



March 2010



BUILT HERITAGE AND CULTURAL LANDSCAPE STUDY

**Kent Breeze Wind Farms and MacLeod Windmills
Various Lots, Concessions A, 1 and 2
Township of Camden
Municipality of Chatham-Kent, Ontario**

Submitted to:

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REPORT

Report Number: 09-1136-1035-5000-R01

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Acknowledgments

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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 Kent Breeze Wind Farms and MacLeod Windmill Project was undertaken in order to meet the REA requirements as outlined in Ontario Regulation 359/09, which is part of the EPA.

The Heritage Impact Assessment was based on a researched land use history of the study area. This thematic 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 view in order to place the histories of the subject lots within a meaningful context.

The study area and project area have been determined to represent one homogenous rural cultural heritage landscape, with no separate or highly sensitive cultural landscapes identified. The construction of the project turbines and associated structures will have a visual impact on the rural cultural heritage landscape of the project and study areas. The land is flat and it is anticipated that the turbines will be prominent, new visual features in the landscape. It is recommended that the visual impact of the two proposed switching stations that are to be located at the intersection of Smoke Line and Huffs Side Road should be minimized with appropriate landscape design, such as massing and screening in order to lessen the impact on the surrounding cultural heritage landscape.

A number of historic structures are located within the larger study area, but no direct or indirect impacts on these structures are anticipated. One farmstead is located on an optioned property within the project area and has been evaluated according to OHA Regulation 9/06 and determined not to be a feature of cultural heritage value or interest. Regardless, due to the REA regulations, this farmstead is located along the edge of the 550 metre noise setback and therefore no direct or indirect impacts are anticipated.

The final layout for the proposed turbine locations and associated structures, access roads and underground cables were evaluated with regards to potential direct and indirect impacts to built heritage features and cultural landscapes. No direct or indirect impacts are anticipated.

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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1.0 STUDY PURPOSE AND METHODOLOGY

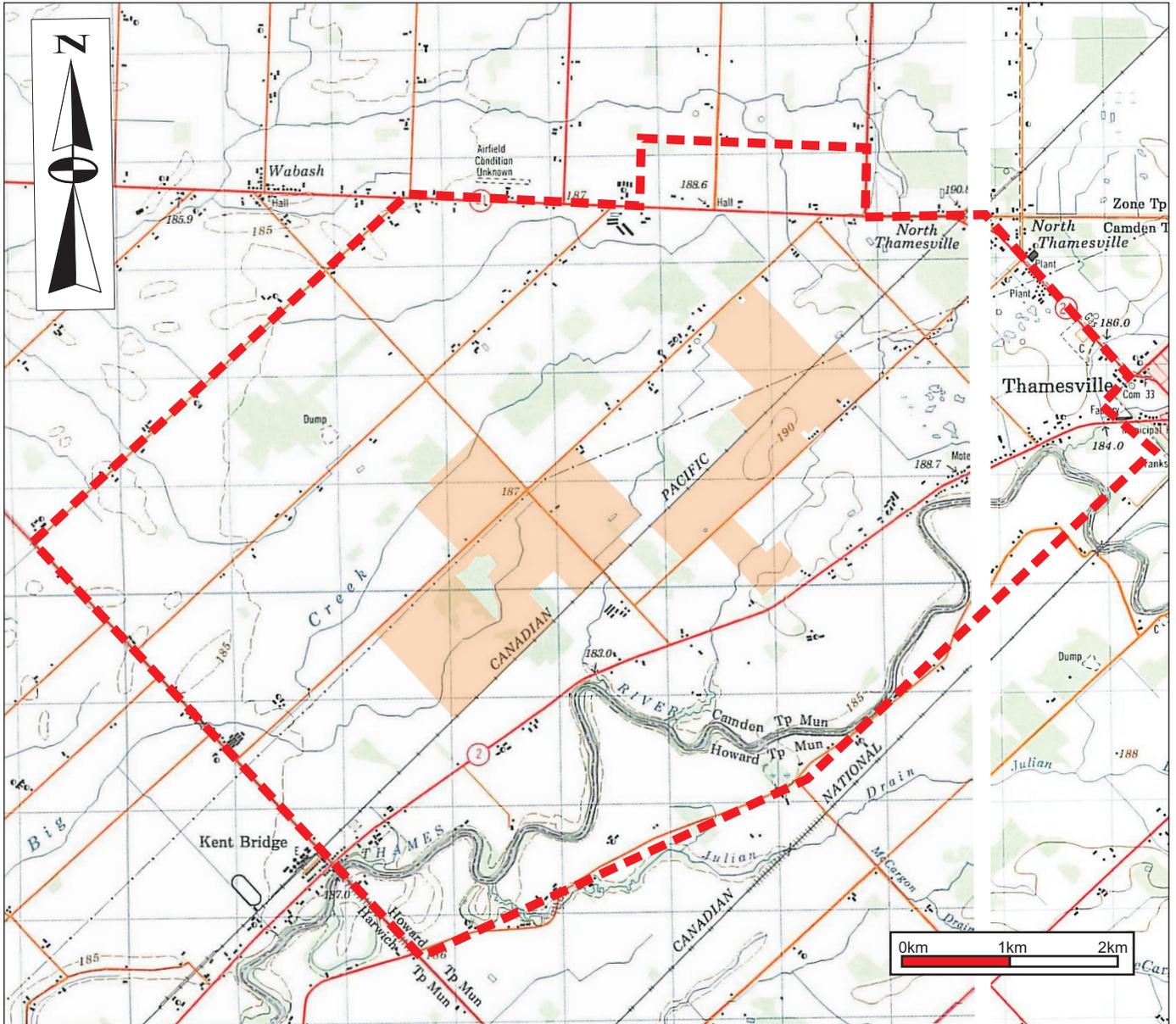
Golder Associates Ltd. (Golder) has been retained by IBI Group to conduct an Environmental Assessment for the Kent Breeze Wind Farms and MacLeod Windmill Project (Figure 1 and Figure 2). This Built Heritage and Cultural Landscape Study assessment was undertaken in order to meet the REA requirements for the proposed Kent Breeze Wind Farms and MacLeod Windmill Project, as outlined in Ontario Regulation 359/09, which is part of the EPA.

For the purposes of this heritage report differentiation has been made between a project area and a study area. The project area refers specifically to those optioned lands that are going to be impacted by the Kent Breeze Wind Farms and Macleod Windmill Project, whereas the study area consists of an approximate two kilometre buffer zone surrounding the project area lands.

Figure 2 illustrates the location and scope of both the project area and study area. Due to the fact that all potential development activities will fall within the limits of the project area, background research and field observations have been focused on that region. In addition a broader overview of the greater study area has also been provided.

The Heritage Impact Assessment was based on a researched land use history of the study area. This thematic 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 view in order to place the histories of the subject lots within a meaningful context.

The final layout (Figure 3) for the proposed turbine locations and associated structures, access roads and underground cables were evaluated with regards to potential direct and indirect impacts to built heritage features and cultural landscapes. Given that the proposed project observes significant setbacks from existing dwellings, in order to satisfy REA regulations no direct or indirect impacts are anticipated.



