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July 14, 2015

Christopher Andreae
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Project:	**North Kent Wind 1**
OPA Reference Number:	**F-003963-WIN-KC3-610**
Report Title:	**Heritage Impact Assessment: North Kent Wind 1 Project**
Applicant:	**North Kent Wind 1 LP**
Location:	**Former Townships of Chatham and Dover** **Municipality of Chatham-Kent, Ontario**
MTCS File No.:	**0002731**

Dear Christopher Andreae:

This office has reviewed the above-mentioned report (the "Report"), which has been submitted to this ministry as required under O. Reg. 359/09, as amended (Renewable Energy Approvals under the *Environmental Protection Act*) (the "REA regulation"). This letter constitutes the Ministry of Tourism, Culture and Sport (the "Ministry") comments for the purposes of section 23(3)(a) of the REA regulation regarding the heritage assessment undertaken for the above project.

The Report recommends the following:

> 7.0 RECOMMENDATIONS
>
> An inventory was undertaken to identify and evaluate potential heritage resources. Through a windshield survey, 14 potential built heritage resources 40 years of age or older and six potential cultural heritage landscapes were documented and evaluated according to *Ontario Regulation 09/06*. The 14 potential built heritage resources contained eleven residences and three barns or barn complexes. Of these, eight were identified to have potential cultural heritage value or interest. Six cultural heritage landscapes were also evaluated according to O. Reg 9/06. Of the six landscapes, only one was identified as containing cultural heritage value or interest.
>
> The Property located at 9579 Eberts Line was the only property identified as potentially experiencing indirect impacts as a result of the Project. The property is expected to be subdivided in order for construction of a substation and tie in to the existing hydro transmission corridor at the western edge of the property. The structure identified as a built heritage resource on the property is currently screened by existing vegetation and tree lines. Retaining the vegetative screening would sufficiently mitigate negative indirect impact anticipated by the substations change in land use on the property.
>
> No further anticipated impacts are identified. As there are no further anticipated impacts to the cultural heritage resources, no further work is recommended.
>
> The recommendations contained in this report are based on current provincial regulation and guidelines pertaining to the approvals process for wind energy projects in Ontario.

Based on the information contained in the Report, the Ministry is satisfied that the heritage assessment process and reporting are consistent with the applicable heritage assessment requirements established in Section 23 of O. Reg. 359/09. Please note that the Ministry makes no representation or warranty as to the completeness, accuracy or quality of the heritage assessment report (please see Note 1).

This letter does not waive any requirements under the *Ontario Heritage Act*.

This letter does not constitute approval of the renewable energy project. Approvals or licences for the project may be required under other statutes and regulations. Please ensure that you obtain all required approvals and/or licences.

Please ensure that the proponent is aware that, if new information or substantive project changes arise after issuance of this letter, the applicant should discuss them with you to determine if any additional assessment or reporting is required. If additional reporting or revisions are required, they should be submitted to the Ministry for review. Upon completion of that review, the Ministry will determine if any revisions to the content of this letter are required.

Should you have any questions or require further information, please do not hesitate to contact me.

Sincerely,

Joseph Muller, RPP/MCIP
Heritage Planner
416 314 7145
Joseph.Muller@Ontario.ca

cc. Becky Grieve, Project Manager
AECOM Canada Limited

Ariel Bautista, Project Developer
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Culture Services Unit, Ministry of Tourism, Culture and Sport

---

Note 1: In no way will the Ministry be liable for any harm, damages, costs, expenses, losses, claims or actions that may result: (a) if the Report or its recommendations are discovered to be inaccurate, incomplete, misleading or fraudulent; or (b) from the issuance of this letter. Further measures may need to be taken in the event that additional heritage resources are identified or the Report is otherwise found to be inaccurate, incomplete, misleading or fraudulent.

6 July 2015

HERITAGE IMPACT ASSESSMENT

North Kent Wind 1 LP North Kent Wind 1 Project
Various Lots and Concessions
Former Townships of Chatham and Dover,
Former County of Kent,
Now Municipality of Chatham-Kent, Ontario

Submitted to:
Becky Grieve
Project Manager, AECOM
55 Wyndham Street North, Suite 215
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Tel: 519-840-2266

OPA Number: F-003963-WIN-KC3-610

REPORT

Report Number: 1521110-3000-R01

Distribution:

1 Copy - AECOM
1 Copy - Samsung Renewable Energy Inc.
1 Copy - Pattern Development
1 PDF Copy - Ministry of Tourism, Culture and Sport
2 Copies - Golder Associates Ltd.

Executive Summary

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.

A Heritage Impact Assessment (HIA) was conducted by Golder Associates Ltd. (Golder) on behalf of AECOM Canada Ltd. for the North Kent Wind 1 Project (Map 1). The project is being proposed by North Kent Wind 1 LP, by its general partner, North Kent Wind 1 GP Inc. (North Kent Wind 1). North Kent Wind 1 is a joint venture limited partnership owned by affiliates of Pattern Renewable Holdings Canada ULC (Pattern Development) and Samsung Renewable Energy Inc. (Samsung Renewable Energy). This HIA is a required component of the client's application for a Renewable Energy Approval (REA), as outlined in Ontario Regulation 359/09 of the Environmental Protection Act (Government of Ontario 1990).

The North Kent Wind 1 Project Study Area encompasses approximately 30,400 acres of public and privately owned lands situated north of the City of Chatham in the former Townships of Chatham and Dover, Kent County, now Municipality of Chatham-Kent, Ontario. The study area is generally bounded by Oldfield Line to the north, Bear Line Road to the west, Pioneer Line and Pine Line/ Darrell Line to the south, and Centre Side Road and Caledonia Road to the east. Up to 50 wind turbine locations are currently being assessed for the North Kent Wind 1 Project, but have not been finalized.

The objective of this HIA was to determine whether the Project Location contains any built heritage resources or cultural heritage landscapes of significant cultural heritage value or interest. This HIA was undertaken according to the guidelines set out in the MTCS' Ontario Heritage Toolkit: Heritage Resources in the Land Use Planning Process and the MTCS document Cultural Heritage Resources: An Information Bulletin for Projects Subject to O. Reg. 359/09. Research regarding the land use history of the Study Area was performed using primary and secondary sources and historic mapping. A field assessment was performed on May 15, 2015 in order to create an inventory of all known and potential heritage resources and cultural heritage landscapes within the Project Location.

An inventory was undertaken to identify and evaluate potential heritage resources. Through a windshield survey, 14 potential built heritage resources and six potential cultural heritage landscapes 40 years of age or older were documented and evaluated according to Ontario Regulation 09/06. Of these, eight were identified to have potential cultural heritage value or interest. Six cultural heritage landscapes were also evaluated according to O. Reg 9/06. Of the six landscapes, only one was identified as containing cultural heritage value or interest.

The property located at 9579 Eberts Line was the only property identified as potentially experiencing indirect impacts as a result of the Project. The property is expected to be subdivided in order for construction of a substation and tie in to the existing hydro transmission corridor at the western edge of the property. The structure identified as a built heritage resource on the property is currently screened by existing vegetation and tree lines. Retaining the vegetative screening would mitigate negative indirect impacts anticipated by the construction of the substation and subsequent use.

No further anticipated impacts were identified. As there are no anticipated impacts to cultural heritage resources, no further work is recommended.

Project Personnel

Project Director	Carla Parslow, Ph.D., Associate, Senior Archaeologist
Project Manager	Bradley Drouin, M.A. (P311), Senior Archaeologist
Senior Built Heritage Specialist	Christopher Andreae, Ph.D., CAHP, Senior Built Heritage Consultant
Report Production	Michael Greguol, M.A., CAHP, Cultural Heritage Specialist Shannen Stronge, M.A., Project Coordinator Liz Yildiz, Environmental Group Administrator
Senior Review	Christopher Andreae, Ph.D., CAHP, Senior Built Heritage Consultant Hugh Daechsel, M.A.., Principal, Senior Archaeologist

Acknowledgements

Proponent Contact:	Becky Grieve, Project Manager, AECOM Canada Ltd.
Client Contact:	Ariel Bautista, Project Developer, Samsung Renewable Energy Inc. Jody Law, Project Developer, Pattern Development
Municipality of Chatham-Kent	Ryan Jacques, Planner Lydia Burggraaf, Curator
MTCS	Laura Hatcher, Heritage Planner
Ontario Heritage Trust	Michael Sawchuck, Manager, Acquisitions and Conservation

Table of Contents

1.0 INTRODUCTION 1
1.1 Project Context 1
2.0 METHODOLOGY 4
2.1 Study Process 4
2.2 Regulatory Framework 5
2.2.1 Introduction 5
2.2.2 Ontario Regulation 359/09 5
2.2.3 Ontario Regulation 9/06, Ontario Heritage Act 6
3.0 LAND USE HISTORY 7
3.1 Physical Setting 7
3.2 Early Settlement and Crown Surveys 9
3.3 Agriculture and Drainage 10
3.4 Industry 15
3.5 Communities 15
3.5.1 Oungah 15
3.5.2 Oldfield 16
3.5.3 Dover Centre 17
3.5.4 Baldoon 18
3.5.5 Darrel 18
3.5.6 City of Chatham 19
3.6 Churches, Cemeteries, Schoolhouses, Public Structures 19
3.7 Transportation 23
3.7.1 Roads 23
3.7.2 Railways 24
4.0 DESCRIPTION OF CULTURAL FEATURES 26
4.1 Protected Properties 26
4.2 Other Properties or Landscapes with Potential Heritage Value 30
4.3 Potential Built Heritage Resources at the Project Locations 30

