SOUTH BRANCH WIND FARM

ARCHAEOLOGICAL AND HERITAGE RESOURCES ASSESSMENT REPORT

Report 4 of 9

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1. PURPOSE

The South Branch Wind Farm Archaeological and Heritage Resources Assessment Report is prepared for the purpose of compliance with section 20 of *Ontario Regulation 359/09, which amends the Environmental Protection Act for the Renewable Energy Approvals under Part V.0.1 of the Act*.

Section 20 requires consideration of impacts from the South Branch Wind Farm to archaeological resources, heritage resources and protected properties within the project area. This report provides a summary of this investigation, the potential for impacts that have been identified and, where appropriate, mitigation measures.

A preliminary version of this report is made available to Aboriginal stakeholders, public stakeholders and agency stakeholders for review prior to the Renewable Energy Approval (REA) submission. This report is available online for download at www.prowind.ca and available in hard copy at select locations identified on the website and in newspaper advertisements.

A final version of this report is included in the REA submission to the Ontario Ministry of the Environment (MOE).

2. PROJECT OVERVIEW

Prowind Inc. (Prowind) is a Canadian wind energy developer based in Hamilton, Ontario. It is affiliated with its parent company, Prowind GmbH, based in Osnabrück, Germany. Prowind's mandate is to create small-scale, renewable and zero-emission power generation. Prowind believes in distributed generation that has a minimum impact on the surrounding environment and landscape.

The South Branch Wind Farm is a 30 MW project that will employ the use of up to 14 wind turbines generators. These wind turbines have a maximum hub height of 140 meters and a maximum rotor diameter of 118 meters. Final turbine specifications have not been established, but for the purpose of assessing the potential impact, maximum possible dimensions are utilized for the REA preparation.

The operational wind farm will consist of wind turbine generators, access roads, a substation and a combination of underground and above ground cabling to connect the turbines to the substation and the substation to the feeder line. In addition, there will be a storage shed, and a designated operations and maintenance building for the life of the project. During the construction and decommissioning, there will be additional, temporary infrastructure including: 3 concrete wash ponds and a construction office trailer.

The project is proposed on privately owned, agricultural land as well as municipal easements surrounding the hamlet of Brinston, Ontario. The project turbines are located

in two main areas. The western area is defined by properties directly on each side of Byker Road, between Dobbie Road and Branch Road to the north and Pitt Road and Sandy Creek Road to the south. Turbines in the eastern area lie on either side of County Road 16 (Brinston Road) between Oak Valley Road to the north and Cook Road to the south.

Figure 1 illustrates the project location within Ontario. Figure 2 shows the project area with proposed infrastructure layout.

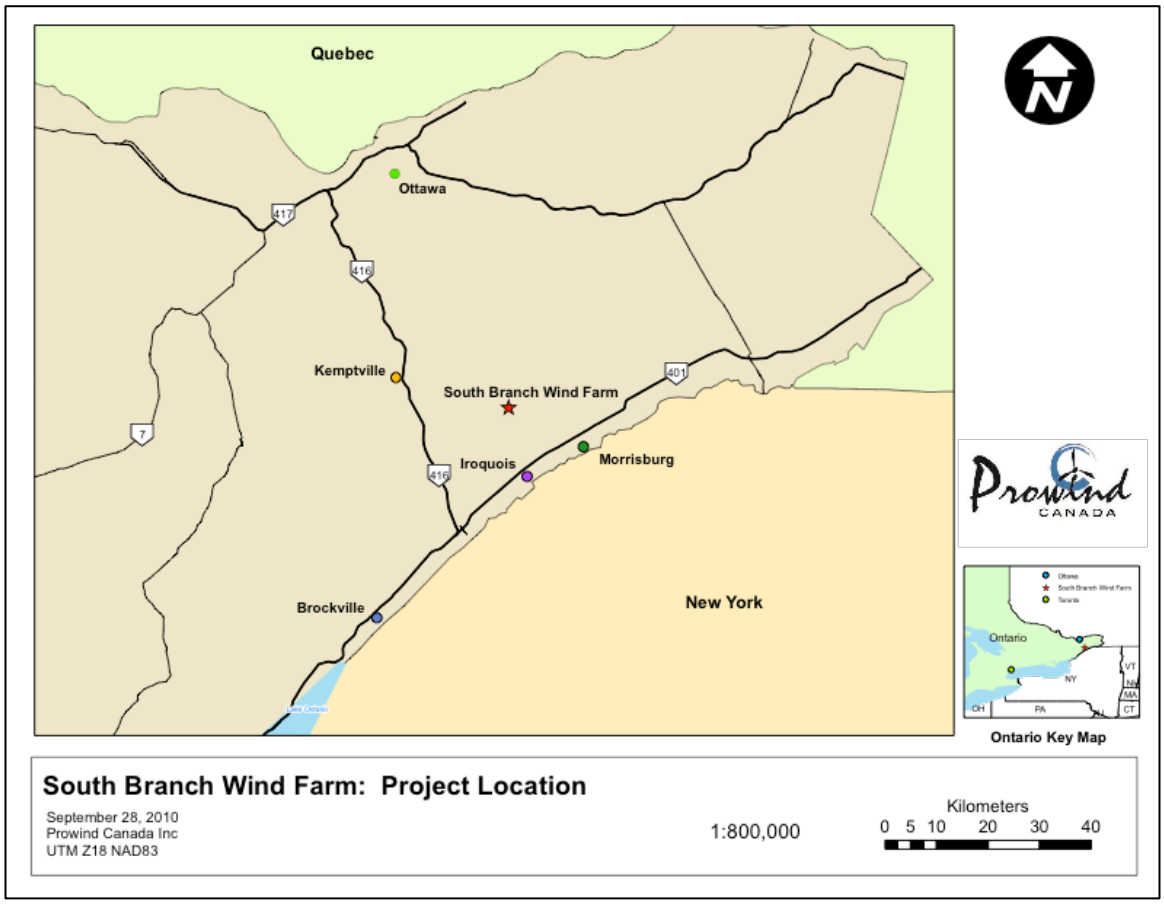

FIGURE 1 SOUTH BRANCH WIND FARM PROJECT LOCATION

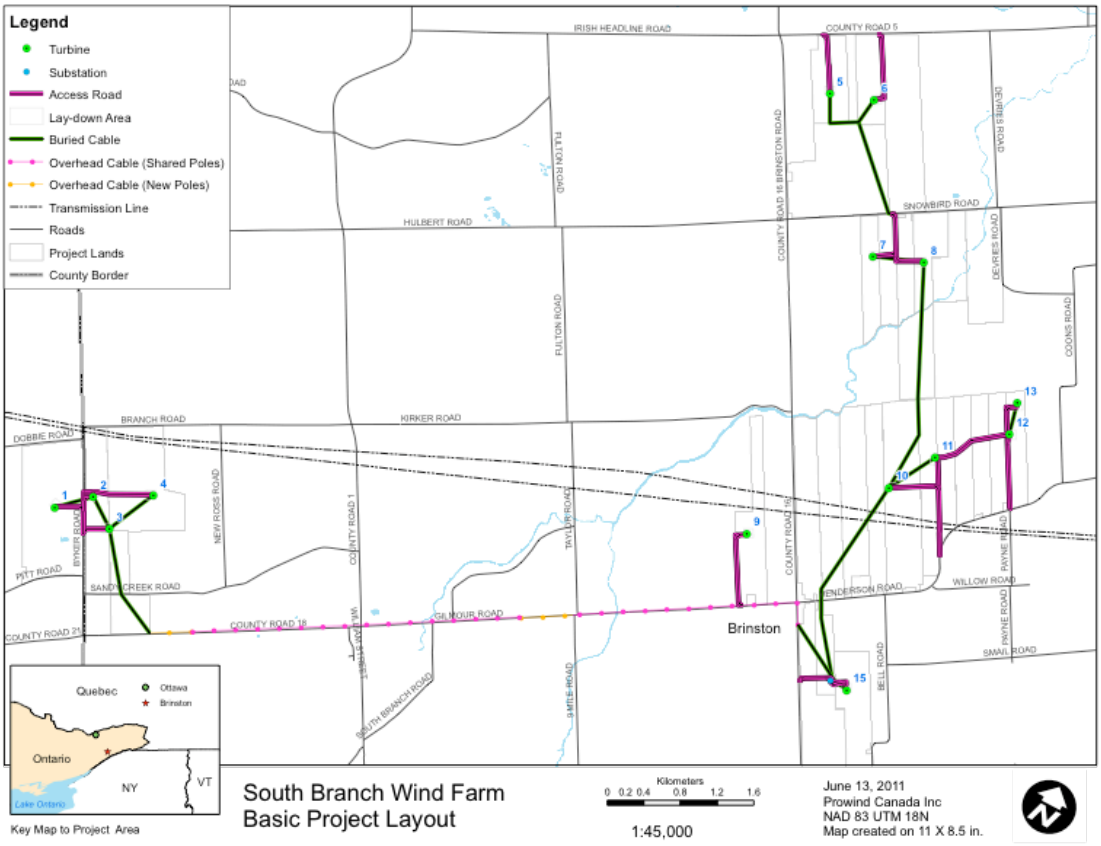

FIGURE 2 SOUTH BRANCH WIND FARM PROJECT LAYOUT

3. DEFINITIONS

An "Archaeological Resource" is described in subsection 1(1) of O. Reg 359/09 as:

> *"subject to subsection (2), an archaeological site or a marine archaeological site, both within the meaning of Ontario Regulation 170/04 (Definitions) made under the Ontario Heritage Act;"*
>
> *and*
>
> *"(2) For the purposes of the definition of "archaeological resource" in subsection (1), an archaeological resource is real property but does not include buildings or structures, other than ruins, burial mounds, petroglyphs and earthworks."*

A "Heritage Resource" is described in subsection 1(1) of O. Reg 359/09 as:

> *"real property that is of cultural heritage value or interest and may include a building, structure, landscape or other feature of real property"*

Characteristics of "protected properties" are described in the table presented in subsection 19(2) of O. Reg 359/09 The table is reproduced here for reference.

TABLE 1 TABLE FROM SUBSECTION 19(2) OF O. REG 359/09

Item	Column 1	Column 2	Column 3
	Description of Property	Person or body whose authorization is required	Type of authorization required to be submitted
1	A property that is the subject of an agreement, covenant or easement entered into under clause 10 (1) (b) of the *Ontario Heritage Act*.	Ontario Heritage Trust.	Authorization to undertake any activities related to the renewable energy project that require the approval of the Ontario Heritage Trust pursuant to the easement or covenant.
2	A property in respect of which a notice of intention to designate the property to be of cultural heritage value or interest has been given in accordance with section 29 of the *Ontario Heritage Act*.	Municipality that gave the notice.	If, as part of the renewable energy project, the alteration of the property or the demolition or removal of a building or structure on the property is proposed, consent to alter the property or demolish or remove the building or structure.
3	A property designated by a municipal by-law made under section 29 of the *Ontario Heritage Act* as a property of cultural heritage value or interest.	Municipality that made the by-law.	If, as part of the renewable energy project, the alteration of the property or the demolition or removal of a building or structure on the property is proposed, consent to alter the property or demolish or remove the building or structure.
4	A property designated by order of the Minister of Culture made under section 34.5 of the *Ontario Heritage Act* as a property of cultural heritage value or interest of provincial significance.	Minister of Culture.	If, as part of the renewable energy project, the alteration of the property or the demolition or removal of a building or structure on the property is proposed, consent to alter the property or demolish or remove the building or structure.
5	A property in respect of which a notice of intention to designate the property as property of cultural heritage value or interest of provincial significance has been given in accordance with section 34.6 of the *Ontario Heritage Act*.	Minister of Culture.	If, as part of the renewable energy project, the alteration of the property or the demolition or removal of a building or structure on the property is proposed, consent to alter the property or demolish or remove the building or structure.
6	A property that is the subject of an easement or a covenant entered into under section 37 of the *Ontario Heritage Act*.	Municipality that entered into the easement or covenant	Authorization to undertake any activities related to the renewable energy project that require the approval of the municipality that entered into the easement or covenant.
7	A property that is part of an area designated by a municipal by-law made under section 41 of the *Ontario Heritage Act* as a heritage conservation district	Municipality that made the by-law	If, as part of the renewable energy project, the alteration of the property or the erection, demolition or removal of a building or structure on the property is proposed, a permit to alter the property or to erect, demolish or remove a building or structure on the property.
8	A property designated as a historic site under Regulation 880 of the Revised Regulations of Ontario, 1990 (Historic Sites) made under the *Ontario Heritage Act*.	Minister of Culture.	If, as part of the renewable energy project, the excavation or alteration of the property of historical significance is proposed, a permit to excavate or alter the property.

4. PROTECTED PROPERTIES

Section 19 of O. Reg 239/09 requires the consideration of protected properties within the project area or abutting the project area.

Consultation with the landowners participating in this project revealed the properties directly involved in the project are not protected for archaeological or heritage resource reasons.

Consultation with Ministry of Tourism and Culture (MTC) personnel, confirmed that there are no records of protected properties within the project area or its abutting lands.

Consultation with the Township of South Dundas and the Township of Edwardsburgh/ Cardinal indicated that the upper tier municipal offices are the appropriate agencies to address this issue.

Consultation with the United Counties of Stormont, Dundas and Glengarry (SD&G) and the United Counties of Leeds and Grenville (L&G) further confirmed that there are no protected properties within or abutting the project area. Records of all heritage resources within a 3 km radius around the project area were investigated; some records of protected properties exist within this wide radius, but none within, or abutting the project area.

The Heritage Impact Assessment (HIA) conducted by Archaeological Research Associates Ltd. similarly did not find records of protected properties within or adjacent to the project area. This was confirmed through a windshield survey of the area.

5. ARCHAEOLOGICAL ASSESSMENT

Section 20 of O. Reg 359/09 requires the proponent of a renewable energy facility to consider any potential impact on archaeological resources in the project area.

Consultation with SD&G, L&G and MTC returned no results with regards to known archaeological resources in the area, but much of the area had not been fully studied.

Due to the necessary disruption of soil during the construction period of the South Branch Wind Farm, there is potential for impact on undiscovered archaeological resources. For this reason, an archaeological assessment was carried out for the South Branch Wind Farm project area.

A Stage 1 Archaeological Survey was completed for the South Branch Wind Farm in April 2009 by AMICK Archaeological Consultants Limited. Note that at the time of the initial survey, South Branch Wind Farm was being managed as three separate 10MW RESOP projects, and the reports are written in reference to these three sites. The Stage 1 studies completed within 2009 confirmed that there are no known archaeological or heritage sites within 2 km of the project area. The study also determined that certain areas within the project area are of high potential for undocumented archaeological sites due to proximity to potable water and historic road network.

The Stage 1 Archaeological Report was submitted to MTC upon completion and accepted into the Provincial Register of archaeological reports. The complete Stage 1 Archaeological Report can be found in Appendix A.

Between 2009 and award of FIT Contract in 2010, when the three projects were amalgamated, the land base of the South Branch Wind Farm had grown sufficiently to warrant subsequent work to confirm results of the original Stage 1 assessment. This revised Stage 1 and subsequent Stage 2 Archaeological Survey of the project area was undertaken by Archaeological Research Associates Ltd., and is presented in entirety in Appendix B of this report.

A Stage 2 survey involves on-site pedestrian surveys and/or test pitting of all the land to be disturbed during the construction process; this will reveal any undocumented archaeological sites, if any. Per MTC standards, all fields to be surveyed must be worked up / ploughed and must have 80% visibility of the soil for the pedestrian survey to be valid. In areas where the ground is unsuitable for ploughing, or the impact falls within a minimum impact threshold (e.g. along existing roadways), the area may be test-pitted at 5m intervals in lieu of ploughing and pedestrian survey. Both of these techniques were applied at South Branch Wind Farm.

Desktop studies for the Stage 1 review were completed in summer 2010 and field work for the Stage 2 assessment began as soon as fields were deemed to meet the 80% visibility criteria, free of snow, and available for assessment. Stage 2 field studies began in April 2011 and carried through to June 2011.

The Stage 1 & 2 summary report provides the following conclusion:

> *"In April, May and June 2011, ARA carried out a Stage 2 archaeological assessment on those parts of the project lands to be directly impacted by construction activities associated with the South Branch Wind Farm. These included turbine pads, laydown areas, underground collector lines, a switching station, access roads and associated project infrastructure. The work was conducted under MTC licence #P007, PIF #P007-300-2011. Legal permission to enter project lands and engage in all necessary fieldwork activities was granted by the property owners. The property survey, completed under optimal conditions, resulted in the identification of two Euro-Canadian findspots (Findspots 1–2).*
>
> *"Findspot 1 was identified as a Euro-Canadian artifact scatter broadly dating from the mid-19th to late 20th century. As this scatter did not meet the MTC's criteria for sites requiring further work, ARA did not recommend a Stage 3 archaeological assessment. Findspot 2 was identified as a Euro-Canadian homestead, consisting of foundations, a well and an artifact scatter and dating from the mid-19th to late 20th century. Findspot 2 was considered to have sufficient CHVI to warrant a Stage 3 – Site Specific assessment. ARA recommended avoidance and the associated lands have since been removed from the project.*
>
> *"ARA feels that no further archaeological study of the subject lands would be productive. It is recommended that the proposed South Branch Wind Farm be released from further archaeological concerns. A Letter of Review and Acceptance into the Provincial Register of Reports is requested, as provided for in Section 65.1 of the Ontario Heritage Act."*

The archaeology survey report was submitted to the Ministry of Tourism and Culture, Culture Programs Unit (MTC-CPU) upon completion. After one iteration of feedback and revision, the report was accepted by Archaeology Review Officer Mr. Andrew Hinshelwood, and confirmed to be complete. MTC-CPU concurred with the findings of the survey and have not required further assessment of the project area. The full text of the acceptance letter is presented in Appendix D of this report, along with the full version of the final archaeology report submission in Appendix B. MTC-CPU comments are copied here for ease of reference:

> *"The Ministry concurs with the recommendation that no further archaeological assessment will be required for the areas of proposed impact on the subject property as shown in Maps 2a, 2b, 3a, 3b and 31 of the above titled report be considered free of further archaeological concern and do not require further assessment."*

6. HERITAGE IMPACT ASSESSMENT

The South Branch Wind Farm project area was assessed for heritage potential as required by section 23 of O. Reg 359/09. This assessment was necessary to identify the presence of built heritage features and cultural heritage landscapes that may be affected by the wind farm development.

A Heritage Impact Assessment (HIA) was conducted by heritage consultants Archaeological Research Associates Ltd (ARA), based in Waterloo, Ontario.

A background study was completed to establish a historic overview of the land use in the project area. Additionally, a windshield survey of the area was completed to identify any existing built heritage features or cultural landscapes. This survey was conducted in the summer of 2010. The full report was completed in July 2011 and delivered to MTC for review and comment.

6.1. BUILT HERITAGE FEATURES

Built Heritage (BH) resources are defined as: "one or more *significant* buildings, structures, monuments, installations or remains associated with architectural, cultural, social, political, economic or military history and identified as being important to a community. These resources may be identified through designation or heritage conservation easement under the *Ontario Heritage Act*, or listed by local, provincial or federal jurisdictions" (MMAH 2005).

Each homestead within the project area was photographed, examined and assessed for cultural heritage value or interest (CHVI) with consideration for the design or physical value, historical or associative value, and contextual value.

Six BH resources meeting criteria for CHVI were identified as being present on participating project lands; 13 further properties identified as BH resources meeting criteria for CHVI abut lands where turbines and associated infrastructure will be installed. Impact evaluation for each of these BH resources was completed.

The study considered proximity of each BH resources to project infrastructure, including: turbines, access roads, underground cable and overhead cable.

The criteria for evaluating both direct and indirect impacts to BH resources included the following:

- Destruction of any, or part of any significant heritage attributes.
- Alteration that is not sympathetic, or is incompatible with the historic fabric and appearance.
- Shadows created that alter the appearance of a heritage attribute or change the viability of a natural feature or plantings, such as a garden.

- Isolation of a heritage attribute from its surrounding environment, context or significant relationship.

- Direct or indirect obstruction of significant views or vistas within, from, or of built and natural features.

- A change in land use such as rezoning a battlefield from open space to residential use, allowing new development or site alteration to fill in the formerly open spaces.

- Land disturbances such as a change in grade that alters soils, and drainage patterns that adversely affect an archaeological resource.

None of the above noted criteria were applicable to any BH resource at the project site. Therefore no BH resource either on project land or on an abutting property will be negatively impacted by South Branch Wind Farm. This analysis is detailed in the Heritage Assessment Report, Section 6.2, attached to this report as Appendix C.

6.2. CULTURAL HERITAGE LANDSCAPE

The cultural heritage landscape (CHL) was evaluated using the guidelines established in UNESCO's World Heritage Convention of 1992.

This survey evaluates the landscape for heritage value based on historical events, significant historic individuals or families, characteristics of particular settlement patterns or lifestyles, long-standing relationship with the natural landscape, potential for pre-history information, and Aboriginal traditions.

Four potential CHLs were identified within the study area: 1) the study area as a whole; 2) the settlement of Brinston; 3) the hamlet of Dixon's Corners; and 4) the hamlet of Hulbert. The potential CHLs were evaluated for CHVI. Three of these were found to be CHLs of CHVI. (Brinston, Dixon's Corners and Hulbert). Heritage attributes of these identified CHLs are described in Table 13 of the HIA report.

An impact assessment on each identified CHL was completed based on similar criteria as was used for BH resources. None of the impact criteria were applicable to any of the identified CHLs in the project area. For this reason, none of the identified CHLs will be negatively impacted by South Branch Wind Farm. This analysis is detailed in the Heritage Assessment Report, Section 6.3, attached to this report as Appendix C.

6.3. CONCLUSIONS AND RECOMMENDATIONS

Following two iterations of review and update, the final report, dated September 7, 2011 was accepted by MTC reviewers. Formal approval of the report and concurrence with the study recommendations are provided in the MTC response letter dated September 7, 2011, presented in Appendix D, along with the final report in Appendix C.

The concluding remarks of the Heritage Impact Assessment are presented here for ease of reference:

> *"Taken as a whole, the number and significance of the heritage resources considered in this assessment demonstrates the marked richness of the vicinity of the study area. The proposed locality of the South Branch Wind Farm includes tangible and readily-visible heritage resources of CHVI that evoke nearly every important era since European settlement began in the region. As the impact evaluations in Sections 6.2 and 6.4 have demonstrated, the project will not result in any detrimental impacts to the heritage attributes and CHVI of these heritage resources.*
>
> *"As with all wind projects in relatively flat physiographic regions, the appearance of the surrounding landscape will be altered, on an interim basis, as a result of the erection of turbine towers, blades and nacelles. However, it must be articulated clearly that these do not constitute impacts to the essential heritage value of the identified BH resources and CHLs. The landscape of the study area is already defined by highly visible transmission towers and high tension wires. Accordingly, it is the professional opinion of Archaeological Research Associates Ltd. that the heritage attributes of the identified resources will not be negatively affected by the addition of project infrastructure.*
>
> *"Given that this study has 1) Considered all potential BH resources and CHLs at the project location; 2) has identified BH resources and CHLs of CHVI based on the criteria in O. Reg 9/06 (Service Ontario 2006); 3) has evaluated all potential direct and indirect impacts to these identified heritage resources; and 4) has found that the project will not negatively impact any of these identified heritage resources, ARA recommends that the South Branch Wind Farm be released from further heritage concerns."*

7. ANALYSIS AND CONCLUSIONS

As required in section 20 of O. Reg 359/09, Prowind has carefully considered potential impacts on protected properties, archaeological and heritage resources that may result from the proposed South Branch Wind Farm.

A thorough study of available records concluded that there are no protected properties within or abutting the project area.

Stage 1 & 2 Archaeological Assessments were completed throughout the project area. Two Euro-Canadian findspots were located during the Stage 2 surveys. Findspot 1 did not meet the MTC criteria for sites requiring further work. Findspot 2 was considered to have sufficient cultural heritage value and/or interest to warrant a Stage 3 – Site Specific assessment. At the recommendation of ARA, Prowind has elected to avoid the area and has since removed these lands from the project.

An HIA concluded that the study area did not meet the requirements to be identified as a significant cultural heritage landscape, and therefore that no detrimental impact is possible.

The HIA identified several heritage resources within the project area. After thorough assessment of these resources within the context of the local region concluded that the project be allowed to proceed without further heritage concerns.

APPENDIX A

STAGE 1 ARCHAEOLOGICAL ASSESSMENT SURVEY

Report on the 2009 Stage 1 Archaeological Background Research And Reconnaissance of Boundary Wind Farm, Part of Lot 36, Concession 5, Part of Lots 35-37, Concession 6, and Part of Lot 36, Concession 7, (GeographicTownship of Matilda), Township of South Dundas, County of Dundas.

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Project Personnel

Consulting Archaeologist	Michael Henry
Project Archaeologist	Dayle Elder
Field Assistants	Phil Rice
Report Preparation	Derek Howard Phil Rice
Draughting	Derek Howard Phil Rice

Executive Summary

This report describes the results of the 2009 Stage 1 Archaeological Background Research and Reconnaissance of Boundary Wind Farm, Part of Lot 36, Concession 5, Part of Lots 35-37, Concession 6, and Part of Lot 36, Concession 7, Township of South Dundas, (Former Township of Matilda), County of Dundas, as conducted by AMICK Consultants Limited. This study was conducted under Archaeological Consulting Licence #P058 issued to Mr. Michael Henry by the Minister of Culture for the Province of Ontario. This assessment was undertaken in order to address conditions of development. All work was conducted in conformity with the guidelines as stipulated within the Archaeological Assessment Technical Guidelines (OMCzCR 1993) and the Ontario Heritage Act (RSO 2005).

AMICK Consultants Limited was engaged by the proponent to undertake this assessment on December 23, 2008. A site visit was completed on April 01, 2009 consisting of a photo reconnaissance of the subject property.

It is recommended that wherever possible potential heritage features should be avoided in the design of the proposed undertaking and that any area that may be impacted through the proposed undertaking be subject to Stage 2 Archaeological Assessment in advance of any proposed alteration of the landscape, including working easements where movement of heavy equipment could cause unintended damage to fragile archaeological deposits if present. It is preferable that the Stage 2 Archaeological Assessment be completed before the final design phase of the proposed undertaking in order to maximize opportunities to avoid heritage features identified as a result of the physical assessment of the study area. Areas within the proposed project area that will not require Stage 2 Archaeological Assessment include areas of exposed bare rock, permanently wet areas, steep slopes and areas subject to deep prior impacts.

Permanently wet areas cannot be assessed using conventional methodology and would only be subject to detailed archaeological study should adjacent lands yield evidence of potentially significant archaeological deposits. Areas of steep slope are generally not

conducive to human occupation or intensive activity. Accordingly, there is no requirement to assess such areas unless table lands above these slopes yield evidence of potentially significant archaeological deposits that may be indicative of adjacent deposits on areas of steep slope. Areas of deep prior impacts minimize or even obliterate any potential for archaeological deposits. Some such disturbances such as roadways or parking areas may require specialized assessment methodology should evidence come to light to suggest that significant archaeological deposits may be present beneath the layers of disturbance and added aggregate material. Areas within the study area that would be considered exempt from Stage 2 Archaeological Assessment must be verified through field reconnaissance.

As a result of this Stage 1 Archaeological Background Research, it has been determined that the subject property and the area within which it is situated, is an area of high potential to yield evidence of potentially significant archaeological deposits. A Stage 2 Archaeological Assessment of the study area is recommended. This Stage 2 work should be completed in advance of any ground altering activities within the study area in order to ensure that no impacts occur to any archaeological resources which may be present.

1.0 INTRODUCTION

This report describes the results of the 2009 Stage 1 Archaeological Background Research and Reconnaissance of Boundary Wind Farm, Part of Lot 36, Concession 5, Part of Lots 35-37, Concession 6, and Part of Lot 36, Concession 7, Township of South Dundas, (Former Township of Matilda), County of Dundas, as conducted by AMICK Consultants Limited. This study was conducted under Archaeological Consulting Licence #P058 issued to Mr. Michael Henry by the Minister of Culture for the Province of Ontario. This assessment was undertaken in order to address conditions of development. All work was conducted in conformity with the guidelines as stipulated within the Archaeological Assessment Technical Guidelines (OMCzCR 1993) and the Ontario Heritage Act (RSO 2005).

AMICK Consultants Limited was engaged by the proponent to undertake this assessment and enter the property for the purpose of conducting archaeological background research on December 23, 2008. All records, documentation, field notes, photographs and artifacts related to the conduct and findings of these investigations are held at the Lakelands District corporate offices of AMICK Consultants Limited until such time that they can be transferred to an agency or institution approved by the Ministry of Culture on behalf of the government and citizens of Ontario.

2.0 LOCATION AND DESCRIPTION

2.1 Location and Current Conditions

As illustrated in Figure 1, the study area is located within Part of Lot 36, Concession 5, Part of Lots 35-37, Concession 6, and Part of Lot 36, Concession 7, Township of South Dundas, (Former Township of Matilda), County of Dundas. The irregularly-shaped study area is defined on the northwest edge as being located approximately 950 metres northwest of Branch Road, and the southeast edge as being located approximately 1125 metres southeast of Gilmore Road. The southwestern edge of the study area is located along Ryker Road, and the northeastern edge of the study area located perpendicular to the southeast of Branch Road is located approximately 200 metres southwest of New Ross Road. This northeast edge travels southwest approximately 550 metres before continuing southeast until reaching Sandy Creek Road, whereupon the study area boundary travels northeast for roughly 175 metres before continuing southeast to the southeast edge. The nearest major intersection is at County Road 21 and County Road 22 in the community of Shanly, located approximately 2,500 metres southwest of the study area (see Figure 1).

The study area is 353 hectares in area, of which 247.1 hectares (70%) are under cultivation in 26 fields of varying size, 45.9 hectares (13%) are forest or woodlot in 2 areas of varying size, and 56.5 hectares (16%) are non-cultivated (grassy areas around out-buildings, fallow and pastureland, stream banks) in 3 areas of varying size. The subject area contains 3 residential areas, 3 agricultural complexes, 3 low lying and wet areas and a high tension tower hydro corridor.

2.2 *Environmental Context*

2.2.1 Physiographic Region

The study area is located within the Edwardsburg Sand Plain physiographic region. This Edwardsburg Sand Plain is defined as bedrock and boulder clay covered by beds of sand over an area of roughly 725.2 km^2. The sand plain is almost continually level at 300-to-400 a.s.l. over the region, although hummocks and ridges appear occasionally. Peat bogs and shallow muck are generally near the surface of the lands, and the common forest is an association of moisture-loving trees including elm, ash, soft maple, and white cedar. The soils of the region are acid and deficient in all important nutrients; the bases of the sand have been largely leeched from the surface horizons of the soils, while the parent sands contain some lime carbonate (Chapman & Putnam 1984: 200).

2.2.2 Water Resources

The study area is located approximately 950 metres northwest of the South Nation River, which flows north-easterly into the Ottawa River roughly 60 kilometres to the north. Within the study area are two tributaries attributed to having potable water: Ferguson Drain, located roughly 100 metres southeast of the northwest edge within the study area, and Sandy Creek, which is located approximately 100 metres southeast of Sandy Creek Road within the study area. Based on proximity to water, whereby lands within 300 metres distance to sources of potable water are deemed to have been attractive to First Nations cultures, the property has a high potential for archaeological resources related to the history of First Nations occupation and land use in the area

3.0 BACKGROUND RESEARCH

As part of the present study, background research was conducted in order to determine if any archaeological resources had been formerly documented within or in close proximity to the subject property and if these same resources might be subject to impacts from the proposed undertaking. This data was also collected in order to assist in the assessment of the archaeological potential of the subject property and in order to establish the significance of any resources which might be encountered during the conduct of the present study. The requisite data was collected from the Archaeology Unit, Heritage Branch, Ontario ministry of Culture (OMC) and the corporate research library of AMICK Consultants Limited.

The Archaeological Sites Database indicates that there are no previously documented sites within the subject property. However, it must be noted that this is based on the assumption of the accuracy of information compiled from numerous researchers using different methodologies over many years. AMICK Consultants Limited assumes no responsibility for the accuracy of site descriptions, interpretations such as cultural affiliation, or location information derived from the Archaeological Sites Database administered by the Ontario Ministry of Culture. In addition, it must also be noted that the lack of formerly documented sites does not indicate that there are no sites present as the documentation of any

archaeological site is contingent upon prior research having been conducted on the subject property.

3.1 Native Occupation:

The data gathered from the Archaeological Sites Database administered by the Ontario Ministry of Culture was collected within a 2-kilometre radius about the study area. As a result it was determined that no archaeological sites relating directly to First Nations habitation/activity had been formally documented. However, the proximity of both potable and navigable sources of water do render this area one of high potential for archaeological resources of First Nations origins.

3.2 Euro-Canadian Settlement:

The Illustrated Historical Atlas of the Counties of Stormont, Dundas and Glengarry, Ont. (1879) indicates that three structures were situated within the study area by that date (see Figure 2).

Lot 36, Concession 5, is shown on the 1879 Historical Atlas as being partially owned by William Milligan with one structure in that property; and by James Milligan with one structure in that property within the study area.

Lot 35, Concession 6, is shown on the 1879 Historical Atlas as being partially owned by John Jordan with no structures in that property; and by Ed Jordan with no structures in that property within the study area.

Lot 36, Concession 6, is shown on the 1879 Historical Atlas as being partially owned by Ed Jordan with no structures in that property; by Richard Bannon with no structures in that property within the study area; by James Leizert with one structure in that property; and by J. S. Ross with no structures in that property within the study area.

Lot 37, Concession 6, is shown on the 1879 Historical Atlas as being partially owned by William Ryland with no structures in that property; by Adam Clark with one structure in that property; and by J. H. Currie with no structures in that property within the study area.

Lot 36, Concession 7, is shown on the 1879 Historical Atlas as being partially owned by Jonathan Hill with one structure in that property; by George Hess with no structures in that property; and by William Hess with no structure in that property within the study area.

It should be noted with respect to the foregoing discussion of possible heritage building sites based on Historic Atlas mapping that the 19th Century mapping data is not precise but figurative in its placement of structures. Accordingly, this data can only be seen as approximate. In addition, as the data included on these maps was sold by subscription, the lack of associated names and/or buildings on properties may not necessarily mean that none were present, it may only indicate that the residents were not willing to be listed.

Accordingly, the above data can be used to indicate the presence of structures where indicated but cannot be used as evidence for the converse.

Summary:

The access to potable and navigable water indicates a high potential for significant archaeological resources of Native origins. Background research suggests a high potential for archaeological resources of Euro-Canadian origins.

4.0 CONCLUSIONS & RECOMMENDATIONS

AMICK Consultants Limited was engaged by the proponent to undertake this assessment on December 23, 2008. A site visit was completed on April 09, 2009 consisting of a photo reconnaissance of the subject property.

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It must be noted at this time that no archaeological survey, regardless of its intensity, can entirely negate the possibility of deeply buried cultural material, notably human interments. In consequence, it is further recommended that should any such remains be encountered during construction activities, the Regulatory Operations Group, Ontario Ministry of Culture and/or the Cemeteries Regulation Group of the Ontario Ministry of Consumer and Commercial Relations and AMICK Consultants Limited be contacted immediately.

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		Middleport	1300-1400 A.D.	
		Huron	1400-1650 A.D.	Warfare
Historic	Early	Odawa, Ojibwa	1700-1875 A.D.	Social displacement.
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Figure 1 Location of the Subject Property

Figure 2 Segment of the Historic Atlas for the Township of Matilda (1879)

Figure 3 Detailed Plan of the Archaeological Reconnaissance

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Plate 2 Farm Complex facing Northwest

Plate 3 Farm Complex facing Southeast

Plate 4 Residential Area facing North

Plate 5 Residential Area facing Northwest

Plate 6 Residential Area facing Northwest

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Plate 14 Sample of Field Conditions facing East

Plate 15 Sample of Field Conditions facing

Plate 16 Sample of Field Conditions facing

Report on the 2009 Stage 1 Archaeological Background Research and Reconnaissance of Brinston / South Branch Wind Farms, Part of Lots 16-18, Concession 6, Part of Lots 12-18, Concessions 7 & 8, and Part of Lots 12-15, Concession 9, Township of South Dundas, County of Dundas.

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Project Personnel

Consulting Archaeologist	Michael Henry
Project Archaeologist	Dayle Elder
Field Assistants	Phil Rice
Report Preparation	Phil Rice
Draughting	Derek Howard Phil Rice

Executive Summary

This report describes the results of the 2009 Stage 1 Archaeological Background Research and Reconnaissance of Brinston / South Branch Wind Farms, Part of Lots 16-18, Concession 6, Part of Lots 12-18, Concessions 7 & 8, and Part of Lots 12-15, Concession 9, Township of South Dundas, County of Dundas, as conducted by AMICK Consultants Limited. This study was conducted under Archaeological Consulting Licence #P058 issued to Mr. Michael Henry by the Minister of Culture for the Province of Ontario. This assessment was undertaken in order to address conditions of development. All work was conducted in conformity with the guidelines as stipulated within the Archaeological Assessment Technical Guidelines (OMCzCR 1993) and the Ontario Heritage Act (RSO 2005).

AMICK Consultants Limited was engaged by the proponent to undertake this assessment, on December 23, 2008. A site visit was completed on April 01, 2009 consisting of a photo reconnaissance of the subject property.

It is recommended that wherever possible potential heritage features should be avoided in the design of the proposed undertaking and that any area that may be impacted through the proposed undertaking be subject to Stage 2 Archaeological Assessment in advance of any proposed alteration of the landscape, including working easements where movement of heavy equipment could cause unintended damage to fragile archaeological deposits if present. It is preferable that the Stage 2 Archaeological Assessment be completed before the final design phase of the proposed undertaking in order to maximize opportunities to avoid heritage features identified as a result of the physical assessment of the study area. Areas within the proposed project area that will not require Stage 2 Archaeological Assessment include areas of exposed bare rock, permanently wet areas, steep slopes and areas subject to deep prior impacts.

Permanently wet areas cannot be assessed using conventional methodology and would only be subject to detailed archaeological study should adjacent lands yield evidence of potentially significant archaeological deposits. Areas of steep slope are generally not conducive to human occupation or intensive activity. Accordingly, there is no requirement to assess such areas unless table lands above these slopes yield evidence of potentially significant archaeological deposits that may be indicative of adjacent deposits on areas of steep slope.

Areas of deep prior impacts minimize or even obliterate any potential for archaeological deposits. Some such disturbances such as roadways or parking areas may require specialized assessment methodology should evidence come to light to suggest that significant archaeological deposits may be present beneath the layers of disturbance and added aggregate material. Areas within the study area that would be considered exempt from Stage 2 Archaeological Assessment must be verified through field reconnaissance.

As a result of this Stage 1 Archaeological Background Research, it has been determined that the subject property and the area within which it is situated, is an area of high potential to yield evidence of potentially significant archaeological deposits. A Stage 2 Archaeological Assessment of the study area is recommended. This Stage 2 work should be completed in advance of any ground altering activities within the study area in order to ensure that no impacts occur to any archaeological resources which may be present.

1.0 INTRODUCTION

This report describes the results of the 2009 Stage 1 Archaeological Background Research and Reconnaissance of Brinston / South Branch Wind Farms, Part of Lots 16-18, Concession 6, Part of Lots 12-18, Concessions 7 & 8, and Part of Lots 12-15, Concession 9, Township of South Dundas, County of Dundas, as conducted by AMICK Consultants Limited. This study was conducted under Archaeological Consulting Licence #P058 issued to Mr. Michael Henry by the Minister of Culture for the Province of Ontario. This assessment was undertaken in order to address conditions of development. All work was conducted in conformity with the guidelines as stipulated within the Archaeological Assessment Technical Guidelines (OMCzCR 1993) and the Ontario Heritage Act (RSO 2005).

AMICK Consultants Limited was engaged by the proponent to undertake this assessment and enter the property for the purpose of conducting archaeological background research on December 23, 2008. All records, documentation, field notes, photographs and artifacts related to the conduct and findings of these investigations are held at the Lakelands District corporate offices of AMICK Consultants Limited until such time that they can be transferred to an agency or institution approved by the Ministry of Culture on behalf of the government and citizens of Ontario.

2.0 LOCATION AND DESCRIPTION

2.1 Location and Current Conditions

As illustrated in Figure 1, the study area is located within Part of Lots 16-18, Concession 6, Part of Lots 12-18, Concessions 7 & 8, and Part of Lots 12-15, Concession 9, Township of South Dundas, County of Dundas. The study area is defined on the southwest edge by Brinston Road, from Oak Valley Road to the northwest to nearly Dundela Road in the southeast. The northwestern edge of the study area is located on Oak Valley Road. The study area is irregularly shaped along its northeast edge from Oak Valley Road south-eastward until Henderson Road where it travels roughly southwest into the town of Brinston, and then heads southeast in a nearly square-shaped area just south of Brinston. The nearest major intersection is at Henderson Road and Brinston Road in the town of Brinston, located along the southwestern edge of the study area.

The study area is 1342.8 hectares in area, of which 1109.5 hectares are under cultivation in 32 fields of varying size, 13.1 hectares are developed in 3 areas of varying size, 142.1 hectares are forest or woodlot in 4 areas of varying size, 73.5 hectares are non-cultivated (grassy areas around out-buildings, fallow and pastureland, stream banks) in five areas of varying size, and 4.6 hectares are surface water. The subject property contains 4 farm complexes, 7 residential areas, a hydro corridor, 1 residential area where the structures have been demolished, and part of the town of Brinston. The portion of the town of Brinston contained 8 residences and 4 businesses. The subject property also contains several unnamed low lying and wet streams and drains as well as the South Branch of the south Nation River.

2.2 ***Environmental Context***

2.2.1 Physiographic Region

The subject property is situated within the Winchester Clay Plain physiographic region. This physiographic region, located to the north and east of the Glengarry till plain, is a low-relief area within the drainage basin of the South Nation River. The flatness of the plain is best demonstrated by how the elevation changes only 15 metres over a distance of nearly 50 kilometres. In some instances, underlying till protrudes to create low drumlins, and even rarer are occasional areas of shallow soil over bedrock. It should be noted that there are several thousand acres of bog. The clays in the south and west are high in lime and grey in colour, the original vegetation of these plains was of the swamp forest type consisting primarily of red maple, elm and white and black ash amongst others, and the soils are imperfectly-to-poorly drained clay and clay loam (Chapman & Putnam 1984: 203-205).

In the southeast portion of the property, specifically within Parts of Lots 13 through 16, Concession 6, of the Township of South Dundas, lies the Glengarry Till Plain physiographic region. This physiographic region is also a region of low-relief, forming the drainage divide between the St. Lawrence and the Ottawa basin. The surface of the region is undulating-to-rolling, consisting of long morainic ridges and a few well-formed drumlins along with intervening clay flats and swamps. The till, which has a medium texture and is mostly limestone mixed with materials from Precambrian rocks and sandstone, is very stony with boulder pavements on the crests of ridges and drumlins throughout (Chapman & Putnam 1984: 201-203).

2.2.2 Water Resources

Several watercourses are located within the study area, but none as prominent as the South Branch tributary of the South Nation River which is situated in Lots 17 & 18, Concession 6, Lots 13 to 17, Concession 7, and Lot 13, Concession 8. The South Nation River is a source of potable water as well as a navigable waterway, which flows north-easterly into the Ottawa River roughly 60 kilometres to the north. Several tributaries and drains flowing into the South Branch are located through each lot and concession throughout the study area. Based on proximity to water, whereby lands within 300 metres distance to sources of potable water are deemed to have been attractive to First Nations cultures, the property has a high potential for archaeological resources related to the history of First Nations occupation and land use in the area

3.0 BACKGROUND RESEARCH

As part of the present study, background research was conducted in order to determine if any archaeological resources had been formerly documented within or in close proximity to the subject property and if these same resources might be subject to impacts from the proposed undertaking. This data was also collected in order to assist in the assessment of the archaeological potential of the subject property and in order to establish the significance of any resources which might be encountered during the conduct of the present study. The requisite

data was collected from the Archaeology Unit, Heritage Branch, Ontario ministry of Culture (OMC) and the corporate research library of AMICK Consultants Limited.

The Archaeological Sites Database indicates that there are no previously documented sites within the subject property. However, it must be noted that this is based on the assumption of the accuracy of information compiled from numerous researchers using different methodologies over many years. AMICK Consultants Limited assumes no responsibility for the accuracy of site descriptions, interpretations such as cultural affiliation, or location information derived from the Archaeological Sites Database administered by the Ontario Ministry of Culture. In addition, it must also be noted that the lack of formerly documented sites does not indicate that there are no sites present as the documentation of any archaeological site is contingent upon prior research having been conducted on the subject property.

3.1 Native Occupation:

The data gathered from the Archaeological Sites Database administered by the Ontario Ministry of Culture was collected within a 2-kilometre radius about the study area. As a result it was determined that no archaeological sites relating directly to First Nations habitation/activity had been formally documented. However, the proximity of both potable and navigable sources of water do render this area one of high potential for archaeological resources of First Nations origins.

3.2 Euro-Canadian Settlement:

The data gathered from the Archaeological Sites Database administered by the Ontario Ministry of Culture was collected within a 2-kilometre radius about the study area. As a result it was determined that no archaeological sites relating directly to Euro-Canadian habitation/activity had been formally documented.

The Illustrated Historical Atlas of the Counties of Stormont, Dundas and Glengarry, Ont. (1879) indicates that several structures were situated within the study area by that date. Additionally, the community of Brinston's Corners was contained within the southern portion of Lot 18, Concession 6 of the Geographic Township of Matilda by that date, and had been established as an urban area (see Figure 2).

Lot 16, Concession 5, is shown on the 1879 Historical Atlas as being partially owned by William Locke with no structures in that property within the study area.

Lot 17, Concession 5, is shown on the 1879 Historical Atlas as being partially owned by Carmi Locke with no structures in that property; by James Locke with no structures in that property; by Charles Locke with no structures in that property; and by Jonathan Locke with no structures in that property within the study area.

Lot 18, Concession 5, is shown on the 1879 Historical Atlas as being partially owned by Francis Barriger with no structures in that property; and by William Locke with two structures in that property within the study area.

Lot 13, Concession 6, is shown on the 1879 Historical Atlas as being partially owned by M. Houlahan with one structure in that property within the study area.

Lot 14, Concession 6, is shown on the 1879 Historical Atlas as being partially owned by Jonathan E. Johnson with two structures in that property; and by James Strader with one structure in that property within the study area.

Lot 15, Concession 6, is shown on the 1879 Historical Atlas as being partially owned by Alexander Locke with no structures in that property; by G. N. Strader with no structures in that property; and by James Locke with no structures in that property within the study area.

Lot 16, Concession 6, is shown on the 1879 Historical Atlas as being partially owned by Daniel Driscoll with one structure in that property; and by Stephen Clow with one structure in that property within the study area.

Lot 17, Concession 6, is shown on the 1879 Historical Atlas as being partially owned by Jonathan Payne with no structures in that property; by George Locke with no structures in that property; and by D. Barriger with one structure in that property within the study area.

Lot 18, Concession 6, is shown on the 1879 Historical Atlas as being partially owned by A. Barriger with no structures in that property; by Duncan C. Clow with one structures in that property; and by Thomas Brinston with the confines of the community of Brinston's Corners in that property within the study area.

Lot 13, Concession 7, is shown on the 1879 Historical Atlas as being partially owned by Michael Houlahan with no structures in that property; by Martin Houlanah with no structures in that property; and by W. Brown with one structure in that property within the study area.

Lot 14, Concession 7, is shown on the 1879 Historical Atlas as being partially owned by Thomas Higginson with one structure in that property; by W. Higginson with no structures in that property; by J. E. Johnson with no structures in that property; and by James Ellis with no structures in that property within the study area.

Lot 15, Concession 7, is shown on the 1879 Historical Atlas as being partially owned by James Ellis with one structure in that property; and by P. & S. Doyle with one structure in that property within the study area.

Lot 16, Concession 7, is shown on the 1879 Historical Atlas as being partially owned by Thomas Bickford with one in that property; by J. Payne with no structures in that property; and by Jonathan Quinnell with one structure in that property within the study area.

Lot 17, Concession 7, is shown on the 1879 Historical Atlas as being partially owned by Levi Montgomery with no structures in that property; and by Eli. J. Montgomery with one structure in that property within the study area.

Lot 18, Concession 7, is shown on the 1879 Historical Atlas as being partially owned by Levi Montgomery with one structure in that property; and by D. McEwen with one structure in that property within the study area.

Lot 12, Concession 8, is shown on the 1879 Historical Atlas as being partially owned by The McOuat Estate with one structure in that property within the study area.

Lot 13, Concession 8, is shown on the 1879 Historical Atlas as being fully owned by Alex Gallagher with no structures in that property within the study area.

Lot 14, Concession 8, is shown on the 1879 Historical Atlas as being partially owned by Alex Gallagher with two structures in that property; and by Henry McQuigg with one structure in that property within the study area.

Lot 15, Concession 8, is shown on the 1879 Historical Atlas as being partially owned by Peter Doyle with one structure in that property; and by N. & E. Tousaint with no structures in that property within the study area.

Lot 16, Concession 8, is shown on the 1879 Historical Atlas as being partially owned by James Ellis with one structure in that property; by H. Steinburg with one structure in that property; and by J. Armstrong with one structure in that property within the study area.

Lot 17, Concession 8, is shown on the 1879 Historical Atlas as being partially owned by Robert Watt with no structures in that property within the study area.

Lot 18, Concession 8, is shown on the 1879 Historical Atlas as being partially owned by Robert Watt with one structure in that property; and by John Morrison with no structures in that property within the study area.