LEGEND

-  Study Area
-  Project Area

REFERENCE

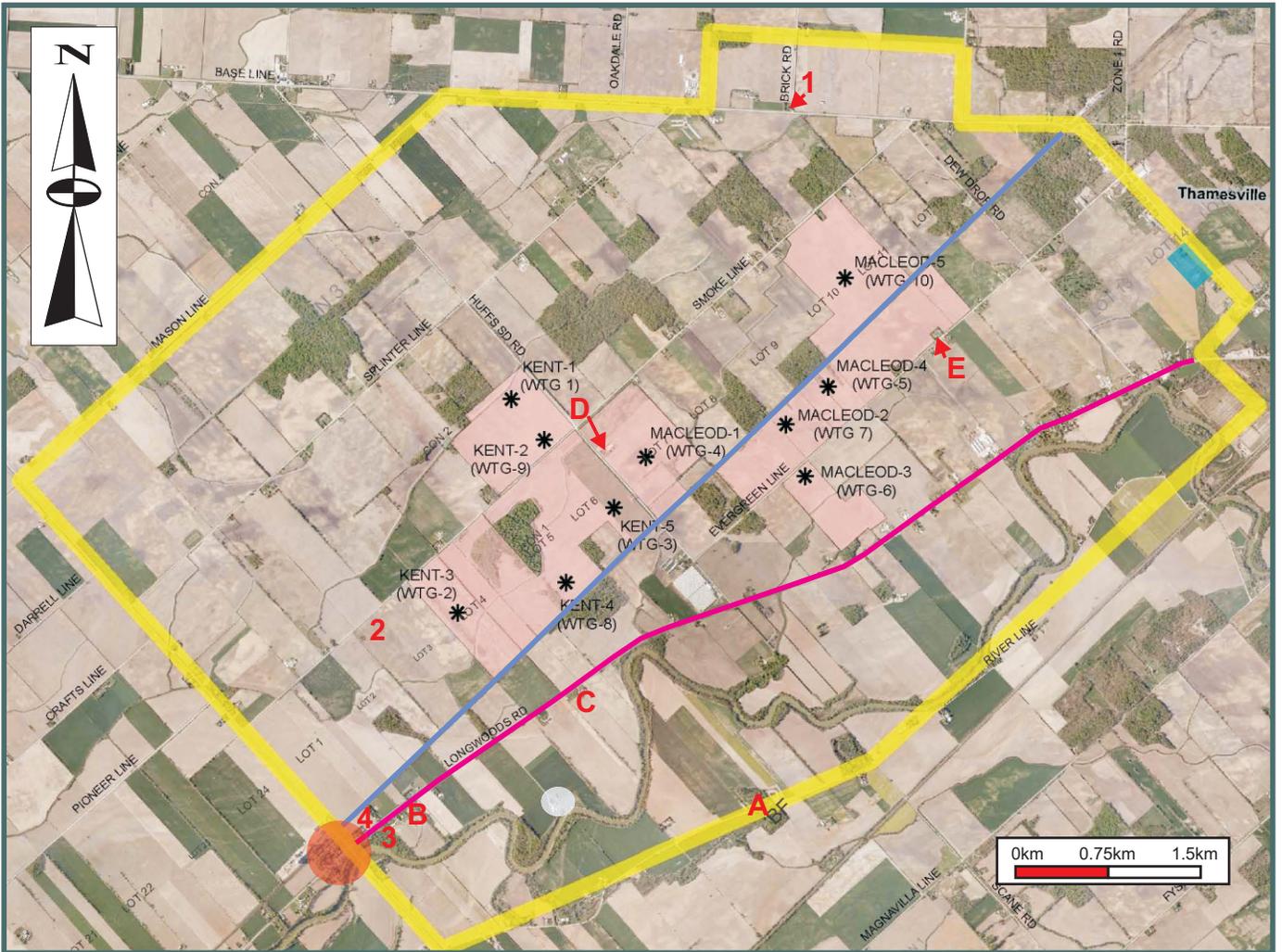
- DRAWING BASED ON
 Government of Canada
 1994 *Topographic Map Sheet 40 I/12: Bothwell* (Edition 7).
 Centre for Topographic Information, Natural Resources
 Canada, Ottawa.
 1996 *Topographic Map Sheet 40 J/9: Wallaceburg* (Edition 7).
 Centre for Topographic Information, Natural Resources
 Canada, 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 Kent Breeze Wind Farms and Macleod Windmill Project Municipality of Chatham-Kent, Ontario				
TITLE	Location of Study Area				
	PROJECT No.	09-1136-1035-5000	FILE No.	0911361035-5000-R01001	
	CADD	JM	Dec 15/09	SCALE	AS SHOWN REV.
	CHECK			FIGURE 1	



LEGEND

- Study Area
- Project Area
- CPR Line
- Longwoods Road
- Kent Bridge Village
- Cemeteries, in Use
- Shawbank Cemetery

Location of Report Photographs

- A Plate 6
- B Plate 8
- C Plate 9
- D Plate 10 (House on Optioned Lot)
- E Plate 11

Historic Structures

- 1 1881 Schoolhouse, Still Standing (Plate 4)
- 2 1881 Schoolhouse, Demolished
- 3 1881 Schoolhouse, Demolished
- 4 1930 Schoolhouse, Still Standing

REFERENCE

DRAWING BASED ON
Mapping Provided by Client

NOTES

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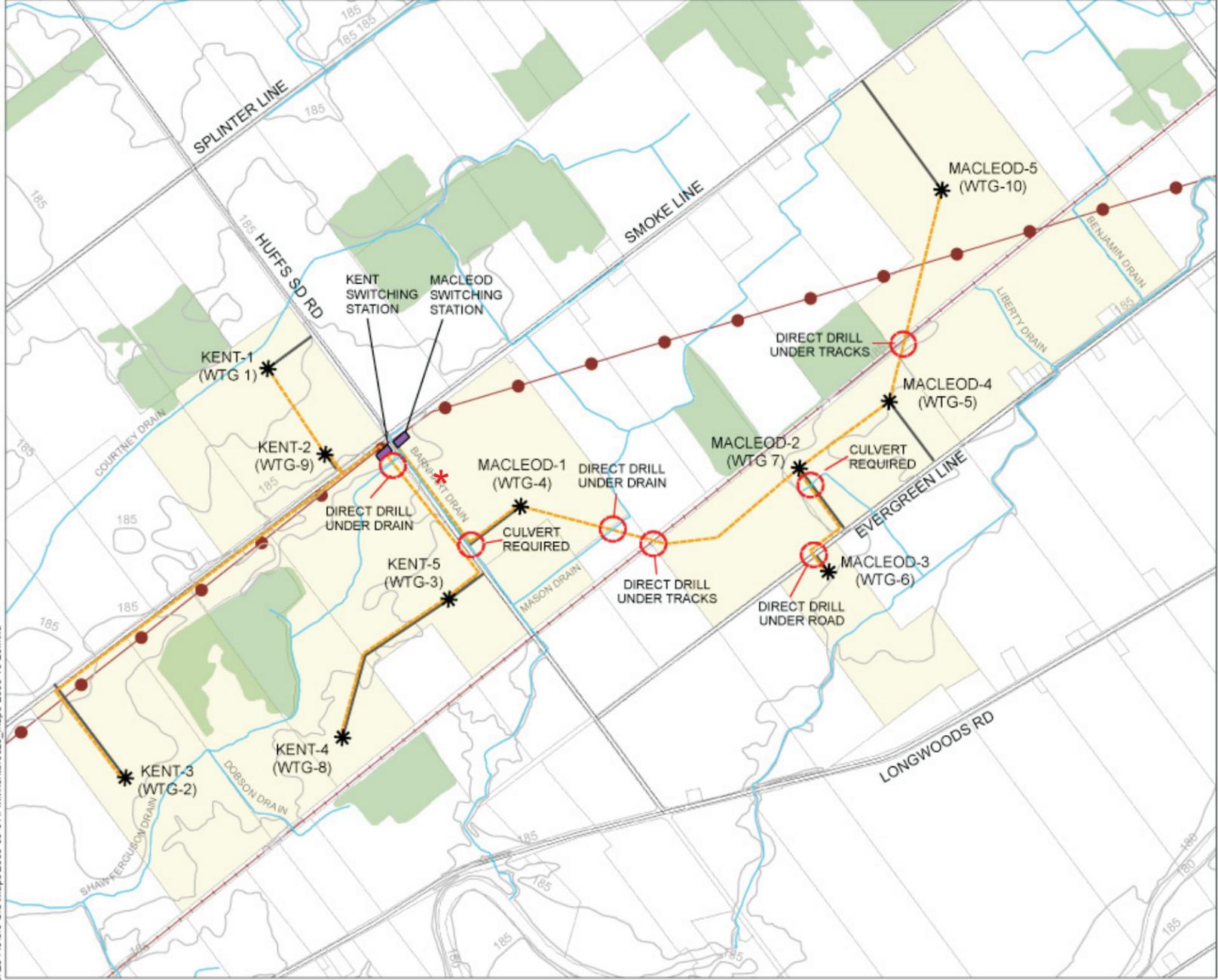
ALL LOCATIONS ARE APPROXIMATE.

PROJECT **Built Heritage and Cultural Landscape Study
Kent Breeze Wind Farms and Macleod Windmill Project
Municipality of Chatham-Kent, Ontario**

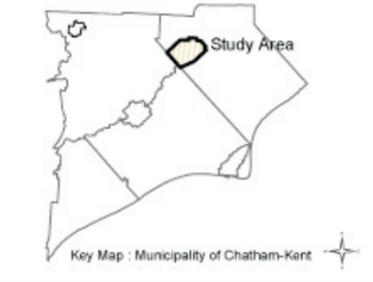
TITLE **Study Area and Project Area with Historic Themes
and Photograph Locations**



PROJECT No.	09-1136-1035-5000	FILE No.	0911361035-5000-R01002
CADD	LJJ	Mar 19/10	SCALE AS SHOWN REV.
CHECK			FIGURE 2

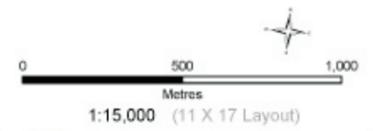


Kent Breeze Wind Farms & Macleod Windmill Project Environmental Assessment



**Map 5
Project Infrastructure**

- LEGEND**
- * Residence on Optioned Property
 - * Turbine
 - Underground Cable
 - Turbine Access Road
 - Utility Line
 - Significant Woodlot (As per Official Plan)
 - Contour Line
 - Railroad
 - Road
 - Watercourse



REFERENCE

DRAWING BASED ON MAPPING PROVIDED BY CLIENT

NOTES

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ALL LOCATIONS ARE APPROXIMATE.