4.4 Cultural Heritage Landscapes at the Project Locations 30
4.4.1 Agricultural Landscapes 31
4.4.2 Rural Settlement Landscapes 31
4.4.3 Cemeteries 32
4.4.4 Railway Landscapes 32
5.0 ANALYSIS OF CULTURAL FEATURES 35
5.1 Potential Built Heritage Resources at the Project Locations 35
5.2 Cultural Heritage Landscapes at the Project Locations 35
5.3 Summary 35
5.3.1 Cultural Heritage Features 35
5.3.2 Cultural Heritage Landscapes 35
6.0 IMPACT ASSESSMENT 36
6.1 Potential Impacts and Mitigation Options 36
6.2 Built Heritage Resources at the Project Locations 36
6.3 Cultural Heritage Landscapes at the Project Location 37
7.0 RECOMMENDATIONS 38
8.0 SOURCES 39
8.1 Published Sources 39
8.2 Online Sources 40
8.3 Maps 40
9.0 IMPORTANT INFORMATION AND LIMI TATIONS OF THIS REPORT 41
10.0 CLOSURE 42

TABLES

Table 1: Chatham-Kent Listed Heritage Properties that are within or adjacent to the Study Area 27
Table 2: Potential Direct Impacts and Relevance to the Project 36
Table 3: Types of Potential Indirect Impacts and Relevance to the Project 36

PLATES

Plate 1: Looking east from Oldfield Line show flat landscape that is reflective of a majority of the Study Area 8
Plate 2: Looking south on Brook Line, showing typical agricultural character of the Study Area 8

Plate 3 : Looking east along Oldfield Line showing common drainage ditches found throughout the Study Area 11

Plate 4: Looking east along Bush Line, showing large drainage ditches found throughout the Study Area 11

Plate 5: Looking south from Bush Line showing hydro corridor, a large visual element within the flat agricultural landscape 12

Plate 6: Looking east at the intersection of St Clair Road and Countyview Line, the location of the former community of Ounagh 16

Plate 7: Looking north approaching the intersection of St Clair Road and Oldfield Line, the location of former community of Oldfield 17

Plate 8: Looking east from the intersection of Dover Centre Line and Baldoon Road, the location of the former community of Dover Centre 18

Plate 9: 8297 Dover Centre Rd, Dover Centre Church constructed in 1913 20

Plate 10: 8314 St Andrews Line, the New St Andrews Church constructed in 1903. 21

Plate 11: 9388 Cedar Hedge Road, the Prince Albert Baptist Church 21

Plate 12: 9138 Oldfield Line, the Oldfield Cemetery, 1870, adjacent to the Oldfield Church 22

Plate 13: 8613 Eberts Line, one of the earliest remaining schoolhouses in Chatham Township constructed in 1900 22

Plate 14: 26694 St Clair Road, a circa 1923 red brick school house located on St Clair Road, abutting the Study Area 23

Plate 15: Looking north along St Clair Road, or Highway 40 24

Plate 16: Looking south at southeastern corner of the Study Area towards the abandoned Erie and Huron Railway right-of-way 25

Plate 17: 25950 Bear Line Road, a listed property abutting the Study Area 28

Plate 18: 8576 Dover Centre Line, a listed property abutting a Project Location 28

Plate 19: 9139 Oldfield Line, the Oldfield Church, a listed property abutting the Study Area 29

Plate 20: 9630 Oldfield Line, a listed property within the Study Area 29

Plate 21: Looking west from Bear Line Road, showing agricultural landscape and wind-related infrastructure located adjacent to the Study Area 32

Plate 22: Unidentified cemetery located along Countryview Line 33

Plate 23: Looking north along abandoned Erie and Huron Railway right-of-way 33

MAPS

Map 1: North Kent Wind Project Study Area 2

Map 2: Photo Locations within the Study Area 3

Map 3: Dover Township 1880 13

Map 4: Chatham Township 1880 14

Map 5: Cultural Landscape within the Study Area 34

Tile 1: Inventory of Potential Heritage Resources 44

APPENDICES

APPENDIX A
Heritage Resources Inventory

APPENDIX B
Statement of Qualifications: Christopher Andreae

APPENDIX C
Statement of Qualifications: Michael Greguol

1.0 INTRODUCTION

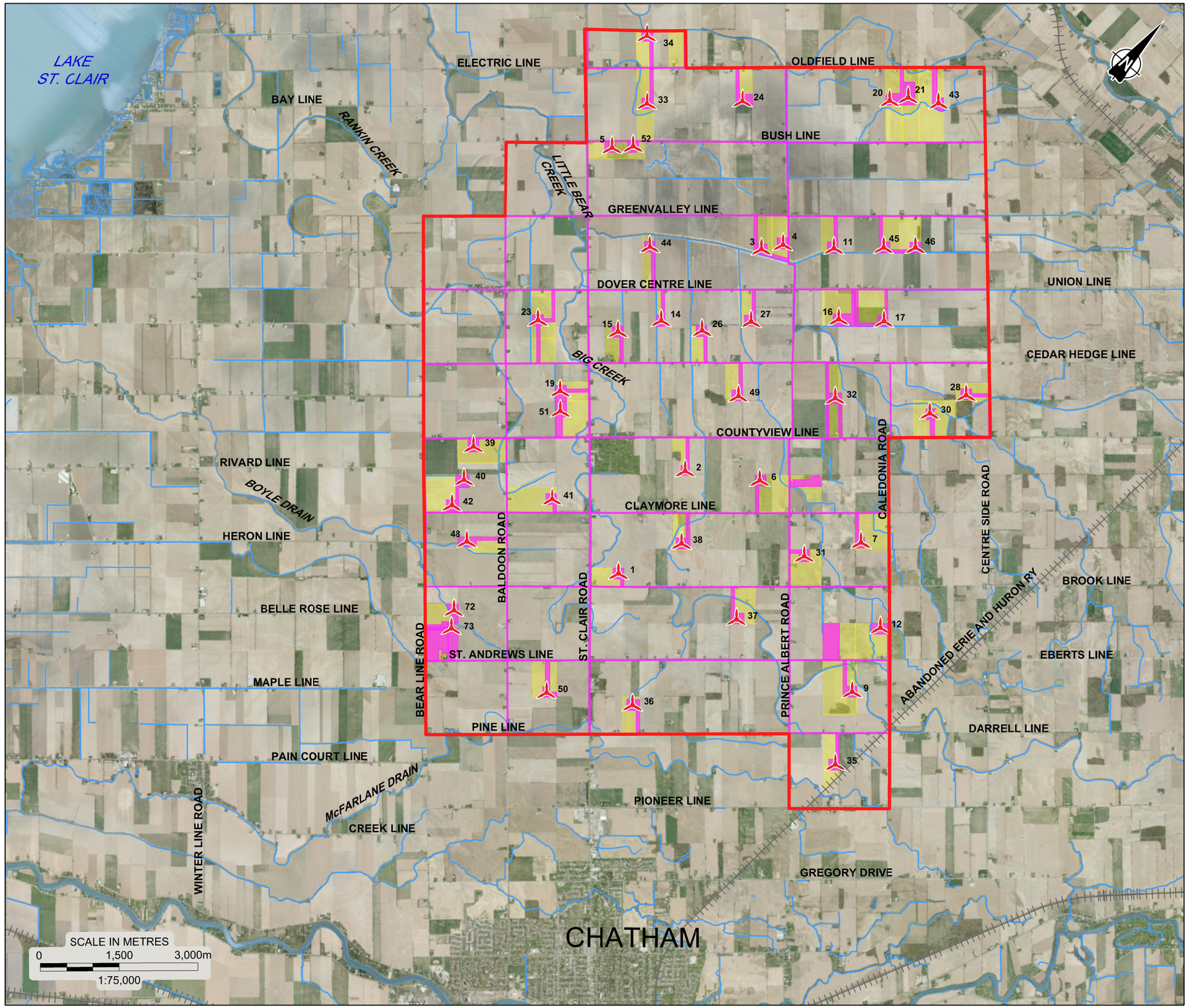
1.1 Project Context

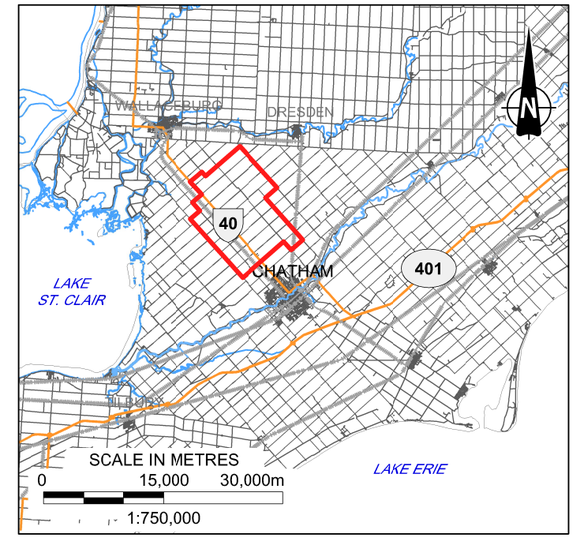
Golder Associates Ltd. (Golder) was contracted by AECOM Canada Ltd to provide a Heritage Impact Assessment (HIA) for the North Kent Wind 1 Project (Map 1). The project is being proposed by North Kent Wind 1 LP, by its general partner, North Kent Wind 1 GP Inc. (North Kent Wind 1). North Kent Wind 1 is a joint venture limited partnership owned by affiliates of Pattern Renewable Holdings Canada ULC (Pattern Development) and Samsung Renewable Energy Inc. (Samsung Renewable Energy). This HIA is a required component of the client's application for a Renewable Energy Approval (REA), as outlined in Ontario Regulation 359/09 of the Environmental Protection Act (Government of Ontario 1990).

The North Kent Wind 1 Project Study Area encompasses approximately 30, 400 acres[1] of public and privately owned lands situated north of the City of Chatham in the former Townships of Chatham and Dover, Kent County, now Municipality of Chatham-Kent, Ontario (Map 1). The study area is generally bounded by Oldfield Line to the north, Bear Line Road to the west, Pioneer Line and Pine Line/ Darrell Line to the south, and Centre Side Road and Caledonia Road to the east. Up to 50 wind turbine locations are currently being assessed for the North Kent Wind 1 Project, but have not been finalized. Land use within the Study Area is primarily agricultural. Additionally, some lots have been severed to include non-farm residential uses.

