

ADELAIDE WIND ENERGY CENTRE

ADDENDUM, HERITAGE ASSESSMENT

March 2012



GL Garrad Hassan



TECHNICAL NOTE

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Approved	P. Henn

History

Issue	Date	Summary
A	14 February 2012	Original release
B	21 March 2012	Revised to include assessment of transmission route

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1 INTRODUCTION

The Adelaide Wind Energy Centre (the “Project”) was previously being developed by Air Energy TCI Inc., the North American subsidiary of TCI Renewables Ltd. The name of the Project at that time was the Adelaide Wind Farm. The Project has been acquired by Kerwood Wind, Inc. and is now being developed as the Adelaide Wind Energy Centre which is subject to Ontario Regulation 359/09 (Renewable Energy Approvals (REA) [1] under Part V.0.1 of the Ontario Environmental Protection Act (EPA)) and Regulation 521/10 [2]. Kerwood Wind, Inc. was awarded a Feed-in-Tariff (FIT) Contract for this Project in July 2011 and is seeking a Renewable Energy Approval from the Ontario Ministry of the Environment (MOE). Kerwood Wind, Inc. is a wholly-owned subsidiary of NextEra Energy Canada ULC (NextEra). The parent company of NextEra Energy Canada ULC is NextEra Energy Resources, LLC. GL Garrad Hassan Canada Inc. a GL Group member operating under the GL Garrad Hassan brand (hereafter “GL GH”) has been retained by NextEra Energy Canada, ULC to assist with the REA application process.

A Heritage Resource Assessment was completed by Golder Associates in September 2010 (Appendix C) and submitted to the Ministry of Tourism, Culture and Sport (MTCS) for acceptance; the assessment considered 40 turbine locations, their access roads, collector system and substation. An MTCS confirmation letter was provided to Mr. Thomas Bird (NextEra Energy Canada, ULC) in September 2010 (MTCS DPR File No. 39EA022 Appendix B) for this assessment. Subsequent to issuance of the MTCS confirmation letter the study area for the proposed development changed, namely by adding a transmission corridor, and the turbine layout was slightly modified. This addendum to the initial Heritage Assessment provides an analysis of the revised turbine layout and additional transmission route. For comparative purposes, the extent of the Project component adjustments is summarized in tabular and map formats in Table 1 and Appendix A, respectively, for MTCS’ review. Structures A (cultural structures on participating parcels with turbine related activities) and B (cultural structures located on participating parcels with no turbine related activities) as presented on the comparison mapping correlate directly with the structures illustrated in Appendix A and Appendix B of the 2010 Golder report.

The transmission route for the Project is approximately 24 km long. The proposed 115 kV transmission line will travel north from the Project substation utilizing existing rights-of-way along Kerwood Road to a proponent-owned switchyard located to the southwest of the intersection of Kerwood and Nairn Roads then east along Nairn Road to a proponent-owned substation at the point of interconnect that is common to three of NextEra’s wind projects (Adelaide, Bornish, and Jericho). It is important to note that the transmission line from the switchyard to the second substation is also common to the three aforementioned NextEra projects. The transmission line components will be installed on municipal road rights-of-way, either replacing existing Hydro One pole infrastructure to support additional requirements, and/or supplementing existing Hydro One poles with new poles, on either side of the municipal road rights-of-way, but not on both sides. The point of interconnect (POI) will be located on private agricultural land approximately 24 km northeast of the Project. In addition to the revised study area, the new layout includes 2 fewer turbines. The approximate coordinates of the transmission route and associated infrastructure are indicated below in Table 2 followed by a map of the Project study area illustrating the transmission route and POI (Figure 1).

Table 1: Project layout comparison: 2011 vs. 2010

2011 Layout Turbine/ID	2010 Layout Turbine/ID	Distance Moved [m]	Comments
1	2	20.0	turbine only
2	1	0.0	
3	3A	42.1	turbine only
4	4A	24.0	turbine only
5	5	0.0	
6	38	180.0	turbine and access road
7	7	11.0	
8	6	28.0	turbine only
9	8	40.0	turbine only
10	9	42.0	turbine only
11	11	31.0	turbine only
12	10	0.0	
13	33A	51.4	turbine and collection
14	12	0.0	collection only
15	13	0.0	collection only
16	16	18.0	collection only
17	18	0.0	
18	19	0.0	
19	15	11.0	turbine only
20	21A	20.0	turbine only
21	20	28.0	turbine and collection
22	22	0.0	
23	24	19.3	turbine only
N/A	27	N/A	turbine removed from revised layout
24	29	166.3	turbine moved to the south, reduced roads and collection
25	31	26.0	turbine only
26	40A	23.2	collection only
27	34	0.0	
N/A	35	N/A	turbine removed from revised layout
28	36	0.0	collection only
29	37	0.0	collection only
30	39	9.0	turbine only
31	14	0.0	
32	17	0.0	
33	23A	30.6	turbine and collection
34	25A	0.3	
35	26A	0.3	
36	28	0.0	collection only
37	30	18.0	
38	32	100.0	turbine, road and collection
Transmission Route	NA	New	north and east of wind energy centre location approximately 24 km , refer to Figure 1 and Table 2 for details

2011 Layout Turbine/ID	2010 Layout Turbine/ID	Distance Moved [m]	Comments
Point of Interconnect	NA	New	northeast of wind energy centre, refer to Figure 1 and Table 2 for details
Adelaide Substation	NA	New	Northwest corner of wind energy centre study area, refer to Figure 1 and Table 2 for details.
Switchyard	NA	New	Approximately 11.5 km north of the wind energy centre

Table 2: Transmission route coordinates

Site	Easting	Northing
Adelaide Substation	439495	4765334
Intersection Kerwood and Nairn Roads	441680	4776525
Parkhill TS (point of interconnection)	452869	4773932
Switchyard	441374	4775877

