

**Initial Heritage Assessment Report:
Built Heritage Resources and Cultural Heritage Landscapes**

**Conestogo Wind Energy Centre
Wellington County, Ontario**

FIT-FU99SSXJ

Prepared for:

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EXECUTIVE SUMMARY

Archaeological Services Inc. was contracted by Genivar, Markham, on behalf of NextEra Energy Canada, to conduct an initial heritage assessment for the proposed Conestogo Wind Energy Centre in the County of Wellington, Ontario. NextEra is applying for a Renewable Energy Approval under Ontario Regulation 359/09 of the *Green Energy Economy Act*.

The results of background historic research and a review of secondary source material confirmed that lands located within the study area were first surveyed and settled in the mid-nineteenth century. The results of data collection examining municipal and provincial heritage inventories confirmed that no properties located within a 125 m buffer of the study area have been designated under Part IV or Part V of the *Ontario Heritage Act* or listed on a municipal heritage register or inventory.

The results of a field survey confirmed that lands within the study area continue to be heavily farmed and generally retain a rural, nineteenth century agricultural setting. Analysis of potential impacts of the undertaking confirmed that four nineteenth century farmscapes and two historic roadsides have the potential to have their setting and character altered through the introduction of various renewable energy infrastructure components, such as turbines, laydown areas, transformers, and access roads etc. Individual built heritage resources and cultural heritage landscape elements located within these farmscapes are not expected to be displaced or removed. However, the overall scenic quality, setting, and character of these farmscapes and roadsides will be temporarily altered by the undertaking. Two historic roadsides, which retain elements that are evocative of their nineteenth century origins will also be altered through the introduction of access roads to turbine sites.

Although these properties have been identified as being subject to indirect impacts, the magnitude and significance of these impacts is not considered to be significantly adverse, warranting major modifications to the proposed turbine layout. While impacts will be temporary, given the expected 25 year operating life of the infrastructure, the proposed undertaking will not remove or displace resources. Additionally, none of these resources have been designated under the *Ontario Heritage Act*, nor have they been listed on a municipal heritage inventory.

Based on the results of background research and data collection, field survey, and analysis of potential impacts of the undertaking, the following recommendations have been developed:

1. The proposed undertaking should be planned to avoid direct impacts to cultural heritage resources. Should it be determined that a cultural heritage resource will be removed, a detailed heritage assessment should be undertaken to determine the resource's specific heritage significance and to develop appropriate conservation and/or mitigation measures.
2. Should turbine layouts and locations of related infrastructure (including lay down areas, transformers, underground electrical collectors, access roads, storage areas, crane paths) be modified to result in impacts to different property parcels, a qualified heritage consultant



should be consulted to identify implications of these modifications on cultural heritage resources.

3. Heritage recordings of the four farmscapes and two roadscares should be undertaken in advance of construction to document the existing conditions of these resources and to serve as an archival resource. Permission to enter the four farmscapes should be secured for the purposes of conducting photographic documentation of built heritage resources and cultural heritage landscape elements located within the entire limits of the property. Detailed land use histories should be included in the heritage recordings of the four farmscapes. Heritage recordings of the two roadscares should include photographic documentation, a township history, and information regarding development of the local road network, where available. Heritage recordings should be produced on archival paper and submitted to the Clerk in the Township of Mapleton and an appropriate local repository.
4. This report should be submitted to the Ministry of Tourism and Culture for review and comment.



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1.0 INTRODUCTION

Archaeological Services Inc. (ASI) was contracted by Genivar, Markham, on behalf of NextEra Energy Canada to conduct an initial cultural heritage assessment for the proposed Conestogo Wind Energy Centre in Wellington County, Ontario (Figure 1). The overall study area is “L-shaped” and is generally bounded, with a 125 metre buffer, by Sideroad 3 to the west, 16th Line to the north, Wellington Road 12 to the west again, Welling Road 109 at Arthur, Highway 6 and Sideroad 12 to the east, and 14th Line to the South. NextEra is applying for a Renewable Energy Approval under O. Reg. 359/09 of the *Green Energy Economy Act*. Appendix A provides contact information for relevant personnel at NextEra.

The purpose of this report is to identify heritage sensitivities in the study area and which may be subject to impacts. It will present an inventory of built heritage and cultural heritage landscapes located in the study area that may be subject to impacts and require more detail heritage evaluation. This report will also recommend appropriate requirements for completion of a separate detailed heritage assessment, including resource evaluation, measurements of impacts, and development of recommendation measures. This report has been completed to partially fulfill the requirements of O. Reg. 359/09, specifically s.20(1) and s.23. This research was conducted under the project direction of Rebecca A. Sciarra, Cultural Heritage Specialist.