The North Kent Wind 1 Project is anticipated to be categorized as a Class 4 wind facility with a total nameplate capacity of up to 100 MW. The major components of this project are expected to include commercial wind turbines with a nominal power up to 3.2 MW, concrete turbine foundations, pad mounted step-up transformers, turbine access roads, buried and overhead collector lines, a collector substation, a microwave tower, meteorological towers, buried and overhead transmission lines and interconnection station, temporary construction areas for the erection of wind turbines, and an operations and maintenance building. The North Kent Wind 1 Project is currently in the approvals phase. Pending REA approval, future phases of the project will include construction, operations and maintenance, and decommissioning.

[1] Metric units are used throughout REA documentation when describing the size of Project infrastructure, except in instances describing areas of land. When describing land size, acres (imperial) will be used rather than hectares (metric) because it is the measuring unit most commonly used by the local community. It is assumed that 1 hectare of land is equal to 2.47 acres of land.





KEY PLAN

LEGEND

- TURBINE
- STUDY AREA BOUNDARY
- WATER SEGMENT
- RAIL LINE (EXISTING OR FORMER)
- WATER BODY
- PROJECT LOCATION
- PROJECT COMPONENTS

REFERENCE

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NOTES

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ALL LOCATIONS ARE APPROXIMATE.

PROJECT

HERITAGE IMPACT ASSESSMENT
NORTH KENT WIND 1 PROJECT
MUNICIPALITY OF CHATHAM-KENT, ONTARIO

TITLE

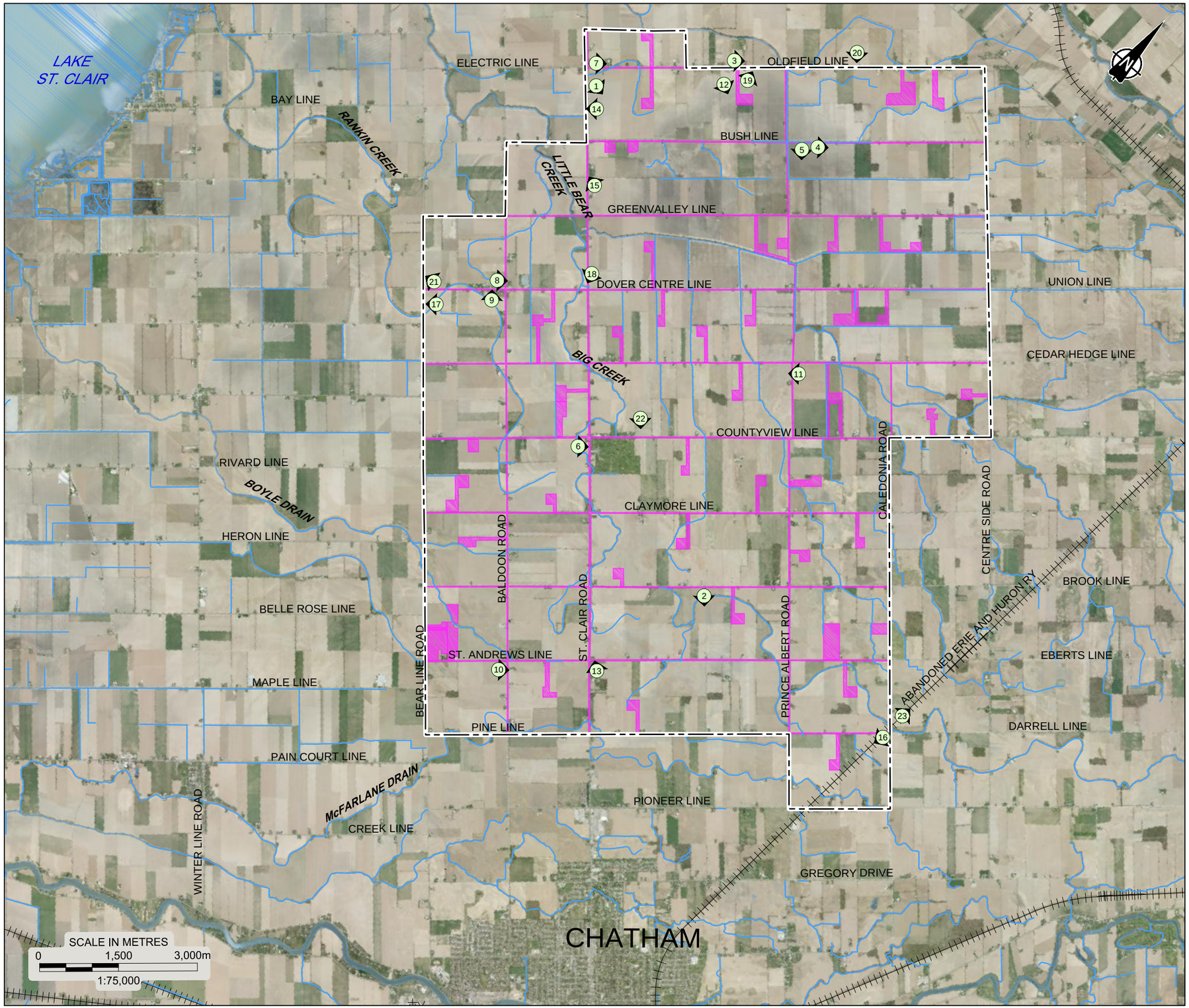
NORTH KENT WIND PROJECT
STUDY AREA

Golder Associates

PROJECT No.	1521110	FILE No.	1521110-3000-R01001
		SCALE	AS SHOWN
CADD	DCH/LMK	June 24/15	REV.
CHECK			

MAP 1

Drawing file: 1521110-3000-R01001.dwg Jun 25, 2015 - 8:39am



LEGEND

- STUDY AREA BOUNDARY
- WATER SEGMENT
- RAIL LINE (EXISTING OR FORMER)
- PROJECT COMPONENTS
- WATER BODY
- PHOTOGRAPH LOCATION, VIEWING DIRECTION, AND PLATE NUMBER

REFERENCE

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NOTES

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ALL LOCATIONS ARE APPROXIMATE.

PROJECT

HERITAGE IMPACT ASSESSMENT
NORTH KENT WIND 1 PROJECT
MUNICIPALITY OF CHATHAM-KENT, ONTARIO

TITLE

PHOTOGRAPH LOCATIONS
WITHIN THE STUDY AREA

Golder Associates

PROJECT No.		1521110	FILE No. 1521110-3000-R01002
			SCALE AS SHOWN REV.
CADD	DCH/LMK	July 3/15	MAP 2
CHECK			

Drawing file: 1521110-3000-R01002.dwg Jul 03, 2015 - 7:55am

2.0 METHODOLOGY

For the purposes of this HIA, the term Study Area consists of the land encompassed within the North Kent Wind 1 Project (Maps 1 and 2). The limits of the Study Area were determined during the early stages of the project in order to encompass all proposed Project Components.

Project Components are defined as all infrastructure related to the wind farm layout, including the wind turbines, access roads, service roads, substations, transmission lines, and collector cables. Project Components could impact potential heritage resources in the Study Area during construction.

The term Project Location is used to define all properties participating within the Study Area where Project Components are proposed to be located. For the purposes of this assessment individual property boundaries were used to define the limits of the Project Locations.

2.1 Study Process

For this HIA report Golder Associates undertook the following tasks:

1) Production of land use history of the Study Area (See Section 3) based on a review of:
   - Primary and secondary resources; and
   - Historic mapping.
2) Consultation with the local municipality (i.e., Municipality of Chatham-Kent), the Ontario Heritage Trust (OHT), and the Ministry of Tourism, Culture, and Sport (MTCS) (See Section 4.1).
3) Consultation with the Municipality of Chatham-Kent's Heritage Committee, Chatham-Kent's Planning Services (Ryan Jacques), and the Chatham-Kent Museum (Lydia Burgrraaf), to identify potential local heritage resources or project related concerns (See Section 4.2).
4) Review of Chatham-Kent's Municipal Heritage Register, the Register of Provincial Heritage Properties, and Federal Heritage Designations.
5) Field surveys were undertaken on May 15, 2015 to create an inventory (See Appendix A) of all known protected properties and potential heritage resources more than 40 years of age and cultural heritage landscapes at the Project Location. (See Sections 4.3 and 4.4). Access to private properties was not available and all identifications were undertaken from public road allowances. Each site was photographed and evaluated according to Ontario Regulation 9/06.
6) Analysis of the cultural heritage value or interest of identified potential heritage resources and cultural heritage landscapes (See Section 5), according to Ontario Regulation 9/06 Criteria for Determining Cultural Heritage Value or Interest.
7) Analysis of the potential adverse impacts (See Section 6), according to guidelines set out in the Ministry of Tourism, Culture and Sport's (MTCS) Ontario Heritage Toolkit: Heritage Resources in the Land Use Planning Process (See Appendix A).

2.2 Regulatory Framework

2.2.1 Introduction

In 2009, the Government of Ontario passed the Green Energy and Green Economy Act to encourage more renewable energy into the Province's power grid and increasing energy conservation and sustainability. Ontario 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 REA integrates previous requirements under the Environmental Assessment Act with clear provincial rules and standards under the EPA. This HIA for the proposed North Kent Wind 1 Project was undertaken in order to meet the REA requirements as outlined in Ontario Regulation 359/09 of the EPA.

This assessment addresses built heritage and cultural heritage landscape resources as required by Ontario Regulation 359/09 (O. Reg. 359/09) under part V.0.1 of the Environmental Protection Act. Evaluation of cultural heritage value or interest was undertaken using Ontario Regulation 9/06 (O. Reg. 9/06), made under the Ontario Heritage Act. The pertinent regulatory framework is defined in the following sections.

