from logging.
- 1980 All logging ceases at the Lake Superior Provincial Park.
- 1995 As part of the MNR`s Algoma Crown Management Unit forest management plan, companies can only log those portions of their stands that have been marked by accredited tree markers. Prior to, companies practiced `high-grading` on licensed Crown lands in Ontario – companies determining themselves which trees to take.

Coastal Transportation

- 1924 First road survey came through the Agawa Bay area. HWY 17 plans were changed from their original surveyed location, to a route along the shore which was about 10 miles longer, in order to accommodate tourism.
- 1933 Original log bridge over Montreal River (just above the mouth) was installed with block and tackle.

21. www.city.sault-ste-marie.on.ca/library/Ind_Index.html. Sault History Online.
22. www.city.sault-ste-marie.on.ca/library/Clergue_Index.html.

- 1939 HWY 17 (dirt road at that point) completed from Sault Ste. Marie to Montreal River Harbour
- 1944 HWY 17 reached Montreal River Harbour from Sault Ste. Marie.
- 1949-50 TransCanada Highway Act was passed by Parliament and a construction timeline was made, choosing one of three possible routes for east of Lake Superior – Sault Ste. Marie.
- 1950 Wawa residents protest, hoping to speed up construction of Highway 17, as they felt isolated from the rest of the province.
- 1954 Highway 17 reached Speckled Trout Creek. The highway was now cleared but not graded to the Agawa River.
- 1956 Ontario's 1450 miles of the TransCanada Highway was paved with the exception of a 165 mile section between the Agawa River and Marathon - "The Gap." Named because of its rugged conditions of great out-cropping of rock and thick wooded areas making construction a challenge.
- 1960 Official opening of Highway 17 making Lake Superior Provincial Park accessible by road.
- 2000 Reconstruction of Highway 17 from Montreal River to Agawa River.

Hydro Electric Power Generation

- 1936-37 First dam (MacKay Generating Station) was built on the Montreal River at Upper Falls (aka Mile 92 on A.C.R).
- 1938 Second dam (Andrews generating station) was built on the Montreal River at Lower Falls (mouth of the Montreal River).
- 1940 Upper Falls Dam (MacKay) was raised 12 feet.
- 1948 Upper Falls Dam (MacKay) was raised for the second time, 8 feet.
- 1943 Lower Falls Dam (Andrews) second unit was added.
- 1957 Upper Falls Dam (MacKay) was raised for the third time, 33 feet, generating double the capacity
- 1958 Gartshore Dam and generating station was built at Centre Falls on the Montreal River.
- 1965 Hogg Dam and generating station between Centre and Lower Falls of the Montreal River was opened (built from 1962-64).
- 1973 Lower Falls Dam (Andrews) third unit was added.
- 2006 Prince Wind Energy Project completed by Brookfield Power. Canada's largest Wind Farm with 126 wind turbines.

Coastal Hiking Trail

- 1979 Development of the Coastal Trail, the trail extends through Lake Superior Provincial Park from Agawa Bay to Chalfant Cover and is approx 65km (or parts).
- 1984 With the completion of two bridges over the Baldhead River, the Coastal Hiking Trail stretched from Indian Harbour to Coldwater River, a distance of 35 km.

Weather on Lake Superior

- 1913 Great Lakes Storm of 1913 was a blizzard with hurricane-force winds that devastated the Great Lakes Basin for 3 days. It killed more than 250 people, destroyed 19 ships, and stranded 19 others. It produced 90mph winds (80 on Lake Superior), waves over 35 ft. and whiteout snow squalls. The temperature went from 80 degrees to below zero overnight.
- 1922 The Wreck of the Tug Reliance is one of many boats to suffer severe Lake Superior

weather. Through heavy snow and intense snow, survivors of the Reliance made their way to shore and through 16 miles of bush, "hills hundreds of feet high, crossing streams waist deep in water and plodding through two feet of snow" to a camp shelter. Death from exposure was common if shelter was not found.

- 1975 Legendary storms of Lake Superior sunk and claimed the lives of 29 crewmen aboard the Edmund Fitzgerald. Gordon Lightfoot made her the subject of his 1976 hit song "The Wreck of the Edmund Fitzgerald."
- 1979 Last recorded complete ice cover of Lake Superior.
- 1985 Scientists descended submersible vessel in the deepest part of Lake Superior near the Pictured Rocks National Lakeshore, (-1333ft/-405m). Water levels on Lake Superior also reached its highest levels of 2.33 ft. above average.
- 1989-90 Record snowfalls totalling 25.5 ft. 10 ft. more than average.
- 2007 Lake Superiors water levels temporarily reached a new low (slightly less than the previous low record in 1926), levels returned within a few days.
- 2007 Lake Superior's surface temperature had risen by 4.5 °F (2.5 °C) since 1979.

Group of Seven Paintings of the Algoma Region[23]

From the period 1918 through the 1920's, members of the Group of Seven made regular trips to the Algoma Region. The first excursion in 1918 included Lawren Harris, J. E. H. MacDonald, Dr. MacCallum, and Frank Johnston; they headed north to ACR mile 113 where they made their first stop at the Agawa Canyon. Arrangements had been made with the ACR to provide them a car which could be left on sidings and gave them with a base from which to work. From the Agawa Canyon they moved down the line to Hubert north of the Montreal River, and then on to Batchawana. Paintings ascribed to the excursion include: Frank Johnston's *Agawa Canyon Territory – Algoma* (n.d.); Lawren Harris's *Montreal River* (1920), and *Montreal River Algoma* (1918); A. Y. Jackson's *First Snow Algoma* (1919-1920); J. E. H. MacDonald's *Agawa Canyon Algoma* (1925-1929), *Algoma Waterfall* (1920), and *The Wild River* (1919) which was painted below the falls of the Montreal River prior to it being developed for hydro electric power.

This list of painting sites was developed from various sources. The word "Algoma" in the title was a key word for selection. However, as part of our research it was determined that the boundaries for the Algoma District were adjusted.

Algoma was the name applied to all areas west of the northern part of Georgian Bay and extending to the edge of the Canadian Shield where it meets the prairies (Manitoba) when it was part of Upper Canada and later Canada West. Prior to 1871 there were only two districts in Northern Ontario – Algoma in the west and Nippising in the east.

Over the years from 1871 to 1912 the District of Algoma was divided up with the formation of new administrative districts for Northern Ontario. The new Districts formed were Thunder Bay (1871), Manitoulin Island (1907), Sudbury (1907) and Temiskaming District (1912 from parts of Algoma, Sudbury and Nippising).

Two additional districts were also created in the western end of Ontario where being part of Thunder Bay District was not realistic given the distances and areas involved– the District of Rainy River (1885)

23. This chronology is not a complete listing of the Group of Seven paintings of the Algoma region. More exhaustive lists are available and different reports state that there are between 44 and 58 different paintings completed by the Group of Seven, of the region.

and the District of Kenora (1907). In 1912 the Patricia Region was added to the District of Kenora from the Northwest Territories to give Northern Ontario it's present geographic boundaries.

- 1918-1919, **Lawren Harris** with **J. E. H. MacDonald** financed boxcar trips for the artists of the group of seven to the Algoma region. Another painting trip after Algoma was to Lake Superior North Shore with A.Y. Jackson (A. Y. Jackson later claimed that Lawren Harris provided the stimulus for the Group of Seven).[24]
- 1918 *Montreal River Algoma*, Lawren Harris
- 1920 *Algoma Hill* and *Montreal River*, Lawren Harris
- 1922 *Above Lake Superior*, Lawren Harris
- 1926 *Afternoon Sun Lake Superior* and *North Shore Lake Superior*, Lawren Harris

- 1919 **A.Y. Jackson** formally joined the Group of Seven and exhibited with them throughout the next decade.
- 1919-1920 *First Snow Algoma*, A.Y. Jackson
- 1926 *North Shore Lake Superior*, A.Y. Jackson
- 1935 *Algoma in November*, A.Y. Jackson

- **Frank Johnston** spent a year working at the Ontario College of Art in the early 1920s but by the fall of 1921, left Toronto to work at the Winnipeg School of Art, and officially broke away from the Group of Seven by 1924. In 1927 he changed his name to Franz Johnston and continued to sell his paintings.
- 1920 *Fire Swept Algoma* and *The Fire Ranger*, Frank Johnston
- *Agawa Canyon Territory Algoma (n.d.),* Frank Johnston

- 1919 **Arthur Lismer** moved to Toronto to accept a position as vice-principal of the Ontario College of Art. He continued to paint in Toronto, and in 1920 the Group of Seven was officially formed. Lismer is actually accredited with naming the group – they failed to come up with an appropriate name – so Lismer counted up the people in the group and gave them a name.
- 1922 *Forest Algoma*, Arthur Lismer
- 1927 *October North Shore Lake Superior,* Arthur Lismer

- 1918 **J. E. H. MacDonald** took a painting trip in the fall to Algoma with some of the members of the Group of Seven. *Algoma Waterfall* (1920) is one of MacDonalds most famous paintings. The Group of Seven was officially formed in 1920 and MacDonald was considered its founding father and painted in the area until the 1960's.
- 1918 *The Little Falls Sketch* and *Autumn Algoma*, J.E.H. MacDonald
- 1919 *The Wild River* and *The Little Falls*, J.E.H. MacDonald
- 1919 *Agawa River Algoma,* J.E.H. MacDonald
- 1920 *Falls Montreal River* and *Batchewana Rapid* and *Algoma Waterfall*, J.E.H. MacDonald
- 1922 *Rowanberries Algoma* and *The Solemn Land*, J.E.H. MacDonald
- c.1922 *Mist Fantasy Sand River Algoma*, J.E.H. MacDonald
- 1925-1929 *Agawa Canyon Algoma*, J.E.H. MacDonald
-

24. All entries under the Group of Seven Paintings of the Algoma Region: www.arthistoryarchive.com/arthistory/canadian/AY-Jackson.html.

- **Frederick H. Varley**, No painting that can be ascribed by name to the Algoma Region.
- 1926 While at Rous and Mann, Alfred Joseph Casson worked under the watchful eye of **Franklin Carmichael**. The young artist soon began accompanying Carmichael on weekend sketching trips. **A. J. Casson** would join in 1926. Later members of the Group included Edwin Holgate of Montreal and Lionel LeMoine FitzGerald of Winnipeg. Harris, Jackson, Carmichael and Casson went to the North Shore of Lake Superior and Harris would return there annually. http://www.canadianstudies.ca/NewJapan/groupof7.html
- 1926 *Jackknife Village*, Franklin Carmichael
- 1928 *North Shore Lake Superior, October Lake Superior,* A. J. Casson

Appendix B List of Interviewees

Bow Lake Wind Farm Heritage Impact Assessment, August 3, 2011
Compilation of comments taken from interviews July 23 – 28 2011

Interviews were carried out by Bruce Fountain and John Stewart. With the exception of MNR and the BFN, the focus of interviews was mainly with people involved in the tourism industry. The intent was to seek historical information as well as tourism information to help carry out the Heritage and Tourism Impact Assessment. For the most part, people were cooperative and informative. Only one interviewee was openly hostile. With all interviews there was very little hard information provided. In all cases people were generous in the exchange of information and with the exception of Chef Sayers anxious to share concerns about the threat of overdevelopment. The impression most interviewees have is that Bow Lake is the tip of the iceberg.

Nearly everyone questioned our ability to be objective in the preparation of the report. Our response was that we are completing one of a number of studies to support an application to the Ministry of the Environment for a Renewable Energy Approval under O. Reg. 359/09. The question of confidentiality was raised and for this reason comments attributed to specific persons are not included.

People Interviewed Include:

Acadia National Park, Mount Desert Island, Maine US National Park Service, Department of The Interior: *John Kelly - Director of Planning.*

Algoma Central Railway/Canadian National Railway: *Terry O'Brien and Frank Binder.*

Algoma Kinniwabbi Travel Association: *Carol Caputo, Director.*

Batchewana First Nations Band: *Chief Dean Sayers.*

Cape Breton Highlands National Park: *Helen Robichaux - Superintendent.*

Community Development Corporation of Sault Ste. Marie & Area: *Al Wright.*

Department Of Energy, Government of Nova Scotia: *Evan McDonald - Senior Policy Analyst.*
Lake Superior Provincial Park: *Bob Elliott - Superintendant.*

Jim Waddington, Researcher, Group of Seven expert with his wife Susan Waddington.

Ministry of Natural Resources: *Shella Walsh - Resource Liaison Specialist, Ilisa Langis - District Biologist, Emily Green - Renewable Energy Biologist.*

Northern Ontario Heritage Fund Corporation: *Bruce Strapp - Executive Director.*

Sault Ste. Marie Economic Development Corporation: *Tom Dodds - Chief Executive Officer, Dave Murphy - Executive Director Industrial Development, Ian McMillan - Executive Director Tourism, Donna Helsinger - Chair, Tourism Management Board.*

United States Department of Transportation: *Gary A. Johnson, Byways, TCSP And On Delta Programs Team Leader Federal Highway Administration.*

Voyageur Lodge: *Frank O`Connor.*

Appendix C Group of Seven Investigation Methodology Summary

1 Background

The purpose of this supplement is to provide additional detail on the extent of effort and methodology applied to the investigations undertaken to assess the potential for impact upon Group of Seven painting sites and associated landscapes. As the investigations and methods documented herein are the basis for the conclusions subsequently presented in the HTIA.

The Bow Lake Wind Farm (Phase 1 and Phase 2) has completed a number of investigations to assess the potential for effects upon archaeological, visual, cultural, heritage resources and tourism. The following timeline shows the key components of these works:

June 2010 (Revised 2011): Bow Lake Wind Farm Phase 1 and Bow Lake Wind Farm Ltd. Phase 2 Visual Impact Assessment, M. K. Ince & Associates Ltd.

November 15, 2010: Stage 2 Archaeological Assessment of Bow Lake Wind Farm, Phase 1 and Phase 2, Township of Smilsky & Peever, District of Algoma AMICK Consultants Ltd. These reports were subsequently reviewed and accepted by MTCS.

May 2011: MTCS requested completion of a Cultural Heritage Assessment which includes an assessment of potential effects of the Bow Lake Wind Farm on landscapes and painting locations associated with works by the Group of Seven artists. MTCS notified the proponent that concerns from the public had been raised and that with the concern expressed, there was justification to examine the issue.

October 2011: Heritage and Tourism Impact Assessment Bow Lake Wind Farm (Phase I and Phase II) submitted to MTCS, including discussion of potential visual impacts to Group of Seven landscapes. MTCS comments were subsequently received, including specific editorial and content comments relating to Group of Seven landscape assessment.