PROJECT **Built Heritage and Cultural Landscape Study
Kent Breeze Wind Farms and Macleod Windmill Project
Municipality of Chatham-Kent, Ontario**

TITLE **SITE LAYOUT**



PROJECT No.	09-1136-1035-5000	FILE No.	0911361035-5000-R01004
CADD	TLC	March 15/10	SCALE AS SHOWN REV.
CHECK			FIGURE 3

J:\20449\5.6 GIS\Maps\2006-09-01\IPM\KentBreeze_map5-2009-10-28.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 Heritage Assessment for the proposed Kent Breeze Wind Farms and MacLeod Windmill Project was undertaken in order to meet the REA requirements as outlined in Ontario Regulation 359/09, which is part of the EPA. Figure 4 maps the REA setbacks that are required for this project.

This assessment addresses built heritage and cultural heritage landscape resources as required by the REA outlined in Ontario Regulation 359/09 under part V.0.1 of the *Environmental Protection Act*, the *Provincial Policy Statement*; and the Municipality of Chatham-Kent *Official Plan*. Following are the specific sections of these documents that pertain to cultural heritage.

2.1.1 Renewable Energy Approvals

Under the REA, 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 the REA, a proponent of a proposed renewable energy project must determine whether the project location is

- 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 the REA, 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 the REA 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 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 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, railways and industrial complexes of cultural heritage value.

Further to that definition, the Ontario Ministry of Culture also divides cultural landscapes into the following three categories (Ministry of Culture 2002) based upon criteria established by UNESCO’s World Heritage Centre (UNESCO 2008):

- *Defined landscapes: those which have been intentionally designed (e.g., a formal garden or, in a more urban setting).*
- *Evolved landscapes: those which have grown organically including those which continue to evolve (continuing landscape); (relict landscape) where an evolutionary process has come to an end (e.g., an abandoned mine site).*
- *Associative landscapes: those with powerful religious, artistic, or cultural associations of the natural element rather than material cultural evidence, which may be insignificant or even absent (e.g., Algonquin Park because of its association with the Group of Seven paintings).*

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.



2.1.3 The Municipality of Chatham-Kent Official Plan

Within the Policy Framework of the Chatham-Kent Official Plan, Section 5.3 states that the Plan supports conservation of cultural and built heritage resources and further states that it shall be the objective of Chatham-Kent to: *Support and encourage the preservation of the Municipality's rich cultural heritage resources.*

2.2 Public Consultation and Recognition

The Municipality of Chatham-Kent Development Planner, Albert Frootman was contacted and was provided with mapping of the study area in order to determine if any properties within the study area are listed in the municipality's heritage inventory. There are no properties from the local municipal inventory nor are there any provincially or federally recognized heritage properties within the study area.

Lewis Sherman and Chris Crawford of the Thamesville and District Historical Society met with the project team to discuss the local history and heritage potential of the area. Sherman and Crawford produced a number of archival documents that were invaluable in researching and writing the land use history for this report.

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.

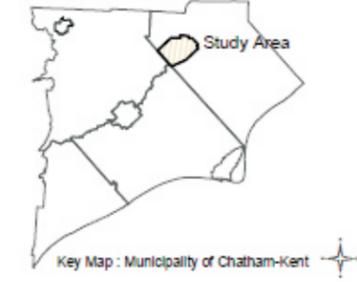


BUILT HERITAGE AND CULTURAL LANDSCAPE STUDY KENT BREEZE WIND FARMS AND MACLEOD WINDMILLS

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.



Kent Breeze Wind Farms & Macleod Windmill Project Environmental Assessment



Map 4 Renewable Energy Approval Setbacks

LEGEND

- * Residence on Optioned Property
- * Turbine
- Points of Reception
- Points of Reception (Potential)
- Points of Reception (Participating)
- 51m Road / Railway Setback
- 98m Lot Line Setback
- 550m Off Site Receptor Setback
- Building Envelope
- Significant Woodlot (As per Official Plan)
- 120m Significant Wood Lot Setback
- Project Area
- Utility Line
- Contour Line
- Railroad
- Road
- Watercourse

0 500 1,000
Metres
1:15,000 (11 X 17 Layout)

April 30, 2009
 Revised May 25, 2009
 Revised June 10, 2009
 Revised July 28, 2009
 Revised September 28, 2009
 Revised October 28, 2009

REFERENCE
 DRAWING BASED ON MAPPING PROVIDED BY CLIENT

NOTES
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 ALL LOCATIONS ARE APPROXIMATE.

PROJECT Built Heritage and Cultural Landscape Study Kent Breeze Wind Farms and Macleod Windmill Project Municipality of Chatham-Kent, Ontario			
TITLE Renewable Energy Approval Setbacks			
	PROJECT No.	09-1136-1035-5000	FILE No. 0911361035-5000-R01004
	CADD	TLC	March 15/10
	CHECK		
		SCALE	AS SHOWN REV.
		FIGURE 4	



3.0 HISTORICAL BACKGROUND INFORMATION

3.1 First Nations Occupation

The First Nations history of the study area and its environs has been well documented in the Stage 1 Archaeological Assessment (Archaeologix Inc., 2008). 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 Number 2 made between the First Nation inhabitants of the area and the British, specifically Alexander McKee of the Indian Department (Surtees 1994: 108). This treaty

was made with the Ottawas, Chippewas, Pottawatomys and Hurons May 19th, 1790, portions of which nations had established themselves on the Detroit River all of whom had been driven by the Iroquois from the northern and eastern parts of the Province, from the Detroit River easterly to Catfish Creek and south of the river La Tranche [Thames River] and Chenail Ecarte, and contains Essex County except Anderdon Township and Part of West Sandwich; Kent County except Zone Township, and Gores of Camden and Chatham; Elgin County except Bayham Township and parts of South Dorchester and Malahide. In Middlesex County, Del[a]ware and Westminster Townships and part of North Dorchester.

(Morris 1943: 17)

Although it is difficult to exactly delineate treaty boundaries today, Figure 5 provides an approximate outline of the limits of Treaty Number 2.

3.2 Original Survey of the Township

In order for organized settlement to occur anywhere 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 Camden 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).



LEGEND

- Treaty Boundary
- Approximate Location of Study Area

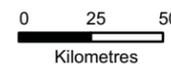
Treaty No. 381, Volume 3 (May 9th, 1781): Mississauga and Chippewa
Crawford's Purchase (Oct. 9th, 1783): Algonquin and Iroquois
Crawford's Purchase (Oct. 9th, 1783): Mississauga
Crawford's Purchases (1784, 1787, 1788): Mississauga
John Collins' Purchase (1785): Chippewa
Treaty No. 2 (May 19th, 1790): Odawa, Chippewa, Pottawatomi, and Huron
Treaty No. 3 (Dec. 2nd, 1792): Mississauga
Haldimand Tract: from the Crown to the Mohawk (1793)
Tyendinaga: from the Crown to the Mohawk (1793)
Treaty No. 3 1/4 (Oct. 24th, 1795): from the Crown to Joseph Brant
Treaty No. 5 (May 22nd, 1798): Chippewa
Treaty No. 6 (Sep. 7th, 1796): Chippewa
Treaty No. 7 (Sep. 7th, 1796): Chippewa
Treaty No. 13 (Aug. 1st, 1805): Mississauga
Treaty No. 13A (Aug. 2nd, 1805): Mississauga
Treaty No. 16 (Nov. 18th, 1815): Chippewa
Treaty No. 18 (Oct. 17th, 1818): Chippewa
Treaty No. 19 (Oct. 28th, 1818): Chippewa
Treaty No. 20 (Nov. 5th, 1818): Chippewa
Treaty No. 21 (Mar. 9th, 1819): Chippewa
Treaty No. 27 (May 31st, 1819): Mississauga
Treaty No. 27 1/2 (Apr. 25th, 1825): Ojibwa and Chippewa
Treaty No. 35 (Aug. 13th, 1833): Wyandot or Huron
Treaty No. 45 (Aug. 9th, 1836): Chippewa and Odawa
Treaty No. 45 1/2 (Aug. 9th, 1836): Saugeen
Treaty No. 57 (Jun. 1st, 1847): Iroquois of St. Regis
Treaty No. 61, Robinson Treaty (Sep. 9th, 1850): Ojibwa
Treaty No. 72 (Oct. 30th, 1854): Chippewa
Treaty No. 82 (Feb. 9th, 1857): Chippewa
Williams Treaty (Oct. 31st and Nov. 15th, 1923): Chippewa and Mississauga
Williams Treaty (Oct. 31st, 1923): Chippewa

NOTES

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REFERENCE

1. Base Data - MNR NRVIS, obtained 2004, CANMAP v2006.4
 2. Treaty Boundary - Approximate Treaty Boundary was created by Golder Associates Ltd. Jan. 2009.
- MORRIS, J.L. 1943. Indians Of Ontario. Reprinted 1964. Department Of Lands And Forests, Toronto.
Produced by Golder Associates Ltd. under licence from Ontario Ministry of Natural Resources. © Queens Printer 2008
Projection: Transverse Mercator Datum: NAD 83