2.2.2 Ontario Regulation 359/09

O. Reg. 359/09 defines a heritage resource as a "real property that is of cultural heritage value or interest and may include a building, structure, landscape or other feature of real property." Section 19(1) requires a proponent of a proposed renewable energy project to determine if the Project Location is on a protected property, defined as:

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

2) A property in respect of which a notice of intention to designate the property to be of cultural heritage value or interest has been given in accordance with section 29 of the Ontario Heritage Act.

3) A property designated by a municipal by-law made under section 29 of the Ontario Heritage Act as a property of cultural heritage value or interest.

4) A property designated by order of the Minister of Tourism, Culture and Sport made under section 34.5 of the Ontario Heritage Act as a property of cultural heritage value or interest of provincial significance.

5) A property in respect of which a notice of intention to designate the property as property of cultural heritage value or interest of provincial significance has been given in accordance with section 34.6 of the Ontario Heritage Act.

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

7) A property that is part of an area designated by a municipal by-law made under section 41 of the Ontario Heritage Act as a heritage conservation district.

8) A property designated as a historic site under Regulation 880 of the Revised Regulations of Ontario, 1990 (Historic Sites) made under the Ontario Heritage Act.

Section 20(1) requires a proponent of a proposed renewable energy project to determine if the project may impact 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 proposed renewable energy project does impact on a heritage resource as documented in Sections 19(1) and 20(1) of O. Reg. 359/09, Section 23(1)(a) requires the proponent to conduct a heritage assessment consisting of:

1) An evaluation of whether there are any heritage resources at the Project Location, applying the criteria set out in Ontario Regulation 9/06, and

2) 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 HIA, as well as any written comments provided by MTCS in respect of the heritage assessment, will be submitted as part of an application for the issue of an REA.

2.2.3 Ontario Regulation 9/06, Ontario Heritage Act

O. Reg. 9/06 provides criteria for determining cultural heritage value or interest. If a property meets one or more of the following criteria it may be designated under Section 29 of the Ontario Heritage Act:

1) The property has design value or physical value because it:

   i) Is a rare, unique, representative or early example of a style, type, expression, material or construction method;

   ii) Displays a high degree of craftsmanship or artistic merit; or

   iii) Demonstrates a high degree of technical or scientific achievement.

2) The property has historic value or associative value because it:

   i) Has direct associations with a theme, event, belief, person, activity, organization, or institution that is significant to a community;

   ii) Yields, or has the potential to yield information that contributes to an understanding of a community or culture; or

   iii) Demonstrates or reflects the work or ideas of an architect, artist, builder, designer, or theorist who is significant to a community.

3) The property has contextual value because it:

   i) Is important in defining, maintaining or supporting the character of an area;

   ii) Is physically, functionally, visually or historically linked to its surroundings; or

   iii) Is a landmark.

3.0 LAND USE HISTORY

3.1 Physical Setting

The Study Area is located east of Lake St. Clair and north of the Thames River in the Municipality of Chatham-Kent, Ontario. It is situated entirely within the Chatham Flats physiographic region, which is a sub-region of the St. Clair Clay Plains. This area is characterized as a thick, clay till plain overlain by smooth, stratified deposits of lacustrine clay and silt. This physiographic region has produced a very flat landscape throughout the Study Area, with elevations ranging subtly between 177 and 181 metres above sea level (Plates 1-2). East of the study area, land elevations rise to a height of 190 metres above sea level. This gradient produces a west-trending natural surface drainage into Lake St. Clair throughout the majority of the study area. Natural drainage of the Study Area is largely provided by five minor watercourses: Little Bear Creek, Big Creek, Rankin Creek, Boyle Drain, originally known as Cheffs Creek, and a branch of McFarlane Drain, originally known as Pain Court Creek. Due to the relatively flat topography of the area, sections of these watercourses have been artificially straightened to improve their drainage capacity.[2]

The soils within the Study Area vary from sandy loam to heavy clay. Although often highly fertile, many of these soils exhibit poor natural drainage, which can hinder their ability to support agricultural activities. This limitation, combined with the relatively flat topography of the Study Area, created an environment where only marginal agricultural advancements occurred in the area until the late 19th century when artificial drainage became more common place (see Section 3.3).[3]

[2] L.J. Chapman and D.F. Putnam, The Physiography of Southern Ontario, 146-150; Ontario Agricultural College, Soil Survey of Kent County, 1930; St. Clair Region Conservation Authority, Lake St. Clair Tributaries Watershed Report Card, 2013; Lower Thames Valley Conservation Authority, Thames-Sydenham and Region Watershed Characterization Report, 2008.

[3] Ontario Agricultural College, Soil Survey of Kent County, 1930.

Plate 1: View looking east from Oldfield Line show flat landscape that is reflective of a majority of the Study Area

Plate 2: View looking south on Brook Line, showing typical agricultural character of the Study Area

3.2 Early Settlement and Crown Surveys

The Study Area that is the subject of the present report is located within the boundaries of the former Townships of Dover and Chatham, in the historical County of Kent. It is situated within an area of Ontario that exhibits evidence of an extended period of human settlement dating back at least 11,000 years. The nature of this settlement as it pertains to the pre-contact Aboriginal period has been well documented in the Stage 1 Archaeological Assessment and is reviewed in the Stage 1 Archaeological Assessment for this Project.[4] As such, the present section will provide an overview of the European occupation of Kent County in general and the Study Area in particular.

The Euro-Canadian history for the area that would become Kent County began in 1790 when a land treaty, known as Treaty No. 2, was made between the British government and local aboriginal groups. Treaty No. 2:

> ... was made with the O[dawa], Chippew[a], Pottawatom[i] and Huro[n] 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 [are included]. [5]

Around the time of this land treaty, and in response to numerous land petitions from United Empire Loyalists, the newly formed Upper Canada government ordered crown surveys to be completed for the Kent County area. Within Chatham and Dover Townships in particular, the lots fronting on the Thames River were surveyed according to the single front special survey system by Patrick McNiff between 1790 and 1791. The interior portions of these townships were later surveyed according to the same system by Abraham Iredell, William Hambly, and Thomas Smith between 1795 and 1810. The single front special system used in Chatham and Dover Townships established concessions containing 200 acre lots divided every six or seven lots by side roads. The concessions were oriented west to east, with the side roads crossing the township from south to north. [6]

Aside from some early inhabitants that had arrived in the area as early as 1780, formal settlement of Chatham and Dover Townships was not initiated until 1792 when United Empire Loyalists and French immigrants began locating along the banks of the Thames River. Settlement of the lands north of the Thames began in 1803 when a group of 111 Scottish immigrants arrived in Dover Township. Brought to the area by the patronage of the Earl of Selkirk, these early pioneers initially settled in the northern corner of the township on the Earl's estate, known as the Baldoon farm, situated north of the Study Area. Eventually forced off of the settlement by rising water levels, many of these early settlers relocated within the interior of Dover and Chatham Townships during the early 19th century. Additional settlement of the interior portions of Chatham and Dover Townships did not occur until the 1830s when an influx of settlers, primarily from Northern Ireland and Scotland, began arriving in the area. These settlers typically located along the well-drained banks of Pain Court Creek and Big Creek. By the

[4] Golder, Stage 1 Archaeological Assessment, North Kent Wind 1 Project, Various Lots and Concessions, Former Townships of Chatham and Dover, Kent County, Now Municipality of Chatham-Kent, Ontario, 2015.

[5] J. L. Morris, Indians of Ontario, 17.

[6] Kent Historical Society, Kentania, 1939; W. G. Dean and G. J. Matthews, Economic Atlas of Ontario, 1969.

late 19th century, Dover and Chatham Townships were considered by local residents to be almost completely settled. The slow rate of settlement in the area was undoubtedly related to the flat topography and poor natural drainage that the area exhibited (see Section 3.3. below).[7]

3.3 Agriculture and Drainage

Due to the relatively flat topography and poor natural drainage of Kent County's soils, the pace of settlement, and by extension agricultural development, was particularly slow in the Townships of Chatham and Dover during the 19th century. By 1846, only 3.9% of the cumulative acreage present in both townships was under cultivation. At this time, wheat was the primary crop grown by farmers in the area. Although it was recognized that proper drainage could increase the productivity and value of poorly drained areas, farmers often could not invest in constructing proper drains due to the high costs involved.[8]

The Ontario Drainage Act, passed in 1872, provided funding to municipalities for the construction of drainage ditches and substantial improvements were subsequently made to the Kent County area (Plates 3-4). The extent to which drainage ditches had been installed in Chatham and Dover Townships by 1880 can be seen on Maps 3 and 4 below. By 1880, the proportion of land that was under cultivation in these townships had risen to 33%. At this time, the farmers residing in the area were typically growing grain crops, such as wheat, barley, oats, rye, and corn, for export to Europe, and many were also raising livestock for export and dairying activities. There were very few local industries present in the area at this time that depended upon agricultural products.[9]

The drainage improvements and agricultural productivity of Kent County increased in the late 19th and early 20th century. The Ontario Tile Drainage Act, which allowed municipalities to lend money to farmers to build sub-surface tile drains, was passed in 1878. According to the Ontario Agricultural Commission of 1880, farmers residing in Kent County were beginning to recognize the benefits that tile under-draining had to offer and, as such, were implementing this improvement in several townships throughout the county. By the 1900s, the majority of Kent County had been improved by tile drainage. With tile drainage in place, and the subsequent arrival of rural Hydro-electric power beginning in 1922 (Plate 5), the local agricultural industry was now capable of supporting a large cash crop industry that eventually included corn, soybeans, winter wheat, and black or burley tobaccos. Other crops that were common during the second half of the 20th century included white beans, tomatoes, peas and other canning crops, while livestock production represented a very limited venture in the area.[10]

[7] Illustrated Historical Atlas of Kent County, 1880; Ontario Agriculture Commission, Report of the Commissioners: Appendix A, 1880.

[8] W. H. Smith, Smith's Canadian Gazetteer, 1846; Jones, History of Agriculture in Ontario 1613-1880, 89, 315.