December 2011: Heritage and Tourism Impact Assessment Bow Lake Wind Farm (Phase I and Phase II) Revised December 2011 ("HTIA") submitted to MTCS for review. MTCS comments related to the Group of Seven landscapes addressed therein.

2 Group of Seven Landscape Assessment

The assessment of potential effects of the Bow Lake Wind Farm on Group of Seven landscapes included a number of information collection and stakeholder consultation initiatives intended to assist in the identification of Group of Seven painting locations in the project area. These information collection initiatives included:

- Background information review (on-line, social media and print resources);
- Consultation with local (Sault Ste. Marie) organizations with potential information on Group of Seven landscapes in the area;

- Interviews with individuals actively involved with researching and identifying Group of Seven painting sites.
- Development of a methodology to assess impact of the turbines on Group of Seven painting sites. See Figure 28.

It was the intent of the assessment that vistas captured in identified Group of Seven painting locations within the project area would be assessed to determine the potential for turbine visibility using visual modeling software used as part of the visual assessment work for the Bow Lake Wind Farm. An evaluation of the nature of the impact, and recommendations around mitigation measures would then be made.

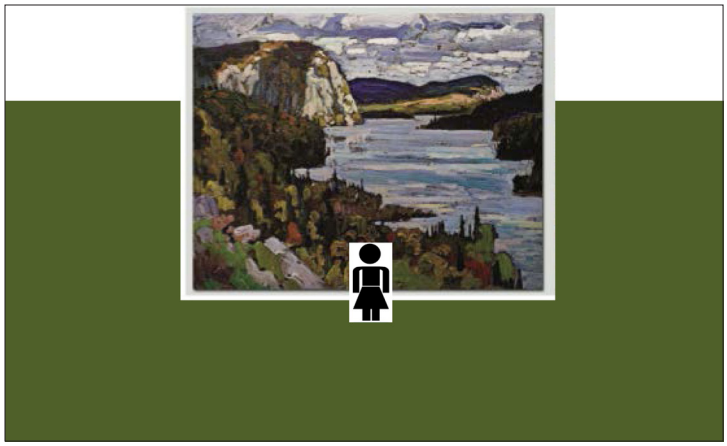
Existing Information Review

The background review was initiated with an internet search focussed on the query "Group of Seven painting sites Algoma" and other similar related groups of phrases.

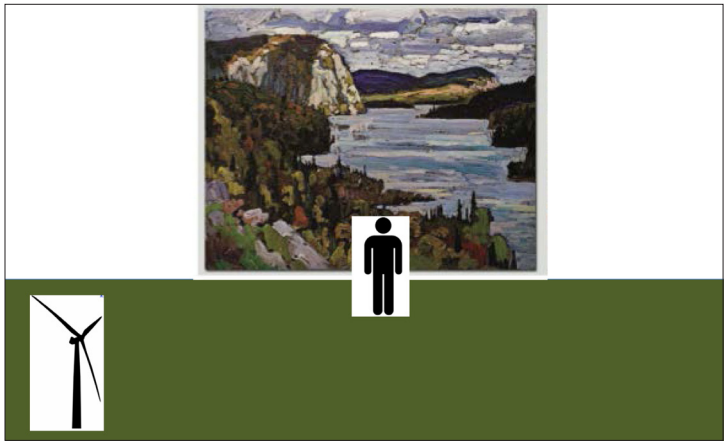
The on-line search yielded the following:

- A video from YouTube featuring Michael Burtch on the subject of the Group of Seven and the Algoma Central Railway
  www.youtube.com/watch?v=3lrxO2 - Part One
  www.youtube.com/watch?v=m8ytpg - Part Two
- A number of related videos were identified concerning the Group of Seven and their Algoma experiences generally. One brief clip described the difficulty in the process of linking paintings to sites.
- A Google Earth link showing reported Group of Seven painting locations and points of interest. The link provided one known painting location in the study area. The location is for a work titled *Rugged Journey, Algoma Canyon* by A.Y. Jackson, which was assessed and found to be unaffected visually by the proposed project http://bbs.keyhole.com/ubb/ubbthreads.php?ubb=showthreaded&Number=493417&site_id=1#import
- Several reports of the ongoing project by Garry and Joanie McGuffins which was endeavouring to identify the locations with the Algoma area from which Group of Seven artists painted their works. The search indicated that the results of the work would be published in a book to be released in 2011.
- A 1966 *Catalogue of Three Exhibitions* at the Art Museum of Toronto provided an interesting listing of paintings titled *Algoma Sketches and Pictures* by J.E.H. MacDonald, Lawren Harris and Frank H. Johnston. Each of the paintings are numbered with the note locating it in the vicinity of Algoma. http://www.archive.org/stream/catalogueofthree00artg#page/n1/mode/2up

Figure 28. Model for Assessing Impact of Turbines on Group of Seven Painting Sites



Level 0
No turbine is visible to a person turning 360 degrees around in proximity to the location where the artist prepared their Working sketches or completed their work.



Level 1
A wind turbine is visible to a person turning 360 degrees around in proximity to the location where the artist prepared working sketches but the turbine is in the rear 180 degree portion to the back of the artist's position.

Level 2
A turbine is visible to a person facing the painting's scene standing in proximity to the location where the artist prepared working sketches or completed work , but outside the scene depicted by the artist.

Level 3
A turbine is visible to a person facing the painting's scene standing in proximity to the view frame where the artist worked and the turbine would be clearly within the artist's frame of work.

Concurrent with the general on-line query, a review of newspaper sources was also conducted. That review identified several potentially relevant articles, including:

- A June 30, 2010 Toronto Star article on Sue and Jim Waddington of Hamilton who have been researching and identifying Group of Seven paintings across Ontario. No Algoma painting locations were identified in the article.
- A November 30, 2010 Sault Star article regarding the works of Michael Burtch and Garry and Joanie McGuffin to identify, via an upcoming book release, locations from which Group of Seven works were painted.
- An August 20, 2011 National Post article, again focussed on the Waddingtons. The article identified their efforts as the subject of a show at the McMichael Gallery in 2010. There were no references to any Algoma locations therein.
- A report prepared by SOAR indicated up to 50 sites were located in the area, only one was identified near Rand with no location provided.
- An August 31, 2011 The Globe and Mail article focussed on the efforts of Michael Burtch and Garry and Joanie McGuffin and their work in identifying Group of Seven locations in Algoma. The article provides an illustration of Harris`painting in Agawa Canyon, a previously identified Group of Seven location known to the public. The location is known to be visually unaffected by the Bow Lake Wind Farm. No information on other sites was provided therein.
- One radio segment was also identified as part of the background review. The segment comes from CBC Radio Fresh Air http://www.cbc.ca/freshair/episodes/2011/09/11/sun-sept-11/ and is an interview with Michael Burtch in advance of The Group of Seven Train event held in September 2011. The radio segment does not provide specific detail on individual locations, but references specifically Agawa Canyon. In the segment Mr. Burtch states that over 150 painting locations have been identified through his work with the McGuffins. It is not stated how many of these are located in the Algoma Area specifically.

Information regarding known painting sites was drawn from these on-line and print resources. Two of the sites; MacDonald's *Solemn Land* and *Montreal River Falls* were provided by MTCS.

Consultation with Key Stakeholders

Garry and Joanie McGuffin/Michael Burtch
The background information review consistently identified Garry and Joanie McGuffin`s ongoing efforts (with Michael Burtch and Linda Savory-Gordon) to identify locations where the Group of Seven artists created their paintings, including those created in the Algoma region. Interviews with key stakeholders (below) also consistently referenced the work of Michael Burtch and the McGuffins. Accordingly, attempts were made on several occasions to speak with the McGuffins/Burtch to determine if any of their identified locations or associated landscapes could potentially be affected by the Bow Lake Wind Farm.

Mr. Burtch, the former Director Curator of the Art Gallery of Algoma was contacted and messages were exchanged with him in an effort to meet to discuss the Group of Seven sites. Unfortunately no meeting could be arranged with Mr. Burtch.

Following multiple attempts at contacting Mr. Burtch and the McGuffins, a single interview was conducted with Joanie McGuffin by John Stewart (Commonwealth Heritage Consultants). Ms. McGuffin confirmed that they are involved in the In Search of the Group of Seven project, which focussed on locating the sites where Group of Seven artists painted their works.

In order to specifically address concerns regarding potential impacts of the Bow Lake Wind Farm Project on Group of Seven locations, Ms. McGuffin was asked to provide information she might have regarding Group of Seven sites in the vicinity of the Bow Lake Wind Farm. Ms. McGuffin stated that she was not prepared to provide that information at this time.

Save Ontario`s Algoma Region ("SOAR")
In parallel with the April 2011 public open house hosted by Bow Lake Wind Farm, SOAR displayed information at the same venue outlining their concerns regarding the proposed wind farm. As part of that presentation, SOAR displayed information related to the Group of Seven. Subsequent to the event, Bow Lake Wind Farm made several requests to SOAR for their information related to the Group of Seven, however it was not provided citing copyright/proprietary concerns.

Interview with Jim and Sue Waddington, January 30, 2012
Jim and Sue Waddington have spent 35 years investigating and identifying approximately 270 sites that can be linked to the Group of Seven's painting sites in Ontario. This pursuit of the sites is a personal passion for the retired McMaster University physics professor Jim Waddington and his wife Susan a retired nurse.

They have taken their interest in their outdoor pursuits of canoeing and camping and applied it to a challenging undertaking of identifying and locating the sites where this iconic group of Canadian landscape painters undertook their original work.

Their interest is not academic. It is rather a personal journey and is their contribution to improving and expanding the information around the Group of Seven. A few words regarding the approach of the Waddington's to their personal project is essential to appreciate the extent and efforts they have undertaken in their work.

- This has been a personal project for the Waddingtons and they have received no external funding to assist in their research and field efforts.
- Another individual who wishes to remain anonymous joins them in their research.
- It is their plan to turn the results of their research over at an appropriate time to the McMichael Gallery.
- A portion of the their research efforts will be the subject of planned book that will be published in the near future by the Art Gallery of Sudbury.
- They have chosen not to provide specific GPS waypoints in their research findings for several reasons:
    - Some of the sites are on private lands with permission required for access.
    - Some of the sites are regarded to be on lands deemed sacred by First Nations.
    - Access to some of the sites can be dangerous for unprepared site visitors.
- General location information is incorporated in their data collection system.
- The information at this time is semi-private and confidential to the research team however the Waddingtons have in past cooperated with other researchers and academics.

The results of the Waddington's work was the basis of the recent show at the McMichael Gallery in the summer of 2010 when 50 of the sites were part of an exhibit *Following the Footsteps of the Group of Seven* which matched the painting with a photograph of the location of the painting.

About 150 of the Group of Seven sites of the 270 locations the Waddington's have identified can be found in the District of Algoma or former District of Algoma areas.

The Waddington's have undertaken research in the area of the proposed Bow Lake Wind Farm particularly north of the Montreal River. In this area (the 30 km Zone of Visual Impact) they have identified the locations of 12 paintings that can be attributed to the Group Of Seven.

Ministry of Tourism, Culture and Sport

MTCS has provided the proponent with a single page from a submission received by MTCS from a member of the public. The submission included scans of Group of Seven paintings alongside photographs from the same location in the present day. Geographic location descriptions were not, however, provided with the visual information. Only two of the painting locations could be identified, both being from the trestle bridge over the Montreal River, located northeast of the proposed Bow Lake Wind Farm.

Academic and Other Experts

Attempts were also made to contact the following knowledgeable individuals:

- Lynda Jessup, Associate Professor, Department of Art, Queen's University
- Dennis Reid, Former Curator for Group of Seven show at the Art Gallery of Ontario
- David Silcox, President Sotheby's Canada, Author of book on the Group of Seven

Ms. Jessup indicated via email that she was not aware of any specific additional sources of information beyond those already consulted. She suggested Dennis Reid may be a good contact. Unfortunately we have been unable to reach Dennis Reid or David Silcox.

Organizational Stakeholders

As part of the Heritage and Tourism Impact Assessment, a number of local organizations with potential interests or information related to heritage resources or potential tourism considerations were contacted. In the course of these discussions, some of these organizations did provide responses related to Group of Seven locations or landscapes. Table C.1 summarizes the input received from these stakeholders related to the Group of Seven.

Table C.1

GROUP OF SEVEN LANDSCAPE INFORMATION FROM ORGANIZATIONAL STAKEHOLDERS			
Organization	**Date**	**Method**	**Reference to Group of Seven Locations**
Northern Ontario Heritage Fund	July 26, 2011	Meeting	No specific painting information given. Suggested we speak with the McGuffins relating to Group of Seven sites.
Tourism Management Board	July 26, 2011	Meeting	No specific information regarding the Group of Seven was provided. Contacted the McGuffins following the meeting suggesting a meeting relating to Group of Seven sites.
Sault Ste. Marie Economic Development Corporation	July 26, 2011	Meeting	Specific discussion on importance of Group of Seven in the city and region. Eventually facilitated a September conversation with Joanie McGuffin and John Stewart.
Voyageur's Lodge Batchawana Bay	July 27, 2011	Meeting	Had no knowledge of painting sites but offered to assist in meeting with McGuffins.
Algoma Central Railway and Canadian National Railway	August 14, 2011	Telephone conference call	Discussed in general terms the past support of the ACR to the Group of Seven and support of a related art exhibition. Discussion indicated that the previous owner of the ACR (Huron Central) disposed of archival materials related to the Group of Seven approximately 10 to 15 years ago during an office consolidation.
Sault Ste. Marie Economic Development Corporation	September 7, 2011	Telephone discussion	Facilitated eventual discussion between John Stewart and Joanie McGuffin.
Chris Tossell local architect former member of the OHT and the SSM Heritage Advisory Committee	September 2011	Interview	He was not aware of any submission to have the area designated as a Cultural Heritage Landscape. He was aware of the research by McGuffins but had not seen any documents.
The Art Gallery of Algoma Jasmina Jovanovic, Director Miranda Bouchard, Curator	January 2012	Email and phone messages	No response to email and phone messages.
The McMichael Canadian Art Collection Victoria Dickenson, Executive Director & CEO	January 2012	Telephone discussion	Was aware of MacDonald's paintings from ACR bridge, but was not aware of current industrial state in the area of these two paintings. Reference was made to the Waddington show in 2010 and the website for the show.
The McMichael Canadian Art Collection Chris Finn, Assistant Curator	January 2012	Telephone discussion	Not aware of any archival or other materials that might point to additional site information. Made reference to a number of source books referring to the time when the Group of Seven painted in Algoma (all of which we were already familiar with, they contain little information on specific sites).
The Art Gallery of Ontario Michelle Jacque, Acting Curator Canadian Art	January 2012	Email correspondence	Michelle suggested potential references in the Waddingtons and the McMichael website.