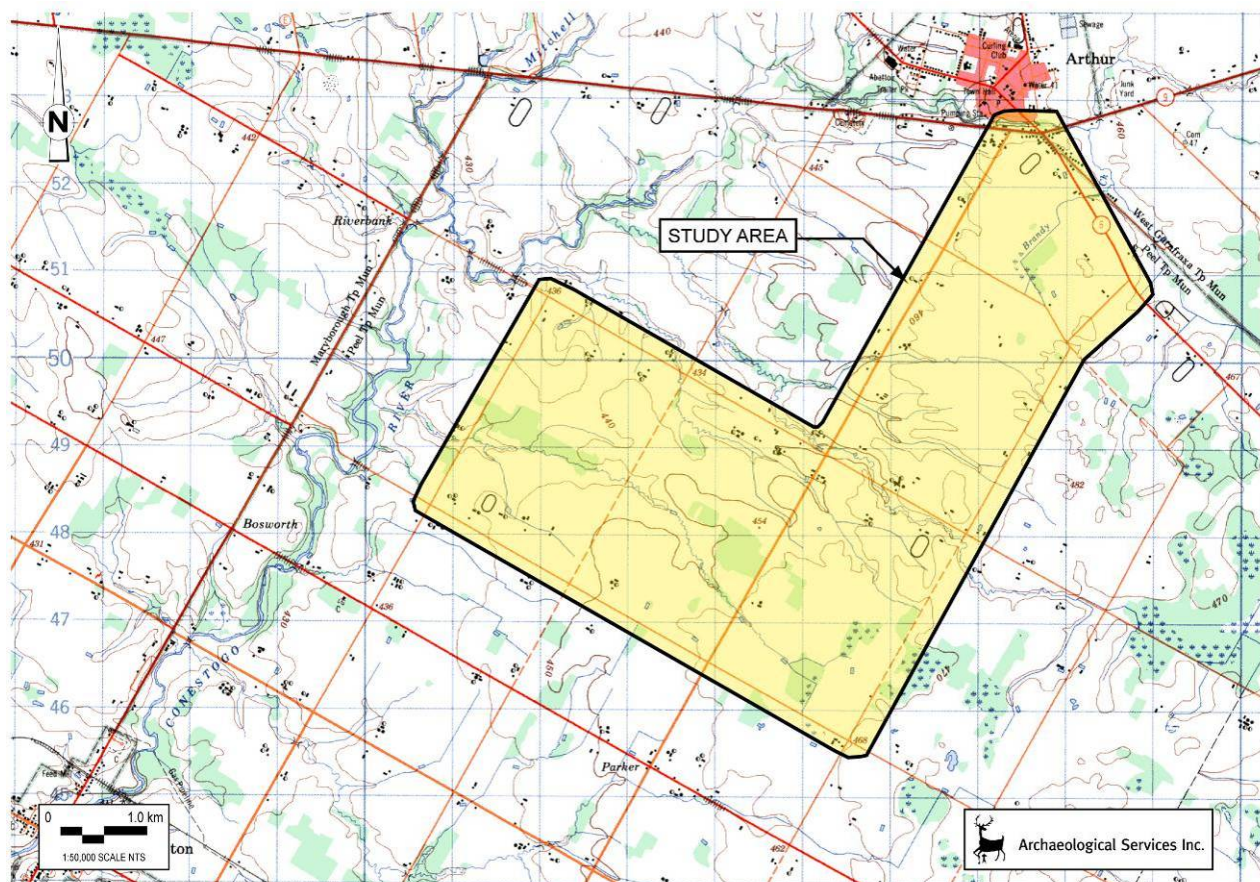


Figure 1: Location of the study area in Mapleton Township, County of Wellington.

Base Map: NTS Sheet 40 P/10, Conestogo

2.0 BUILT HERITAGE RESOURCE AND CULTURAL HERITAGE LANDSCAPE ASSESSMENT CONTEXT

2.1 Approach and Methodology

As part of heritage assessments conducted under the Renewable Energy Approvals process, it is required that the following study components be undertaken: desk-top data collection and consultation with local heritage stakeholders; field review; identification of cultural heritage resources; evaluation of cultural heritage resources to be potentially impacted; description of proposed developments or site alterations; measurement of impacts; and consideration of alternatives, mitigation, and conservation methods. It should be noted that requirements to conduct a heritage evaluation can only be determined following a preliminary heritage assessment. It should also be noted that heritage evaluations must be completed in order to measure impacts of the undertaking and to develop appropriate alternatives, mitigation measures, or conservation methods. Normally, a multi-phased study approach is undertaken to provide the most suitable amount of information appropriate at various project stages. A preliminary heritage assessment is first conducted to identify heritage sensitivities. Based on the results of this preliminary assessment, requirements for a detailed heritage assessment are then recommended.

O. Reg. 359/09, s. 20(1) and s. 23 requires that applicable projects must determine if there will be an impact to any heritage resources or protected properties as described in s. 19, and then carry out a heritage assessment under s. 23. Heritage resources are defined under O. Reg 359/09 as “real property that is of cultural heritage value or interest and may include a building, structure, landscape or other feature of real property” (Part 1, Section 1). This assessment addresses above ground cultural heritage resources over 40 years old. Use of a 40 year old threshold is a guiding principle when conducting a preliminary identification of cultural heritage resources (Ministry of Transportation 2006; Ministry of Transportation 2007; Ontario Realty Corporation 2007). While identification of a resource that is 40 years old or older does not confer outright heritage significance, this threshold provides a means to collect information about resources that may retain heritage value. Similarly, if a resource is slightly younger than 40 years old, this does not preclude the resource from retaining heritage value.

The proposed wind farm project has the potential to affect cultural heritage resources in a variety of ways. These include the loss or displacement of resources through removal or demolition and the disruption of resources by introducing physical, visual, audible or atmospheric elements that are not in keeping with the resources and/or their setting.

For the purposes of this assessment, the term cultural heritage resources was used to describe both cultural landscapes and built heritage features. A cultural landscape is perceived as a collection of individual built heritage features and other related features that together form farm complexes, roadsides and nucleated settlements. Built heritage features are typically individual buildings or structures that may be associated with a variety of human activities, such as historical settlement and patterns of architectural development.

The *Planning Act* (1990) and related *Provincial Policy Statement (PPS)* make a number of provisions relating to heritage conservation. One of the general purposes of the *Planning Act* is to integrate matters of provincial interest in provincial and municipal planning decisions. In order to inform all those involved in planning activities of the scope of these matters of provincial interest, Section 2 of the *Planning Act* provides an extensive listing. These matters of provincial interest shall be regarded when certain authorities, including the council of a municipality, carry out their responsibilities under the *Act*. One of these provincial interests is directly concerned with:



2.0 ...protecting cultural heritage and archaeological resources for their economic, environmental, and social benefits.

Part 4.5 of the *PPS* states that:

Comprehensive, integrated and long-term planning is best achieved through municipal official plans. Municipal official plans shall identify provincial interests and set out appropriate land use designations and policies. Municipal official plans should also coordinate cross-boundary matters to complement the actions of other planning authorities and promote mutually beneficial solutions.

Municipal official plans shall provide clear, reasonable and attainable policies to protect provincial interests and direct development to suitable areas.

In order to protect provincial interests, planning authorities shall keep their official plans up-to-date with this Provincial Policy Statement. The policies of this Provincial Policy Statement continue to apply after adoption and approval of a municipal official plan.