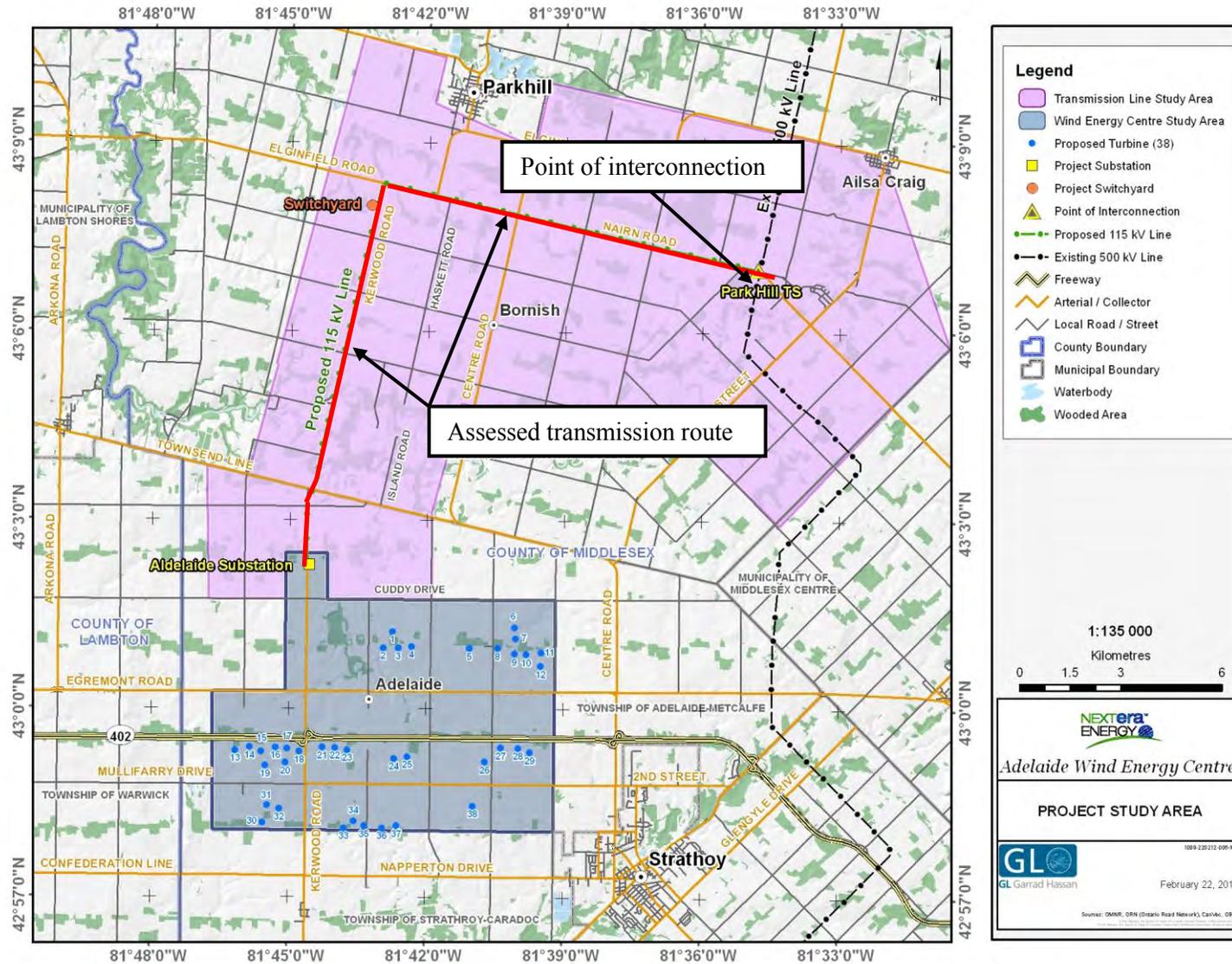


Figure 1: Transmission route

2 RESULTS

An assessment of the revised Project layout and new transmission route was undertaken by Scarlett Janusas Archaeological and Heritage Consulting and Education (SJAHCE). A site visit was conducted on March 12, 2012 to investigate whether there were any heritage resources on the lands that extended beyond the original study area, i.e. the proposed transmission corridor.