Evaluation of Potential Visual Impacts to Group of Seven Painting Locations

Known Painting Locations

The process of identifying locations of Group of Seven paintings for which no location is currently known would be onerous, involve months to (more likely) years of effort, and is outside of a reasonable scope for a HTIA for the Bow Lake Wind Farm. The HTIA has therefore considered and assessed potential impacts on all publicly known Group of Seven painting location in the project area. A consolidated summary of known or potential painting locations and the potential visibility of wind turbines from those locations is provided in Table 3.1.

Table 3.1

A Listing of the Group of Seven Paintings located in the 30 Km Visual Impact Zone and Adjacent Areas of Northern Algoma and the Lake Superior North Shore				
Artist	**Painting Title + Date**	**Confirmed Inside the 30 km Zone of Visual Impact**	**Northern Areas of Algoma and Lake Superior North Shore**	**Notes Painting Type Visual Impact**
A. J. Casson	October Lake Superior (1928)		√	***Vista*** **No Impact** - distant from Bow Lake
Lawren Harris	Algoma Hill at mile 81 ACR (1920)		√	**No Impact** - distant from Bow Lake
	Montreal River (1920)	√		***Vista*** **No Impact**
	Montreal River Algoma (1918)	√		***Vista*** **No Impact**
	Above Lake Superior (1922)		√	***Vista*** **No Impact** - distant from Bow Lake
	Afternoon Sun Lake Superior (1926)		√	***Vista*** **No Impact** - distant from Bow Lake
	North Shore Lake Superior (1926)		√	***Vista*** **No Impact**
A.Y. Jackson	Algoma Canyon (ACR Rail Line near Rand) (1919)	√		***Vista*** **No Impact**
	First Snow Algoma (1919-1920)		√	***Vista*** **No Impact** - distant from Bow Lake
	Algoma in November (1935)		√	***Vista*** **No Impact** - distant from Bow Lake
Frank Johnson	Agawa Canyon Territory Algoma (no date)		√	**No Impact**
	Fire Swept Algoma (1920)		√	***Vista*** Location not identified
	The Fire Ranger (1920)		√	***Vista*** Location not identified
Arthur Lismer	Forest Algoma (1922)		√	**No Impact**
	October North Shore Lake Superior (1927)		√	**No Impact**

Artist	Painting Title + Date	Confirmed Inside the 30 km Zone of Visual Impact	Northern Areas of Algoma and Lake Superior North Shore	Notes Painting Type Visual Impact
J.E.H. MacDonald	Agawa Canyon Algoma (1925-1929)	√		**No Impact** – Canyon Floor
	Agawa River Algoma (1919)	√		***Vista*** **No Impact**
	Algoma Waterfall (1920)	√		**No Impact**
	Batchewana Rapid (1920)		√	**No Impact** Just outside the Zone of Visual Impact but recognized as a important painting
	Montreal River Falls (1920)	√		***Vista*** **No Impact** - not in viewscape - extensive electrical generation and Transmission infrastructure have occurred since the time of the painting
	The Little Falls, Sketch (1918)		√	**No Impact**
	Mist Fantasy Sand River Algoma (1922)		√	**No Impact**
	Rowanberries Algoma (1922)		√	**No Impact** Location not identified
	The Little Falls (1919)	√		**No Impact**
	The Solemn Land (1921)	√		***Vista*** **No Impact** Electrical generation dam at the painting site and the subsequent raising of the dam's level (twice) has created a large reservoir altering the water' component in the picture's viewgraph
	The Wild River (1919)	√		**No Impact** Location not identified

[1]Those parts of the Heritage and Tourism Impact Assessment Report dealing with the Group of Seven and other established artists who painted in the area of the proposed Bow Lake Wind Farm were reviewed by Jim Waddington. In summary he concluded:

- The consultants had done a reasonable job in the identification of most of the Group of Seven and others significant paintings within the 30 km Visual Impact zone established for the project.
- All of the large vista paintings by the Group of Seven in the Zone of Visual Impact that he is familiar with are identified.
- In his view none of Group of Seven paintings that is he is familiar with in the general area contain in their viewscape any direct imposition of the proposed wind turbines.
- There remains a possibility that the sites of other paintings or sketches by the Group of Seven and other artists will be identified by others in the future.

1. It is important to note that Jim Waddington's opinions on the potential visibility of the Bow Lake Wind Farm are based on a general understanding of the locations based on publically available information of the proposed wind tower locations, his personal knowledge of the area and without access to software to measure the potential visual impact at the particular painting location.Based on their experience of 35 years of concentrated effort on the subject Jim Waddington cautioned that even after a rigorous process of investigation in an area for painting sites that it is quite possible for additional painting sites to be found in the future. He believes most of the large vista painting locations have been identified, but there is opportunity in the future for the identification of additional sites that incorporate smaller views or in the identification of the sites of the hundreds of early pencil and oil sketches by the Group and Seven and others who painted in northern Algoma.

Jim Waddington is familiar with the efforts of the Burtch/McGuffins and Gordon who have been locating Group of Seven painting sites in the areas. He initiated contact with them and provided some information to the group. He has had no communications with the group since this first and only encounter.

Cultural Landscape/Potential Painting Locations

Recognizing it was not possible to report on more than a few specific sites linked to the Group of Seven due to limited available information of specific painting locations (or limited number of painting sites in the vicinity of the Bow Lake Wind Farm) it was decided a more inclusive approach would be helpful in considering the potential effects of the project on cultural landscape values within the region. In addition to known painting locations, it is general views and scenic vistas in the area, whether recorded through paintings or other means, which could be considered important and could possibly be impacted by development. On that basis, we proceeded with a heritage impact assessment focusing on known Group of Seven painting locations *as well as* known viewing stations and lookouts from which the turbines might be visible. Although some viewpoints are not necessarily related to specific Group of Seven paintings, these views can also hold associative value for the cultural landscape. A number of these viewpoints had been identified in the M.K. Ince *Visual Impact Assessment*, and were therefore further considered in the Heritage Impact Assessment.

The HTIA document describes the results of this broader assessment and specific conclusions on cultural landscape impacts. At each of the potential vantage points the potential Visual Impact was determined taking into consideration topography, (e.g. Agawa Canyon), vegetation screening/obstruction (e.g. ACR line in zone of visual impact) and limitations on accessibility or viewing duration (e.g. Montreal River Trestle Bridge).

Appendix D Tourism Operators Survey

Bow Lake Wind Farm Tourist Operators Survey

SurveyMonkey

1. Please pride the following information so that we may contact for clarification of any of the issues raised here. (Remember, all this information will be CONFIDENTIAL)

	Response Percent	Response Count
Name of the business:	**100.0%**	**14**
Your name:	**100.0%**	**14**
Telephone number:	**100.0%**	**14**
Email:	**100.0%**	**14**
answered question		**14**
skipped question		**1**

2. Where is your business located? Please check as many responses below as might describe the location of your business operation(s)

	Response Percent	Response Count
along the Lake Superior Coast	53.3%	8
along Highway 17 corridor	**66.7%**	**10**
along the ACR/CN corridor	26.7%	4
interior accessible by road	53.3%	8
interior accessible only by boat	0.0%	0
interior accessible only by aircraft	6.7%	1
in the City of Sault Ste. Marie	6.7%	1
Elsewhere (where?)		5
answered question		**15**
skipped question		**0**

3. What type of business are you in? Please check as many as apply to your business operation

	Response Percent	Response Count
accommodation	**86.7%**	**13**
food and beverage	40.0%	6
retail	20.0%	3
transportation/travel services	6.7%	1
outfitter or supplier of recreational goods and services	53.3%	8
Other (what?)		2
answered question		**15**
skipped question		**0**

4. Who owns the business?

	Response Percent	Response Count
self or family	**92.9%**	**13**
with other partners	0.0%	0
non local corporation	7.1%	1
Other: Who?		1
answered question		**14**
skipped question		**1**

5. Where do you or the business owners live (permanent residence)?

		Response Percent	Response Count
on-site		**66.7%**	**10**
elsewhere in Algoma Region		20.0%	3
elsewhere in Ontario		6.7%	1
elsewhere in Canada		0.0%	0
elsewhere		6.7%	1
		answered question	**15**
		skipped question	**0**

6. Operating season: Is your business:

		Response Percent	Response Count
a seasonal operation		35.7%	5
year-round		**64.3%**	**9**
		Other (what?)	2
		answered question	**14**
		skipped question	**1**

7. How many years has the business been operating?

	Response Percent	Response Count
less than 5 years	6.7%	1
6 to 10 years	6.7%	1
more than 10 years	**86.7%**	**13**
	answered question	**15**
	skipped question	**0**

8. Number of full time employees during your peak season:

	Response Percent	Response Count
1 or 2	35.7%	5
3 to 5	**42.9%**	**6**
6 to 10	0.0%	0
11 to 20	0.0%	0
more than 21	21.4%	3
	answered question	**14**
	skipped question	**1**

9. Number of part time employees during your peak season:

	Response Percent	Response Count
1 or 2	**40.0%**	**6**
3 to 5	33.3%	5
6 to 10	6.7%	1
11 to 20	13.3%	2
more than 21	6.7%	1
	answered question	**15**
	skipped question	**0**

10. How many customers or guests do you service annually?

	Response Percent	Response Count
fewer than 100	6.7%	1
100 – 500	20.0%	3
500 -1,000	13.3%	2
1,000 – 5,000	13.3%	2
5,000 – 10,000	**26.7%**	**4**
more than 10,000	20.0%	3
	answered question	**15**
	skipped question	**0**

11. What are your annual gross revenues? (Remember, all this information is CONFIDENTIAL)

	Response Percent	Response Count
$50,000 or less	14.3%	2
$50,000 - $100,000	21.4%	3
$100,000 - $250,000	**28.6%**	**4**
$250,000 - $500,000	0.0%	0
$500,000 - $1 million	14.3%	2
over $1 million	21.4%	3
	answered question	**14**
	skipped question	**1**

12. Over the last three years, what have the business trends been like in your operation?

	Response Percent	Response Count
business has been more-or less stable	21.4%	3
business has fluctuated up and down	**28.6%**	**4**
business is going steadily down by more than 10% compared to 3 years ago	**28.6%**	**4**
business has grown by more than 10% compared to 3 years ago	21.4%	3
	Other (what?)	2
	answered question	**14**
	skipped question	**1**

13. What percentage of your clientele are repeat customers?

	Response Percent	Response Count
fewer than 25%	14.3%	2
25% to 50%	28.6%	4
50% to 75%	**42.9%**	**6**
75% to 90%	14.3%	2
90% to 100%	0.0%	0
	answered question	**14**
	skipped question	**1**

14. How long does the guest experience usually last in your business?

	Response Percent	Response Count
less than a day	0.0%	0
overnight	**53.3%**	**8**
multiple nights	46.7%	7
	answered question	**15**
	skipped question	**0**

15. What are the typical reasons that your guests have for coming to the area? please check as many as apply

		Response Percent	Response Count
scenic beauty of the area		**100.0%**	**15**
rest and relaxation		80.0%	12
historic and heritage aspects of the region		40.0%	6
hunting and fishing		66.7%	10
hiking/nature		73.3%	11
canoe or kayaking		80.0%	12
visiting friends or relatives		60.0%	9
		Other (what?)	6
		answered question	**15**
		skipped question	**0**

16. This survey is contributing to a Heritage Impact Assessment of the proposed project. To assist the project could you please rank the following heritage related assets in your region of Algoma in your view in terms of their attractiveness to tourists.

	HIGH – a primary reason why tourists come to the area	MEDIUM – a contributing factor to why tourist come to the area	LOW – not a significant draw for most tourists coming to the area	Response Count
Lake Superior and its coastline	**80.0% (12)**	13.3% (2)	6.7% (1)	15
The physical vistas of land, water and vegetation, autumn colour, etc.	**80.0% (12)**	13.3% (2)	6.7% (1)	15
The Algoma Central Railway (ACR) / CN corridor	33.3% (5)	**46.7% (7)**	20.0% (3)	15
The Hwy. 17 corridor	**73.3% (11)**	20.0% (3)	6.7% (1)	15
This was an area where the Group of Seven and other landscape artists painted	20.0% (3)	**40.0% (6)**	**40.0% (6)**	15
Agawa pictographs	20.0% (3)	**66.7% (10)**	13.3% (2)	15
Sault Ste. Marie Locks	6.7% (1)	**60.0% (9)**	33.3% (5)	15
			answered question	**15**
			skipped question	**0**

17. Are there other heritage-related assets that are major reasons why tourists and visitors come to the region?

	Response Count
	8
answered question	**8**
skipped question	**7**

18. First, how familiar would you say you are with the Bow Lake Wind Farm Proposal at Montreal River?

	Response Percent	Response Count
very familiar	21.4%	3
somewhat familiar	**35.7%**	**5**
I've hear of it but not much more	21.4%	3
not at all familiar	14.3%	2
can't say / don't know	7.1%	1
answered question		**14**
skipped question		**1**

19. Please indicate the extent to which you think each of the following aspects of the presence and operation of the Bow Lake Wind Farm specifically may impact on your tourism business:

	Will have a major negative effect	Will have some negative effect	Will have no impact	Will have some positive impact	Will have a major positive impact	No idea	Response Count
Visual impact of wind towers	**40.0% (6)**	26.7% (4)	26.7% (4)	6.7% (1)	0.0% (0)	0.0% (0)	15
Noise impact of wind towers	13.3% (2)	**46.7% (7)**	40.0% (6)	0.0% (0)	0.0% (0)	0.0% (0)	15
Interruption of scenic vistas in the area	**46.7% (7)**	33.3% (5)	20.0% (3)	0.0% (0)	0.0% (0)	0.0% (0)	15
Change in sense of “wilderness experience”	**40.0% (6)**	**40.0% (6)**	20.0% (3)	0.0% (0)	0.0% (0)	0.0% (0)	15
Presence of warning lights at night	**46.7% (7)**	13.3% (2)	26.7% (4)	6.7% (1)	0.0% (0)	6.7% (1)	15
Access roads into wind towers for construction and maintenance	**33.3% (5)**	20.0% (3)	26.7% (4)	20.0% (3)	0.0% (0)	0.0% (0)	15
Impact upon wildlife (migration patterns, habitat areas, etc.)	33.3% (5)	**40.0% (6)**	20.0% (3)	0.0% (0)	0.0% (0)	6.7% (1)	15
Impact upon human history and heritage of the area	**33.3% (5)**	26.7% (4)	26.7% (4)	6.7% (1)	0.0% (0)	6.7% (1)	15
Perception that the Region is contributing to environmental stewardship through green technology	6.7% (1)	6.7% (1)	**33.3% (5)**	26.7% (4)	6.7% (1)	20.0% (3)	15
Perception of job creation and progress through this technology	6.7% (1)	0.0% (0)	**33.3% (5)**	20.0% (3)	26.7% (4)	13.3% (2)	15
Perception of your customers on the quality of the experience you are able to offer to them	26.7% (4)	26.7% (4)	**40.0% (6)**	0.0% (0)	6.7% (1)	0.0% (0)	15
						answered question	**15**
						skipped question	**0**

20. Are there other ways in which the Bow Lake Wind Farms may affect your business, either positively or negatively?

	Response Count
	11
answered question	**11**
skipped question	**4**

21. Should the proposed Bow River Wind Farm proceed, what is your best estimate of the overall impact it will have upon your business?