[9] Ontario Agriculture Commission, Report of the Commissioners: Appendix A, 1880; Jones, 248.

[10] Ontario Agriculture Commission, Report of the Commissioners: Appendix A, 1880; Jones, 314; Kent Historical Society, Papers and Addresses, Volume 9, 1991; V. Lauriston, Romanic Kent, 1989; Chapman and Putnam, 150.

Plate 3: View looking east along Oldfield Line showing common drainage ditches found throughout the Study Area

Plate 4: View looking east along Bush Line, showing large drainage ditches found throughout the Study Area

Plate 5: View looking south from Bush Line showing hydro corridor, a prominent visual element within the flat agricultural landscape

LEGEND

STUDY AREA BOUNDARY

REFERENCE

Belden, H. & Co.
1880 *Illustrated Historical Atlas of Kent County*. H. Belden & Co., Toronto.

NOTES

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

ALL LOCATIONS ARE APPROXIMATE.

APPROXIMATE SCALE IN METRES
0 1,500 3,000m
1:75,000

PROJECT

HERITAGE IMPACT ASSESSMENT
NORTH KENT WIND 1 PROJECT
MUNICIPALITY OF CHATHAM-KENT, ONTARIO

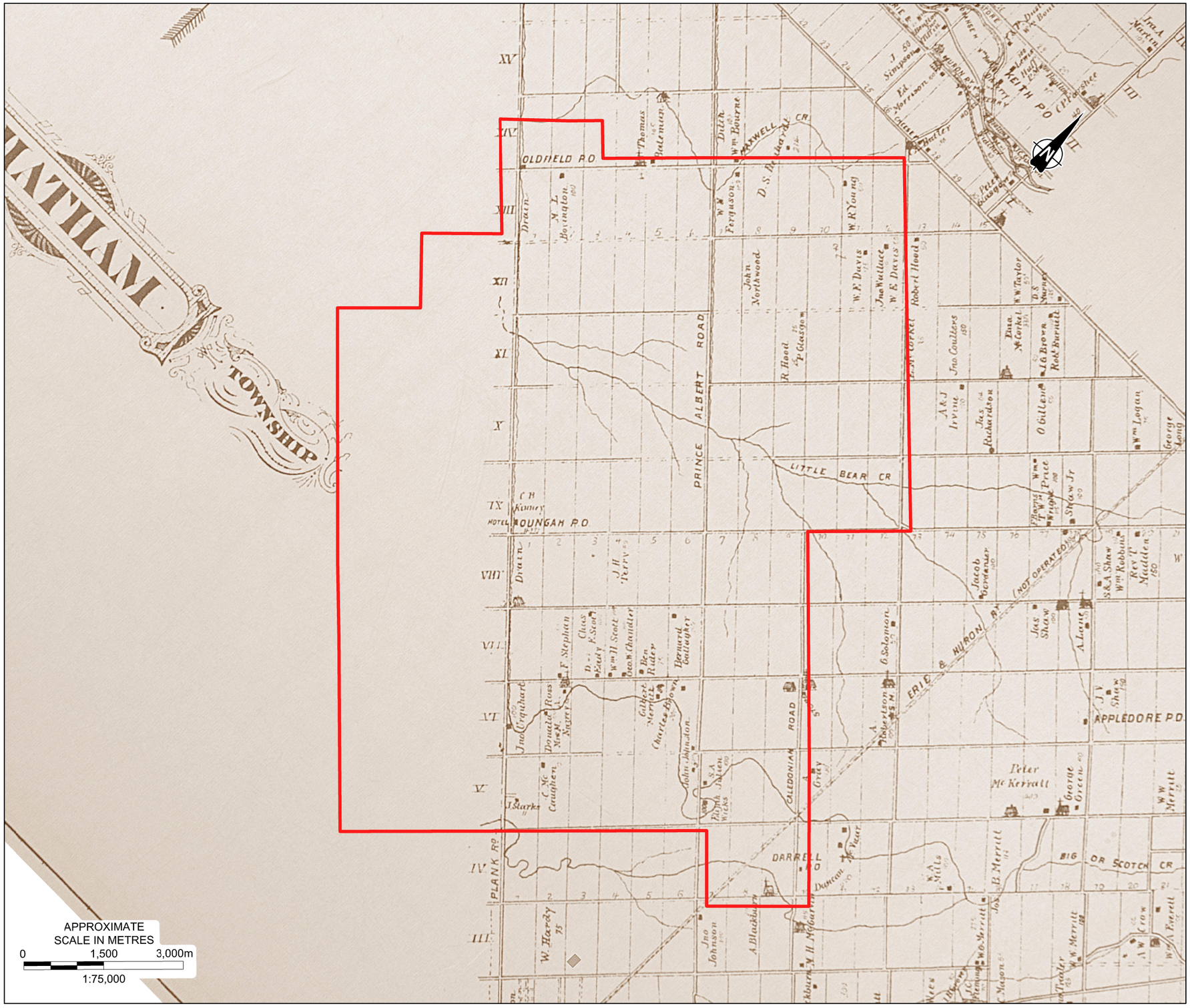
TITLE

A PORTION OF THE 1880 MAP OF DOVER TOWNSHIP

Golder Associates

PROJECT No.		1521110	FILE No. 1521110–3000–R01003
			SCALE AS SHOWN REV.
CADD	DCH/LMK	June 17/15	MAP 3
CHECK			

Drawing file: 1521110–3000–R01003.dwg Jun 17, 2015 – 10:37am



LEGEND

STUDY AREA BOUNDARY

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ALL LOCATIONS ARE APPROXIMATE.

PROJECT

HERITAGE IMPACT ASSESSMENT
NORTH KENT WIND 1 PROJECT
MUNICIPALITY OF CHATHAM-KENT, ONTARIO

TITLE

A PORTION OF THE 1880 MAP OF CHATHAM TOWNSHIP

Golder Associates

PROJECT No.		1521110	FILE No. 1521110-3000-R01004
			SCALE AS SHOWN REV.
CADD	DCH/LMK	June 17/15	
CHECK			**MAP 4**

Drawing file: 1521110-3000-R01004.dwg Jun 17, 2015 - 10:35am

3.4 Industry

The earliest industries of Kent County provided daily necessities for life in rural areas. Soon after they began clearing land and building roads, settlers began constructing mills. One of the earliest mills in the vicinity of the Study Area was built near the mouth of the Thames River during the early 19th century. By the late 19th century, Dover and Chatham Townships contained a total of four saw mills and one grist mill.[11]

Other industrial and commercial enterprises in Dover and Chatham Townships that served the local economy during the second half of the 19th century included: lumber manufacturers, hotels, general stores, carriage factories, blacksmith shops, shoe makers, and insurance agencies.[12] The limited number and variety of such enterprises in the area can likely be attributed to the diversity of services offered in the Town of Chatham, which functioned as the primary market facility for Chatham and Dover Townships.

3.5 Communities

As was typical in 19th century southern Ontario, most of the commercial activity in the Townships of Dover and Chatham was located in small, unincorporated hamlets. The hamlets of Oungah, Oldfield, and Dover Centre were the only settlements once located within the limits of the Study Area. Just beyond the limits of the Study Area were the settlements of Baldoon and Darrell, and the incorporated Town (later City) of Chatham. No incorporated villages were formerly located in the Study Area.

3.5.1 Oungah

Located at the centre of the town line between Dover and Chatham Townships was the community of Oungah, formerly located within the Study Area (Plate 6). A post office was established in this small community in 1853 and by 1873, the population was 50. By the late 19th century, the population had grown to roughly 90 individuals, enabling the community to support a general store, a grocery store, a lumber manufacturer, a hotel, and a saw mill. Throughout the 20th century, the population of Oungah slowly decreased, eventually reaching 11 individuals in 1976. In 1998, this community was incorporated within the new Municipality of Chatham-Kent.[13]

[11] Illustrated Historical Atlas of Kent County, 1880; J. Lovell, Lovell's Gazetteer of British North America, 1873

[12] H. N. McEvoy, W.H. Irwin, and G. H. Burnham, Gazetteer and Directory of the Counties of Kent, Lambeth, and Essex, 1867; Lovell, 1873.

[13] Lovell, 1873, 1895; Union Publishing Company, Farmer's and Business Directory for the Counties of Elgin, Essex, Kent & Lambton, 1886; F. Carter, Place Names of Ontario, 892.

Plate 6: View looking east at the intersection of St Clair Road and Countyview Line, the location of the former community of Ounagh

3.5.2 Oldfield

Oldfield was a dispersed rural community located in the northwest portion of Chatham Township, near the town line with Dover Township, also formerly located within the Study Area (Plate 7). A post office was first established in Oldfield in 1876. By 1892, this community had 50 residents and contained a general store and hotel. The community of Oldfield did not experience any significant growth in the 20th century and, in 1998, became a part of the Municipality of Chatham-Kent.[14]

[14] Union Publishing Company, Farmer's and Business Directory for the Counties of Elgin, Essex, Kent & Lambton, 1903; Carter, 870.

Plate 7: View looking north approaching the intersection of St Clair Road and Oldfield Line, the location of former community of Oldfield

3.5.3 Dover Centre

Dover Centre was a dispersed rural community located in the north-central portion of Dover Township at the intersection between Baldoon Road and Dover Centre Line. This community was situated within the Study Area (Plate 8). The community was established later than most of the surrounding hamlets in Dover and Chatham Township. In 1893 the community had a small population of 25, and its post office opened in 1899. By 1927, the community also had a large church and a general store. In 1976, the population of the community was 34, and in 1998 it became a part of the Municipality of Chatham-Kent.