Those policies of particular relevance for the conservation of heritage features are contained in Section 2-Wise Use and Management of Resources, wherein Subsection 2.6 - Cultural Heritage and Archaeological Resources, makes the following provisions:

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

A number of definitions that have specific meanings for use in a policy context accompany the policy statement. These definitions include built heritage resources and cultural heritage landscapes.

Built heritage resources mean one or more buildings, structures, monuments, installations or remains associated with architectural, cultural, social, political, economic, or military history, and identified as being important to a community.

Cultural heritage landscapes mean a defined geographical area of heritage significance that has been modified by human activities. Such an area is valued by a community, and is of significance to the understanding of the history of a people or place. Examples include farmscapes, historic settlements, parks, gardens, battlefields, mainstreets and neighbourhoods, cemeteries, trailways, and industrial complexes of cultural heritage value (*PPS* 2005).

In addition, significance is also more generally defined. It is assigned a specific meaning according to the subject matter or policy context, such as wetlands or ecologically important areas. With regard to cultural heritage and archaeology resources, resources of significance are those that are valued for the important contribution they make to our understanding of the history of a place, an event, or a people (*PPS* 2005).

Criteria for determining significance for the resources are recommended by the Province, but municipal approaches that achieve or exceed the same objective may also be used. While some significant resources may already be identified and inventoried by official sources, the significance of others can only be determined after evaluation (*PPS* 2005).

Accordingly, the foregoing guidelines and relevant policy statement were used to guide the scope and methodology of the cultural heritage assessment.



2.2 Data Collection

In the course of the cultural heritage assessment, all potentially affected cultural heritage resources within the study area are subject to inventory and photographic documentation. Short form names are usually applied to each resource type, (e.g. barn, residence). Generally, when conducting a preliminary identification of cultural heritage resources, three stages of research and data collection are undertaken to appropriately establish the potential for and existence of cultural heritage resources in a particular geographic area.

Background historic research, which includes consultation of primary and secondary source research and historic mapping, is undertaken to identify early settlement patterns and broad agents or themes of change in a study area. This stage in the data collection process enables the researcher to determine the presence of sensitive heritage areas that correspond to nineteenth and twentieth century settlement and development patterns. To augment data collected during this stage of the research process, federal, provincial, and municipal databases and/or agencies are consulted to obtain information about specific properties that have been previously identified and/or designated as retaining cultural heritage value. Typically, resources identified during these stages of the research process are reflective of particular architectural styles, associated with an important person, place, or event, and contribute to the contextual facets of a particular place, neighbourhood, or intersection.

A field review, in the form of a windshield survey, is then undertaken to confirm the location and condition of previously identified cultural heritage resources. The field review is also utilized to identify cultural heritage resources that have not been previously identified on federal, provincial, or municipal databases and which have the potential to be impacted by the undertaking.

Several investigative criteria are utilized during the field review to appropriately identify new cultural heritage resources. These investigative criteria are derived from provincial guidelines, definitions, and past experience. A built structure or landscape is identified as a cultural heritage resource that should be considered during the course of the assessment, if the resource meets a combination of the following criteria:

- It is 40 years or older;
- It is a rare, unique, representative or early example of a style, type, expression, material or construction method;
- It displays a high degree of craftsmanship or artistic merit;
- It demonstrates a high degree of technical or scientific achievement;
- The site and/or structure retains original stylistic features and has not been irreversibly altered so as to destroy its integrity;
- It has a direct association with a theme, event, belief, person, activity, organization, or institution that is significant to: the Townships of Mapleton and Wellington North; the Province of Ontario; Canada; or the world heritage list;
- It yields, or had the potential to yield, information that contributes to an understanding of: the Townships of Mapleton and Wellington North; the Province of Ontario; Canada; or the world heritage list;
- It demonstrates or reflects the work or ideas of an architect, artist builder, designer, or theorist who is significant to: the Townships of Mapleton and Wellington North the Province of Ontario; Canada; or the world heritage list;
- It is important in defining, maintaining, or supporting the character of an area;



- It is physically, functionally, visually, or historically linked to its surroundings;
- It is a landmark;
- It illustrates a significant phase in the development of the community or a major change or turning point in the community's history;
- The landscape contains a structure other than a building (fencing, culvert, public art, statue, etc.) that is associated with the history or daily life of that area or region; or
- There is evidence of previous historic and/or existing agricultural practices (e.g. terracing, deforestation, complex water canalization, apple orchards, vineyards, etc.).

If a resource satisfies an appropriate combination of these criteria, it will be identified as a cultural heritage resource. The identified resource will be subject to further research during the separate detailed cultural heritage assessment if required. Typically, further historical research and consultation is required to determine the specific significance of the identified cultural heritage resource.

When identifying cultural heritage landscapes, the following categories are typically utilized for the purposes of the classification during the field review:

Farm complexes:	comprise two or more buildings, one of which must be a farmhouse or barn, and may include a tree-lined drive, tree windbreaks, fences, domestic gardens and small orchards.
Roadscapes:	generally two-lanes in width with absence of shoulders or narrow shoulders only, ditches, tree lines, bridges, culverts and other associated features.
Waterscapes:	waterway features that contribute to the overall character of the cultural heritage landscape, usually in relation to their influence on historic development and settlement patterns.
Railscapes:	active or inactive railway lines or railway rights of way and associated features.
Historical settlements:	groupings of two or more structures with a commonly applied name.
Streetscapes:	generally consists of a paved road found in a more urban setting, and may include a series of houses that would have been built in the same time period.
Historical agricultural Landscapes:	generally comprises a historically rooted settlement and farming pattern that reflects a recognizable arrangement of fields within a lot and may have associated agricultural outbuildings and structures
Cemeteries:	land used for the burial of human remains.

Results of data collection are contained in Section 3.0; while Sections 4.0 and 5.0 contain conclusions and recommendations with respect to the undertaking.