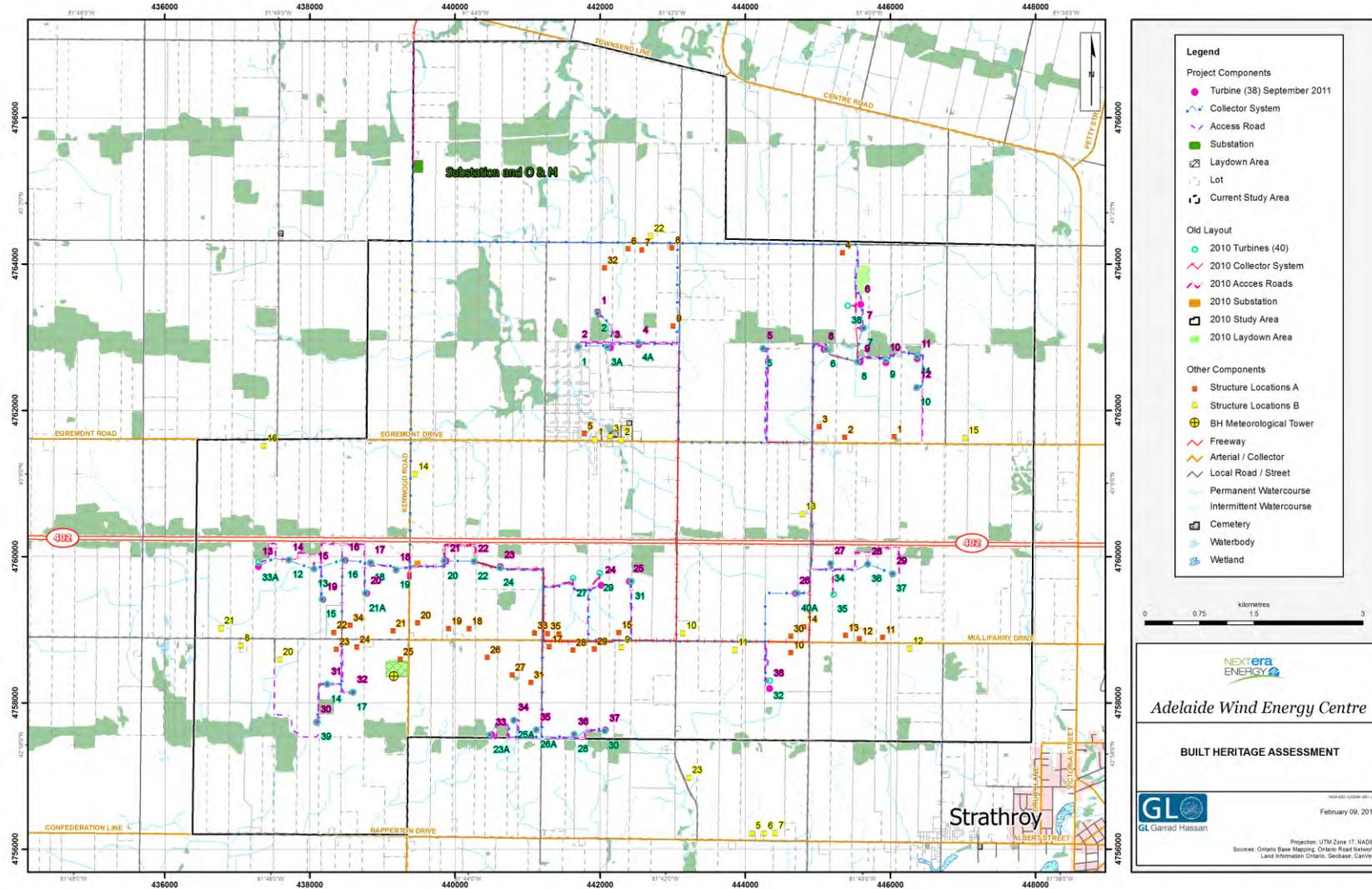
The additional site visit and research indicated that the transmission line infrastructure and areas of direct and indirect impacts are not located on any protected properties or potential cultural heritage features of significance or interest, based on correspondence from the MTCS, Ontario Heritage Trust, the municipalities of Middlesex, North Middlesex and the Township of Adelaide Metcalfe (Appendix D).

In summary, the changes made to the Project layout as presented in Table 1 have been considered. All turbine positions that have been modified have remained within the original study area and therefore have been evaluated accordingly for potential impact on cultural heritage features. The addition of the transmission route, switchyard and point of interconnect have also been adequately studied. It is recommended that the same mitigation measures proposed in the 2010 Golder submission be applied to the new substation location, i.e. appropriate siting and the use of landscape design measures such as massing and screening. In conclusion, the revised component locations for the Project do not directly or indirectly impact any protected properties or potential cultural heritage features of significance or interest.

REFERENCES

- [1] *Ontario Regulation 359/09*, made under the *Environmental Protection Act*, Renewable Energy Approvals under Part 1.0 of the Act.
- [2] *Ontario Regulation 521/10*, made under the *Environmental Protection Act*, Renewable Energy Approvals under Part 1.0 of the Act.

APPENDIX A BUILT HERITAGE ASSESSMENT



APPENDIX B MTCS LETTER

Ministry of Tourism and Culture
Culture Division
Culture Programs Unit
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September 10, 2010

Mr. Thomas Bird
Environmental Services Project Manager
NextEra Energy Canada, ULC
5500 North Service Road, Suite 205
Burlington, Ontario
L7L 6W6

RE: Adelaide Wind Farm

Location: Various Lots, Concession 1 to 5 N.E.R. and 1 to 4 S.E.R., Township of Adelaide, Middlesex County, Ontario

FIT-FZEYQNB

MTC DPR File No. 39EA022

Dear Mr. Bird:

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:

10.0 Recommendations:

Given that the potential wind turbines and associated infrastructure are to be localized on chosen participating parcels within the study area, the cultural features that are located on those parcels were photographed and evaluated according to OHA Regulation 9/06. From the 47 structures that were identified to be greater than 40 years old, 42 (27 houses and 15 barns) were determined to have general historical significance. When further applying the criteria set out in OHA Regulation 9/06, none of these structures were determined to have cultural heritage value or interest. These buildings are heritage resources, for the fact that they do contribute to a broad understanding of agricultural development in the area, but they are not significant enough to warrant designation or further investigation.

The rural cultural heritage landscape located on the project lands and land abutting project lands has been determined not to be of cultural heritage value or interest. However, as the construction of the project turbines and associated structures will have a visual impact on the landscape of the study area, it is recommended that the visual impact of the substation located on the east side of Kerwood Road, south of the 402 (Figure 2) should be minimized with appropriate siting/location of the substation, and landscape design such as massing and screening.

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,



Laura Hatcher
Heritage Planner

cc:

Christopher Andreae, Project Manager
Golder Associates

Chris Schiller, Manager
Culture Services Unit, Programs and Services Branch, MTC

* 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.

APPENDIX C GOLDER ASSOCIATES HERITAGE ASSESSMENT



September 2010



HERITAGE ASSESSMENT

Adelaide Wind Farm Various Lots, Concession 1 to 5 N.E.R. And 1 to 4 S.E.R., Geo. Township of Adelaide Middlesex County, Ontario

Submitted to:
Mr. Thomas Bird
Environmental Services Project Manager
NextEra Energy Canada, ULC
5500 North Service Road
Suite 205, Burlington, ON L7L 6W6
Tel: (905) 335-4904

REPORT



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- 2 Copies - Golder Associates Ltd.