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Summary:

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	Late	Pickering	800-1300 A.D.	Villages and agriculture.
		Uren	1300-1350 A.D.	Larger villages.
		Middleport	1300-1400 A.D.	
		Huron	1400-1650 A.D.	Warfare
Historic	Early	Odawa, Ojibwa	1700-1875 A.D.	Social displacement.
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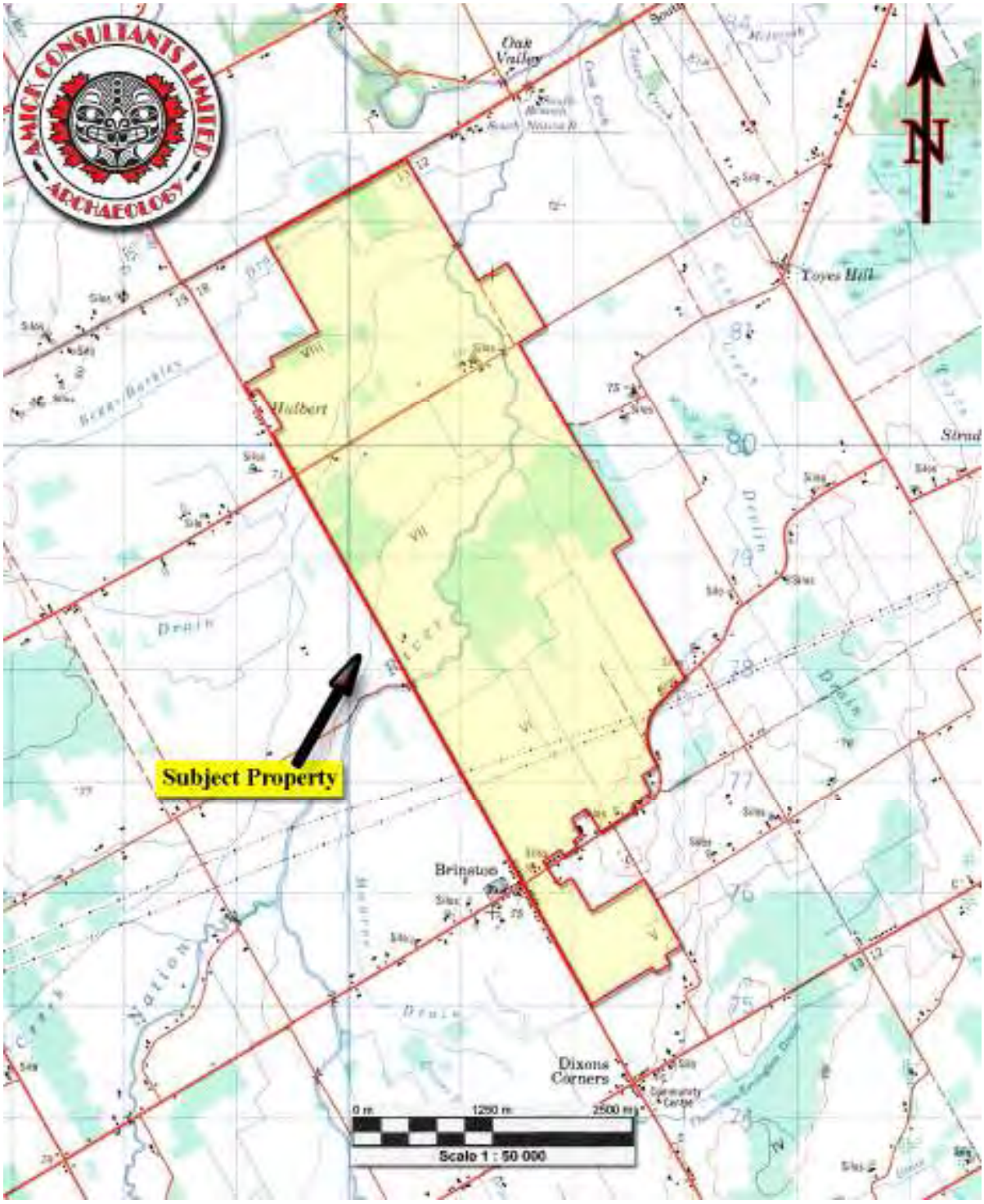

Figure 1 Location of the Subject Property

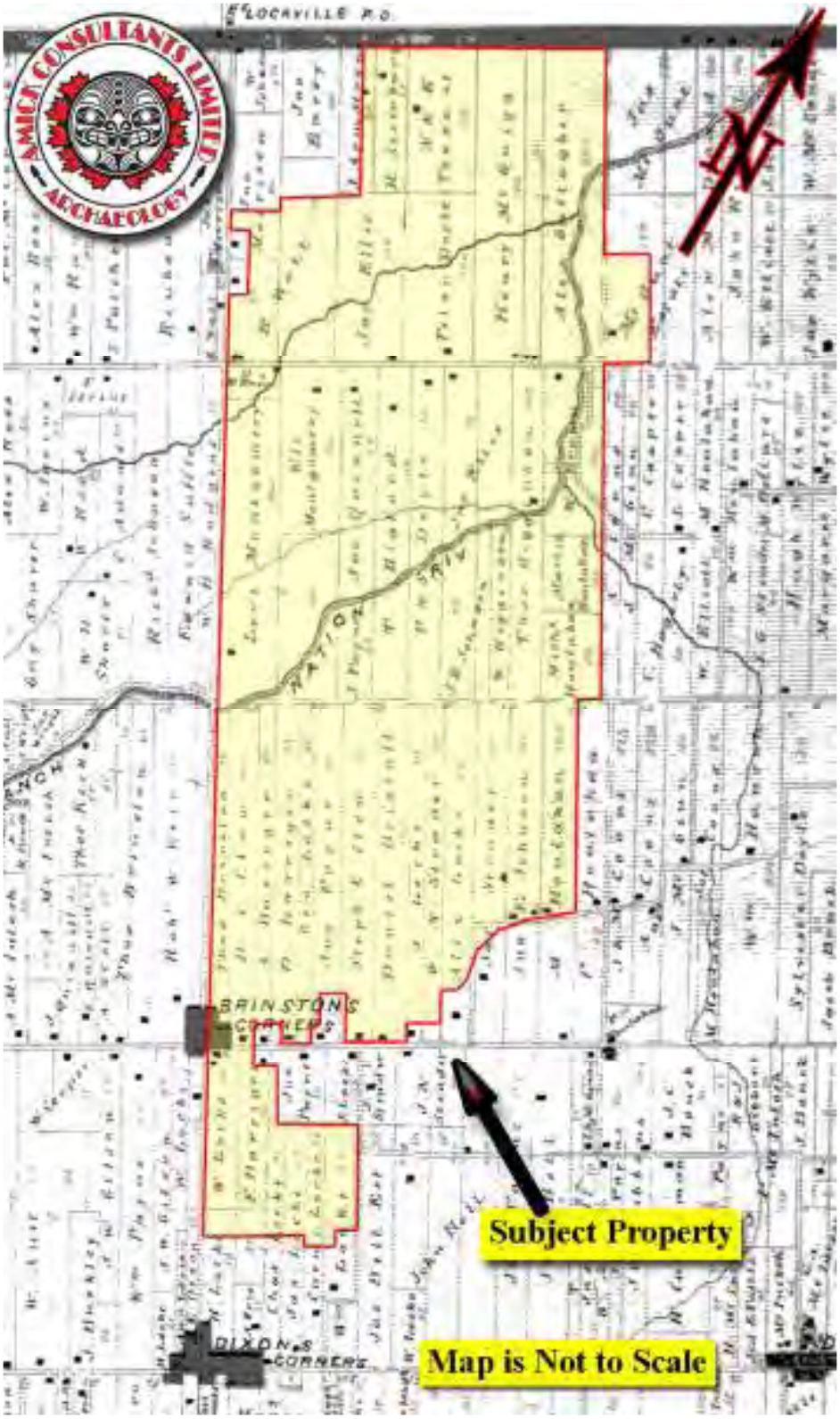

Figure 2 Segment of the Historic Atlas for the Township of Matilda, County of Dundas (1879)

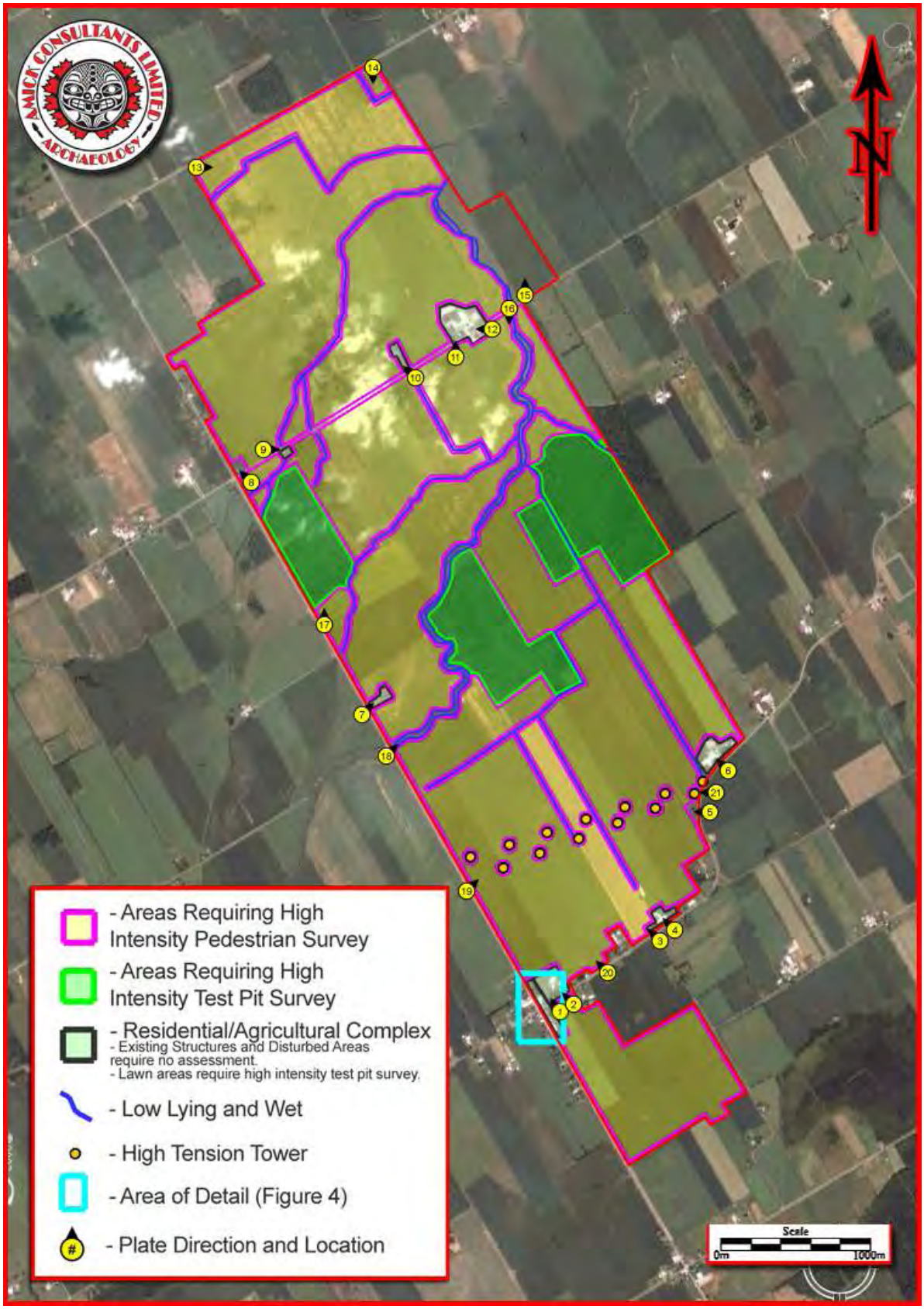

Figure 3 Detailed Plan of the Archaeological Assessment

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Plate 2 Farm Complex 11091 Henderson Rd. facing Northwest

Plate 3 Residential Area 11185 Henderson Rd. facing Northwest

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Plate 25 4121 Brinston Rd. facing East

Plate 26 4125 Brinston Rd. facing East

Plate 27 4129 Brinston Rd. facing East

Plate 28 1066 Hendrson Rd. facing Northeast

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Plate 31 4153 Brinston Rd. facing East

Plate 32 4155 Brinston Rd. facing East

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APPENDIX B

STAGE 1 & 2 ARCHAEOLOGICAL ASSESSMENT SURVEY

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Stage 1 and 2 Archaeological Assessments
South Branch Wind Farm (FIT-FT3B1IC)
Townships of South Dundas and Edwardsburgh/Cardinal
Geo. Townships of Matilda and Edwardsburgh
United Counties of Stormont, Dundas and Glengarry and United Counties of Leeds and Grenville, Ontario

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Project #P007-264 and #P007-300
PIF #P007-264-2010 and #P007-300-2011

25/08/2011

Revised Report

Executive Summary

In December 2010 and April – June 2011, ARA carried out Stage 1 and 2 archaeological assessments of lands with the potential to be impacted by the proposed South Branch Wind Farm in the Townships of South Dundas and Edwardsburgh/Cardinal, Ontario. The work was carried out under MTC licence #P007, PIF #P007-264-2010 and #P007-300-2011, and was completed under contract to Prowind Canada Inc. in advance of a REA application.

A portion of the project lands were subjected to a Stage 1 archaeological assessment by AMICK Consultants Ltd. in 2009. At that time, AMICK indicated that nearly all of their study area exhibited archaeological potential, and accordingly recommended a Stage 2 property survey. ARA conducted a Stage 1 archaeological assessment of the remaining project lands in December 2010 under MTC licence #P007, PIF #P007-264-2010. In accordance with Section 1.0 the *Draft Standards and Guidelines for Consultant Archaeologists* (MCL 2009:1–8), the results of the Stage 1 assessment were achieved through detailed documentary research of the archaeological and land use history of each study area, coupled with the application of archaeological potential modeling.

The results of the Stage 1 assessment indicated that the majority of the study area had clear potential for Pre-Contact and Euro-Canadian era archaeological sites. Local features with archaeological potential included multiple primary water sources and historically-surveyed roadways. Isolated areas with no archaeological potential were identified in lands disturbed by modern infrastructural development (e.g. roadways, ditches, easements, etc). ARA concluded that all lands with archaeological potential to be directly impacted by the project warranted a Stage 2 property survey.

In April, May and June 2011, ARA carried out a Stage 2 archaeological assessment on those parts of the project lands to be directly impacted by construction activities associated with the South Branch Wind Farm. These included turbine pads, laydown areas, underground collector lines, a switching station, access roads and associated project infrastructure. The work was conducted under MTC licence #P007, PIF #P007-300-2011. Legal permission to enter project lands and engage in all necessary fieldwork activities was granted by the property owners. The property survey, completed under optimal conditions, resulted in the identification of two Euro-Canadian findspots (Findspots 1–2).

Findspot 1 was identified as a Euro-Canadian artifact scatter broadly dating from the mid-19th to late 20th century. As this scatter did not meet the MTC's criteria for sites requiring further work, ARA did not recommend a Stage 3 archaeological assessment. Findspot 2 was identified as a Euro-Canadian homestead, consisting of foundations, a well and an artifact scatter dating from the early 19th to the early 20th century. Findspot 2 was considered to have sufficient CHVI to warrant a Stage 3 site-specific assessment. ARA recommended avoidance and the proponent removed all impacting project infrastructure (a buffer zone of 1.88 km now exists).

ARA feels that no further archaeological study of the subject lands would be productive. It is recommended that the proposed South Branch Wind Farm be released from further archaeological concerns. A *Letter of Review and Acceptance into the Provincial Register of Reports* is requested, as provided for in Section 65.1 of the *Ontario Heritage Act*.

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- Rochelle Rumney, Environmental Planner, Prowind Canada Inc.
- Robert Von Bitter, Archaeological Data Coordinator, MTC.
- Cathy Weston, President, Prowind Canada Inc.

1.0 PROJECT CONTEXT

1.1 Development Context

Under a contract awarded by Prowind Canada Inc. in August 2010, ARA carried out Stage 1 and 2 archaeological assessments of lands with the potential to be impacted by the proposed South Branch Wind Farm (FIT-FT3B1IC) in the Townships of South Dundas and Edwardsburgh/Cardinal, Ontario.

The South Branch Wind Farm project area consists of two irregularly-shaped blocks of land encompassing the Stage 1 and 2 study areas (see Maps 1–2). The eastern block is located in the Township of South Dundas, United Counties of Stormont, Dundas and Glengarry, Ontario. It measures 1,113 ha and falls on parts of Lots 12–21, Concession 5–8 in the Geographic Township of Matilda. This block is bounded by County Road 5 in the north, County Road 18 in the south and agricultural lands to the east and west.

The western block is located partly within the Township of South Dundas, United Counties of Stormont, Dundas and Glengarry, and partly within the Township of Edwardsburg/Cardinal, United Counties of Leeds and Grenville. It measures 300 ha in area, and falls on parts of Lots 35–37, Concession 6 of the Geographic Township of Matilda and parts of Lots 1–2, Concession 7 of the Geographic Township of Edwardsburg. This block is bounded by Branch Road and Dobbie Road in the north, County Road 18 in the south and agricultural lands to the east and west.

The proponent has secured a 30 MW contract to sell power to the Ontario Power Authority (OPA) under the FIT program, and is preparing a REA application in accordance with Ontario Regulation 359/09 under Part V.0.1 of the *Environmental Protection Act* (Prowind 2011). The project area originally consisted of 15 wind turbines, one substation, multiple access roads/crane paths, an underground collector system and two sections of new overhead electrical poles (see Appendix A). In order to avoid a findspot of significant CHVI, the project layout has since been revised to remove Turbine 14 and its associated infrastructure (see Appendices B–C).

In April 2009, two areas within the current project lands of the South Branch Wind Farm were subjected to Stage 1 assessments by AMICK (2009a; 2009b). At that time, three distinct renewable energy projects were envisioned: the Brinston, South Branch and Boundary Wind Farms. AMICK's work, conducted under PIF #P058-440-2009 and PIF #P058-452-2009, resulted in the identification of numerous areas of archaeological potential and isolated areas of no archaeological potential (see Section 1.3.2, Appendices D-E). Following these Stage 1 assessments, the three projects were united and the participating properties were partially redefined. The Stage 1 assessment documented in this report was conducted on all previously un-assessed project lands in December 2010 under MTC licence #P007, PIF #P007-264-2010. Although governed by the *Archaeological Assessment Technical Guidelines* (MCTR 1993), ARA has made every effort to meet the more recent standards set out in the *Draft Standards and Guidelines for Consultant Archaeologists* (MCL 2009).

The Stage 2 assessment of all lands to be impacted by project infrastructure was conducted in April, May and June 2011 under MTC licence #P007, PIF #P007-300-2011. This work was governed by the *Standards and Guidelines for Consultant Archaeologists* (MTC 2011). Legal permission to enter project lands and engage in all necessary fieldwork activities was granted by the property owners.

The Stage 1 and 2 assessments were carried out in order to:

- Provide information concerning the study area's geography, history and current land condition;
- Determine the presence of known archaeological sites in the study area;
- Evaluate in detail the study area's archaeological potential;
- Empirically document all archaeological resources on the property;
- Determine whether the property contains resources requiring further assessment; and
- Recommend appropriate Stage 3 assessment strategies for these sites if identified.

These assessments were conducted in accordance with the provisions of the *Ontario Heritage Act*, R.S.O. 1990, c. O.18. All notes, photographs and records pertaining to this work are housed in a secure company storage facility located at 97 Gatewood Road, City of Kitchener, Ontario. The MTC is asked to review the results and recommendations presented in this report.

1.2 Historical Context

After a century of archaeological work in southern Ontario, scholarly understanding of the historic usage of lands along the St. Lawrence River has become fairly well-developed. What follows is a detailed summary of the archaeological cultures that have settled in the vicinity of the study area over the past 11,000 years; from the earliest Palaeo-Indian hunters to the most recent Euro-Canadian farmers.

1.2.1 Pre-Contact

1.2.1.1 Palaeo-Indian Period

The first documented evidence of occupation in southern Ontario dates to around 9000 BC, after the retreat of the Wisconsinan glaciers and the formation of Lake Algonquin, Early Lake Erie and Early Lake Ontario (Karrow and Warner 1990; Jackson et al. 2000:416–419). At that time small Palaeo-Indian bands moved into the region, leading mobile lives based on the communal hunting of large game and the collection of plant-based food resources (Ellis and Deller 1990:38; MCL 1998:34). Current understanding suggests that Palaeo-Indian peoples ranged over very wide territories in order to live sustainably in a post-glacial environment with low biotic productivity. This environment changed considerably over the course of the period, developing from sub-arctic spruce forests to a boreal forest dominated by pine (Ellis and Deller 1990:52–54, 60).

An Early Palaeo-Indian period (ca. 9000–8400 BC) and a Late Palaeo-Indian period (ca. 8400–7800 BC) are discernable amongst the lithic spear and dart points. Early points are characterized

by grooves or 'flutes' near the base while the later examples lack such fluting. All types would have been used to hunt caribou and other 'big game'. Archaeological sites from both time-periods typically served as small campsites or 'way-stations' (occasionally with hearths or fire-pits), where tool manufacture/maintenance and hide processing would have taken place. For the most part, these sites tend to be small (less than 200 sq. m) and ephemeral (Ellis and Deller 1990:51–52, 60–62). Many parts of the Palaeo-Indian lifeway remain unknown.

1.2.1.2 Archaic Period

Beginning in the early 8th millennium BC, the biotic productivity of the environment began to increase as the climate warmed and southern Ontario was colonized by deciduous forests. This caused the fauna of the area to change as well, and ancient peoples developed new forms of tools and alternate hunting practices to better exploit both animal and plant-based food sources. These new archaeological cultures are referred to as 'Archaic'. Thousands of years of gradual change in stone tool styles allows for the recognition of Early (7800–6000 BC), Middle (6000–3000 BC) and Late Archaic periods (3000–900 BC) (MCL 1998:34).

The Early and Middle Archaic periods are characterized by substantial increases in the number of archaeological sites and a growing diversity amongst stone tool types and exploited raw materials. Notable changes in Archaic assemblages include a shift to notched or stemmed projectile points, a growing prominence of net-sinkers (notched pebbles) and an increased reliance on artifacts like bone fish hooks and harpoons. In addition to these smaller items, archaeologists also begin to find evidence of more massive wood working tools such as ground stone axes and chisels (Ellis et al. 1990:65–67). Towards the end of the Middle Archaic (ca. 3500 BC), the archaeological evidence suggests that populations were 1) increasing in size, 2) paying more attention to ritual activities, 3) engaging in long distance exchange (e.g. in items such as copper) and 4) becoming less mobile (Ellis et al. 1990:93; MCL 1998:34). Late Archaic peoples typically made use of shoreline/riverine sites located in rich environmental zones during the spring, summer and early fall, and moved further inland to deer hunting and fruit-gathering sites during late fall and winter (Ellis et al. 1990:114).

During the Late Archaic these developments continued, and new types of projectile points appear along with the first true cemeteries. Excavations of burials from this time-frame indicate that human remains were often cremated and interred with numerous grave goods, including items such as projectile points, stone tools, red ochre, materials for fire-making kits, copper beads, bracelets, beaver incisors, and bear maxilla masks (Ellis et al. 1990:115–117). Interestingly, these true cemeteries may have been established in an attempt to solidify territorial claims, linking a given band or collection of bands to a specific geographic location.

From the tools unearthed at Archaic period sites it is clear that these people had an encyclopaedic understanding of the environment that they inhabited. The number and density of the sites that have been found suggest that the environment was exploited in a successful and sustainable way over a considerable period of time. The success of Archaic lifeways is attested to by clear evidence of steady population increases over time. Eventually, these increases set the stage for the final period of Pre-Contact occupation – the Woodland Period (Ellis et al. 1990:120).

1.2.1.3 Early and Middle Woodland Periods

The beginning of the Woodland period is primarily distinguished from the earlier Archaic by the widespread appearance of pottery. Although this difference stands out prominently amongst the archaeological remains, it is widely believed that hunting and gathering remained the primary subsistence strategy throughout the Early Woodland period (900–400 BC) and well into the Middle Woodland period (400 BC–AD 600). In addition to adopting ceramics, communities also grew in size during this period and participated in developed and widespread trade relations (Spence et al. 1990; MCL 1998:34).

Two distinct regional traditions developed in the vicinity of the study area during the Early Woodland period: 1) the Meadowood complex, located in southern Ontario, southern Quebec and western New York; and 2) the Middlesex complex, located primarily in New York, New England and along the St. Lawrence River. Peoples associated with both of these archaeological complexes would have made use of the local area during the 1st millennium BC.

The Meadowood archaeological culture (900–400 BC) is characterized by distinctive Meadowood preforms, side-notched Meadowood points and Vinette 1 ceramics (thick and crude handmade pottery with cord-marked decoration). Meadowood peoples are believed to have been organized in bands of roughly 35 people, and some of the best documented sites are fall camps geared towards the hunting of deer and the gathering of nuts (Spence et al. 1990:128–137).

Evidence of the Middlesex archaeological culture (450–50 BC) originates primarily from burial mounds and the associated grave goods found within. The artifactual assemblage is characterized by blocked-end tubes (long and slender tubes made of ground and polished Ohio ‘firestone’, possibly used as pipes) and a variety of large bifacially worked items (e.g. long leaf-shaped blades, long stemmed blades, etc). On the whole, Middlesex archaeological remains share many similarities to the Adena and Hopewell complexes from southern Ohio, likely resulting from the exchange of ideas and materials. Scholars believe that as our understanding of Middlesex ‘culture’ grows, it will become increasingly apparent that the remains represent a mortuary tradition shared by numerous distinct hunter-gatherer groups, rather than any unified cultural group (Spence et al. 1990:138-142).

Ceramic traditions continued to develop during the subsequent Middle Woodland period, and three distinct archaeological cultures emerged in southern Ontario: ‘Point Peninsula’ north and northeast of Lake Ontario, ‘Couture’ near Lake St. Clair and ‘Saugeen’ in the rest of southwestern Ontario (see Map 4). These cultures all shared a similar method of decorating pottery, using either dentate or pseudo-scallop shell stamp impressions, but they differed in terms of preferred vessel shape, zones of decoration and surface finish (Spence et al. 1990:142–43).

The Point Peninsula complex (400 BC–AD 900) extended through south-central and eastern Ontario, southern Quebec, western and northern New York and north-western Vermont. It is characterized mainly by small camp sites and seasonal village sites that would have been repeatedly used over the years. Point Peninsula material culture is distinguished by the use of Vinette 2 ceramics (coil constructed pottery with dentate or pseudo-scallop decoration) and influences from northern Ontario and the Hopewell area to the south (Spence et al. 1990:157-

158). Hopewellian influence, for example, can be seen in the continued use burial mounds (e.g. the Serpent Mounds near Peterborough) until ca. AD 400 (Wright 1972:44-51).

During the transition between the Middle and Late Woodland periods (AD 600-900), the first rudimentary evidence of maize (corn) horticulture appears in southern Ontario. Based on the available archaeological evidence, which comes primarily from the vicinity of the Grand and Credit Rivers, this pivotal development was not particularly widespread (Fox 1990:171, Map 6.1). The adoption of maize horticulture instead appears to be linked to the emergence of the Princess Point complex, whose material remains include decorated ceramics (combining cord roughening, impressed lines and punctuate designs), triangular projectile points, T-based drills, steatite and ceramic pipes, and ground stone chisels and adzes (Fox 1990:174-188). The distinctive artifacts and horticultural practices of Princess Point peoples have led to the suggestion that they were directly ancestral to the later Iroquoian-speaking populations of southern Ontario (Warrick 2000:427).

Although Princess Point sites are absent in the immediate vicinity of the study area, a regional variant has been identified near Cornwall at the Ault Park site (see Map 5). Although the pottery from Ault Park shares many similarities with Princess Point sites to the west, there are clear differences indicative of a level of continuity with the earlier Point Peninsula complex (Fox 1990:183-186).

1.2.1.4 Late Woodland Period

In the Late Woodland period (ca. AD 900–1600), maize horticulture spread beyond the Grand and Credit River areas, allowing for population increases which in turn led to larger settlement sizes, higher settlement density and increased social complexity among the peoples involved. These developments are believed to be linked to the spread of Iroquoian-speaking populations in the area; ancestors of the historically-documented Huron, Neutral, St. Lawrence Iroquois and Haudenosaunee Nations. Other parts of southern Ontario, including the Georgian Bay littoral, the Bruce Peninsula and the vicinity of Lake St. Clair, were inhabited by Algonkian-speaking peoples, who were much less agriculturally-oriented. Late Woodland archaeological remains from the greater vicinity of the study area show three major stages of cultural development prior to European contact: ‘Early Iroquoian’, ‘Middle Iroquoian’ and ‘Late Iroquoian’ (Williamson 1990; Dodd et al. 1990; Lennox and Fitzgerald 1990).

Early Iroquoians (AD 900–1300) lived in small villages (ca. 0.4 ha) of between 75 and 200 people, and each settlement consisted of four or five longhouses up to 15 m in length. The houses contained central hearths and pits for storing maize (which made up 20-30% of their diet), and the people produced distinctive pottery with decorative incised rims (Warrick 2000:434–438). The best attested Early Iroquoian culture in the local area is the Glen Meyer complex, which is characterized by well-made and thin-walled pottery, ceramic pipes, gaming discs, and a variety of stone, bone, shell and copper artifacts (Williamson 1990:295–304).

Over the next century (AD 1300–1400), Middle Iroquoian culture became dominant in southern Ontario, and distinct ‘Uren’ and ‘Middleport’ stages of development have been identified. Both houses and villages dramatically increased in size during this time; longhouses grew from 28 m to 33 m, settlements expanded from 1.0 to 1.2 ha and populations swelled from 500 to 600

people. Middle Iroquoian villages were also better planned, suggesting emerging clan organization, and most seem to have been occupied for perhaps 30 years prior to abandonment (Dodd et al. 1990:356–359; Warrick 2000:439–446).

During the Late Iroquoian period (AD 1400–1600), the phase just prior to widespread European contact, it becomes possible to differentiate between the archaeologically-represented groups that would become the Huron, Neutral and St. Lawrence Iroquois. The study area itself lies within the territorial boundaries of the St. Lawrence Iroquois, who appear to have been organized into six primary regional groups/clusters. Specifically, the study area falls within the Upper St. Lawrence River cluster near Prescott, Ontario (see Map 6). The sites in this area consist of either large inland villages (1.6 to 3.25 ha in size) or small multi-purpose campsites located along the St. Lawrence River and other waterways (e.g. fishing stations). On the whole, St. Lawrence Iroquois material culture is similar to other Late Woodland Iroquoian groups. It is characterized by finely manufactured and decorated ceramics (with circular punctuates, chevron designs, high collars and pinched bases), a lack of chipped lithic tools and a wide variety of bone and antler artifacts. Many of the village sites also exhibit evidence of expansion associated with a large population increase or influx (Jamieson 1990:385-402).

1.2.2 Early Contact

1.2.2.1 European Explorers

In 1534, Jacques Cartier became the first European to travel the St. Lawrence River. At that time, he encountered 300 St. Lawrence Iroquoians at the tip of the Gaspé Peninsula. Cartier travelled further up the St. Lawrence River the following year, and he found two permanent settlements at the present locations of Quebec City and Montreal. Cartier's accounts of these people are the only records of the St. Lawrence Iroquois at the time of European contact (Jamieson 1990:385).

When Samuel de Champlain came to the St. Lawrence in 1603, the St. Lawrence Iroquois had disappeared and the land was occupied by Algonkian-speaking Anishinabeg peoples. The disappearance of the St. Lawrence Iroquois has been attributed to the introduction of European disease and warfare with other Aboriginal groups. It has also been suggested that the St. Lawrence Iroquois were attacked and dispersed by the Five Nations Iroquois. The St. Lawrence Iroquois refugees proceeded to join with Huron and Anishinabeg populations; a large influx at Huron villages in the Trent Valley is suggested by the prevalence of St. Lawrence Iroquoian pottery in newly expanded habitation areas (Jamieson 1990:403).

The first European to venture deeper into what would become southern Ontario was Étienne Brûlé, who was sent by Samuel de Champlain in the summer of 1610 to accomplish three goals: 1) to consolidate an emerging friendship between the French and the First Nations, 2) to learn their languages, and 3) to better understand their unfamiliar customs. Other Europeans would subsequently be sent by the French to train as interpreters. These men became c*oureurs de bois*, "living Indian-style ... on the margins of French society" (Gervais 2004:182). Such 'woodsmen' played an essential role in all later communications with the First Nations.

Champlain himself made two trips to Ontario: in 1613, he journeyed up the Ottawa River searching for the North Sea, and in 1615-1616, he travelled up the Mattawa River and descended

to Lake Nipissing and Lake Huron to explore Huronia (Gervais 2004:182–185). The First Nations encountered by Champlain in southern Ontario were quite diverse, including prominent Iroquoian-speaking peoples such as the Wendat (Huron), the Petun (Tobacco) and '*la nation neutre*' (the Neutrals) in addition to many bands of the Algonkian-speaking Anishinabeg ('Original-Peoples'). Champlain's map of *Nouvelle France* from 1632 reveals all that he learned about the area (see Map 7). Although the distribution of the Great Lakes is clearly an abstraction, the lack of settled groups 'north' of the St. Lawrence River is clear. It is likely that Anishinabeg bands moved into the area following the fall of the St. Lawrence Iroquois.

1.2.2.2 Trading Contacts and Conflict

The first half of the 17th century saw a marked increase in trading contacts between the First Nations and European colonists. Archaeologically, these burgeoning relations are clearly manifested in the widespread appearance of items of European manufacture by AD 1630, including artifacts such as red and turquoise glass beads, scissors, drinking glasses, keys, coins, firearms, ladles and medallions. At Neutral Nation sites, for example, many artifacts such as projectile points and scrapers began to be manufactured from brass, copper and iron scrap, and some European-made implements completely replaced more traditional tools (Lennox and Fitzgerald 1990:432–437).

Nicholas Sanson's *Le Canada, ou Nouvelle France* (1656) provides an excellent representation of southern Ontario at this time of heightened contact (see Map 8). Several Algonquin bands can be seen in the vicinity of the study area, including the *Tonthataronon* and *Otchiahen*.

This increased contact had the disastrous consequence of introducing European diseases into First Nations communities. These progressed from localized outbreaks to much more widespread epidemics (Warrick 2000:457; MCL 1998:35). Archaeological evidence of disease-related population reduction appears amongst settled agricultural communities (e.g. the Neutral Nation) in the form of reduced longhouse sizes, the growth of multi-ossuary cemeteries and the loss of traditional craft knowledge and production skills (Lennox and Fitzgerald 1990:432–433). The impact of disease on the mobile Anishinabeg (e.g. Algonquin bands) is more difficult to ascertain.

1.2.2.3 Five Nations Invasion

These trading contacts eventually led to increasing factionalism and tension between the First Nations as different groups vied for control of the lucrative fur trade, itself a subject of competition between the French and British. In what would become southern Ontario, the Wendat and the Petun, along with their Anishinabeg trading partners, allied themselves with the French. In what would become New York State, the League of the Haudenosaunee (the Five Nations Iroquois at that time) allied themselves with the British. The latter alliance was largely related to Champlain's involvement in Anishinabeg and Wendat attacks against Haudenosaunee strongholds in 1609 and 1615, which engendered enmity against the French (Lajeunesse 1960:xxix).

Interposed between the belligerents, the Neutral Nation declined to align itself with either the French or the British. Tensions boiled over in 1649. In a situation likely exacerbated by

epidemics brought by the Europeans and the decimation of the Aboriginal population, the Five Nations invaded southern Ontario. The Haudenosaunee directed their assaults against the Neutrals in 1650 and 1651, taking multiple frontier villages (one with over 1,600 men) and numerous captives (Coyne 1895:18).

The advance of the Iroquois led to demise of the Neutral Nation as a distinct cultural entity and the dispersal of the Wendat and Petun Nations (Lennox and Fitzgerald 1990:456, Ramsden 1990:384). The remnants of the affected groups formed new communities outside of the disputed area, settling in Quebec (the modern-day community of Wendake), in the area of Michilimackinac and near Lake St. Clair (where they were known as the Wyandot). Many were likely adopted into the League of the Haudenosaunee (Ramsden 1990:384). After the invasion, southern Ontario remained an underpopulated wilderness for several generations. This rich hunting ground was exploited by the Haudenosaunee/Five Nations for its furs, which were traded to the Dutch and the English (Smith 1987:19).

Due to their mutually violent history, the Haudenosaunee did not permit French explorers and missionaries to travel directly into southern Ontario for much of the 17th century. Instead, they had to journey up the Ottawa River to Lake Nipissing and then paddle down the French River into Georgian Bay (Lajeunesse 1960:xxix). New France was consequently slow to develop in southern Ontario, at least until the fall of several Iroquoian strongholds in 1666 and the opening of the St. Lawrence and Lake Ontario route to the interior (Lajeunesse 1960:xxxii).

1.2.3 The Euro-Canadian Era

1.2.3.1 Anishinabeg Influx

The fortunes of the Five Nations began to change in the 1690s as disease and casualties from battles with the French took a toll on the formerly-robust group (Smith 1987:19). On July 19, 1701, the Iroquois ceded lands in southern Ontario to King William III with the provision that they could still hunt freely in the territory (Coyne 1895:28). However, this agreement appears to have lacked any sort of binding formality. According to the traditions of the Algonkian-speaking Anishinabeg, Ojibway bands soon expanded into southern Ontario in an effort to trade directly with the French and the English (Smith 1987:19). This led to a series of battles involving the Haudenosaunee and the Ojibway, in which the latter were more successful (Coyne 1895:28).

Haudenosaunee populations subsequently withdrew into New York State, and Anishinabeg bands moved into southern Ontario. Many of these were mistakenly lumped together by the immigrating Europeans under the generalized designations of ‘Chippewa/Ojibway’, ‘Northern Iroquois’ and ‘Mississauga’. ‘Mississauga’ quickly became a term applied to many Algonkian-speaking people around Lake Erie and Lake Ontario (Smith 1987:19).

These bands are known to have taken advantage of the competition between the English and French over the fur trade, and they were consequently well-supplied with European goods. The Mississaugas, for example, traded primarily with the French, and received “everything from buttons, shirts, ribbons to combs, knives, looking glasses, and axes” (Smith 1987:22). The British, on the other hand, were well-rooted in New York State and enjoyed mutually beneficial relations with the Haudenosaunee.

Throughout the 1700s (and into the early 1800s), Anishinabeg peoples hunted, fished, gardened and camped along the rivers, floodplains and forests of southern Ontario (Warrick 2005:2). However, their 'footprint' was exceedingly light, and associated archaeological sites are both rare and difficult to detect. Henry Popple's *A Map of the British Empire in America* (1733) shows the First Nations destroyed by the Iroquois in the mid-17th century, and also demonstrates the ephemeral impact of the mobile Anishinabeg and their lack of settlements in the 18th century (see Map 9).

1.2.3.2 European and Aboriginal Relations

The late 17th and early 18th centuries bore witness to the growth and spread of the fur trade across all of what would become the Province of Ontario. The French, for example, established and maintained several trading posts across northern Ontario and the Upper Great Lakes, offering many enticements to attract fur traders from the First Nations. Even further north, Britain's Hudson Bay Company dominated the fur trade. This company struggled militarily with the French for control of this trade until 1763, and many naval and land battles were fought on Hudson Bay and James Bay (Ray 2011). These developments resulted in an ever-increasing level of contact between European traders and local Aboriginal communities.

As the number of European men living in Ontario increased, so too did the frequency of their relations with Aboriginal women. Male employees and former employees of French and British companies began to establish families with these women, a process which resulted in the ethnogenesis of a distinct Aboriginal people: the Métis. Comprised of the descendants of those born from such relations (and subsequent intermarriage), the Métis emerged as a distinct Aboriginal people during the 1700s. Métis settlements developed along freighting waterways and watersheds, and were tightly linked to the spread and growth of the fur trade. These settlements were part of larger regional communities, connected by "the highly mobile lifestyle of the Métis, the fur trade network, seasonal rounds, extensive kinship connections and a shared collective history and identity" (MNO 2011).

In 1754, hostilities over trade and the territorial ambitions of the French and the British led to the Seven Years' War (often called the French and Indian War in North America), in which many Anishinabeg bands fought on behalf of the French. After the French surrender in 1760, they adapted their trading relationships accordingly, and formed a new alliance with the British (Smith 1987:22).

During the late 18th century, the face of what would become Ontario began to change at an extraordinary pace. Following the American Revolutionary War (1775–1783), waves of United Empire Loyalists came to settle in the Province of Quebec, and the First Nations began to feel considerable population pressure. In addition to sparking the slow death of the fur trade, this influx caused the Crown to seek out property for those who had been displaced by the conflict. The Anishinabeg were left with little to exchange for European goods, aside from their land.

1.2.3.3 British Colonialism

With the establishment of absolute British control came a new era of land acquisition and organized settlement. In the *Royal Proclamation* of 1763, which followed the Treaty of Paris, the

British government recognized the title of the First Nations to the land they occupied. In essence, the ‘right of soil’ had to be purchased by the Crown prior to European settlement (Lajeunesse 1960:cix). Numerous treaties and land surrenders were accordingly arranged by the Crown, and great swaths of territory were acquired from the ‘Mississaugas’, ‘Northern Iroquois’ and other First Nations (see Map 10). These first purchases established a pattern “for the subsequent extinction of Indian title” (Gentilcore and Head 1984:78).

The first land purchases in the area took place along the shores of Lake Ontario and Lake Erie, as well as in the immediate 'back country'. Such acquisitions began in August 1764, when a strip of land along the Niagara River was surrendered by Six Nations, Chippewa and Mississauga chiefs (NRC 2010a). Although many similar territories were purchased by the Crown in subsequent decades, it was only with the conclusion of the American Revolutionary War in 1783 and the wholesale displacement of United Empire Loyalists that the British began to feel a pressing need for additional land.

In response to this need, the Governor of Canada Sir Frederick Haldimand, sent Captain William Crawford to the Bay of Quinte and the St. Lawrence River to obtain legal titles to areas that would be opened for settlement. On October 9, 1783, Crawford finalized the negotiations with several Mississauga chiefs, and lands from “Toniato or Onagara River (on the St. Lawrence River) to a river in the Bay of Quinte within eight leagues of the bottom of the Bay including all the islands, extending back from the lake so far as a man can travel in a day" were exchanged for guns, gunpowder, 12 laced hats and red cloth (NRC 2010a). These ‘Crawford Purchases’ set the stage for European settlement along the north shore of the St. Lawrence River.

Major Holland began surveying these lands in 1784, and due to the urgency of settlement for those “strong in British principles,” the newly established townships were not even named - but assigned numbers instead (Leavitt 1879:17). The westernmost surveyed territory was originally called Township No. 8 (Elizabethtown), while the easternmost was Township No. 1 (Charlottenburg). This numbering system was somewhat erroneous, as the easternmost Township of Lancaster (the Sunken Township) was also part of the original survey but was otherwise omitted due to the fact that its lands had “no value” (Leavitt 1879:17).

These new lands were granted to Loyalists “in partial recompense for the losses sustained in adhering to the old flag” and to provide a “bulwark against the spread of republicanism in North America” for the Crown (Leavitt 1879:17). The extent of the grants varied according to rank: field-officers received 5,000 acres; captains, 3,000 acres; junior officers (subalterns), 2,000 acres; and privates, 200 acres.

For the most part, the precise location of the granted land was determined by chance. Lots were numbered on small slips of paper and placed in a hat, and each soldier made his draw and claimed his new land (Carter 1905:37-38; McKenzie 1967:9). Every private, in addition to receiving 200 acres, was also granted 50 additional acres for his wife and each child. Each child, in turn, was entitled to a grant of 200 acres when they turned 21. Through this arrangement, the majority of the inland townships (e.g. Mountain and Winchester) ended up in the possession of the descendants of the United Empire Loyalist soldiers (Carter 1905:38).

The initial settlement of the St. Lawrence River took place under the direction of Sir John Johnson, whose regiment (the King's Royal Rangers) was granted land in the first five townships west of Montreal. The next three townships, including Edwardsburgh and Matilda, were set aside for Major Edward Jessup's regiment (the Loyal Rangers), while a third group went farther west (McKenzie 1967:7). The study area itself falls within the boundaries of Township No. 5 (later named the Township of Matilda in the County of Dundas) and Township No. 6 (later named the Township of Edwardsburgh in the County of Grenville).

On July 24, 1788, the Governor General of Quebec, Sir Guy Carleton, Baron of Dorchester, divided Upper Canada into four administrative districts: Hesse, Nassau, Mecklenburg and Lunenburg. The government then set about creating land boards to facilitate further settlement in each district. In December 1791, the Parliament of Great Britain's *Constitutional Act* created the Provinces of Upper Canada and Lower Canada from the former Province of Quebec, and Colonel John Graves Simcoe was made its first Lieutenant-Governor. Simcoe became responsible for governing the new province, directing its settlement and establishing a constitutional government modelled after that of Britain (Coyne 1895:33). In 1792, the Upper Canadian legislature incorporated the Western, Home, Midland and Eastern Districts from the former Districts of the Province of Quebec.

Simcoe initiated several schemes to populate and protect the newly-created province, employing a settlement strategy that relied upon the creation of shoreline communities with effective transportation links connecting them. These communities, inevitably, would be composed of lands obtained from the First Nations, and many more purchases were subsequently arranged. A total of 19 counties were established in 1792, including previously settled lands, new lands open for settlement and lands not yet acquired by the Crown. These counties stretched from Essex in the west to Glengarry in the east (Archives of Ontario 2009). The vicinity of the study area became part of the newly incorporated Dundas and Grenville Counties in the Eastern District (see Map 11).

1.2.3.4 Dundas and Grenville Counties

Although the study area's lands were initially assigned to Dundas and Grenville County in the Eastern District, this organizational structure was not to last. As local population levels increased in southern Ontario, smaller administrative units became desirable and the larger districts began to be broken down. New districts were accordingly established, and in 1798 the Johnstown District was formed from part of the Eastern District (Archives of Ontario 2009). The western end of the study area fell within this new district, whereas the eastern remainder continued to be part of Dundas County in the Eastern District (see Map 12).

For the majority of the Euro-Canadian era, Dundas County consisted of the Townships of Matilda and Williamsburg along the river and the Townships of Mountain and Winchester in the back country. To the west, Grenville County consisted of the Townships of Wolford, Oxford, South Gower, Augusta and Edwardsburg - the latter two of which fronted on the St. Lawrence River. According to historical records, Sir John Johnson's regiment of disbanded German Lutheran soldiers was largely responsible for settling Dundas County, while the settlement of Grenville County was linked to the regiments of Majors Jessup and Rodgers (Weaver 1913:111, 127).

The municipal organization laid out in 1798 would endure until 1849, at which time the District system was abolished (Archives of Ontario 2009). With the *Municipal Act* of 1850, Dundas County became part of the United Counties of Stormont, Dundas and Glengarry for judicial and municipal purposes. At the same time, Grenville County was incorporated into the United Counties of Leeds and Grenville (see Map 13).

These new United Counties still continue to function today, although numerous changes have taken place in terms of their internal township organization. For example, the Townships of Williamsburg and Matilda were amalgamated to become the Township of South Dundas in 1998, and the Township of Edwardsburgh joined with the Village of Cardinal to become the Township of Edwardsburgh/Cardinal in 2001.

1.2.3.5 The Township of Matilda (Township No. 5)

In historic times, the Township of Matilda was bounded on the northeast by the Township of Williamsburg, on the northwest by the Township of Mountain, on the southwest by the Township of Edwardsburg and on the southeast by the St. Lawrence River. It was named after Princess Royal, Charlotte Augusta Matilda, eldest daughter of King George III in 1787 (Carter 1905:318). As mentioned above, United Empire Loyalists first settled the area, coming from Mohawk Valley in New York State (Belden & Co. 1879:viii).

In terms of local environment, the South Branch South Nation River and its tributaries defined the northern portion of the Township of Matilda, while the St. Lawrence River was a major contributing factor to settlement in the south. The township was particularly blessed with very fertile agricultural land. J. Smyth Carter noted that "fine, cultivated farms, well constructed, comfortable buildings, modern rural conveniences of every character, and behind all this a soil noted for its fertility, have made this historic township a desirable place of residence, and caused a marked stability in the values of farm property" (1905:321).

By the mid-19th century, over 6,500 acres of the township's lands were under cultivation. At this time, there were three saw mills within the township - which had a population was 2,535 (Smith 1846:113). In addition to successful farms, the people of the Township of Matilda experienced great success in the manufacture of dairy products. In 1903, the sale of cheese exceeded $250,000, the majority of which passed through Matilda/Iroquois in the south (Carter 1905:321).

The township's major road was the Matilda Road, which ran north from Matilda/Iroquois along the St. Lawrence River and was graded and planked by 1852. Unfortunately, it decayed rapidly and quickly became a gravel road of unsatisfactory quality. This road was not wholly reliable until 1875 when a crusher was purchased to maintain it in good order (Carter 1905:67-68).

The major railways laid in the second half of the 19th century (e.g. the Grand Trunk Railway and the Canadian Pacific Railway) bypassed most of Matilda Township. The Grand Trunk Railway did serve the major settlement of Matilda/Iroquois, but the vicinity of the study area itself did not directly benefit from its arrival.

The principal inland settlements within the Township of Matilda included Brinston's Corners, Dixon's Corners and Dundela. Brinston's Corners, located along the Matilda Road, began with the erection of a sawmill intended to provide wood for the thoroughfare. Shops and residences soon sprang up as well, and the 'Corners' became a commercial centre with a post office (1873), a carriage shop, a blacksmith shop, medical services, merchants, a barber, a cheese factory and a telegraph office. Dixon's Corners began as a favourite local meeting-place and quickly grew into a small community with a hotel, a post office (1852) and a cheese factory. Dundela's origins can be traced back to the first store of Everet Barclay, which was quickly joined by a post office (1865), a hotel and numerous other businesses (Carter 1905:322-325).

Other less prominent communities developed around local post office outlets, including Glen Stewart (1874), Haddo (1894), Hainsville (1887), Hulbert (1888), Irena (1877), New Ross (1867), Pleasant Valley (1877), Rowena (1880) and Toye's Hill (1882) (Carter 1905:325-326). Belden & Co.'s *Illustrated Historical Atlas of the Counties of Stormont, Dundas and Glengarry, Ontario* from 1879 indicates that the Township of Matilda was densely settled by that time (McGill University 2001). Many of the original 200-acre lots appear to have been subdivided between family members (see Map 14).

1.2.3.6 The Township of Edwardsburgh (Township No. 6)

The historic Township of Edwardsburgh was bordered by the Township of Matilda on the east, South Gower and Oxford on the north, Augusta on the west and the St. Lawrence River on the south. The township possessed good land near the river, but further back the landscape was characterized primarily by swampland at the head of the South Branch South Nation River (Smith 1846:52).

The Township of Edwardsburgh was named for the Duke of Kent. Interestingly, when Major Edward Jessup's disbanded soldiers arrived in 1784 they found that they were not the first Europeans to settle in the area. Francois and Guillaume de Lorimier, two brothers from a distinguished French-Canadian family, were granted land in the township over a decade earlier. Their house is believed to have been built prior to 1770, making it the first home in the Township of Edwardsburgh by a wide margin (McKenzie 1967:35).

The Township of Edwardsburg grew at a slow but steady pace. By 1812 the township had a population of about 1,000 inhabitants (McKenzie 1967:11). By the mid-19th century, 7,748 acres of land were under cultivation, and the township boasted six saw mills and three grist mills. At that time, the population was 2,837, quite comparable to the neighbouring Township of Matilda (Smith 1846:52). The largest communities to develop within the Township of Edwardsburg were Johnstown and Edwardsburg, both located along the St. Lawrence River and the Grand Trunk Railway (see Map 15). Further inland, significant settlements developed at Spencerville along Concession 6 and Adams along Concession 7, both just west of the study area. By 1877, 32,301 acres of the township had been cleared, and the amount of real and personal property had reached $1,258,460 (Leavitt 1879:110).

1.2.3.7 The Study Area

The eastern section of the study area falls on parts of Lots 17-18, Concession 5, Lots 12-20. Concession 6, Lots 14-16 and 19-22, Concession 7 and Lots 15-18, Concession 8 of the Township of Matilda. The historic land use of the majority of this area was documented in AMICK's Stage 1 archaeological assessment (PIF# P058-440-2009), which considered parts of Lots 16-18, Concession 5, Lots 13-18, Concessions 6-7, and Lots 12-18, Concession 8 of the Township of Matilda (AMICK 2009b). AMICK made use of Belden & Co.'s *Illustrated Historical Atlas of the Counties of Stormont, Dundas and Glengarry, Ontario* from 1879. Based on their study of this map, AMICK concluded that, by 1879, all of the lots in their study area were occupied, with many of them having structures (2009b:8-10).

The western section of the study area falls on parts of Lots 36-37, Concession 6 of the Township of Matilda and parts of Lots 1-2, Concession 7 of the Township of Edwardsburgh. The historic land use of the majority of this area was documented in AMICK's Stage 1 archaeological assessment (PIF# P058-452-2009), which considered parts of Lot 36, Concession 5, Lots 35-37, Concession 6, and Lot 36, Concession 7 of the Township of Matilda (AMICK 2009a). Here, AMICK made use of Leavitt's *History of Leeds and Grenville, Ontario* from 1879. Based on their study of this map, AMICK concluded that, by 1879, all of the lots in their study area were occupied with many of them having structures (2009a:7).

The area of the Stage 1 component of this archaeological assessment falls on the lands that were not included in either of AMICK's Stage 1 assessments (see Maps 16–17). A study of Belden & Co.'s *Illustrated Historical Atlas of the Counties of Stormont, Dundas and Glengarry, Ontario* from 1879 and Leavitt's *History of Leeds and Grenville, Ontario* from 1879 was conducted. The results are displayed in Tables and 1 and 2.

Table 1: Euro-Canadian Landowners within the Stage 1 and 2 Eastern Study Areas according to Belden & Co.'s *Illustrated Atlas of the Counties of Stormont, Dundas and Glengarry, Ontario* (1879)
(McGill University 2001)

Township	Lot	Concession	Owner	Comments
Matilda	17	5	Carmi Locke, James Locke and C. Locke	One Structure on the Property
Matilda	18	5	F. Barridge, A. Ross and H. Locke	One Structure on the Property
Matilda	12	6	Coons	No Structures on the Property
Matilda	13	6	Houlahan	No Structures on the Property
Matilda	15	6	Alex Locke and J. Locke	No Structures on the Property
Matilda	17	6	J. Payne and G. Locke	No Structures on the Property

Matilda	19	6	Thomas Brinston	One Structure on the Property
Matilda	20	6	A. Scott and Thomas Brinston	One Structure on the Property
Matilda	20	7	W. H. Hudgins, Edward Suffle and Richard Johnson	No Structures on the Property
Matilda	21	7	W.D. Shaver	One Structure on the Property
Matilda	22	7	Guy Shaver	One Structure on the Property
Matilda	16	8	J. Armstrong	No Structures on the Property
Matilda	17	8	J. Barry and R. Watt	No Structures on the Property
Matilda	18	8	R. Watt	No Structures on the Property

Table 2: Euro-Canadian Landowners within the Stage 1 and 2 Western Study Areas according to Leavitt's *History of Leeds and Grenville, Ontario* (1879) and Belden & Co.'s *Illustrated Atlas of the Counties of Stormont, Dundas and Glengarry, Ontario* (1879)
(McGill University 2001)

Township	Lot	Concession	Owner	Comments
Matilda	35	6	C. Lazert	No Structures
Matilda	36	6	W. Milligan	No Structures
Matilda	37	6	C. Lazert	No Structures
Edwardsburgh	1	7	D. Froom and David Adams	Two Structures on the Property
Edwardsburgh	2	7	S.W. Buck	Two Structures on the Property

1.3 Archaeological Context

1.3.1 Natural Environment

Environmental factors play a substantial role in shaping ancient land-use and site selection processes, particularly in small Pre-Contact societies with non-complex, subsistence-oriented economies. In order to accurately reconstruct the historic land usage of the study area, the following five features of the local natural environment must be considered: 1) forests; 2) drainage systems; 3) climatic conditions; 4) physiography; and 5) soil types.

The local environment of the study area lies within the Great Lakes-St. Lawrence Forest, which is a transitional zone between the southern Deciduous Forest and the northern Boreal Forest. Vegetation here consists of a mixture of coniferous and deciduous trees, as well as many species of ferns, fungi, shrubs and mosses. The most prominent conifers are eastern white pine, red pine, eastern hemlock and white cedar, while deciduous trees are best represented by yellow birch, sugar and red maple, basswood and red oak. Other species more commonly occurring in the north are also present, including white and black spruce, jack pine, aspen and white birch (MNR 2011). Relatively little of the original forest cover remains standing today, as early Euro-Canadian settlers conducted large-scale clearing operations to prepare the land for agricultural exploitation.

In Pre-Contact times (before the arrival of Europeans), these dense forests would have been particularly bountiful. It is believed that the First Nations of the Great Lakes region exploited close to 500 plant species for food, beverages, food flavourings, medicines, smoking, building materials, fibres, dyes and basketry (Mason 1981:59–60). Furthermore, this diverse vegetation would have served as both home and food for a wide range of game animals, including white tailed deer, turkey, passenger pigeon, cottontail rabbit, elk, muskrat and beaver (Mason 1981:60). Accordingly, it is clear that access to certain types of vegetation played an important role in the site selection processes employed by Pre-Contact peoples.

The subject lands lie entirely within the South Nation Watershed, and numerous primary and secondary water sources traverse parts of the study area. The South Branch South Nation River itself passes through the eastern participating properties, as do several of its tributaries. Numerous man-made drains are also present in this area, including the Beggs-Barkley Drain, the Thorpe-Ellis Drain, the Devlin Drain and the Monroe Drain. The western block of participating properties is traversed by Sandy Creek, and the Ferguson Drain is located in the north.

The study area is located within the Eastern Ontario climatic region of southern Ontario. The mean annual temperature is 5.8 ºC and annual precipitation levels range between 715 and 980 mm per year. The area's proximity to the St. Lawrence River moderates the temperature and affects annual precipitation levels (Richards et al. 1949:27–28; Matthews and Richards 1952:24–25). On the whole, this climate is well suited for the common grain and forage crops grown during the Euro-Canadian period.