3.0 BUILT HERITAGE RESOURCE AND CULTURAL HERITAGE LANDSCAPE ASSESSMENT

3.1 Introduction

This section provides a brief summary of historic research and a description of above ground cultural heritage resources that may be affected by the proposed Conestogo Wind Energy Centre. Historically, the study area is mostly located in the former Township of Peel, Wellington County, with the northern-most section of the study area located at the junction of the Townships of Arthur, Luther, and Garafraxa. It is now mostly located within the Township of Mapleton, which was created with the amalgamation of the Townships of Peel and Mayborough, and the Village of Drayton, and partly in the Township of Wellington North, which was formed by the amalgamation of the Township of Arthur, Village of Arthur, the Township of West Luther, and the Town of Mount Forest.

3.2 Township Survey and Settlement

The first non-aboriginal settlers in the former Township of Peel area were fugitive African-American slaves who escaped to Canada following the Underground Railroad. It is said that Emancipation Day, which commemorated the abolition of slavery in the British Colonies in 1834, was widely celebrated in the area, white residents joining their black neighbours in celebration (Mapleton n.d.).

The Garafraxa Road along the northeast edge of Peel Township was laid out in 1837, connecting Fergus to the southeast with Mount Forest to the northwest. In 1840-1841 free 50 acre lots adjoining the road were surveyed, thus precipitating a rush to settle along the road (Sawden 1952: 17-18). European settlers came to the area in the mid-1800s intent on working the land. While the population increased at a substantial rate, many of the settlers left in the late 1850s following unexpected harsh weather and poor crops (Mapleton n.d.).

The Village of Arthur, named after Arthur Wellesley, Duke of Wellington, was first surveyed in 1841 and officially surveyed in 1846. Community growth was initiated by the construction of saw and grist mills. 1851 saw the opening of the village post office, as well as the organization of the first church and school (Township of Wellington North n.d.).

Completion of two rail lines through the area facilitated commercial activity in the last quarter of the nineteenth century. The 1871 Grand Trunk Railway intersects the southern corner of the Township of Peel study area, and the 1874 Toronto, Grey and Bruce Railway line extends eastward and northward from Arthur (Andreae 1997:128-129).

In the early 1900s, Old Order Mennonites from Pennsylvania began arriving in the area, establishing farms and roots for their families. At the end of World War II, several Dutch families immigrated to the rural areas of the Township (Mapleton n.d.).

3.3 Review of Historic Mapping

The 1906 *Illustrated Atlas of the County of Wellington* was reviewed to determine the potential for the presence of cultural heritage resources located within the study area. Historically, the study area with its 125-metre buffer is almost entirely located within the former Township of Peel (Figure 2). Very small



portions of the study area are also located in the former Townships of Arthur, Luther, and Garafraxa. The study area is partially or completely located within the following Lots and Concessions:

Township of Peel

- Lots 3 to 13, Concession XIV
- Lots 3 to 13, Concession XV
- Lots 3 to 13, Concession XVI
- Lots 3 to 13, Concession XVII
- Lots 9 to 13, Concession XVIII
- Lots 9 to 12, Concession XIX
- Lots 18 to 23, Concession B
- Lots 18 to 23, Concession A

Township of Arthur

- not specified – located within the historic settlement of Arthur

Township of Luther

- Lot 1, Concession I

Township of Garafraxa

- Lots 36 and 37, Concession I

A number of property owners/residents and historic features are illustrated within or adjacent to the study area. The majority of the illustrated features are individual farm houses. Other significant historical features that are illustrated include the historic settlement of Arthur, one school, and one saw or grist mill. It should be noted, however, that not all features of interest appear on the historic maps. For example, features of interest were not mapped systematically in the Ontario series of historical atlases, given that they were financed by subscription, and subscribers were given preference with regard to the level of detail provided on the maps. Moreover, not every feature of interest would have been within the scope of the maps. Tables 1 to 3 provides a summary of the study area's historic location and associated features depicted on historic mapping of the former Townships of Peel, Luther, and Garafraxa.





Figure 2: Approximate location of the study area superimposed on portions of the former Townships of Peel, Arthur, Luther, and Garafraxa in the 1906 *Illustrated Atlas of the County of Wellington*.

Table 1: Summary of 1906 Property Owners and Historic Features within the Study Area			
Con.#	Lot#	Property Owner(s)/Resident(s)	Historic Feature(s)
<i>Peel Township</i>			
XIV	3	MClellan (north half)	---
	4	Mrs. Lowes (north half)	Residence
	5	C. Lowes (west half) W. Tucker (east half)	Residence ---
	6	J. Burns (west half) C. Casey (east half)	Residence Residence
	7	A. Walker (north half)	---
	8	T. Sun (northwest quarter) R. McKim (east half)	Residence ---
	9	R. McKim (west half) J. Canrar (east half)	--- ---
	10	R. Boyle (west half) F. McGuire (east half)	--- ---
	11	S. McKee (west half) G. McKee (northeast quarter)	--- Residence
	12	E. Lynch (west quarter) Mrs. Lynch (east quarter)	Residence Residence
	13	B. Burns (west half)	Residence
XV	3	E. Green (north half) W. Green (south half)	Residence ---
	4	A. Johnston (west half) J. Johnston (east half)	Residence Residence
	5	J. Tucker (west half) W. Tucker (east half)	Residence Residence
	6	H. Trask (west half) J. Conner (southeast quarter) P. Morris (northeast quarter)	Residence Residence Residence
	7	P. Farley (west half) Mrs. Hanlon (east half)	Residence ---
	8	T. Sullivan (west half) R. McKun (east half)	Residence ---
	9	R. McKun (west half) G. Thompson (east half)	--- Residence
	10	J. Allen (southwest quarter) W. Raycroft (northwest quarter) N. Allen (east half)	Residence --- ---
	11	A. Jordan (west half) W. Whistler (east half)	Residence ---
	12	M. Jordan (west half) J. Scott (east half)	Residence Residence
	13	M. Tyner (west half)	Residence
XVI	3	J. T. Harvey (east half)	Residence
	4	J. Riordan (west half) E. Brown (east half)	Residence Residence
	5	P. Farley (west half) Pte. Farley (east half)	Residence Residence
	6	J. Harvey (west half) J. Conlan (east half)	--- School
	7	M. Cainer (southwest quarter) E. Cainer (northwest quarter)	--- Residence