	Response Percent	Response Count
no impact	**60.0%**	**9**
business will go down	20.0%	3
business will increase	0.0%	0
no idea	20.0%	3
Other (what?)		2
answered question		**15**
skipped question		**0**

22. If, in the question above, you indicated that your business volume might change, by what percentage (%) might it go up or down?

	Response Average	Response Total	Response Count
Up:	10.00	10	1
Down:	**20.50**	**82**	4
		answered question	**4**
		skipped question	**11**

23. Given all of the foregoing, and as a business operator, which statement (if any) best summarizes your attitude to the proposed wind fame operation at Bow Lake?

	Response Percent	Response Count
I am very concerned and fear it will have a detrimental effect on my business	20.0%	3
I am somewhat concerned that it will have a detrimental effect on my business	26.7%	4
I think it will have no impact and does not concern me	**33.3%**	**5**
I think it could be good for overall business in the area	20.0%	3
	Other (what?)	4
	answered question	**15**
	skipped question	**0**

24. Are you aware of the plans for additional wind farms in this general area of Lake Superior/Algoma?

	Response Percent	Response Count
yes – very knowledgeable	14.3%	2
somewhat knowledgeable	**42.9%**	**6**
not very knowledgeable	14.3%	2
know nothing about additional wind farm operations	28.6%	4
Other (what?)		0
answered question		**14**
skipped question		**1**

25. If the Bow Lake Wind Farm were the only proposal to receive Ontario Government approval for construction between the Prince Wind Farm (near Sault Ste. Marie) and Montreal River would you support the project?

	Response Percent	Response Count
yes	**42.9%**	**6**
no	28.6%	4
not sure – other assessments would need to be undertaken	28.6%	4
answered question		**14**
skipped question		**1**

26. Do you have any other comments you would like to make on this issue?

	Response Count
	11
answered question	**11**
skipped question	**4**

Page 2, Q2. Where is your business located? Please check as many responses below as might describe the location of your business operation(s)		
1	Wawa	Aug 18, 2011 12:06 PM
2	area of mile 67 road and mckay dam road	Aug 17, 2011 5:32 PM
3	Goulais Valley	Aug 16, 2011 7:49 PM
4	North of Wawa, On	Aug 15, 2011 4:14 PM
5	hwy 101, 40 km east of Wawa	Aug 11, 2011 2:49 PM

Page 2, Q3. What type of business are you in? Please check as many as apply to your business operation		
1	rock climbing, ice climbing, snowmachine guiding	Aug 17, 2011 5:32 PM
2	fishing, hunting, boat & motor rentals	Aug 11, 2011 2:49 PM

Page 2, Q4. Who owns the business?		
1	Algoma Central Properties Inc.	Aug 23, 2011 10:25 AM

Page 2, Q4. Who owns the business?

Page 2, Q6. Operating season: Is your business:

1	10 months of the year - closed Nov/Dec.	Aug 12, 2011 7:14 AM
2	mid-May to mid-October	Aug 11, 2011 2:49 PM

Page 2, Q12. Over the last three years, what have the business trends been like in your operation?

1	depends on snow but it has been good	Aug 17, 2011 5:32 PM
2	just opened	Aug 11, 2011 2:14 PM

Page 2, Q15. What are the typical reasons that your guests have for coming to the area? please check as many as apply

1	Business	Aug 23, 2011 10:25 AM
2	Driving by & overnighting	Aug 18, 2011 12:06 PM
3	ice climbing rock climbing, snowmachining past this area	Aug 17, 2011 5:32 PM
4	back country snowshoeing and skiing, birdwatching,	Aug 16, 2011 7:49 PM
5	Snowmobiling and skiing	Aug 11, 2011 5:24 PM
6	business, work, guided tours atv & sled	Aug 11, 2011 2:00 PM

Page 2, Q17. Are there other heritage-related assets that are major reasons why tourists and visitors come to the region?

1	Business and Tournaments (city-wide events i.e. Essar hosted events)	Aug 23, 2011 10:25 AM
2	Other assets include wildlife viewing, long wilderness viewscapes, wilderness values such as large areas of unroaded forested areas, lack of noise and visual industrial sites, astronomical viewing, and dark night skies ... as well as the infrastructure of small tourism contacts and services offered in a small area of the region. In one day a lot of activities can be engaged in	Aug 16, 2011 7:49 PM
3	To see the Wwa Goose	Aug 16, 2011 3:36 PM
4	Scenic Drive of Lake Superior, wildlife viewing, fishing in local lakes	Aug 15, 2011 4:14 PM

Page 2, Q17. Are there other heritage-related assets that are major reasons why tourists and visitors come to the region?		
5	blue berrys, and fishing	Aug 12, 2011 5:41 PM
6	if i'm correct in 1944 a 1550 sq klm park was put aside to preserve the wild natural beauty of this very area	Aug 12, 2011 12:18 PM
7	Miles of trails and the highest mountain in a 500K circle.	Aug 11, 2011 5:24 PM
8	old mines, atv riding, canoeing, hiking, photography, picking berries, bear hunting,	Aug 11, 2011 2:00 PM

Page 3, Q20. Are there other ways in which the Bow Lake Wind Farms may affect your business, either positively or negatively?		
1	NA	Aug 23, 2011 10:27 AM
2	If the guests perception of wind turbines is negative, then it'll be a negative effect. If the guests perception of wind turbines is positive, it's a positive effect. It's all in perception....	Aug 18, 2011 12:12 PM
3	we access the ice climbs at montreal river by using this corridor for snowmachining. if the roads are blocked we cant access the climbs	Aug 17, 2011 5:35 PM
4	It will bring business in to the resort from workers but only in the short term	Aug 17, 2011 10:07 AM
5	Most of the visitors to this region that are here for the supposed wilderness attributes will be disturbed by the lights and access roads of the wind farm, both physically and in their perception of this region as "accessible wilderness". There is also the negative impact that the roads, clearcutting and turbine construction and building will have on various species, especially many migratory forest-nesting birds who will nest in areas where there is not a forest canopy. Also the turbines are dangerous to bats and raptor birds. Other species that will suffer detrimental effects from this industrial site include species already at risk such as Blandings Turtle. Increased roads means increased human presence which is detrimental to any present wildlife population. This is detrimental to my business because wildlife, and remote areas contribute to the grandeur and lure of this region. Our back-country adventures are dependent on getting away from any sign of present human activity.	Aug 16, 2011 8:00 PM
6	No	Aug 16, 2011 3:43 PM
7	I have no idea how at this time other than reducing public travel of tourist	Aug 15, 2011 4:18 PM
8	at this point and development is good developement, the suggest area is a tourism dead zone, other than a couple of naturalist tying up progress with their personal agendas	Aug 12, 2011 5:44 PM
9	aug 14 to 17 i am informed we are to be part of the new fly fisher t.v program promoting this algoma area. our web site does the same. for what, so we can see wind farms and no access roads.	Aug 12, 2011 1:20 PM
10	We are not very close to the area.	Aug 11, 2011 5:27 PM

Page 3, Q20. Are there other ways in which the Bow Lake Wind Farms may affect your business, either positively or negatively?		
11	should not be near residents housing, need to be kept in good repair	Aug 11, 2011 2:05 PM

Page 3, Q21. Should the proposed Bow River Wind Farm proceed, what is your best estimate of the overall impact it will have upon your business?		
1	depends on road access	Aug 17, 2011 5:35 PM
2	Guests will still come but they will not be happy with the impact on the wilderness	Aug 17, 2011 10:07 AM

Page 3, Q22. If, in the question above, you indicated that your business volume might change, by what percentage (%) might it go up or down?		
	Up:	
4	10	Aug 11, 2011 2:05 PM
	Down:	
1	12	Aug 15, 2011 4:18 PM
2	50	Aug 12, 2011 1:20 PM
3	10	Aug 12, 2011 7:18 AM
4	10	Aug 11, 2011 2:05 PM

Page 3, Q23. Given all of the foregoing, and as a business operator, which statement (if any) best summarizes your attitude to the proposed wind fame operation at Bow Lake?		
1	I love green energy technology and approve of wind farms. My guests will have different opinions, but they will still drive the trans canada to get where they are going.	Aug 18, 2011 12:12 PM
2	we might have to take a 60 kilomter trail bypass	Aug 17, 2011 5:35 PM
3	there are plenty of other areas to put these windmills away from the Coastline of Lake Superior	Aug 15, 2011 4:18 PM
4	vivala busienss development	Aug 12, 2011 5:44 PM

Page 4, Q26. Do you have any other comments you would like to make on this issue?		
1	I'm all for clean energy.	Aug 18, 2011 12:14 PM

Page 4, Q26. Do you have any other comments you would like to make on this issue?		
2	the company did not research my business and my use of this area for guiding rock and ice climbing	Aug 17, 2011 5:36 PM
3	I am not happy with the way the different companies are trying to sneak these projects by without proper environmental assessments or by building a bunch of "small wind farms".	Aug 17, 2011 10:12 AM
4	Yes. I am concerned that these turbine windfarms are already using obsolete technology, and that they are going ahead without adequate environmental safeguards as they supersede the Endangered Species Act and other assessments because they are fast tracked as "environmentally green". I see no benefit to the region for hosting them - no decrease in cost of local power, no owners' that are local, all off-shore ownership. The heritage coastline of Superior must be protected for future generations, and for the intrinsic values it still has which are not supported by the viewscapes of large scale industrial wind sites. i do not disgree with the need for industrial wind turbines - but think they should be erected where landscape is already compromised, and closer to source of use.	Aug 16, 2011 8:08 PM
5	No	Aug 16, 2011 3:43 PM
6	If this project is "supposed to be Green' than how can you propose something that will totally destroy the senic value of what Mother Nature has created along Lake Superior.	Aug 15, 2011 4:20 PM
7	I have not received any information on the "view line" visibility of towers, nor lights, from the water at various distances from shore, although I specifically requested this at first information session at Goulais River several years ago (in writing). With topographical map software, I believe this could have been quite easily provided. My opinion on this matter may be altered if this information was forthcoming.	Aug 12, 2011 8:56 PM
8	get on with this, people from southern onatrio are the ones bucking it and do not contribute to the costs in the area or pay taxes, I am at $20000 in property taxes, over 10% of my annual revenue. the people complaining live in t.o. and contribute nothing to our economy.	Aug 12, 2011 5:50 PM
9	i do not see wind farms as environment friendly. that they indeed work to any advantage, weighed to what they will destroy.	Aug 12, 2011 1:21 PM
10	This is the Heritage Coastline. It is one of the most spectacular and majestic coastlines in Canada. It should be left in that kind of state. Industry should find another location, closer to the users of the power, to build such developments. The visibility blight from highway 17 and from the water should be enough to deter the Provinicial Gov't from proceeding with wind farms on Superior's Coast. The other issue is the mythology that these things are "Green Energy". The Gov't should inform the public about just how efficient these mammoth beasts are. Time to dispel the myths and talk truths. The consultation meetings that the Bow Lake people held about the proposals were a farce. No real town hall meeting to let us publically air our questions because they were too afraid to face the public. The Ontario gov't should be made aware that the general perception in those rooms during those two meeting nights was that it was aburd, a waste of time, Has anyone, not associated with Bow Lake, read the responses to their questionnaires?	Aug 12, 2011 7:29 AM

Page 4, Q26. Do you have any other comments you would like to make on this issue?		
11	It is about time that we move towards green energy. It would be nice if we could profit from it. Cost of power going down eventually....	Aug 11, 2011 5:28 PM

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Chris Finn, Assistant Curator, The McMichael Canadian Art Collection

Chris Tossell, Architect, former member of the OHT and the SSM Heritage Advisory Committee

Evan McDonald, Senior Policy Analyst, Department Of Energy, Government of Nova Scotia

Gary A. Johnson, Byways, TCSP And On Delta Programs Team Leader Federal Highway Administration United States Department of Transportation

Helen Robichaux, Superintendent Cape Breton Highlands National Park

Jim Waddington, Researcher, Group of Seven expert with his wife Susan Waddington.

Joanie McGuffins, Co Author of *In Search of the Group of Seven*, to be published.