Physiographically, the eastern portion of the study area lies in the region known as the Edwardsburgh Sand Plain, which consists of beds of glaciofluvial sand over top of bedrock and boulder clay. The ground here is relatively level, with a few moraines and beach ridges created by the Champlain Sea (Chapman and Putnam 1984:200). The western portion of the study area lies within the Winchester Clay Plain, an area of low relief located almost entirely within the South Nation River Watershed. The area is dominated by clay plains, although there are several exposed pockets of underlying till and bedrock (Chapman and Putnam 1984:203). These physiographic elements have accumulated over sandstone and dolostone bedrock belonging to the Lower Ordovician March and Oxford formations (Davidson 1989:42).

Soils in the western portion of the project lands consist primarily of Grenville Loam (undulating to rolling topography; good natural drainage; moderately stony with boulders), Rubicon Sand

(undulating to level topography; imperfect natural drainage; stone free), and Matilda Loam (gently undulating to slightly depressional topography; imperfect natural drainage; moderately stony). Pockets of Granby Sandy Loam and Allendale Sandy Loam also occur in this area (Richards et al. 1949:Soil Map; Matthews and Richards 1952:Soil Map).

In the eastern part of the project lands, the soils consist primarily of North Gower Clay (level to slightly undulating topography; poor natural drainage; stone free) with pockets of Grenville Loam, Kars Gravelly Sandy Loam, Matilda Loam, and Morrisburg Clay Loam (Matthews and Richards 1952:Soil Map).

In sum, the natural environment of the study area possesses a number of environmental characteristics which would have made it attractive to both Pre-Contact and Euro-Canadian peoples. The abundant water sources traversing the study area (e.g. the South Branch South Nation River) would have attracted a wide variety of game animals, and consequently, early hunters. The primarily well-drained soils would have been ideal for the maize horticulture of Middle to Late Woodland peoples and the mixed agriculture practiced by later Euro-Canadian populations. Finally, the relative proximity of the study area to the St. Lawrence River would also have influenced its settlement and land-use history. Such major waterways functioned as the principal transportation routes through the extensive forests of Pre- and Post-Contact southern Ontario.

1.3.2 Previous Archaeological Work

In advance of fieldwork, an archival search was conducted using the MTC's Ontario Archaeological Sites Database in order to determine the presence of any registered archaeological resources which might be located on or within a 2 km radius of the Stage 1 study area. No previously identified sites were found within this large area, an absence likely resulting from a lack of archaeological exploration in this part of southeastern Ontario. Such negative evidence should not be considered to be a meaningful reflection of local Pre-Contact or Euro-Canadian settlement patterns.

As mentioned previously (see Section 1.1), the current South Branch Wind Farm originally consisted of three different renewable energy projects: 1) the South Branch Wind Farm, 2) the Brinston Wind Farm and 3) the Boundary Wind Farm. In April 2009, the project lands for these three wind farms were subjected to Stage 1 archaeological assessments by AMICK (2009a; 2009b). This work, conducted under PIF #P058-440-2009 and PIF #P058-452-2009, resulted in the identification of numerous areas of archaeological potential and isolated areas of no archaeological potential (see Appendices D-E).

Within both the Brinston/South Branch Wind Farms and Boundary Wind Farm study areas, AMICK identified areas of no archaeological potential within the building footprints of residential and agricultural complexes (i.e. existing structures and disturbed areas), in lands with high tension towers and in lands previously disturbed by infrastructure-related development activities (2009a:Figure 3; 2009b:Figure 3). All other lands were recommended for Stage 2 high intensity pedestrian survey or test pit survey (see Appendices D-E), as the study areas were found to have "a high potential for significant archaeological resources" of Aboriginal and Euro-Canadian origin (AMICK 2009a:8; 2009b:10). Following these archaeological assessments, the

separate projects were united as the South Branch Wind Farm and the project lands were partially redefined. ARA then conducted the Stage 1 archaeological assessment component documented in this report on all previously un-assessed project lands.

1.3.3 Property Conditions

The Stage 2 property survey of the proposed South Branch Wind Farm was conducted on April 12–13, May 16–20 and June 16–17, 2011. Legal permission to enter project lands and engage in all necessary fieldwork activities was granted by the property owners. Key personnel involved during the assessment were P.J. Racher, Project Director; C.E. Gohm, Project Manager; A.J. Wong and A.W. Ray, Field Directors; M. Fowler, S. Knight and R. Hughes, Assistant Field Directors; and six additional crewmembers. Field conditions were excellent, with mainly sunny skies, well-weathered soils in the ploughed lands and dry soil for screening.

1.4 Aboriginal Engagement

This project area, which is located within Algonquin Traditional Territory (ATT), is currently subject to a Land Claims Negotiation between the Algonquins of Ontario, the Government of Canada and the Province of Ontario (Prowind Canada Inc. 2010:21). Prowind Canada Inc. has engaged in communications with all Aboriginal communities that have interest in the proposed project area. In letters dated December 3, 2010 and January 18, 011, the Métis Nation of Ontario and the Alderville First Nation, respectively, stated that the project would have no or minimal potential to impact their rights, culture or way of life (see Appendix G). Likewise, Prowind Canada Inc. has also been in communication with the Akwesasne Mohawk Nation who have expressed no major concerns about the project moving forward.

2.0 STAGE 1 FIELD METHODS

2.1 Stage 1 Background Summary

The Stage 1 assessment of the South Branch Wind Farm study area entailed a thorough examination of the study area's geography, history, archaeology and current land condition. This study was accomplished through the use of archival, historical, academic and professional publication sources. Dating back to the Palaeo-Indian era approximately 11,000 years ago, the study area region comprises a complex chronology of Pre-Contact and Euro-Canadian histories. The study area properties itself are dateable to the early 19th century when the area was surveyed. Since that date, the study area has consistently been used as farmland through to present day.

As detailed in Section 1.3.1, the natural environment of the study area would have been attractive to both Pre-Contact and Euro-Canadian peoples as a result of proximity to multiple water sources including the South Branch of the South Nation River, its tributaries and Sandy Creek. Well drained soils would have been ideal for both maize horticulture and mixed agriculture.

The scarcity of known archaeological sites in the area is likely the result of a lack of research as opposed to meaningful settlement patterns.

2.2 Property Inspection

An optional property inspection was not undertaken for this assessment.

3.0 STAGE 1 ANALYSIS AND CONCLUSIONS

In addition to the relevant historical sources and the results of past excavations and surveys, the archaeological potential of a property can be assessed using its soils, hydrology and landforms as considerations. Young et al. note that, "either the number of streams and/or stream order is always a significant factor in the positive prediction of site presence" (1995:23). They further note that certain types of landforms, such as moraines, seem to have been favoured by different groups throughout prehistory (Young et al. 1995:33). According to several researchers, such as Janusas (1988:1), "the location of early settlements tended to be dominated by the proximity to reliable and potable water resources." Site potential modeling studies (Peters 1986; Pihl 1986) have found that most prehistoric archaeological sites are located within 300 m of either extant water sources or former bodies of water, such as post-glacial lakes.

While many of these studies do not go into detail as to the basis for this pattern, Young et al. (1995) suggest that the presence of streams would have been a significant attractor for a host of plant, game and fish species, encouraging localized human exploitation and settlement. Additionally, lands in close proximity to streams and other water courses were highly valued for the access they provided to transportation and communication routes. Primary water sources (e.g. lakes, rivers, streams and creeks) and secondary water sources (e.g. intermittent streams and creeks, springs, marshes and swamps) are therefore of pivotal importance for identifying archaeological potential (MCL 2009:5).

Section 1.3.1 of the *Draft Standards and Guidelines for Consultant Archaeologists* emphasizes the following six features/characteristics as being additional indicators of positive potential for Pre-Contact archaeological materials: 1) features associated with extinct water sources (glacial lake shorelines, relic river channels, shorelines of drained lakes, etc); 2) the presence of pockets of well-drained soils (for habitation and agriculture); 3) elevated topography (e.g. drumlins, eskers, moraines, knolls, etc.); 4) distinctive landforms that may have been utilized as spiritual sites (waterfalls, rocky outcrops, caverns, promontories, etc.); 5) proximity to valued raw materials (quartz, ochre, copper, chert outcrops, medicinal flora, etc); and 6) accessibility of plant and animal food sources (spawning areas, migratory routes, prairie lands, etc.) (MCL 2009:5–6).

Conversely, it must be understood that non-habitational sites (e.g. burials, lithic quarries, kill sites, etc.) may be located anywhere. Potential modeling appears to break down when it comes to these idiosyncratic sites, many of which have more significance than their habitational counterparts due to their relative rarity. The Stage 1 archaeological assessment practices outlined in Section 1.0 of the *Draft Standards and Guidelines for Consultant Archaeologist* ensure that these important sites are not missed in southern Ontario, as no property can be exempted from further archaeological work unless it has been inspected and demonstrated to have no archaeological potential (MCL 2009:3–4).

With the development of integrated 'complex' economies in the Euro-Canadian era (i.e. the Early and Late Historic Period), settlement tended to become less dependent upon local resource procurement/production and more tied to wider economic networks. As such, proximity to transportation routes (roads, canals, etc) became the most significant predictor of site location - especially for Euro-Canadian populations. In the early Euro-Canadian era (pre-1850), when transport by water was the norm, sites tended to be situated along major rivers and creeks – the 'highways' of their day. With the opening of the interior of the Province of Ontario to settlement after about 1850, sites tended to be more commonly located along historically-surveyed roads. Section 1.3.1 of the *Draft Standards and Guidelines for Consultant Archaeologists* recognizes trails, passes, roads, railways and portage routes as examples of such early historical transportation routes (MCL 2009:6).

In addition to transportation routes, Section 1.3.1 of the *Draft Standards and Guidelines for Consultant Archaeologists* emphasizes three other indicators of positive potential for Euro-Canadian archaeological materials: 1) areas of early settlement (military outposts, pioneer homesteads or cabins, early wharfs or dock complexes, pioneer churches, early cemeteries, etc.); 2) properties listed on a municipal register, designated under the *Ontario Heritage Act* or otherwise categorized as a federal, provincial or municipal historic landmark/site; and 3) properties identified with possible archaeological sites, historical events, activities or occupations, as identified by local histories or informants (MCL 2009:6).

Based on the location, drainage and topography of the subject lands and the application of land-use modelling, it seems clear that the Stage 1 study area would, in its pristine state, have clear potential for the presence of Pre-Contact and Euro-Canadian era archaeological sites. Indicators of archaeological potential include numerous primary water sources (e.g. the South Branch River, tributaries of the South Branch River and Sandy Creek) and historically-surveyed roadways (e.g. Brinston Road, County Road 18 and Hulbert Road). Unlike many properties in southern Ontario, the relative lack of development within the study area has preserved the majority of this archaeological potential.

Isolated areas of no archaeological potential were also identified within the Stage 1 study area. These were all associated with disturbances resulting from modern infrastructural developments (i.e. paved roadways and drainage ditches), and were located along County Road 18/Gilmour Road (see Image 1; Maps 18 and 29). The integrity of the archaeological record in these lands was clearly impacted during past construction activities, resulting in the removal of archaeological potential.

In sum, the majority of the study area has the potential to yield sites which span Ontario’s entire archaeological history.

4.0 STAGE 1 RECOMMENDATIONS

Based on the archaeological potential modelling from the assessments completed by AMICK (2009a; 2009b) and the current study, ARA recommends that all areas with archaeological potential that will be impacted be subject to a Stage 2 archaeological assessment. In keeping with Sections 2.1.1 and 2.1.2 of the *Standards and Guidelines for Consultant Archaeologists*, lands that are under cultivation be subject to the pedestrian-survey method at 5 m intervals (MTC 2011:30) and lands where ploughing is not possible or viable be subject to a test pit survey at 5 m intervals (MTC 2011:31).

The areas along County Road 18/Gilmour Road were identified as being disturbed due to modern infrastructural developments. Disturbed areas were also identified in the Stage 1 assessments completed by AMICK (2009a; 2009b). In keeping with Section 2.1 S2b of the *Standards and Guidelines for Consultant Archaeologists*, these lands were considered to have no archaeological potential and are exempt from the Stage 2 archaeological assessment (MTC 2011:28).

5.0 STAGE 2 FIELD METHODS

Given that the study area was comprised of both actively or recently cultivated lands as well as lands that could not be ploughed, it was necessary to utilize both the pedestrian survey and test pit survey methods to complete the Stage 2 archaeological assessment.

In areas actively or recently under cultivation, the archaeological assessment was carried out using the pedestrian survey method. Section 2.1.1 of the *Standards and Guidelines for Consulting Archaeologists* provides clear requirements for the condition of such lands prior to the commencement of fieldwork: all fields must be recently ploughed; all soils must be well-weathered; and at least 80% of the ploughed ground surface must be visible (MTC 2011:30). These conditions were met during the pedestrian survey component of the Stage 2 assessment (see Images 2–3).

Following the standard strategy for pedestrian survey outlined in Section 2.1.1, ARA crewmembers traversed the study area along parallel transects established at 5 m intervals, yielding 20 survey transects per hectare (see Images 4–5). If archaeological materials were encountered in the course of the pedestrian survey, the transect interval would be closed to 1 m and a close inspection of the ground would be conducted for 20 m in all directions (see Image 6). All diagnostic artifacts and a representative sample of non-diagnostic artifacts would then be collected for analysis. All remaining artifacts would be left *in situ* until a proper Stage 3 Controlled Surface Pick-up (CSP) could be carried out.

In those parts of the study area that physically could not be ploughed or where ploughing was not viable (e.g. wooded areas, abandoned farmland with heavy brush and weed growth, etc.), the assessment was conducted using the test pit survey method (sometimes referred to as shovel-testing). In this method, ARA crewmembers hand-excavated small regular test pits with a minimum diameter of 30 cm at prescribed intervals across the site. Section 2.1.2 *Standards and Guidelines for Consulting Archaeologists* stipulates that lands within 300 m of any feature of archaeological potential be examined at 5 m intervals, and any lands more than 300 m from such

features be examined at 10 m intervals (MTC 2011:31–32). Given the presence of multiple indicators of archaeological potential in the immediate vicinity, a 5 m interval was adopted for this study area (see Image 7).

In accordance with Section 2.1.2 of the *Standards and Guidelines for Consulting Archaeologists*, each test pit was excavated into the first 5 cm of subsoil (MTC 2011:32). The resultant pits were then examined for stratigraphy, cultural features and/or evidence of fill (see Image 8). The soil from each test pit was screened through 6 mm mesh and examined for archaeological materials (see Image 9). All test pits were backfilled upon completion, as per the property owners' instruction (MTC 2011:32).

If archaeological materials were encountered in the course of the test pitting survey, each positive test would be documented and all artifacts would be collected according to their associated test pit. Clustered test pits at a transect interval of 1 m would then be excavated in the immediate vicinity to further define the nature and limits of the deposit.

Artifacts that may indicate the presence of significant cultural deposits include bone, charcoal, lithics (stone tools and refuse generated by their production and use), ceramics, glass and metal. Archaeological features such as pits, foundations and other non-portable remains may also be detected during a Stage 2 property survey. Any archaeological materials with potential CHVI are flagged, mapped, photographed and collected for further analysis, whether associated with Pre-Contact Aboriginal groups or Post-Contact First Nations, Métis and Euro-Canadian populations. Artifact locations are recorded on topographic maps, in field notes and at +/- 2 m accuracy on a Garmin eTrex Legend, WAAS-enabled, GPS handheld unit (using the UTM17 NAD83 coordinate system).

All project lands within the study area were assessed according to these methods, save for those with no archaeological potential (see Maps 18–29). Section 2.1 of the *Standards and Guidelines for Consultant Archaeologists* states that only those areas that are permanently wet, consist of exposed bedrock and/or have slopes greater than 20° can be considered exempt from requiring archaeological assessment (MTC 2011:28). As part of its business practice, ARA makes every effort to survey these areas where possible.

As part of the Stage 2 archaeological assessment, all field data was removed with permission from the property owner. Any artifacts recovered would be sent to 97 Gatewood Road in the City of Kitchener for processing, cataloguing, analysis and curation. Project photographs, mapping materials and field notes are stored at the same facility.

Approximately 99% of the study area lands identified as having archaeological potential in the Stage 1 were fully assessed (see Maps 18–29). The pedestrian survey of the agricultural lands (94% of the study area) and the test-pit survey of the non-agricultural lands (5% of the study area) resulted in the discovery of two Euro-Canadian artifact scatters (Findspots 1–2). These are fully discussed in Sections 6.1–6.2.

Of the areas subject to the test-pitting method, the access roads leading to Turbines 11 and 12, the northern 70 m of the access road to Turbine 5, the northern 170 m of the access road to

Turbine 6 and the majority of the access road to Turbine 14 were found to be disturbed by the presence of gravel laneways (see Images 10-14). The area north of the operations building was found to be disturbed by construction activities. All disturbance was confirmed by test pitting (see Images 15-16).

The southwest corner of the Turbine 4 laydown area, a small area along the Turbine 14 access road and the northeast corner of the Turbine 14 laydown area were found to have high water tables. These were confirmed by test pitting (see Images 17-19).

The remaining 1% could not be fully assessed due to the presence of clear disturbances that have damaged the integrity of the archaeological record, permanently wet lands and/or lands sloped greater than 20º. Two areas along the cable corridor between Turbines 8 and 10 were found to be permanently wet. The northern area was associated with the South Branch South Nation River and the southern area was associated with a minor tributary of the South Branch South Nation River. Both areas had lands sloped greater than 20° along their banks (see Images 20-21). The southeast corner of the Turbine 4 laydown area was permanently wet due to the presence of a swamp (see Image 22). Disturbance resulting from a man-made drainage ditch was also noted in the eastern section of the Turbine 4 laydown area (see Image 23). In keeping with Section 2.1 S2b of the *Standards and Guidelines for Consultant Archaeologists*, these lands were considered to have no archaeological potential (MTC 2011:28).

The lands identified as having no archaeological potential in the Stage 1 assessments by AMICK (2009a;2009b) and in Section 3.0 were not assessed as stated in Section 2.1 S2c of the *Standards and Guidelines for Consulting Archaeologists* (MTC 2011:28).

6.0 STAGE 2 RECORD OF FINDS

In the course of the Stage 2 assessment, 2 findspots were located within the study area. A description of each follows:

6.1 Findspot 1 - The Doyle Site (BfFu-4)

6.1.1 Summary

Site Name: The Doyle Site (Findspot 1)
Borden No.: BfFu-4
Description: A 25 x 15 m scatter of artifacts (concentrated in the east) (see Map 22).
Location: In the access road to Turbines 7 and 8, approximately 25 m south of Snowbird Road.
Materials Identified: Ceramic, glass and metal.
Total No. of Artifacts: 36.
No. of Artifacts Collected: 36.
Diagnostic Artifacts: Transfer-print white earthenware, refined white earthenware, Ironstone, art glazed pottery, milk glass, solarized glass tableware and a cut nail.
Non-Diagnostic Artifacts: Glazed red earthenware, scrap metal, unidentifiable porcellaneous ware, unidentifiable bottle glass, red brick, miscellaneous metal material and hardware.

6.1.2 Artifact Discussion

The artifact assemblage at Findspot 1 consists of fragments of black and green transfer-print white earthenware, undecorated refined white earthenware, Ironstone, art glaze pottery, porcellaneous ware, glazed coarse red earthenware, milk glass, unidentifiable bottle glass, solarized glass, miscellaneous metal hardware and material and also included a cut nail and red brick fragments (see Table 3; Appendix H). Unfortunately, few of these artifacts possess any significant diagnostic value as the majority were produced sometime during the mid-to-late 19th century and continued to be popular well into the 20th century (see Image 25). For example, Ironstone - also known as vitrified white earthenware - first appeared in Ontario during the 1840s and became a very popular form of tableware during the 1870s and 1880s (Adams 1995:102). Although its popularity declined after the 1890s, Ironstone continued to be used throughout the rest of the Euro-Canadian era (Carter N.D.).

Other components of the assemblage were likewise in use for long periods of time. Refined whitewares gained popularity and began to replace earlier creamwares and pearlwares in the 1830s, and continued to be produced into the 20th century (Adams 1995:102). Black transfer-print refined earthenwares were popular from 1830–1870 (Adams 1995:104). Green transfer-print whitewares were popular from 1829–1839 and continued to be produced through to 1850 (Stelle 2001). Art glaze pottery refers to a variety of ceramic materials including stoneware, redware and refined white earthenware. Art pottery is made distinctive by elaborate and unique underglaze in a variety of colours and decorations. Art pottery was not made popular until the late 19thcentury through the 1930s (Ketchum 1983:13).

Milk, or opaque white glass, refers to glasswares and medicinal bottles created with the addition of zinc oxide, flourides, phosphates and occasionally faunal and floral materials (Lindsey 2011). Milk glass can be found in a variety of pressed designs and can be roughly dated from 1860 to present, however its popularity began to wane in the mid-20th century (Lindsey 2011; Spillman 1983: 443). Solarized magnese glass is easily recognizable by its light purple tint in clear glass examples. Iron oxides were also added to glass mixtures, which turned various shades of pink and purple with exposure to natural sunlight. Solarized glass was popular between the last quarter of the 19th century and World War I (Parks Canada 1985:13). A cut nail was also recovered at Findspot 1; machine cut nails were commonly used between the 1830s and the 1890s (Adams 1995:94).

Table 3: Analysis of Artifacts Recovered from Findspot 1

Category	Group	Class/Object	Frequency	% of Total Assemblage
Architectural	Metal	Machine Cut Nail	1	2.78%
	Brick	Red Brick	2	5.56%
	Door Hardware	Latch Part	1	2.78%
		Total Architectural	**4**	11.11%
Ceramic	Food Preparation/ Consumption	Cooking/Storage	1	2.78%
		Tableware	17	47.22%

	Agriculture/horticulture	Flower pot	2	5.56%
		Total Ceramic	**20**	55.56%
Glass	Food Preparation/ Consumption	Tableware	3	8.33%
		Storage Container	6	19.44%
	Medicinal	Toiletry Bottle	1	2.78%
		Total Glass	**11**	30.56%
Metal	Unassigned Material	Hardware	1	2.78%
		Material	1	2.78%
		Total Metal	**2**	5.56%
Total Artifacts			**36**	**100.00%**

6.2 Findspot 2 - The Shaver Site (BfFu-5)

6.2.1 Summary

Site Name: The Shaver Site (named for the 19th century owner of the farmstead documented at this site in Belden's 1879 Atlas).

Borden No.: BfFu-5

Description: 30 x 60 m in size. 30 x 20 m scatter within ploughed lands, 7 positive test pits, foundations and a stone well in an area 30 x 40 m within the bush lot (see Maps 27–28).

Location: In the Turbine 14 laydown area, 1.1 km west of Brinston Road and 550 m north of Kirker Road.

Materials Identified: Ceramic, glass, metal, plastic, mortar, brick, metamorphic rock, mammal bone and mammal dentition.

Total No. of Artifacts: 147. Of these, 47 were identified during test pitting and 100 artifacts were identified during pedestrian survey.

No. Of Artifacts Collected: 87. All artifacts from the test pits were collected and a representative sample of 40 artifacts was collected during the pedestrian survey. The remaining artifacts were left *in situ*.

Diagnostic Artifacts: Blue edged whiteware, salt glazed stoneware, wheat pattern Ironstone, brown transfer pearlware, brown transfer whiteware, blue transfer whiteware, polychrome whiteware, Japanese porcelain, industrial slip whiteware, art glaze pottery, 20th century plastic, 20th century painted whiteware and 20th century porcellaneous ware.

Non-Diagnostic Artifacts: Glazed red earthenware, scrap metal, unidentifiable glass, red brick, mammal bone, mammal dentition, unidentifiable porcellaneous ware, metamorphic rock, miscellaneous metal material and hardware.

6.2.2 Artifact Discussion

The artifact assemblage at Findspot 2 consists of fragments of blue and brown transfer-print white earthenware, brown transfer pearlware, refined white earthenware, Ironstone, wheat pattern Ironstone, Japanese porcelain, industrial slip whiteware, painted refined white earthenware, art glaze pottery, salt glazed stoneware, glazed coarse red earthenware, unidentifiable bottle glass, 20th century plastic, porcellaneous ware and whiteware, a cut nail and mortar (see Table 4; Appendix G).

Again, most of these artifacts began to be produced in the mid-to-late 19th century and continued to be popular well into the 20th century (see Images 28–29). Ironstone first appeared in Ontario during the 1840s and became a very popular form of tableware during the 1870s and 1880s (Adams 1995:102). Although its popularity declined after the 1890s, Ironstone continued to be used throughout the rest of the Euro-Canadian era (Carter N.D.). Two fragments of wheat and hops patterned Ironstoneware were also retrieved from Findspot 2; this particular pattern was manufactured by several different companies in the last quarter of the 19th century (Dieringer and Dieringer 2001:127). Wheat pattern examples that cannot be linked to a specific maker's mark are generally given a date of manufacture between 1870–1880 when the wheat pattern reached its production peak (Sussman 1985:10).

Refined whitewares replaced earlier creamwares and pearlwares in the 1830s, but continued to be produced into the 20th century (Adams 1995:102). Blue was the most popular white earthenware transfer colour at this time; black, red, green, and purple transfer colours also appeared in the 1830s and 1840s. Blue, black, and brown transfers remained the most popular between 1850 and 1890 (Adams 1995:103). Late polychrome transfer whitewares in green, red, blue and yellow did not appear until after 1840 when transfer print methodology became more sophisticated (Samford 1997:22). One fragment of blue painted whiteware was recovered, dating to the first quarter of the 19th century. However, this incomplete fragment could represent a polychrome painted vessel which dates to the mid-19th century (Stelle 2001). Industrial slip (or annular decorated) whitewares are distinguishable from other banded whitewares due to the engine-turning process of applying coloured slip onto the ware. Annular decorated wares date roughly from 1830–1860 (Lofstrom,Tordoff and George 1982:14). Blue unscalloped, moulded edge whiteware were produced from 1825–1891 yet were most popular from 1841–1857 (Stelle 2001). Brown transfer pearlware is dated more specifically from 1809-1825 (Miller 2000:13).

One fragment of Japanese porcelain was recovered. While porcelains are one of the oldest forms of ceramic, Japanese-made porcelain was not exported to North America until 1869. These wares were commonly marked 'Made in Nippon' until 1921 when they were subsequently marked 'Made in Japan' (Miller 2000: 29). Art pottery was not made popular until the late 19thcentury through to the 1930s (Ketchum 1983:13). 'Salt glazed stoneware with Albany slip' refers to a natural chocolate brown interior glaze from Albany, New York. This popular storageware was produced after the first quarter of the 19th century and remained popular until 1910 (Stelle 2001). Modern examples of porcellaneous ware, plastic and whiteware were also collected and are attributed to the 20th century. One cut nail was also recovered at Findspot 2. Machine cut nails were commonly used between the 1830s and the 1890s (Adams 1995:94).

Table 4: Analysis of Artifacts Recovered from Findspot 2

Category	Group	Class/Object	Frequency	% of Total Assemblage
Architectural	Metal	Machine Cut Nail	5	5.75%
		Unidentifiable Nail	3	3.45%
	Brick	Red Brick	5	5.75%
	Door Hardware	Hinge Part	2	2.30%
	Construction Material	Mortar	4	4.60%

	Window Pane Glass	Cylindrical Glass	1	1.15%
		Total Architectural	**20**	**22.99%**
Ceramic	Food Preparation/ Consumption	Cooking/Storage	5	5.75%
		Tableware	31	35.63%
	Decorative Furnishings	Porcelain Figurine	1	1.15%
		Total Ceramic	**37**	**42.53%**
Glass	Food Preparation/ Consumption	Tableware	1	1.15%
		Unidentifiable bottle	9	10.34%
	Decorative Furnishings	Chandelier Crystal	1	1.15%
		Total Glass	**11**	**12.64%**
Metal	Unassigned Material	Wire	5	5.75%
		Scrap Metal	3	3.45%
		Strapping	1	1.15%
		Total Metal	**9**	**10.34%**
Faunal	Bone	Mammal Bone	4	4.60%
	Dentition	Mammal Dentition	3	3.45%
		Total Faunal	**7**	**8.05%**
Other	Metamorphic Rock	Anthracite Coal	1	1.15%
	20th Century	Plastic	2	2.30%
		Total Other	**3**	**3.45%**
Total Artifacts			**87**	**100.00%**

Table 5: Stage 2 Documentary Record Inventory

Field Documents	Total	Nature	Location
Photographs	705	Digital; depicting field conditions and assessment strategy	On server at 97 Gatewood Road, Kitchener; Folder P007-300-2011
Field Notes	27	Digital and hard copy	In file and on server at 97 Gatewood Road, Kitchener; Folder P007-300-2011
Maps	21	Digital and hard copy	In file and on server at 97 Gatewood Road, Kitchener; Folder P007-300-2011

7.0 STAGE 2 ANALYSIS AND CONCLUSIONS

The Stage 2 archaeological assessment, conducted under MTC licence #P007, PIF #P007-300-2011, resulted in the discovery of two archaeological findspots (Findspots 1–2).

7.1 Findspot 1 - The Doyle Site (BfFu-4)

Findspot 1 was identified as a Euro-Canadian artifact scatter, broadly dating from the mid-19th to late 20th century. As noted in Section 6.1.2, these artifacts possess little diagnostic value. Based on the ubiquitous nature of these kinds of finds on Euro-Canadian sites, their widespread geographic and chronological distribution and their extremely fragmentary nature, none of these artifacts can be considered to possess significant CHVI.

According to Section 2.2 of the *Standards and Guidelines for Consultant Archaeologists*, a Post-Contact site only requires a Stage 3 assessment when at least 20 artifacts date the period of use to before AD 1900, or when a 20th century assemblage is found to possess CHVI (MTC 2011:39-40). As fewer than 20 diagnostic artifacts dating to pre-1900 were found, Findspot 1 does not meet the first criteria for further work. Findspot 1 also does not appear to possess any significant measure of CHVI as a 20th century assemblage, and therefore does not meet the second criteria for further work. Based on these factors, it is the considered opinion of ARA that Findspot 1 does not warrant further archaeological work (i.e. a Stage 3 and/or Stage 4 archaeological assessment).

7.2 Findspot 2 - The Shaver Site (BfFu-5)

Findspot 2 consisted of a Euro-Canadian homestead, well and associated midden. Although the original homestead structure has since been removed and the foundations have been re-used as a modern refuse dump (thereby possibly skewing the archaeological record), its original location is clearly defined by the stone foundations and the well within the site boundaries.

Upon analysis, it has been determined that Findspot 2 possesses numerous artifacts with strong diagnostic qualities. While Findspot 2 displayed several popular 19th century artifacts including salt-glazed coarse stoneware and plain whitewares, it also contained examples of blue edgeware, blue transferware and - most significantly - brown transfer pearlware. Brown transfer pearlware is a much earlier and therefore significant find dating from 1809-1825 (Miller 2000:13). Based on the presence of both popular and more exceptional Euro-Canadian artifacts, Findspot 2 is considered to range in date from the early 19th century to the early 20th century, possessing significant CHVI.

According to Section 2.2 of the *Standards and Guidelines for Consultant Archaeologists*, a Post-Contact site only requires a Stage 3 assessment when at least 20 artifacts date the period of use to before AD 1900, or when a 20th century assemblage is found to possess CHVI (MTC 2011:39-40). Based on the presence of numerous diagnostic artifacts, in addition to the stone foundations with associated well, it is the considered opinion of ARA that the Shaver Site (BfFu-5) clearly warrants a Stage 3 site-specific assessment if it cannot be avoided by project re-design.

8.0 STAGE 2 RECOMMENDATIONS

8.1 Findspot 1 - The Doyle Site (BfFu-4)

Findspot 1 was identified as a Euro-Canadian artifact scatter, broadly dating from the mid-19th to late 20th century. This findspot has been assigned Borden Number BfFu-4 and designated as the Doyle Site.

The diagnostic artifacts from this scatter vary considerably in date, and few are of any significant diagnostic value. Based on the criteria set out in Section 2.2 of the *Standards and Guidelines for Consultant Archaeologists*, Findspot 1 cannot be considered to be of further CHVI. Accordingly, it does not warrant a Stage 3 and/or Stage 4 archaeological assessment.

8.2 Findspot 2 - The Shaver Site (BfFu-5)

Findspot 2 was identified as a Euro-Canadian homestead, well and associated midden dating from the early 19th century to the early 20th century. This findspot has been assigned Borden Number BfFu-5 and designated as the Shaver Site.

This archaeological site clearly meets the MTC's criteria for sites requiring further work, and it therefore can be considered to be of further CHVI. In order to avoid any impacts to this site, the proponent redesigned the project lands in order to remove the impacting project infrastructure. Specifically, Turbine 14 and its associated infrastructural elements (e.g. the underground cable line and access road) were deleted from the project design (see Appendices B–C). In order to conform with the direction set out in Section 7.8.5 of the *Standards and Guidelines for Consultant Archaeologists* (MTC 2011:140–141), a minimum 20 m buffer has been established between this site and the lands currently under consideration for development (see Maps 30–31). The buffer between the Shaver Site (BfFu-5) and the South Branch Wind Farm's proposed project infrastructure measures 1.88 km in diameter.

8.3 Synthesis of Recommendations

Since Findspot 1 (the Doyle Site; BfFu-4) was of no further CHVI, it was not recommended for a Stage 3 site-specific assessment. Findspot 2 (the Shaver Site; BfFu-5), conversely, was clearly of further CHVI. In order to avoid impacts to this archaeological site, the proponent redesigned the study area and removed the impacting project infrastructure. A buffer of 1.88 km now exists between the Shaver Site and any proposed project infrastructure, conforming with the direction set out in Section 7.8.5 of the *Standards and Guidelines for Consultant Archaeologists* (MTC 2011:140–141).

Based on these findings and the modification of the project design, ARA feels that no further archaeological study of the subject lands would be productive. It is recommended that the South Branch Wind Farm be released from further archaeological concerns. ARA also recommends that should any future development be proposed in the vicinity of Findspot 2 (the Shaver Site; BfFu-5), a Stage 3 site-specific archaeological assessment must be completed. A *Letter of Review and Acceptance into the Provincial Register of Reports* is requested, as provided for in Section 65.1 of the *Ontario Heritage Act*.

9.0 ADVICE ON COMPLIANCE WITH LEGISLATION

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

- This report is submitted to the Minister of Tourism and Culture as a condition of licensing in accordance with Part VI of the *Ontario Heritage Act*, R.S.O. 1990, c 0.18. The report is reviewed to ensure that it complies with the standards and guidelines that are issued by the Minister, and that the archaeological fieldwork and report recommendations ensure the conservation, protection and preservation of the cultural heritage of Ontario. When all matters relating to archaeological sites within the project area of a development proposal have been addressed to the satisfaction of the Ministry of Tourism and Culture, a letter will be issued by the ministry stating that there are no further concerns with regard to alterations to archaeological sites by the proposed development.
- It is an offence under Sections 48 and 69 of the *Ontario Heritage Act* for any party other than a licenced archaeologist to make any alteration to a known archaeological site or to remove any artifact or other physical evidence of past human use or activity from the site, until such time as a licenced archaeologist has completed archaeological fieldwork on the site, submitted a report to the Minister stating that the site has no further cultural heritage value or interest, and the report has been filed in the Ontario Public Register of Archaeology Reports referred to in Section 65.1 of the *Ontario Heritage Act*.
- Should previously undocumented archaeological resources be discovered, they may be a new archaeological site and therefore subject to Section 48 (1) of the *Ontario Heritage Act*. The proponent or person discovering the archaeological resources must cease alteration of the site immediately and engage a licenced consultant archaeologist to carry out archaeological fieldwork, in compliance with Section 48 (1) of the *Ontario Heritage Act*.
- The *Cemeteries Act*, R.S.O. 1990 c. C.4 and the *Funeral, Burial and Cremation Services Act*, 2002, S.O. 2002, c.33 (when proclaimed in force) require that any person discovering human remains must notify the police or coroner and the Registrar of Cemeteries at the Ministry of Consumer Services.
- Archaeological sites recommended for further archaeological fieldwork or protection remain subject to Section 48 (1) of the *Ontario Heritage Act* and may not be altered, or have artifacts removed from them, except by a person holding an archaeological licence.

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11.0 IMAGES

Image 1: Area of No Archaeological Potential along County Road 18/Gilmour Road (Facing Southwest)

Image 2: View of Soil Conditions along the Cable Corridor from Turbine 10 to Gilmour Road (Photo Taken on May 16, 2011)

Image 3: View of Soil Conditions at Turbine 6 Laydown Area
(Photo Taken on June 16, 2011)

Image 4: View of Crewmembers Conducting Pedestrian Survey at 5 m Intervals at Turbine 2
(Photo Taken on May 16, 2011; Facing Northwest)

Image 5: View of Crewmembers Conducting Pedestrian Survey at 5 m along Access Road between Turbines 7 and 8
(Photo Taken on May 16, 2011; Facing South)

Image 6: View of Crewmembers Conducting Pedestrian Survey at 1 m Intervals - Findspot 2
(Photo Taken on April 13, 2011; Facing Southeast)

Image 7: View of Crewmembers Test Pitting at 5 m Intervals along the Access Road to Turbine 5
(Photo Taken on June 17, 2011; Facing South)

Image 8: View of Typical Test Pit Excavated into Subsoil along the Access Road to Turbine 9
(Photo Taken on May 20, 2011)

Image 9: View of Crewmember Screening through 6 mm Mesh along the Access Road to Turbine 5
(Photo Taken on June 17, 2011; Facing West)

Image 10: View of Disturbed Area (Gravel Laneway) along Access Road to Turbine 11, Confirmed by Test Pitting
(Photo Taken on April 13, 2011; Facing Northwest)

Image 11: View of Disturbed Area (Gravel Laneway) along Access Road to Turbine 12, Confirmed by Test Pitting
(Photo Taken on April 12, 2011; Facing Northwest)

Image 12: View of Disturbed Area (Gravel Laneway) along Access Road to Turbine 5, Confirmed by Test Pitting
(Photo Taken on May 20, 2011; Facing South)

Image 13: View of Disturbed Area (Gravel Laneway) along Access Road to Turbine 6, Confirmed by Test Pitting
(Photo Taken on May 20, 2011; Facing North)

Image 14: View of Disturbed Area (Gravel Laneway) along Turbine 14 Access Road, Confirmed by Test Pitting
(Photo Taken on April 13, 2011; Facing Southwest)

Image 15: View of Disturbed Area around the Operations Building, Confirmed by Test Pitting
(Photo Taken on May 16, 2011; Facing West)

Image 16: View of Typical Disturbed Test Pit near the Operations Building
(Photo Taken on May 16, 2011)

Image 17: View of a Crewmember Test Pitting in the Southwest Corner of the Turbine 4 Laydown Area with a High Water Table
(Photo Taken on May 17, 2011; Facing East)

Image 18: View of Typical Test Pit Excavated into Subsoil in Southwest Corner of the Turbine 4 Laydown Area with a High Water Table
(Photo Taken on May 20, 2011)

Image 19: View of Crewmembers Test Pitting at 5 m Intervals in an Area with a High Water Table in Turbine 14 Laydown Area
(Photo Taken on April 13, 2011; Facing South)

Image 20: View of Permanently Wet Lands and Lands Sloped Greater than 20° along the Northern Half of the Cable Corridor between Turbines 8 and 10
(Photo Taken on May 16, 2011; Facing North)

Image 21: View of Permanently Wet Lands and Lands Sloped Greater than 20° along the Southern Half of the Cable Corridor between Turbines 8 and 10
(Photo Taken on May 16, 2011; Facing West)

Image 22: View of Permanently Wet Lands (Swamp) in the Southeastern Corner of Turbine 4 Laydown Area
(Photo Taken on May 20, 2011; Facing East)

Image 23: View of Drainage Ditch in the Eastern Corner of Turbine 4 Laydown Area
(Photo Taken on May 20, 2011; Facing North)

Image 24: View of Findspot 1
(Photo Taken on April 12, 2011; Facing East)

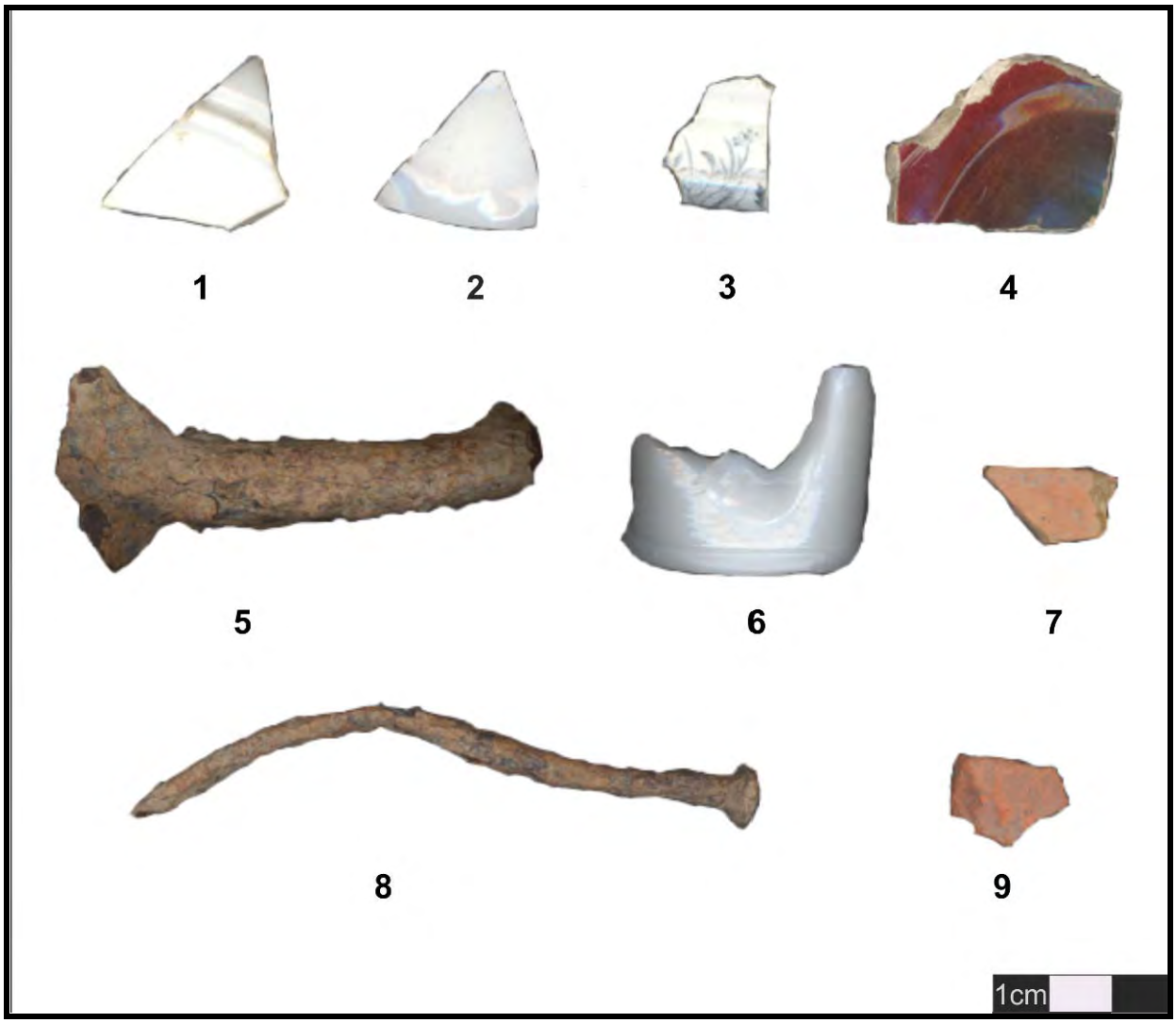


Image 25: View of Artifacts from Findspot 1
(1: Porcellaneous Ware; 2: Ironstone; 3: Black Transfer Whiteware; 4: Art Glaze Pottery; 5: Metal Door Hardware; 6: Milk Glass; 7: Glazer Red Earthenware; 8: Cut Nail; 9: Red Brick)

Image 26: View of Findspot 2, Shale Foundations
(Photo Taken on April 13, 2011; Facing East)

Image 27: View of Findspot 2, Well
(Photo Taken on April 13, 2011; Facing West)

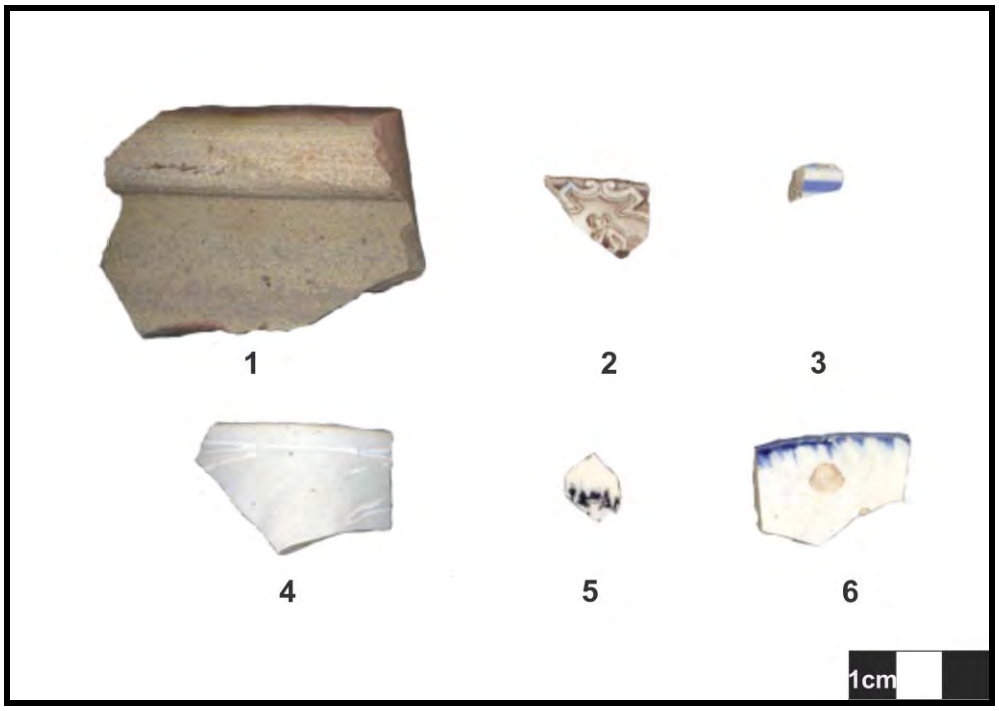


Image 28: Sample of Ceramic Artifacts from Findspot 2
(1: Salt Glazed Coarse Stoneware with Albany Slip; 2: Brown Transfer Pearlware; 3: Industrial Slip Whiteware; 4:Wheat Pattern Ironstone; 5: Japan-Made Porcelain; 6: Blue Edged Whiteware)

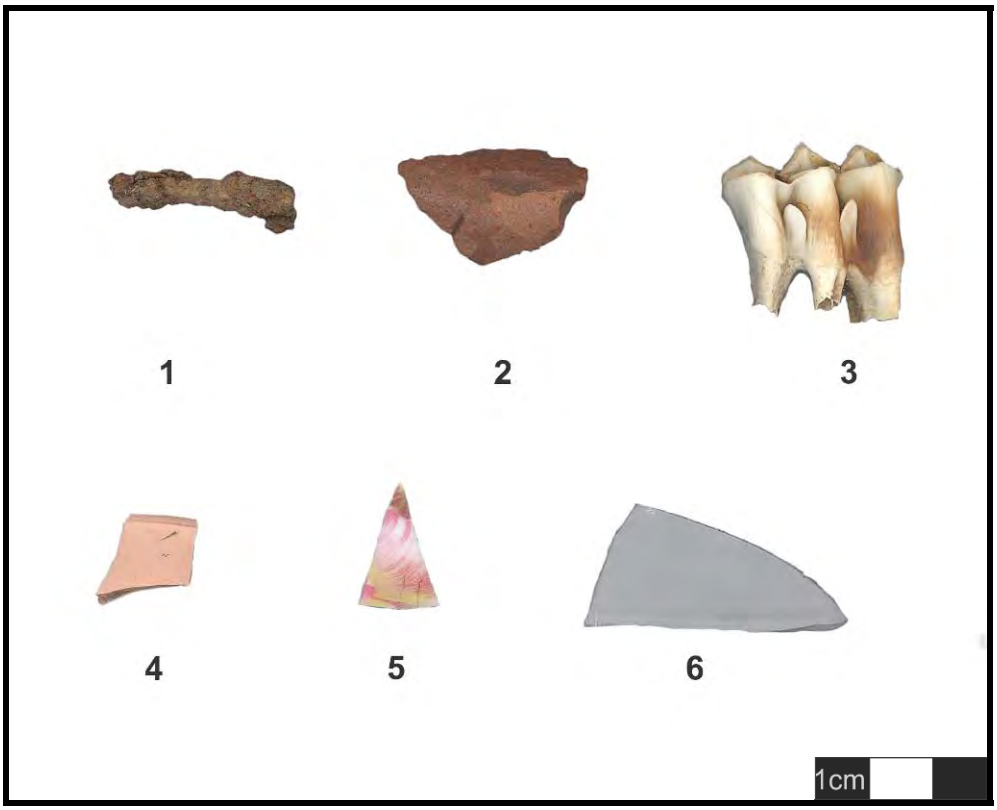
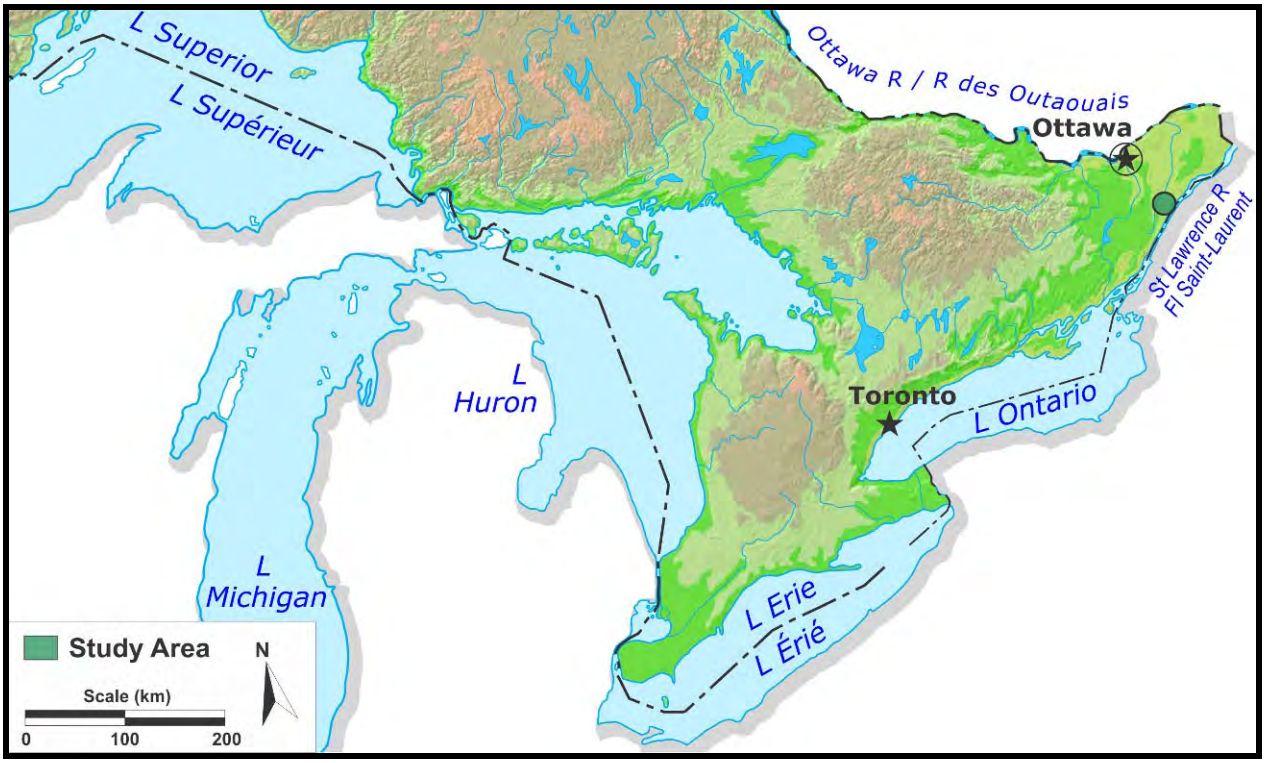
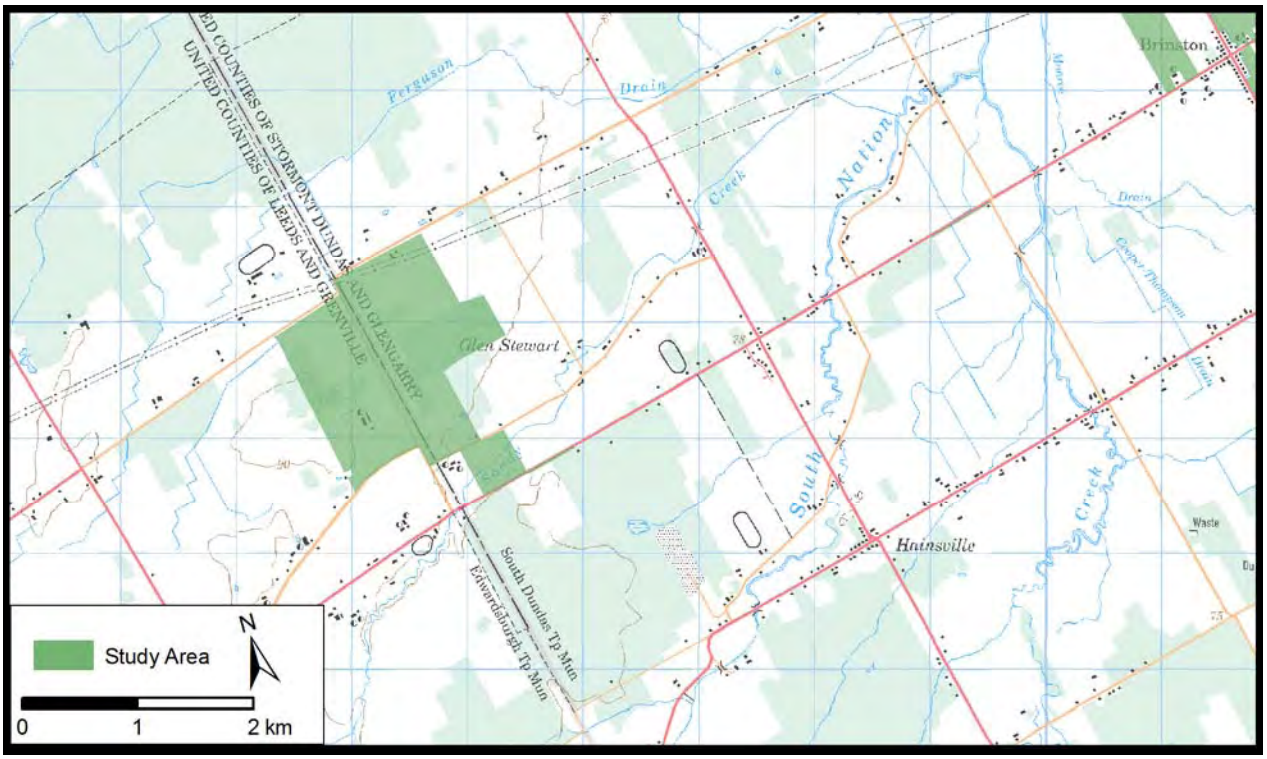