Table 1: Summary of 1906 Property Owners and Historic Features within the Study Area			
Con.#	Lot#	Property Owner(s)/Resident(s)	Historic Feature(s)
		O. Conlan (southeast quarter) Mrs Conlan (northeast quarter)	--- ---
	8	C. Casey (west half) T. Sullivan (east half)	Residence Residence
	9	T. Harcourt (west half) J. Harcourt (east half)	Residence Residence; Roadscape
	10	P. Owens (west quarter) T. Kelly (centre-west quarter) T. Sherridan (centre-east quarter) J. Sherridan (east quarter)	Residence Residence Residence Residence
	11	E. McCann (west half) J. Sherridan (east half)	Residence Residence
	12	W. Harvey (west half) P. Bushlin (east half)	Residence; Saw or Grist Mill Residence
	13	J. Madden	---
XVII	3	J. Kelly (west half)	---
	4	J. Donovan (west half) M. Farrell (east half)	Residence Residence
	5	E. Gainer (west quarter) J. Gainer (centre-west quarter) Mr. McDaniel (east half)	Residence Residence Residence
	6	T. Sullivan (south half)	Residence
	7	M. Hoolahan (west half) J. Farrell (east half)	--- ---
	8	P. Farrell (west quarter) M. Farrell (remainder)	--- ---
	9	M. Harcourt (north half) J. Harcourt (south half)	--- Residence
	10	B. Campbell (south half) T. Campbell (north half)	Residence Residence
	11	[---] Callaghan (southwest corner) J. Callaghan (remainder of west half) A. Callaghan (east half)	Residence Residence Residence
	12	E.J. Clarke (south half) R. Morrison (north half)	Residence Residence
	13	F. O'Neil (north third) E. Madden (centre third) D. Madden (south third)	Residence Residence ---
XVIII	9	M. McMahon (north half) M. Scanlon (south half)	Residence Residence
	10	P.M. Kirby (south half) J. Col. Tey (north half)	Residence Residence
	11	R. Moynak (west half) P. Marroney (east half)	Residence Residence
	12	J. Welsh (south half) T. Fitzpatrick (north half)	Residence Residence
	13	F. O'Neil (south third) E. Noble (centre third) J. Noble (north third)	--- Residence ---
XIX	9	E. O'Callaghan (south half) Cars. O'Callaghan (north half)	--- ---



Table 1: Summary of 1906 Property Owners and Historic Features within the Study Area			
Con.#	Lot#	Property Owner(s)/Resident(s)	Historic Feature(s)
	10-12	M. Fitzgerald F. Fitzgerald	Residence Residence
B	18	P. Coughlan	Residence
	19	W. Thompson	Residence
	20	W. Hathaway	Residence
	21	E. Byrne	Residence
	22	P.O'Riley	Residence
	23	C. O'Callaghan	Residence
A	18	J. Gill	---
	19-23	J. Gill	Residence
<i>Arthur Township</i>			
n/a	n/a	n/a	Historic Settlement (Arthur)
<i>Luther Township</i>			
I	1	S. Guanl	---
<i>Garafraxa Township</i>			
I	37	[L. Fortier??]	Residence
	36	A. Ballantine	Residence

3.4 Existing Conditions

In order to make a preliminary identification of existing built heritage resources and cultural heritage landscapes within the study area, the Ministry of Culture's Ontario Heritage Properties Database was consulted. The Clerk's Department at the Townships of Mapleton and Wellington North were also contacted and the community websites were consulted to collect relevant data. A review of the provincial database revealed that there were no heritage properties designated under the *Ontario Heritage Act* within the study area. Communications with the Townships also confirmed that no properties located in or adjacent to the study area have been designated under Part IV or V of the *Ontario Heritage Act* or listed on a municipal heritage register.¹

A field review was undertaken by Rebecca Sciarra, ASI in July 2010 to document the existing conditions of the study area and to identify if any previously unidentified cultural heritage resources were located in the study area and which would be subject to impacts.

To assess impacts of the undertaking, field review maps were prepared to show the following proposed infrastructure. It is expected that the proposed infrastructure will have a 25 year operating life.

- Wind turbine locations with a 15 m buffer²;
- Transformer location with a 5 and 10 acre buffer³;

¹ Patty Sinnamon, CAO/Clerk at Mapleton Township, telephone communication, July 6 2010; Lorraine Heinbuch, Clerk at Township of Wellington North, telephone communication July 7 2010. The Townships of Mapleton and Wellington North do not have inventories of cultural heritage resources.

² As of July 6 2010, wind turbine locations had not been finalized and were identified to have the potential to shift from the currently proposed location within a 15 m area. A 15 m buffer was also used to account for footprints of potential laydown areas.



- Temporary Construction Laydown Area;
- Crane paths;
- Access roads;
- Proposed overhead electrical lines; and
- Proposed underground electrical collectors.

The field review was conducted to collect information necessary to describe the existing conditions of the entire study area. Data and photographic documentation was collected to identify cultural heritage resources that may be directly or indirectly impacted by the undertaking, and in particular the various infrastructure components described above. In this regard, the field review focused on entire lots where turbines, access roads, underground collector wires, transformers, and overhead wires are proposed (based on spatial data received July 7th, 2010).

The overall study area can be described as generally rural-agricultural in character and setting. It is comprised of level, gently undulating fields that have been carved out into large parcels with approximately 300 metre frontages and depths of approximately 1.3 kilometres deep (Plate 1). In some cases, these large parcels have been severed to accommodate modern residential subdivision or have been combined for large scale agricultural operations (Plate 2). The study area is also characterized by a series of meandering watercourses and associated valleylands (Plate 3). These watercourses are tributaries of the Conestogo River.

The study area is situated below the historic settlement of Arthur but is physically and visually disconnected from it by Highway 109 (Plate 4). A number of nineteenth and early twentieth century farmsteads and associated agricultural complexes are located along the various concession roads, all of which are considered historic thoroughfares. In many cases, these older farmsteads continue to be actively farmed and continue to be situated on large parcels of land and retain landscape features such as long, tree-lined entrance drives, generous setbacks from the road right-of-way, and vegetative screening and windbreaks at property boundary lines. The study area also evidences development of modern and large scale agricultural buildings as well as mid to late twentieth century residential construction.