John Kelly, Director of Planning, Acadia National Park, Mount Desert Island, Maine US National Park Service, Department Of The Interior

Lynda Jessup, Associate Professor, Department of Art, Queen's University

Michelle Jacque, Acting Curator Canadian Art, The Art Gallery of Ontario

Terry O'Brien And Frank Binder, Algoma Central Railway/Canadian National Railway

Victoria Dickenson, Executive Director & CEO, The McMichael Canadian Art Collection

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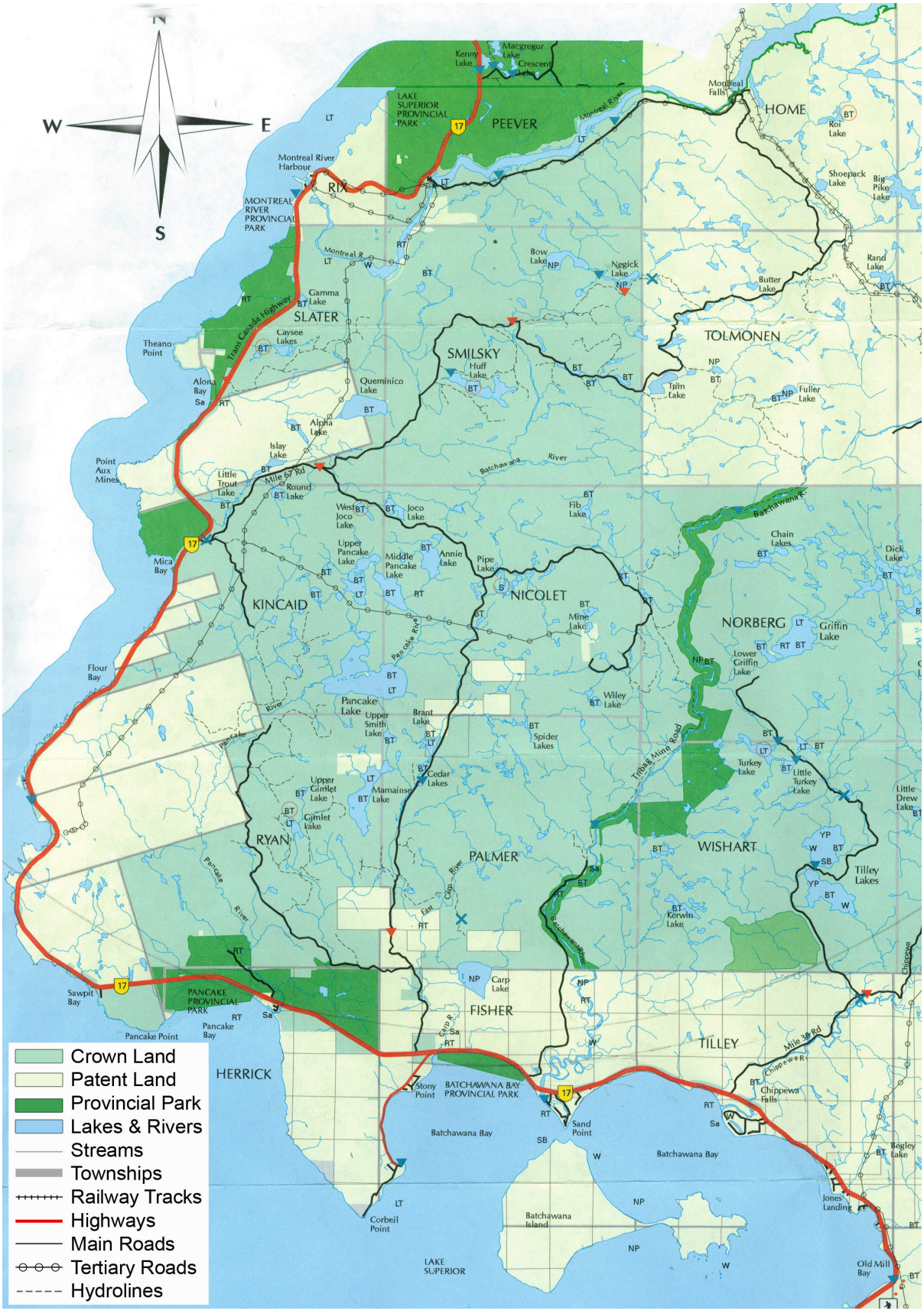
Appendix F Sault Ste. Marie District Townships Map



APPENDIX G LETTERS FROM MINISTRY OF TOURISM AND CULTURE AND ONTARIO HERITAGE TRUST

Ministry of Tourism and Culture

Culture Services Unit
Programs and Services Branch
400 University Avenue, 4th floor
Toronto ON M7A 2R9
Tel. 416 314-7265
Fax: 416 314-7461

Ministère du Tourisme et de la Culture

Unité des services culturels
Direction des programmes et des services
4e étage, 400 avenue University
Toronto ON M7A 2R9
Tél. : 416 314-7265
Téléc. : 416 314-7461

Ontario

June 29, 2010

David Barrie
M. K. Ince and Associates Ltd.
2412 Columbia Street
Vancouver, British Columbia, Canada
V5Y 3E6

Dear Mr. Barrie:

Project : Bow Lake Wind Farm
Location : District of Algoma, 80 kilometres North of Sault Ste Marie and 8 km East of Montreal River Harbour.

The Ministry of Tourism and Culture has received your request, as per the Renewable Energy Approvals process of Ontario Regulation 359/09 under the *Environmental Protection Act*, to determine whether the above-noted renewable energy project affects cultural heritage resources.

Section 19 of O.Reg 359/09 requires proponents to contact the Ministry to determine if a renewable energy project location is:

- designated as a property of cultural heritage value or interest of provincial significance (under section 34.5 of the *Ontario Heritage Act*)
- the subject of a notice of intention to designated as a property of cultural heritage value or interest of provincial significance (under section 34.6 of the *Ontario Heritage Act*)
- designated as a historic site (under Regulation 880 of the *Ontario Heritage Act*)

As a result of this review, the Ministry notes that these projects are not protected properties as stipulated in section 19 of O. Reg 359/09.

Please note that Aboriginal and/or municipal interests may exist with respect to this undertaking. The Ministry of Tourism and Culture recommends contacting these and other key parties to ensure that all interests are addressed.

If you have any questions, please do not hesitate to contact the undersigned.

Best regards,

Alejandro Cifuentes
Heritage Planner
(416) 314-7159
alejandro.cifuentes@ontario.ca

ONTARIO HERITAGE TRUST
An agency of the Government of Ontario

10 Adelaide Street East
Toronto, Ontario M5C 1J3

Telephone: 416-325-5000
Fax : 416-325-5071
www.heritagetrust.on.ca

VIA MAIL AND EMAIL

January 11, 2012

John Stewart
Commonwealth Historic Resource Management Ltd.
53 Herriot Street, Suite 300
Perth, ON K7H 1T5

Dear Mr. Stewart:

Re: Bow Lake Wind Farm - Phases 1 and 2, Twps. of Smilsky and Peever, Distr. of Algoma

Thank you for your email from November 16, 2011, with the attached Notices of Proposal for the Bow Lake Wind Farm, Phases 1 and 2 Renewable Energy Projects, a Class 4 wind facility to be located within the study area shown on the site map.

As the Province's lead heritage agency, the Ontario Heritage Trust is mandated to preserve, protect and promote the conservation of the Province's rich natural and cultural heritage. In carrying out the above mandate, the Trust protects many significant cultural heritage and natural heritage sites across Ontario through ownership and conservation easements. The Trust also promotes appropriate measures to protect heritage resources which may be affected by large-scale undertakings.

We have reviewed the study area site map you provided and advise that, as per O. Reg. 359/09 s. 19, the Trust does not protect any property through a conservation easement on lands that are within or abutting the study area for this renewal energy undertaking. However, we encourage you to contact the Ministry of Tourism, Culture and Sport, if you have not already done so, to determine if there are any other cultural heritage interests noted in s. 19 which may be affected by this project.

Should you have any questions, please contact me at 416 325-5019.

Yours truly,

Sean Fraser
Manager, Acquisitions and Conservation Services

Copy: Chris Schiller, Manager, Culture Services Unit, Ontario Ministry of Tourism, Culture and Sport

Appendix H Ontario Heritage Act Regulation 9/06

Ontario Heritage Act
ONTARIO REGULATION 9/06
CRITERIA FOR DETERMINING CULTURAL HERITAGE VALUE OR INTEREST

Consolidation Period: From January 25, 2006 to the e-Laws currency date.

No amendments.

This is the English version of a bilingual regulation.

Criteria

1. (1) The criteria set out in subsection (2) are prescribed for the purposes of clause 29 (1) (a) of the Act. O. Reg. 9/06, s. 1 (1).

(2) A property may be designated under section 29 of the Act if it meets one or more of the following criteria for determining whether it is of cultural heritage value or interest:

1. The property has design value or physical value because it,
    - i. is a rare, unique, representative or early example of a style, type, expression, material or construction method,
    - ii. displays a high degree of craftsmanship or artistic merit, or
    - iii. demonstrates a high degree of technical or scientific achievement.
2. The property has historical value or associative value because it,
    - i. has direct associations with a theme, event, belief, person, activity, organization or institution that is significant to a community,
    - ii. yields, or has the potential to yield, information that contributes to an understanding of a community or culture, or
    - iii. demonstrates or reflects the work or ideas of an architect, artist, builder, designer or theorist who is significant to a community.
3. The property has contextual value because it,
    - i. is important in defining, maintaining or supporting the character of an area,
    - ii. is physically, functionally, visually or historically linked to its surroundings, or
    - iii. is a landmark. O. Reg. 9/06, s. 1 (2).

Transition

2. This Regulation does not apply in respect of a property if notice of intention to designate it was given under subsection 29 (1.1) of the Act on or before January 24, 2006. O. Reg. 9/06, s. 2.

Appendix I Great Scenic Drives

Review of Coastal and River Scenic Drive

The coastal portions of Highway 17 drive from Sault Ste. Marie to Thunder Bay are cited as among the most scenic coastal or water related drives in world by various travel sources sourced on the internet. Comparisons have been made of this portion of the TransCanada Highway as being the same league as California's legendary Highway 1 that runs along much of the state's Pacific coastline (1,050 km).

The 700 km from Sault Ste. Marie to Thunder Bay features about 350 km or 50% of the drive that is near or in close visual proximity to the coastline of Lake Superior.

The tourism potential of the scenic water and unique topography of the eastern and northern shore of Lake Superior led to the decision by the Province of Ontario in the 1950s to extend the existing road from Montreal River Harbour to Thunder Bay and to select the new highway as Ontario's contribution to the TransCanada Highway route. The existing Highway 11, across the largely flat and featureless landscape further to the north, was considered. However, the more scenic and more expensive to build Highway 17 was ultimately selected because of the tourism potential that they saw in the region.

Shortly after the road opened, Ontario and three states that share the United States side of Lake Superior (Michigan, Wisconsin and Minnesota) launched the idea of the Lake Superior Circle Route to inspire the attraction of visitors to the new road linkage. The concept of the Lake Superior Circle Route was more of a tourism marketing idea than a commitment to taking steps to enhance and protect the newly available tourism product.

Internet searches around such phrases as "great scenic drives in Canada or the United States" leads to a limited number of reference to the Canadian side of Lake Superior and more references to other highways often with fewer visual features. It seems that no one has assumed branding responsibility of what is represented by the scenic drive from Sault Ste. Marie to Thunder Bay.

From these lists of "great scenic drives" we identified some of the best known coastal or water related drives in North America and considered what steps, if any, were being undertaken to protect the natural visual features and to enhance the visitor experience.

The following chart is provided in support of the tourism recommendation to undertake steps to formalize Highway 17 as a "Scenic Drive". From this sampling of ten well recognized coastal or water related scenic drives in North America only British Columbia and Ontario governments (excluding the Niagara Parks Commission) are lacking in not having programs or requirements relating to visual standards for their scenic drives. The states and the U.S. government have been pro-active in this area in linking protection and designation programs for scenic drives with economic benefits.

Sample List of "Best Scenic Coastal or Water Related Drives" in North America and the Application of Visual Standards			
Scenic Drive	**Description and Lead Agency**	**Application of Visual Controls**	**Notes**
Lake Superior Circle Route and The Voyageur's Route	International Around Lake Superior and the Highway 17 from Sault Ste. Marie to Thunder Bay – 700 km. (Ontario Ministry of Transport)	None in Ontario portion – only in Lake Superior Provincial Park section about 100 km. Yes in Minnesota. Yes in Michigan (Copper Country Trail)	National Scenic Byways – see next
Highway 61, Minnesota	Lake Superior shore from Duluth to near Grand Portage. (Minnesota Department of Transportation)	Yes	All American Road National Scenic Byway
Cabot Trail, Nova Scotia	Circle of Cape Breton including portions inside Cape Breton Highland Provincial Park – 300 km. (Departments of Transportation with Tourism)	Yes for sections inside and adjacent to the Parks Canada lands	Small-scale commercial wind production in private lands portion of the Cabot Trail is beginning to appear. Identified as a present policy gap
Fundy Coastal Drive, New Brunswick	St. Stephen to Sackville – 390 km. (Department of Highways)	Yes	
St. Lawrence Route, Quebec	Highway 363 Baie Saint Paul to La Malbaien - 50 km (Departments of Transportation and Tourism)	Yes	Quebec gives much attention to various scenic drives
Niagara Parkway, Ontario	Ontario side of the Niagara River 50 km. (Niagara Parks Commission)	Yes	Very strict visual controls
Highway 60, Ontario	Huntsville to Madawaska – 126 km. (Ministry of Transportation)	No – only in those portions of the highway passing through Algonquin Park about 50% of the route	
Sea to Sky Highway, British Columbia	Vancouver to Lillooet – 150 km (Department of Transportation)	No	Commercial wind generators are just starting to appear and the province is becoming concerned
Highway 1, California	Portions of Highway 1 are protected including the highly visual Big Sur area – 1000 km. (Department of Transportation)	Yes	All American Road National Scenic Byway
Acadia Byway, Maine	Road to and around Acadia National Park – 65 km. (Maine Transportation and National Parks Service)	Yes	All American Road National Scenic Byway

Responses to Protect Scenic Qualities

The United States has had a national program in conjunction with the states recognizing highways with unique features. The U.S. Congress established the national scenic byways program in 1991 to protect scenic but often less traveled roads and to promote tourism and economic development. The program is administered by the US Department of Transportation. There are presently 151 national scenic byways in the United States. They are selected on the basis of the following attributes:

- Scenic quality
- Natural quality
- Historic quality
- Cultural quality
- Archaeological quality
- Recreational quality

Candidate roads for the national scene by way program are nominated by individual states. To qualify, the road must be supported by the corridor management plan that involves community involvement and "should provide for the conservation and enhancement of the byways intrinsic qualities as well as promotion of tourism and economic development". Included in the plan must be but not limited to the following requirements:

- A map identifying corridor boundaries and the location of intrinsic qualities in different land uses within the corridor.
- A strategy for maintaining and enhancing these intrinsic qualities.
- A strategy describing how existing development might be enhanced and new development might be accommodated while still preserving the intrinsic qualities of the corridor.
- A general review of the roads safety record in order to identify any correctable faults in high-way design, maintenance or operation.
- Develop a plan that demonstrates how the state will ensure the number and placement of signs are supportive of the visitor experience.
- A narrative describing how the national scenic byways program will be positioned for marketing.

It should be noted that in both categories of national scenic byways that there is a requirement for a significant setback of billboards. Roads that qualify under the program received a priority for access to additional federal funding to assist in their maintenance and operation.

The national scenic byways program has two levels of recognition.