Image 29: Sample of Artifacts from Findspot 2
(1: Cut Nail; 2: Red Brick; 3: Mammal Dentition;
4: Pink Plastic; 5: Modern Porcellaneous Ware; 6: Window Glass)

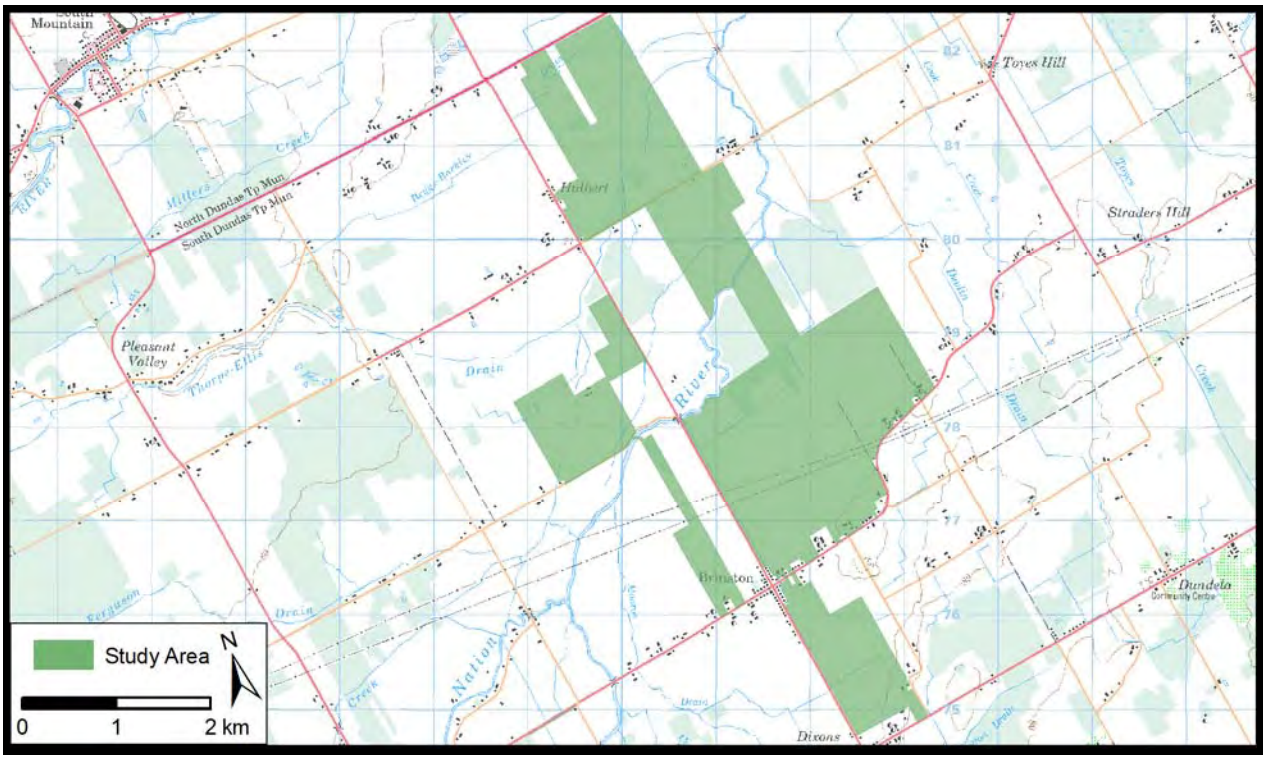
12.0 MAPS



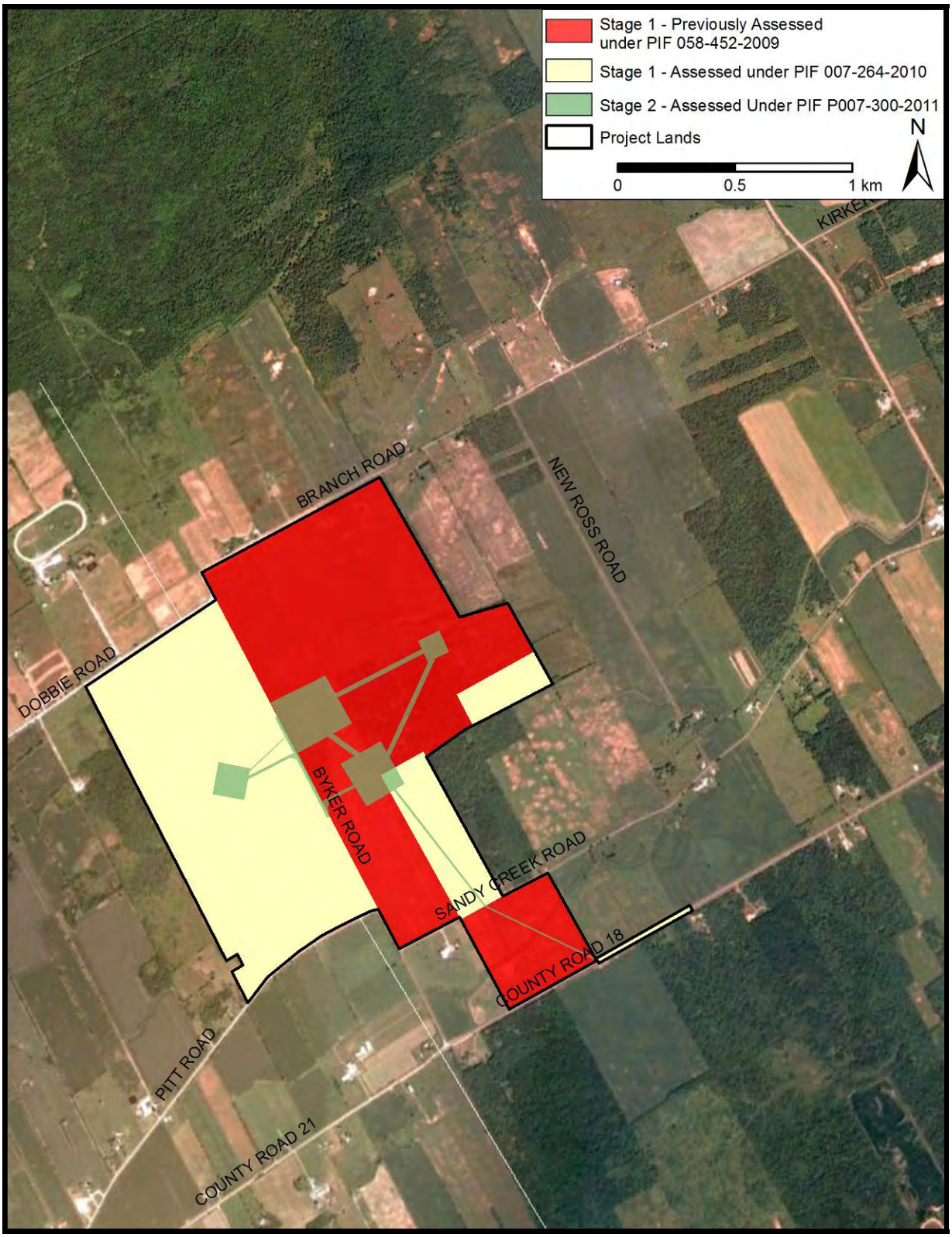
Map 1: Location of the Study Area in the Province of Ontario (NRC 2004)



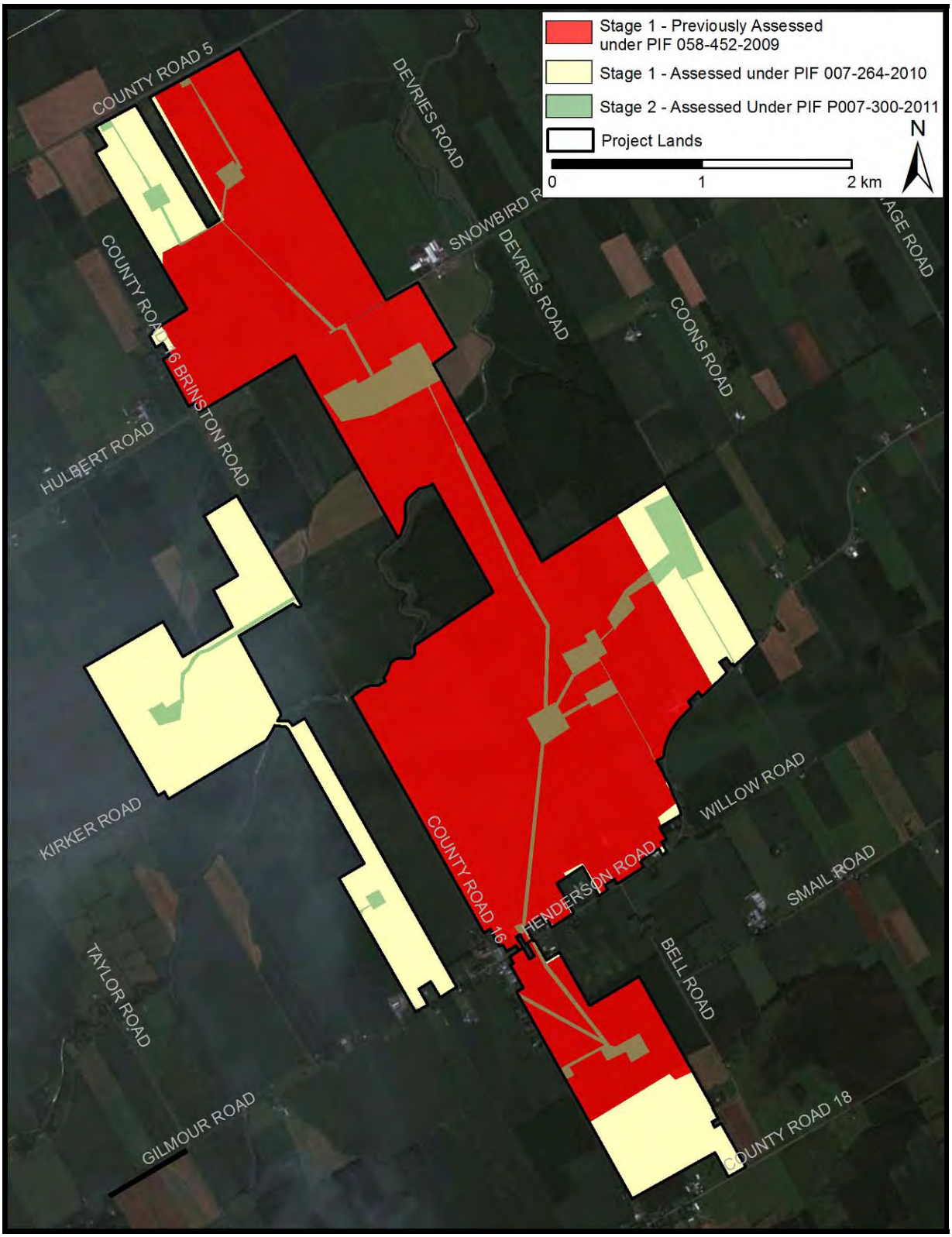
Map 2a: Location of the Western Project Lands in the Townships of South Dundas and Edwardsburgh/Cardinal
(NRC 2010b)



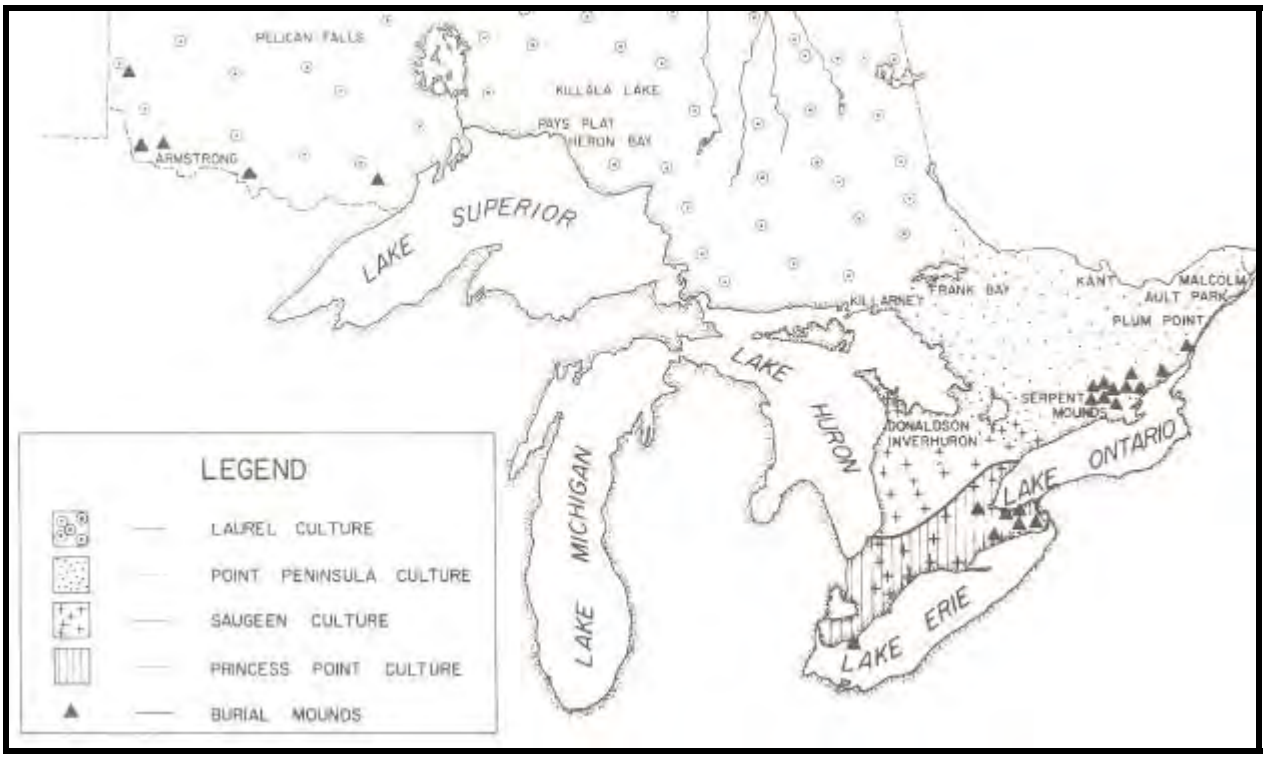
Map 2b: Location of the Eastern Project Lands in the Township of South Dundas
(NRC 2010b)



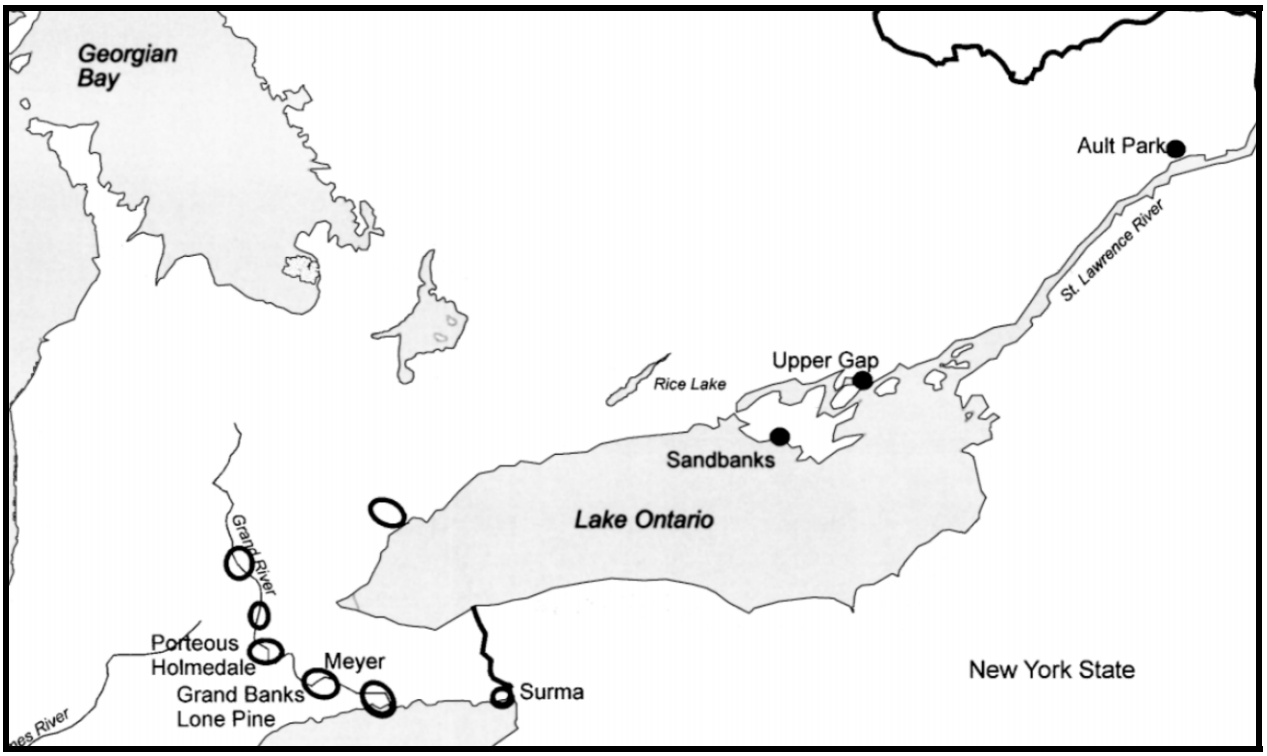
Map 3a: Key Plan of the Project Lands, Showing all Areas of Archaeological Assessment in the Western Project Lands



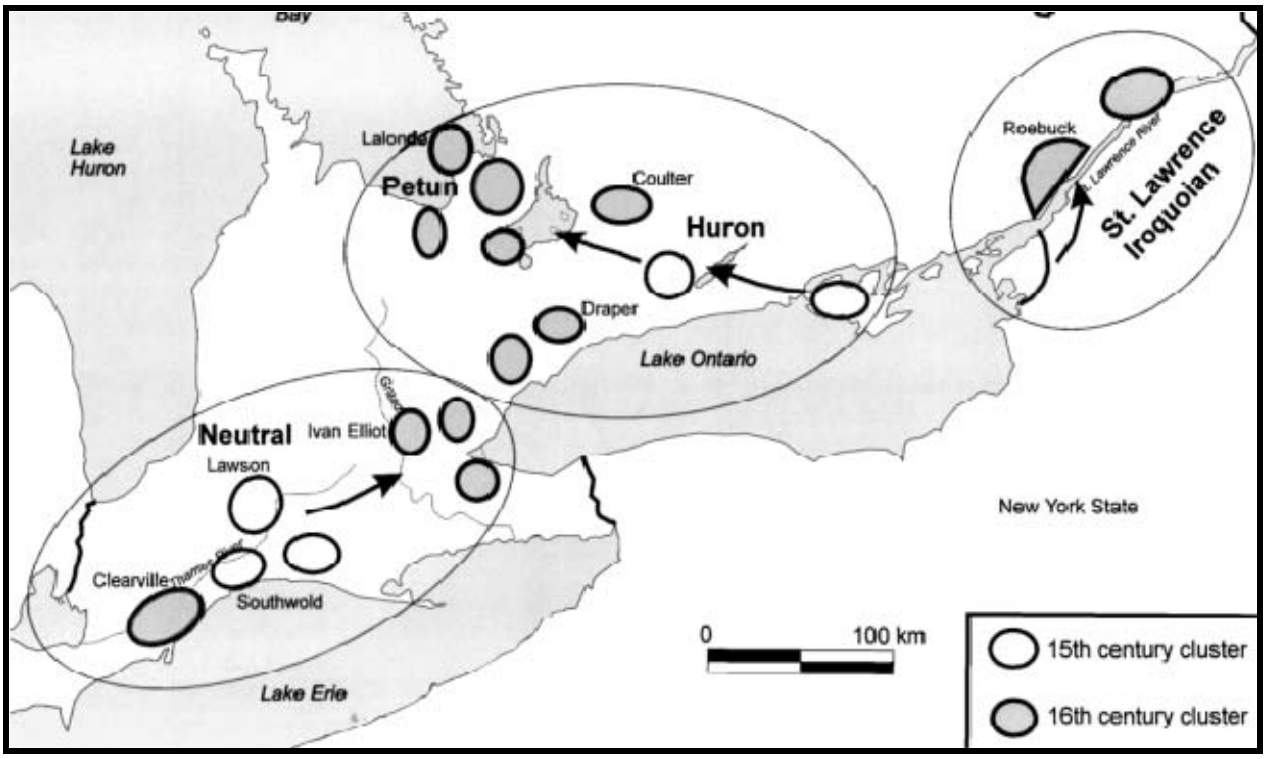
Map 3b: Key Plan of the Project Lands, Showing all Areas of Archaeological Assessment in the Eastern Project Lands



Map 4: Map of Middle Woodland Period Complexes
(Wright 1972:Map 4)

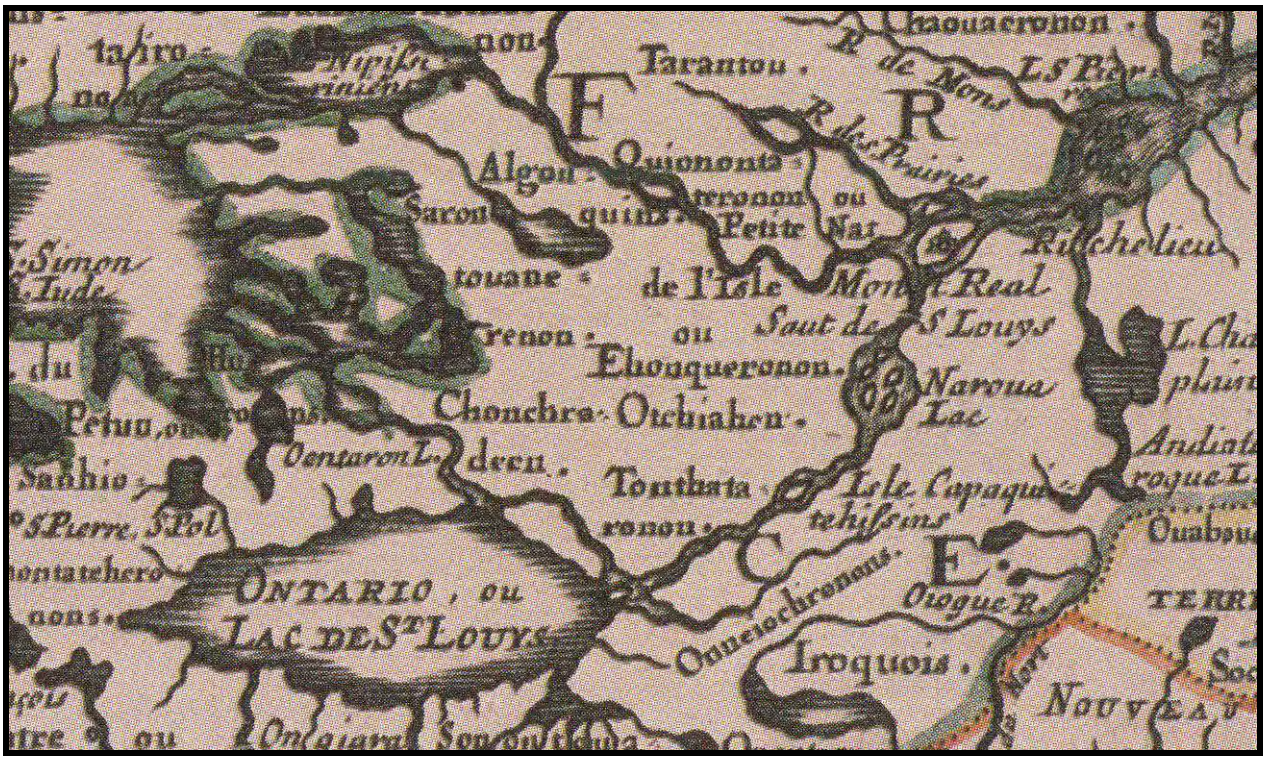


Map 5: Princess Point Site Clusters in Southern Ontario
(Warrick 2000:Fig. 3)



Map 6: Pre-Contact Iroquoian Site Clusters
(Warrick 2000:Fig. 10)

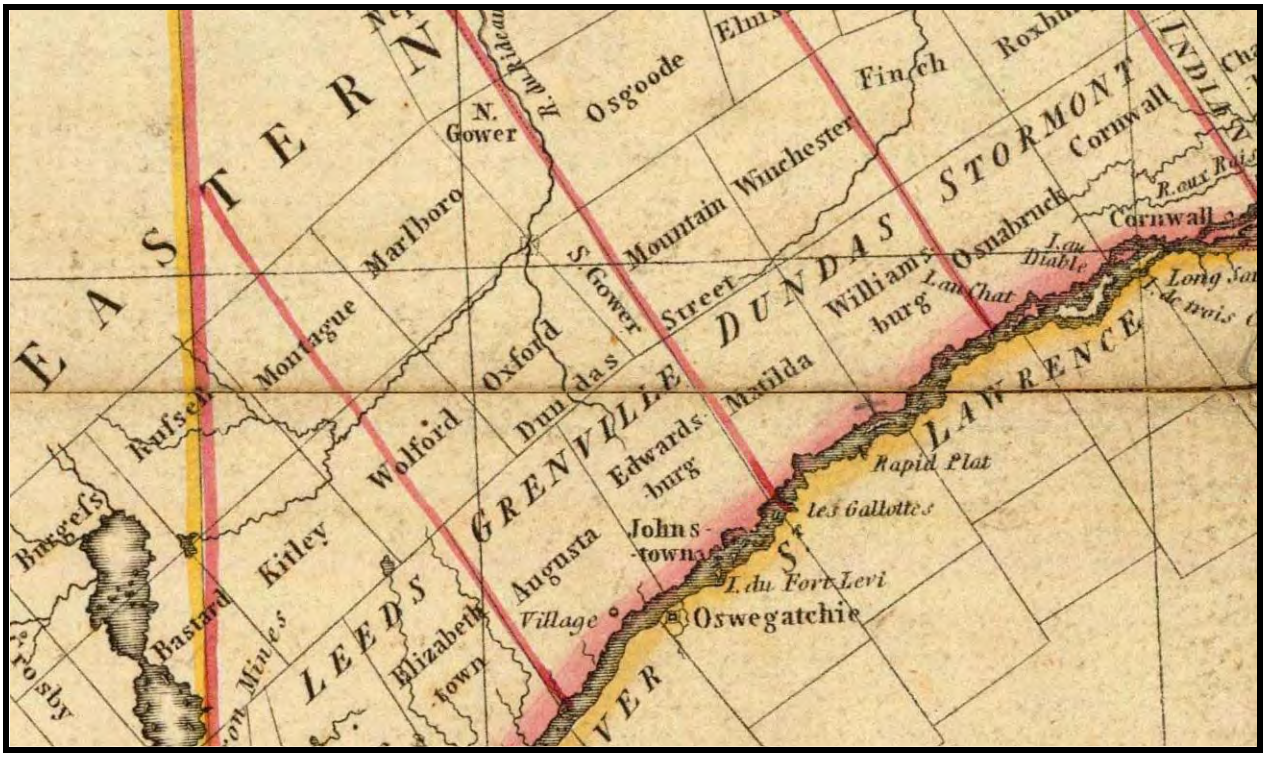
Map 7: Detail from S. de Champlain's *Carte de la Nouvelle France* (1632)
(Gentilcore and Head 1984:Map 1.2)



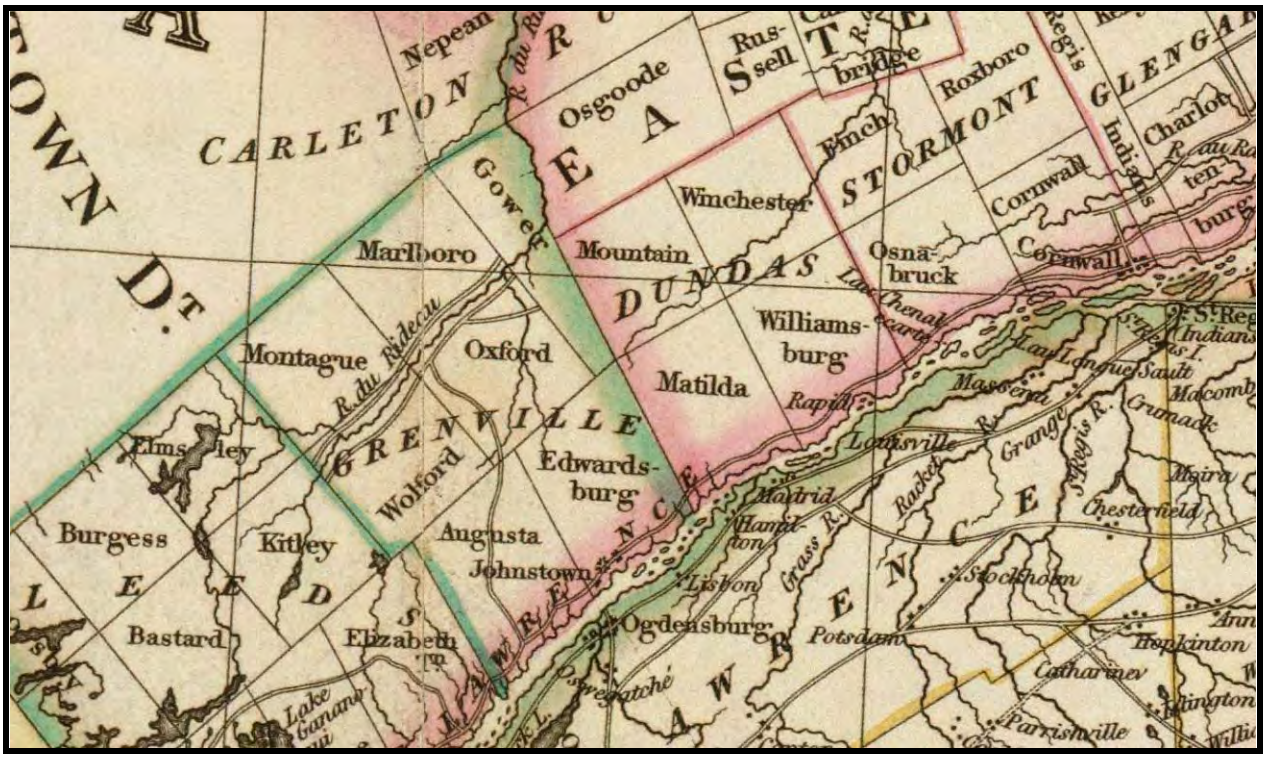
Map 8: Detail of N. Sanson's *Le Canada, ou Nouvelle France* (1656)
(Gentilcore and Head 1984:Map 1.10)

Map 9: Detail of H. Popple's *A Map of the British Empire in America* (1733)
(Cartography Associates 2009)

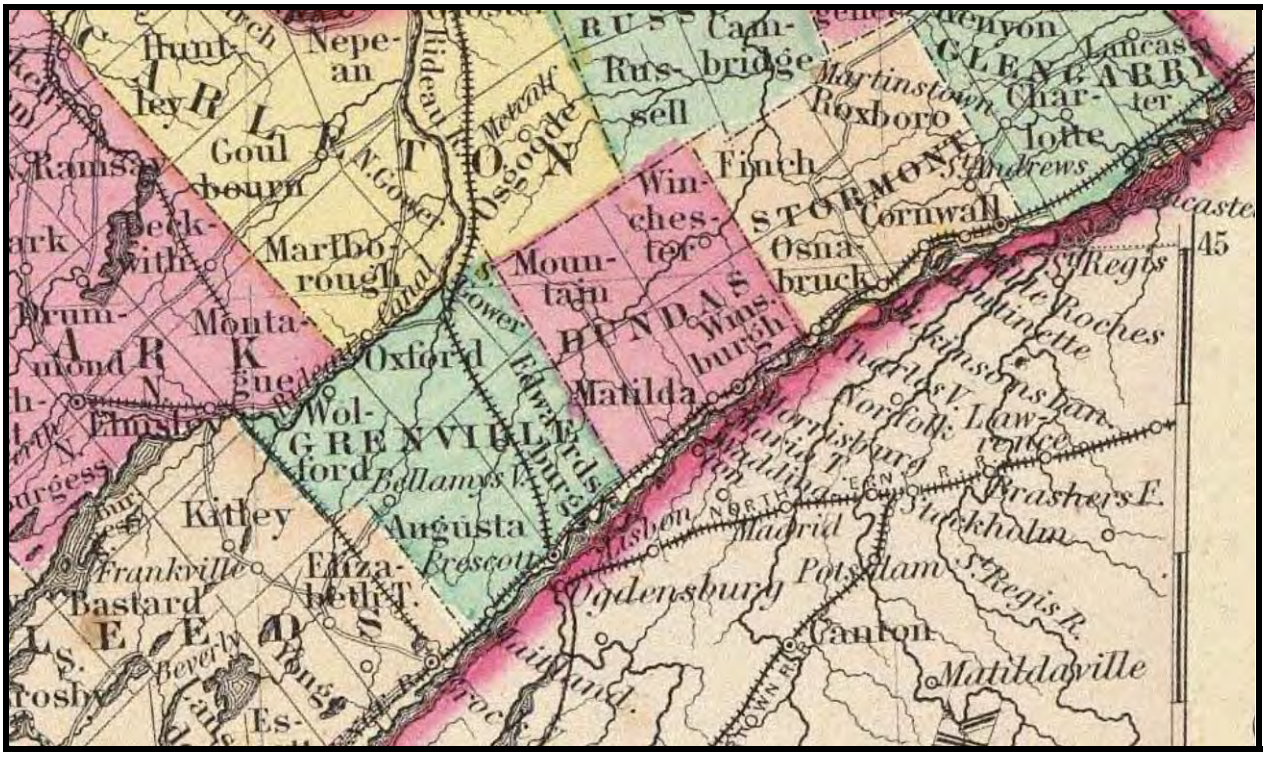
Map 10: Detail of Sayer and Bennett's *General Map of the Middle British Colonies in America* (1776)



Map 11: Detail of D.W. Smyth's *A Map of the Province of Upper Canada* (1800)
(Cartography Associates 2009)

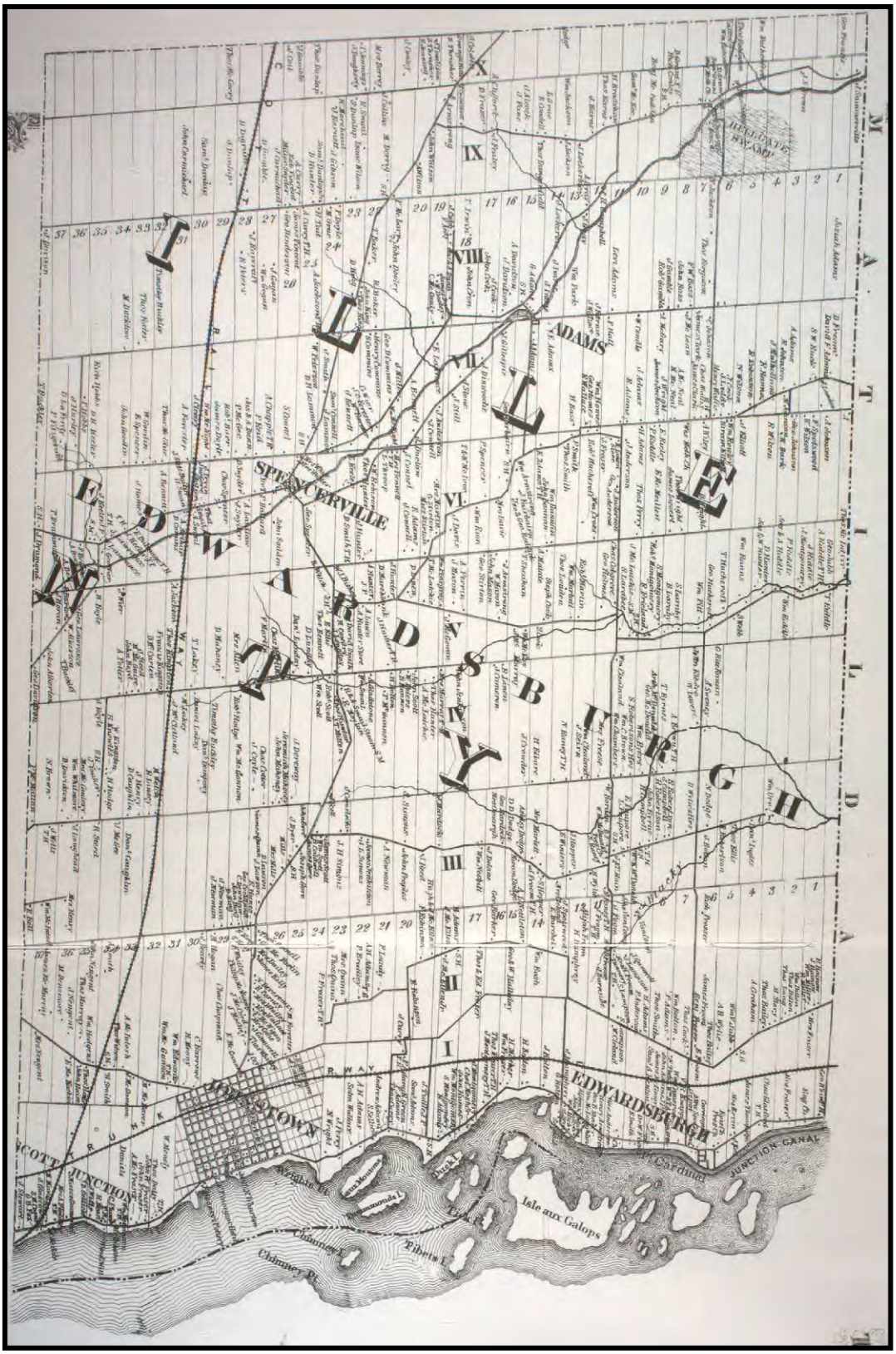


Map 12: Detail from J. Purdy's *A Map of Cabotia* (1814)
(Cartography Associates 2009)

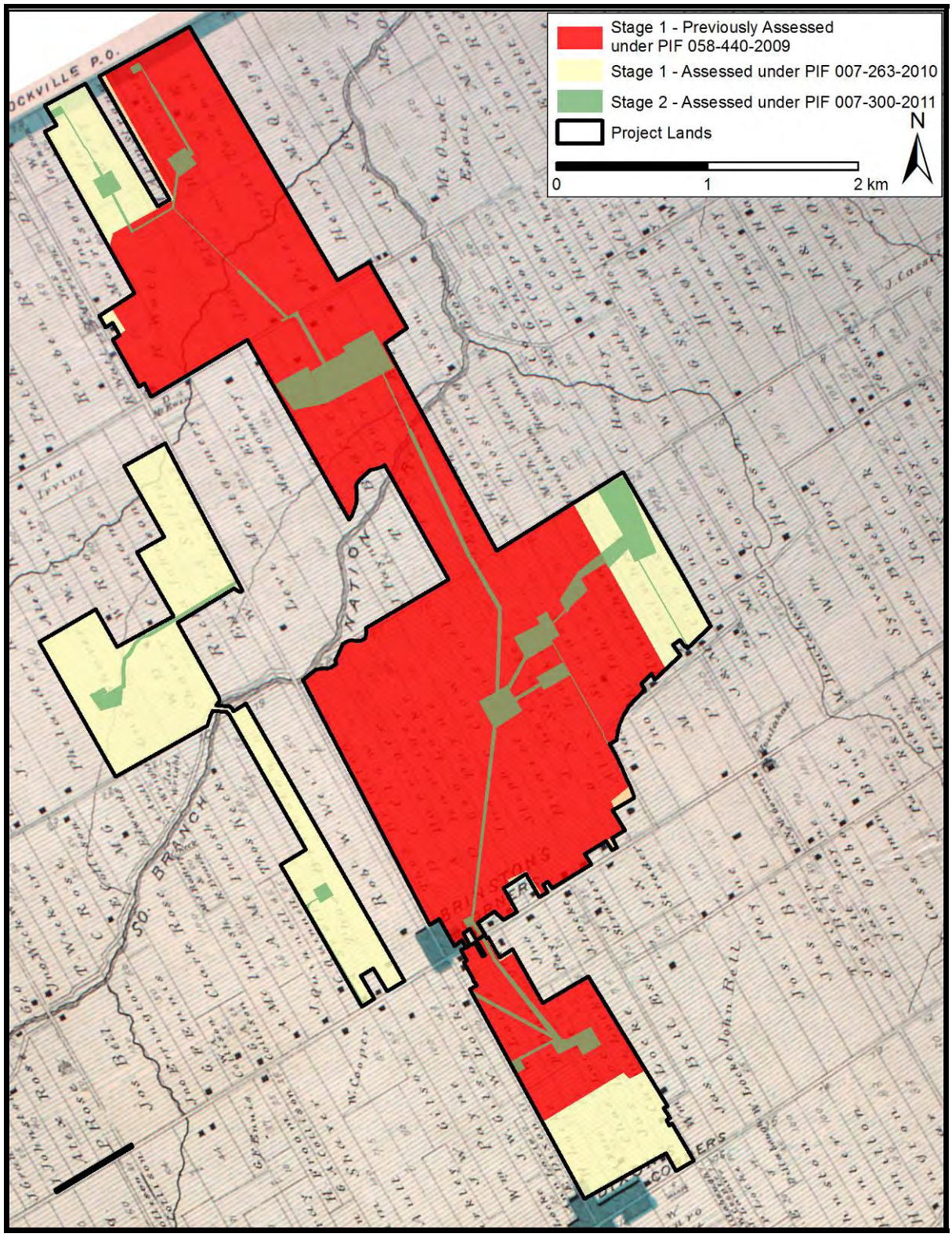


Map 13: Detail from G.W. Colton's *Canada West or Upper Canada* (1856)
(Cartography Associates 2009)

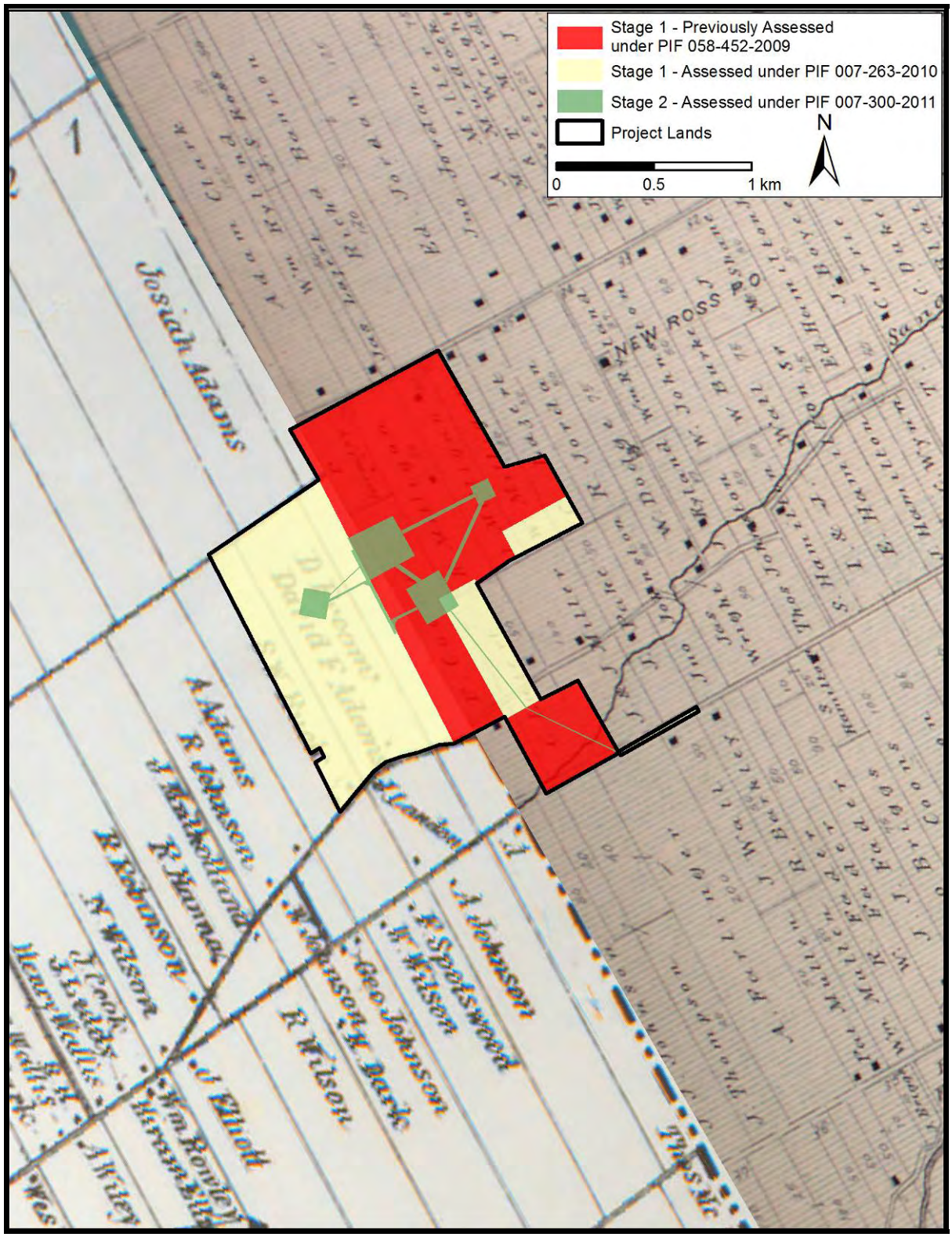
Map 14: The Township of Matilda from Belden & Co.'s *Illustrated Historical Atlas of the Counties of Stormont, Dundas and Glengarry, Ontario* (1879)
(McGill University 2001)



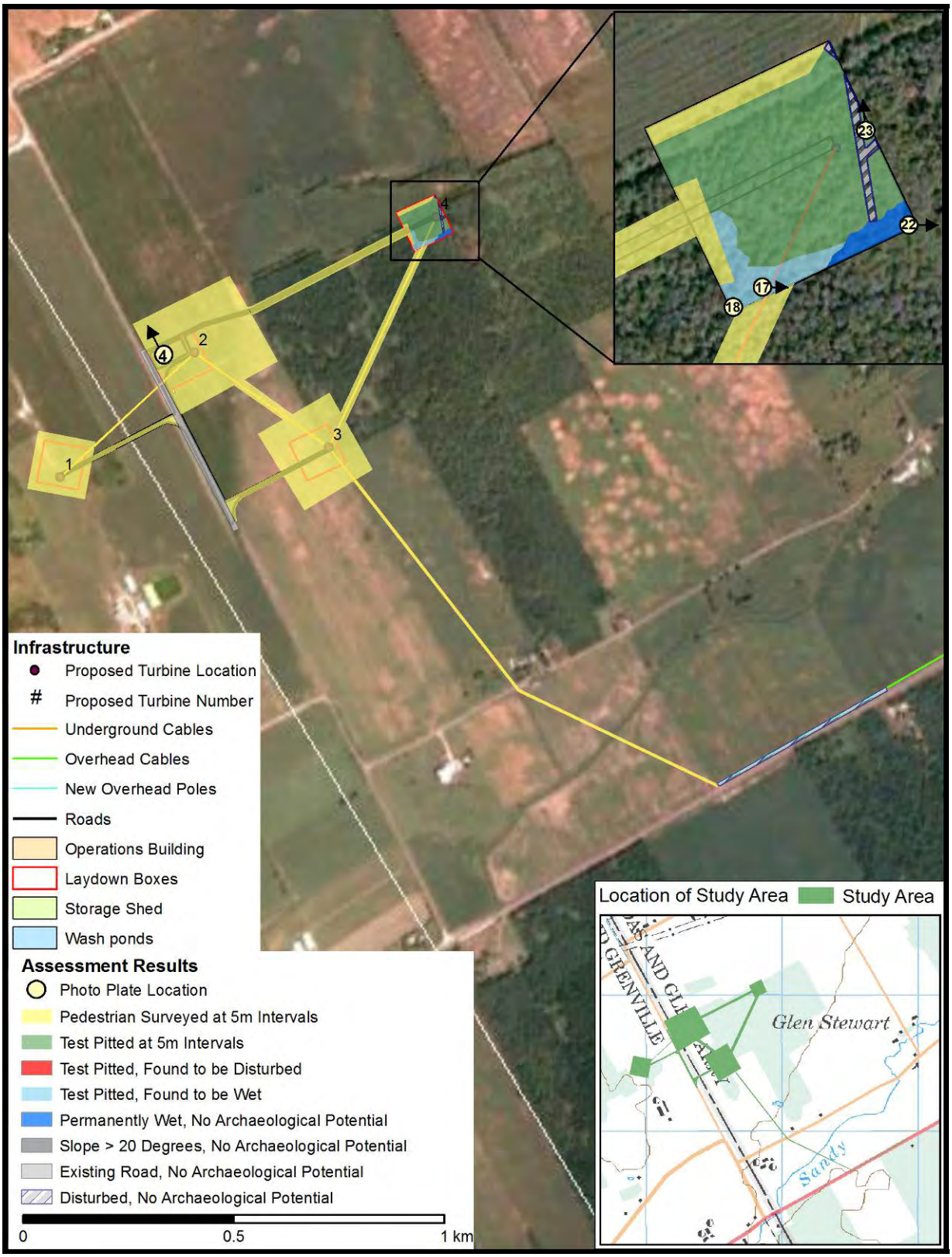
Map 15: The Township of Edwardsburgh from Leavitt's *History of Leeds and Grenville, Ontario* (1879)
(McGill University 2001)



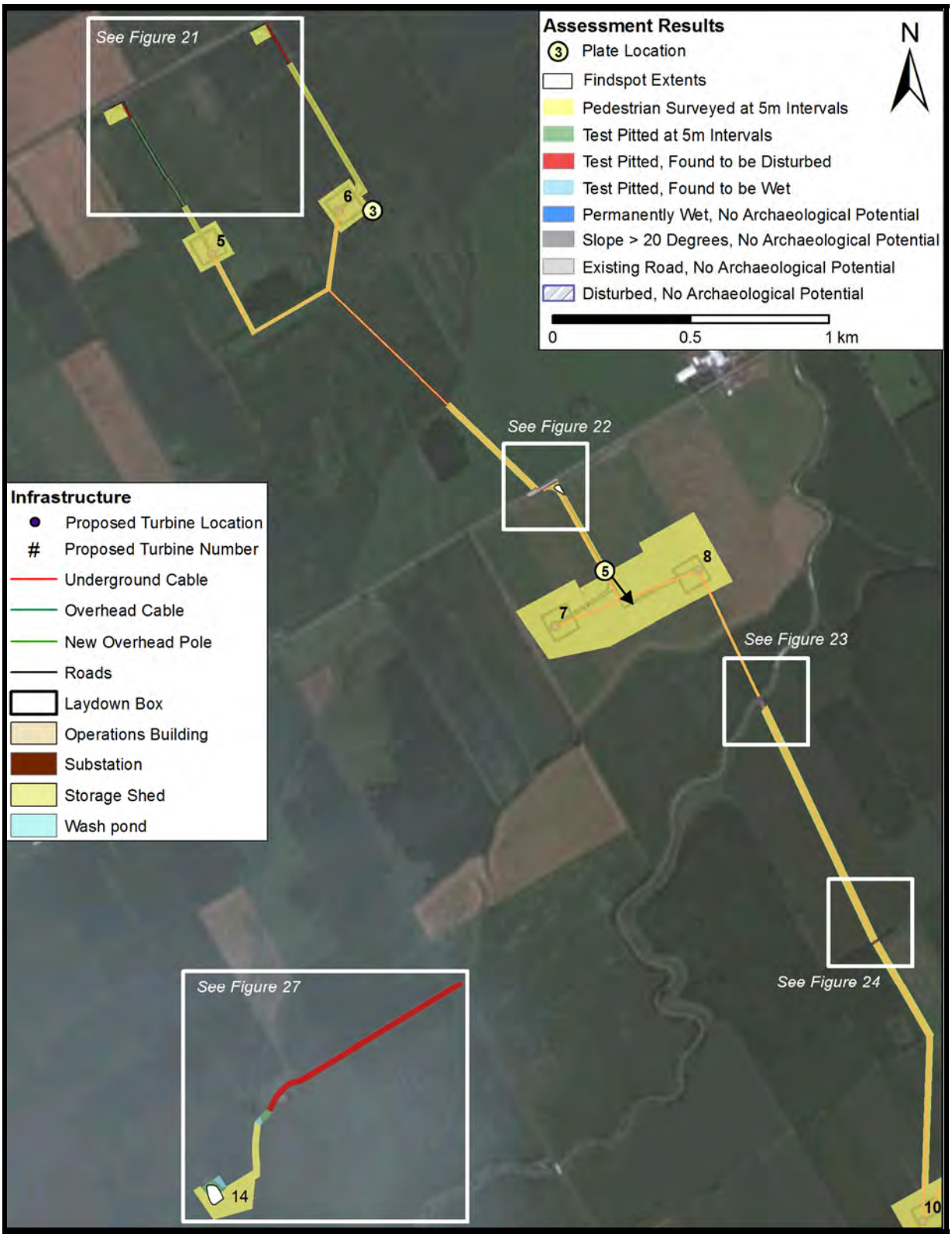
Map 16: Detail of the Township of Matilda from Belden & Co.'s *Illustrated Atlas of the Counties of Stormont, Dundas and Glengarry, Ontario* (1879), Showing the Stage 1 and 2 Study Areas
(McGill University 2001)



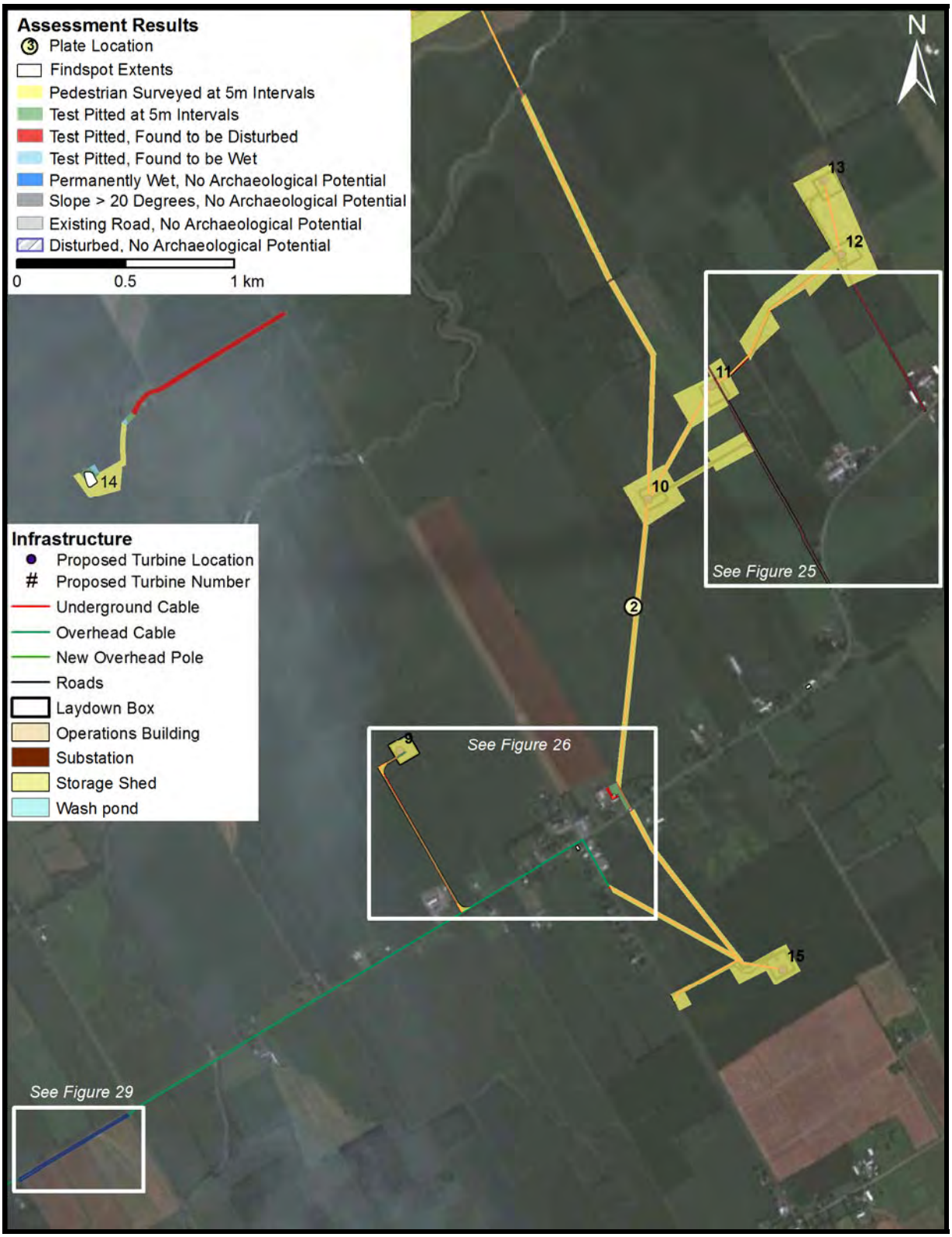
Map 17: Detail of the Township of Edwardsburgh from Leavitt's *History of Leeds and Grenville, Ontario* (1879), Showing the Stage 1 and 2 Study Areas
(McGill University 2001)



Map 18: Stage 2 Western Study Area Overview, Showing Property Survey Methods and Results
(Incorporating GIS data provided by Prowind Canada Inc.)