Table 2 identifies cultural heritage resources located in the study area which have been identified as having the potential to be impacted by the undertaking. Section 6.0 provides location mapping of these resources.

³ As of July 6 2010, the specific location of storage infrastructure had not yet been determined. However, it was confirmed, that storage infrastructure or temporary office buildings would be located within 5 – 10 acres of the transformer location.





Plate 1: Northwest across flat terrain from Sideroad 6, approximately 740 m north of 14th Line.



Plate 2: Example of mid-twentieth century residential subdivision and construction on the west side of Wellington Road 12, just south of 16th Line.



Plate 3: Looking west at meandering tributary and vegetation from Sideroad 5, approximately 1.3 km north of 14th Line.



Plate 4: North at Wellington Road 109 and Wellington Road 12 intersection, showing physical and visual barrier between study area and Arthur, which is located to the north.





Table 2: Conestogo Wind Energy Centre – Identified Cultural Heritage Landscapes (CHLs)						
Feature	Location	Feature Type	Description/Comment*	Recognition/Reference(s)	Photo	Potential Impact
CHL 1	7810 16 th Line	Farmscape	This property contains a mid-to-late nineteenth century 1 ½ storey Ontario Gothic farmhouse of frame construction. It features a plaster or stucco exterior. Its foundations are unknown. It appears to have retained original window trim and window arrangement. Its front façade features a boldly pitched central dormer with pointed arch window. It features a metal roof. Multiple outbuildings are extant on the property and include a gable roof barn with a vertical plank exterior and metal roof. The residential structure is accessed by a long, tree-lined entrance drive. Lands in front of the residence and to the west are actively cultivated.	Identified during the field review.		The proposed undertaking has the potential to alter the nineteenth century, agricultural setting of this property through the introduction of Turbine No. 1 and associated access road at the rear of the parcel.
CHL 2	7788 16 th Line	Farmscape	This property contains a mid-to-late nineteenth century 1 ½ storey Ontario Gothic farmhouse of frame construction. It features a plaster or stucco exterior. Its foundations are unknown. A modern addition with a brick exterior has been constructed on the rear of the residence. The adjacent barn complex appears to be of modern construction, featuring two concrete silos and a gable roofed barn. A long, tree-lined entrance drive provides access to the structure. Lands to the south appear to be actively cultivated.	Identified during the field review.		The proposed undertaking has the potential to alter the nineteenth century, agricultural setting of this property through the introduction of: a transformer along its eastern edge approximately 300 – 400 metres east of the agricultural complex; Turbines No. 2 and 3 and access roads at the rear of the parcel; an underground electrical collector along the property's eastern boundary; a temporary construction laydown area at the rear of the parcel; and a crane path at the rear of the parcel.





Table 2: Conestogo Wind Energy Centre – Identified Cultural Heritage Landscapes (CHLs)						
Feature	Location	Feature Type	Description/Comment*	Recognition/Reference(s)	Photo	Potential Impact
CHL 3	7708 16 th Line	Farmscape	This property contains an early twentieth century 2 storey farmstead of frame construction. It features vinyl siding and central single brick chimney stack. Its foundations are unknown. A large complex of agricultural buildings are located to the east of the residence, and may contain early twentieth century structures. The property is access by a long, tree-lined entrance drive. Lands to the south appear to be actively cultivated.	Identified during the field review.		The proposed undertaking has the potential to alter the early twentieth century, agricultural setting of the property through the introduction of Turbine No. 6 and associated access roads.
CHL 4	Sideroad 6	Roadscape	This road is a historic thoroughfare and retains features and elements associated with the adjacent rural, nineteenth century setting. The road features: a very narrow right-of-way; gravel surface; lacks curbs, ditches or shoulders; and is framed by various hedgerows, vegetative screening, and mature deciduous trees.	Identified during the field review.		The proposed undertaking has the potential to alter this historic thoroughfare, which continues to function as a roadscape evocative of its nineteenth century origins, through the introduction of a transformer adjacent to the road right-of-way. Access roads for Turbine Nos. 1, 2, 3, 4, 5 6, and 7, a proposed underground electrical collector and a temporary construction laydown area also have the potential to alter this resource.

Table 2: Conestogo Wind Energy Centre – Identified Cultural Heritage Landscapes (CHLs)							
Feature	Location	Feature Type	Description/Comment*	Recognition/Reference(s)	Photo		Potential Impact
CHL 5	7793 14 th Line	Farmscape	This property contains a mid-to-late nineteenth century vernacular farmhouse that has undergone a series of additions. The structure appears to be of frame construction and features a single central chimney stack. A number of outbuildings are located to the north of the residence, which feature gable roofs and may be of nineteenth century construction. A very long entrance drive provides access to the residence. The property is heavily cultivated.	Identified during the field review.			The proposed undertaking has the potential to alter the nineteenth century, agricultural setting of the property through the introduction of: Turbines No. 7 and 8, associated access roads, and crane paths.
CHL 6	14 th Line	Roadscape	This road is a historic thoroughfare and retains features and elements associated with the adjacent rural, nineteenth century setting. The road features: a very narrow right-of-way; gravel surface; lacks curbs, ditches or shoulders; and is framed by various hedgerows, vegetative screening, and mature deciduous trees.	Identified during the field review.			The proposed undertaking has the potential to alter this historic thoroughfare, which continues to function as a roadscape evocative of nineteenth century origins, through the introduction of access roads for Turbine Nos. 9 and 10.

4.0 CONCLUSIONS

The results of background historic research and a review of secondary source material illustrate that lands located within the study area were first surveyed and settled in the mid-nineteenth century. The results of data collection examining municipal and provincial heritage inventories confirmed that no properties located within a 125 m buffer of the study area have been designated under Part IV or Part V of the *Ontario Heritage Act* or listed on a municipal heritage register or inventory.