PROJECT	Built Heritage and Cultural Landscape Study Kent Breeze Wind Farms and Macleod Windmill Project Municipality of Chatham-Kent, Ontario		
TITLE	Treaty Boundaries Based on Morris 1943		
 Golder Associates Mississauga, Ontario	PROJECT No 09-1136-1035-5000	1:2,500,000	REV. 0.0
	DESIGN JMC 15 Dec. 2008	FIGURE 5	
	GIS JMC 23 Jan. 2009		
	CHECK		
REVIEW			

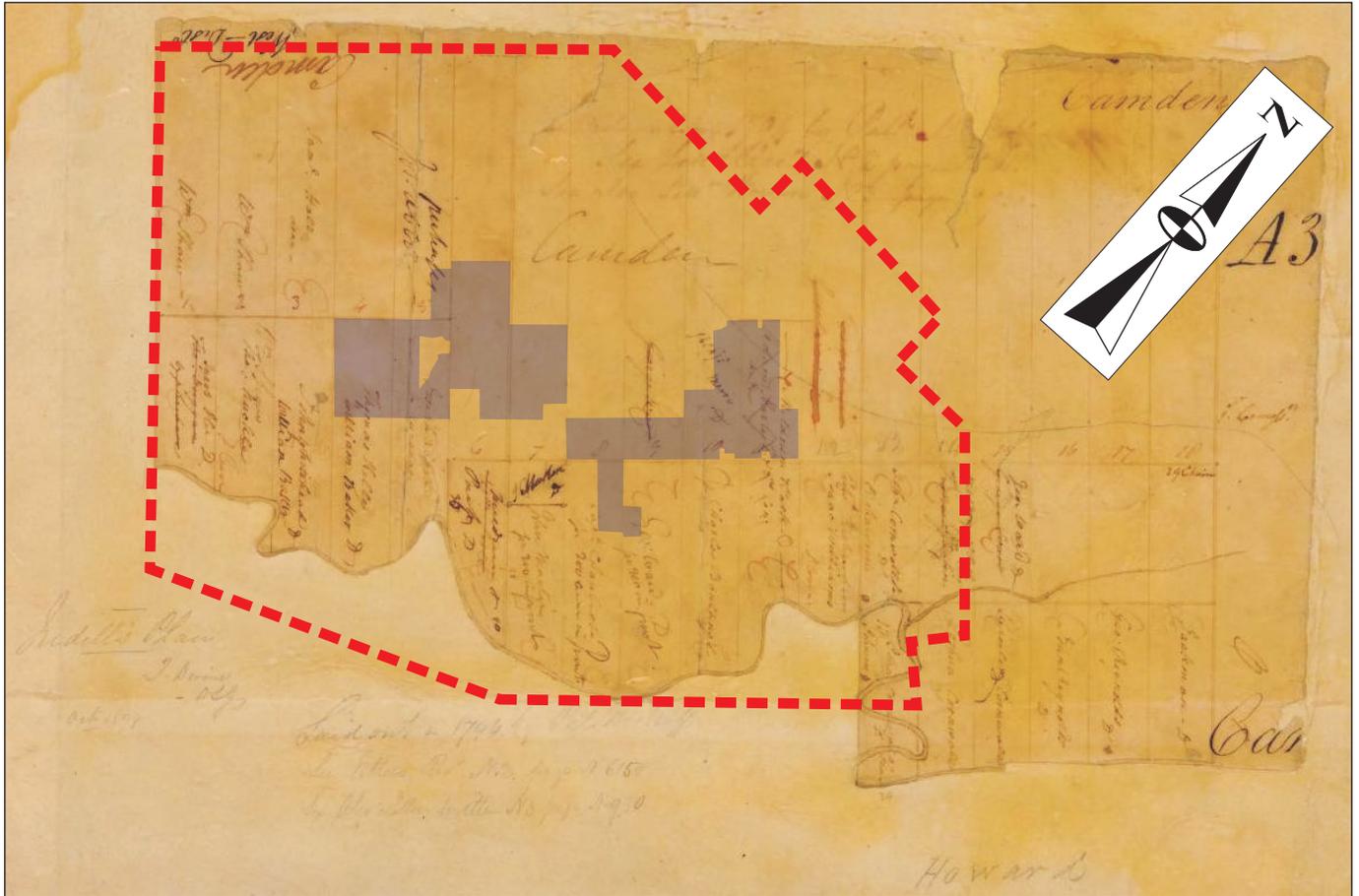


Plate 1: Fence and Tree Line along the North Side of Longwoods Road, Dividing Adjacent Lots



The first survey of the area was made following the First Nation land surrender in 1790 (Hamil 1951: 16). This survey was fronted along the Thames after an unsuccessful attempt to front the townships along Lake Erie (Hamil 1951: 16). After attempts to limit the number of lots to be granted to squatters and new settlers, the first two concessions of most townships were open to settlement as of the proclamation of July 16, 1792 where Lieutenant-Governor John Graves Simcoe set up the county system in Upper Canada. The third township of Kent County surveyed by Patrick McNiff was later to be divided into Howard Township south of the Thames River and Camden Township north of the Thames River. The survey was completed in 1793. The Deputy Surveyor for the Western District, Abraham Iredell, attempted to resurvey various townships in Kent County, including the future Camden Township, between 1795 and 1800 in order to resolve lot boundary disputes and perceived property division inequities. While ultimately unsuccessful in his attempts and forced to leave the existing boundaries as they were (Hamil 1951: 26-30), his plan map (Figure 6) for the area survives and provides the names of the first settlers on the study area lands (Iredell n.d.).

The Crown survey system that was employed in Camden Township was the single front system which was used for surveys dating from 1783-1818. The single front system used in Camden Township created rectangular lots of 200 acres that ran across the entire concession. Because the lots extended the entire concession, road allowances were laid out on every concession line. Side road allowances were laid out after every sixth lot. The initial survey proceeded out from the Thames River for Camden Township and from Base Line Road for Camden Gore Township.



LEGEND

-  Study Area
-  Project Area

REFERENCE

DRAWING BASED ON
 Iredell, Abraham
 n.d. *Iredell's Plan*. Compiled by Thomas Devine, Deputy
 Surveyor General of Ontario, October 1878. Map No. A3.
 On file with the Ministry of Natural Resources Crown Land
 Survey Records Office, Peterborough, Ontario.