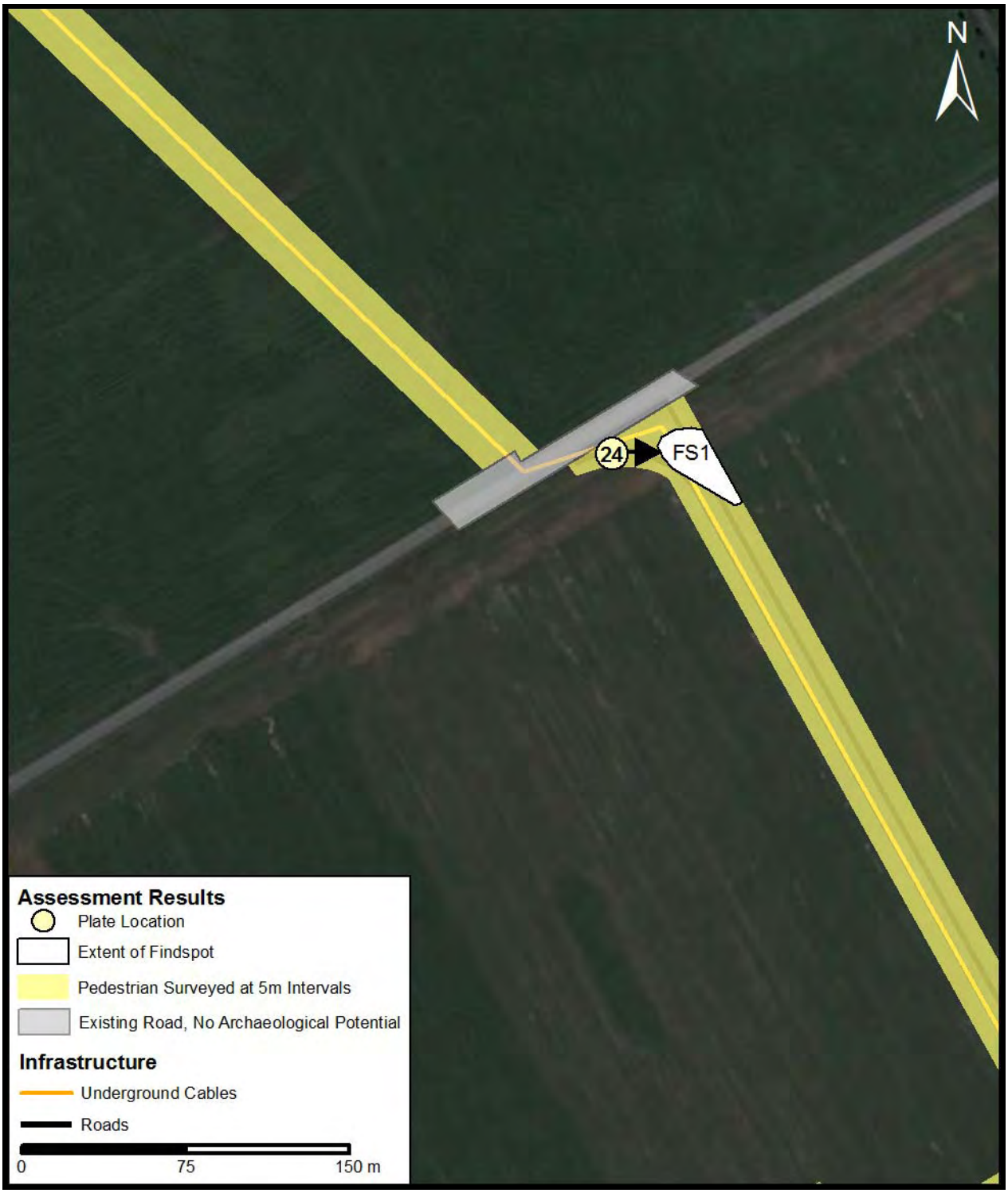


Map 19: Stage 2 Northeastern Study Area Overview, Showing Property Survey Methods and Results
(Incorporating GIS data provided by Prowind Canada Inc.)



Map 20: Stage 2 Southeastern Study Area Overview, Showing Property Survey Methods and Results
(Incorporating GIS data provided by Prowind Canada Inc.)

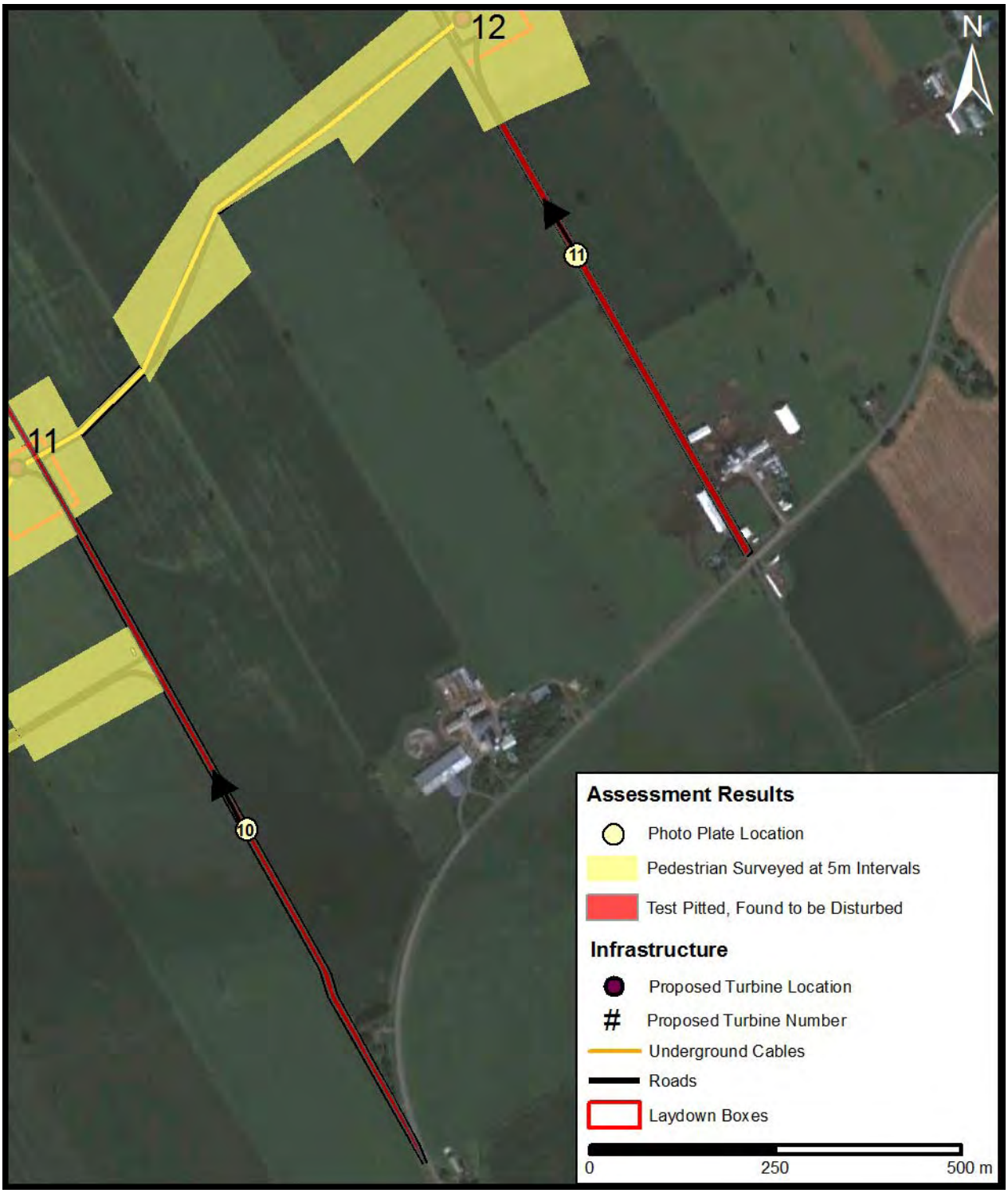
Map 21: Stage 2 Study Area Detail View, Showing Property Survey Methods and Results along Access Roads to Turbines 5 and 6
(Incorporating GIS data provided by Prowind Canada Inc.)



Map 22: Stage 2 Study Area Detail View, Showing Property Survey Methods and Results along Cable Corridor between Turbines 6 and 8
(Incorporating GIS data provided by Prowind Canada Inc.)

Map 23: Stage 2 Study Area Detail View, Showing Property Survey Methods and Results along the Northern Section of Cable Corridor between Turbines 8 and 10
(Incorporating GIS data provided by Prowind Canada Inc.)

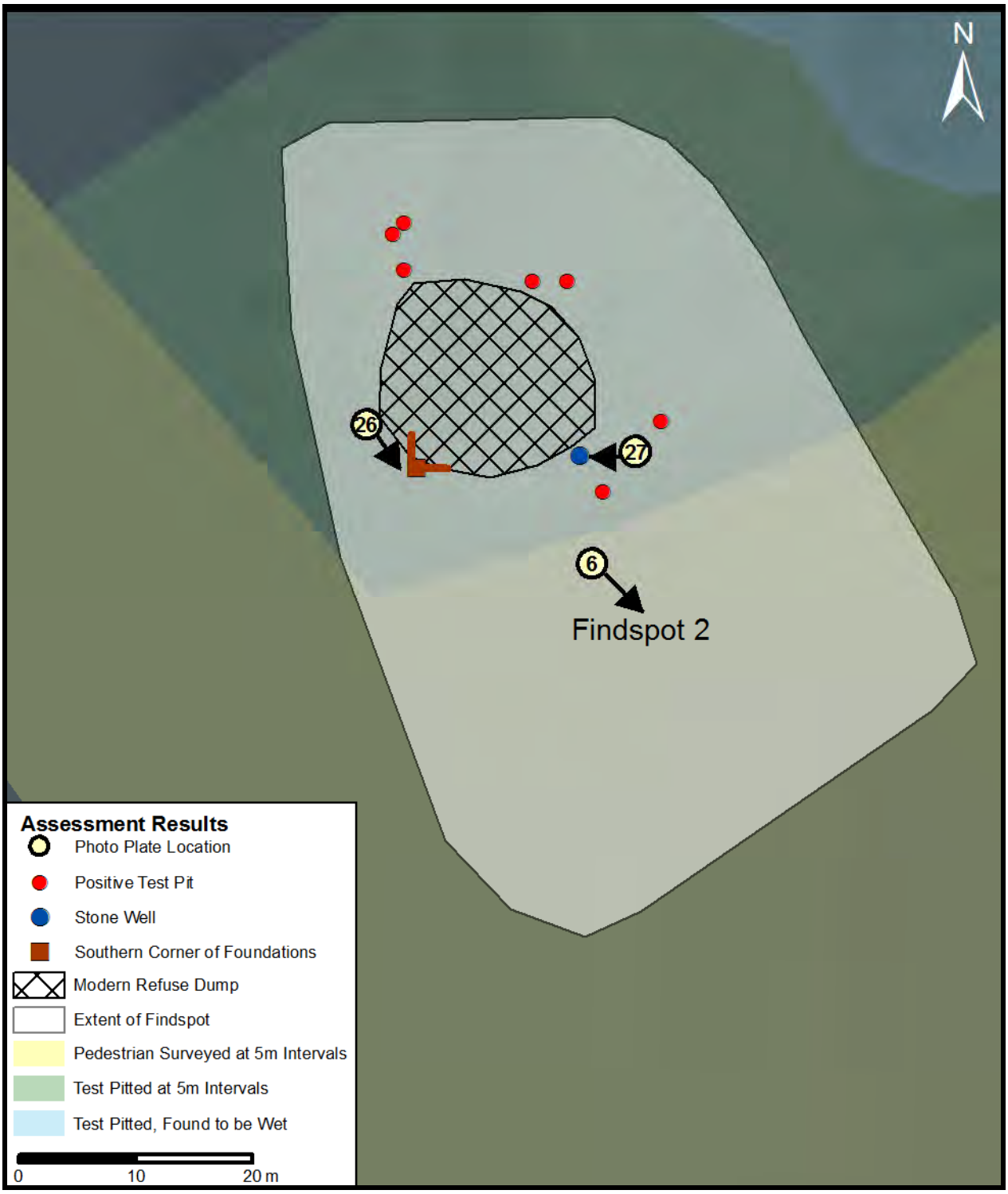
Map 24: Stage 2 Study Area Detail View, Showing Property Survey Methods and Results along the Southern Section of Cable Corridor between Turbines 8 and 10
(Incorporating GIS data provided by Prowind Canada Inc.)



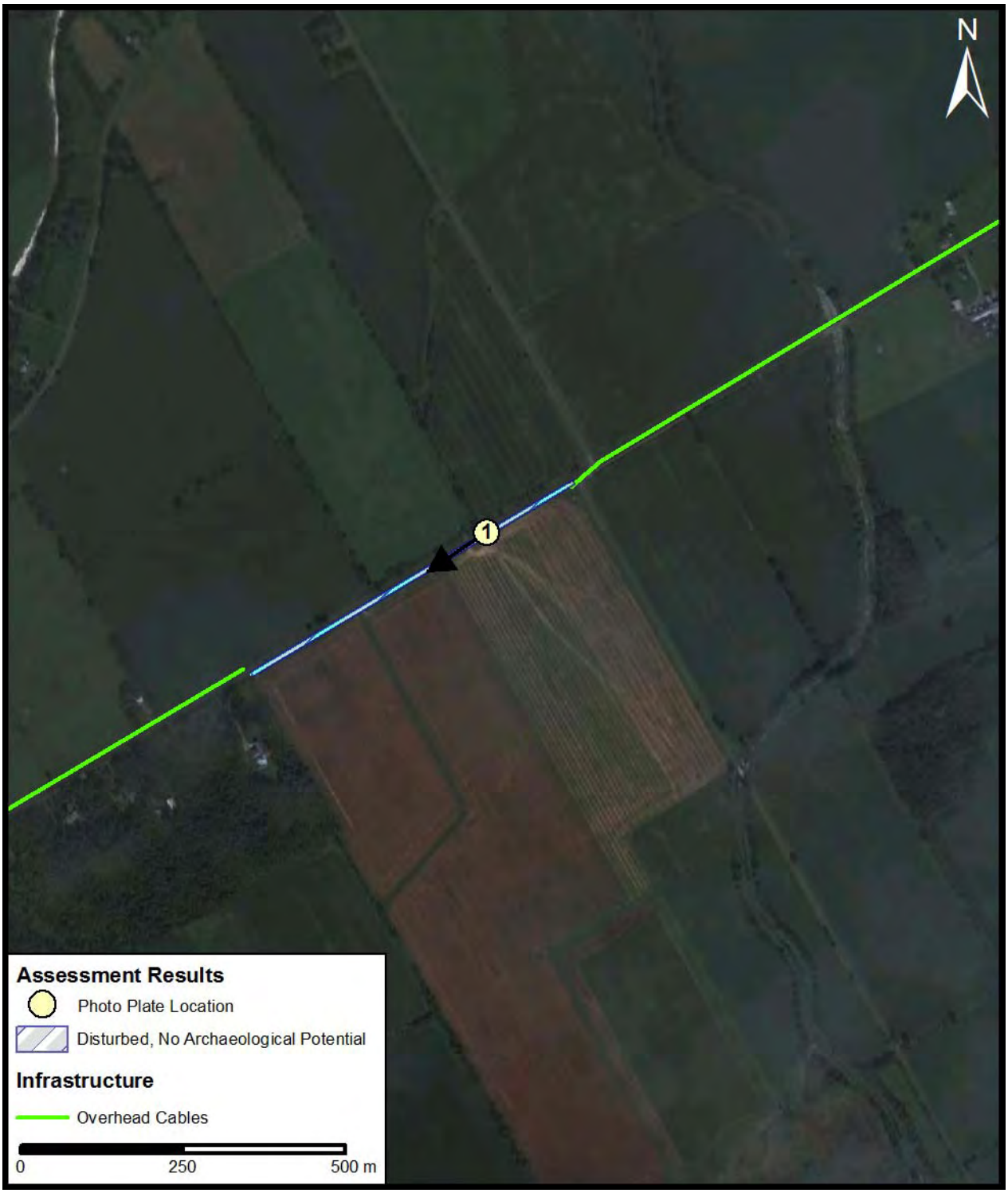
Map 25: Stage 2 Study Area Detail View, Showing Property Survey Methods and Results of Access Roads to Turbines 11 and 12
(Incorporating GIS data provided by Prowind Canada Inc.)

Map 26: Stage 2 Study Area Detail View, Showing Property Survey Methods and Results along the Access Road to Turbine 9 and the Operations Building
(Incorporating GIS data provided by Prowind Canada Inc.)

Map 27: Stage 2 Study Area Detail View, Showing Property Survey Methods and Results of Access Road and Turbine 14 Laydown Area
(Incorporating GIS data provided by Prowind Canada Inc.)

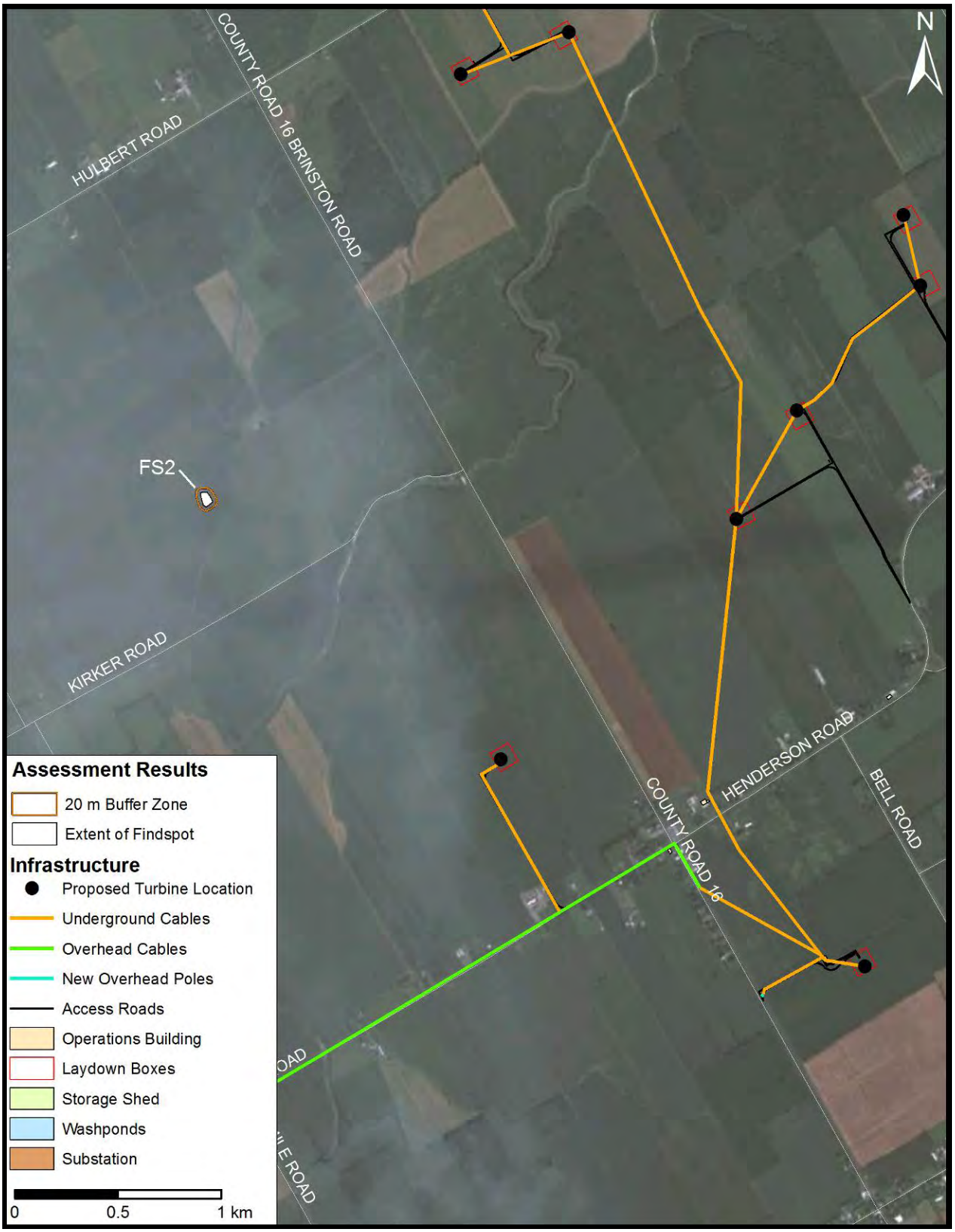


Map 28: Stage 2 Study Area Detail View, Showing Findspot 2
(Incorporating GIS data provided by Prowind Canada Inc.)



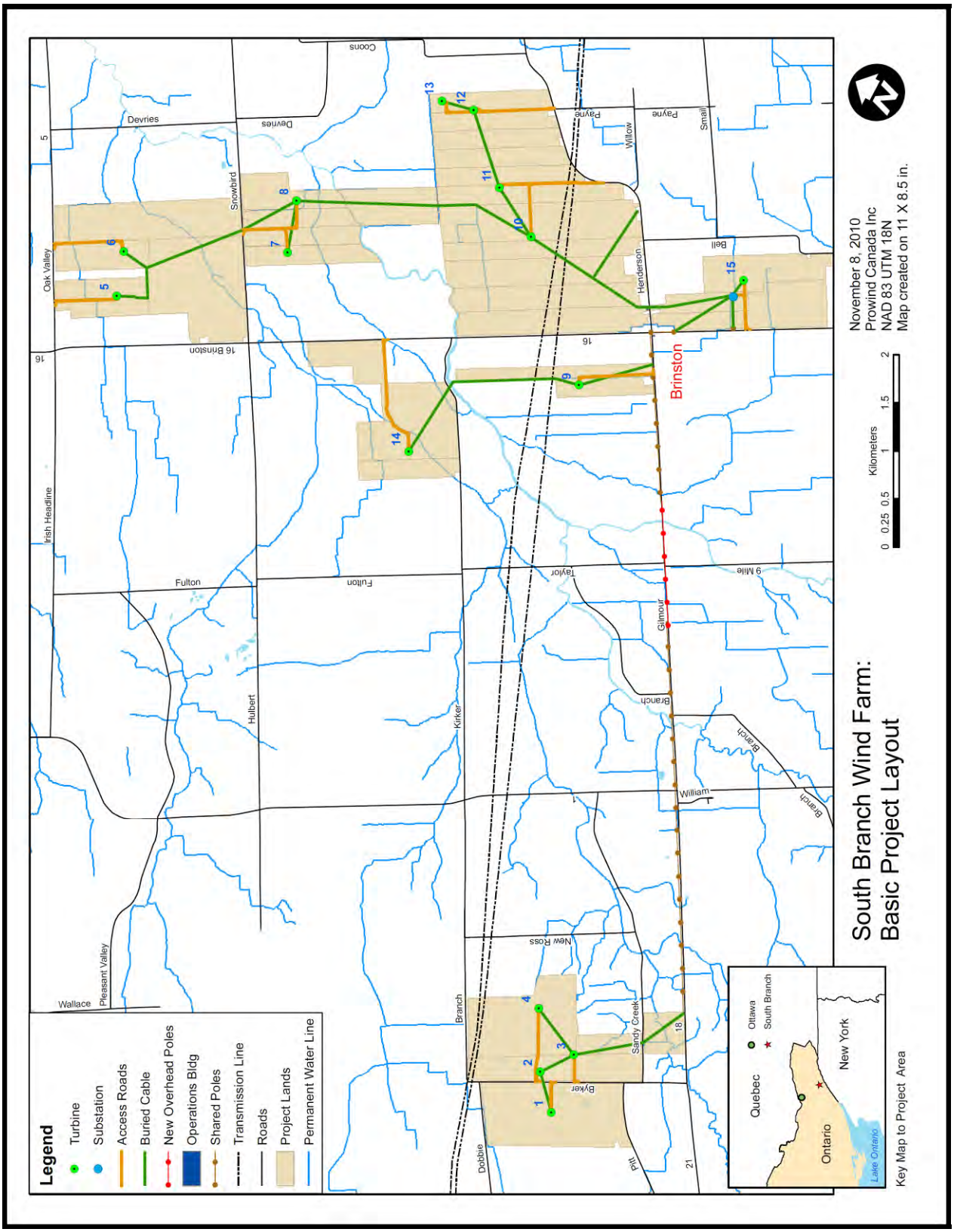
Map 29: Stage 2 Study Area Detail View, Showing Property Survey Methods and Results along County Road 18/Gilmour Road
(Incorporating GIS data provided by Prowind Canada Inc.)

Map 30: View of Minimum 20 m Buffer Zone around Findspot 2 after Project Re-Design
(Incorporating GIS data provided by Prowind Canada Inc.)

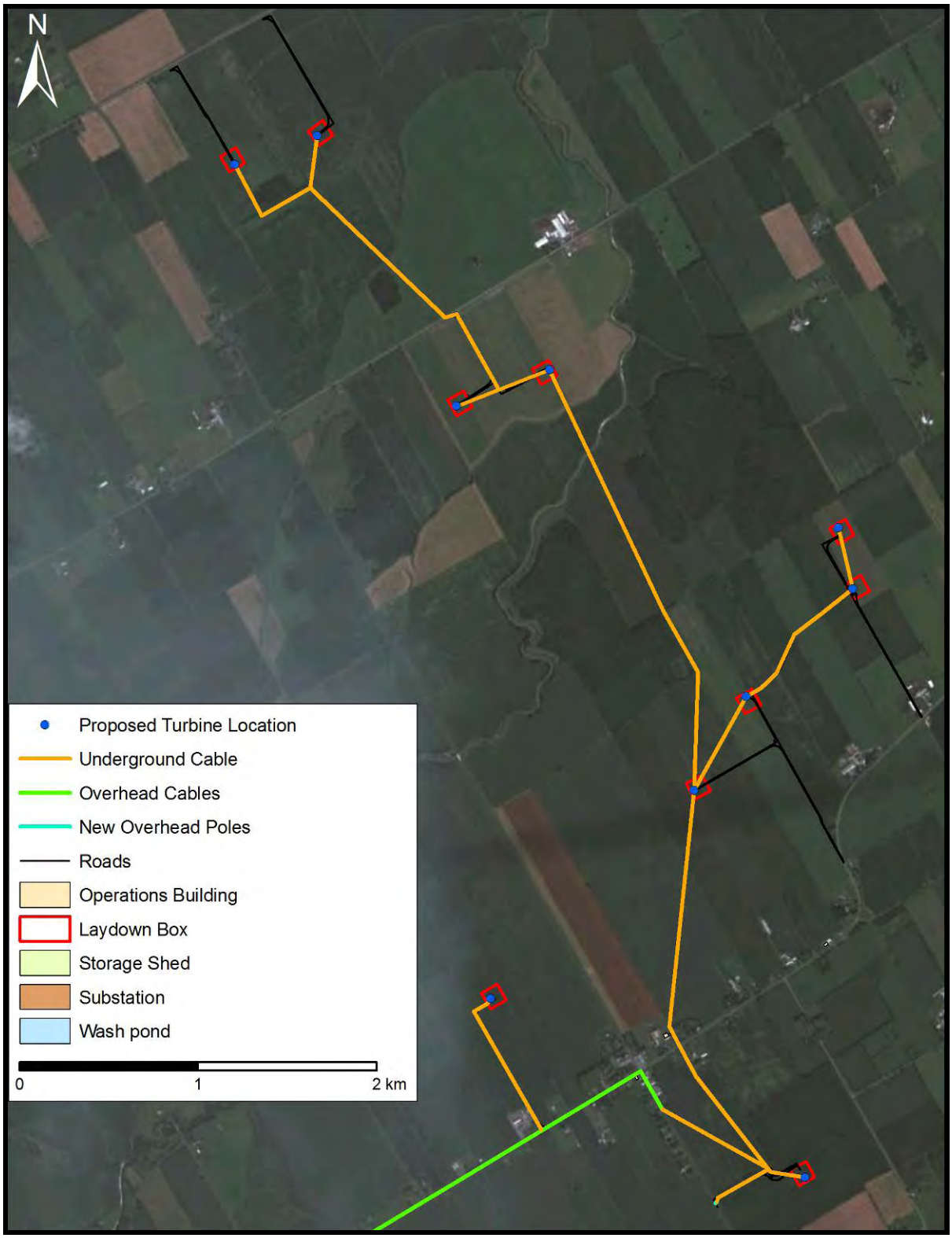


Map 31: View of Minimum 20 m Buffer Zone around Findspot 2 after Project Re-Design, Showing Nearest Lands under Consideration for Development
(Incorporating GIS data provided by Prowind Canada Inc.)

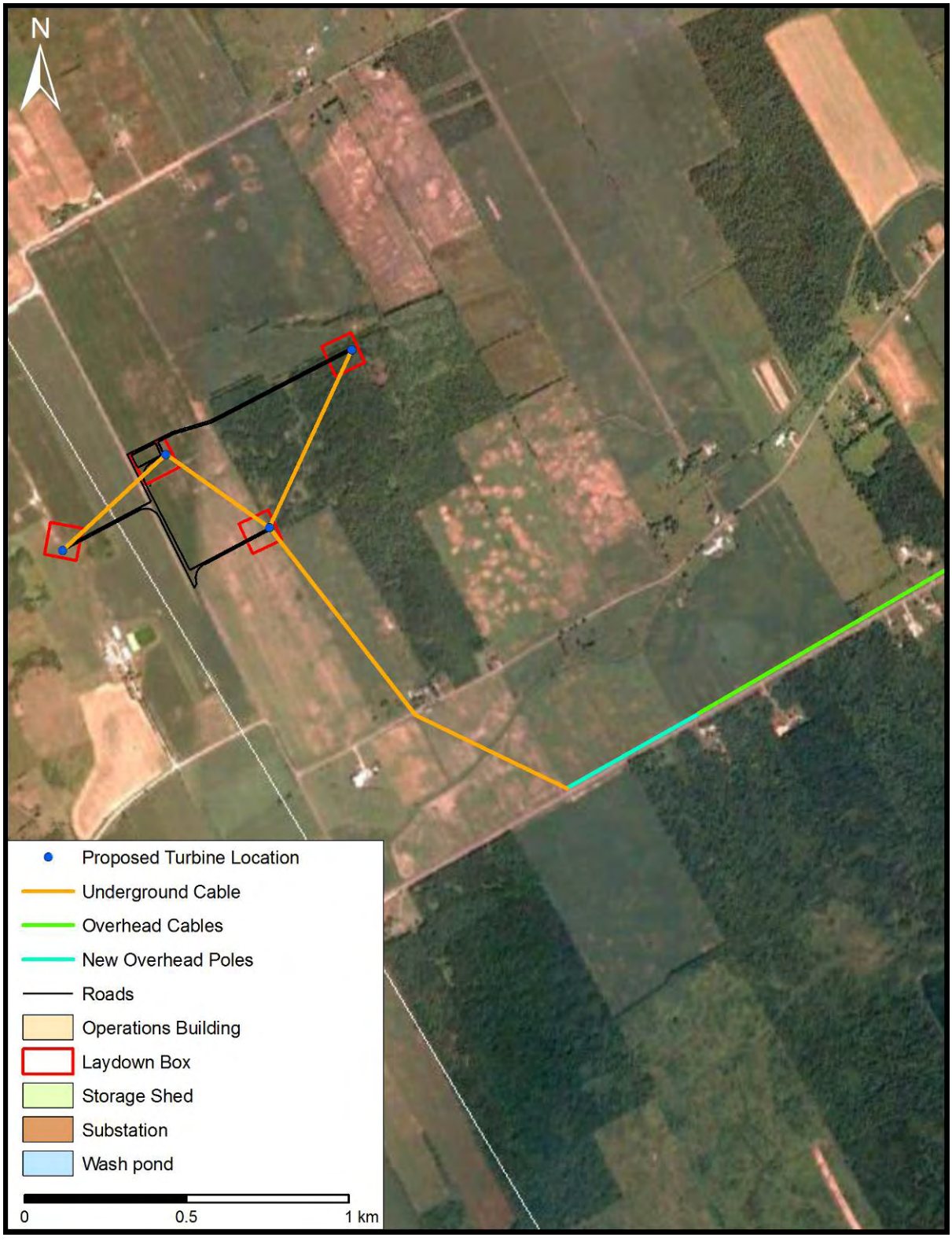
Appendix A: South Branch Wind Farm's Original 2010 Layout
(Provided by Prowind Canada Inc. on November 9, 2010)



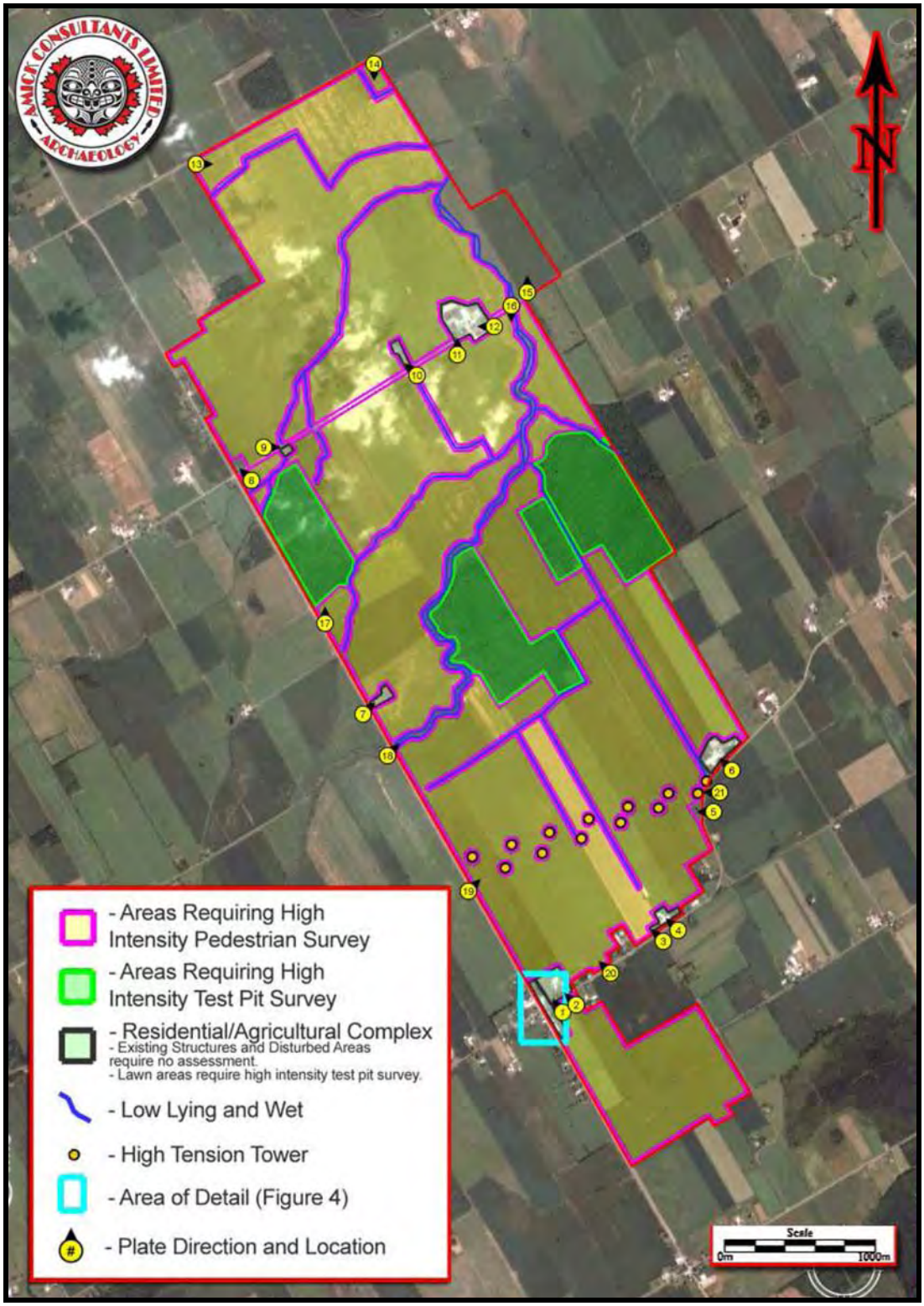
Appendix B: Overview of the South Branch Wind Farm's Final 2011 Layout, Showing all Proposed Infrastructure in the Eastern Section
(Based on GIS data provided in 2011 by Prowind Canada Inc.)



Appendix C: Overview of the South Branch Wind Farm's Final 2011 Layout, Showing all Proposed Infrastructure in the Western Section
(Based on GIS data provided in 2011 by Prowind Canada Inc.)



Appendix D: Stage 1 Assessment Results of the Brinston/South Branch Wind Farms, Conducted by AMICK Consultants Ltd. in 2009
(AMICK 2009b:Figure 3)



Appendix E: Stage 1 Assessment Results of the Boundary Wind Farm, Conducted by AMICK Consultants Ltd. in 2009
(AMICK 2009a:Figure 3)

Appendix F: Site GPS Coordinates

Site Name	UTM Zone	Easting	Northing
Findspot 1 - P & S Doyle Site (BbFu-4)	18	0470586 m E	4980534 m N
Findspot 2 - The Shaver Site (BfFu-5)	18	0469346 m E	4977968 m N

Appendix G: Aboriginal Engagement Letters
(Provided by Prowind Canada Inc.)

the Métis Nation of Ontario

December 3rd, 2010

ProWind Canada Inc.

Cathy Weston
ProWind Canada Inc.
P.O. Box 1678
Kemptville, Ontario K0G 1J0
Tel. 613-258-6700
Fax. 613-258-6722
cweston@prowind.ca

Subject: SOUTH BRANCH WIND FARM

Cathy Weston:

As you know, the Métis are one of three Aboriginal peoples in Canada, whose rights; interests and way of life are constitutionally protected under section 35 of the Constitution Act 1982. The Crown has a duty to consult the Métis before making a decision, taking an action or issuing an approval that could impact rights, interests or way of life.

The Métis Nation has Aboriginal rights in the lands, waters and natural resources within the area where this Project is located. The rights are held as collective rights, by the rights-bearing Métis community, as represented by the Métis Nation of Ontario ("MNO").

The MNO along with the Region 6 Protocol Agreement Consultation Committee ("the Committee") have had an opportunity to review the project information. Based on the information provided and under the stipulations that:

1. The project proceeds as presented in the provided notice documentation.
2. ProWind Canada Inc. regularly informs the MNO of the project's progress, EA bench marks and any new developments.
3. The MNO and the Committee may request additional project information at any time.
4. A meeting to obtain additional information remains available as an option for the MNO and the Committee.

The MNO and the Committee believes that should the project proceed there would be no immediate adverse impacts to Métis rights, culture or way of life.

Métis Nation of Ontario 500 Old St. Patrick St, Unit D, Ottawa, ON K1N 9G4
Tel: 613-798-1488 **Toll free:** 1-800-263-4889 **Fax:** 613-722-4225 **www.metisnation.org**

the Métis Nation of Ontario

Please be aware that the rights-bearing Métis communities are regional in size and scope and our traditional territories are expansive. Therefore, we recommend and appreciate early notification when potential projects are identified, as there may be a number of MNO Community Councils involved for a single project location. MNO will be pleased to assist in determining which Community Councils and other governance structures within the MNO should be notified to ensure all citizens of the potentially affected rights-bearing Métis community have the opportunity to be consulted.

Going forward, we wish to stress that the MNO and its Community Councils wish to fully participate in consultation processes, but we currently have no capacity to review complex documents or to mount effective consultation without appropriate time and assistance. We receive many notices, almost all of which propose to affect our Aboriginal rights and many of which involve complex and far-reaching initiatives. A response, much less a timely one, is often problematic under these conditions, which we hope to change. The courts have made it clear, however, that when our Aboriginal rights may be affected, we must be engaged early and in a meaningful way, for consultation to have taken place.

The attached PDF file titled, "MNO - Duty to Consult", outlines the general process and key elements for effective consultation with the Métis in Ontario. We hope that it may be useful to you, should you undertake other projects within the Métis Nation of Ontario. Additional information regarding the Métis Way of Life, the Duty to Consult and the MNO's regional Consultation Protocols are available at www.metisnation.org/programs/lands,-resources--consultations.aspx. This link outlines the general process and key elements for effective consultation with the Métis in Ontario.

If you have any questions regarding this letter, please contact the staff support person for this file: James Wagar at 416-977-9881 ext 107 or jamesw@metisnation.org.

We look forward to continuing to build and develop this positive relationship in the future.

Deepest Regards,

_____

James Wagar
Consultation Assessment Coordinator
Lands Resources and Consultations
Métis Nation of Ontario

Métis Nation of Ontario 500 Old St. Patrick St, Unit D, Ottawa, ON K1N 9G4
Tel: 613-798-1488 **Toll free:** 1-800-263-4889 **Fax:** 613-722-4225 **www.metisnation.org**

ALDERVILLE FIRST NATION
P.O. Box 46
11696 Second Line
Roseneath, Ontario K0K 2X0

Chief: James R. Marsden
Councillor: Dave Mowat
Councillor: Pam Crowe
Councillor: Leonard Gray
Councillor: Randall Smoke

January 18th, 2011

Prowind Canada Inc.
P.O. Box 1678
Kemptville, ON
K0G 1J0

Att: Rochelle Rumney

Re: South Branch Wind Farm Draft REA Review

Dear Rochelle,

Thank you for your consultation request to Alderville First Nation regarding the **South Branch Wind Farm Draft Review,** which is being proposed within our Traditional and Treaty Territory. We appreciate the fact that **Prowind Canada** recognizes the importance of First Nations Consultation and that your office is conforming to the requirements within the Duty to Consult Process. We greatly appreciate that the reports you sent us are on CD format, and it would be great if more companies would use that method instead of sending out hardcopies.

As per the Alderville First Nation Consultation Protocol, your proposed project is deemed a level 3, having minimal potential to impact our First Nations' rights, therefore, please keep Alderville apprised of any archaeological findings, burial sites or any environmental impacts, should any occur. Also note that when the time arises for the official dig, we have an **Archaeologist Liaison** person on hand to perform the **Archaeological Study.**

Although we may not always have representation at all stakeholders meetings, it is our wish to be kept apprised throughout all phases of this project. I can be reached at the contact information below.

In good faith and respect,

Dave Simpson
Lands and Resources
Communications Officer
Alderville First Nation

dsimpson@aldervillefirstnation.ca

Tele: (905) 352-2662
Fax: (905) 352-3242

Appendix H: Artifact Registry

Record	Stage	Findspot	PTP	Date	Frequency	Material	Group	Class Name	Object Name	Datable Attribute Name	Comments	Fire Evidence
1	2	1	N/A	11-Apr-11	4	Ceramic	Food preparation/consumption	Tableware	Serving Tableware	Refined White EW other décor	Art pottery, green/red/brown glaze, serving ware	n
2	2	1	N/A	11-Apr-11	3	Ceramic	Food preparation/consumption	Tableware	Tableware	Refined White EW other transfer	Black transfer, floral or landscape	n
3	2	1	N/A	11-Apr-11	1	Ceramic	Food preparation/consumption	Tableware	Tableware	Refined White EW plain	Plain whiteware, body	n
4	2	1	N/A	11-Apr-11	1	Ceramic	Food preparation/consumption	Tableware	Tableware	Refined White EW other transfer	Green transfer, partial makers mark, "EN..." England	n
5	2	1	N/A	11-Apr-11	1	Ceramic	Food preparation/consumption	Tableware	Tableware	Vitrified White EW moulded	Unidentifiable moulded, rim	n
6	2	1	N/A	11-Apr-11	1	Ceramic	Food preparation/consumption	Tableware	Tableware	Vitrified White EW moulded	Unknidentifiable moulded, body	n
7	2	1	N/A	11-Apr-11	1	Ceramic	Food preparation/consumption	Tableware	Flatware	Porcelain	Porcellaneous	n
8	2	1	N/A	11-Apr-11	3	Ceramic	Food preparation/consumption	Tableware	Tableware	Vitrified White EW plain	Plain whiteware, body	n
9	2	1	N/A	11-Apr-11	1	Ceramic	Food preparation/consumption	Tableware	Handle	Vitrified White EW plain	Plain whiteware, handle	n
10	2	1	N/A	11-Apr-11	1	Ceramic	Food preparation/consumption	Tableware	Tableware	Vitrified White EW plain	Plain whiteware, heavy rim sherd	n
11	2	1	N/A	11-Apr-11	2	Glass	Food preparation/consumption	Glass tableware	Glassware	Coloured glass	White coloured glass vase or goblet, Embossed "H A"	n
12	2	1	N/A	11-Apr-11	1	Glass	Food preparation/consumption	Glass tableware	Glassware	Solarized/Magnese	Light purple-tinged glass, glassware or ink bottle	n
13	2	1	N/A	11-Apr-11	1	Glass	Medicinal/Hygiene	Pharmaceutical	Toiletry/perfume bottle	Unidentifiable	Lt. purple, body, no visible mould seams	n
14	2	1	N/A	11-Apr-11	2	Glass	Food preparation/consumption	Glass Beverage Container	Bottle	Unidentifiable	No visible mould seams, brown, body	n
15	2	1	N/A	11-Apr-11	1	Glass	Food preparation/consumption	Glass Beverage Container	Bottle	Unknown moulded	No visible mould seams, clear, stamped base, "2S"	n
16	2	1	N/A	11-Apr-11	1	Glass	Food preparation/consumption	Glass Storage Container	Bottle	Unidentifiable	No visible mould seams, clear, body	n
17	2	1	N/A	11-Apr-11	1	Glass	Food preparation/consumption	Glass Storage Container	Bottle	Unidentifiable	No visible mould seams, turqoise, body	n
18	2	1	N/A	11-Apr-11	1	Glass	Food preparation/consumption	Glass Beverage Container	Bottle	Unidentifiable	No visible mould seams, finish , brown, liquor or beer	n
19	2	1	N/A	11-Apr-11	1	Ceramic	Food preparation/consumption	Ceramic Cooking/storage	Holloware	Coarse Red EW glazed	lt. brown glaze ext.,	n
20	2	1	N/A	11-Apr-11	2	Ceramic	Activities	Agriculture/horticulture	Flower pot	Coarse Red EW unglazed	Unglazed, flower pot	n
21	2	1	N/A	11-Apr-11	1	Ferrous	Unassigned Material	Miscellaneous Hardware	Staple	Not applicable	Large staple	n
22	2	1	N/A	11-Apr-11	1	Ferrous	Architectural	Nails	Nails	Cut	Cut nails	n
23	2	1	N/A	11-Apr-11	2	Brick	Architectural	Consturction Materials	Unglazed brick	Not applicable	Red brick	n
24	2	1	N/A	11-Apr-11	1	Ferrous	Architectural	Door/Window hardware	Latch/latch part	Not applicable	Door latch/hardware	n
25	2	1	N/A	11-Apr-11	1	Ferrous	Unassigned Material	Miscellaneous Material	Scrap metal	Not applicable	Scrap metal	n
26	2	2	N/A	13-Apr-11	1	Plastic	Food preparation/consumption	Tableware	Unidentifiable	20th century	Pink plastic	n
27	2	2	N/A	13-Apr-11	1	Plastic	Food preparation/consumption	Tableware	Unidentifiable	20th century	White plastic	n
28	2	2	N/A	13-Apr-11	2	Brick	Architectural	Consturction Materials	Unglazed brick	Not applicable	Red brick	n
29	2	2	N/A	13-Apr-11	1	Dentition	Faunal/floral	Bone	Mammal bone	Not applicable	Mammal dentition, deer	n
30	2	2	N/A	13-Apr-11	1	Bone	Faunal/floral	Bone	Mammal bone	Not applicable	Mammal long bone	n
31	2	2	N/A	13-Apr-11	1	Ceramic	Food preparation/consumption	Ceramic Cooking/storage	Holloware	Coarse Stoneware salt glaze	Albany slip int.,	y
32	2	2	N/A	13-Apr-11	1	Ceramic	Food preparation/consumption	Tableware	Flatware	Porcelain	Thin porcelain, plain	n
33	2	2	N/A	13-Apr-11	1	Ceramic	Food preparation/consumption	Tableware	Handle	Porcelain	Porcelain handle, plain	n
34	2	2	N/A	13-Apr-11	1	Ceramic	Furnishing	Decorative Furnishings	Figurine	Soft Paste Porcelain painted	Some paint remnants, figurine or decorative container	n
35	2	2	N/A	13-Apr-11	2	Ceramic	Food preparation/consumption	Tableware	Mug	Vitrified White EW moulded	Wheat and hops pattern, small blue specks in glaze	n
36	2	2	N/A	13-Apr-11	1	Ceramic	Food preparation/consumption	Ceramic Cooking/storage	Holloware	Coarse Red EW glazed	Dark shiny brown glaze	y
37	2	2	N/A	13-Apr-11	1	Ceramic	Food preparation/consumption	Tableware	Tableware	Refined White EW other décor	Art pottery, green glaze	y
38	2	2	N/A	13-Apr-11	9	Ceramic	Food preparation/consumption	Tableware	Tableware	Vitrified White EW plain	Plain whiteware, body	n
39	2	2	N/A	13-Apr-11	1	Ceramic	Food preparation/consumption	Tableware	Tableware	Vitrified White EW	Plain whiteware, body	n
40	2	2	N/A	13-Apr-11	1	Ceramic	Food preparation/consumption	Tableware	Tableware	Pearlware plain	Pearlware, body	n
41	2	2	N/A	13-Apr-11	1	Ceramic	Food preparation/consumption	Tableware	Tableware	Pearlware other transfer	Brown transfer, mother and child, rim	n
42	2	2	N/A	13-Apr-11	1	Ceramic	Food preparation/consumption	Tableware	Tableware	Refined White EW other transfer	brown transfer, leaf pattern	y
43	2	2	N/A	13-Apr-11	1	Ceramic	Food preparation/consumption	Tableware	Tableware	Refined White EW other transfer	Brown transfer, unidentifiable pattern	n
44	2	2	N/A	13-Apr-11	1	Ceramic	Food preparation/consumption	Tableware	Tableware	Refined White EW blue transfer	Blue transfer, unidentifiable pattern	n
45	2	2	N/A	13-Apr-11	1	Ceramic	Food preparation/consumption	Tableware	Tableware	Refined White EW painted	Floral painted, dyed yellow-ish body	n
46	2	2	N/A	13-Apr-11	1	Ceramic	Food preparation/consumption	Tableware	Tableware	20th century	Modern, porcellaneous, bright coloured print	n
47	2	2	N/A	13-Apr-11	1	Ceramic	Food preparation/consumption	Tableware	Flatware	Refined White EW edged	Blue edged, moulded, un-scalloped blue edge	n
48	2	2	N/A	13-Apr-11	1	Glass	Food preparation/consumption	Glass Storage Container	Bottle	Unidentifiable	No visible mould seams, turqoise, body	y
49	2	2	N/A	13-Apr-11	1	Glass	Food preparation/consumption	Glass Storage Container	Bottle	Unidentifiable	No visible mould seams, lt. turqoise/frosted, body	y
50	2	2	N/A	13-Apr-11	2	Glass	Food preparation/consumption	Glass Storage Container	Bottle	Unidentifiable	No visible mould seams, turqoise, body	n
51	2	2	N/A	13-Apr-11	1	Glass	Food preparation/consumption	Glass Beverage Container	Bottle	Unidentifiable	No visible mould seams, brown, body, beer or liquor	n
52	2	2	N/A	13-Apr-11	2	Ferrous	Unassigned Material	Miscellaneous material	Wire	Not applicable	Wire fragment	n
53	2	2	N/A	13-Apr-11	1	Ferrous	Architectural	Door/Window hardware	Hinge/hinge part	Not applicable	Hinge part	n
54	2	2	1	13-Apr-11	4	Mortar	Architectural	Consturction Materials	Foundation material	Not applicable	Mortar	n

55	2	2	1	13-Apr-11	3	Ferrous	Unassigned Material	Miscellaneous Material	Scrap metal	Not applicable	Scrap metal	n
56	2	2	1	13-Apr-11	1	Ceramic	Food preparation/consumption	Ceramic Cooking/storage	Holloware	Coarse Red EW glazed	Fulham-like beige/red glaze ext.,	n
57	2	2	1	13-Apr-11	2	Ceramic	Food preparation/consumption	Ceramic Cooking/storage	Holloware	Coarse Red EW unglazed	Redware, unglazed	y
58	2	2	1	13-Apr-11	1	Ceramic	Food preparation/consumption	Tableware	Tableware	Porcelain	Porcelain, black makers mark "JAPAN"	n
59	2	2	2	13-Apr-11	1	Glass	Food preparation/consumption	Glass tableware	Tumbler	Unidentifiable	clear tumbler fragment, body	n
60	2	2	2	13-Apr-11	1	Bone	Faunal/floral	Bone	Mammal bone	Not applicable	Mammal long bone,	n
61	2	2	3	13-Apr-11	1	Glass	Furnishing	Lighting devices	Other	Not applicable	Chandelier crystal	n
62	2	2	3	13-Apr-11	1	Ferrous	Unassigned Material	Miscellaneous material	Wire	Not applicable	Wire fragment	n
63	2	2	3	13-Apr-11	1	Ferrous	Architectural	Door/Window hardware	Hinge/hinge part	Not applicable	Door hinge hardware	n
64	2	2	4	13-Apr-11	1	Bone	Faunal/floral	Bone	Mammal bone	Not applicable	Mammal vertebra	n
65	2	2	4	13-Apr-11	1	Metal	Unassigned Material	Miscellaneous material	Strapping	Not applicable	metal strapping, barrel?	n
66	2	2	4	13-Apr-11	1	Glass	Architectural	Window glass	Pane glass	Cylindrical glass	Window glass	n
67	2	2	4	13-Apr-11	1	Ceramic	Food preparation/consumption	Tableware	Tableware	Refined White EW industrial slip	Blue and white industrial slip banded	n
68	2	2	4	13-Apr-11	1	Brick	Architectural	Consturction Materials	Unglazed brick	Not applicable	Red brick	n
69	2	2	5	13-Apr-11	1	Bone	Faunal/floral	Bone	Mammal bone	Not applicable	Mammal long bone	n
70	2	2	5	13-Apr-11	2	Dentition	Faunal/floral	Bone	Mammal bone	Not applicable	mammal dentition	n
71	2	2	5	13-Apr-11	1	Ceramic	Food preparation/consumption	Tableware	Tableware	Porcelain	Porcellaneous, plain	n
72	2	2	5	13-Apr-11	1	Ceramic	Food preparation/consumption	Tableware	Tableware	Refined White EW polychrome	Polychrome transfer, modern	n
73	2	2	5	13-Apr-11	2	Brick	Architectural	Consturction Materials	Unglazed brick	Not applicable	Red brick	n
74	2	2	5	13-Apr-11	1	Glass	Food preparation/consumption	Glass Storage Container	Bottle	Unknown moulded	Turqoise, unidentifiable embossed, body	n
75	2	2	5	13-Apr-11	1	Glass	Food preparation/consumption	Glass Beverage Container	Bottle	Unidentifiable	unidentifiable green bottle glass	n
76	2	2	5	13-Apr-11	1	Glass	Food preparation/consumption	Glass Beverage Container	Bottle	Unidentifiable	Unidentifiable clear container glass	n
77	2	2	5	13-Apr-11	3	Ferrous	Architectural	Nails	Nails	Unidentifiable	Too fragmented	n
78	2	2	5	13-Apr-11	5	Ferrous	Architectural	Nails	Nails	Cut	Cut nails	n
79	2	2	6	13-Apr-11	1	Ceramic	Food preparation/consumption	Tableware	Tableware	Refined White EW plain	Plain whiteware	y
80	2	2	7	13-Apr-11	2	Ferrous	Unassigned Material	Miscellaneous Material	Wire	Not applicable	Wire fragment	n
81	2	2	7	13-Apr-11	1	Glass	Food preparation/consumption	Glass Storage Container	Bottle	Unidentifiable	No visible mold seams, clear container glass	n
82	2	2	7	13-Apr-11	1	fetamorphi	Not applicable	Not applicable	Not applicable	Not applicable	Black anthracite coal	n
83	2	2	7	13-Apr-11	1	Ceramic	Food preparation/consumption	Tableware	Tableware	Refined White EW painted	Blue painted rim	n
84	2	2	7	13-Apr-11	1	Ceramic	Food preparation/consumption	Tableware	Tableware	Refined White EW plain	Plain, base	n
85	2	2	7	13-Apr-11	1	Ceramic	Food preparation/consumption	Tableware	Tableware	Porcelain	Porcellaneous	n

APPENDIX C

HERITAGE IMPACT ASSESSMENT REPORT

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Heritage Assessment Report
South Branch Wind Farm (FIT-FT3B1IC)
Townships of South Dundas and Edwardsburgh/Cardinal
Geo. Townships of Matilda and Edwardsburgh
United Counties of Stormont, Dundas and Glengarry and United Counties of Leeds and Grenville, Ontario

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Revised Report

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- Don Lewis, Manager, Planning & Enforcement, Township of South Dundas

1.0 INTRODUCTION

Under a contract awarded in August 2010, Archaeological Research Associates Ltd. (ARA) conducted a Heritage Assessment Report for lands with the potential to be impacted by the proposed South Branch Wind Farm (FIT-FT3B1IC). The proponent, Prowind Canada Inc., is applying for a Renewable Energy Approval (REA) as set out by O. Reg. 359/09 under Part V.0.1 of the *Environmental Protection Act*. The project involves the construction of 14 wind turbines, 1 substation and associated infrastructure (see Section 2.0). This study was conducted in order to fulfill the requirements of a cultural heritage assessment report, as discussed in Sections 20 (Consideration of Archaeological and Heritage Resources) and 23 (Heritage Assessment) of O. Reg. 359/09.