Acknowledgments

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Ministry of Culture	Penny Young, M.A., Laura Hatcher



Executive Summary

In 2009, the Government of Ontario passed the *Green Energy and Green Economy Act* as a method of integrating more renewable energy into the Province's power grid and increasing energy conservation and sustainability (Government of Ontario, 2009; MOE, 2009). Regulation 359/09 of the *Environmental Protection Act* (EPA) defines the requirements for a proposed Renewable Energy project to achieve Renewable Energy Approval (REA). The Regulation integrates requirements under the *Environmental Assessment Act* within a new Regulation under the EPA. This Heritage Assessment for the proposed Adelaide Wind Farm was undertaken in order to meet the REA requirements as outlined in Ontario Regulation 359/09, which is part of the EPA.

The Heritage Assessment was based on a researched land use history of the study area. This research provided a framework within which to evaluate the significance of historic structures and landscapes. The historical background of the area at times considers a somewhat broader spatial and temporal view in order to place the histories of the subject lots within a meaningful context.

The study area has been determined to represent a single rural cultural heritage landscape with no separate cultural landscapes located on the project lands and land abutting project lands that have been determined to have cultural heritage value or interest. Given that the potential wind turbines and associated infrastructure are to be localized on chosen participating parcels within the study area, the cultural features that are located on those parcels were photographed and evaluated according to OHA Regulation 9/06. From the 47 structures that were identified to be greater than 40 years old, 42 (27 houses and 15 barns) were determined to have general historical significance. When further applying the criteria set out in OHA Regulation 9/06, none of these structures were determined to have cultural heritage value or interest. These buildings are heritage resources, for the fact that they do contribute to a broad understanding of agricultural development in the area, but they are not significant enough to warrant designation or further investigation.

The construction of the project turbines and associated structures will have a visual impact on the rural cultural heritage landscape of the study area. This rural cultural heritage landscape that is located on the project lands and land abutting project lands has been determined to have no cultural heritage value or interest. However, it is recommended that the visual impact of the substation located on the east side of Kerwood Road, south of the 402 (Figure 2) should be minimized with appropriate siting/location of the substation, and landscape design such as massing and screening.

The Executive Summary highlights key points from the report only; for complete information and findings, as well as the limitations, the reader should examine the complete report.



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APPENDICES

APPENDIX A

Cultural Structures located on Participating Parcels with Proposed Turbine Related Activities

APPENDIX B

Representative Cultural Structures located within the Study Area or on Participating Parcels that Do Not have Proposed Turbine Related Activities

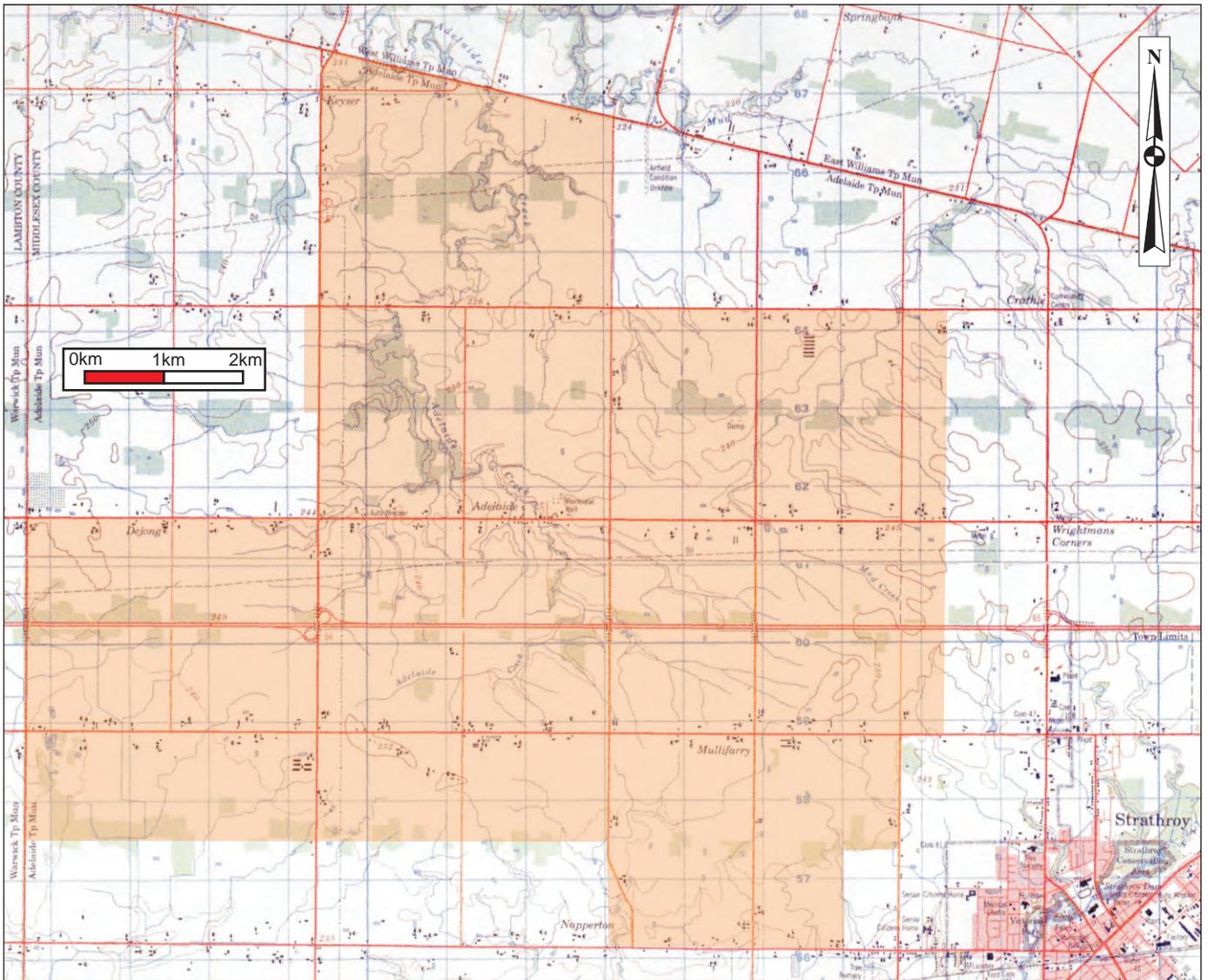


1.0 STUDY PURPOSE AND METHODOLOGY

Golder Associates Ltd. (Golder) was retained by NextEra Energy Canada, ULC to conduct a Heritage Assessment as part of an application for a Renewable Energy Approval (REA) for the proposed Adelaide Wind Farm (the Project) (Figure 1 and Figure 2). The study area consists of approximately 8275 hectares located in the Township of Adelaide-Metcalfe, in Middlesex County, Ontario. The study area limits that were used for the purposes of this Heritage Assessment are indicated as “Site Study Area” on Figure 2.