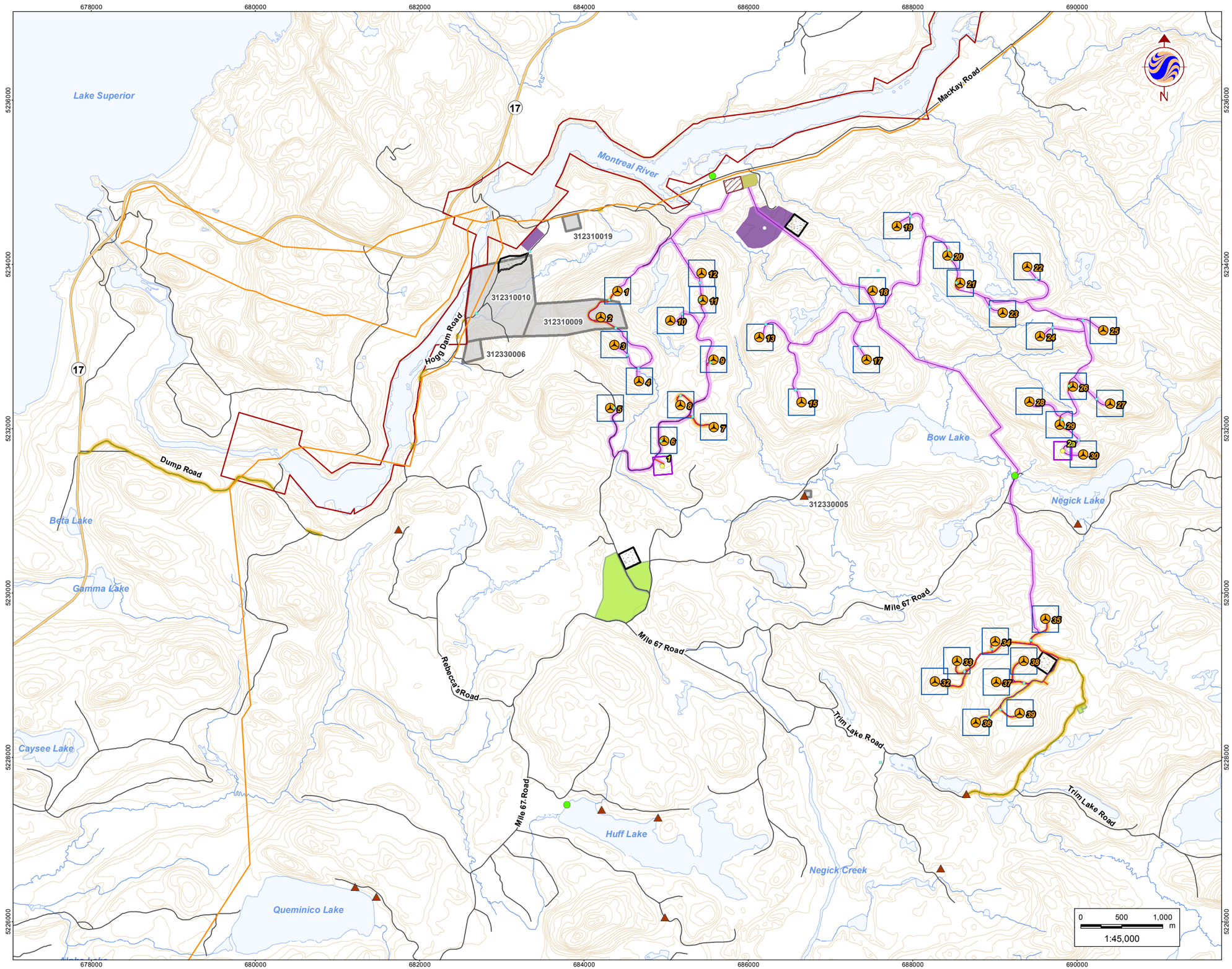
These are:

1) The National Scenic Byway with the qualities identified above.

2) Those American Roads that are deemed to be the most scenic roads in the program. These roads must have features that do not exist elsewhere in the United States and are scenic enough to be tourist destinations unto themselves – there are 31 All American Roads or around 20% of the National Scenic Byway designated roads. This is the "gold seal" of identifying the best scenic drives in the United States of America.

Appendix C

Land Title Search Results and Agreements



W:\active\60960734\drawing\MXD\APC\CrownLandInterest_Report\160960771_CrownLandTenure_20130130.mxd
Revised: 2013-01-30 By: pworsell

Legend

Project Components

- Turbine Location
- Gate Location
- Meteorological Tower
- Access Road (New)
- Access Road (Upgrade)
- Overhead/Underground Collector Line
- Access Road Corridor (60m Easement)
- Collector Line Corridor (60m Easement)
- Construction Compound
- Construction Compound & Welfare Building
- Construction Compound & Transformer Station
- Turbine Lease Area
- Met Tower Lease/Land Use Permit
- Operations and Maintenance Lease Area

Existing Features

- Crown Land Tenure Location (Lease or LUP)
- Access Point
- Expressway / Highway
- Road
- Elevation Contour
- Existing Transmission Line
- Watercourse
- Waterbody
- Patent Land
- Aggregate Site
- Brookfield Power Lease Area

Notes

1. Coordinate System: NAD 1983 UTM Zone 16N
2. Base features produced under license with the Ontario Ministry of Natural Resources © Queen's Printer for Ontario, 2013.

Stantec

January 2013
160960771

Client/Project

Bow Lake Wind Farm
Nodin Kitagan Limited Partnership and Nodin Kitagan 2 Limited Partnership, through their General Partners Shongwish Nodin Kitagan GP Corp. and Shongwish Nodin Kitagan 2 GP Corp.

Figure No.

1.0

Title

Project Location & Study Area - Overview

BOW LAKE WIND PROJECT - TITLE SEARCH RESULTS (AS OF NOVEMBER 2012)

PIN	ARN	MUNICIPALITY	AREA (m2)	OWNER	DESCRIPTION
312309507			28,179,946	*Not available*	
312310009		DISTRICT OF ALGOMA	432,482	RADON RESOURCES INC.	PCL 3539 SEC AWS; MINING CLAIM SSM19288 PEEVER; MINING CLAIM SSM19289 PEEVER; MINING CLAIM SSM19290 PEEVER; DISTRICT OF ALGOMA
312310010	572721000002000	DISTRICT OF ALGOMA	713,920	RADON RESOURCES INC.	PCL 3540 SEC AWS; MINING CLAIM SSM19291 PEEVER; MINING CLAIM SSM19292 PEEVER; MINING CLAIM SSM19409 PEEVER; MINING CLAIM SSM19410 PEEVER RESERVING THE RIGHT TO FLOOD THE SAID LANDS TO CONTOUR ELEVATION 864 ABOVE MEAN SEA LEVEL; S/T LT59693; DISTRICT OF ALGOMA
312310019		DISTRICT OF ALGOMA	35,718	GREAT LAKES POWER TRANSMISSION HOLDING CORP.	SURFACE RIGHTS ONLY, ALL OF LOCATION CL 13852 PT 1 1R11005 TWP OF PEEVER; DISTRICT OF ALGOMA AS IN CROWN PATENT AL 18166.
312330005	579922100000900	DISTRICT OF ALGOMA	5,495	BANNISTER, STEVEN RAY	PCL 12549 SEC AWS SRO; LOCATION CL11606 SMILSKY PT 1 1R10144; DISTRICT OF ALGOMA
312330006		DISTRICT OF ALGOMA	49,113	RADON RESOURCES INC.	PCL 3538 SEC AWS; MINING CLAIM SSM20499 PEEVER/SMILSKY AS IN A7398; DISTRICT OF ALGOMA
312349501			89,146,917	*Not available*	

RADON RESOURCES INC.
1765 GREAT NORTHERN ROAD
SAULT STE. MARIE, ON P6B 0C3
TEL (705) 759-1994 FAX (705) 759-0283

FACSIMILE TRANSMITTAL SHEET

TO: Scott Hossie	FROM: Don Caswell
COMPANY: BluEarth Renewables Inc.	DATE: JANUARY 2, 2013
FAX NUMBER: (519) 900-2039	TOTAL NO. OF PAGES INCLUDING COVER: 2
PHONE NUMBER:	SENDER'S REFERENCE NUMBER:
RE: Bow Lake MNR Letter	YOUR REFERENCE NUMBER:

URGENT FOR REVIEW PLEASE COMMENT PLEASE REPLY

Hi Scott,

Note – I haven't sent this to her yet.

I'm back in the office January 7, will touch base with you then. If you need anything else, please call my cell at (705) 542-8702.

Happy New Year,
Don

Radon Resources Incorporated
1765 Great Northern Road
Sault Ste. Marie, ON P6B0C3

December 20, 2012

Erin Nixon
Ministry of Natural Resources
Renewable Energy Planner
64 Church Street
Sault Ste. Marie, ON
P6A 3H3

This letter is confirm that Radon Resources Inc. and Bow Lake Phase 1 Wind Farm Ltd. have an option to purchase shares agreement in place; and that this option, upon execution, would result in the sale of Radon, including the lands and aggregate licenses held by us to Bow Lake. This includes the property described in PINS 31231-0010, 31231-0009 and 31233-0006.

This also will confirm that the agreement continues to be in good standing.

Radon supports the issuance of the Crown permits and approvals to allow for construction, operation, and decommissioning of the Bow Lake wind farm.

If you have any questions with regard to this letter, please do not hesitate to contact me at (705) 759-1994.

Yours truly,

Donald P. Caswell

Donald Caswell
Secretary Treasurer
Radon Resources Inc.

Great Lakes Power
TRANSMISSION

Great Lakes Power
Transmission LP
2 Sackville Road, Suite B
Sault Ste. Marie, ON P6B 6J6

Tel +1 (705) 254-7444
Fax +1 (705) 759-7706
www.glp.ca

January 11, 2013

Erin Nixon
Renewable Energy Planner
Ministry of Natural Resources
64 Church Street
Sault Ste. Marie, ON P6A 3H3

Re: Bow Lake Wind Project

Great Lakes Power Transmission LP ("GLPT") is currently working with the developer of the Bow Lake Wind Project, Nodin Kitagan Limited Partnership & Nodin Kitagan 2 Limited Partnership on the interconnection of the project to the IESO controlled grid. The final Customer Impact Assessment ("CIA") has been issued for the project and we are currently working on the GLPT Connection Cost and Recovery Agreement ("CCRA") along with some preliminary engineering. Detailed engineering will begin immediately after the CCRA is executed.

Yours truly.

Gary Gazankas

Director of Operations
Great Lakes Power Transmission LP

tel: (705) 256-3842

CLERGUE
FOREST MANAGEMENT INC.

Mr. Scott Hossie
Lead, Project Development
BluEarth Renewables Inc.
34 Harvard Road
GUELPH, ON N1G 4V8

January 7, 2013

Dear Scott,

I would like to confirm receipt of the *Notice of Assignment* dated November 29, 2012.

Clergue Forest Management Inc., will make the necessary changes to our files to reflect this assignment. Effective November 30, 2012, the four (4) agreements:

- Bow Lake Phase 1 FMP Shared Roads Agreement
- Bow Lake Phase 2 FMP Shared Roads Agreement
- Overlapping Licence Agreement for Bow Lake Phase 1 Wind Farm Ltd.
- Overlapping Licence Agreement for Bow Lake Phase 2 Wind Farm Ltd.

Shall be assigned to:

Nodin Kitagan 2 Limited Partnership
c/o BluEarth Renewables Inc.
Suite 200, 4723 – 1st Street SW
Calgary, Alberta T2G 4Y8

Thank you for the notification.

Sincerely,

Jim P. Boniferro
Director

Sault Ste. Marie Office
85 Great Northern Road, Sault Ste. Marie, ON Canada P6B 4Y8
Tel. (705) 942-7706 • Fax (705) 942-8798

Brookfield

Brookfield Renewable Power Inc.
Great Lakes Power Limited
243 Industrial Park Crescent
Sault Ste. Marie, Ontario P6B 5P3

Tel 705.256.7575
Fax 705.256.4558
www.brookfieldpower.com

Tuesday, July 26, 2011

To: Bow Lake Phase 1 Wind Farm Ltd ("BLW1") and Bow Lake Phase 2 Wind Farm Ltd ("BLW2") (the "Bow Lake Companies")

Dear Sirs:

Re: Bow Lake Wind Farm and Use of the Hogg Dam Road and Mackay Road

I am writing to confirm that notwithstanding any existing land use rights granted to Brookfield Renewable Power Inc. or Great Lakes Power Corporation Ltd. (together "Brookfield") by the Ontario Ministry of Natural Resources, Brookfield agrees that the Bow Lake Companies may access and use the Hogg Dam Road and Mackay Road (the "Shared Roads") as may be necessary for constructing and operating a wind farm, including carrying out improvements to these roads at the points numbered 1-6 (inclusive) on the map attached to this letter as Appendix A, as described in more detail in the Class EA1 submission to be made by the Bow Lake Companies to the MNR.

I confirm that this letter may be used by the Bow Lake Companies to support the Class EA1 submission being made by the Bow Lake Companies to the Ministry of Natural Resources relating to road improvements to the Hogg Dam Road and Mackay Road.

Bow Lake Companies agree to repair at their cost in a timely manner any damage to the Shared Roads that is caused by them and to share the ongoing cost of maintaining the Shared Roads on an equitable basis according to each party's respective use.

Bow Lake Companies shall use the Shared Roads at their own risk. Bow Lake Companies shall, at their own expense, fully and effectively defend, indemnify and hold harmless Brookfield and its affiliates, officers, directors, agents and employees ("Brookfield Group"), both during and after the term of this Agreement, from and against any and all damages, demands, claims, actions, causes of action, proceedings, fines and penalties, costs and expenses (including, but not limited to, necessary attorneys fees and expenses) ("Losses") suffered, awarded against or incurred by Brookfield Group arising from a third party claim in relation to (i) bodily injury (including death); or (ii) physical damage to property of such third party; in all cases to the extent caused by the acts or omissions of Bow Lake Companies or those for whom in law Bow Lake Companies are responsible.

The road improvements referred to above and all repair work must be carried out to an appropriate standard in accordance with good engineering practice so that the Shared Roads are restored and maintained to the same condition that they were prior to the commencement of their shared use.

Before carrying out any maintenance work, the parties will meet and agree on the scope of work and specification and decide how best to carry out these works i.e. whether through a contractor or directly. If the parties decide to use a contractor the parties will obtain quotations and make a joint decision as to choice of contractor and agree the form of contract, contracting parties etc. If necessary, an independent road survey will be carried out prior to and following the completion of the road improvement works referred to in the first paragraph above to determine the condition of the roads prior to the commencement of works. Alternatively, the parties may

. 2

rely on the existing reports prepared by Tulloch Engineering Inc. on behalf of the Bow Lake Companies. The cost of an independent road survey (if any) will be shared equally.

It is acknowledged that there may be some disruption to Brookfield's use of the Shared Roads while the improvements are carried out and during the construction of the wind farm; however the Bow Lake Companies agree to use reasonable efforts to mitigate such disruption and to communicate with Brookfield its programme for the works. Brookfield and the Bow Lake Companies agree where possible to co-ordinate activities to ensure both parties uninterrupted use of the Shared Roads for their respective purposes.