Plate 8: View looking east from the intersection of Dover Centre Line and Baldoon Road, the location of the former community of Dover Centre

3.5.4 Baldoon

Baldoon was a dispersed rural community located in the north-central portion of Dover Township at the intersection between Concession 11 and Little Bear Line; this community is situated approximately 700 metres west of the Study Area. Founded in 1804 by Lord Selkirk and named for a village in the Highlands of Scotland, Baldoon remained a small community for much of the 19th century. A post office was first established in Baldoon in 1875. By 1895, the community had a population of 30 individuals and contained a Methodist church, two stores, saw and grist mills, and a carriage factory. In the early 20th century, Baldoon's population began to decrease, reaching 25 in 1926. In 1998, this community was incorporated within the new Municipality of Chatham-Kent.[15]

3.5.5 Darrell

The community of Darrell was located in the south-central portion of Chatham Township, immediately northeast of the Study Area. This rural community was first established in 1863 when a post office of the same name was constructed in the area. By 1895, the population of Darrell had reached roughly 260 individuals, and the community contained a general store and lumber manufacturer. Throughout the 20th century, the population of

[15] Carter, 55; Lovell, 1895.

Darrell slowly decreased and in 1998, the community was amalgamated into the new Municipality of Chatham-Kent.[16]

3.5.6 City of Chatham

Located along the banks of the Thames River, partly within the Townships of Chatham, Dover, Raleigh, and Harwich, was the community that would eventually be known as the Town of Chatham; this community is situated immediately northeast of the southwestern portion of the Study Area. Named for a place in England by Governor Simcoe, Chatham's town plot was first laid out and surveyed in 1795 by Deputy Surveyor Abraham Iredell. Grants of town lots were made as early as 1802 and in 1816 a post office known as McGregor's Creek was established in the community. Fifteen years later, the first public school was erected in the community and by 1833, Chatham's population had reached 300. The pace of growth and development in the community of Chatham increased rapidly during the mid-19th century. In 1846, the community had a population of 1,500 inhabitants and contained two grist mills, two saw mills, two breweries, three distilleries, one tannery, ten stores, four groceries, one pottery, one maltster, six tailors, two saddlers, three shoemakers, ten taverns, one printing office, one watchmaker, one gunsmith, eight blacksmiths, three cabinet makers, one hatter, one tinsmith, two carriage makers, one foundry, two bakers, one tallow chandler, two asheries, one livery stable, one bookseller and stationer, two banks, one land agency, three schools, five doctors, one lawyer, and one dentist. This rapid growth prompted Chatham's incorporation as a village in 1850.

Two years later, railway communication was established in the area by the completion of the Great Western Railway. Construction of this railway triggered additional growth and development in the Village of Chatham, which was subsequently incorporated as a town in 1855. By 1857, the town contained a population of 6,000 individuals. The Town of Chatham continued to prosper throughout the late 19th century and was eventually incorporated as a city in 1895. During the 20th century, the City of Chatham expanded beyond its 19th century limits into the surrounding agricultural landscape, and by 1980, was home to 40,928 residents. In 1998, the City of Chatham was amalgamated with the rest of Kent County to form the Municipality of Chatham-Kent. [17]

3.6 Churches, Cemeteries, Schoolhouses, Public Structures

At least four schoolhouses, three churches, and one grange hall were located within the Study Area in the late 19th century. An additional two churches were also located in close proximity to the Study Area. These institutions served the needs of the rural communities in the Townships of Dover and Chatham. The churches catered to the religious beliefs of several denominations, including Catholic, Methodist, Presbyterian, Baptist, and Anglican, which had been brought to the area by the various groups of immigrants.

Three historic churches are located within the Study Area; the Dover Centre Church constructed in 1913, the New St. Andrews Church constructed in 1903, and the Prince Albert Baptist Church. A fourth historic church, the Oldfield Church constructed circa 1890 (now adaptively re-used as a residential dwelling) is adjacent to the Study Area. The Oldfield cemetery is located adjacent to the church and is located within the Study Area An additional historic cemetery is located on Countryview Line, east of St. Clair Road (Plates 9-12).

[16] Carter, 1065; Lovell, 1895.

[17] Kent Historical Society, 1939; Carter, 742; Smith, 1846.

Two historic schoolhouses are also located within the Study Area. A circa 1900 red brick schoolhouse building still remains within the Study Area. Situated at 8613 Ebert's Line, the building is one of the oldest remaining former school buildings in Chatham Township is currently being used for a small commercial use. A second 1923 schoolhouse is located at 26694 St. Clair Road and appears to have been adaptively re-used as a residential dwelling (Plates 13-14).

Plate 9: 8297 Dover Centre Rd, Dover Centre Church constructed in 1913

Plate 10: 8314 St Andrews Line, the New St Andrews Church constructed in 1903.

Plate 11: 9388 Cedar Hedge Road, the Prince Albert Baptist Church

Plate 12: 9138 Oldfield Line, the Oldfield Cemetery, 1870, adjacent to the Oldfield Church

Plate 13: 8613 Eberts Line, one of the earliest remaining schoolhouses in Chatham Township constructed in 1900

Plate 14: 26694 St Clair Road, a circa 1923 red brick school house located on St Clair Road, abutting the Study Area

3.7 Transportation

3.7.1 Roads

Most of the major roads located in the Study Area follow the original survey grids laid out during the crown surveys of Dover and Chatham Townships from the late 18th to early 19th century. These roads were cleared and made passable by the early land owners who built their dwellings adjacent to the concession roads. Despite being cleared, the conditions of the roads remained relatively poor until the late 19th and early 20th centuries. Specifically, the flat topography and poor natural drainage of the soils found throughout Kent County caused the roads in the area to frequently become impassable due to saturation. The installation of roadside flanking drainage ditches helped improve this feature of the landscape, but it was not until the surfaces of roads were lined with gravel and eventually paved with asphalt in the 20th century that the roads became a more reliable form of transportation.

Highway 40, or St. Clair Road, represents one of the more significant transportation routes present within the Study Area (Plate 15). This thoroughfare is a provincially maintained highway 91.8 kilometers in length. It passes through the centre portion of the Study Area and links Chatham and Sarnia via Wallaceburg. Corresponding to the original boundary between Dover and Chatham Townships, Highway 40 was built as a Depression-relief project in the spring of 1934. The highway has been modified several times since its initial

construction and now provides commuters from the Kent and Lambton County areas the ability to access both Highway 401 to the south and Highway 402 to the north.[18]

Plate 15: View looking north along St Clair Road, or Highway 40

3.7.2 Railways

During the 19th century, only one rail line ran through the Study Area: the Erie and Huron Railroad (Plate 16). Incorporated in 1873, the Erie and Huron Railway constructed a rail line from Rondeau to Dresden via Chatham between 1879 and 1883. In 1886, an extension of the line into Sarnia was completed. Station stops along the line included Corunna, Mooretown, Courtright, Sombra, Port Lambton, and Wallaceburg. Although originally constructed for the purpose of hauling cordwood, the rail line also provided passenger service during the late 19th century. In 1898, the Erie and Huron Railway was purchased by Hiram Walker and became part of the Lake Erie and Detroit River Railway. In 1902, the line was leased to the Pere Marquette Railway, which subsequently purchased it the following year. In 1947, the line became part of the Chesapeake and Ohio System. In the early 21st century the line became a part of the CSX Transportation system and was later abandoned in 2006.[19]

[18] C. Bevers, Ontario Highways: History Pages & Route Maps, www.thekingshighway.ca

[19] Moore Museum, A North-South Connection: The Erie & Huron Railroad, www.mooremuseum.ca

Plate 16: View looking south at southeastern corner of the Study Area along the abandoned Erie and Huron Railway right-of-way

4.0 DESCRIPTION OF CULTURAL FEATURES

4.1 Protected Properties

As part of the requirements of O. Reg. 359/09, s.19, three interested parties, the Minister of Tourism, Culture and Sport, the Ontario Heritage Trust, and the local Municipality (Chatham-Kent), must be contacted to confirm the presence of protected properties within the Study Area.

Appendix B of the MTCS' Cultural Heritage Resources: An Information Bulletin for Projects Subject to Ontario Regulation 359/09 – Renewable Energy Approval indicated that, as of August 2013, no designated properties, nor pending or ongoing provincial designations were present within the Study Area. In June 2015, Laura Hatcher, Heritage Planner with the MTCS, confirmed that no new properties had been protected since this publication.

Michael Sawchuck, Manager of Acquisitions and Conservation Services for the Heritage Programs and Operations Branch confirmed on June 3, 2015 that the OHT does not protect any property through a conservation easement on lands that will be directly impacted or visually affected by this renewable energy undertaking.

The Municipality of Chatham-Kent's Municipal Heritage Register was reviewed to determine whether any properties formally designated under Part IV of the Ontario Heritage Act exist within or abutting the Study Area. This register indicated the presence of three listed properties within the present Study Area, and two additional properties that abut the Study Area limits. The locations of these properties have been summarized in Table 1 and illustrated on Tile 1 in order to demonstrate their spatial relationship to Project Locations. Although none of these properties were located at Project Locations, it was determined that one property, Site #3 (8576 Dover Centre Line) is abutting the Project Location. Since this property is not designated, it is not formally recognized under O. Reg. 359/09 and, therefore, an evaluation of cultural heritage value or interest is not required (Plates 17-20).

The Municipality of Chatham-Kent was contacted regarding the presence of properties with easements, covenants, or an intention to designate located within the Study Area. Ryan Jacques, Planner at the Municipality of Chatham-Kent confirmed that none of these property types exist within the Study Area.