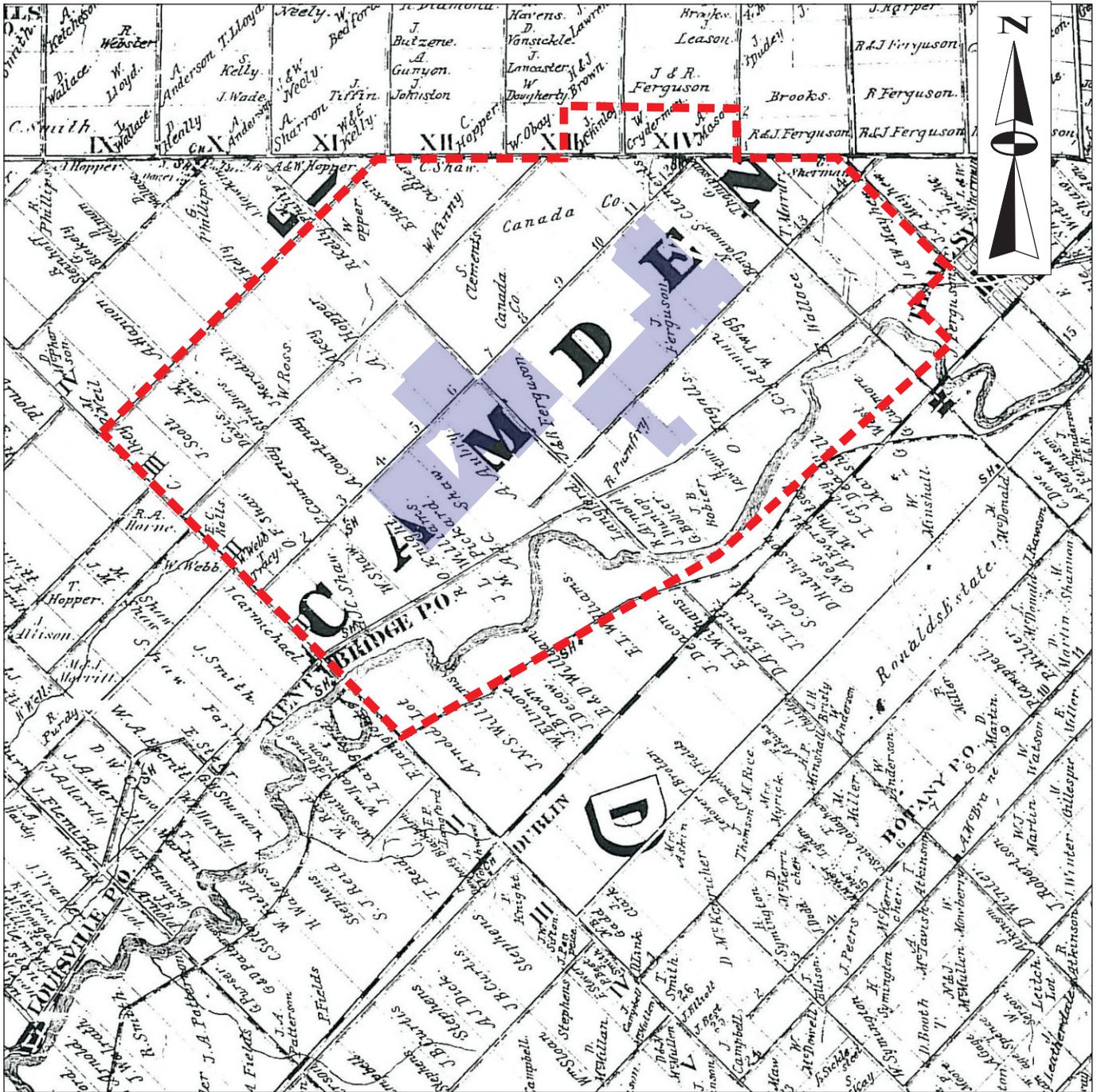
NOTES

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 Kent Breeze Wind Farms and Macleod Windmill Project Municipality of Chatham-Kent, Ontario			
TITLE			
Abraham Iredell's c.1800 Map of the Original Survey of the Township of Camden			
PROJECT No.	09-1136-1035-5000	FILE No.	0911361035-5000-R01004
CADD	JM	Dec 15/09	SCALE NOT TO SCALE REV.
CHECK			FIGURE 6





LEGEND

-  Study Area
-  Project Area

REFERENCE

DRAWING BASED ON
 Shackleton and McIntosh
 1876 *Map for the County of Kent*. Civil Engineers and Company,
 Chatham.

NOTES

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

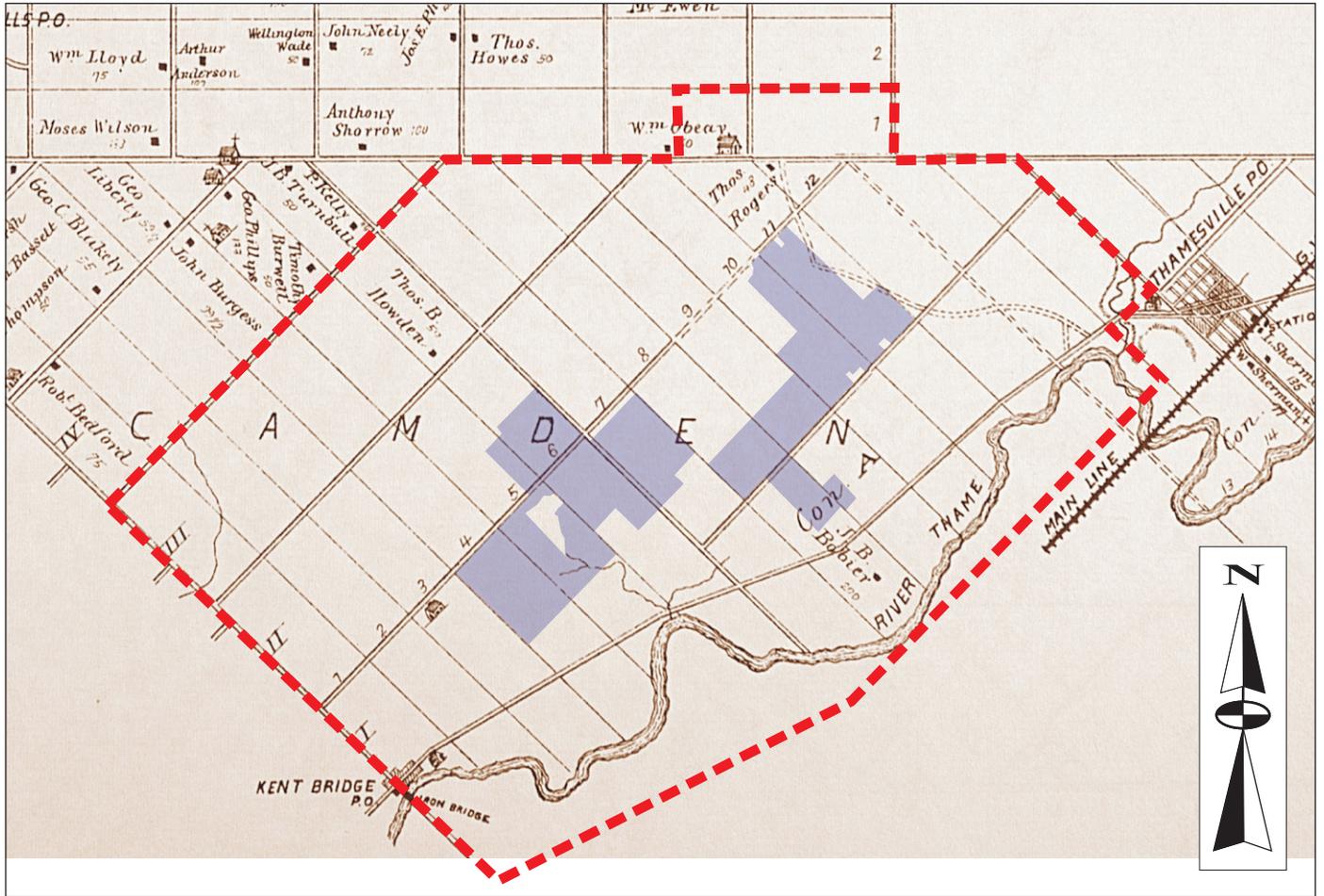
ALL LOCATIONS ARE APPROXIMATE.

PROJECT Built Heritage and Cultural Landscape Study
 Kent Breeze Wind Farms and Macleod Windmill Project
 Municipality of Chatham-Kent, Ontario

TITLE A Portion of Shackleton and McIntosh's 1876
Map for the County of Kent



PROJECT No.	09-1136-1035-5000	FILE No.	0911361035-5000-R01005
CADD	JM	Dec 16/09	SCALE NOT TO SCALE REV.
CHECK			FIGURE 7



LEGEND

-  Study Area
-  Project Area

REFERENCE

DRAWING BASED ON
 Belden, H. and Company
 1881 *Illustrated Historical Atlas of Essex and Kent County*.
 1973 reprint. Edward Phelps and Ross Cumming, Sarnia.

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 Kent Breeze Wind Farms and Macleod Windmill Project Municipality of Chatham-Kent, Ontario		
TITLE	A Portion of the 1881 Map of the Township of Camden in the <i>Illustrated Historical Atlas of Kent County</i>		
PROJECT No.	09-1136-1035-5000	FILE No.	0911361035-5000-R01006
CADD	JM	Dec 15/09	SCALE NOT TO SCALE REV.
CHECK			FIGURE 8





Lot numbers increase as one moves towards the north eastern boundary of the township. The Concessions were numbered sequentially moving north from the Thames River with Concession A and B used for the first two irregular concessions that follow the path of the Thames River. The historic maps from 1876 and 1881 (Figure 7 and Figure 8) illustrate the lot size and side road allowances very well.

The majority of the farm lots fronted onto the concession roads and though very few farmsteads are indicated on the 1881 historic map for the study area it can be seen that in other areas of Camden Township that almost all of the farmsteads were located along the concessions (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.

Comparing Figure 1 with the historic atlas map in Figure 8, it can be seen that modern day Highway 2 and the current road grid were in existence by 1881. The atlas map also marks a trail that was not noted on either of the earlier township maps but it is worth pointing out that it crosses the easternmost edge of the eastern parcel of the project area. This indicated trail may be due to the fact that the region was poorly drained and swampy in several areas and alternate access was needed through the area.

3.3 Early Settlers

The European settlement of Camden Township began in the late eighteenth century with squatters settling along the banks of the Thames River, although their specific locations were not recorded until the first survey of the area in 1790 (Hamil 1951: 16). The first recorded settler in the area was a Connecticut-born Loyalist, Joshua Cornwall, in 1796, followed by Lemuel Sherman in 1797 (Lauriston 1939: 63). Both the Cornwall and Sherman families settled along the north bank of the Thames River south of the current town of Thamesville, outside of the study area (Figure 8). According to Abraham Iredell's original survey map dating from 1800 (Figure 6) the following lots that fall within the project area have names written upon them, reading from southwest to northeast:

- Lot 4, Concession 1: Thomas Kelly and William Baker
- Lot 5, Concession 1: Joseph Abbott (for purchase [written on map below his name but reading uncertain])
- Lot 5, Concession 2: Joseph Abbott (perhaps [written on map above his name])
- Lot 8, Concession A: Captain (the remainder is illegible)
- Lot 9, Concession 1: George Ward - struck through and then noted on Lot 9, Concession A, therefore this attribution is probably in error
- Lot 10, Concession 1: Benjamin Merry
- Lot 11, Concession 1: George Meldrum and William Park



BUILT HERITAGE AND CULTURAL LANDSCAPE STUDY KENT BREEZE WIND FARMS AND MACLEOD WINDMILLS

No structures are noted on this map and so it is difficult to discern whether these individuals actually lived within the bounds of the project area. The next hand-drawn township map (Figure 9) was produced when the township was surveyed by Benjamin Springer in 1833 in order to help rectify land ownership disputes (Hamil 1951: 30). He notes areas of swamp in Lots 4, 5, and 6 of Concession 1. Settlers are recorded neither on the Township Map (Springer 1833) nor in the associated field notes (Springer 1832).