The results of a field survey confirmed that lands within the study area continue to be heavily farmed and generally retain a rural, nineteenth century agricultural setting. The study area features a gently undulating topography and several historic thoroughfares including roads that feature: narrow right-of-ways; gravel beds; lack of shoulders, ditches or curbs; and which are framed by hedgerows and mature tree lines. The study area also retains a number of mid-to-late nineteenth century farmsteads which continue to be used for agricultural production. These properties generally consist of: vernacular structures or Ontario Gothic farmhouses; agricultural complexes; windbreaks and vegetative screening; original lot dimensions; rolling topography; long entrance drives, and generous set backs from roads. In parts of the study area, modern, large scale agricultural operations have emerged alongside modern residential subdivision and construction.

To assess the potential impacts of the undertaking on cultural heritage resources in the study area, the results of the field review, which focused on lots proposed for development of turbine infrastructure were considered against a range of possible impacts to cultural heritage resources, as outlined in the Ministry of Tourism Culture document entitled *Screening for Impacts to Built Heritage and Cultural Heritage Landscapes* (March 2010). Potential impacts to above ground cultural heritage resources may include the following:

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

This analysis confirmed that four nineteenth century farmscapes (CHL 1 – 3 and CHL 5) and two historic roads (CHL 4 and CHL 6) have the potential to have their setting and character altered through the introduction of various renewable energy infrastructure components, such as turbines, laydown areas, transformers, and access roads etc. Individual built heritage resources and cultural heritage landscape elements located within these farmscapes are not expected to be displaced or removed. However, the overall scenic quality, setting, and character of these farmscapes and roads will be temporarily altered by the undertaking. Two historic roads, which retain elements that are evocative of their nineteenth century origins will also be altered through the introduction of access roads to turbine sites.



5.0 RECOMMENDATIONS

The proposed renewable energy infrastructure has the potential to impact cultural heritage resources in a variety of ways. Impacts can include: direct impacts that result in the loss of resources through demolition, or the displacement of resources through relocation; and indirect impacts that result in the disruption of resources by introducing physical, visual, audible or atmospheric elements that are not in keeping with the resources and/or their setting. Four nineteenth century farmscapes and two roadscares were identified as having the potential to be indirectly impacted through the introduction of physical, visual, and audible elements. It is expected that the introduction of these elements will temporarily alter the nineteenth century rural, agricultural setting of these properties. Although these properties have been identified as being subject to indirect impacts, the magnitude and significance of these impacts is not considered to be significantly adverse, warranting significant modifications to the proposed turbine layout. While impacts will be temporary, given the 25 year operating life of the infrastructure, the proposed undertaking will not remove or displace resources. Additionally, none of these resources have been designated under the *Ontario Heritage Act*, nor have they been listed on a municipal heritage inventory.

Based on the results of background research and data collection, field survey, and analysis of potential impacts of the undertaking, the following recommendations have been developed:

1. The proposed undertaking should be planned to avoid direct impacts to cultural heritage resources. Should it be determined that a cultural heritage resource will be removed, a detailed heritage assessment should be undertaken to determine the resource's specific heritage significance and to develop appropriate conservation and/or mitigation measures.
2. Should turbine layouts and locations of related infrastructure (including lay down areas, transformers, underground electrical collectors, access roads, storage areas, crane paths etc.) be modified to result in impacts to different property parcels, a qualified heritage consultant should be consulted to identify implications of these modifications on cultural heritage resources.
3. Heritage recordings of the four farmscapes and two roadscares should be undertaken in advance of construction to document the existing conditions of these resources and to serve as an archival resource. Permission to enter the four farmscapes should be secured for the purposes of conducting photographic documentation of built heritage resources and cultural heritage landscape elements located within the entire limits of the property. Detailed land use histories should be included in the heritage recordings of the four farmscapes. Heritage recordings of the two roadscares should include photographic documentation, a township history, and information regarding development of the local road network, where available. Heritage recordings should be produced on archival paper and submitted to the Clerk in the Township of Mapleton and an appropriate local repository.
4. This report should be submitted to the Ministry of Tourism and Culture for review and comment.