The study area consists of two irregularly-shaped blocks of land (see Figure 1–3). The eastern block (approximately 1,113 ha) is located in the Township of South Dundas, Geographic Township of Matilda, United Counties of Stormont, Dundas and Glengarry, Ontario. This block is bounded by County Road 5 to the north, Dundela Road to the south and agricultural lands to the east and west. The western block (approximately 300 ha) is located in the Township of Edwardsburgh-Cardinal, Geographic Township of Edwardsburgh, United Counties of Leeds and Grenville, Ontario. This block is bounded by Branch and Dobbie Roads to the north, Gilmour Road to the south and agricultural lands to the east and west. These blocks encompass all participating properties, all intervening lands and all proposed infrastructure for the project.

This assessment was conducted for the purpose of identifying heritage resources within or near the study area which may be subject to project impacts. The approach consisted of the following:

- The creation of an inventory of all previously-identified and newly recognized potential Built Heritage (BH) resources or Cultural Heritage Landscapes (CHLs);
- A description of the history and development of these potential heritage resources and discussion of their importance;
- An evaluation of each potential heritage resource against the criteria set out in O. Reg. 9/06 for determining cultural heritage value or interest (CHVI);
- The measurement of the potential impacts of design alternatives on all identified heritage resources (i.e. BH resources and CHLs of CHVI); and
- The provision of suggested strategies for the conservation of identified heritage resources.

The project was carried out in accordance with the provisions of:

- the *Ontario Heritage Act* (Service Ontario 2009a);
- Ontario Regulation 359/09 made under the *Environmental Protection Act* (Service Ontario 2009b); and
- *The Guidelines on the Man-Made Heritage Component of Environmental Assessments* (MCL 1992).

All records pertaining to the assessment are currently housed in a secure company storage facility located at 97 Gatewood Road, Kitchener, Ontario.

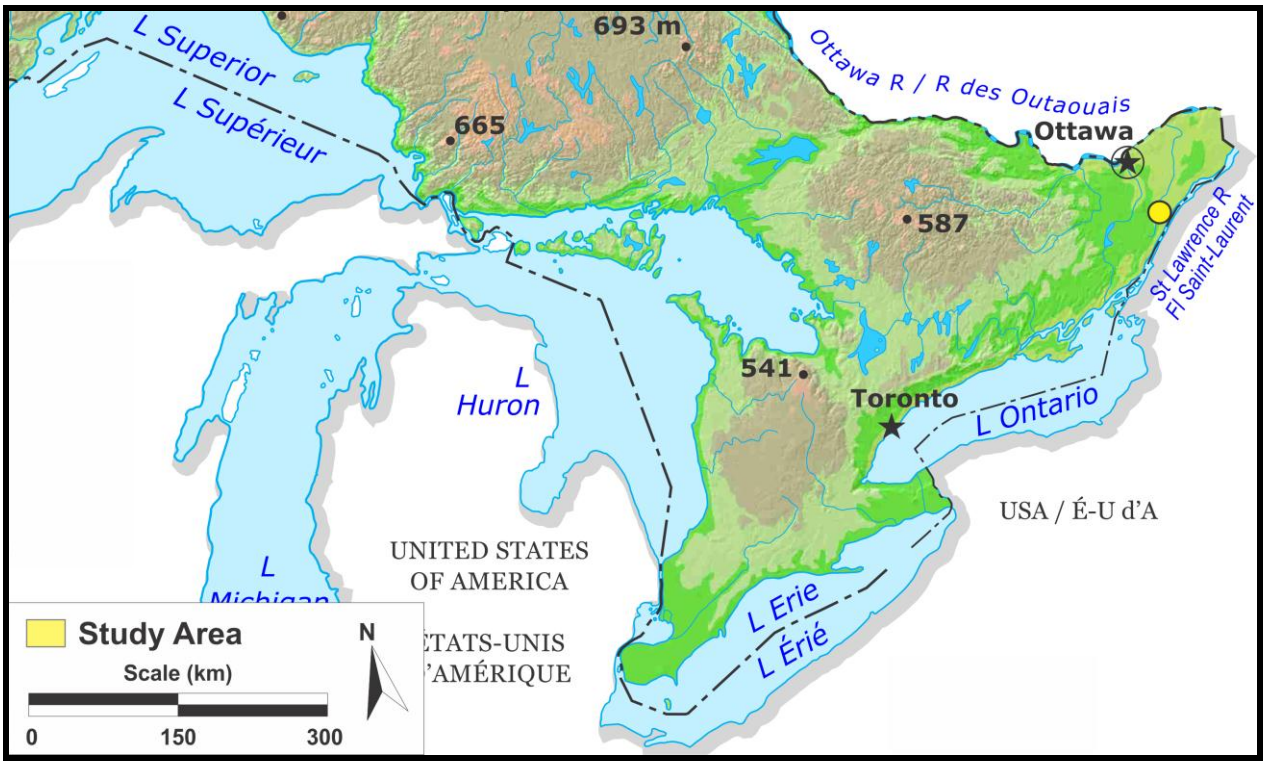

Figure 1: Location of Study Area in the Province of Ontario
(NRC 2004)

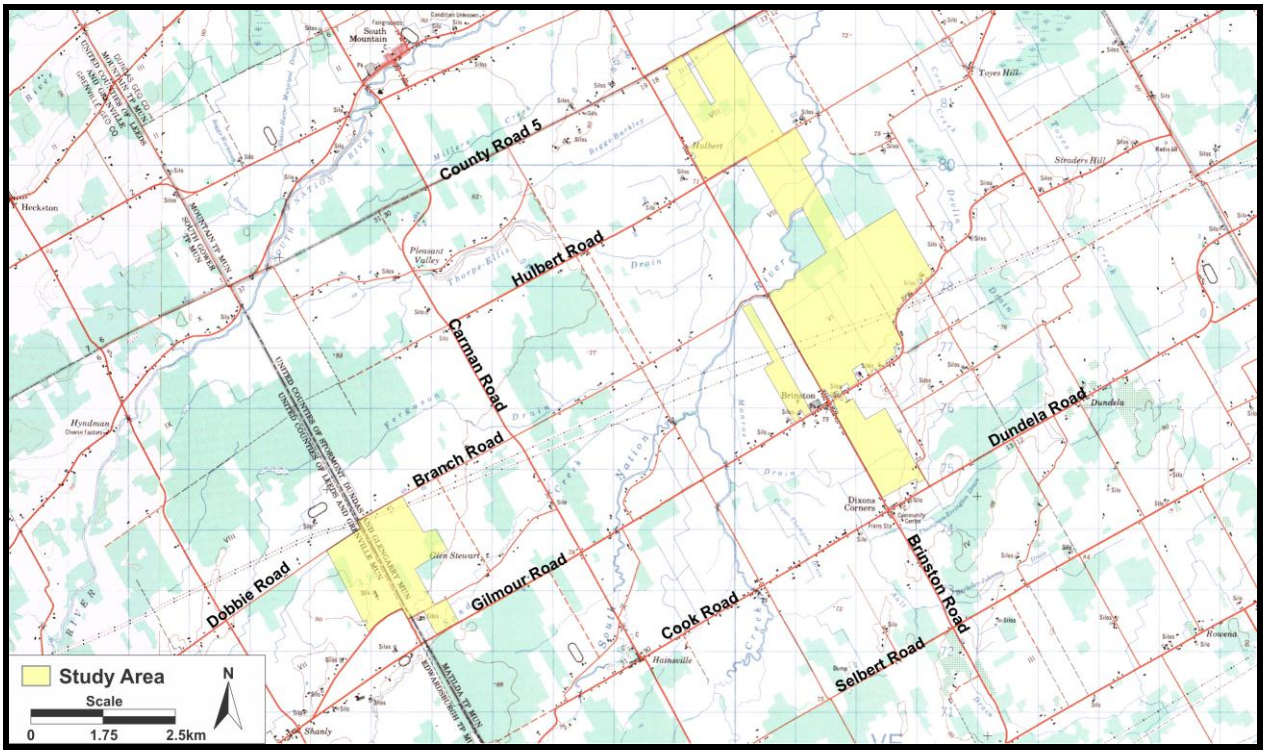

Figure 2: Location of Study Area in the Geo. Townships of Matilda and Edwardsburg
(SoftMap Technologies Inc. 2000)

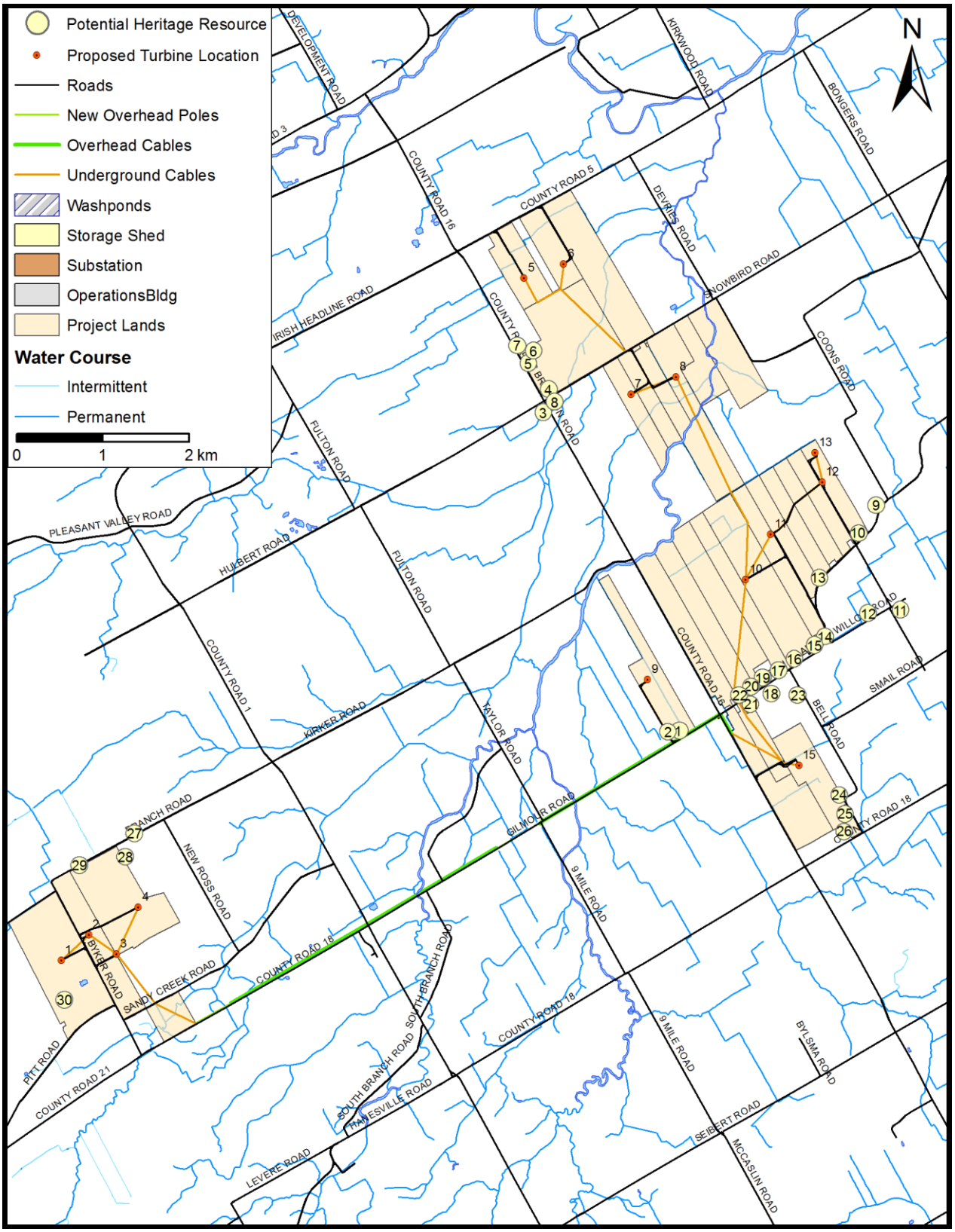

Figure 3: Study Area in Detail, Showing Potential Heritage Resources, Turbine Locations and Associated Infrastructure

2.0 PROJECT SUMMARY

The South Branch Wind Farm project proposes to establish a series of wind turbines and associated infrastructure capable of generating up to 30 megawatts (MW) of renewable energy to the Province of Ontario. The project involves the construction of 14 wind turbines and 1 substation. The model of wind turbines to be used has not been established, but it is anticipated that they will have a maximum hub height of 140 m and a maximum rotor diameter of 118 m. Other auxiliary features/infrastructural elements to be established within the project limits include multiple access roads, laydown areas and underground cabling (see Figure 3). The project is located on privately owned agricultural land, and the area will continue to be used for agricultural purposes in conjunction with the wind turbines (Prowind Canada Inc. 2010).

3.0 METHODOLOGY

This study was designed to examine the heritage resources of the study area and the surrounding landscape, both individually and as a whole, in accordance with the Renewable Energy Approvals requirements of O. Reg. 359/09. Section 20 (1) of O. Reg. 359/09 requires that applicable projects must consider whether the project may have an impact on local heritage resources, and Section 23 of O. Reg. 359/09 stipulates that a cultural heritage assessment be undertaken if there is potential for such impacts (Service Ontario 2009b).

The following concepts require clear definition, as they are fundamental for the accurate identification of heritage resources in any context:

- Cultural Heritage Value or Interest (CHVI): "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" (Parks Canada 2003:2).
- Built Heritage Resource (BH): "one or more significant buildings, structures, monuments, installations or remains associated with architectural, cultural, social, political, economic or military history and identified as being important to a community. These resources may be identified through designation or heritage conservation easement under the *Ontario Heritage Act*, or listed by local, provincial or federal jurisdictions" (MMAH 2005:29).
- Cultural Heritage Landscape (CHL): "a defined geographical area of heritage significance which has been modified by human activities and is valued by a community. A landscape involves a grouping(s) of individual heritage features such as structures, spaces, archaeological sites and natural elements, which together form a significant type of heritage form, distinctive from that of its constituent elements or parts. Examples may include but are not limited to, heritage conservation districts designated under the *Ontario Heritage Act*; and villages, parks, gardens, battlefields, mainstreets and neighbourhoods, cemeteries, trailways and industrial complexes of cultural heritage value" (MMAH 2005:29).

Typically, a heritage assessment consists of two parts: 1) an inventory and evaluation of potential BH resources and CHLs within the project area, and 2) an evaluation of project impacts to the identified heritage resources with proposed measures to avoid, eliminate or mitigate the impact, if necessary (Service Ontario 2009b). The inventory is generated by both background research and a field survey. Background information is obtained from aerial photographs, historical maps, local historical organizations and archival sources. Where possible, further information was obtained from the Ministry of Tourism and Culture (MTC). The field survey component involves the collection of primary data through systematic photographic documentation by means of a windshield survey of the study area. Photographs capturing previously-identified or newly recognized potential BH resources and CHLs are taken, as are general views of the area.

In order to objectively identify BH resources CHLs, O. Reg. 9/06 made under the *Ontario Heritage Act* sets out specific criteria for determining CHVI (Service Ontario 2006). The regulation identifies three principal criteria: 1) Design/Physical Value, 2) Historical/Associative Value and 3) Contextual Value. All potential BH resources and CHLs must then be evaluated against these criteria, as required by O. Reg. 359/09 made under the *Environmental Protection Act* (Service Ontario 2009b).

Once a potential heritage resource has been determined to be of CHVI (whether an isolated BH resource or an expansive CHL spanning multiple properties), Subsection 20 (1) (a) (ii) of O. Reg. 359/09 requires that an evaluation of "any impact" of the project on the resource be carried out, and "measures to avoid, eliminate or mitigate the impact" be proposed (Service Ontario 2009b).

Project impacts may include direct and/or indirect impacts. The former Ministry of Culture's *InfoSheet #5: Heritage Impact Assessments and Conservation Plans* provides an overview of several major types of negative impacts (MCL 2006:3), including but not limited to:

- Destruction of any, or part of any, significant heritage attributes;
- Alteration that is not sympathetic, or is incompatible, with the historic fabric and appearance;
- Shadows created that alter the appearance of a heritage attribute or change the viability of a natural feature or plantings, such as a garden;
- Isolation of a heritage attribute from its surrounding environment, context or significant relationship;
- Direct or indirect obstruction of significant views or vistas within, from, or of built and natural features;
- A change in land use such as rezoning a battlefield from open space to residential use, allowing new development or site alteration to fill in the formerly open spaces; and
- Land disturbances such as a change in grade that alters soils, and drainage patterns that adversely affect an archaeological resource.

Of these negative impacts, 1) the destruction of any, or part of any, significant heritage attributes and 2) the direct or indirect obstruction of significant views or vistas within, from, or of built and natural features are among the most common that may occur as a result of the construction, operation and decommissioning of renewable energy projects.

Evaluations of these potential impacts on identified BH resources and CHLs of CHVI must then be presented. According to Section 23 of O. Reg. 359/09, all resources identified at the project location must be evaluated, as well as any Protected Properties that abut the parcel of land on which the project location is located. A key factor in this evaluation process is the distance between the proposed project infrastructure (e.g. wind turbines, access roads and underground cabling) and the identified heritage resources of CHVI. Unfortunately, no *Standards and Guidelines* have yet been provided by the MTC to aid in the determination of minimal separation distances between design elements and heritage resources. Accordingly, all methodological attempts to make use of this quantitative data must rely primarily on subjective criteria and the opinion of qualified heritage professionals.

Through an analysis of the proximity (or lack therefore) of heritage resources to project infrastructure, the presence or absence of the major types of negative impacts outlined in *InfoSheet #5: Heritage Impact Assessments and Conservation Plans* (2006:3) can be determined. For identified CHLs of CHVI, this methodology can also be adopted. All types of CHLs must be considered, including small CHLs located within the study area (e.g. historic communities) and larger CHLs encompassing large parts of the study area (e.g. broad landscapes consisting of multiple CHLs).

Should impacts be identified, recommendations to avoid, eliminate or mitigate each impact are then offered. *InfoSheet #5: Heritage Impact Assessments and Conservation Plans* lists several methods of minimizing or avoiding a negative impact on an identified heritage resources (MCL 2006:4), including but not limited to:

- Alternative development approaches;
- Isolating development and site alteration from significant built and natural features and vistas;
- Design guidelines that harmonize mass, setback, setting, and materials;
- Limiting height and density;
- Allowing only compatible infill and additions;
- Reversible alterations;
- Buffer zones, site plan control, and other planning mechanisms.

In response to the above-mentioned requirements, this heritage assessment was conducted in two parts. First, a Potential Heritage Resource Inventory was assembled for the study area listing 1) all previously-identified BH resources identified through background research and 2) potential BH resources recognized through background research and during the field survey. Each potential BH resource was then evaluated against the criteria set out in O. Reg. 9/06 to determine possible CHVI. Each property was documented and evaluated utilizing a standardized format developed by the Heritage Resources Centre at the University of Waterloo. The project impacts (defined above) on any identified BH resources located on properties participating in the project and properties abutting project lands were evaluated, and measures were proposed to avoid/eliminate/mitigate the impacts, if needed.

Second, a Potential Cultural Heritage Landscape Inventory was created, identifying all such landscapes within or traversing the study area, describing them, and discussing their importance.

These potential CHLs were then evaluated against the criteria set out in O. Reg. 9/06 to determine possible CHVI. The project impacts on all identified CHLs of CHVI were then evaluated, and measures were proposed to avoid/eliminate/mitigate the impacts, if needed.

This approach is supported by the guidelines and policies provided by the following:

- Ontario Regulation 359/09 made under the *Environmental Protection Act* (Service Ontario 2009b);
- Ontario Regulation 9/06 made under the *Ontario Heritage Act* (Service Ontario 2006);
- the *Guidelines on the Man-Made Heritage Component of Environmental Assessments* (MCL 1980); and
- the *Guideline for Preparing the Cultural Heritage Resource Component of Environmental Assessments* (MCL 1992).

4.0 NATURAL CONTEXT

Environmental factors play an important shaping role in the land-use process, essentially setting out the initial conditions from which later cultural landscapes form and develop. While particularly true in the case of small societies with non-complex, subsistence-oriented economies, this also applies across the broad historical and cultural spectrum of Ontario. Four main 'natural' factors are particularly informative when considering the BH and CHL resources of the study area: 1) the nature of local forests, 2) regional climatic conditions, 3) physiography and 4) local soil types.

The study area lies within the Great Lakes-St. Lawrence Forest region, an ecological zone described as a transitional zone between the southern deciduous forest and northern coniferous boreal forest. The region is characterized by a mix of coniferous trees, such as eastern white pine, red pine, eastern hemlock and white cedar, and deciduous trees, such as yellow birch, sugar and red maples basswood and red oak. Common species form the boreal forest such as white and black spruce, jack pine, aspen and white birch are also present. A wide range of fungi, ferns, mosses and shrubs are also found in the region. Over 20% of Ontario's forests are located in this region (MNR 2011).

The study area is located within the Eastern Ontario climatic region of southern Ontario. The mean annual temperature is 5.8º C and annual precipitation levels range between 715 and 980 mm per year. The area's proximity to the St. Lawrence River moderates the temperature and affects annual precipitation levels (Richards et al. 1949:27-28; Matthews and Richards 1952:24-25).

Physiographically, the western portion of the study area lies in the region known as the Edwardsburgh Sand Plain, which consists of beds of glaciofluvial sand over top of bedrock and boulder clay. The ground here is relatively level, with a few moraines and beach ridges created by the Champlain Sea (Chapman and Putnam 1984:200). The eastern portion of the study area lies within the Winchester Clay Plain, an area of low relief located almost entirely within the South Nation River Watershed. The area is dominated by clay plains, although there are several

exposed pockets of underlying till and bedrock (Chapman and Putnam 1984:203). The underlying bedrock consists primarily of sandstone and dolostone belonging to the Lower Ordovician March and Oxford formations (Davidson 1989:42).

Soils in the western portion of the study area consist primarily of Grenville Loam (undulating to rolling topography; good natural drainage; moderately stony with boulders), Rubicon Sand (undulating to level topography; imperfect natural drainage; stone free), and Matilda Loam (gently undulating to slightly depressional topography; imperfect natural drainage; moderately stony) with pockets of Granby Sandy Loam and Allendale Sandy Loam (Richards et al. 1949:Soil Map; Matthews and Richards 1952:Soil Map). Soils in the eastern portion of the study area consist primarily of North Gower Clay (level to slightly undulating topography; poor natural drainage; stone free) with pockets of Grenville Loam, Kars Gravelly Sandy Loam, Matilda Loam, and Morrisburg Clay Loam (Matthews and Richards 1952:Soil Map).

In sum, the natural environment of the study area possesses a number of environmental characteristics which would have made it attractive to both Pre-Contact and Euro-Canadian peoples. The presence of the South Nation River would have attracted a wide variety of game animals, and consequently, early hunters. The soils would have been well suited to the mixed agriculture practised by Euro-Canadian populations. The proximity of the study area to the north shore of the St. Lawrence River - an area of significant early Euro-Canadian settlement - would also have influenced the formation of local BH and CHL resources.

5.0 HISTORICAL CONTEXT

Although many CHLs have strong associations with Aboriginal communities, all of the heritage resources considered in this report are associated with Post-Contact (rather than Pre-Contact) historical developments. Accordingly, the historical documentation of the initial settlement and growth of Euro-Canadian communities in Dundas County and Grenville County is more important and relevant than that of the lengthy Pre-Contact period. Although the archaeological history of this region spans the Palaeo-Indian, Archaic, Woodland and Early Contact periods, these historical periods are not summarized in this report. These are instead documented in the Stage 1 and 2 archaeological assessments conducted by ARA for the South Branch Wind Farm (ARA 2011).

5.1 European Contact

Although Jacques Cartier first arrived in this part of what would become southern Ontario in 1534, the history behind the development of Euro-Canadian settlement in the area only truly begins in the late 17th and early 18th centuries. During this time, Euro-Canadian colonists and fur traders became much more involved in Aboriginal affairs, and the resulting contacts became much more pronounced across the entire region. The French, for example, established and maintained several trading posts across northern Ontario and the Upper Great Lakes, offering many enticements to attract fur traders from the First Nations. Even further north, Britain's Hudson Bay Company dominated the fur trade. This company struggled militarily with the French for control of this trade until 1763, and many naval and land battles were fought on

Hudson Bay and James Bay (Ray 2011). These developments resulted in an ever-increasing level of contact between European traders and local Aboriginal communities.

As the number of European men living in Ontario increased, so too did the frequency of their relations with Aboriginal women. Male employees and former employees of French and British companies began to establish families with these women, a process which resulted in the ethnogenesis of a distinct Aboriginal people: the Métis. Comprised of the descendants of those born from such relations (and subsequent intermarriage), the Métis emerged as a distinct Aboriginal people during the 1700s. Métis settlements developed along freighting waterways and watersheds, and were tightly linked to the spread and growth of the fur trade. These settlements were part of larger regional communities, connected by "the highly mobile lifestyle of the Métis, the fur trade network, seasonal rounds, extensive kinship connections and a shared collective history and identity" (MNO 2011).

In 1754, hostilities over trade and the territorial ambitions of the French and the British led to the Seven Years' War (often called the French and Indian War in North America). The British victory over the French proved pivotal in catalyzing the Euro-Canadian settlement process, and the associated population influx caused the demographics of many landscapes to change considerably. By the late 18th century, these changes were greatly accelerated as waves of United Empire Loyalists came to settle in the Province of Quebec following the American Revolutionary War (1775–1783). This influx sparked the slow death of the fur trade, and also drove the British Crown to seek out property for those who had been displaced by the conflict.

5.2 Land Acquisitions

With the establishment of absolute British control in the Province of Quebec a new era of land acquisition and organized settlement began. In the *Royal Proclamation Act* of 1763, which followed the Treaty of Paris, the British government recognized the title of the First Nations to the land they occupied. In essence, the 'right of soil' had to be purchased by the Crown prior to European settlement (Lajeunesse 1960:cix). Numerous treaties and land surrenders were accordingly arranged by the Crown, and great swaths of territory were acquired from the 'Mississaugas', 'Northern Iroquois' and other First Nations (see Figure 4). These first purchases established a pattern "for the subsequent extinction of Indian title" (Gentilcore and Head 1984:78).

The first land purchases in the area took place along the shores of Lake Ontario and Lake Erie, as well as in the immediate 'back country'. Such acquisitions began in August 1764, when a strip of land along the Niagara River was surrendered by Six Nations, Chippewa and Mississauga chiefs (NRC 2010). Although many similar territories were purchased by the Crown in subsequent decades, it was only with the conclusion of the American Revolutionary War in 1783 and the wholesale displacement of United Empire Loyalists that the British began to feel a particularly pressing need for additional land.

Figure 4: Detail of Sayer and Bennett's *General Map of the Middle British Colonies in America* (1776)
(Cartography Associates 2009)

In response to this need, the Governor of Canada, Sir Frederick Haldimand, sent Captain William Crawford to the Bay of Quinte and the St. Lawrence River to obtain legal titles to areas that would be opened for settlement. On October 9, 1783, Crawford finalized the negotiations with several Mississauga chiefs, and lands from "Toniato or Onagara River (on the St. Lawrence River) to a river in the Bay of Quinte within eight leagues of the bottom of the Bay including all the islands, extending back from the lake so far as a man can travel in a day" were exchanged for guns, gunpowder, 12 laced hats and red cloth (NRC 2010). These 'Crawford Purchases' set the stage for European settlement north of the St. Lawrence River.

Major Holland began surveying these lands in 1784, and due to the urgency of settlement for those "strong in British principles" the newly established townships were not even named, but assigned numbers instead (Leavitt 1879:17). The westernmost surveyed territory was originally called Township No. 8 (Elizabethtown), while the easternmost was Township No. 1 (Charlottenburg). This numbering system was somewhat erroneous, as the easternmost Township of Lancaster (the Sunken Township) was also part of the original survey but was otherwise omitted due to the fact that its lands had "no value" (Leavitt 1879:17).

These new lands were granted to Loyalists "in partial recompense for the losses sustained in adhering to the old flag" and to provide a "bulwark against the spread of republicanism in North America" for the Crown (Leavitt 1879:17). The extent of the grants varied according to rank: field-officers received 5,000 acres; captains, 3,000 acres; junior officers (subalterns), 2,000 acres; and privates, 200 acres.

For the most part, the precise location of the granted land was determined by chance. Lots were numbered on small slips of paper and placed in a hat, and each soldier made his draw and claimed his new land (Carter 1905:37-38; McKenzie 1967:9). Every private, in addition to receiving 200 acres, was also granted 50 additional acres for his wife and each child. Each child, in turn, was entitled to a grant of 200 acres when they turned 21. Through this arrangement, the majority of the inland townships (e.g. Mountain and Winchester) ended up in the possession of the descendants of the United Empire Loyalist soldiers (Carter 1905:38).

The initial settlement of the St. Lawrence River took place under the direction of Sir John Johnson, whose regiment (the King's Royal Rangers) was granted land in the first five townships west of Montreal. The next three townships, including Edwardsburgh and Matilda, were set aside for Major Edward Jessup's regiment (the Loyal Rangers), while a third group went farther west (McKenzie 1967:7). The study area itself falls within the boundaries of Township No. 5 (later named the Township of Matilda in the County of Dundas) and Township No. 6 (later named the Township of Edwardsburgh in the County of Grenville).

On July 24, 1788, the Governor General of Quebec, Sir Guy Carleton, Baron of Dorchester, divided Upper Canada into four administrative districts: Hesse, Nassau, Mecklenburg and Lunenburg. The government then set about creating land boards to facilitate further settlement in each district. Later, in December 1791, the Parliament of Great Britain's *Constitutional Act* created the Provinces of Upper Canada and Lower Canada from the former Province of Quebec, and Colonel John Graves Simcoe was made its first Lieutenant-Governor. Simcoe became responsible for governing the new province, directing its settlement and establishing a constitutional government modelled after that of Britain (Coyne 1895:33). In 1792, the Upper Canadian legislature incorporated the Western, Home, Midland and Eastern Districts from the former Districts of the Province of Quebec.

Simcoe initiated several schemes to populate and protect the newly-created province, employing a settlement strategy that relied on the creation of shoreline communities with effective transportation links connecting them. These communities, inevitably, would be composed of lands obtained from the First Nations, and many more purchases were subsequently arranged. A total of 19 counties were established on July 16, 1792, including previously settled lands, new lands open for settlement and lands not yet acquired by the Crown. These counties stretched from Essex in the west to Glengarry in the east (Archives of Ontario 2009). The vicinity of the study area became part of the newly incorporated Dundas and Grenville Counties in the Eastern District (see Figure 5).

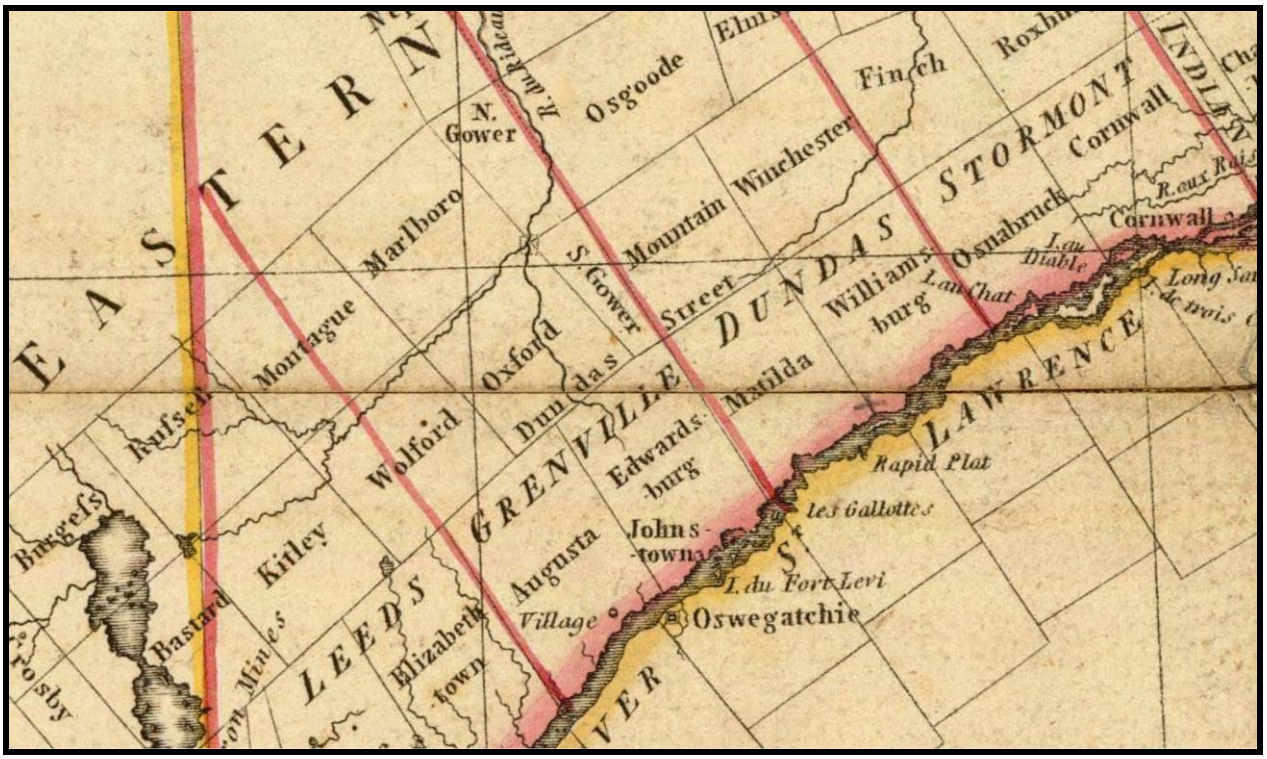

Figure 5: Detail of D.W. Smyth's *A Map of the Province of Upper Canada* (1800)
(Cartography Associates 2009)

5.3 Dundas County

Dundas County was named in 1792 for Mr. Henry Dundas, the Colonial Secretary and Viscount Melville (Croil 1861:225). It was situated nearly midway between Montreal and Kingston, directly south of Ottawa, and fronted on the St. Lawrence River. In historic times it was divided into four Townships: Williamsburg and Matilda along the river and Mountain and Winchester in the back country. With the *Municipal Act* of 1850, Dundas County came to be included in the United Counties of Stormont, Dundas and Glengarry for judicial and municipal purposes. In 1998, the Townships of Williamsburg and Matilda were amalgamated to become South Dundas, with the remaining two townships became North Dundas.

The settlement of eastern Ontario began in 1784 with Sir John Johnson's regiment of disbanded soldiers. Johnson's German Lutheran soldiers settled in Dundas County, Johnson's German Calvinists settled in the adjoining Stormont County and Johnson's Scottish Presbyterians settled in Glengarry County (Putnam and Wallace 1861:7). Those lots fronting on the St. Lawrence River were cleared and settled first. Back lots were often given by Loyalists to their sons and grandsons.

By 1861, census records indicate that the population of Dundas County had grown to 18,824, with agriculture (both crop and dairy) being the predominant industry (Carter 1905:59). The largest village in the county was Morrisburg, situated on the St. Lawrence River. By 1913 Morrisburg had a population of 1,700 inhabitants (Weaver 1913:110).

5.3.1 Township of Matilda (Township No. 5)

The Township of Matilda was named after Princess Charlotte Augusta Matilda, Princess Royal, eldest daughter of King George III. The St. Lawrence River marked its southern boundary, and the South Branch South Nation River and its tributaries defined its northern portion. These water systems greatly aided the settlement of the back lots, and part of the South Branch Wind Farm's study area falls within the South Nation River Watershed. Belden & Co.'s *Illustrated Atlas of the Counties of Stormont, Dundas and Glengarry, Ontario* from 1879 indicates that the Township of Matilda was densely settled by that time. Many of the original 200-acre lots appear to have been subdivided between family members (see Figure 6).

The township's major road was named Matilda Road (County Road 18), which ran north from the St. Lawrence River and was graded and planked by 1851. It was not wholly reliable until 1875, when a crusher was purchased to keep the road graded and gravelled (Carter 1905:67-68). The many railways that were constructed in the second half of the 19th century bypassed most of Matilda Township. The Grand Trunk Railway (1854) was laid near the St. Lawrence River to the south, and the Canadian Pacific Railway (1884) ran through the Townships of Mountain and Winchester to the north. In addition to agriculture, by the mid-19th century the Township of Matilda had developed a substantial cheese producing industry. Local cheddar cheese factories served as meeting place for farmers, and even the smallest village supporting multiple cheese factories up until the 1940s and 1950s (Rutley 2005:3).

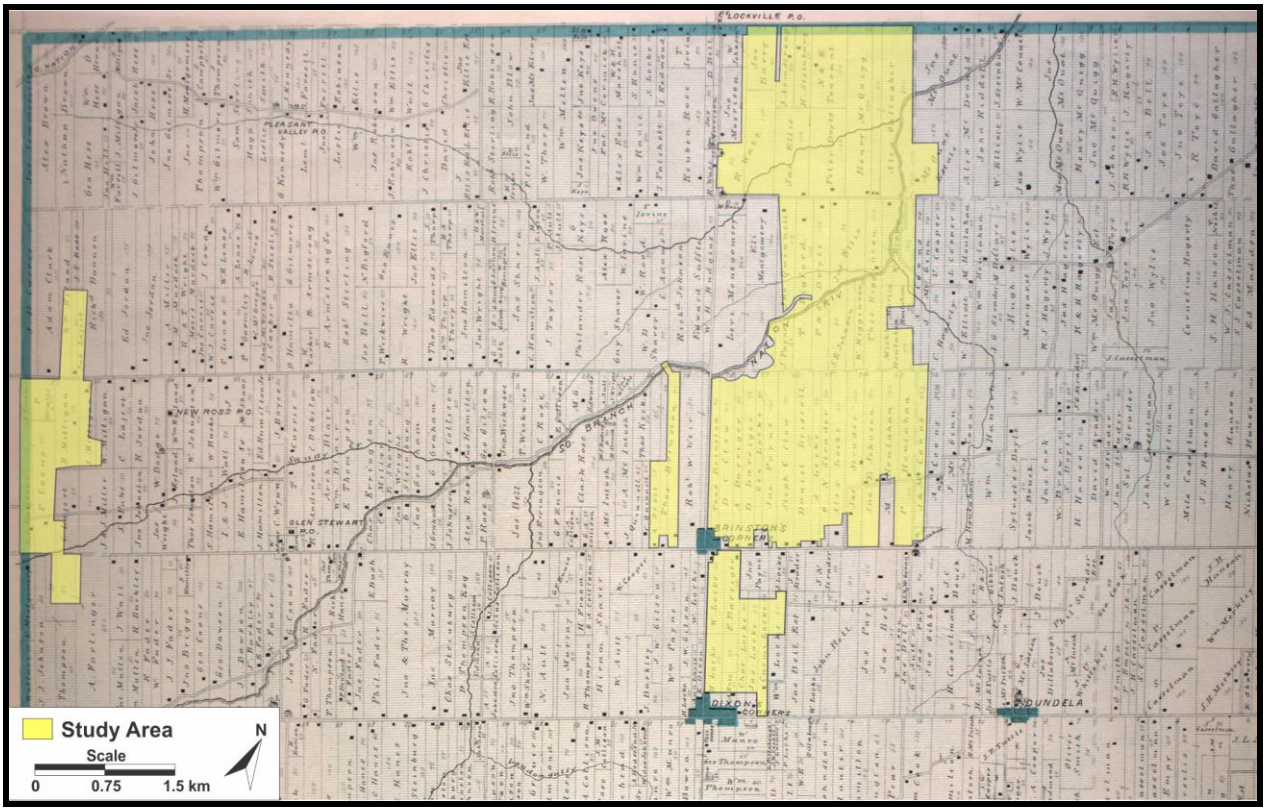

Figure 6: Detail of the Township of Matilda from Belden & Co.'s *Illustrated Atlas of the Counties of Stormont, Dundas and Glengarry, Ontario* (1879), Showing Study Area
(McGill University 2001)

5.3.2 Brinston

The village of Brinston is located in the Township of Matilda at the Junction of County Road 16 (Brinston Road) and County Road 18 (Henderson/Gilmour Road). In the mid-1800s, Brinston was an active community considered to be one of the hubs of the Township of Matilda, boasting hotels, inns, medical services and a cheese factory (Parks n.d.). The present-day Brinston United Church (formerly Methodist) was constructed in 1905, replacing the earlier "Old Brown Church" built in 1872 (Marin and Marin 1982:569). In 1940, the Department of Agriculture listed Brinston as having four cheese factories (Marin and Marin 1982:528). At present, Brinston is a small community comprised of thirty to forty houses, a United Church (ca. 1905), a Memorial Park (ca. 1919) and a playing field. The built resources of the village include a variety of architectural styles dating from the mid-19th century to present day (see Plates 1–5). The village remains a service centre for the surrounding agricultural community. In addition to a general store and post office, it offers a number of agricultural-based commercial services.

Plate 1: Historical Photo of Brinston Methodist Church and Parsonage (ca. 1905)
Both Buildings Remain Intact and are Occupied

Plate 2: View of Brinston approaching from east along Henderson Road The Church Spire is Visible from a Distance

Plate 3: Vernacular Architecture in the Village of Brinston

Plate 4: View of Brinston General Store

Plate 5: View north through the Village of Brinston

5.3.3 Dixon's Corners

The hamlet of Dixon's Corners is located in the Township of Matilda at the junction of County Road 16 (Brinston Road) and Cook Road. Evidence of the hamlet's pioneering roots is evident in the Wesleyan Methodist cemetery south of the hamlet, which bears a date of 1825. At present, the hamlet is comprised of about ten to twenty houses (see Plates 6–7). The general store, which had been owned by the same family for nearly 100 years, closed in 2003. The local post office and mailboxes have been moved to nearby Brinston (Marin and Marin 2008:627). Despite this change, the hamlet appears to have continued to function as a social hub for the surrounding rural community. It contains the Matilda Township Community Hall (ca 1978) and a new Community Christian Reformed Church. The Wesleyan Methodist pioneer cemetery (dating to 1825) and St. Anne's Roman Catholic Cemetery are also located in Dixon's Corners (the associated church was demolished in 1986).

Plate 6: View north along Brinston Road toward Dixon's Corners

Plate 7: Italianate residence at crossroads in Dixon's Corners

5.3.4 Hulbert

Located in Matilda Township at the junction of County Road 16 (Brinston Road) and Snowbird/Hulbert Roads, the hamlet of Hulbert is comprised of only a few houses and a United Church (see Plate 8). The hamlet is not indicated on Belden & Co.'s *Illustrated Atlas of the Counties of Stormont, Dundas and Glengarry, Ontario* from 1879, although a schoolhouse is depicted at the crossroads and a church is shown further north. In 1889, Hulbert is known to have been home to both a tavern and a hotel (Parks n.d.).

The present Hulbert Valley United Church (see Potential Heritage Resource No. 3), situated on the southwest corner of the crossroads, was built in 1980. The first church here was a Methodist church, built in 1873 (see Plate 9). It was replaced in 1908 with a new church, which burned and was rebuilt in 1938. This church burned down as well in 1979 and was replaced by the extant structure (Marin and Marin 1982:572). A structure remains on the northeast corner of the crossroads where a schoolhouse is indicated on Belden & Co.'s *Illustrated Atlas of the Counties of Stormont, Dundas and Glengarry, Ontario* from 1879.

Plate 8: View north on Brinston Road approaching Hulbert

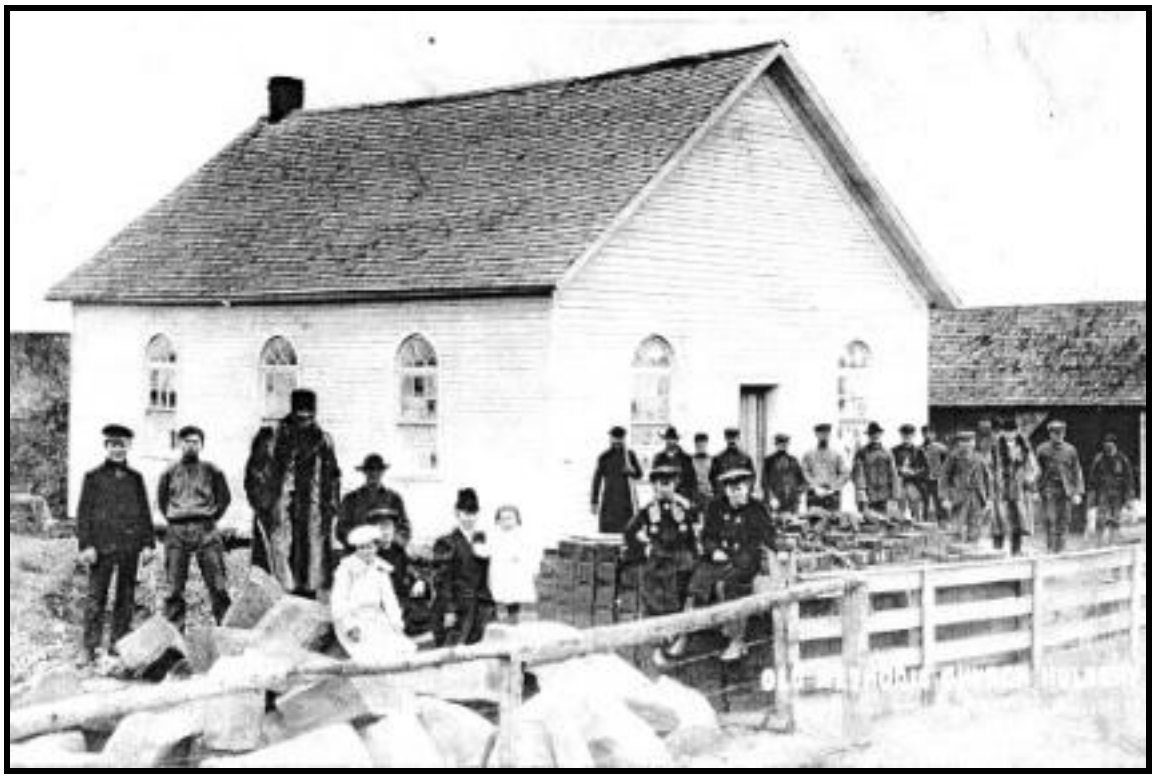

Plate 9: Old Methodist Church, Hulbert (ca. 1907)
Church was Replaced by Extant Church in 1980 – see Potential Heritage Resource No. 6

5.3.5 Glen Stewart

The hamlet of Glen Stewart is located in Township of Matilda at the junction of County Road 1 (Carman Road) and County Road 18 (Glen Stewart Road). It also appears in Belden & Co.'s *Illustrated Atlas of the Counties of Stormont, Dundas and Glengarry, Ontario* from 1879. By 1874 the hamlet offered the first daily mail delivery outside of Brinston, and was also the location of the township's first cheese factory (Parks n.d.). At present, Glen Stewart is comprised of only a few houses and offers no services, although signage is still present (see Plate 10).