The Project consists of the installation of 40 wind turbines within the defined study area of Adelaide-Metcalfe Township. The proposed turbines are primarily located at the back of farm lots, away from concession roads and a large grouping is proposed to the south of the Highway 402 Corridor in order to mitigate potential heritage impacts.

The Heritage Assessment was based on a researched land use history of the study area. This research provided a framework within which to evaluate the relevance of historic structures and landscapes. Field surveys were conducted on November 17, 2009 and March 22, 2010. Given that the potential wind turbines and associated infrastructure are to be localized on chosen participating parcels within the study area, the cultural features that are located on those parcels were photographed and evaluated according to OHA Regulation 9/06.



LEGEND

 Study Area

REFERENCE

- DRAWING BASED ON
 Government of Canada
 1994a *Topographic Map Sheet 40 I/13: Strathroy* (Edition 6).
 Surveys and Mapping Branch, Department of Energy,
 Mines and Resources, Ottawa.
 1994b *Topographic Map Sheet 40 P/4: Parkhill* (Edition 7).
 Surveys and Mapping Branch, Department of Energy,
 Mines and Resources, Ottawa.

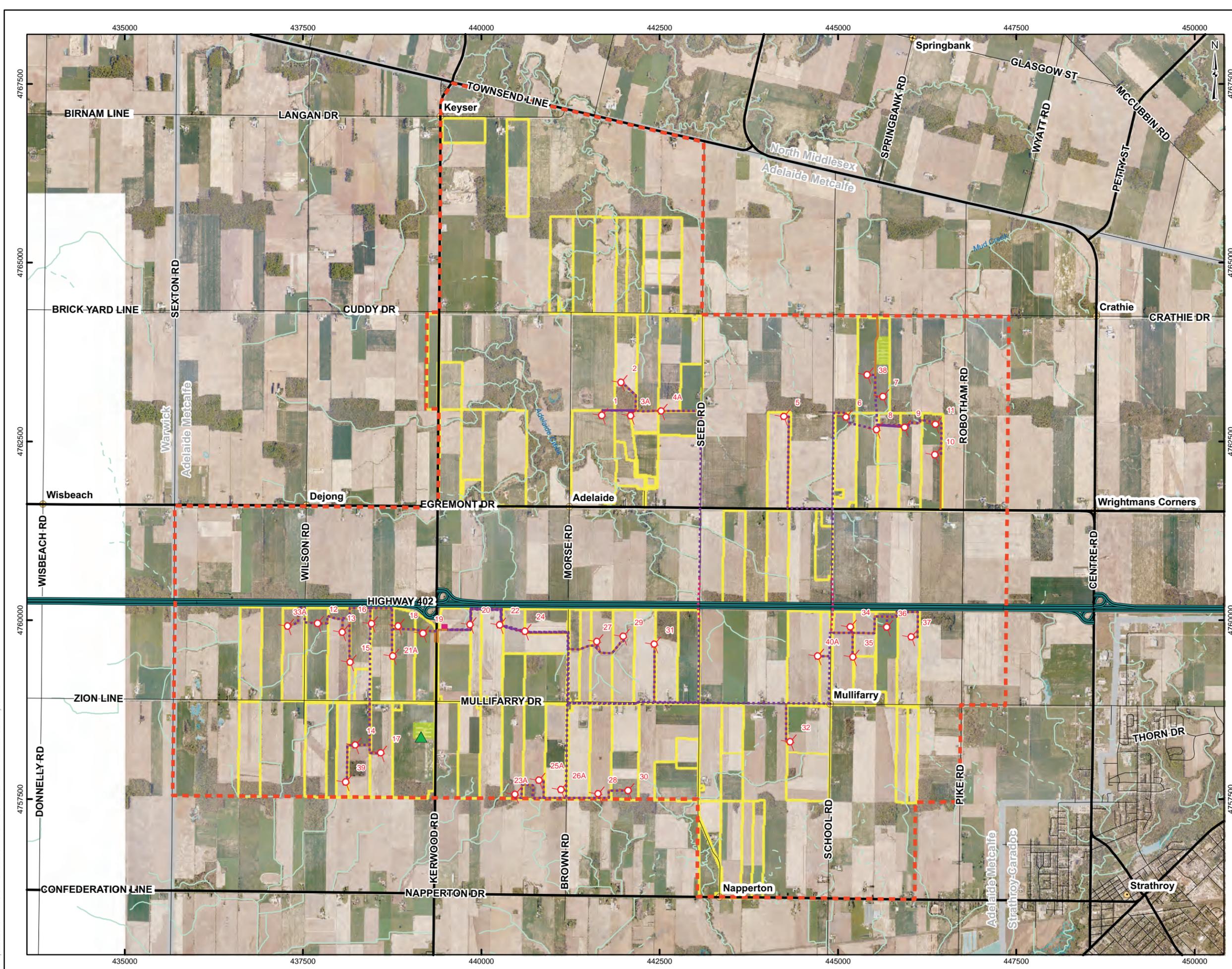
NOTES

THIS DRAWING IS SCHEMATIC ONLY AND IS TO BE READ
 IN CONJUNCTION WITH ACCOMPANYING TEXT.

ALL LOCATIONS ARE APPROXIMATE.