Each party will maintain its own insurance cover associated with use of the Shared Roads, including vehicle insurance and public liability. Brookfield shall be an additional insured on the Bow Lake Companies insurance policies and Bow Lake Companies shall provide Brookfield a certificate of insurance evidencing same.

The parties shall use all reasonable endeavours to settle any dispute arising between them in connection with the arrangements described in this letter by referring the matter to their respective senior managers. If the parties cannot agree on the scope of maintenance work or how the costs will be shared within a period of 21 days the parties will engage an independent expert to make a binding determination. The cost of the expert shall be shared equally between the parties.

By signing this letter below both parties indicate their intention to be legally bound by its terms and the interim arrangements set out herein. The parties shall then in good faith negotiate a more formal agreement with the usual covenants including the term of the license.

Yours sincerely,

Ralph Stefano, P. Eng.
Operations and Maintenance Manager, Sault Hydro Operations
For and on behalf of Brookfield Renewable Power Inc.

Date: July 26, 2011

MAUREEN
~~Simon~~ de Pietro
President
For and on behalf of the Bow Lake Companies

Date: 2nd August 2011

cc: Pat McDonald
Lands and Water Technical Specialist
Algoma Area, Sault Ste. Marie District
Ministry of Natural Resources

Appendix D

MNR Correspondence

Ministry of Natural Resources

Sault Ste. Marie District Office
64 Church Street
Sault Ste. Marie, ON P6A 3H3
Tel.: 705-949-1231
Fax.: 705-949-6450

Ministère des Richesses naturelles

Bureau du district de Sault Ste. Marie
64, rue Church
Sault Ste. Marie, ON P6A 3H3
Tél.: 705-949-1231
Téléc.: 705-949-6450

November 15, 2012

Dear Mr…:

RE: Bow Lake Wind Farm Consultation

Nodin Kitagan Limited Partnership is proceeding with their application to construct the Bow Lake Wind Farm within the townships of Smilsky and Peever. They will be applying to the Ministry of Natural Resources in 2013 for the use of crown land to build their facilities, including lands for their turbine sites, transmission lines, and access.

The MNR wishes to ensure that all registered users of Crown land in the vicinity of the project (e.g. holders of land use permits, trap-lines, baitfish areas, etc.) have had an opportunity to comment on this proposed facility. While most of you have previously received notifications from the company at various stages of the process, we would like to ensure that you have had the opportunity to comment.

I have enclosed a map of the proposed turbine sites, a response card and self-addressed stamped envelope. If you have not already had the opportunity to provide feedback on the project, please feel free to provide your comments. Please note, however, that these comments must be submitted no later than December 7, 2012.

If you wish to obtain additional information on this project, please visit the company's website at http://www.bluearthrenewables.com/bowlakewind/. The company will also be holding a public information session on December 13, 2012 from 5-8 pm at the Aweres Public School to discuss more details on this proposal and receive the public's comments.

Sincerely,

Catherine Crouse, Resource Planning Intern
Ministry of Natural Resources, Sault Ste. Marie District
64 Church St., Sault Ste. Marie, ON P6A 3H3
Tel: 75-941-5114 / FAX: 705-949-6450
Catherine.crouse@ontario.ca

Ministry of Natural Resources

Sault Ste. Marie District Office
64 Church Street
Sault Ste. Marie, ON P6A 3H3
Tel.: 705-949-1231
Fax.: 705-949-6450

Ministère des Richesses naturelles

Bureau du district de Sault Ste. Marie
64, rue Church
Sault Ste. Marie, ON P6A 3H3
Tél.: 705-949-1231
Téléc.: 705-949-6450

Ontario

Bow Lake Wind Farm 2012 Consultation:

My comments concerning this wind farm centre on:

- ☐ Generation of wind energy
- ☐ Aesthetics
- ☐ Natural Heritage
- ☐ Cultural Heritage
- ☐ Tourism
- ☐ Other

Ministry of Natural Resources

Sault Ste. Marie District Office
64 Church Street
Sault Ste. Marie, ON P6A 3H3
Tel.: 705-949-1231
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Ministère des Richesses naturelles

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Ontario

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- ☐ Generation of wind energy
- ☐ Aesthetics
- ☐ Natural Heritage
- ☐ Cultural Heritage
- ☐ Tourism
- ☐ Other

Ministry of Natural Resources

BOW LAKE WIND FARM PROJECT
CROWN LAND INTEREST REPORT CHECKLIST

Section IV: Addressing interests of existing users, including those with licenses, permits or tenure:

The Crown Land Interest Report (CLIR) requires proponents to contact all tenure holders within the area to ascertain their interest and any concerns with the project. However, the contact information for users licensed through the MNR, including Land Use Permit Holders, Bait Fish Harvester, Trappers, and Bear Management Area Holders, could not be released to the company due to privacy restrictions under FIPPA.

Therefore, the Sault Ste. Marie District MNR sent a letter, dated November 15, 2012, to all 10 of these users (see 'BowLake_Stakeholder_MailingList_2012.doc') asking them to forward to us any concerns regarding this project proposal. Enclosed with the letter was a response card and a return-envelope addressed to the Sault District MNR office.

One response was received on December 20, 2012 by the MNR with the following concern:

> "My concern is the wildlife and the natural environment. The disturbance of the wind mills will affect the wildlife habitat. I feel this would be a mistake. Canada is known for its natural beauty and habitat of wildlife."

The response card was not signed so we were unable to respond directly to this individual about their concern.

The company responded on January 14, 2013 that they did not receive any comments back directly in response to these letters.

Prepared by Catherine Crouse,
Resource Planning Intern, Sault Ste. Marie District
January 14, 2013.

NOTICE OF PROPOSAL AND PUBLIC MEETING

by Bow Lake
to Engage in a Renewable Energy Project

Project Name: BOW LAKE WIND FARM

Project Location: Townships of Smilsky and Peever, District of Algoma

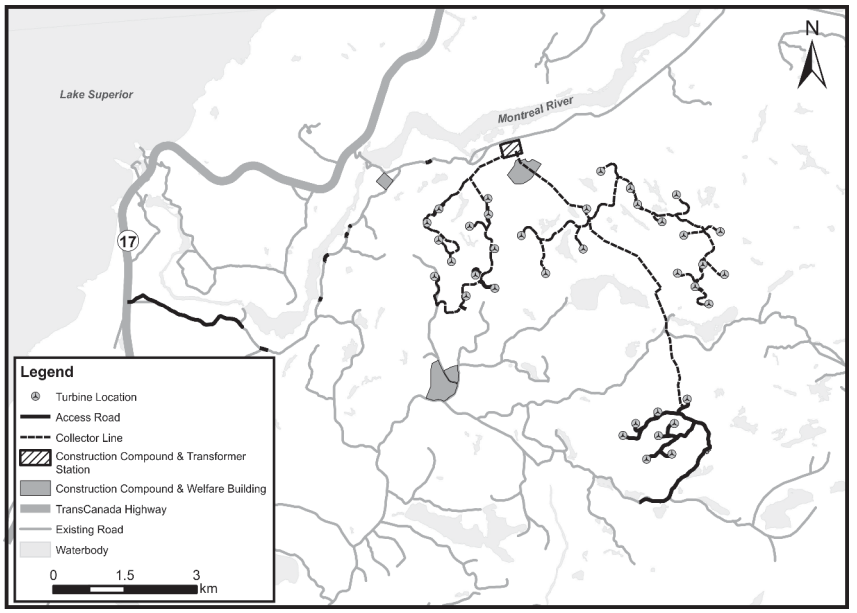
Dated At: the District of Algoma this the 1st of August, 2012

Bow Lake Phase 1 Wind Farm Ltd. and Bow Lake Phase 2 Wind Farm Ltd. (collectively "Bow Lake") are proposing to develop the Bow Lake Wind Farm (the "Project") and are planning to engage in this renewable energy project in respect of which the issuance of a Renewable Energy Approval (REA) is required. The distribution of this Notice of a Proposal and Public Meeting, and the Project itself, are subject to the provisions of the *Environmental Protection Act of Ontario* (Act) Part V.0.1 and Ontario Regulation 359/09 (Regulation). This notice is being distributed in accordance with Section 15 of the Regulation prior to an application being submitted and assessed for completeness by the Ministry of the Environment.

Meeting Location:

DATE: Thursday September 6th, 2012
TIME: 5:00 pm to 8:00 pm
PLACE: Aweres Public School,
185 556 Highway, RR2,
Sault Ste. Marie, Ontario

There will be no set time for any formal presentation. Members of the community are welcome to arrive anytime between 5:00-8:00pm.



Project Description:

Pursuant to the Act and Regulation, the facility, in respect of which the project is to be engaged in, is considered to be a Class 4 wind facility. If approved, this project would have a total maximum name plate capacity of 58.32 MW and include up to 36 wind turbines. The project location is described in the adjacent map.

Proposed changes to the Regulation were posted to the Environmental Registry in April 2012. Since April, Bow Lake has been working to understand and ensure compliance with the proposed changes to the Regulation. The Regulation was formally amended on July 1, 2012, and as a result of this amendment, going forward Bow Lake will be combining both phases of the Project under one REA application. This approach represents a departure from the former pursuit of separate renewable energy approvals for each phase of the Project. It is important to note that there have been no material changes to the project location or design of either phase, and the Project is not being expanded beyond the original Phase 1 and Phase 2 proposals; the original proposals are being combined into a single REA Application. Bow Lake will be re-initiating the REA process for the combined Project, including continuation of the natural heritage reporting and the consultation program.

Documents for Public Inspection:

The Draft Project Description Report describes the facility as a Project that will include up to 36 wind turbines. The proposed Project would also include access roads, up to three meteorological towers, electrical collector lines, and a transformer station. A written copy of the Draft Project Description Report is being made available for public inspection at the Sault Ste. Marie North Planning Board office (669 Wellington Street East, Sault Ste. Marie, Ontario) and on the Project website at www.blueearthrenewables.com/bowlakewind.

Further, Bow Lake will prepare additional supporting documents in order to comply with the requirements of the Act and Regulation. Written copies of additional draft supporting documents will be made available for public inspection at least 60 days before the final public meeting.

Project Contacts and Information:

To learn more about the project proposal or to communicate concerns please contact:

Bryan Tripp
Regulatory Lead
Bow Lake Wind Farm
34 Harvard Rd.
Guelph, ON N1G 4V8
Telephone: (519) 821-7319
Project Email: bowlakewind@bluearth.ca

Mark Kozak
Project Manager
Stantec Consulting Ltd.,
70 Southgate Drive, Suite 1
Guelph, ON, N1G 4P5
Telephone: (519) 836-6050

FILEPATH: W:\active\60960734\drawing\CorelNewspaperNotice\2012-07_NoticeOfProposalPublicMeeting\60960734_2012-07_NPPM_Notice_20110727.cdr

NOTICE OF FINAL PUBLIC MEETING - BOW LAKE WIND FARM

To be held by Nodin Kitagan Limited Partnership and Nodin Kitagan 2 Limited Partnership (formerly Bow Lake) regarding a Proposal to Engage in a Renewable Energy Project

Project Name: BOW LAKE WIND FARM

Project Location: Townships of Smilsky and Peever, District of Algoma

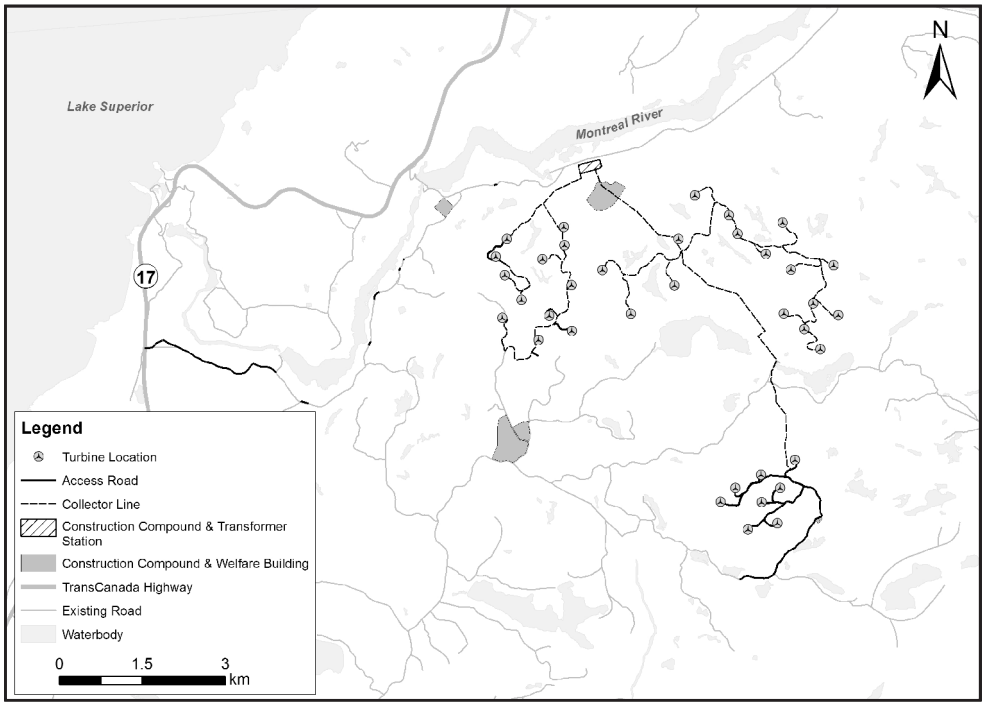
Dated At: the District of Algoma this the 10th of October, 2012

Nodin Kitagan Limited Partnership and Nodin Kitagan 2 Limited Partnership, by its General Partners Shongwish Nodin Kitagan GP Corp. and Shongwish Nodin Kitagan 2 GP Corp. (collectively "the Proponent") are proposing to develop the Bow Lake Wind Farm (the "Project"). The change from the previous proponent corporate names (Bow Lake Phase 1 Ltd. and Bow Lake Phase 2 Ltd.) to the new Proponent corporate names is a result of the formal development partnership with the Batchewana First Nation of Ojibways. The Proponents are planning to engage in this renewable energy project in respect of which the issuance of a Renewable Energy Approval (REA) is required. The distribution of this Notice of Final Public Meeting, and the Project itself, are subject to the provisions of the *Environmental Protection Act of Ontario* (Act) Part V.0.1 and Ontario Regulation 359/09 (Regulation). This notice is being distributed in accordance with Section 15 of the Regulation prior to an application being submitted and assessed for completeness by the Ministry of the Environment.