Unfortunately, the 1881 Illustrated Atlas of Essex and Kent County (H. Belden and Company 1881) was a supplement to the Illustrated Atlas of the Dominion of Canada and therefore only listed subscribers to the atlas on the county maps. As can be seen on the map of the Township of Camden (Figure 8), there was only one subscriber that lived within the project area, J. B. Bobier of Lot 8, Concession A. The Bobier residence is illustrated south of the project area, but still within the limits of the larger study area.



4.0 SETTLEMENT AND AGRICULTURE

4.1 Description/Character

4.1.1 Settlement Phases

Settlement and development of agriculture go hand-in-hand. As with much of southern Ontario, agricultural development in Kent County fell into three phases: pioneer farming, wheat growing for export, and mixed farming. This pattern was followed to varying degrees within the Township of Camden.

During the initial era of pioneer farming, progress was slow. The aim was chiefly to provide enough food for the family. Under favourable circumstances a single good season could bring the farm into production and make a family self-sustaining. From there, if the family were capable, a few more seasons could provide the raw materials for almost all their necessities.

The length of time occupied by this pioneer phase was variable. Settlement could be delayed by the large amount of land held by absentee owners or by poor land in the area. With good transportation and markets, there was an incentive to improve quickly. With no access to cash sources, the pioneer phase lasted longer. No surviving visual evidence of the pioneer phase has been noted in the study area.

As soon as settlers managed to meet their immediate needs they turned to growing crops that could be sold or bartered. During the 1840s, settled areas with good transport increasingly moved into a mono-culture of wheat production. The profitability of wheat was due to tariff protection by Great Britain and the 1850s failure of the European wheat crop and shortages caused by the Crimean War.

The wheat prosperity, however, was short lived. A disease struck the crop in the late 1850s that greatly reduced yields. This, coupled with a general economic depression that began in 1857, slowed the growth of the province. In response to these factors, Ontario farmers in the 1860s began to diversify into a broader mix of crops.

Although the wheat boom was very short, it “kick-started” many farmers from the pioneer stage into a market economy. The American Civil War in the early 1860s helped to diversify agriculture in the province and provided another era of prosperity. The demand for feeder cattle in the United States stimulated stock production. Grain growing continued to be economically important. Evidence of the prosperity, and the subsequent Civil War economic boom, can be seen today in the investment in surviving substantial houses and barns from the 1860s and later within the limits of the study area (Plate 2), but not specifically within the project area.

The agricultural economy of Kent County remained unchanged until after the Second World War. Crops came in and out of popularity depending on market forces.

Starting in the 1940’s the most important change to agriculture in Kent County was that it became more specialized. Families no longer maintained a small number of a variety of types of livestock, but rather focused on one type of farming on a larger scale.



This increase in specialization was due to a number of factors including an increase in cash cropping; invention of new machinery; electrification on farms; use of pesticides and herbicides; and the use of commercial fertilizers. Due to the sandy soils found in Camden Township many farmers turned to growing fruits, vegetables and tobacco.

Evidence of specialization and growth of the farms in the greater study area is evidenced on the landscape by cement silos, large facilities needed to house livestock or to grow and manufacture cash crops (Plate 3). Additional substantiation of farming specialization on a large scale is also evidenced by the fact that the project area lands are all owned and managed by one farmer.

Plate 2: Example of Late 19th Century Farmstead Located within the Study Area





Plate 3: Example of Large Farming Operation Located within Study Area



4.1.2 Land Drainage

The project area is overlain with three different sand types: Berrien Sand, Brookston Sandy Loam, and Granby Sand (Department of Agriculture 1930). These are all imperfectly to moderately drained due to the underlying clay. There are also a number of streams running through the project area and these originate from the Thames River which is less than 700 metres from the project area at its closest point. The topography of the area is relatively level. The land banking on both sides of the Thames River, located within the greater study area consists of Thames Clay Loam and is imperfectly drained (Department of Agriculture 1930).

In the earliest years of settlement, immigrants simply avoided wetlands. By the 1860s, widespread interest in draining wetlands developed in Kent County and in the province as a whole. At the time, the Crown Lands Department estimated there were about 400,000 hectares of marsh in southern Ontario that could be cultivated if drained. In 1868 the Ontario government passed an *Act* enabling townships to undertake drainage programs. Subsequent *Acts* in 1869 and 1872 were passed to fund these projects. In 1878 legislation was approved that provided financial assistance to farmers who wished to tile their own fields.

Municipal drains were built along side roads both to drain fields and improve the stability of roads. These, and other drainage improvements, appear to date from just before or after the Second World War.

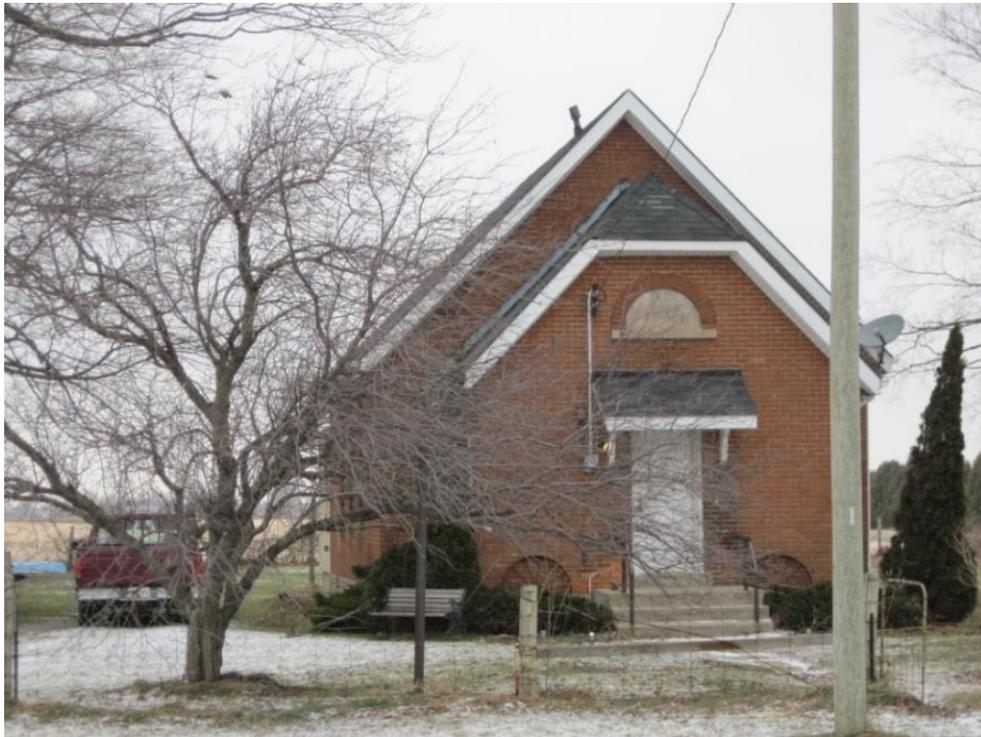


4.1.3 Religion and Education

There are no school houses, churches or cemeteries located within the limits of the specific project area, nor is there any historical evidence that there were any throughout the history of the region. Within the limits of the greater study area there were four school houses, two of which are still standing and three cemeteries (Figure 2).

The first school house that is still standing in the study area is located on Lot 1, Concession 13, Township of Camden Gore and is indicated on the 1881 historic map (Figure 8). This was the S.S. No. 10 Camden School, locally referred to as the “Red School House” and today it has been converted into a residential home (Plate 4). This structure was built sometime between 1876 and 1881 (Figure 2).

Plate 4: Former School House Located at Corner of Base Line and Brick Road



The second school that is still standing is the Kent Bridge school located on the north side of Longwoods Road, east of the Village of Kent Bridge. This school was a later addition to the Township, being built in 1930 and maintained as a school until 1967. This school has also been converted into a family home.

Two additional school houses are indicated on the 1881 historical map of Camden Township, the first just east of Kent Bridge on the south side of Longwoods Road, Lot 1, Concession A and the second on Lot 3, Concession 1 (Figure 8).



The school house that was located east of Kent Bridge was built around 1842 and was maintained as a school until sometime in the late nineteenth century (Lauriston 1952:437). No specific information has been found for the school that was once located on Lot 3.

Four cemeteries are presently located within the limits of the study area (Figure 2). The Shawbank cemetery is a family burial ground located on Lot 2, Concession A, Camden Township. This cemetery, with grave markers dating to the early nineteenth century is not indicated on either the 1876 or 1881 historic maps (Figure 7 and 8). This absence on the historic maps may be due to its remote location, at the southern end of Lot 2 right along the bank of the Thames River. On the 1876 map the landowners are listed as J. C. Shaw and W. Shaw. Access to this cemetery is gated at Longwoods Road and it can scarcely be seen from the roadside.