Table 1: Chatham-Kent Listed Heritage Properties that are within or adjacent to the Study Area

Site No.*	Address	Comments	Within Study Area? (Yes/No)	Approximate Distance (m) from Study Area	Abutting Project Location? (Yes/No)
1	8613 Eberts Line	Circa 1900 schoolhouse, one of the oldest remaining former school buildings in Chatham Township, adaptively reused as a private dwelling.	Yes	N/A	No
2	25950 Bear Line Road	Circa 1855, farm house, one of the first structures built along Bear Line. House and property continuously owned by the Rankin family since the nineteenth century.	No	175	No
3	8576 Dover Centre Line	2 ½ storey asymmetrical Queen Anne farmhouse constructed in 1902, with mature trees, and large grassed lot.	Yes	N/A	Yes
4	9139 Oldfield Line	Circa 1890 Methodist Church constructed in the Gothic Revival style. The building sits on a slightly higher elevation than its surroundings and has been adaptively reused as a private dwelling.	No	25	No
5	9630 Oldfield Line	Circa 1880 Gothic Revival farmhouse, constructed circa 1880, one of the oldest surviving residences on Oldfield Line.	Yes	N/A	No

*Site numbers refer to the Chatham-Kent Municipal Heritage Register properties listed on the legend of Tile 1

Plate 17: 25950 Bear Line Road, a listed property abutting the Study Area

Plate 18: 8576 Dover Centre Line, a listed property abutting a Project Location

Plate 19: 9139 Oldfield Line, the Oldfield Church, a listed property abutting the Study Area

Plate 20: 9630 Oldfield Line, a listed property within the Study Area

4.2 Other Properties or Landscapes with Potential Heritage Value

To assist in the identification of other properties or landscapes with potential heritage value within or abutting the Study Area, the Chatham-Kent Municipal Heritage Committee, and the Chatham-Kent Museum (Lydia Burggraaf) were also consulted.

The Chatham-Kent Municipal Heritage Committee discussed the Project at their June 17th, 2015 meeting. The committee did not make any comments related to the Project, or identify any additional properties with potential heritage value. In addition, Lydia Burggraaf of the Chatham-Kent Museum did not identify any concerns, or additional properties with potential heritage value.

4.3 Potential Built Heritage Resources at the Project Locations

A total of 13 structures and buildings were visually identified at Project Locations during the field assessment to be greater than 40 years (See Appendix A and Tile 1).

The structures identified at the Project Locations consisted of various components, including residential structures, barns, and former school houses. As is typical in rural landscapes, the residential structures tended to be located close to the road with additional barns and outbuildings adjacent to, or at the rear of the residence.

Eleven of the properties identified contained residential structures that ranged from the mid-19th century to the mid-20th century. Most of the buildings were modest one to two and a half storey vernacular farmhouses. The houses were all of local vernacular designs with some elements of high architecture rather than designed in a particular formal architectural style. The modest size of the structures found throughout the Project Locations is reflective of economic conditions historically present throughout the region, as well as the general prosperity of agricultural production at the Project Locations. The houses contribute to the agricultural character of the Study Area.

Three of the properties identified contained barn structures that appear to be 40 years of age or older based on their timber frame construction, wooden plank siding, and gambrel roofs. Generally, these barns should be considered cultural resources because these types of structures are no longer viable for modern agriculture and are at risk through abandonment or removal. The barns included in Appendix A were constructed in the late19th or early 20th century, although they have now been incorporated into more modern farm complexes that typically include more modern barns and outbuildings. This is reflective of the technological changes in the agricultural industry that have occurred in the region throughout the 20th and 21st centuries.

4.4 Cultural Heritage Landscapes at the Project Locations

Section 6.0 of the Provincial Policy Statement defines cultural heritage landscapes as a:

> A defined geographical area that may have been modified by human activity and is identified as having cultural heritage value or interest by a community, including an Aboriginal community.

> The area may involve features such as structures, spaces, archaeological sites or natural elements that are valued together for their interrelationship, meaning, or association.[20]

In many cases these areas have been highly modified and remain today as remnants of past human activity. Cultural heritage landscapes can also be comprised of entire communities and particular patterns of settlement, as well as more vernacular spaces including agricultural activities alongside urban developments.

For the purposes of this HIA, only that portion of the cultural heritage landscape located within the Study Area was evaluated. The REA Checklist: Consideration of Potential for Heritage Resources identifies a series of cultural heritage landscape categories that can be considered when assessing for heritage potential.

The Study Area was determined to contain 6 cultural heritage landscapes that collectively contribute to a single evolved vernacular rural cultural landscape (See Map 5, Tile 1, and Appendix A). None of these landscapes are individually considered to demonstrate significant cultural heritage value or interest. In general, the cultural landscapes within the Study Area can be categorized as agricultural landscapes, rural settlement landscapes, cemeteries, and railway landscapes. However, collectively they contribute to the layering of historic and modern land use patterns that define the cultural landscape.

4.4.1 Agricultural Landscapes

Most of the Study Area consists of an agricultural landscape defined by agricultural fields and associated farmsteads located primarily along concession roads rather than side roads. Due to the flat landscape and poor natural drainage, land drainage is a very visible part of the landscape in the form of deep municipal drains that run alongside the road allowances. Typically installed in the late 19th century, these drainage ditches are a very visible modification to the otherwise flat landscape that highlights the historical importance of the agricultural industry in the area. The Study Area is also noticeably void of woodlots, which is a direct consequence of the late 19th century lumber industry in Kent County (Plate 21).

4.4.2 Rural Settlement Landscapes

Although no formally organized communities currently exist within the limits of the Study Area, the remaining urban and rural communities that been amalgamated into the Municipality of Chatham-Kent represent rural community landscapes.

The former community of Dover Centre is the most visual remnant of a rural hamlet in the Study Area. Although now a part of the Municipality of Chatham-Kent, the former community of Dover Centre is located at the intersection of Baldoon Road and Dover Centre Line. The adjacent properties at the intersection consist of two commercial properties, a church, and a residential property. West of the intersection a row of residential properties front onto Dover Centre Line, contributing to its former hamlet character.

The former communities of Oldfield and Ounagh have almost disappeared into the evolving landscape as a result of heavy traffic and expanding road allowances.

[20] Government of Ontario, Provincial Policy Statement Under the Planning Act, 2014.

4.4.3 Cemeteries

Two cemeteries within the Study Area also represent cultural heritage landscape elements. The Oldfield Cemetery is located at the north end of the Study Area, and an unidentified cemetery is located on Countryview Line, just east of Prince Albert Road. Both cemeteries contain historic gravesites that were likely connected to the rural hamlet communities in the Study Area (Plate 22).

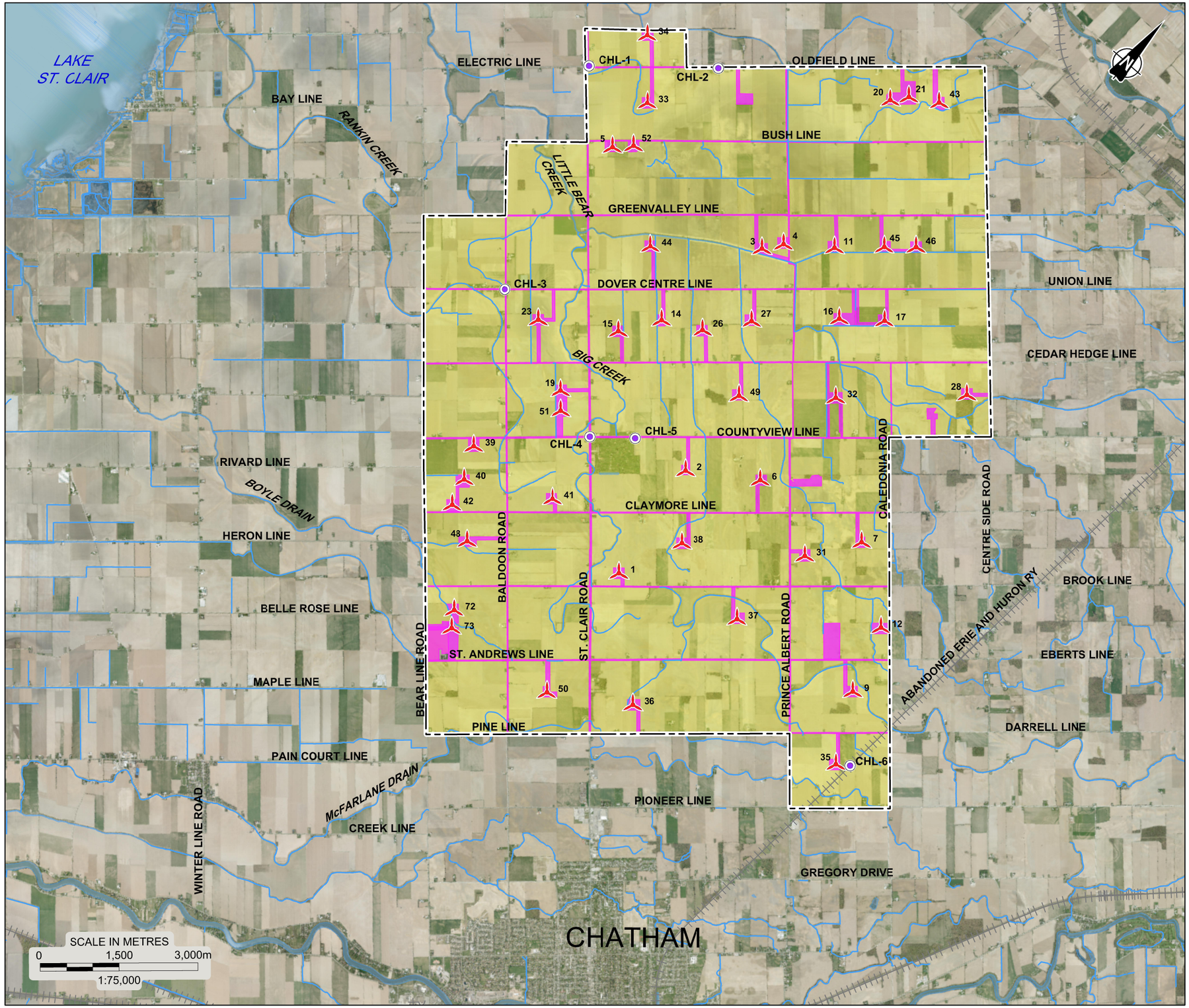
4.4.4 Railway Landscapes

The railway bed, ballast, and tracks of the abandoned Erie and Huron Railway is a particularly unique feature of the landscape. The linear character of the rail line is defined by ditches, infill of vegetation and remnants of the former telegraph lines. The at-grade railway crossings are no longer a part of the road allowance, however, the signage remains, and the railway ties and tracks are still in place beyond the road. Although the construction of this line was significant in opening up the interior of Kent County to industry and agricultural settlements, its abandonment represents the evolving nature of transportation networks in southern Ontario (Plate 23).