Meeting Location:

DATE: Thursday December 13th, 2012
TIME: 5:00 pm to 8:00 pm
PLACE: Aweres Public School,
185 556 Highway, RR2,
Sault Ste. Marie, Ontario

There will be no set time for any formal presentation. Members of the community are welcome to arrive anytime between 5:00-8:00pm.



Project Description:
Pursuant to the Act and Regulation, the facility, in respect of which the project is to be engaged in, is considered to be a Class 4 wind facility. If approved, this project would have a total maximum name plate capacity of 58.32 MW and include 36 wind turbines. The project location is described in the map adjacent.

Documents for Public Inspection:
The Draft Project Description Report describes the facility as a Project that will include 36 wind turbines. The Project would also include access roads, two meteorological towers, electrical collector lines, operations and maintenance building and a transformer station. A written copy of the updated *Draft Project Description Report* is being made available for public inspection starting **October 12, 2012** at the Sault Ste. Marie North Planning Board office (669 Wellington Street East, Sault Ste. Marie, Ontario) and on the Project website at www.bluearthrenewables.com/bowlakewind.

Further, the Proponent has prepared additional supporting documents in order to comply with the requirements of the Act and Regulation. Written copies of additional draft supporting documents have been made available starting on **October12, 2012** on the project website and at the viewing location noted above for public inspection at least 60 days before the final public meeting.

Project Contacts and Information:
To learn more about the project proposal or to communicate concerns please contact:

Bryan Tripp
Regulatory Lead
Bow Lake Wind Farm
34 Harvard Rd.
Guelph, ON N1G 4V8
Telephone: (519) 821-7319
Project Email: bowlakewind@bluearth.ca

Mark Kozak
Project Manager
Stantec Consulting Ltd.,
70 Southgate Drive, Suite 1
Guelph, ON, N1G 4P5
Telephone: (519) 836-6050

NodinKitagan
LIMITED PARTNERSHIP

The Power to Change the Future.™

Nodin Kitagan Limited Partnership

Bow Lake Wind Farm

Newsletter No. 1

New Partnership, New Name

Bow Lake Phase 1 Wind Farm Ltd. and Bow Lake Phase 2 Wind Farm Ltd. (collectively "BLWF") have been working closely with the Batchewana First Nation ("BFN") over the last several years, and are pleased to confirm that they are in the final stages of completing partnership agreements that will see the BFN become economic partners in the Bow Lake Wind Farm ("Project"). As a result of this partnership, going forward the project proponents will be Nodin Kitagan Limited Partnership (for Phase 1) and Nodin Kitagan 2 Limited Partnership (for Phase 2), by their respective general partners Shongwish Nodin Kitagan GP Corp. and Shongwish Nodin Kitagan 2 GP Corp. BLWF and BFN will own these corporate partnerships. BluEarth Renewables, a shareholder in BLWF, will continue to lead the development of the Project on behalf of all Project partners.

The English name of the Project will continue to be *Bow Lake Wind Farm*, however the BFN know and refer to the Project as *Chinodin Chigumi Nodin Kitagan*.

BluEarth Renewables is also a partner in the Nodin Kitagan companies, and is leading the development of the Project on behalf of the partnerships.

Update & Timeline

The Nodin Kitagan Partnerships have undertaken rigorous design and study work to prepare a complete Renewable Energy Approval ("REA") application. Draft REA documents, including Natural and Cultural Heritage Assessment documents, are available for review on the project website **(www.bluearthrewables.com/bowlakewind),** and hard copies are available at the Sault North Planning Board Office (669 Wellington Street East, Sault Ste. Marie).

We welcome your questions or feedback at any time. Contact information is available on the Project website and on the back side of this newsletter.

The Final Public Meeting is scheduled for December 13, 2012, 5:00 to 8:00 pm at the Aweres School – details are available on the Project website. Subsequent to that meeting, the proponent will work to update and finalize its REA application documents based on feedback received leading up to and at that final meeting, and to submit an REA application to the Ministry of Environment early in 2013. Should the Project be successful in receiving environmental approvals, construction could start in the summer of 2013.

NodinKitagan
LIMITED PARTNERSHIP

Photo: Sean LeBlanc

Regulatory Changes

On the 29th of June 2012 changes to Ontario Regulation 359/09 and Ontario Regulation 334 (regulations pertaining to the permitting and approval or renewable energy projects) came into force. In order to meet the requirements of these 2012 amendments, Phase 1 and Phase 2 of the Project have been combined into one Renewable Energy Approval application. While this is a change from the former pursuit of two separate REA approvals, there have been no material changes to the Project location or design, and the Project is not being expanded beyond the original Phase 1 and Phase 2 proposals – these proposals are merely being combined into a single process.

The amalgamation of the two phases into one REA application changes the scope of the project that was initially described in the Public Notice for a Category B (Class Environmental Assessment) Evaluation issued on February 29, 2012. The works assessed in the Class EA were proposed upgrades and construction of multi-use, public roads in Phase 1. As a result of the change in scope, the Phase 1 Class EA has been terminated. Because of the June 2012 changes to O.Reg. 344, the Class EA will not be re-started, but rather the proposed multi-use road works originally described in the Phase 1 Class EA will now be evaluated under and in accordance with the REA Regulation.

The environmental and cultural assessment of the complete Project, including both Phases and multi-use roads, will allow for all potential Project effects to be considered under the rigorous REA Regulation, and make it easier for the public to access and understand comprehensive information with respect to the Project, and to understand the Project in its entirety.

Additional information on this change is available in the October 5, 2012 Notice of Change available on the Project website.

Activities on Site

Throughout 2012 Stantec has had a number of biologists and ecologists out in the Project area, studying the flora and fauna and collecting data to complete the Natural Heritage Assessment. The results of those studies are now available in the draft Natural Heritage Assessment documents on the Project website. The BFN were also out in the Project area, conducting natural and cultural heritage studies to inform their own permitting process.

Through October and November, workers will be on site conducting investigative geotechnical studies. This work involves drilling small boreholes in order to provide information that engineers require in designing turbine foundations. This work is commonly done in early project development stages, and all necessary approvals have been obtained from the Ministry of Natural Resources to undertake this work.

So, where does the power go?

One of the most common questions we heard at the September 6 Public Meeting was, where is the power from the Bow Lake Project going to go? The Independent Electricity System Operator (IESO) balances the supply and demand for electricity in Ontario and then directs its flow across the province's transmission lines. According to the IESO, the power produced by the Bow Lake Wind Farm will be consumed in and around Sault Ste. Marie. Currently, Sault Ste. Marie receives a portion of its electricity via transmission lines from southern Ontario, although other energy projects in the region, including wind, hydro and solar, can significantly contribute towards meeting the local energy demands. The energy from the Bow Lake Wind Farm will further contribute towards local energy self-sufficiency, reducing reliance on energy generated in other regions of the province, and improving the efficiency of Ontario's electrical system.

C/O BluEarth Renewables Inc.
200, 4723 – 1 Street SW
Calgary AB T2G 4Y8

October 5, 2012

Reference: Bow Lake Wind Farm – Project Update

This Project update is to inform Aboriginal communities and public stakeholders about two recent changes to the proposed Bow Lake Wind Farm (the "Project"), located approximately 80 km north of Sault Ste. Marie and roughly six kilometres east of Montreal River Harbour. One change is administrative in nature, and the other related to regulatory process.

1. Change of Proponent Name

Understanding that the proposed Project falls within the territory of the Batchewana First Nation of Ojibways ("BFN"), Bow Lake Phase 1 Wind Farm Ltd. and Bow Lake Phase 2 Wind Farm Ltd. (collectively "BLWF") have engaged directly with the BFN over the last several years. Both the BFN and BLWF have contributed significant resources toward this engagement, and are pleased to confirm that they are in the final stages of completing partnership agreements that will see the BFN become economic partners in the Project. As a result of this partnership, going forward the project proponents will be Nodin Kitagan Limited Partnership (for Phase 1) and Nodin Kitagan 2 Limited Partnership (for Phase 2), on behalf of their respective general partners Shongwish Nodin Kitagan GP Corp. and Shongwish Nodin Kitagan 2 GP Corp. BLWF and BFN will own these corporate partnerships.

The BFN will also be:

- entering into various business and relationship agreements with the Project to guide Project activities; and
- issuing a Development and Power Generation Permit, which provides the BFN's approval to construct, operate, repower, and decommission the Project.

The English name of the Project is the *Bow Lake Wind Farm*, however, the BFN know and refer to the Project as *Chinodin Chigumi Nodin Kitagan*.

2. Migration of Phase 1 Class EA Works to REA Process

On February 29, 2012 the Project issued a *Public Notice for a Category B Project Evaluation* under the Ministry of Natural Resources' Class Environmental Assessment ("Class EA") Process for MNR Resource Stewardship. This notice was with respect to proposed upgrades to existing roads and the construction of three "spur" roads (the "works") in Phase 1 of the Project, to allow access for cranes, turbine components, and other equipment and materials related to the wind plant development. The roads proposed for upgrading were public roads, with multiple users, and because the proposed upgrades were to continue to support public, multi-use access, these works were therefore previously required to be assessed under the Class EA process as opposed to the Renewable Energy Approval ("REA") process.

On the 29th of June 2012 amendments to Ontario Regulation 359/09 (the Renewable Energy Approval ("REA") Regulation) and to Ontario Regulation 334 (under the *Environmental Assessment Act*) came into force. The amendments to O. Reg. 334 allowed the assessment of public, multi-use access roads that are to be used to access renewable energy projects to occur through the REA process, removing the requirement to evaluate these components under a separate and parallel Class EA process under the *Environmental Assessment Act*.

In order to meet the June 2012 amendments to the REA Regulation, Phase 1 and Phase 2 of the project have been combined into one Renewable Energy Application. There have been no material changes to the project location or design and the Project is not being expanded – the two phases are merely being combined into one REA process.

The amalgamation of both phases of the Project into one REA Application is considered a change to the scope of the work and project initially captured in the Class EA Notice, which only considered Phase 1 of the Project. As a result of this change, the Project has terminated the Phase 1 Class EA process that was initiated in February 2012. The Project is still proposing to undertake the multi-purpose road works described in the former Phase 1 Class EA, however because of the June 2012 amendments to O. Reg. 334 described above, the environmental and cultural assessment of these works will now be evaluated under and in accordance with the REA Regulation.

Evaluating these multi-purpose road works together with the rest of the Project activities will ensure all potential Project effects will be considered under the rigor of the REA Regulation, and in a cohesive manner. The assessment of the complete Project, including both phases and multi-purpose roads, under the REA regulation will make it easier for the public to access and understand comprehensive Project information focused on a single, in depth review process.

Comments from the public have been received in response to the Phase 1 Class EA Public Notice issued in February 2012. The Project has considered this feedback, and will incorporate these comments as applicable in the REA assessment.

Should you have any comments or concerns about the former Phase 1 Class EA works, or any other proposed Project activities, you may continue to contact us at any time at the coordinates listed below.

Project contact information has not changed. Interested parties may still obtain up to date project information on the Project website (www.bluearthrenewables.com/bowlakewind), may send their questions to or directly contact either of the following project representatives:

Bryan Tripp
Regulatory Lead
Bow Lake Wind Farm
34 Harvard Rd.
Guelph, ON N1G 4V8
Telephone: (519) 821-7319
Project Email: bowlakewind@bluearth.ca

Mark Kozak
Project Manager
Stantec Consulting Ltd.
70 Southgate Drive, Suite 1
Guelph, ON N1G 4P5
Telephone: (519) 836-6050

C/O BluEarth Renewables Inc.
200, 4723 – 1 Street SW
Calgary AB T2G 4Y8

October 5, 2012

Reference: Bow Lake Wind Farm – Project Update

This Project update is to inform Aboriginal communities and public stakeholders about two recent changes to the proposed Bow Lake Wind Farm (the "Project"), located approximately 80 km north of Sault Ste. Marie and roughly six kilometres east of Montreal River Harbour. One change is administrative in nature, and the other related to regulatory process.

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The English name of the Project is the *Bow Lake Wind Farm*, however, the BFN know and refer to the Project as *Chinodin Chigumi Nodin Kitagan*.

2. Migration of Phase 1 Class EA Works to REA Process

On February 29, 2012 the Project issued a *Public Notice for a Category B Project Evaluation* under the Ministry of Natural Resources' Class Environmental Assessment ("Class EA") Process for MNR Resource Stewardship. This notice was with respect to proposed upgrades to existing roads and the construction of three "spur" roads (the "works") in Phase 1 of the Project, to allow access for cranes, turbine components, and other equipment and materials related to the wind plant development. The roads proposed for upgrading were public roads, with multiple users, and because the proposed upgrades were to continue to support public, multi-use access, these works were therefore previously required to be assessed under the Class EA process as opposed to the Renewable Energy Approval ("REA") process.

On the 29th of June 2012 amendments to Ontario Regulation 359/09 (the Renewable Energy Approval ("REA") Regulation) and to Ontario Regulation 334 (under the *Environmental Assessment Act*) came into force. The amendments to O. Reg. 334 allowed the assessment of public, multi-use access roads that are to be used to access renewable energy projects to occur through the REA process, removing the requirement to evaluate these components under a separate and parallel Class EA process under the *Environmental Assessment Act*.

In order to meet the June 2012 amendments to the REA Regulation, Phase 1 and Phase 2 of the project have been combined into one Renewable Energy Application. There have been no material changes to the project location or design and the Project is not being expanded – the two phases are merely being combined into one REA process.

The amalgamation of both phases of the Project into one REA Application is considered a change to the scope of the work and project initially captured in the Class EA Notice, which only considered Phase 1 of the Project. As a result of this change, the Project has terminated the Phase 1 Class EA process that was initiated in February 2012. The Project is still proposing to undertake the multi-purpose road works described in the former Phase 1 Class EA, however because of the June 2012 amendments to O. Reg. 334 described above, the environmental and cultural assessment of these works will now be evaluated under and in accordance with the REA Regulation.

Evaluating these multi-purpose road works together with the rest of the Project activities will ensure all potential Project effects will be considered under the rigor of the REA Regulation, and in a cohesive manner. The assessment of the complete Project, including both phases and multi-purpose roads, under the REA regulation

will make it easier for the public to access and understand comprehensive Project information focused on a single, in depth review process.

Comments from the public have been received in response to the Phase 1 Class EA Public Notice issued in February 2012. The Project has considered this feedback, and will incorporate these comments as applicable in the REA assessment.

Should you have any comments or concerns about the former Phase 1 Class EA works, or any other proposed Project activities, you may continue to contact us at any time at the coordinates listed below.

Project contact information has not changed. Interested parties may still obtain up to date project information on the Project website (www.bluearthrenewables.com/bowlakewind), may send their questions to or directly contact either of the following project representatives:

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