PROJECT			
Built Heritage and Cultural Landscape Study Adelaide Wind Farm			
Geo. Twp. of Adelaide, Middlesex County, Ontario			
TITLE			
Location of the Study Area			
PROJECT No. 07-1112-0151-1800		FILE No. 0711120151-1800-R02001	
CADD JM Feb 26/09		SCALE AS SHOWN REV.	
CHECK		FIGURE 1	





LEGEND

- Turbine
- Permanent MET Mast
- Overhead Cable
- Underground Cable
- Access Road
- Substation
- Site Study Area
- Expressway
- Major Road
- Local Road
- Watercourse, Permanent
- Watercourse, Intermittent
- Proposed Laydown / Staging Area
- Optioned Lots
- Municipal Boundary
- Waterbody, Permanent
- Wetland, Permanent



REFERENCE

Base Data - MNR NRVIS, obtained 2004, CANMAP v2006.4
 Produced by Golder Associates Ltd under licence from Ontario Ministry of Natural Resources, © Queens Printer 2010
 Air Photo - Spring 2006 First Base Solutions.
 Datum: NAD 83 Projection: UTM Zone 17N

0 0.5 1 2 3
Kilometres

PROJECT			
ADELAIDE WIND FARM PROJECT			
TITLE			
SITE LAYOUT			
	PROJECT NO.	07-1112-0151	SCALE AS SHOWN
	DESIGN	PP 05 Mar 2008	REV 0
	GIS	PP 26 Mar 2010	
	CHECK	LHJR 26 Mar 2010	
	REVIEW	JW 26 Mar 2010	
FIGURE: 2			

G:\Projects\2007\07-1112-0151_TCA\AdelaideWindFarm\GIS\MapDocs\Draft\REA\March2010\SiteLayout.mxd



2.0 POLICY CONTEXT AND ASSESSMENT CRITERIA

2.1 Policy Context

In 2009, the Government of Ontario passed the *Green Energy and Green Economy Act* as a method of integrating more renewable energy into the Province's power grid, and increasing energy conservation and sustainability (Government of Ontario, 2009; MOE, 2009). Regulation 359/09 of the *Environmental Protection Act* (EPA) defines the requirements for a proposed Renewable Energy project to achieve Renewable Energy Approval (REA). The Regulation integrates requirements under the *Environmental Assessment Act* within a new regulation under the EPA. This Built Heritage and Cultural Landscape Study for the proposed Adelaide Wind Farm was undertaken in order to meet the REA requirements as outlined in Ontario Regulation 359/09, which is part of the EPA.

This assessment addresses built heritage and cultural heritage landscape resources as required by Reg. 359/09 under part V.0.1 of the *Environmental Assessment Act*; the *Provincial Policy Statement*; the County of Middlesex *Official Plan*; and the Township of Adelaide Metcalfe *Official Plan*. Following are the specific sections of these documents that pertain to cultural heritage.

2.1.1 Ontario Regulation 359/09

Under Reg. 359/09, a heritage resource

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

Under section 19(1) of Reg. 359/09, a proponent of a proposed renewable energy project must determine whether the project location is on a protected property, which includes:

- A property that is the subject of an agreement, covenant or easement entered into under clause 10 (1) (b) of the *Ontario Heritage Act*.
- 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*.
- 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.
- 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.
- 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*.



- A property that is the subject of an easement or a covenant entered into under section 37 of the *Ontario Heritage Act*.
- 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.
- 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*.

Under section 20(1) of Reg. 359/09, a proponent of a proposed renewable energy project must also consider whether engaging in the project may have an impact on a heritage resource at the property location not listed in section 19(1) or a property listed in section 19(1) that abuts the parcel of land on which the property location is situated.

If the resulting answer is that the proposed renewable energy project may have an impact on a heritage resource as documented in section 19(1) and 20(1), according to section 23(1) of Reg. 359/09 the proponent shall:

- (a) *conduct a heritage assessment consisting of,*
 - i) *an evaluation of whether there are any heritage resources at the project location, applying the criteria set out in Ontario Regulation 9/06 (Criteria for Determining Cultural Heritage Value or Interest) made under the Ontario Heritage Act, and*
 - ii) *if any heritage resources are identified as a result of the evaluation under subclause (i), an evaluation of any impact of the renewable energy project on the heritage resources and proposed measures to avoid, eliminate or mitigate the impact, which may include a heritage conservation plan;*

The heritage assessment report as well as any written comments provided by the Ministry of Tourism and Culture in respect of the heritage assessment will be submitted as part of an application for the issue of a renewable energy approval.

2.1.2 Ontario Regulation 9/06 made under the Ontario Heritage Act

The criteria for determining cultural heritage value or interest are outlined under Regulation 9/06 as follows:

1. (1) The criteria set out in subsection (2) are prescribed for the purposes of clause 29 (1) (a) of the Act. O. Reg. 9/06, s. 1 (1).
- (2) A property may be designated under section 29 of the Act if it meets one or more of the following criteria for determining whether it is of cultural heritage value or interest:
 1. The property has design value or physical value because it,
 - i. is a rare, unique, representative or early example of a style, type, expression, material or construction method,
 - ii. displays a high degree of craftsmanship or artistic merit, or



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

2.1.3 The Provincial Policy Statement

Section 2.6.1 of the Provincial Policy Statement (PPS) requires that

Significant built heritage resources and significant cultural heritage landscapes shall be conserved.

Section 2.6.3 of the PPS specifies the circumstances under which development / site alteration may be permitted and discusses mitigative measures:

Development and site alteration may be permitted on adjacent lands to protected heritage property where the proposed development and site alteration has been evaluated and it has been demonstrated that the heritage attributes of the protected heritage property will be conserved.

Mitigative measures and/or alternative development approaches may be required in order to conserve the heritage attributes of the protected heritage property affected by the adjacent development or site alteration.

The PPS defines “built heritage resources” 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.

The PPS defines “conserved” as

...the identification, protection, use and/or management of cultural heritage and archaeological resources in such a way that their heritage values, attributes and integrity are retained. This may be addressed through a conservation plan or heritage impact assessment.