The remaining three cemeteries within the study area, The Mayhew Mt. Pleasant Cemetery, O'Neill's Cemetery and St. Paul's New Roman Catholic Cemetery are all located side by side on Lot 14, Concession A, Camden Township. All three are still in use today.

4.1.4 Urban Places

There are no urban communities within the project area, but there is one village located in the study area, the village of Kent Bridge (Figure 1 and 2). This community has had several names throughout history including, Kelley's Corners, Gee's Ferry, Arnold's Mill, Howard Bridge and finally Kent Bridge (Gilbert, 2009). The village's most important feature throughout history has been the bridge over the Thames River. In 1845 an early settler by the name of Christopher Gee operated a ferry across the Thames River that connected the Townships of Camden, Harwich, Howard and Chatham (Lauriston 1952:438). Gee also constructed a floating bridge across the Thames which was swept away in 1846 by rushing waters (*Kent Bridge*, 1980). The first official bridge across the Thames at this location was an enclosed wooden structure that was constructed in 1854. That same year the community officially became known as Kent Bridge (Lauriston 1952:438). The bridge has been replaced several times since 1854, with a double arched wooden bridge in 1861, an iron span bridge in 1875 and finally the current concrete bridge (Plate 5) which was opened in 1961 (*Kent Bridge Historical Group*, 1980).



Plate 5: Concrete Bridge Spanning the Thames River at Village of Kent Bridge, Looking South



Throughout history Kent Bridge has had a number of businesses and important structures including a Temperance Hall, post office, blacksmith shop, several stores, three schools, two churches and a mill. The majority of the businesses and structures are, or were located on the west side of the Town Line, in Chatham Township and therefore fall outside the limits of the study area. Two of the schools are located within the study area and were discussed in greater detail in Section 4.1.3 (Figure 2). There are several substantial brick homes that are located just east of Kent Bridge and are discussed in greater detail in Section 4.1.5.

4.1.5 Architecture

4.1.5.1 Architectural Development within the Area

As discussed in Section 4.1.1, settlement and agriculture go hand in hand; this is reflected in the architectural development within the area. There are very few buildings remaining in the specific project area or in close situ to the project area that are still being used within in an agricultural context, most of the structures are residential homes that have been built within the second half of the twentieth century. Within the larger study area however there are several buildings remaining that are still being used within an agricultural context, along with a large number of homes that are solely residential.



BUILT HERITAGE AND CULTURAL LANDSCAPE STUDY KENT BREEZE WIND FARMS AND MACLEOD WINDMILLS

Upper Canada settlers generally constructed a log house as their first home. As sawn lumber became readily available in Kent County many settlers built frame homes to replace these early, often crudely made structures. Others remained in their log cabins for longer periods and modified them to suit their changing needs (Kenyon 1985: 23). There are no remaining log homes in the project area or study area surviving from this time period.

Popular styles of early residence in the Township that replaced log homes were Ontario Cottages and Ontario Farm Houses. The Ontario Cottages were usually single storey frame dwellings with a centre doorway and windows on either side that ranged from simple to elaborate styles. The cottages were eventually replaced by larger wood frame houses or houses made of brick. These houses were constructed in the Georgian style.

The Georgian plan was especially popular dating from the early 19th century to around the time of Confederation in 1867. This style featured a shallow gable roof with a symmetrical three- or five-bay façade parallel with the ridgeline of the roof. Georgian homes have minimal, simplistic styling with an air of restrained dignity which fit well with the ideals of the European settlers at that time (Kyles 2009). Within the study area, on the south side of the Thames River, located at 12339 River Line is a beautiful example of a Georgian style home (Plate 6, Figure 2).

Plate 6: Example of a Georgian Style Home, Located at 12339 River Line



Gothic Revival became popular with the waning of Georgian architecture in Ontario by the mid-19th century. The three main features of Gothic Revival are the Gothic windows with flat topped headings; finials, the carved wood at the peak of the gables; and bargeboards, the ornamental woodwork around the gables (Kyles 2009).



BUILT HERITAGE AND CULTURAL LANDSCAPE STUDY KENT BREEZE WIND FARMS AND MACLEOD WINDMILLS

The Gothic Revival Cottage was the most prevalent residential design in all of Ontario prior to the 1950s. The design for the cottage, complete with floor plans, was written up in *Canada Farmer* magazine in 1865 (Plate 7) (Kyles 2009). Two red brick homes, located just east of Kent Bridge, within the study area are examples of the later Gothic Revival movement and likely date from the late 1870s or 1880s (Plates 8 and 9, Figure 2).

Plate 7: Gothic Revival Cottage Illustrated in Canada Farmer Magazine





BUILT HERITAGE AND CULTURAL LANDSCAPE STUDY KENT BREEZE WIND FARMS AND MACLEOD WINDMILLS

Plate 8: Example of a Late Gothic Revival Home, Located at 11680 Longwoods Road



Plate 9: Example of a Late Gothic Revival Style Home, Located at 11734 Longwoods Road





BUILT HERITAGE AND CULTURAL LANDSCAPE STUDY KENT BREEZE WIND FARMS AND MACLEOD WINDMILLS

There is only one home that falls specifically within the limits of the project area (Figure 2, 3 and 4). This yellow-sided home does not distinctively fall into a classification and can only be labelled as vernacular. It has been so substantially altered that it is impossible to ascertain its original appearance (Plate 10). The out buildings associated with this house are modern steel grain bins and a steel sided drive shed. There is no evidence that an older barn stood on the property which would help to date the home to a specific time period.

Plate 10: Early Twentieth Century, Vernacular Home, Located at 23845 Huffs Side Road



In addition to the one home that falls within the project area there are several homes, dating to the second half of the twentieth century that are closely surrounded by the project area. Plate 11 shows two homes that are located on the north side of Evergreen Line, surrounded by the project area and are typical examples of the types of homes located in the general vicinity (Figure 2). There are no identifiable historic structures standing within the project area limits.



Plate 11: Two 20th Century Homes, Located on the North Side of Evergreen Line



4.1.5.2 Buildings of Heritage Significance

The project team conducted a survey of both the project and study areas, with the intention of scoping the vicinity and obtaining a general impression as to the character and heritage value of its existing structures. The team considered aspects of the buildings such as approximate age, style, integrity, apparent condition, and particular architectural features.

Only one home falls within the limits of the specific project area and on an optioned property (Figure 2, 3 and 4). This yellow-sided home does not distinctively fall into a classification and can only be labelled as vernacular. It has been so substantially altered that it is impossible to ascertain its original appearance (Plate 10). The out buildings associated with this house are modern steel grain bins and a steel sided drive shed.

This home was evaluated according to Ontario Regulation 9/06 under the Ontario Heritage Act (OHA) in order to determine potential contextual or associative value. Table 1 summarizes this evaluation. According to Regulation 9/06 a property may be designated under section 29 of the OHA if it meets one or more of the criteria listed in Table 1. The home located at 23845 Huffs Side Road does not meet any of the criteria outlined in Regulation 9/06.



BUILT HERITAGE AND CULTURAL LANDSCAPE STUDY KENT BREEZE WIND FARMS AND MACLEOD WINDMILLS

Table 1: Evaluation of Home Located at 23845 Huffs Side Road, According to Ontario Regulation 9/06 under the Ontario Heritage Act

Criteria for Determining Cultural Heritage Value or Interest	Evaluation and Remarks
the property is a rare, unique, representative or early example of a style, type, expression, material or construction method	exterior of home has been substantially changed from its original condition, interior not examined
the property displays a high degree of craftsmanship or artistic merit	not noted
the property demonstrates a high degree of technical or scientific achievement	not noted
the property has direct associations with a theme, event, belief, person, activity, organization or institution that is significant to a community	nothing has been found in the historical record
the property yields or has the potential to yield, information that contributes to an understanding of a community or culture	research did not indicate any value
the property demonstrates or reflects the work or ideas of an architect, artist, builder, designer or theorist who is significant to a community	research did not indicate any value
the property is important in defining, maintaining or supporting the character of an area	research did not indicate any value
the property is physically, functionally, visually or historically linked to its surroundings	research did not indicate any value
the property is a landmark	research did not indicate any value



5.0 INDUSTRY

5.1 Description/Character

5.1.1 Mills

Grinding grain was of great importance to early settlers. The establishment of a mill was determined by the availability of power, the quantity of grain growing, and the presence of a population large enough to support the operations. The process of land clearing for agriculture saw the first removal of timber. The wood from clearing was necessary for both house and barn construction. As markets developed for lumber, sawmills were established. Water power was the principal source of power for early saw and grist mills.