Plate 10: Approaching Glen Stewart from the west along Glen Stewart Road

5.3.6 New Ross

Belden & Co.'s *Illustrated Atlas of the Counties of Stormont, Dundas and Glengarry, Ontario* from 1879 indicates that the community of New Ross was located in Concession 6 of the Township of Matilda and had its own post office and schoolhouse. The community continued to appear on county maps until 1951 (see Figure 6). Nothing remains of New Ross today, however, and the surrounding land is predominately woodlots and open land (see Plate 11).

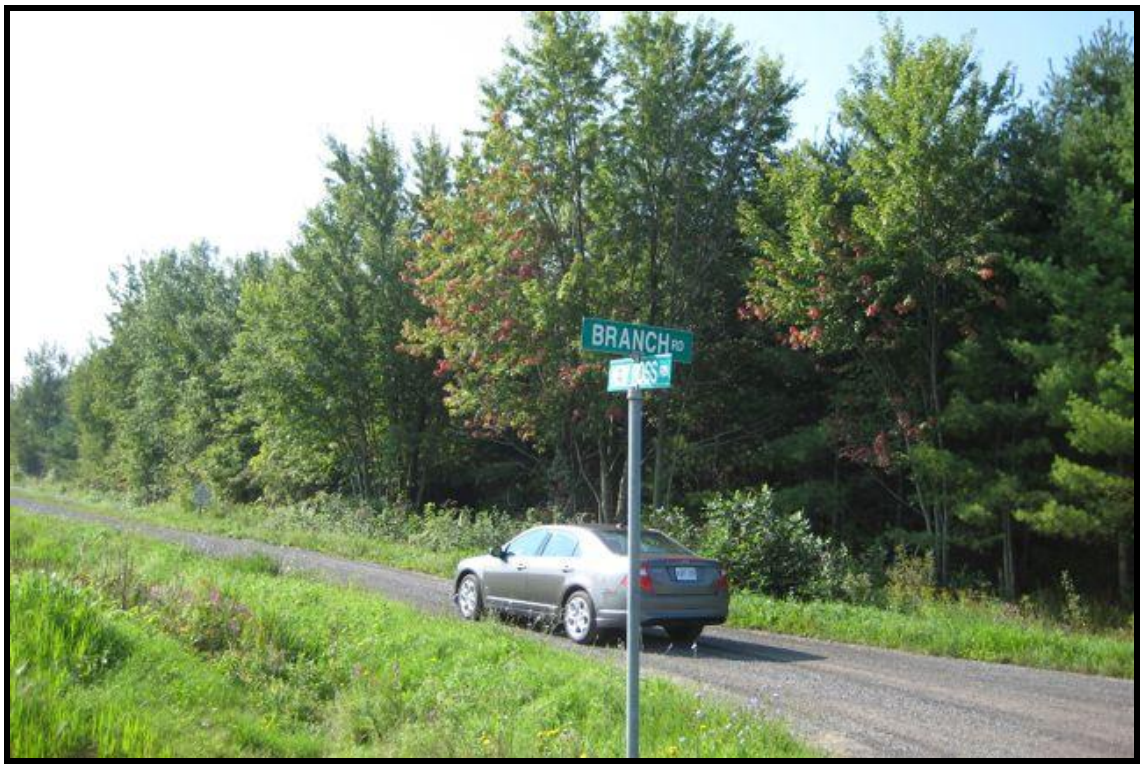

Plate 11: View southwest at Junction of Branch Road and New Ross Road
The Location of the Historic Settlement of New Ross

5.4 Grenville County

Grenville County was first surveyed at the end of the 18th century and originally contained five townships. Three of these townships fronted on the Rideau, while two fronted on the St. Lawrence River (Weaver 1913:126). The regiments of Majors Jessup and Rodgers were largely responsible for the initial settlement of the area. With the *Municipal Act* of 1850, Grenville County came to be part of the United Counties of Leeds and Grenville (Clow 1967:2).

5.4.1 Township of Edwardsburgh (Township No. 6)

The Township of Edwardsburgh (see Figure 7) was named for the Duke of Kent. Interestingly, when Major Edward Jessup's disbanded soldiers arrived in 1784 to establish their homesteads they found they were not the first Europeans in the area. Francois and Guillaume de Lorimier, brothers from a distinguished French-Canadian family, had been previously granted the land and were reputed to have built the first house in the Township of Edwardsburgh prior 1770 (Clow 1967:103; McKenzie 1967:35).

The Township of Edwardsburg grew at a slow but steady pace. By 1812 the township had a population of about 1,000 inhabitants (McKenzie 1967:11). At present, the amalgamated Township of Edwardsburgh/Cardinal has a population of 6,800 inhabitants.

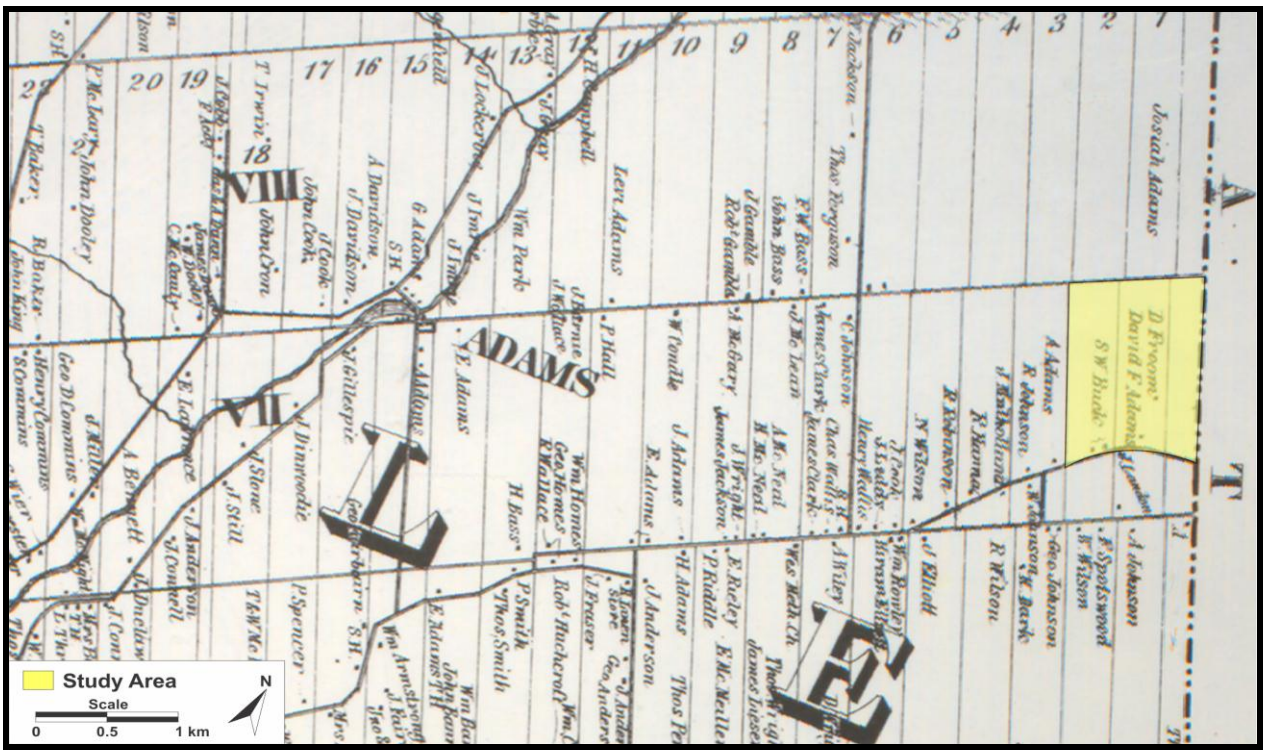

Figure 7: Detail of the Township of Edwardsburgh Leavitt's *History of Leeds and Grenville, Ontario* (1879), Showing Study Area
(McGill University 2001)

5.4.2 Shanly

The Village of Shanly is located in the Township of Edwardsburg at the junction of County Roads 21 and 22. Although it is not indicated on Thadeus Leavitt's *History of Leeds and Grenville, Ontario* (1879), other historical sources date the earliest settlement there to the 1840s (known as Moore's Settlement). In the 1860s, the village was renamed Wallace's Corner. It was then once again renamed in the late 1880s after its first post office opened. This renaming was in honour of Walter Shanly, an engineer from Ottawa who was in charge of building the railway between Ottawa and Prescott (Froom and Bennett 1995:241).

By the late 1880s Shanly had become a thriving community, listing among its businesses a blacksmith, several cheese factories, a carpenter, multiple hay and grain dealers, a cooper and a harness maker (Froom and Bennett 1995:244). A Methodist church, which still stands, was built in 1893 (see Plate 12). A schoolhouse built ca. 1900 is located across from the church, and has since been converted into a residence. At present, Shanly is a small crossroads community of a few dozen houses, but offers no services.

Plate 12: Shanly United Church (ca. 1893)

6.0 IDENTIFICATION OF HERITAGE RESOURCES

In order to document previously-identified Built Heritage (BH) resources and Cultural Heritage Landscapes (CHL) lying within or near the study area, a number of sources were considered. The National Historic Sites archive (Parks Canada 2011) was consulted, but no heritage resources were identified within or adjacent to the study area. Although it has not been updated since 2005, and accordingly, is not a comprehensive source of information, the Ontario Heritage Properties Database (MCL 2005) was also consulted. Once again, no heritage resources were identified within or adjacent to the study area. The MTC's current List of Heritage Conservation Districts (MTC 2011) was also consulted, but no such districts were found for this locality.

The Townships of South Dundas and Edwardsburgh-Cardinal were then contacted in order to obtain further information regarding any properties designated under Part IV of the *Ontario Heritage Act*; any properties identified as having potential heritage value; and any Heritage Conservation Districts designated under Part V of the *Ontario Heritage Act*. Don Lewis of the Township of South Dundas indicated that the township does not keep an inventory of resources with heritage value. Debra McKinstry of the Township of Edwardsburg/Cardinal also indicated that the township does not keep an inventory of resources with heritage value.

In order to obtain further information about local heritage resources, additional background and historical research (including historical mapping) was gathered from web-based sources and from secondary sources. Secondary sources were consulted during visits to the Stormont, Dundas and Glengarry Public Library (Morrisburg Branch), the Loyalist Resource Centre in Morrisburg and the Leeds and Grenville Public Library in Prescott. Additional information was obtained from the James A. Laidlaw Library at Brock University. These data were analyzed and a list of potential heritage resources was begun.

A field survey was then conducted to photograph and document the heritage resources that were identified through background research and also to identify and photograph additional potential BH resources and CHLs that were not previously recognized. This survey was conducted on August 30 and 31, 2010.

In combination, the background study and the field survey documented numerous potential BH and CHL resources within the study area. These resources included historic settlements (villages or hamlets), individual properties or landscapes within each historic settlement, and properties, usually farms, in the surrounding environs. In accordance with the methodology set out in Section 3.0, the identification of resources of CHVI and evaluation of impacts to said resources was approached in two stages. Potential BH resources were considered first (see Sections 6.1–6.2), and then potential CHLs were examined (see Sections 6.3–6.4).

6.1 Potential Built Heritage Resource Inventory and Evaluation

During the survey, a total of 30 properties were identified as having potential for CHVI within or immediately adjacent to the study area (see Figure 3). The resulting inventory was roughly organized by property from east to west, although each potential BH resource's proximity to historical nodes of settlement was also factored in. These properties were then evaluated against the criteria in O. Reg. 9/06 (Service Ontario 2006). None of these properties were identified as Protected Properties, as defined under Section 19 of O. Reg. 359/09 (Service Ontario 2009b). The results of the evaluation for each property can be found in the Appendix, which also includes the location, description and photographic documentation of each potential BH resource.

A standardized checklist based on O. Reg. 9/06 was implemented to aid in the evaluation process (see Appendix). Design or Physical Value manifests when a feature is a rare, unique, representative or early example of a style, type, expression, material or construction method; when it displays a high degree of craftsmanship or artistic value; or when it displays a high degree of technical or scientific achievement. Historical or Associative Value appears when a resource has direct associations with a theme, event, belief, person, activity, organization or institution that is significant to the community; yields or has the potential to yield information that contributes to the understanding of a community or culture; or demonstrates or reflects work or ideas of an architect, builder, artist, designer or theorist who is significant to the community. Contextual value is implied when a feature is important in defining, maintaining or supporting the character of an area; is physically, functionally, visually or historically linked to its surroundings; or is a landmark.

It was found that 28 of the 30 properties with the potential for CHVI met one or more of the established criteria (see Table 1; Appendix). As such, those 28 are *identified BH resources* and therefore require an evaluation of potential project impacts. Potential Heritage Resource No. 30 was identified as having unknown CHVI because there was no access to the property and an evaluation could not be completed. As such, it is included in the evaluation of potential project impacts.

Table 1: South Branch Wind Farm Potential BH Resource Inventory and CHVI Evaluation

Potential Heritage Resource No.	Address	Possesses CHVI?	Criteria Met for Positive Identification of CHVI
1	10991 Gilmour Road	Yes	Design/Physical Value *and* Historical/Associative Value
2	10969 Gilmour Road	Yes	Design/Physical Value
3	11064 Hulbert Road	Yes	Historical/Associative Value *and* Contextual Value
4	3775 Brinston Road	Yes	Design/Physical Value, Historical/Associative Value *and* Contextual Value

5	3513 Brinston Road	Yes	Design/Physical Value, Historical/Associative Value *and* Contextual Value
6	3489 Brinston Road	Yes	Contextual Value
7	3477 Brinston Road	Yes	Design/Physical Value *and* Contextual Value
8	11120 Snowbird Road	Yes	Design/Physical Value *and* Historical/Associative Value
9	-- Henderson Road	Yes	Design/Physical Value *and* Historical/Associative Value
10	11391 Henderson Road	No	*No Criteria Met*
11	11376 Willow Road	Yes	Historical/Associative Value
12	11347 Willow Road	Yes	Historical/Associative Value
13	11341 Henderson Road	Yes	Design/Physical Value
14	11272 Henderson Road	Yes	Design/Physical Value *and* Historical/Associative Value
15	11251 Henderson Road	Yes	Design/Physical Value *and* Historical/Associative Value
16	11205 Henderson Road	Yes	Design/Physical Value *and* Historical/Associative Value
17	11165 Henderson Road	Yes	Design/Physical Value *and* Historical/Associative Value
18	11136 Henderson Road	Yes	Design/Physical Value
19	11113 Henderson Road	Yes	Design/Physical Value *and* Historical/Associative Value
20	11107 Henderson Road	Yes	Design/Physical Value
21	11104 Henderson Road	No	*No Criteria Met*
22	11091 Henderson Road	Yes	Design/Physical Value
23	Spruce Haven-Bell Road	Yes	Historical/Associative *and* Contextual Value
24	4354 Bell Road	Yes	Design/Physical Value *and* Historical/Associative Value
25	4362 Bell Road	Yes	Design/Physical Value *and* Historical/Associative Value
26	11235 County Road 18	Yes	Design/Physical Value *and* Historical/Associative Value

27	10171 Branch Road	Yes	Design/Physical Value *and* Contextual Value
28	1011 Branch Road	Yes	Design/Physical Value
29	10057 Branch Road	Yes	Design/Physical Value
30	110 Pitt Road	Unknown	Possible Design/Physical Value *and* Historical/Associative Value

Each of the identified BH resources, save for Heritage Resource No. 30 (see above), possesses one or more heritage attributes. In general, heritage attributes can be understood as the "principal features, characteristics, context and appearance that contribute to the cultural heritage significance" of a given heritage resource (MMAH 2005:31). These heritage attributes are the key elements of each heritage resource, and accordingly must be articulated prior to the evaluation of potential project impacts. A summary of the heritage attributes of the identified BH resources appears in Table 2.

Table 2: Summary of the Heritage Attributes of the Identified BH Resources

Heritage Resource No.	Address	Heritage Attributes
1	10991 Gilmour Road	An example of the Ontario Gothic style; the possible residence of Thomas Brinston (attested in the *Historical Atlas* from 1879)
2	10969 Gilmour Road	An example of an Italianate farmhouse
3	11064 Hulbert Road	Associated with the Methodist community of Hulbert since 1873; associated with the historic Hamlet of Hulbert
4	3775 Brinston Road	An example of a Dutch Colonial style residence; located on the site of a historic schoolhouse (attested in the *Historical Atlas* from 1879); associated with the historic Hamlet of Hulbert
5	3513 Brinston Road	An example of Ontario vernacular style; possibly the residence of R. Watt (attested in the *Historical Atlas* from 1879); associated with the historic Hamlet of Hulbert
6	3489 Brinston Road	Associated with the historic Hamlet of Hulbert
7	3477 Brinston Road	An Ontario Gothic style residence; associated with the historic Hamlet of Hulbert
8	11120 Snowbird Road	An example of a neoclassical style farmhouse and vertical board barn; possibly the residence of D.A. McEwen (attested in the *Historical Atlas* from 1879)
9	-- Henderson Road	An excellent example of an Ontario Gothic style farmhouse; date stone reads 'A.D. 1883'; possibly built by a member of the Coons family

11	11376 Willow Road	Possibly the former schoolhouse indicated in the *Historical Atlas* from 1879
12	11347 Willow Road	Possibly the structure illustrated in the *Historical Atlas* from 1879, belonging to M. Houlahan
13	11341 Henderson Road	A good example of an Italianate style farmhouse
14	11272 Henderson Road	An excellent example of a stone vernacular style farmhouse; one of the few stone farmhouses in the area; the original fret work is intact on the side porch; possibly the residence of Jas. Strader (attested in the *Historical Atlas* from 1879)
15	11251 Henderson Road	The only example of an intact 19th century farmstead in the study area; farmhouse and vertical board barns are of a similar time period; possibly the residence and farm of Alex Locke (attested in the *Historical Atlas* from 1879)
16	11205 Henderson Road	A good example of an Ontario cottage style farmhouse; one of the few stone farmhouses in the area; possible residence and farm of Daniel Driscoll (attested in the *Historical Atlas* from 1879)
17	11165 Henderson Road	An example of an Ontario vernacular style farmhouse; original window sash exists; possibly the residence of Jno. Payne (attested in the *Historical Atlas* from 1879)
18	11136 Henderson Road	An example of an Italianate farmhouse
19	11113 Henderson Road	An example of early vernacular style; "brick nogging" construction (i.e. timber framing infilled with brick); possibly the residence of D. Barringer (attested in the *Historical Atlas* from 1879)
20	11107 Henderson Road	An example of an Italianate style residence
22	11091 Henderson Road	An example of a neoclassical farmhouse
23	Spruce Haven-Bell Road	Cemetery has the potential to yield abundant historical information pertaining to the early community of Brinston; historically linked to the Euro-Canadian occupation of Brinston
24	4354 Bell Road	An excellent example of an Italianate style farmhouse; eave brackets & veranda detailing appear to be original; possibly the residence of Wm. Locke (attested in the *Historical Atlas* from 1879)
25	4362 Bell Road	An example of an Ontario vernacular style farmhouse; possibly the residence of Carm. Locke (attested in the *Historical Atlas* from 1879)
26	11235 County Road 18	A good example of an Italianate style farmhouse; possibly the residence of Jas. Locke (attested in the *Historical Atlas* from 1879)
27	10171 Branch Road	The only log structure identified within the study area; log structure on the property may be associated with an earlier occupation of the property

28	1011 Branch Road	An example of a timber-framed vertical board barn
29	10057 Branch Road	An example of an Ontario cottage style farmhouse
30	110 Pitt Road	Unknown design or physical values (if any); possibly the farm and residence of D. Froom (attested in the *Historical Atlas* from 1879)

6.2 Impact Evaluation of Identified Built Heritage Resources

According to Section 23 (Heritage Assessment) of O. Reg. 359/09, an impact evaluation must be applied to any identified BH resources that are identified at the project location and to any Protected Properties that abut the parcel of land on which the project is located (Service Ontario 2009b). As part of its business practice, ARA also considers other heritage resources that abut or are otherwise adjacent to the project location. Of the 28 identified BH resources within or adjacent to the study area, 19 meet these specific criteria (see Sections 6.2.1 and 6.2.2). As mentioned in Section 6.1, no Protected Properties were identified in the project location.

As discussed in Section 3.0, impacts can be classified as either direct or indirect impacts. Direct impacts include, but are not limited to, those that physically affect the heritage resources themselves. These can be caused by the initial project staging, excavation/levelling operations, construction of access roads, preparation of turbine pads, installation of underground lines, maintenance and repairs over the life of the project, and the final decommissioning of the turbines. Indirect impacts include, but are not limited to, alterations that are not compatible with the historic fabric and appearance of the area, the creation of shadows that alter the appearance of an identified heritage attribute, the isolation of a heritage attribute from its surrounding environment, the obstruction of significant views and vistas, and other less-tangible impacts.

A key factor in this evaluation process is the distance between the proposed project infrastructure (e.g. wind turbines, access roads and underground cabling) and the identified heritage resources of CHVI. As stated previously, however, no *Standards and Guidelines* have yet been provided by the MTC to aid in the determination of minimal separation distances between design elements and heritage resources. Accordingly, all methodological attempts to make use of this quantitative data must rely primarily on subjective criteria and the opinion of qualified heritage professionals.

Through an analysis of the proximity (or lack therefore) of heritage resources to project infrastructure, the presence or absence of the major types of negative impacts outlined in *InfoSheet #5: Heritage Impact Assessments and Conservation Plans* (2006:3) can be determined. Should impacts be identified, recommendations to avoid, eliminate or mitigate each impact are required by Subsection 23 (1) (a) (ii) of O. Reg. 359/09.

6.2.1 Participating Properties

In the course of the survey, it was found that six BH Resources of CHVI fall on participating project lands (Heritage Resource Nos. 13, 16, 22, 25, 26 & 30). The proximity of each of these heritage resources to proposed neighbouring project infrastructure appears in Tables 3–4.

Table 3: Distances between Identified BH Resources on Participating Properties and Turbines

HR No.	Distance to Turbine # (km)													
	1	2	3	4	5	6	7	8	9	10	11	12	13	15
13	9.99	9.58	9.39	8.92	4.89	4.69	3.06	2.85	2.45	0.95	0.78	1.01	1.36	2.30
16	9.22	8.82	8.60	8.16	5.48	5.36	3.66	3.60	1.74	1.13	1.52	2.11	2.44	1.19
22	8.34	7.95	7.73	7.29	5.51	5.47	3.78	3.85	1.03	1.45	2.02	2.75	3.07	1.05
25	9.26	8.91	8.62	8.28	7.17	7.09	5.38	5.35	2.70	2.87	3.27	3.76	4.11	0.69
26	9.19	8.83	8.53	8.21	7.46	7.38	5.68	5.67	2.87	3.18	3.59	4.11	4.45	0.95
30	0.43	0.67	0.60	1.20	9.77	10.16	9.45	9.95	7.52	9.10	9.61	10.46	10.59	8.75

Table 4: Distances between Identified BH Resources on Participating Properties and Access Roads, Underground Cables and Overhead Cables

HR No.	Distance to Access Roads (km)	Distance to Underground Cables (km)	Distance to Overhead Cables (km)
13	0.36	0.73	2.09
16	0.69	1.07	1.07
22	0.86	0.07	0.19
25	0.74	0.72	1.56
26	1.00	0.97	1.75
30	0.31	0.47	1.38

As these tables demonstrate, all but one of these identified BH resources are more than 690 m away from any proposed turbine location. The sole exception (Heritage Resource No. 30) is 430 m away from Turbine 1. The minimum distances between each resource and the closest access road, underground cable route and overhead cable route are 310 m (Heritage Resource No. 30), 70 m (Heritage Resource No. 22) and 190 m (Heritage Resource No. 22), respectively.

As discussed in Section 3.0, the definitions of negative impacts presented in *InfoSheet #5: Heritage Impact Assessments and Conservation Plans* (MCL 2006:3) can be effectively adapted into criterion for identifying both direct and indirect impacts. The results of this evaluation of impacts to the identified BH resources on participating properties are summarized in Table 5.

Table 5: Impact Evaluation of Identified BH Resources on Participating Properties
(adapted from MCL 2006:3)

Type of Negative Impact	Applicable to Heritage Resource Nos. 13, 16, 22, 25, 26 or 30?	Comments
Destruction of any, or part of any, significant heritage attributes	No	There will be no destructive impacts whatsoever to any of the heritage attributes of these resources (see Table 2).
Alteration that is not sympathetic, or is incompatible, with the historic fabric and appearance	No	The proposed infrastructure of the South Branch Wind Farm involves alterations that are compatible with the historic fabric and appearance of the BH resources. Although the addition of turbine towers, blades and nacelles will modify the appearance of the landscape, the lands surrounding the identified BH features are already defined by visible infrastructure, with towering transmission towers and high tension wires traversing the area. The addition of turbines, on an interim basis, will by no means negatively impact the identified BH resources.
Shadows created that alter the appearance of a heritage attribute or change the viability of a natural feature or plantings, such as a garden	No	No shadows will be cast near any of the heritage attributes of the resources. Access roads and underground cabling cast no shadows, and the turbines themselves are at least 430 m away (see Table 3).
Isolation of a heritage attribute from its surrounding environment, context or significant relationship	No	None of the heritage attributes outlined in Table 2 will be isolated from its surrounding environment, context or significant relationship.
Direct or indirect obstruction of significant views or vistas within, from, or of built and natural features	No	The proposed infrastructure of the South Branch Wind Farm will not result in the direct or indirect obstruction of any significant views or vistas within, from, or of built and natural features associated with the BH resources. As Table 2 demonstrates, significant view and vistas are not heritage attributes of any of the subject properties; rather, all are defined by intrinsic values (i.e. those rooted in their design, age, integrity, history, context, etc.). These values will continue to exist with or without the addition of the proposed infrastructure.

A change in land use such as rezoning a battlefield from open space to residential use, allowing new development or site alteration to fill in the formerly open spaces	No	No rezoning will occur; open space/agricultural lands remains.
Land disturbances such as a change in grade that alters soils, and drainage patterns that adversely affect an archaeological resource.	No	These impacts have been addressed in a separate archaeological report (ARA 2011).

As Table 5 summarizes, none of the identified BH resources with CHVI located on participating properties will be negatively impacted by the South Branch Wind Farm.

6.2.2 Abutting Properties

In the course of the survey, it was found that 13 BH resources of CHVI were located on lands abutting participating properties (Resource Nos. 1, 2, 4, 5, 6, 14, 15, 17, 19, 20, 24, 28 & 29). The proximity of each of these heritage resources to proposed neighbouring project infrastructure appears in Tables 6–7.

Table 6: Distances between Identified BH Resources on Abutting Properties and Turbines

HR No.	Distance to Turbine # (km)													
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**15**
1	7.64	7.23	7.01	6.59	5.62	5.64	4.00	4.17	0.73	1.97	2.55	3.36	3.64	1.44
2	7.47	7.07	6.85	6.43	5.66	5.70	4.08	4.27	0.76	2.11	2.70	3.53	3.79	1.55
4	8.62	8.18	8.16	7.57	1.40	1.56	1.01	1.54	3.51	3.16	3.07	3.38	3.22	5.21
5	8.77	8.35	8.35	7.74	0.99	1.24	1.28	1.75	3.94	3.59	3.48	3.72	3.53	5.66
6	8.85	8.42	8.42	7.82	0.84	1.13	1.43	1.88	4.12	3.77	3.65	3.87	3.67	5.84
14	9.57	9.17	8.96	8.51	5.40	5.26	3.57	3.46	2.08	1.08	1.32	1.80	2.14	1.50
15	9.55	9.14	8.94	8.49	5.34	5.20	3.51	3.40	2.02	1.03	1.26	1.78	2.09	1.54
17	8.93	8.54	8.31	7.88	5.47	5.38	3.67	3.66	1.50	1.17	1.64	2.31	2.63	1.07

19	8.55	8.14	7.93	7.50	5.50	5.44	3.75	3.79	1.17	1.34	1.88	2.62	2.91	1.01
20	8.50	8.10	7.88	7.45	5.49	5.44	3.74	3.79	1.13	1.36	1.89	2.65	2.94	1.03
24	9.30	8.94	8.66	8.31	7.06	6.97	5.27	5.23	2.64	2.75	3.14	3.64	3.98	0.62
28	1.18	0.82	1.07	0.67	8.43	8.84	8.27	8.79	6.77	8.23	8.70	9.52	9.62	8.23
29	1.08	0.81	1.14	0.90	8.64	9.05	8.52	9.05	7.04	8.52	8.99	9.82	9.89	8.54

Table 7: Distances between Identified BH Resources on Abutting Properties and Access Roads, Underground Cables and Overhead Cables

HR#	Distance to Access Roads (km)	Distance to Underground Cables (km)	Distance to Overhead Cables (km)
1	0.10	0.10	0.05
2	0.06	0.06	0.03
4	1.10	1.10	4.21
5	0.92	0.72	4.66
6	0.90	0.59	4.86
14	0.29	0.93	1.46
15	0.25	0.88	1.45
17	0.94	0.52	0.78
19	0.91	0.13	0.39
20	0.86	0.08	0.34
24	0.67	0.62	1.51
28	0.65	0.73	2.23
29	0.75	0.81	2.43

As these tables demonstrate, all of these BH resources are more than 620 m away from any proposed turbine location. The minimum distances between each resource and the closest access road, underground cable route and overhead cable route are 60 m (Heritage Resource No. 2), 60 m (Heritage Resource No. 2) and 30 m (Heritage Resource No. 2), respectively.

The definitions of impacts presented in *InfoSheet #5: Heritage Impact Assessments and Conservation Plans* (MCL 2006:3) can be effectively adapted into criterion for identifying both direct and indirect impacts. The results of this evaluation of impacts to the identified BH resources of CHVI on abutting properties are summarized in Table 8.

Table 8: Impact Evaluation of Identified BH Resources on Abutting Properties
(adapted from MCL 2006:3)

Type of Negative Impact	Applicable to Heritage Resource Nos. 1, 2, 4, 5, 6, 14, 15, 17, 19, 20, 24, 28 or 29?	Comments
Destruction of any, or part of any, significant heritage attributes	No	There will be no destructions whatsoever of any of the heritage attributes of these resources (see Table 2).
Alteration that is not sympathetic, or is incompatible, with the historic fabric and appearance	No	The proposed infrastructure of the South Branch Wind Farm involves alterations that are compatible with the historic fabric and appearance of the BH resources. Although the addition of turbine towers, blades and nacelles will modify the appearance of the landscape, the lands surrounding the identified BH features are already defined by visible infrastructure, with towering transmission towers and high tension wires traversing the area. The addition of temporary turbines will by no means negatively impact the identified BH resources.
Shadows created that alter the appearance of a heritage attribute or change the viability of a natural feature or plantings, such as a garden	No	No shadows will be cast near any of the heritage attributes of the resources. Access roads and underground cabling cast no shadows, and the turbines themselves are at least 620 m away (see Table 6).
Isolation of a heritage attribute from its surrounding environment, context or significant relationship	No	None of the heritage attributes outlined in Table 2 will be isolated from its surrounding environment, context or significant relationship.
Direct or indirect obstruction of significant views or vistas within, from, or of built and natural features	No	The proposed infrastructure of the South Branch Wind Farm will not result in the direct or indirect obstruction of any significant views or vistas within, from, or of built and natural features associated with the BH resources. As Table 2 demonstrates, significant view and vistas are not heritage attributes of any of the subject properties; rather, all are

		defined by intrinsic values (i.e. those rooted in their design, age, integrity, history, context, etc.). These values will continue to exist with or without the addition of the proposed infrastructure.
A change in land use such as rezoning a battlefield from open space to residential use, allowing new development or site alteration to fill in the formerly open spaces	No	No rezoning will occur; open space/agricultural lands remain.
Land disturbances such as a change in grade that alters soils, and drainage patterns that adversely affect an archaeological resource.	No	These impacts have been addressed in a separate archaeological report (ARA 2011).

As Table 8 summarizes, none of the identified BH resources with CHVI located on abutting properties will be negatively impacted by the South Branch Wind Farm.

6.3 Potential Cultural Heritage Landscape Inventory and Evaluation

6.3.1 Backgrounds and Concepts

The term "cultural landscape" was first coined in 1908 by noted German geographer Otto Schluter in his formulation of the distinction between natural and cultural landscapes (James and Martin 1981:177). The concept was expanded and further developed by American geographer Carl Sauer in his 1925 paper *The Morphology of Landscape* in which he declared:

> *The cultural landscape is fashioned from a natural landscape by a culture group. Culture is the agent, the natural area is the medium, the cultural landscape is the result. ... The natural landscape is of course of fundamental importance for it supplies the materials out of which the cultural landscape is formed. The shaping force, however, lies in the culture itself* (cited in Mitchell 2003:27).

The method and theory of cultural landscape studies were further debated and refined in academic circles in a process which culminated in UNESCO's World Heritage Convention of 1992. The *Operational Guidelines for the Implementation of the World Heritage Convention* define several types of cultural landscapes, list the criteria for determining their significance and suggest methods for their conservation (UNESCO 2008). While any landscapes that have been altered by humans constitute cultural landscapes, those with demonstrable heritage value or *cultural heritage landscapes* (CHLs) have been marked for special consideration.

Whereas the definition of BH is fairly straightforward, CHLs manifest in a much wider variety of forms and styles. As a consequence, CHLs often possess heritage values which arise from a number of different criteria. Accordingly, the identification, evaluation and conservation of cultural landscapes can be extremely complex. CHLs can stretch across multiple properties or

even multiple municipalities. Defining their extents requires careful consideration of the components of the landscape and an understanding of the historical processes that led to its creation. In many cases, input from community heritage organizations is crucial to the process.

It has been recognized that the heritage value of a CHL is often derived from its association with historical themes that characterize the development of human settlement in an area (MNR 1975; Scheinman 2006). In Ontario, typical themes which may carry heritage value within the community include (but are not limited to) Pre-Contact habitation; early European exploration; early European and First Nations contacts; pioneer settlement; the development of transportation networks; agriculture and rural life; early industry and commerce; and/or urban development. Individual CHLs may touch on a number of these themes simultaneously.

The heritage value of a CHL can also originate from non-historical and non-associative values. Just like BH resources (see Section 3.0), CHLs can be defined by physical values, design values, and/or contextual values, as the criteria set out in O. Reg. 9/06 reflect (Service Ontario 2006). Although significant measures of design or physical value are relatively rare in the case of CHLs (i.e. few have a high degree of craftsmanship, few display scientific merit, etc.), contextual value is quite common due to their frequent links to the surroundings and importance in defining the character of any given area.

6.3.2 Identification and Evaluation of Local Cultural Heritage Landscapes

A total of four potential CHLs were identified within the study area for the South Branch Wind Farm: 1) the study area as a whole; 2) the settlement of Brinston; 3) the hamlet of Dixon's Corners; and 4) the hamlet of Hulbert. These potential CHLs are described and evaluated for CHVI in Sections 6.3.2.1–6.3.2.4. A summary of the heritage attributes of the resultant *identified CHLs* appears in Section 6.3.2.5.

The standardized checklist employed in the evaluation of the potential BH resource inventory (see Section 6.1) was implemented to aid in this evaluation process, as were additional perspectives/guidance provided in the evaluation process developed for the Regional Municipality of Waterloo (Scheinman 2006). This method is based on current practice standards and is similar to the procedure used by the Ontario Realty Corporation, the MTC, the City of London and the Town of Caledon. These, in turn, rely on CHL identification methods that are essentially modifications of the seminal model developed and adopted by the U.S. National Parks Service (Scheinman 2006:10). The US National Parks Service model can be found in its entirety in *National Register Bulletin #30 'Guidelines for Evaluating and Documenting Rural Historic Landscapes'* (McClelland, Keller, Keller and Melnick 1999). These additional perspectives/guidance allow for greater specificity and accuracy in studying potential CHLs.

6.3.2.1 The Study Area as a Whole

Using the standardized checklist and additional perspectives/guidance discussed above, the study area as a whole was evaluated against the criteria set out in O. Reg. 9/06 to determine whether it was a CHL of CHVI (Service Ontario 2006). The results of this evaluation appear in Table 9.

Table 9: Evaluation of the Study Area as a CHL of CHVI
(adapted from McClelland, Keller, Keller and Melnick 1999; MCL 2006:3; Scheinman 2006)

Criteria	Description	Applicable to this CHL?	Comments
A. Design or Physical Value	1. Is a rare, unique, representative or early example of a style, type, expression, material or construction method	No	The study area is not a rare, unique, representative or an early example of any such aspect. It is composed of diverse elements of widely varying dates and materials.
	2. Displays a high degree of craftsmanship or artistic value	No	The study area as a whole does not display a high degree of craftsmanship or artistic value, although it does contain BH resources of CHVI (see Section 6.1).
	3. Displays a high degree of technical or scientific achievement	No	The study area does not display a high degree of technical or scientific achievement at all.
B. Historical or Associative Value	1. Has direct associations with a theme, event, belief, person, activity, organization or institution that is significant to a community	No	The study area as a whole does not have any direct associations with any of these elements that are significant to the community. Although the individual families responsible for the BH resources within the study area all contributed to the heritage fabric of the region, none of them stand out as being 'significant to the community'.
	2. Yields or has the potential to yield information that contributes to the understanding of a community or culture	No	The study area as a whole neither yields nor has the potential to yield information that contributes to the understanding of Euro-Canadian culture. Instead, its component parts (i.e. the smaller settlements) possess this potential.
	3. Demonstrates or reflects the work or ideas of an architect, builder, artist, designer or theorist who is significant to a community	No	The study area does not reflect the work or ideas of any significant member of the community, but instead was the product of decades of building by a variety of contributing members.
C. Contextual Value	1. Is important in defining, maintaining or supporting the character of an area	No	The study area does not define, maintain nor support the character of the area. It also does not embody any distinctive characteristics (i.e. settlement patterns or lifeways derived from a specific ethnic background) relating to the character of the area.
	2. Is physically, functionally, visually or historically linked to its surroundings	No	The study area is not linked to its surroundings in any of these ways, nor does it manifest a particularly close and/or long-standing relationship between its natural and domestic components.
	3. Is a landmark	No	The study area as a whole is not a landmark.

Based on the evaluation of the study area as a whole against the criteria set out in O. Reg. 9/06, it cannot be said to be a CHL of CHVI. It therefore does not warrant an impact evaluation as described in Subsection 23 (1) (a) (ii) of O. Reg. 359/09 (Service Ontario 2009b).

6.3.2.2 Brinston

As described in Section 5.3.2, Brinston is located at the junction of County Road 16 (Brinston Road) and County Road 18 (Henderson/Gilmour Road) and was an active community in the mid-1800s. At present, Brinston is a small community comprised of thirty to forty houses, a United Church (ca. 1905), a Memorial Park (ca. 1919) and a playing field.

Using the standardized checklist and additional perspectives/guidance discussed above, Brinston was evaluated against the criteria set out in O. Reg. 9/06 to determine whether it was a CHL of CHVI (Service Ontario 2006). The results of this evaluation appear in Table 10.

Table 10: Evaluation of Brinston as a CHL of CHVI
(adapted from McClelland, Keller, Keller and Melnick 1999; MCL 2006:3; Scheinman 2006)

Criteria	Description	Applicable to this CHL?	Comments
A. Design or Physical Value	1. Is a rare, unique, representative or early example of a style, type, expression, material or construction method	Yes	Brinston consists of several important BH resources that are either early examples or representative expressions of Euro-Canadian construction techniques. Heritage Resource Nos. 1, 2, 17, 18, 19, 20 and 22 and located within or near Brinston. Heritage Resource No. 23 (Spruce Haven Cemetery), although distant from Brinston, was also used by the community during the 19th and 20th centuries.
	2. Displays a high degree of craftsmanship or artistic value	No	Brinston as a whole does not display a high degree of craftsmanship or artistic value, although it does contain BH resources of CHVI (see Section 6.1).
	3. Displays a high degree of technical or scientific achievement	No	Brinston does not display a high degree of technical or scientific achievement.
B. Historical or Associative Value	1. Has direct associations with a theme, event, belief, person, activity, organization or institution that is significant to a community	Yes	Brinston is directly associated with the production of cheese in the mid-20th century, a historic event and theme that is significant to the community.
	2. Yields or has the potential to yield information that contributes to the understanding of a community or culture	Yes	Brinston definitely has the potential to yield information that contributes to the understanding of Euro-Canadian settlement in the area.

	3. Demonstrates or reflects the work or ideas of an architect, builder, artist, designer or theorist who is significant to a community	No	Brinston does not reflect the work or ideas of any significant member of the community, but instead was the product of decades of building by a variety of contributing members.
C. Contextual Value	1. Is important in defining, maintaining or supporting the character of an area	No	Brinston does not define, maintain or support the character of the Township of Matilda.
	2. Is physically, functionally, visually or historically linked to its surroundings	Yes	Brinston is both visually and historically linked to its surroundings.
	3. Is a landmark	Yes	Brinston can be considered an important landmark along County Road 16.

Based on the evaluation of Brinston against the criteria set out in O. Reg. 9/06, it can clearly be identified as a CHL of CHVI. Brinston possesses Physical or Design Value, Historical or Associative Value, and Contextual Value. As a CHL of CHVI, Brinston requires an impact evaluation as described in Subsection 23 (1) (a) (ii) of O. Reg. 359/09 (Service Ontario 2009b).

6.3.2.3 Dixon's Corners

As described in Section 5.3.3, Dixon's Corners is located at the junction of County Road 16 (Brinston Road) and Cook Road. Evidence of the hamlet's pioneering roots was evident in the Wesleyan Methodist cemetery to the south, which bears a date of AD 1825. At present, the hamlet is comprised of about ten to twenty houses, and it continues to function as a social hub for the surrounding rural community. It contains the Matilda Township Community Hall (ca. 1978) and a new Community Christian Reformed Church.

Using the standardized checklist and additional perspectives/guidance discussed above, Dixon's Corners was evaluated against the criteria set out in O. Reg. 9/06 to determine whether it was a CHL of CHVI (Service Ontario 2006). The results of this evaluation appear in Table 11.

Table 11: Evaluation of Dixon's Corners as a CHL of CHVI
(adapted from McClelland, Keller, Keller and Melnick 1999; MCL 2006:3; Scheinman 2006)

Criteria	Description	Applicable to this CHL?	Comments
A. Design or Physical Value	1. Is a rare, unique, representative or early example of a style, type, expression, material or construction method	No	Dixon's Corners does not consist of any identified BH resources that fall into these categories.

	2. Displays a high degree of craftsmanship or artistic value	No	Dixon's Corners as a whole does not display a high degree of craftsmanship or artistic value.
	3. Displays a high degree of technical or scientific achievement	No	Dixon's Corners does not display a high degree of technical or scientific achievement.
B. Historical or Associative Value	1. Has direct associations with a theme, event, belief, person, activity, organization or institution that is significant to a community	No	Dixon's Corners is not directly associated with any theme, event, belief, person, activity or institution that is significant to the community.
	2. Yields or has the potential to yield information that contributes to the understanding of a community or culture	Yes	Dixon's Corners definitely has the potential to yield information that contributes to the understanding of Euro-Canadian settlement in the area.
	3. Demonstrates or reflects the work or ideas of an architect, builder, artist, designer or theorist who is significant to a community	No	Dixon's Corners does not reflect the work or ideas of any significant member of the community, but instead was the product of decades of building by a variety of contributing members.
C. Contextual Value	1. Is important in defining, maintaining or supporting the character of an area	No	Dixon's Corners does not define, maintain or support the character of the Township of Matilda.
	2. Is physically, functionally, visually or historically linked to its surroundings	Yes	Dixon's Corners is both visually and historically linked to its surroundings.
	3. Is a landmark	Yes	Dixon's Corners can be considered an important landmark along County Road 16.

Based on the evaluation of Dixon's Corners against the criteria set out in O. Reg. 9/06, it can clearly be identified as a CHL of CHVI. Dixon's Corners possesses Historical or Associative Value and Contextual Value. As a CHL of CHVI, Dixon's Corners requires an impact evaluation as described in Subsection 23 (1) (a) (ii) of O. Reg. 359/09 (Service Ontario 2009b).

6.3.2.4 Hulbert

As described in Section 5.3.4, Hulbert is located at the junction of County Road 16 (Brinston Road) and Snowbird/Hulbert Roads. In the late 19th century, Hulbert was known to have been home to a tavern, hotel and Methodist church (ca. 1873). At present, this hamlet is comprised of only a few houses and a United Church (ca. 1980).

Using the standardized checklist and additional perspectives/guidance discussed above, Hulbert was evaluated against the criteria set out in O. Reg. 9/06 to determine whether it was a CHL of CHVI (Service Ontario 2006). The results of this evaluation appear in Table 12.

Table 12: Evaluation of Hulbert as a CHL of CHVI
(adapted from McClelland, Keller, Keller and Melnick 1999; MCL 2006:3; Scheinman 2006)

Criteria	Description	Applicable to this CHL?	Comments
A. Design or Physical Value	1. Is a rare, unique, representative or early example of a style, type, expression, material or construction method	Yes	Hulbert consists of two identified heritage resources that are early examples and representative expressions of Euro-Canadian construction techniques (Heritage Resource Nos. 3 and 4).
	2. Displays a high degree of craftsmanship or artistic value	No	Hulbert as a whole does not display a high degree of craftsmanship or artistic value.
	3. Displays a high degree of technical or scientific achievement	No	Hulbert does not display a high degree of technical or scientific achievement.
B. Historical or Associative Value	1. Has direct associations with a theme, event, belief, person, activity, organization or institution that is significant to a community	No	Hulbert is not directly associated with any theme, event, belief, person, activity or institution that is significant to the community.
	2. Yields or has the potential to yield information that contributes to the understanding of a community or culture	Yes	Hulbert definitely has the potential to yield information that contributes to the understanding of Euro-Canadian settlement in the area.
	3. Demonstrates or reflects the work or ideas of an architect, builder, artist, designer or theorist who is significant to a community	No	Hulbert does not reflect the work or ideas of any significant member of the community, but instead was the product of decades of building by a variety of contributing members.
C. Contextual Value	1. Is important in defining, maintaining or supporting the character of an area	No	Hulbert does not define, maintain or support the character of the Township of Matilda.
	2. Is physically, functionally, visually or historically linked to its surroundings	Yes	Hulbert is both visually and historically linked to its surroundings.
	3. Is a landmark	No	Hulbert is not a landmark.

Based on the evaluation of Hulbert against the criteria set out in O. Reg. 9/06, it can clearly be identified as a CHL of CHVI. Hulbert possesses Historical or Associative Value and Contextual Value. As a CHL of CHVI, Hulbert requires an impact evaluation as described in Subsection 23 (1) (a) (ii) of O. Reg. 359/09 (Service Ontario 2009b).

6.3.2.5 Summary of Heritage Attributes

Each of the identified CHLs possesses multiple heritage attributes. In general, heritage attributes can be understood as the "principal features, characteristics, context and appearance that contribute to the cultural heritage significance" of a given heritage resource (MMAH 2005:31). These heritage attributes are the key elements of each heritage resource, and accordingly must be articulated prior to the evaluation of potential project impacts. A summary of the heritage attributes of the identified CHLs appears in Table 13.

Table 13: Summary of Heritage Attributes of the Identified CHLs

Identified CHL	Heritage Attributes
Brinston	Consists of several important BH resources that are either early examples or representative expressions of Euro-Canadian construction techniques; is directly associated with the production of cheese in the mid-20th century, a historic event and theme that is significant to the community; has the potential to yield information that contributes to the understanding of Euro-Canadian settlement in the area; is both visually and historically linked to its surroundings; can be considered an important landmark along County Road 16
Dixon's Corners	Dixon's Corners definitely has the potential to yield information that contributes to the understanding of Euro-Canadian settlement in the area; Dixon's Corners is both visually and historically linked to its surroundings; Dixon's Corners can be considered an important landmark along County Road 16
Hulbert	Consists of two identified BH resources that are early examples and representative expressions of Euro-Canadian construction techniques; has the potential to yield information that contributes to the understanding of Euro-Canadian settlement in the area; is both visually and historically linked to its surroundings

6.4 Impact Evaluation of Identified Cultural Heritage Landscapes

According to Section 23 (Heritage Assessment) of O. Reg. 359/09, an impact evaluation must be applied to any heritage resources of CHVI that are identified at the project location (Service Ontario 2009b). These include both identified BH resources and identified CHLs. Of the four identified CHLs located within or adjacent to the study area, three meet these specific criteria: the settlements of Brinston, Dixon's Corners and Hulbert.

As discussed in Section 3.0, impacts can be classified as either direct or indirect impacts. Direct impacts include, but are not limited to, those that physically affect the heritage resources

themselves. These can be caused by the initial project staging, excavation/levelling operations, construction of access roads, preparation of turbine pads, installation of underground lines, maintenance and repairs over the life of the project, and the final decommissioning of the turbines. Indirect impacts include, but are not limited to, alterations that are not compatible with the historic fabric and appearance of the area, the creation of shadows that alter the appearance of an identified heritage attribute, the isolation of a heritage attribute from its surrounding environment, the obstruction of significant views and vistas, and other less-tangible impacts.

A key factor in this evaluation process is the distance between the proposed project infrastructure (e.g. wind turbines, access roads and underground cabling) and the identified heritage resources of CHVI. As stated previously, however, no *Standards and Guidelines* have yet been provided by the MTC to aid in the determination of minimal separation distances between design elements and heritage resources. Accordingly, all methodological attempts to make use of this quantitative data must rely primarily on subjective criteria and the opinion of qualified heritage professionals.

Through an analysis of the proximity (or lack therefore) of heritage resources to project infrastructure, the presence or absence of the major types of negative impacts outlined in *InfoSheet #5: Heritage Impact Assessments and Conservation Plans* (2006:3) can be determined. Should impacts be identified, recommendations to avoid, eliminate or mitigate each impact are required by Subsection 23 (1) (a) (ii) of O. Reg. 359/09. The proximity of each of the identified CHLs to proposed neighbouring project infrastructure appears in Table 14.

Table 14: Distances between Identified CHLs and the Nearest Proposed Turbine, Access Road, Underground Cable and Overhead Cable

CHL with CHVI	Distance to Nearest Turbine (km)	Distance to Nearest Access Road (km)	Distance to Nearest Underground Cable (km)	Distance to Nearest Overhead Cable (km)
Brinston	0.93	0.65	0.28	see below
Dixon's Corners	1.18	1.18	1.20	1.81
Hulbert	1.02	1.17	1.10	4.20

For Brinston, the nearest proposed turbine is 930 m away while the closest proposed access road and underground cable route are 650 m and 280 m away, respectively. The nearest overhead cable passes through Brinston, but it will use existing poles in this area (see Figure 3). For Dixon's Corners, the nearest proposed turbine is 1.18 km away while the closest proposed access road, underground cable route and overhead cable route are 1.18 km, 1.20 km, and 1.81 km away, respectively. For Hulbert, the nearest proposed turbine is 1.02 km away while the closest proposed access road, underground cable route and overhead cable route are 1.17 km, 1.10 km, and 4.20 km away, respectively.

As discussed in Section 3.0, the definitions of negative impacts presented in *InfoSheet #5: Heritage Impact Assessments and Conservation Plans* (MCL 2006:3) can be effectively adapted into criterion for identifying both direct and indirect impacts. The evaluation of impacts to identified CHLs within or adjacent to the study area is summarized in Table 15.

Table 15: Impact Evaluation of Identified CHLs on Participating Properties
(adapted from MCL 2006:3)

Type of Negative Impact	Applicable to Brinston, Dixon's Corners or Hulbert?	Comments
Destruction of any, or part of any, significant heritage attributes	No	There will be no destructions whatsoever of any of the heritage attributes of these CHLs (see Table 13).
Alteration that is not sympathetic, or is incompatible, with the historic fabric and appearance	No	The proposed infrastructure of the South Branch Wind Farm involves alterations that are compatible with the historic fabric and appearance of these CHLs. Although the addition of turbine towers, blades and nacelles will modify the appearance of the landscape, the lands surrounding Brinston, Dixon's Corners and Hulbert are already defined by visible infrastructure, with towering transmission towers and high tension wires traversing the area. The addition of temporary turbines will by no means negatively impact the identified CHLs.
Shadows created that alter the appearance of a heritage attribute or change the viability of a natural feature or plantings, such as a garden	No	No shadows will be cast near any of the heritage attributes of these CHLs. Access roads and underground cabling cast no shadows, and the turbines themselves are at least 930 m away (see Table 14).
Isolation of a heritage attribute from its surrounding environment, context or significant relationship	No	None of the heritage attributes outlined in Table 13 will be isolated from its surrounding environment, context or significant relationship.
Direct or indirect obstruction of significant views or vistas within, from, or of built and natural features	No	The proposed infrastructure of the South Branch Wind Farm will not result in the direct or indirect obstruction of any significant views or vistas within, from, or of built and natural features associated with these CHLs. As Table 13 demonstrates, significant view and vistas are not heritage attributes of any of the subject CHLs; rather, all are defined by intrinsic values (i.e. those rooted in their design, age, integrity, history, context, etc.). These values will continue to exist

		with or without the addition of the proposed infrastructure.
A change in land use such as rezoning a battlefield from open space to residential use, allowing new development or site alteration to fill in the formerly open spaces	No	No rezoning will occur in these areas of settlement, as they will continue to be residential in nature (surrounded by agricultural lands)
Land disturbances such as a change in grade that alters soils, and drainage patterns that adversely affect an archaeological resource.	No	These impacts have been addressed in a separate archaeological report (ARA 2011).

As Table 15 summarizes, none of the identified CHLs will be negatively impacted by the South Branch Wind Farm.

7.0 CONCLUSIONS AND RECOMMENDATIONS

The background research and field survey of the South Branch Wind Farm study area resulted in the identification of 30 potential Built Heritage (BH) resources (Potential Heritage Resource Nos. 1–30) and 4 potential Cultural Heritage Landscapes (CHLs). The potential heritage resources were tested against the criteria of O. Reg. 9/06 to determine whether they were of cultural heritage value or interest (CHVI). None of the identified heritage resources have been designated under the *Ontario Heritage Act*, nor have they been listed on a municipal register.