The PPS defines “cultural heritage landscape” as

...a defined geographical area of heritage significance which has been modified by human activities and is valued by a community. It 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.

Regarding cultural heritage and archaeology, the PPS defines “significant” as

resources that are valued for the important contribution they make to our understanding of the history of a place, an event, or a people.

2.1.4 The County of Middlesex Official Plan

Within the Policy Framework of the Middlesex Official Plan, Section 2.2.5 states that the Plan supports conservation of cultural and built heritage resources and further states that

Development and site alteration on or adjacent to lands containing archaeological resources and/or significant built heritage resources shall maintain the heritage integrity of the site.

2.1.5 Township of Adelaide Metcalfe Official Plan

Section 1.3e of the Adelaide Metcalfe Plan states that one of the goals that is a basic decision-making guideline of this Plan and reflects the general long-range intent of the Plan is

To protect, conserve or wherever feasible, rehabilitate and/or reuse the cultural heritage resources of the Township.

2.2 Public Consultation and Recognition

The Township of Adelaide Metcalfe does not have a Heritage Committee nor do they have a local Historical Society. Attempts were made to contact other, local historians, with an interest in the history of the general area and unfortunately no one was located. According to the Clerk of Adelaide Metcalfe Township, there is no Heritage Committee in either Middlesex County or Adelaide Metcalfe; however, the Heritage Trail through the Middlesex Department of Tourism, identifies heritage resources throughout the entire county. According to this Heritage Trail, one site of heritage interest is located within the study area, St. Ann’s Anglican Church.



This church is located within the village of Adelaide and is not located on a participating parcel (Figure 11, Appendix B). There are no federally or provincially recognized cultural heritage resources, plaques or cemeteries located in the study area.

2.3 Assessment Criteria

A range of examples of “built heritage resources” is included on the Ministry of Culture (2002) website: “At a micro-scale level, there are individual buildings ranging from houses to hydro-electric generating stations, defined open spaces ranging from small cemeteries to waterfront parks, and discrete purpose-built structures ranging from century-old stone bridges to silver mine head frames.” As these examples indicate, the concept of built heritage applies to individual buildings of either a private or public nature (e.g., houses, barns, city halls, churches), industrial and utilitarian artifacts (e.g., bridges, lime kilns, culverts), and landscapes that have been designed to serve a specifically human purpose (e.g., cemeteries, parks, promenades, streetscapes). The process of producing a thorough evaluation of their heritage significance involves the consideration and balancing of numerous factors: the age of the resource, the quality of its design, its mode of construction, the importance of architects or contractors responsible for its erection, the importance of its owners or inhabitants, its role in relation to significant events or movements in the area where it is situated, its state of preservation (i.e., the extent to which its original features and character have been maintained), its condition, its uniqueness or its value as a representative of a distinctive local type, its landmark status, and its visual and/or thematic role within its immediate topological and geographic context.

As mentioned in Section 2.1.2, the Ministry of Culture has defined three types of cultural landscapes: defined landscapes, “which have been intentionally designed”; evolved landscapes, “which have grown organically”; and associative landscapes, “those with powerful religious, artistic or cultural associations of the natural element.” Such landscapes may comprise “built” heritage in the sense that they comprise elements of human design, construction and manipulation, and they may affect the evaluation of the individual built structures they envelop.

The process of evaluating heritage landscapes involves research into many different facets of its pre-historical and historical pasts, comprehensive field surveys to identify relationships between the human occupation of the land and its present form, and interviews to determine facets of the landscape with important associations for its present occupants and the wider communities of which it forms a part. The landscapes considered in this report constitute evolved landscapes; a study of such landscapes necessarily involves a history of the human occupation of the land and of the uses they made of the land. Section 4.0 of this report provides that essential background.



3.0 PHYSICAL DESCRIPTION OF STUDY AREA

The study area falls within the southwestern section of the Horseshoe Moraines physiographic region, specifically towards the tail end of the Seaforth Moraine (Chapman and Putnam 1984:127-129). This portion of the Horseshoe Moraines is characterized by a simple landscape consisting primarily of a fine-textured till with some stoniness present (Chapman and Putnam 1984:127). The study area has two major soil types: the Huron series and the Brantford series. Both soil series are silty clay loams and range from moderately well to imperfectly drained. The area's topography is nearly level with only some areas of gentle sloping which can contribute to the soils' drainage characteristics as noted above. The soils of this area are well suited for agricultural activities.

Several watercourses run through the study area. The section of the study area located roughly north of Highway 402 contains tributaries of the Ausable River; Adelaide Creek and Mud Creek. The headwaters of the Ausable can be found in the Wyoming Moraine and the Clay Plain at Exeter. The river drains to Lake Huron. Branches of Adelaide Creek flow through the town of Adelaide and join the Ausable River northeast of Keyser, in West Williams Township. The creek is fairly narrow, shallow and winding and it has low banks often lined with scrub brush. The Mud Creek flows through Crathie and the northeast section of Adelaide Township to join with the Ausable River in West Williams Township, north of the study area. The creek is small and shallow, with low banks.

In the southern portion of the study area, Hardy Creek and a branch of the Sydenham River begin south of Highway 402 and drain to the main branch of the Sydenham River in Brooke Township. Many of the small branches have been adapted and redirected as municipal drains. Hardy Creek has somewhat steeper banks in comparison to other watercourses in the area. Throughout the study area municipal drains were built along roads both to drain fields and improve the stability of roads.



4.0 HISTORICAL BACKGROUND INFORMATION

4.1 First Nations Occupation

The First Nations history of the study area and its environs has been well documented in the Stage 1 Archaeological Assessment (Golder Associates Ltd. 2009). It is not apparent that First Nations activities and presence have influenced the character of the modern cultural landscape (as far as can be discerned through vegetation patterns, earthworks, knowledge of their sacred sites, etc.) nor have they left tangible, above ground material features (earthworks, etc.). The aboriginal presence in the study area is assumed at this time to be the matter of archaeology.