Plate 21: View looking west from Bear Line Road, showing agricultural landscape and wind-related infrastructure located adjacent to the Study Area

Plate 22: Unidentified cemetery located along Countryview Line

Plate 23: View looking north along abandoned Erie and Huron Railway right-of-way



LEGEND

- TURBINE
- STUDY AREA BOUNDARY
- WATER SEGMENT
- RAIL LINE (EXISTING OR FORMER)
- CULTURAL LANDSCAPE WITHIN STUDY AREA
- PROJECT COMPONENTS
- WATER BODY
- CULTURAL HERITAGE LANDSCAPES

REFERENCE

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NOTES

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ALL LOCATIONS ARE APPROXIMATE.

FOR THE PURPOSES OF THIS REPORT, CULTURAL HERITAGE LANDSCAPE (CHL) NUMBERS HAVE BEEN ASSIGNED TO EACH CULTURAL HERITAGE LANDSCAPE DISCUSSED WITHIN THE BODY OF THE REPORT. PLEASE SEE SECTION 4.4 AND APPENDIX A FOR FURTHER DOCUMENTATION.

PROJECT

HERITAGE IMPACT ASSESSMENT
NORTH KENT WIND 1 PROJECT
MUNICIPALITY OF CHATHAM-KENT, ONTARIO

TITLE

CULTURAL LANDSCAPES WITHIN THE STUDY AREA

Golder Associates

PROJECT No.		1521110	FILE No. 1521110-3000-R01005
			SCALE AS SHOWN REV.
CADD	DCH/LMK	June 24/15	
CHECK			**MAP 5**

Drawing file: 1521110-3000-R01005.dwg Jun 25, 2015 - 8:12am

5.0 ANALYSIS OF CULTURAL FEATURES

5.1 Potential Built Heritage Resources at the Project Locations

Appendix A identifies 12 properties containing structures more than 40 years old and having potential cultural heritage value or interest. When O. Reg. 9/06 was applied (see Appendix A), eight of these structures were determined to have some cultural heritage value or interest.

5.2 Cultural Heritage Landscapes at the Project Locations

Section 4.4 identified the entire Study Area as a single cultural landscape, that also contained six potential cultural heritage landscapes. The potential significance of this cultural heritage landscape was evaluated against Ontario Regulation 9/06. When the regulation was applied (See Appendix A), one of the landscapes were determined to have some cultural heritage value or interest.

5.3 Summary

5.3.1 Cultural Heritage Features

All individual structures located within or abutting the Project Locations that were more than 40 years old were identified and 14 structures (eleven houses and three barns) were photographed. These structures were then evaluated according to Ontario Regulation 9/06. When applying the criteria set out in Ontario Regulation 9/06, the number of structures was reduced to eight that have potential cultural heritage value or interest.

5.3.2 Cultural Heritage Landscapes

The Study Area was determined to represent a single vernacular rural landscape consisting of agricultural uses, remnants of formal rural communities, cemeteries, and an abandoned railway landscape. The Study Area was determined to be representative of most vernacular rural landscapes. Evaluation according to O. Reg. 9/06 concluded that the vernacular rural landscape did not contain cultural heritage value or interest. One cemetery was determined to have some cultural heritage value or interest as a cultural heritage landscape.

6.0 IMPACT ASSESSMENT

6.1 Potential Impacts and Mitigation Options

Where potential cultural heritage value or interest was determined according to Ontario Regulation 9/06, the anticipated direct and indirect impacts were evaluated. These impacts were identified according to the MTCS' Ontario Heritage Toolkit: Heritage Resources in the Land Use Planning Process. Tables 2 and 3 outline the impacts identified by MTCS, and their relationship to the project.

Table 2: Potential Direct Impacts and Relevance to the Project

Direct Impacts	Relevance to this Project
Destruction - of any, or part of any, significant heritage attribute or feature	None Anticipated : no heritage attribute or feature to be demolished
Alteration - that is not sympathetic, or is incompatible, with the historic fabric or appearance	None Anticipated : no alterations anticipated

Table 3: Types of Potential Indirect Impacts and Relevance to the Project

Indirect Impacts	Relevance to this Project
Shadows - created that alter the appearance of a heritage attribute or change the visibility of a natural feature or plantings, such as a garden	None Anticipated : substantial distance from turbines
Isolation - of a heritage attribute from its surrounding environment, context or a significant relationship	None Anticipated : nature of wind turbine operations will not isolate features
Land Disturbance - such as a change in grade that alters historic patterns of topography or drainage	None Anticipated : no significant or permanent alteration to land
A Change in Land Use - such as rezoning a battlefield from open space to residential use, allowing new development of site alteration to fill in the formerly open spaces	None Anticipated : existing land use is agriculture with modern agricultural and energy-related industries located throughout 9579 Eberts Line: A portion of this participating property will be subdivided and used for construction of a substation for tie in to the hydro transmission corridor.
Obstruction - of significant views or vistas from, within, or to a built and natural feature	None Anticipated : no significant views have been identified

6.2 Built Heritage Resources at the Project Locations

Although eight structures were determined to have cultural heritage value or interest, no direct or indirect impacts are anticipated and therefore, no further mitigation is recommended. The property located at 9579 Eberts Line is a participating property and is anticipated to be divided. The western edge of the property is anticipated to be used for a potential substation and tie in to the existing hydro transmission corridor. The substation will likely result in a change of land use but is not anticipated to cause impacts to the heritage

structure evaluated at the property. Maintaining the existing tree lines surrounding the residential portion of the property will mitigate any visual change to the property.

6.3 Cultural Heritage Landscapes at the Project Location

Although one property was determined to be demonstrating cultural heritage value or interest, no direct or indirect impacts are anticipated. As no cultural heritage value or interest was determined, there are no adverse impacts anticipated to the cultural heritage landscapes.

7.0 RECOMMENDATIONS

An inventory was undertaken to identify and evaluate potential heritage resources. Through a windshield survey, 14 potential built heritage resources 40 years of age or older and six potential cultural heritage landscapes were documented and evaluated according to Ontario Regulation 09/06. The 14 potential built heritage resources contained eleven residences and three barns or barn complexes. Of these, eight were identified to have potential cultural heritage value or interest. Six cultural heritage landscapes were also evaluated according to O. Reg 9/06. Of the six landscapes, only one was identified as containing cultural heritage value or interest.

The property located at 9579 Eberts Line was the only property identified as potentially experiencing indirect impacts as a result of the Project. The property is expected to be subdivided in order for construction of a substation and tie in to the existing hydro transmission corridor at the western edge of the property. The structure identified as a built heritage resource on the property is currently screened by existing vegetation and tree lines. Retaining the vegetative screening would sufficiently mitigate negative indirect impacts anticipated by the substations change in land use on the property.

No further anticipated impacts were identified. As there are no further anticipated impacts to the cultural heritage resources, no further work is recommended.

The recommendations contained in this report are based on current provincial regulations and guidelines pertaining to the approvals process for wind energy projects in Ontario.

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8.3 Maps

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9.0 IMPORTANT INFORMATION AND LIMITATIONS OF THIS REPORT

Golder Associates Ltd. has prepared this report in a manner consistent with the standards and guidelines developed by the Ontario Ministry of Transportation, the Ontario Heritage Bridge Guidelines and the Ontario Ministry of Tourism, Culture, and Sport, Programs and Services Branch, Cultural Division, subject to the time limits and physical constraints applicable to this report. No other warranty, expressed or implied is made.

This report has been prepared for the specific site, design objective, developments and purpose described to Golder Associates Ltd., by Ms. Becky Grieve of AECOM. The factual data, interpretations and recommendations pertain to a specific project as described in this report and are not applicable to any other project or site location.

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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.

10.0 CLOSURE

We trust that this report meets your current needs. If you have any questions, or if we may be of further assistance, please contact the undersigned.

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APPENDIX A

Heritage Resources Inventory

LEGEND

- TURBINE
- STUDY AREA BOUNDARY
- WATER SEGMENT
- RAIL LINE (EXISTING OR FORMER)
- CULTURAL LANDSCAPE WITHIN STUDY AREA
- PROJECT COMPONENTS
- WATER BODY
- BUILT HERITAGE RESOURCE
- CULTURAL HERITAGE LANDSCAPES
- LISTED PROPERTIES

REFERENCE

DRAWING BASED ON 2010 AERIAL IMAGE PROVIDED BY THE MUNICIPALITY OF CHATHAM-KENT, INCLUDES MATERIAL © 2015 OF THE QUEEN'S PRINTER FOR ONTARIO. ALL RIGHTS RESERVED;
AND CANMAP STREETFILES V2008.4.

NOTES

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

ALL LOCATIONS ARE APPROXIMATE.

FOR THE PURPOSES OF THIS REPORT, BUILT HERITAGE RESOURCES (BHR), CULTURAL HERITAGE LANDSCAPES (CHL) , AND LISTED PROPERTY NUMBERS HAVE BEEN ASSIGNED TO EACH KNOWN OR POTENTIAL HERITAGE RESOURCE DISCUSSED WITHIN THE BODY OF THIS REPORT. PLEASE SEE SECTION 4.0 AND APPENDIX A FOR FURTHER DOCUMENTATION.

PROJECT

HERITAGE IMPACT ASSESSMENT
NORTH KENT WIND 1 PROJECT
MUNICIPALITY OF CHATHAM-KENT, ONTARIO

TITLE

HERITAGE RESOURCES INVENTORY

Golder Associates

PROJECT No.		1521110	FILE No. 1521110-3000-R010TI
			SCALE AS SHOWN REV.
CADD	DCH/LMK	June 24/15	**TILE 1**
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