Through the historical record it has been documented that during the early 19th century both a saw mill and grist mill were located south of the village of Kent Bridge on the south side of the Thames River. Both mills were operated by Frederick Arnold on the small seasonal creek that branches off from the Thames, today called the Julian Drain (Figure 1), but at the time referred to as Arnold's Creek (Lauriston, 1952:436). Due to the fact that the creek was seasonal, the power for this mill was said to have been unreliable (Lauriston, 1952:436). The mill is not indicated on the 1876 map or the 1881 map and there is no evidence on the current landscape of its former operation (Figure 7 and 8).

5.1.2 Electric Power

The specific date by which Camden Township obtained hydro has not been determined. A hydro corridor transects the study area (Plate 12) running east to west from north of Thamesville and follows Smoke Line Road (Figure 1).



BUILT HERITAGE AND CULTURAL LANDSCAPE STUDY KENT BREEZE WIND FARMS AND MACLEOD WINDMILLS

Plate 12: Hydro Corridor, Looking West on Corner of Smoke Line and Huffs Side Road





6.0 TRANSPORTATION

6.1 Description/Character

6.1.1 Railways

One rail line transects the project area (Plate 13) running parallel with the Concession Roads and north of Longwoods Road (Figure 1 and 2). This is the Canadian Pacific Railway which came through the area in 1889. The first express train to pass through the village of Kent Bridge was in 1890 and was an excursion to Guelph (Lauriston 1952:442).

Plate 13: Canadian Pacific Railway Line, Railway Bed, Looking West from Huffs Side Road



6.1.2 Roads / Highways

The first two concessions north of the Thames River in Camden Township are irregular as they followed the natural path of the Thames River. The township as a whole is triangular shaped and the road grid was laid out within this odd shape moving northward from the Thames.



BUILT HERITAGE AND CULTURAL LANDSCAPE STUDY KENT BREEZE WIND FARMS AND MACLEOD WINDMILLS

The concession roads that fall within the study area are primarily gravel or tar and chip with the exception of Longwoods Road and Mason Line. The side roads are also primarily gravel or tar and chip (Figure 2).

Longwoods Road provides the main east-west access to the region (Figure 2). The Longwoods Road is said to have followed the path of an original Aboriginal trail along the Thames River and had the infamous reputation of being muddy and impassable during certain times of the year (Hamil, 1951:158). Longwoods Road also known as Chatham-Kent Highway 2 was once part of the King's Highway 2 (Bever 2009). The King's Highway 2 was the predecessor of the 401, connecting Windsor to Montreal (Bever 2009). The use of Longwoods Road has significantly declined with the completion of the 401 in the late 1960's however it is still well used by the local inhabitants.



7.0 SUMMARY OF CULTURAL FEATURES

7.1 Introduction

The results of the background historic research and review of secondary source information has concluded that the study area has its historic origins in 19th century survey and settlement. There is a homogeneous land use pattern existing throughout the study area and project area consisting of agricultural fields, pastures, woodlots and associated farmsteads. Settlement and development of agriculture in Kent County moved from pioneer farming in the early 19th century to wheat growing and mixed farming in the late 19th century through to the present. The surviving farmsteads located within the greater study area represent shifting eras of rural change from the mid-19th century onwards.

7.2 Cultural Landscape

The study area and project areas are defined as a rural cultural landscape consisting of a homogeneous land use pattern of agricultural fields, pastures, woodlots and associated farmsteads. The initial survey of Camden Township had profound effects on the modern cultural heritage landscape. The grid from the survey ultimately established the road and settlement patterns. The farmsteads are primarily clustered along the concession roads and in most cases the structures that exist along the side roads were built long after the initial phase of settlement. The village of Kent Bridge blends in as part of the overall rural cultural landscape (Figure 2).

7.3 Built Heritage

Farmsteads

The surviving farmsteads within the greater study area represent changing eras of rural land use from the mid-19th century onwards. This can be seen in the variety of domestic architecture and barn designs. A detailed inventory was not completed, but representative structures can be seen in Plates 2 and 3.

The one farm home that is located specifically within the project area has been labelled vernacular and did not meet any of the criteria for determining cultural heritage value or interest as outlined in OHA Regulation 9/06. Sufficient homesteads survive within the greater study area to provide examples of several architectural styles dating from the mid-19th century onwards (Plates 6, 8, 9 and 10, Figure 2).

Social Institutions

With regards to rural institutions, two school houses and three cemeteries are still located within the study area (Figure 2). There is no evidence that any such institutions were ever located specifically within the project area.



Rural Industry

There is no visible evidence of historic rural industry within the project area or study area. However, more recent industrial development is evident within the study area. The corridor of hydro electric transmission lines is a fairly prominent industrial feature as it transects the project area (Figure 1, Plate 12).

Transportation

The Canadian Pacific Railway Line is the most prominent transportation related cultural feature in the project area and study area landscape (Figure 2, Plate 13). The roads within the project area and study area are based on the original transportation grid established in the early 19th century, with Longwoods Road being the most prominent (Figure 2).



8.0 IMPACT ASSESSMENT

8.1 Project Description

The project undertaking consists of the installation of 10 wind turbines and associated collector cables; switching stations and access roads within the defined project area of Camden Township (Figure 3). The turbines are located in agricultural fields and due to an REA 550 metre noise setback for turbines from residential units (that are not on optioned properties), all of the turbines are more than 550 m away from buildings with the exception of the one house that is located on an optioned property which falls right on the edge of the 550 meter buffer (Figure 4). All of the collector cables will be placed below ground on optioned properties. The turbine access roads cut through agricultural land on optioned properties and avoid all significant woodlots (Figure 3 and 4). The two switching stations will be constructed on the northwest and northeast corners of Smoke Line and Huffs Road on optioned properties (Figure 3).

8.2 Potential Impacts to Built Heritage Features and Cultural Heritage Landscapes and Mitigation Measures

An undertaking can have direct or indirect adverse impacts on built heritage features and cultural heritage landscapes. Tables 2 and 3 outline possible direct and indirect impacts, the relevance to this project and the mitigation options.

Table 2: Types of Direct Impacts and Relevance to the Project

Direct Impacts (structure will be physically impacted by an undertaking)	Relevance to this Project	Mitigation Measures
Destruction - of any, or part of any, significant heritage attribute or feature	not applicable: no heritage attribute or feature to be demolished	none recommended
Vibration Damages - to a structure during construction or because of subsequent changes to the building or adjacent land use	not applicable: vibration impacts not anticipated with this project	none recommended
Alteration - that is not sympathetic, or is incompatible, with the historic fabric or appearance	not applicable: no alterations anticipated	none recommended



**BUILT HERITAGE AND CULTURAL LANDSCAPE STUDY
KENT BREEZE WIND FARMS AND MACLEOD WINDMILLS**

Table 3: Types of Indirect Impacts, Relevance to the Project and Mitigation Options

Indirect Impacts (character of a structure or landscape will be impacted by an undertaking)	Relevance to this Project	Mitigation Measures
Shadows - created that alter the appearance of a heritage attribute or change the visibility of a natural feature or plantings	not applicable: large distance from turbines	none recommended
Isolation - of a heritage attribute from its surrounding environment, context or a significant relationship	not applicable: nature of wind turbine operations will not isolate features	none recommended
Land Disturbance - such as a change in grade that alters historic patterns of topography or drainage	not applicable: no significant alteration to land	none recommended
A Change in Land Use - such as adding industrial features to an agricultural area	Existing land use is agriculture. Proposed addition of energy production may change visual character of agricultural land use.	The visual impact of the two switching stations (Figure 3) should be minimized with appropriate landscape design such as massing and screening.
Obstruction - of significant views or vistas from, within, or to a built and natural feature	Flat land is distinctive element of the cultural landscape, anticipated that turbines will be prominent, new visual features in landscape.	The visual impact of the two switching stations (Figure 3) should be minimized with appropriate landscape design such as massing and screening.



9.0 SUMMARY AND RECOMMENDATIONS

The study area and project area have been determined to represent one homogenous rural cultural heritage landscape, with no separate or highly sensitive cultural landscapes identified. The construction of the project turbines and associated structures will have a visual impact on the rural cultural heritage landscape of the project and study areas. The land is flat and it is anticipated that the turbines will be prominent, new visual features in the landscape. It is recommended that the visual impact of the two proposed switching stations that are to be located at the intersection of Smoke Line and Huffs Side Road should be minimized with appropriate landscape design, such as massing and screening in order to lessen the impact on the surrounding cultural heritage landscape.

A number of historic structures are located within the larger study area, but no direct or indirect impacts on these structures are anticipated. One farmstead is located on an optioned property within the project area and has been evaluated according to OHA Regulation 9/06 and determined not to be a feature of cultural heritage value or interest. Regardless, due to the REA regulations, this farmstead is located along the edge of the 550 metre noise setback and therefore no direct or indirect impacts are anticipated.

The final layout for the proposed turbine locations and associated structures, access roads and underground cables were evaluated with regards to potential direct and indirect impacts to built heritage features and cultural landscapes. No direct or indirect impacts are anticipated.

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10.0 IMPORTANT INFORMATION AND LIMITATIONS OF THIS REPORT

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Unless otherwise stated, the suggestions, recommendations and opinions given in this report are intended only for the guidance of the Client in the design of the specific project.



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