The area first enters the Euro-Canadian historic record as part of Treaty Numbers 21 and 27½ made between the First Nation inhabitants of the area and the British. Treaty Number 21:

was a provisional agreement, entered into on the 9th day of March, 1819, between John Aiken, Esquire, on behalf of His Majesty, and the Principal Men of the Chippewa Nation of Indians, inhabiting a tract of land, whereas the said John Aikens for His Majesty was to pay the said Indians 600 pounds yearly for the said tract described as follows:

Commencing at the northerly side of the River Thames at the south west angle of the Township of London; thence along the western boundary of the Township of London, in a course north 21 degrees, 30 minutes west, twelve miles to the north west angle of the said Township; then on a course about south 62 degrees and 30 minutes west forty-eight miles more or less until it intersects a line on a course produced north two miles from the north east angle of the Shawnee [Sombra] Township; then along the eastern boundary line of the said Township, twelve miles and a half more or less to the northern boundary line of the Township of Chatham; then east twenty-four miles more or less to the River Thames; then along the waters edge of the River Thames against the stream to the place of beginning, reserving a tract of land situate[d] on the northerly side of the River Thames nearly opposite to the northerly angle of the Township of Southwold and south west angle of the Del[a]ware Township containing 15,360 acres; also reserving two miles square distant about four miles above the rapids where the Indians have their improvements and nearly parallel to the Moravian Village containing 5,120 acres.

(Morris 1943: 24-25)

Treaty Number 21 was further modified in Treaty Number 28½ (Canada 1891: 281-282) and finally confirmed in Treaty Number 25 which modified the method of quantity of payment to the First Nation Groups concerned and some minor variation in the description of the land surrender (Morris 1943: 25).



A small portion of the northwest corner of the Geographic Township of Adelaide was later surrendered in Treaty Number 27½,

being an agreement made at Amherstburg in the Western District of the Province of Upper Canada on the 26th of April, 1825, between James Givens, Esquire, Superintendent of Indian Affairs, on behalf of His Majesty King George the Fourth and the Chiefs and Principal Men of the part of the Chippewa Nation of Indians, inhabiting and claiming the tract of land ... Wawanosh Township in the County of Huron was named after Way-way-nosh the principal Chief of the Band making this Treaty.

(Morris 1943: 26-27)

Treaty Number 27½ was subsequently confirmed on July 10, 1827 as Treaty Number 29 with only a minor change in the legal description of the boundaries of the land surrender (Morris 1943: 27).

Although it is difficult to exactly delineate treaty boundaries today, Figure 3 provides an approximate outline of the limits of Treaty Numbers 21 and 27½.

4.2 Original Survey of the Township

In order for organized settlement to occur in early Upper Canada, an official legal survey was first required of all lands. It was only following the survey that land could be registered and title given to an owner. With a land title, the owner could mortgage, lease and sell the land under the rules of law. On occasion land had been “leased” prior to the land surveys but these were highly speculative transactions.

The land surveys of the Township of Adelaide had profound effects on the modern cultural heritage landscape of the current study area. The surveys ultimately established the road pattern and the location of farmsteads. Many of the original boundary lines are still visible today as fences and hedgerows (Plate 1).

The initial survey of Adelaide Township was conducted in 1831 and centred on the development of a much needed route through the Western District of Upper Canada. Within Adelaide Township this route would be named Egremont Road. The Lieutenant Governor of Canada at the time, Sir John Colborne, recognized that the contemporary road network in what is now southwestern Ontario was insufficient to allow European settlers into the area and did not provide an adequate military transportation route should any defensive concerns arise (Nielsen 1993: 3). Colborne therefore initiated the creation of a road which would extend from Lobo Township to Lake Huron and essentially open up the formerly untouched Western District for future immigration (Nielsen 1993: 3).

Colborne gained the assistance of the Commissioner of Crown Lands and Surveyor General of Woods, Peter Robinson, who in turn recommended Peter Carroll to carry out the survey (Nielsen 1993: 5). Figure 4 is a copy of Peter Carroll’s original 1831 map illustrating his Egremont Road Survey (Carroll 1831). Carroll completed the initial survey of Adelaide Township (along with Warwick and Plympton Townships that are now part of Lambton County) in 1831. This survey lay in the route of Egremont Road along with “three tiers of lots on either side” (Nielsen 1993: 6). The original township map prepared by Peter Carroll (Figures 5 and F6), while dated in Oxford County on December 29, 1831, had numerous additions made to it over the following years.



HERITAGE RESOURCE ASSESSMENT AIR ENERGY TCI ADELAIDE WIND FARM

The most obvious addition is the comprehensive survey of the entire township which was completed in July, 1832 (Nielsen 1993: 8). The names of lot occupants indicated on the map appear to have been added once settlers immigrated into the area after 1832.

The Crown survey system that was employed in the Township of Adelaide was the 2,400 acre sectional system which was used for surveys dating from 1829 to 1851. The 2,400 acre system used in Adelaide Township created rectangular lots of 200 acres that ran across the entire concession. Since a road at the back of the lot was unnecessary, road allowances were laid out on every second concession line. Side road allowances were laid out after every third lot. The surveys proceeded from a baseline, Egremont Road, which still exists by the same name. Lot numbers increase as one moves towards the eastern boundary of the township. The concessions were numbered sequentially moving north and south from the surveyed Egremont Road and the initials N.E.R. and S.E.R. became used to refer to the areas north and south of Egremont Road. Figures 7 and 8 illustrate the lot size and side road allowances.

The majority of the farm lots fronted onto the concession roads. Hence almost all of the farmsteads were located along the concessions, with some exceptions (for example Lot 15, Concession 3 S.E.R. in Figure 8). To this day this pattern of occupancy is strongly imprinted upon the landscape. In most cases, houses located on the side roads were built long after the initial phase of settlement had occurred.

Plate 1: Fence and Tree Line along the West Side of Pike Road, Dividing Adjacent Lots