6.0 LOCATION MAPPING OF IMPACTED CULTURAL HERITAGE RESOURCES

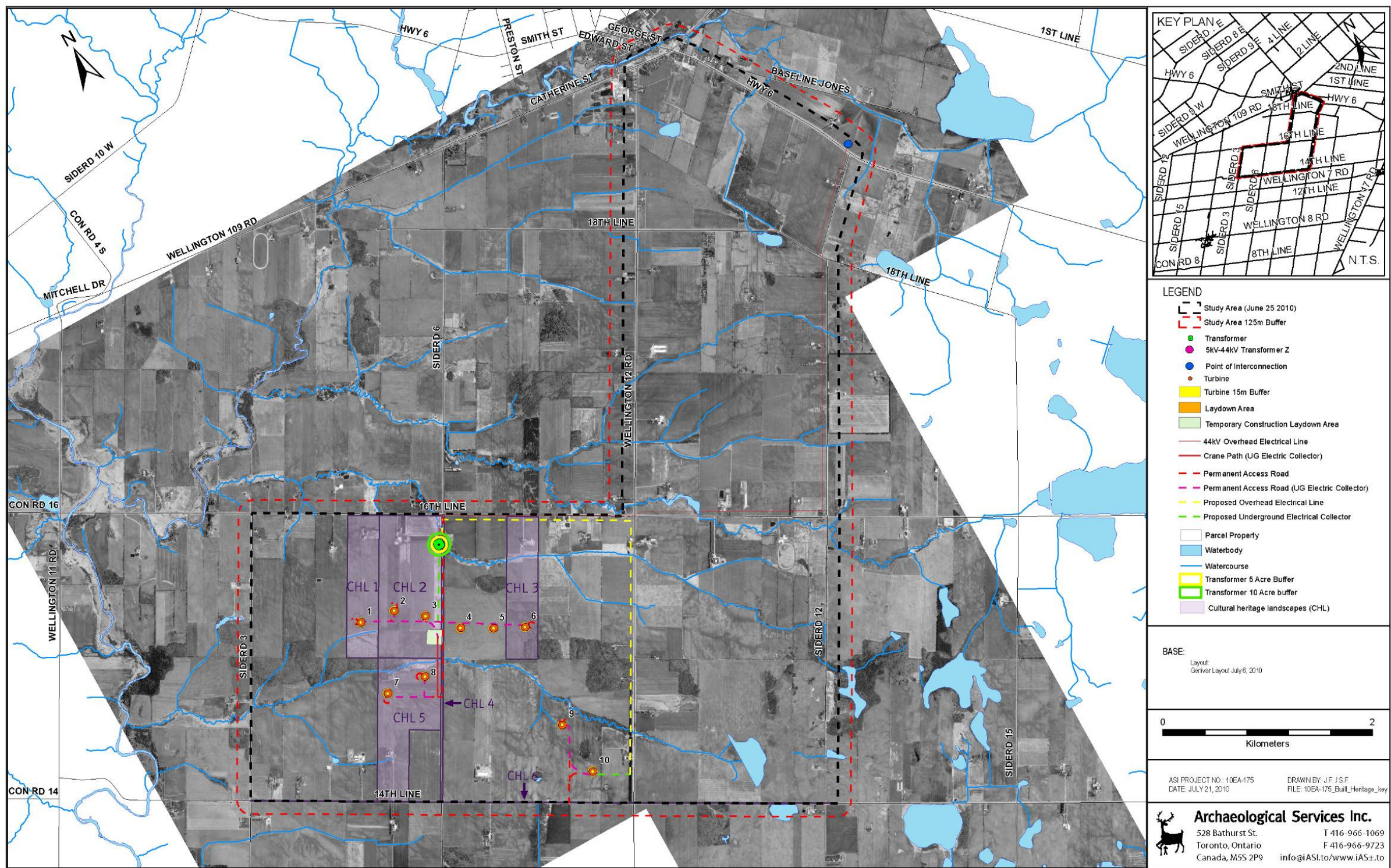


Figure 3: Key plan of the Conestogo Wind Energy Centre showing extent of study area, proposed infrastructure, site context, and impacted cultural heritage landscapes (CHLs).

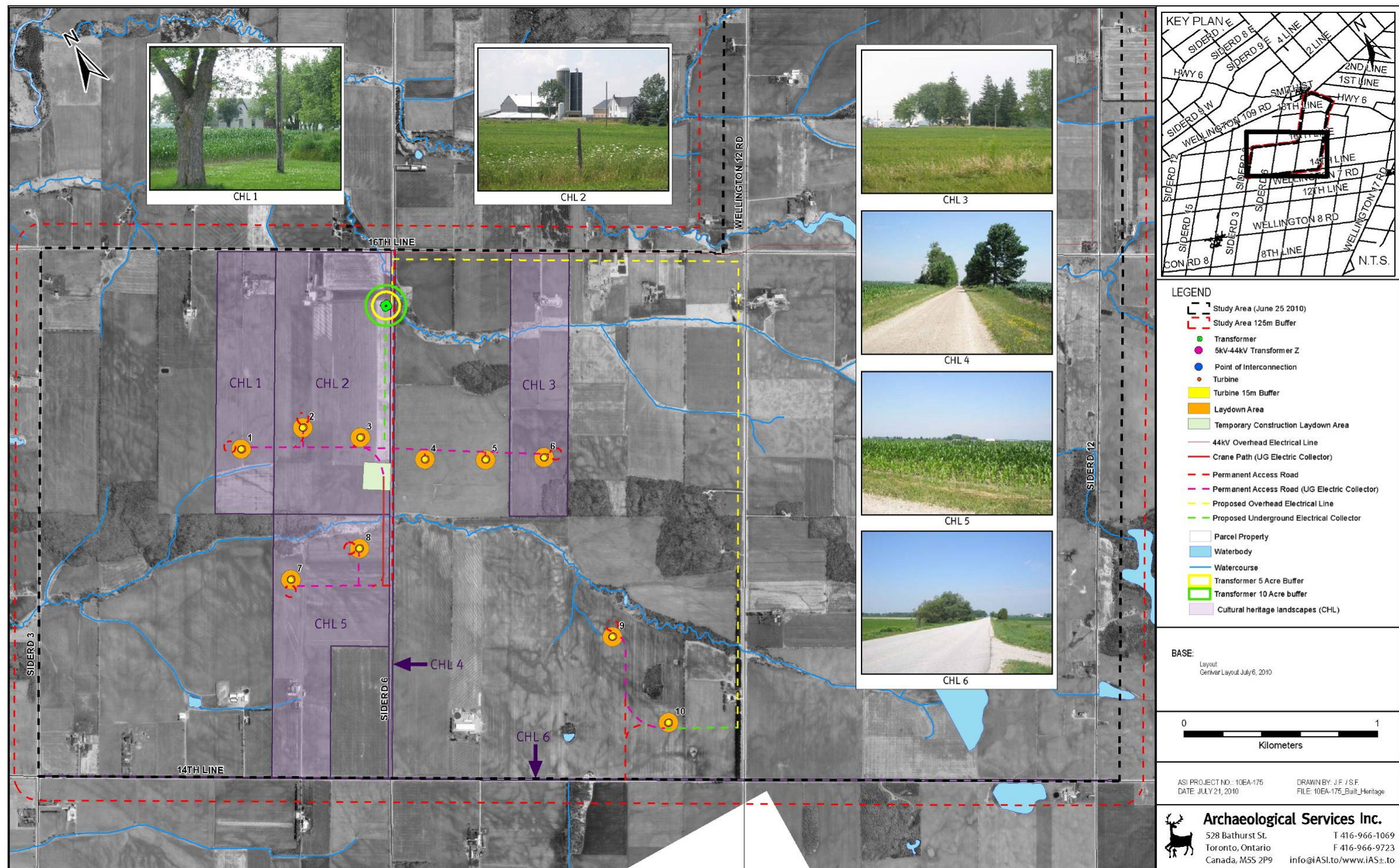


Figure 4: Detail of cultural heritage resources impacted by the Conestogo Wind Energy Centre.

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