All identified BH resources and CHLs of CHVI were then evaluated for potential project impacts. The results of these evaluations can be summarized as follows:

- Six BH resources of CHVI were identified on participating project lands (Potential Heritage Resource Nos. 13, 16, 22, 25, 26 & 30). All proposed turbine locations were located at least 430 m away from any of these resources. The minimum distances between each resource and the closest access road, underground cable route and overhead cable route were 310 m, 70 m and 190 m, respectively. After the project impact analysis, no direct or indirect impacts were identified that would negatively affect these heritage resources.
- Thirteen BH resources of CHVI were identified on lands abutting properties where turbines and associated project infrastructure are proposed (Potential Heritage Resource Nos. 1, 2, 4, 5, 6, 14, 15, 17, 19, 20, 24, 28 & 29). All proposed turbine locations were located at least 620 m away from any of these resources. The minimum distances between each resource and the closest access road, underground cable route and overhead cable route were 60 m, 60 m and 30 m, respectively. After the project impact analysis, no direct or indirect impacts were identified that would negatively affect these heritage resources.
- Of the four potential CHLs, three were found to be CHLs of CHVI (Brinston, Dixon's Corners and Hulbert). For Brinston, the nearest proposed turbine is 930 m away while the closest proposed access road and underground cable route are 650 m and 280 m away,

respectively. The nearest overhead cable passes through Brinston, but it will use existing poles in this area (see Figure 3). For Dixon's Corners, the nearest proposed turbine is 1.18 km away while the closest proposed access road, underground cable route and overhead cable route are 1.18 km, 1.20 km, and 1.81 km away, respectively. For Hulbert, the nearest proposed turbine is 1.02 km away while the closest proposed access road, underground cable route and overhead cable route are 1.17 km, 1.10 km, and 4.20 km away, respectively. After the project impact analysis, no direct or indirect impacts were identified that would negatively affect these heritage resources.

Taken as a whole, the number and significance of the heritage resources considered in this assessment demonstrates the marked richness of the vicinity of the study area. The proposed locality of the South Branch Wind Farm includes tangible and readily-visible heritage resources of CHVI that evoke nearly every important era since European settlement began in the region. As the impact evaluations in Sections 6.2 and 6.4 have demonstrated, the project will not result in any detrimental impacts to the heritage attributes and CHVI of these heritage resources.

As with all wind projects in relatively flat physiographic regions, the appearance of the surrounding landscape will be altered, on an interim basis, as a result of the erection of turbine towers, blades and nacelles. However, it must be articulated clearly that *these do not constitute impacts to the essential heritage values of the identified BH resources and CHLs*. The landscape of the study area is already defined by highly visible transmission towers and high tension wires. Accordingly, it is the professional opinion of Archaeological Research Associates Ltd. that the heritage attributes of the identified resources will not be negatively affected by the addition of project infrastructure.

Given that this study has 1) considered all potential BH resources and CHLs at the project location; 2) has identified BH resources and CHLs of CHVI based on the criteria in O. Reg. 9/06 (Service Ontario 2006); 3) has evaluated all potential direct and indirect impacts to these identified heritage resources; and 4) has found that the project will not negatively impact any of these identified heritage resources, ARA recommends that the South Branch Wind Farm be released from further heritage concerns.

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APPENDIX: SOUTH BRANCH WIND FARM POTENTIAL BUILT HERITAGE RESOURCE INVENTORY

Potential Heritage Resource No. 1

Identification of Resource

Property Name	n/a
Street Address	10991 Gilmour Road
Recognition (e.g. Designated or Listed)	No recognition
Community	n/a
Municipality	Matilda Twp
Regional Municipality	United Counties of Stormont, Dundas & Glengarry Geographic County of Dundas
Construction Date	Ca. 1870
Building Type	Residence
Cultural Heritage Value	Example of Ontario Gothic style
Heritage Impact of Wind Farm	No impact
Photo	 Photo: Aug 30, 2010

Evaluation of Cultural Heritage Value

Criteria	No.	Description	√	Cultural Heritage Value
A. Design or Physical Value	1	Is a rare, unique, representative or early example of a style, type, expression, material or construction method	√	An example of the Ontario Gothic style
	2	Displays a high degree of craftsmanship or artistic value		
	3	Displays a high degree of technical or scientific achievement		
B. Historical or Associative Value	1	Has direct associations with a theme, event, belief person, activity, organization or institution that is significant to a community	√	Possibly residence of Thomas Brinston indicated in *Historical Atlas* 1879
	2	Yields or has the potential to yield information that contributes to the understanding of a community or culture		
	3	Demonstrates or reflects the work or ideas of an architect, builder, artist, designer or theorist who is significant to a community		
C. Contextual Value	1	Is important in defining, maintaining or supporting the character of an area		
	2	Is physically, functionally, visually or historically linked to its surroundings		
	3	Is a landmark		

Potential Heritage Resource No. 2

Identification of Resource

Property Name	n/a
Street Address	10969 Gilmour Road
Recognition (e.g. Designated or Listed)	No recognition
Community	n/a
Municipality	Matilda Twp
Regional Municipality	United Counties of Stormont, Dundas & Glengarry Geographic County of Dundas
Construction Date	ca. 1880
Building Type	Farm complex
Cultural Heritage Value	Italianate farmhouse
Heritage Impact of Wind Farm	No impact
Photo	 Photo: Aug 30, 2010

Evaluation of Cultural Heritage Value

Criteria	No.	Description	√	Cultural Heritage Value
A. Design or Physical Value	1	Is a rare, unique, representative or early example of a style, type, expression, material or construction method	√	An example of an Italianate farmhouse
	2	Displays a high degree of craftsmanship or artistic value		
	3	Displays a high degree of technical or scientific achievement		
B. Historical or Associative Value	1	Has direct associations with a theme, event, belief person, activity, organization or institution that is significant to a community		
	2	Yields or has the potential to yield information that contributes to the understanding of a community or culture		
	3	Demonstrates or reflects the work or ideas of an architect, builder, artist, designer or theorist who is significant to a community		
C. Contextual Value	1	Is important in defining, maintaining or supporting the character of an area		
	2	Is physically, functionally, visually or historically linked to its surroundings		
	3	Is a landmark		

Potential Heritage Resource No. 3

Identification of Resource

Property Name	Hulbert Valley United Church
Street Address	11064 Hulbert Road
Recognition (e.g. Designated or Listed)	No recognition
Community	Hamlet of Hulbert
Municipality	Matilda Twp
Regional Municipality	United Counties of Stormont, Dundas & Glengarry Geographic County of Dundas
Construction Date	1980
Building Type	Church
Cultural Heritage Value	Associated with Methodist church of Hulbert since 1873
Heritage Impact of Wind Farm	No impact
Photo	 Photo: Aug 30, 2010

Evaluation of Cultural Heritage Value

Criteria	No.	Description	√	Cultural Heritage Value
A. Design or Physical Value	1	Is a rare, unique, representative or early example of a style, type, expression, material or construction method		
	2	Displays a high degree of craftsmanship or artistic value		
	3	Displays a high degree of technical or scientific achievement		
B. Historical or Associative Value	1	Has direct associations with a theme, event, belief person, activity, organization or institution that is significant to a community	√	Associated with Methodist community of Hulbert since 1873
	2	Yields or has the potential to yield information that contributes to the understanding of a community or culture		
	3	Demonstrates or reflects the work or ideas of an architect, builder, artist, designer or theorist who is significant to a community		
C. Contextual Value	1	Is important in defining, maintaining or supporting the character of an area	√	Associated with the Hamlet of Hulbert
	2	Is physically, functionally, visually or historically linked to its surroundings		
	3	Is a landmark		

Potential Heritage Resource No. 4

Identification of Resource

Property Name	n/a
Street Address	3775 Brinston Road
Recognition (e.g. Designated or Listed)	No recognition
Community	Hamlet of Hulbert
Municipality	Matilda Twp
Regional Municipality	United Counties of Stormont, Dundas & Glengarry Geographic County of Dundas
Construction Date	Unknown
Building Type	Residence
Cultural Heritage Value	Example of Dutch Colonial style
Heritage Impact of Wind Farm	No impact
Photo	 Photo: Aug 30, 2010

Evaluation of Cultural Heritage Value

Criteria	No.	Description	√	Cultural Heritage Value
A. Design or Physical Value	1	Is a rare, unique, representative or early example of a style, type, expression, material or construction method	√	Example of Dutch Colonial style residence
	2	Displays a high degree of craftsmanship or artistic value		
	3	Displays a high degree of technical or scientific achievement		
B. Historical or Associative Value	1	Has direct associations with a theme, event, belief person, activity, organization or institution that is significant to a community	√	Located on site of former schoolhouse indicated on *Historical Atlas* 1879
	2	Yields or has the potential to yield information that contributes to the understanding of a community or culture		
	3	Demonstrates or reflects the work or ideas of an architect, builder, artist, designer or theorist who is significant to a community		
C. Contextual Value	1	Is important in defining, maintaining or supporting the character of an area	√	Associated with the Hamlet of Hulbert
	2	Is physically, functionally, visually or historically linked to its surroundings		
	3	Is a landmark		

Potential Heritage Resource No. 5

Identification of Resource

Property Name	n/a
Street Address	3513 Brinston Road
Recognition (e.g. Designated or Listed)	No recognition
Community	Hamlet of Hulbert
Municipality	Matilda Twp
Regional Municipality	United Counties of Stormont, Dundas & Glengarry Geographic County of Dundas
Construction Date	ca. 1860
Building Type	Residence
Cultural Heritage Value	Ontario vernacular style
Heritage Impact of Wind Farm	No impact
Photo	 Photo: Aug 30, 2010

Evaluation of Cultural Heritage Value

Criteria	No.	Description	√	Cultural Heritage Value
A. Design or Physical Value	1	Is a rare, unique, representative or early example of a style, type, expression, material or construction method	√	Example of Ontario vernacular style
	2	Displays a high degree of craftsmanship or artistic value		
	3	Displays a high degree of technical or scientific achievement		
B. Historical or Associative Value	1	Has direct associations with a theme, event, belief person, activity, organization or institution that is significant to a community	√	Possibly residence of R. Watt indicated in *Historical Atlas* 1879
	2	Yields or has the potential to yield information that contributes to the understanding of a community or culture		
	3	Demonstrates or reflects the work or ideas of an architect, builder, artist, designer or theorist who is significant to a community		
C. Contextual Value	1	Is important in defining, maintaining or supporting the character of an area	√	Associated with the Hamlet of Hulbert
	2	Is physically, functionally, visually or historically linked to its surroundings		
	3	Is a landmark		

Potential Heritage Resource No. 6

Identification of Resource

Property Name	n/a
Street Address	3489 Brinston Road
Recognition (e.g. Designated or Listed)	No recognition
Community	Hamlet of Hulbert
Municipality	Matilda Twp
Regional Municipality	United Counties of Stormont, Dundas & Glengarry Geographic County of Dundas
Construction Date	Pre-1900
Building Type	Residence
Cultural Heritage Value	Vernacular style farmhouse
Heritage Impact of Wind Farm	No impact
Photo	 Photo: Aug 30, 2010

Evaluation of Cultural Heritage Value

Criteria	No.	Description	√	Cultural Heritage Value
A. Design or Physical Value	1	Is a rare, unique, representative or early example of a style, type, expression, material or construction method		
	2	Displays a high degree of craftsmanship or artistic value		
	3	Displays a high degree of technical or scientific achievement		
B. Historical or Associative Value	1	Has direct associations with a theme, event, belief person, activity, organization or institution that is significant to a community		
	2	Yields or has the potential to yield information that contributes to the understanding of a community or culture		
	3	Demonstrates or reflects the work or ideas of an architect, builder, artist, designer or theorist who is significant to a community		
C. Contextual Value	1	Is important in defining, maintaining or supporting the character of an area	√	Associated with the Hamlet of Hulbert
	2	Is physically, functionally, visually or historically linked to its surroundings		
	3	Is a landmark		

Potential Heritage Resource No. 7

Identification of Resource

Property Name	n/a
Street Address	3477 Brinston Road
Recognition (e.g. Designated or Listed)	No recognition
Community	Hamlet of Hulbert
Municipality	Matilda Twp
Regional Municipality	United Counties of Stormont, Dundas & Glengarry Geographic County of Dundas
Construction Date	ca. 1860
Building Type	Residence
Cultural Heritage Value	Modified Ontario Gothic style
Heritage Impact of Wind Farm	No impact
Photo	 Photo: Aug 30, 2010

Evaluation of Cultural Heritage Value

Criteria	No.	Description	√	Cultural Heritage Value
A. Design or Physical Value	1	Is a rare, unique, representative or early example of a style, type, expression, material or construction method	√	Ontario Gothic style residence
	2	Displays a high degree of craftsmanship or artistic value		
	3	Displays a high degree of technical or scientific achievement		
B. Historical or Associative Value	1	Has direct associations with a theme, event, belief person, activity, organization or institution that is significant to a community		
	2	Yields or has the potential to yield information that contributes to the understanding of a community or culture		
	3	Demonstrates or reflects the work or ideas of an architect, builder, artist, designer or theorist who is significant to a community		
C. Contextual Value	1	Is important in defining, maintaining or supporting the character of an area	√	Associated with the Hamlet of Hulbert
	2	Is physically, functionally, visually or historically linked to its surroundings		
	3	Is a landmark		

Potential Heritage Resource No. 8

Identification of Resource

Property Name	n/a
Street Address	11120 Snowbird Road
Recognition (e.g. Designated or Listed)	No recognition
Community	n/a
Municipality	Matilda Twp
Regional Municipality	United Counties of Stormont, Dundas & Glengarry Geographic County of Dundas
Construction Date	Farmhouse- 19th century; Barn-late 19th to early 20th century
Building Type	Farm Complex
Cultural Heritage Value	Example of neoclassical style farmhouse and vertical board barns
Heritage Impact of Wind Farm	No impact
Photo	 Photo: Aug 30, 2010

Evaluation of Cultural Heritage Value

Criteria	No.	Description	√	Cultural Heritage Value
A. Design or Physical Value	1	Is a rare, unique, representative or early example of a style, type, expression, material or construction method	√	Example of neoclassical style farmhouse and vertical board barns
	2	Displays a high degree of craftsmanship or artistic value		
	3	Displays a high degree of technical or scientific achievement		
B. Historical or Associative Value	1	Has direct associations with a theme, event, belief person, activity, organization or institution that is significant to a community	√	Possibly residence of D. A. McEwen indicated in *Historical Atlas* 1879
	2	Yields or has the potential to yield information that contributes to the understanding of a community or culture		
	3	Demonstrates or reflects the work or ideas of an architect, builder, artist, designer or theorist who is significant to a community		
C. Contextual Value	1	Is important in defining, maintaining or supporting the character of an area		
	2	Is physically, functionally, visually or historically linked to its surroundings		
	3	Is a landmark		

Potential Heritage Resource No. 9

Identification of Resource

Property Name	n/a
Street Address	Henderson Road (west of Coons Road)
Recognition (e.g. Designated or Listed)	n/a
Community	n/a
Municipality	Matilda Twp
Regional Municipality	United Counties of Stormont, Dundas & Glengarry Geographic County of Dundas
Construction Date	1883
Building Type	Residence (former farmhouse)
Cultural Heritage Value	Excellent example of Ontario Gothic style farmhouse
Heritage Impact of Wind Farm	No impact
Photo	 Photo: Aug 30, 2010

Evaluation of Cultural Heritage Value

Criteria	No.	Description	√	Cultural Heritage Value
A. Design or Physical Value	1	Is a rare, unique, representative or early example of a style, type, expression, material or construction method	√	Excellent example of Ontario Gothic style farmhouse; -Date stone "A.D. 1883"
	2	Displays a high degree of craftsmanship or artistic value		
	3	Displays a high degree of technical or scientific achievement		
B. Historical or Associative Value	1	Has direct associations with a theme, event, belief person, activity, organization or institution that is significant to a community	√	Possibly built by member of Coons family
	2	Yields or has the potential to yield information that contributes to the understanding of a community or culture		
	3	Demonstrates or reflects the work or ideas of an architect, builder, artist, designer or theorist who is significant to a community		
C. Contextual Value	1	Is important in defining, maintaining or supporting the character of an area		
	2	Is physically, functionally, visually or historically linked to its surroundings		
	3	Is a landmark		

Potential Heritage Resource No. 10

Identification of Resource

Property Name	n/a
Street Address	11391 Henderson Road
Recognition (e.g. Designated or Listed)	No recognition
Community	n/a
Municipality	Matilda Twp
Regional Municipality	United Counties of Stormont, Dundas & Glengarry Geographic County of Dundas
Construction Date	ca. 1930 or later
Building Type	Farm Complex
Cultural Heritage Value	None
Heritage Impact of Wind Farm	N/A
Photo	 Photo: Aug 30, 2010

Evaluation of Cultural Heritage Value

Criteria	No.	Description	√	Cultural Heritage Value
A. Design or Physical Value	1	Is a rare, unique, representative or early example of a style, type, expression, material or construction method		
	2	Displays a high degree of craftsmanship or artistic value		
	3	Displays a high degree of technical or scientific achievement		
B. Historical or Associative Value	1	Has direct associations with a theme, event, belief person, activity, organization or institution that is significant to a community		
	2	Yields or has the potential to yield information that contributes to the understanding of a community or culture		
	3	Demonstrates or reflects the work or ideas of an architect, builder, artist, designer or theorist who is significant to a community		
C. Contextual Value	1	Is important in defining, maintaining or supporting the character of an area		
	2	Is physically, functionally, visually or historically linked to its surroundings		
	3	Is a landmark		

Potential Heritage Resource No. 11

Identification of Resource

Property Name	n/a
Street Address	11376 Willow Road
Recognition (e.g. Designated or Listed)	No recognition
Community	n/a
Municipality	Matilda Twp
Regional Municipality	United Counties of Stormont, Dundas & Glengarry Geographic County of Dundas
Construction Date	Unknown
Building Type	Residence
Cultural Heritage Value	Possibly former schoolhouse indicated in *Historical Atlas* (1879)
Heritage Impact of Wind Farm	No impact
Photo	 Photo: Aug 30, 2010

Evaluation of Cultural Heritage Value

Criteria	No.	Description	√	Cultural Heritage Value
A. Design or Physical Value	1	Is a rare, unique, representative or early example of a style, type, expression, material or construction method		
	2	Displays a high degree of craftsmanship or artistic value		
	3	Displays a high degree of technical or scientific achievement		
B. Historical or Associative Value	1	Has direct associations with a theme, event, belief person, activity, organization or institution that is significant to a community	√	Possibly former schoolhouse indicated in *Historical Atlas* (1879)
	2	Yields or has the potential to yield information that contributes to the understanding of a community or culture		
	3	Demonstrates or reflects the work or ideas of an architect, builder, artist, designer or theorist who is significant to a community		
C. Contextual Value	1	Is important in defining, maintaining or supporting the character of an area		
	2	Is physically, functionally, visually or historically linked to its surroundings		
	3	Is a landmark		

Potential Heritage Resource No. 12

Identification of Resource

Property Name	n/a
Street Address	11347 Willow Road
Recognition (e.g. Designated or Listed)	No recognition
Community	n/a
Municipality	Matilda Twp
Regional Municipality	United Counties of Stormont, Dundas & Glengarry Geographic County of Dundas
Construction Date	Unknown
Building Type	Residence
Cultural Heritage Value	Possibly the structure illustrated in the *Historical Atlas* (1879)
Heritage Impact of Wind Farm	No impact
Photo	 Photo: Aug 30, 2010

Evaluation of Cultural Heritage Value

Criteria	No.	Description	√	Cultural Heritage Value
A. Design or Physical Value	1	Is a rare, unique, representative or early example of a style, type, expression, material or construction method		
	2	Displays a high degree of craftsmanship or artistic value		
	3	Displays a high degree of technical or scientific achievement		
B. Historical or Associative Value	1	Has direct associations with a theme, event, belief person, activity, organization or institution that is significant to a community	√	Possibly the structure illustrated in the *Historical Atlas* (1879), belonging to M. Houlahan
	2	Yields or has the potential to yield information that contributes to the understanding of a community or culture		
	3	Demonstrates or reflects the work or ideas of an architect, builder, artist, designer or theorist who is significant to a community		
C. Contextual Value	1	Is important in defining, maintaining or supporting the character of an area		
	2	Is physically, functionally, visually or historically linked to its surroundings		
	3	Is a landmark		

Potential Heritage Resource No. 13

Identification of Resource

Property Name	n/a
Street Address	11341 Henderson Road
Recognition (e.g. Designated or Listed)	No recognition
Community	n/a
Municipality	Matilda Twp
Regional Municipality	United Counties of Stormont, Dundas & Glengarry Geographic County of Dundas
Construction Date	Farmhouse-ca. 1880; farm buildings modern construction
Building Type	Farm Complex
Cultural Heritage Value	Italianate style farmhouse
Heritage Impact of Wind Farm	No impact
Photo	 Photo: Aug 30, 2010

Evaluation of Cultural Heritage Value

Criteria	No.	Description	√	Cultural Heritage Value
A. Design or Physical Value	1	Is a rare, unique, representative or early example of a style, type, expression, material or construction method	√	Good example of Italianate style farmhouse
	2	Displays a high degree of craftsmanship or artistic value		
	3	Displays a high degree of technical or scientific achievement		
B. Historical or Associative Value	1	Has direct associations with a theme, event, belief person, activity, organization or institution that is significant to a community		
	2	Yields or has the potential to yield information that contributes to the understanding of a community or culture		
	3	Demonstrates or reflects the work or ideas of an architect, builder, artist, designer or theorist who is significant to a community		
C. Contextual Value	1	Is important in defining, maintaining or supporting the character of an area		
	2	Is physically, functionally, visually or historically linked to its surroundings		
	3	Is a landmark		

Potential Heritage Resource No. 14

Identification of Resource

Property Name	n/a
Street Address	11272 Henderson Road
Recognition (e.g. Designated or Listed)	No recognition
Community	n/a
Municipality	Matilda Twp
Regional Municipality	United Counties of Stormont, Dundas & Glengarry Geographic County of Dundas
Construction Date	ca. 1850 or earlier
Building Type	Residence (former farmhouse)
Cultural Heritage Value	Excellent example of stone Ontario vernacular style farmhouse
Heritage Impact of Wind Farm	No impact
Photo	 Photo: Aug 30, 2010

Evaluation of Cultural Heritage Value

Criteria	No.	Description	√	Cultural Heritage Value
A. Design or Physical Value	1	Is a rare, unique, representative or early example of a style, type, expression, material or construction method	√	-Excellent example of stone vernacular style farmhouse -one of few stone farmhouses in area -original fret work intact on side porch
	2	Displays a high degree of craftsmanship or artistic value		
	3	Displays a high degree of technical or scientific achievement		
B. Historical or Associative Value	1	Has direct associations with a theme, event, belief person, activity, organization or institution that is significant to a community	√	Possibly residence of Jas. Strader indicated in *Historical Atlas* 1879
	2	Yields or has the potential to yield information that contributes to the understanding of a community or culture		
	3	Demonstrates or reflects the work or ideas of an architect, builder, artist, designer or theorist who is significant to a community		
C. Contextual Value	1	Is important in defining, maintaining or supporting the character of an area		
	2	Is physically, functionally, visually or historically linked to its surroundings		
	3	Is a landmark		

Potential Heritage Resource No. 15

Identification of Resource

Property Name	n/a
Street Address	11251 Henderson Road
Recognition (e.g. Designated or Listed)	No recognition
Community	n/a
Municipality	Matilda Twp
Regional Municipality	United Counties of Stormont, Dundas & Glengarry Geographic County of Dundas
Construction Date	Farmhouse-ca. 1860 or earlier; barns ca 1900
Building Type	Farm Complex
Cultural Heritage Value	Ontario cottage style farmhouse and vertical board barns
Heritage Impact of Wind Farm	No impact
Photo	 Photo: Aug 30, 2010

Evaluation of Cultural Heritage Value

Criteria	No.	Description	√	Cultural Heritage Value
A. Design or Physical Value	1	Is a rare, unique, representative or early example of a style, type, expression, material or construction method	√	- Only example of 19th c intact farmstead (i.e. farmhouse & vertical board barns of similar time period)
	2	Displays a high degree of craftsmanship or artistic value		
	3	Displays a high degree of technical or scientific achievement		
B. Historical or Associative Value	1	Has direct associations with a theme, event, belief person, activity, organization or institution that is significant to a community	√	Possibly residence and farm of Alex Locke indicated in *Historical Atlas* 1879
	2	Yields or has the potential to yield information that contributes to the understanding of a community or culture		
	3	Demonstrates or reflects the work or ideas of an architect, builder, artist, designer or theorist who is significant to a community		
C. Contextual Value	1	Is important in defining, maintaining or supporting the character of an area		
	2	Is physically, functionally, visually or historically linked to its surroundings		
	3	Is a landmark		

Potential Heritage Resource No. 16

Identification of Resource

Property Name	n/a
Street Address	11205 Henderson Road
Recognition (e.g. Designated or Listed)	No recognition
Community	n/a
Municipality	Matilda Twp
Regional Municipality	United Counties of Stormont, Dundas & Glengarry Geographic County of Dundas
Construction Date	ca. 1860 or earlier
Building Type	Farm Complex
Cultural Heritage Value	Good example of stone Ontario cottage style
Heritage Impact of Wind Farm	No impact
Photo	 Photo: Aug 30, 2010

Evaluation of Cultural Heritage Value

Criteria	No.	Description	√	Cultural Heritage Value
A. Design or Physical Value	1	Is a rare, unique, representative or early example of a style, type, expression, material or construction method	√	-Good example of Ontario cottage style farmhouse -one of few stone farmhouses in area
	2	Displays a high degree of craftsmanship or artistic value		
	3	Displays a high degree of technical or scientific achievement		
B. Historical or Associative Value	1	Has direct associations with a theme, event, belief person, activity, organization or institution that is significant to a community	√	Possible residence and farm of Daniel Driscoll indicate in *Historical Atlas* 1879
	2	Yields or has the potential to yield information that contributes to the understanding of a community or culture		
	3	Demonstrates or reflects the work or ideas of an architect, builder, artist, designer or theorist who is significant to a community		
C. Contextual Value	1	Is important in defining, maintaining or supporting the character of an area		
	2	Is physically, functionally, visually or historically linked to its surroundings		
	3	Is a landmark		

Potential Heritage Resource No. 17

Identification of Resource

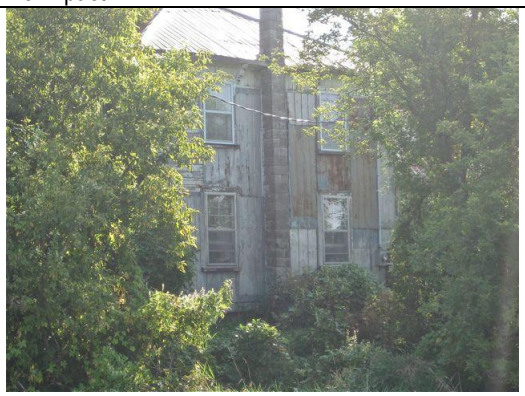
Property Name	n/a
Street Address	11165 Henderson Road
Recognition (e.g. Designated or Listed)	No recognition
Community	Brinston
Municipality	Matilda Twp
Regional Municipality	United Counties of Stormont, Dundas & Glengarry Geographic County of Dundas
Construction Date	ca. 1870
Building Type	Residence (former farmhouse)
Cultural Heritage Value	Ontario vernacular style farmhouse
Heritage Impact of Wind Farm	No impact
Photo	 Photo: Aug 30, 2010

Evaluation of Cultural Heritage Value

Criteria	No.	Description	√	Cultural Heritage Value
A. Design or Physical Value	1	Is a rare, unique, representative or early example of a style, type, expression, material or construction method	√	-Example of Ontario vernacular style farmhouse; -original window sash
	2	Displays a high degree of craftsmanship or artistic value		
	3	Displays a high degree of technical or scientific achievement		
B. Historical or Associative Value	1	Has direct associations with a theme, event, belief person, activity, organization or institution that is significant to a community	√	Possibly residence of Jno. Payne indicated in *Historical Atlas* 1879
	2	Yields or has the potential to yield information that contributes to the understanding of a community or culture		
	3	Demonstrates or reflects the work or ideas of an architect, builder, artist, designer or theorist who is significant to a community		
C. Contextual Value	1	Is important in defining, maintaining or supporting the character of an area		
	2	Is physically, functionally, visually or historically linked to its surroundings		
	3	Is a landmark		

Potential Heritage Resource No. 18

Identification of Resource

Property Name	n/a
Street Address	11136 Henderson Road
Recognition (e.g. Designated or Listed)	No recognition
Community	n/a
Municipality	Matilda Twp
Regional Municipality	United Counties of Stormont, Dundas & Glengarry Geographic County of Dundas
Construction Date	ca. 1880
Building Type	Residence (former farmhouse)
Cultural Heritage Value	Italianate farmhouse
Heritage Impact of Wind Farm	No impact
Photo	 Photo: Aug 30, 2010

Evaluation of Cultural Heritage Value

Criteria	No.	Description	√	Cultural Heritage Value
A. Design or Physical Value	1	Is a rare, unique, representative or early example of a style, type, expression, material or construction method	√	An example of an Italianate farmhouse
	2	Displays a high degree of craftsmanship or artistic value		
	3	Displays a high degree of technical or scientific achievement		
B. Historical or Associative Value	1	Has direct associations with a theme, event, belief person, activity, organization or institution that is significant to a community		
	2	Yields or has the potential to yield information that contributes to the understanding of a community or culture		
	3	Demonstrates or reflects the work or ideas of an architect, builder, artist, designer or theorist who is significant to a community		
C. Contextual Value	1	Is important in defining, maintaining or supporting the character of an area		
	2	Is physically, functionally, visually or historically linked to its surroundings		
	3	Is a landmark		

Potential Heritage Resource No. 19

Identification of Resource

Property Name	n/a
Street Address	11113 Henderson Road
Recognition (e.g. Designated or Listed)	No recognition
Community	Brinston
Municipality	Matilda Twp
Regional Municipality	United Counties of Stormont, Dundas & Glengarry Geographic County of Dundas
Construction Date	ca. 1830 (per. comm. with owner)
Building Type	Residence (former farmhouse)
Cultural Heritage Value	Early vernacular style
Heritage Impact of Wind Farm	No impact
Photo	 Photo: Aug 30, 2010

Evaluation of Cultural Heritage Value

Criteria	No.	Description	√	Cultural Heritage Value
A. Design or Physical Value	1	Is a rare, unique, representative or early example of a style, type, expression, material or construction method	√	-Example of early vernacular style; -"brick nogging" construction (i.e. timber framing in-filled with brick) (per. com. with owner)
	2	Displays a high degree of craftsmanship or artistic value		
	3	Displays a high degree of technical or scientific achievement		
B. Historical or Associative Value	1	Has direct associations with a theme, event, belief person, activity, organization or institution that is significant to a community	√	Possibly residence of D. Barringer indicated in *Historical Atlas* 1879.
	2	Yields or has the potential to yield information that contributes to the understanding of a community or culture		
	3	Demonstrates or reflects the work or ideas of an architect, builder, artist, designer or theorist who is significant to a community		
C. Contextual Value	1	Is important in defining, maintaining or supporting the character of an area		
	2	Is physically, functionally, visually or historically linked to its surroundings		
	3	Is a landmark		

Potential Heritage Resource No. 20

Identification of Resource

Property Name	n/a
Street Address	11107 Henderson Road
Recognition (e.g. Designated or Listed)	No recognition
Community	Brinston
Municipality	Matilda Twp
Regional Municipality	United Counties of Stormont, Dundas & Glengarry Geographic County of Dundas
Construction Date	ca. 1880
Building Type	Residence
Cultural Heritage Value	Italianate style residence
Heritage Impact of Wind Farm	No impact
Photo	 Photo: Aug 30, 2010

Evaluation of Cultural Heritage Value

Criteria	No.	Description	√	Cultural Heritage Value
A. Design or Physical Value	1	Is a rare, unique, representative or early example of a style, type, expression, material or construction method	√	Example of Italianate style
	2	Displays a high degree of craftsmanship or artistic value		
	3	Displays a high degree of technical or scientific achievement		
B. Historical or Associative Value	1	Has direct associations with a theme, event, belief person, activity, organization or institution that is significant to a community		
	2	Yields or has the potential to yield information that contributes to the understanding of a community or culture		
	3	Demonstrates or reflects the work or ideas of an architect, builder, artist, designer or theorist who is significant to a community		
C. Contextual Value	1	Is important in defining, maintaining or supporting the character of an area		
	2	Is physically, functionally, visually or historically linked to its surroundings		
	3	Is a landmark		

Potential Heritage Resource No. 21

Identification of Resource

Property Name	n/a
Street Address	11104 Henderson Road
Recognition (e.g. Designated or Listed)	No recognition
Community	n/a
Municipality	Matilda Twp
Regional Municipality	United Counties of Stormont, Dundas & Glengarry Geographic County of Dundas
Construction Date	ca. 1960 or later
Building Type	Farm Complex
Cultural Heritage Value	None
Heritage Impact of Wind Farm	N/A
Photo	 Photo: Aug 30, 2010

Evaluation of Cultural Heritage Value

Criteria	No.	Description	√	Cultural Heritage Value
A. Design or Physical Value	1	Is a rare, unique, representative or early example of a style, type, expression, material or construction method		
	2	Displays a high degree of craftsmanship or artistic value		
	3	Displays a high degree of technical or scientific achievement		
B. Historical or Associative Value	1	Has direct associations with a theme, event, belief person, activity, organization or institution that is significant to a community		
	2	Yields or has the potential to yield information that contributes to the understanding of a community or culture		
	3	Demonstrates or reflects the work or ideas of an architect, builder, artist, designer or theorist who is significant to a community		
C. Contextual Value	1	Is important in defining, maintaining or supporting the character of an area		
	2	Is physically, functionally, visually or historically linked to its surroundings		
	3	Is a landmark		

Potential Heritage Resource No. 22

Identification of Resource

Property Name	n/a
Street Address	11091 Henderson Road
Recognition (e.g. Designated or Listed)	No recognition
Community	n/a
Municipality	Matilda Twp
Regional Municipality	United Counties of Stormont, Dundas & Glengarry Geographic County of Dundas
Construction Date	Farmhouse ca. 1850 or earlier; farm buildings – modern construction
Building Type	Farm Complex
Cultural Heritage Value	Neoclassical farmhouse
Heritage Impact of Wind Farm	No impact
Photo	 Photo: Aug 30, 2010

Evaluation of Cultural Heritage Value

Criteria	No.	Description	√	Cultural Heritage Value
A. Design or Physical Value	1	Is a rare, unique, representative or early example of a style, type, expression, material or construction method	√	Example of neoclassical farmhouse
	2	Displays a high degree of craftsmanship or artistic value		
	3	Displays a high degree of technical or scientific achievement		
B. Historical or Associative Value	1	Has direct associations with a theme, event, belief person, activity, organization or institution that is significant to a community		
	2	Yields or has the potential to yield information that contributes to the understanding of a community or culture		
	3	Demonstrates or reflects the work or ideas of an architect, builder, artist, designer or theorist who is significant to a community		
C. Contextual Value	1	Is important in defining, maintaining or supporting the character of an area		
	2	Is physically, functionally, visually or historically linked to its surroundings		
	3	Is a landmark		

Potential Heritage Resource No. 23

Identification of Resource

Property Name	Spruce Haven Cemetery
Street Address	Bell Road
Recognition (e.g. Designated or Listed)	n/a
Community	Brinston
Municipality	Matilda Twp
Regional Municipality	United Counties of Stormont, Dundas & Glengarry Geographic County of Dundas
Construction Date	n/a
Building Type	Cemetery
Cultural Heritage Value	Cemetery still in use, associated with Brinston
Heritage Impact of Wind Farm	No impact
Photo	 Photo: Aug 30, 2010

Evaluation of Cultural Heritage Value

Criteria	No.	Description	√	Cultural Heritage Value
A. Design or Physical Value	1	Is a rare, unique, representative or early example of a style, type, expression, material or construction method		
	2	Displays a high degree of craftsmanship or artistic value		
	3	Displays a high degree of technical or scientific achievement		
B. Historical or Associative Value	1	Has direct associations with a theme, event, belief person, activity, organization or institution that is significant to a community		
	2	Yields or has the potential to yield information that contributes to the understanding of a community or culture	√	Has the potential to yield abundant historical information pertaining to the early community of Brinston
	3	Demonstrates or reflects the work or ideas of an architect, builder, artist, designer or theorist who is significant to a community		
C. Contextual Value	1	Is important in defining, maintaining or supporting the character of an area		
	2	Is physically, functionally, visually or historically linked to its surroundings	√	Historically linked to the Euro-Canadian occupation of Brinston
	3	Is a landmark		

Potential Heritage Resource No. 24

Identification of Resource

Property Name	n/a
Street Address	4354 Bell Road
Recognition (e.g. Designated or Listed)	n/a
Community	Near Dixon's Corners
Municipality	Matilda Twp
Regional Municipality	United Counties of Stormont, Dundas & Glengarry Geographic County of Dundas
Construction Date	ca. 1880
Building Type	Residence (former farmhouse)
Cultural Heritage Value	Excellent example of Italianate style farmhouse
Heritage Impact of Wind Farm	No impact
Photo	 Photo: Aug 30, 2010

Evaluation of Cultural Heritage Value

Criteria	No.	Description	√	Cultural Heritage Value
A. Design or Physical Value	1	Is a rare, unique, representative or early example of a style, type, expression, material or construction method	√	-Excellent example of Italianate style farmhouse -Eave brackets & veranda detailing appear to be original
	2	Displays a high degree of craftsmanship or artistic value		
	3	Displays a high degree of technical or scientific achievement		
B. Historical or Associative Value	1	Has direct associations with a theme, event, belief person, activity, organization or institution that is significant to a community	√	Possibly home of Wm. Locke indicated on 1879 *Historical Atlas*
	2	Yields or has the potential to yield information that contributes to the understanding of a community or culture		
	3	Demonstrates or reflects the work or ideas of an architect, builder, artist, designer or theorist who is significant to a community		
C. Contextual Value	1	Is important in defining, maintaining or supporting the character of an area		
	2	Is physically, functionally, visually or historically linked to its surroundings		
	3	Is a landmark		

Potential Heritage Resource No. 25

Identification of Resource

Property Name	n/a
Street Address	4362 Bell Road
Recognition (e.g. Designated or Listed)	n/a
Community	Near Dixon's Corners
Municipality	Matilda Twp
Regional Municipality	United Counties of Stormont, Dundas & Glengarry Geographic County of Dundas
Construction Date	ca. 1860
Building Type	Residence (former farmhouse)
Cultural Heritage Value	Ontario vernacular style farmhouse
Heritage Impact of Wind Farm	No impact
Photo	 Photo: Aug 30, 2010

Evaluation of Cultural Heritage Value

Criteria	No.	Description	√	Cultural Heritage Value
A. Design or Physical Value	1	Is a rare, unique, representative or early example of a style, type, expression, material or construction method	√	-Example of Ontario vernacular style farmhouse
	2	Displays a high degree of craftsmanship or artistic value		
	3	Displays a high degree of technical or scientific achievement		
B. Historical or Associative Value	1	Has direct associations with a theme, event, belief person, activity, organization or institution that is significant to a community	√	Possibly home of Carm. Locke indicated on 1879 *Historical Atlas*
	2	Yields or has the potential to yield information that contributes to the understanding of a community or culture		
	3	Demonstrates or reflects the work or ideas of an architect, builder, artist, designer or theorist who is significant to a community		
C. Contextual Value	1	Is important in defining, maintaining or supporting the character of an area		
	2	Is physically, functionally, visually or historically linked to its surroundings		
	3	Is a landmark		

Potential Heritage Resource No. 26

Identification of Resource

Property Name	n/a
Street Address	11235 County Road 18
Recognition (e.g. Designated or Listed)	n/a
Community	Near Dixon's Corners
Municipality	Matilda Twp
Regional Municipality	United Counties of Stormont, Dundas & Glengarry Geographic County of Dundas
Construction Date	Farmhouse ca. 1880; farm buildings-modern construction
Building Type	Farm Complex
Cultural Heritage Value	Good example of Italianate style farmhouse
Heritage Impact of Wind Farm	No impact
Photo	 Photo: Aug 30, 2010

Evaluation of Cultural Heritage Value

Criteria	No.	Description	√	Cultural Heritage Value
A. Design or Physical Value	1	Is a rare, unique, representative or early example of a style, type, expression, material or construction method	√	Good example of Italianate style farmhouse
	2	Displays a high degree of craftsmanship or artistic value		
	3	Displays a high degree of technical or scientific achievement		
B. Historical or Associative Value	1	Has direct associations with a theme, event, belief person, activity, organization or institution that is significant to a community	√	Possibly home of Jas. Locke indicated on 1879 *Historical Atlas*
	2	Yields or has the potential to yield information that contributes to the understanding of a community or culture		
	3	Demonstrates or reflects the work or ideas of an architect, builder, artist, designer or theorist who is significant to a community		
C. Contextual Value	1	Is important in defining, maintaining or supporting the character of an area		
	2	Is physically, functionally, visually or historically linked to its surroundings		
	3	Is a landmark		

Potential Heritage Resource No. 27

Identification of Resource

Property Name	n/a
Street Address	10171 Branch Road
Recognition (e.g. Designated or Listed)	n/a
Community	n/a
Municipality	Matilda Twp
Regional Municipality	United Counties of Stormont, Dundas & Glengarry Geographic County of Dundas
Construction Date	unknown
Building Type	Farm Complex
Cultural Heritage Value	Log structure on property may be associated with earlier occupation
Heritage Impact of Wind Farm	No impact
Photo	 Photo: Aug 30, 2010

Evaluation of Cultural Heritage Value

Criteria	No.	Description	√	Cultural Heritage Value
A. Design or Physical Value	1	Is a rare, unique, representative or early example of a style, type, expression, material or construction method	√	The only log structure identified within the study area
	2	Displays a high degree of craftsmanship or artistic value		
	3	Displays a high degree of technical or scientific achievement		
B. Historical or Associative Value	1	Has direct associations with a theme, event, belief person, activity, organization or institution that is significant to a community		
	2	Yields or has the potential to yield information that contributes to the understanding of a community or culture		
	3	Demonstrates or reflects the work or ideas of an architect, builder, artist, designer or theorist who is significant to a community		
C. Contextual Value	1	Is important in defining, maintaining or supporting the character of an area		
	2	Is physically, functionally, visually or historically linked to its surroundings	√	Log structure on property may be associated with earlier occupation of property
	3	Is a landmark		

Potential Heritage Resource No. 28

Identification of Resource

Property Name	n/a
Street Address	1011 Branch Road
Recognition (e.g. Designated or Listed)	n/a
Community	n/a
Municipality	Matilda Twp
Regional Municipality	United Counties of Stormont, Dundas & Glengarry Geographic County of Dundas
Construction Date	Unknown
Building Type	Barn/Shed (no other structures on site)
Cultural Heritage Value	Timber-framed vertical board barn
Heritage Impact of Wind Farm	No impact
Photo	 Photo: Aug 30, 2010

Evaluation of Cultural Heritage Value

Criteria	No.	Description	√	Cultural Heritage Value
A. Design or Physical Value	1	Is a rare, unique, representative or early example of a style, type, expression, material or construction method	√	A timber-framed vertical board barn
	2	Displays a high degree of craftsmanship or artistic value		
	3	Displays a high degree of technical or scientific achievement		
B. Historical or Associative Value	1	Has direct associations with a theme, event, belief person, activity, organization or institution that is significant to a community		
	2	Yields or has the potential to yield information that contributes to the understanding of a community or culture		
	3	Demonstrates or reflects the work or ideas of an architect, builder, artist, designer or theorist who is significant to a community		
C. Contextual Value	1	Is important in defining, maintaining or supporting the character of an area		
	2	Is physically, functionally, visually or historically linked to its surroundings		
	3	Is a landmark		

Potential Heritage Resource No. 29

Identification of Resource

Property Name	n/a
Street Address	10057 Branch Road
Recognition (e.g. Designated or Listed)	n/a
Community	n/a
Municipality	Matilda Twp
Regional Municipality	United Counties of Stormont, Dundas & Glengarry Geographic County of Dundas
Construction Date	ca. 1870 or earlier
Building Type	Farm Complex
Cultural Heritage Value	Ontario cottage style farmhouse
Heritage Impact of Wind Farm	No impact
Photo	 Photo: Aug 30, 2010

Evaluation of Cultural Heritage Value

Criteria	No.	Description	√	Cultural Heritage Value
A. Design or Physical Value	1	Is a rare, unique, representative or early example of a style, type, expression, material or construction method	√	-Ontario cottage style farmhouse
	2	Displays a high degree of craftsmanship or artistic value		
	3	Displays a high degree of technical or scientific achievement		
B. Historical or Associative Value	1	Has direct associations with a theme, event, belief person, activity, organization or institution that is significant to a community		
	2	Yields or has the potential to yield information that contributes to the understanding of a community or culture		
	3	Demonstrates or reflects the work or ideas of an architect, builder, artist, designer or theorist who is significant to a community		
C. Contextual Value	1	Is important in defining, maintaining or supporting the character of an area		
	2	Is physically, functionally, visually or historically linked to its surroundings		
	3	Is a landmark		

Potential Heritage Resource No. 30

Identification of Resource

Property Name	n/a
Street Address	110 Pitt Road
Recognition (e.g. Designated or Listed)	n/a
Community	n/a
Municipality	Edwardsburgh Twp
Regional Municipality	Counties of Leeds & Grenville (Geographic County of Grenville)
Construction Date	Unknown
Building Type	Farm Complex
Cultural Heritage Value	Unknown - Farmhouse not visible from road. Other farm buildings are of contemporary construction
Heritage Impact of Wind Farm	No Impact
Photo	 Photo: Aug 30, 2010

Evaluation of Cultural Heritage Value

Criteria	No.	Description	√	Cultural Heritage Value
A. Design or Physical Value	1	Is a rare, unique, representative or early example of a style, type, expression, material or construction method	√	Unknown-homestead not visible from road
	2	Displays a high degree of craftsmanship or artistic value		
	3	Displays a high degree of technical or scientific achievement		
B. Historical or Associative Value	1	Has direct associations with a theme, event, belief person, activity, organization or institution that is significant to a community	√	Possibly farm and residence of D. Froom indicated in *Historical Atlas* 1879
	2	Yields or has the potential to yield information that contributes to the understanding of a community or culture		
	3	Demonstrates or reflects the work or ideas of an architect, builder, artist, designer or theorist who is significant to a community		
C. Contextual Value	1	Is important in defining, maintaining or supporting the character of an area		
	2	Is physically, functionally, visually or historically linked to its surroundings		
	3	Is a landmark		

APPENDIX D

AGENCY CONFIRMATION LETTERS

Ministry of Tourism and Culture

Culture Programs Unit
Programs and Services Branch
Culture Division
435 S. James St., Suite 334
Thunder Bay, ON, P7E 6S7
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Ministère du Tourisme et de la Culture

Unité des programmes culturels
Direction des programmes et des services
Division de culture
435 rue James sud, Bureau 334
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Email: andrew.hinshelwood@Ontario .ca

Ontario

September 9, 2011

Paul Racher
Archaeological Research Associates Ltd.
97 Gatewood Road
Kitchener, ON N2M 4E3

RE: Review and Acceptance into the Provincial Register of Reports: Archaeological Assessment Report Entitled, *REVISED: Stage 1 and 2 Archaeological Assessment, South Branch Wind Farm (FIT FT3B11C) Township of South Dundas and Edwardsburgh/Cardinal, Geo. Townships of Matilda and Edwardsburgh, United Counties of Stormont, Dundas and Glengarry and United Counties of Leeds and Grenville, ON,* Dated August 25, 2011, Received by MTC Toronto Office August 26, 2011.

MTC Project Information Form Number P007-264-2010 and P007-300-2011
MTC RIMS Number HD00375

Dear Paul,

This office has reviewed the above-mentioned report, which has been submitted to this Ministry as a condition of licensing in accordance with Part VI of the Ontario Heritage Act, R.S.O. 1990, c 0.18. This review is to ensure that the licensed professional consultant archaeologist has met the terms and conditions of their archaeological licence, that archaeological sites have been identified and documented according to the 2011 Standards and Guidelines for Consultant Archaeologists set by the Ministry, and that the archaeological fieldwork and report recommendations ensure the conservation, protection and preservation of the cultural heritage of Ontario.*

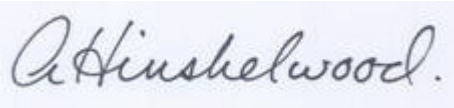
As a result of the Stage 1 and Stage 2 archaeological assessment, two find spots of cultural material were identified. Of these, only one, FS 2, was determined to hold cultural heritage value or interest and has been registered as the Shaver Site, BfFu-5). As a result of this identification, the project has been redesigned to avoid BfFu-5 by a distance of approximately 1.88 kilometres. Finally, the report

recommends that no further archaeological assessment on the subject lands proposed for disturbance by the development is required.

The Ministry concurs with the recommendation that no further archaeological assessment will be required for the areas of proposed impact on the subject property as shown in Maps 2a, 2b, 3a, 3b and 31 of the above titled report be considered free of further archaeological concern and do not require further assessment.

Please feel free to contact me with any concerns or questions regarding this letter.

Yours,



Andrew Hinshelwood
Archaeology Review Officer

cc. Archaeological Licensing Office

* 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.

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Ontario

September 7, 2011

Rochelle Rumney
Environmental Coordinator
Prowind Canada Inc.
226 ½ James St. N, Unit A
Hamilton, ON L8R 2L3

RE: **Colloquial Name of Project: South Branch Wind Farm**

Location: Township of South Dundas, United Counties of Stormont, Dundas and Glengarry and Township of Edwardsburgh, United Counties of Leeds and Grenville

OPA Reference Number: FIT-FT3B1IC

MTC DPR file no.: PLAN-00EA057

Dear Ms. Rumney:

This letter constitutes the Ministry of Tourism and Culture'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 project.

Based on the information contained in the report you have submitted for this project, 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 report recommends the following:

7.0 CONCLUSIONS AND RECOMMENDATIONS

The background research and field survey of the South Branch Wind Farm study area resulted in the identification of 30 potential Built Heritage (BH) resources (Potential Heritage Resource Nos. 1–30) and 4 potential Cultural Heritage Landscapes (CHLs). The potential heritage resources were tested against the criteria of O. Reg. 9/06 to determine whether they were of cultural heritage value or interest (CHVI). None of the identified heritage resources have been designated under the Ontario Heritage Act, nor have they been listed on a municipal register.

All identified BH resources and CHLs of CHVI were then evaluated for potential project impacts. The results of these evaluations can be summarized as follows:

- Six BH resources of CHVI were identified on participating project lands (Potential Heritage Resource Nos. 13, 16, 22, 25, 26 & 30). All proposed turbine locations were located at least 430 m away from any of these resources. The minimum distances between each resource and the closest access road, underground cable route and overhead cable route were 310 m, 70 m and 190 m, respectively. After the project impact analysis, no direct or indirect impacts were identified that would negatively affect these heritage resources.
- Thirteen BH resources of CHVI were identified on lands abutting properties where turbines and associated project infrastructure are proposed (Potential Heritage Resource Nos. 1, 2, 4, 5, 6, 14, 15, 17, 19, 20, 24, 28 & 29). All proposed turbine locations were located at least 620 m away from any of these resources. The minimum distances between each resource and the closest access road, underground cable route and overhead cable route were 60 m, 60 m and 30 m, respectively. After the project impact analysis, no direct or indirect impacts were identified that would negatively affect these heritage resources.
- Of the four potential CHLs, three were found to be CHLs of CHVI (Brinston, Dixon's Corners and Hulbert). For Brinston, the nearest proposed turbine is 930 m away while the closest proposed access road and underground cable route are 650 m and 280 m away, respectively. The nearest overhead cable passes through Brinston, but it will use existing poles in this area (see Figure 3). For Dixon's Corners, the nearest proposed turbine is 1.18 km away while the closest proposed access road, underground cable route and overhead cable route are 1.18 km, 1.20 km, and 1.81 km away, respsectively. For Hulbert, the nearest proposed turbine is 1.02 km away while the closest proposed access road, underground cable route and overhead cable route are 1.17 km, 1.10 km, and 4.20 km away, respectively. After the project impact analysis, no direct or indirect impacts were identified that would negatively affect these heritage resources.

Taken as a whole, the number and significance of the heritage resources considered in this assessment demonstrates the marked richness of the vicinity of the study area. The proposed locality of the South Branch Wind Farm includes tangible and readily-visible heritage resources of CHVI that evoke nearly every important era since European settlement began in the region. As the impact evaluations in Sections 6.2 and 6.4 have demonstrated, the project will not result in any detrimental impacts to the heritage attributes and CHVI of these heritage resources.

As with all wind projects in relatively flat physiographic regions, the appearance of the surrounding landscape will be altered, on an interim basis, as a result of the erection of turbine towers, blades and nacelles. However, it must be articulated clearly that these do not constitute impacts to the essential heritage values of the identified BH resources and CHLs. The landscape of the study area is already defined by highly visible transmission towers and high tension wires. Accordingly, it is the professional opinion of Archaeological Research Associates Ltd. that the heritage attributes of the identified resources will not be negatively affected by the addition of project infrastructure.

Given that this study has 1) considered all potential BH resources and CHLs at the project location; 2) has identified BH resources and CHLs of CHVI based on the criteria in O. Reg. 9/06 (Service Ontario 2006); 3) has evaluated all potential direct and indirect impacts to these identified heritage resources; and 4) has found that the project will not negatively impact any of these identified heritage resources, ARA recommends that the South Branch Wind Farm be released from further heritage concerns.

The Ministry is satisfied with these 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
Heritage Planner

cc. Paul J. Racher, Vice President, Operations
Archaeological Research Associates Ltd.

Christina E. Gohm, Project Manager
Archaeological Research Associates Ltd.

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

[*] 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.