

Ministry of Tourism, Culture and Sport
Confirmation Letter
April 12, 2013

**Ministry of Tourism, Culture
and Sport**

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April 12, 2013 (by email only)

Paige Glenen
Stantec Consulting Ltd.
2791 Lancaster Road, Suite 200
Ottawa, ON K1B 1A7

Project: Niagara Region Wind Farm
Feed-in Tariff Number: FIT-FLKZ509
Report Title: Protected Properties Assessment
Applicant: Niagara Region Wind Corporation
Location: Townships of West Lincoln and Wainfleet and Town of Lincoln
in the Regional Municipality of Niagara, and portions of
Haldimand Country.
MTCS File No.: 00EA080

Dear Paige Glenen:

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:

5.0 Study Results and Recommendations

A total of twelve (12) protected properties as outlined in the table in Section 19, O.Reg.359/09 were identified within the Study Area (Table 2). Potential Project-related negative impacts and constraints have been assessed for each of the identified protected properties.

Constraints related to Section 19, O.Reg.359/09 have been identified with respect to one property, the Comfort Barn (PP2).

As per Section 19 of O.Reg.359/09, written authorization from the Municipality must be submitted as part of the REA Application "if, as part of the renewable energy project, the alteration of the property or the demolition or removal of a building or structure on the property is proposed". Given that the proposed undertaking will alter the property on which the Comfort Barn (PP1) is located, written authorization from the Township of West Lincoln for alterations to the subject property must be submitted as part of the REA submission. The Township of West Lincoln Heritage Committee has reviewed the proposal for the

installation of a wind turbine on the subject property and has determined that the cultural heritage values of the Comfort Barn will not be negatively affected (Appendix A).

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 s. 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
Heritage Planner
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cc. Darren Croghan, Project Manager
Niagara Region Wind Corporation

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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.

Protected Properties Assessment



Stantec

**FINAL REPORT
Protected Properties Assessment,
Niagara Region Wind Farm**

Prepared for:

Niagara Region Wind Corporation
277 Lakeshore Road East, Suite 211
Oakville, ON L6J 6J3

Prepared by:

Stantec Consulting Ltd
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December 2012
Revised March 28, 2013
Revision 2 April 5, 2013

FIT-FLKZ509

Project No.: 160950269

EXECUTIVE SUMMARY

Niagara Region Wind Corporation (NRWC) is proposing to develop, construct, and operate the 230 megawatt (MW) Niagara Region Wind Farm (the Project) in response to the Government of Ontario's initiative to promote the development of renewable electricity in the province. The Project is located in Southern Ontario within the Townships of West Lincoln, and Wainfleet and the Town of Lincoln within the Regional Municipality of Niagara and within Haldimand County.

Stantec Consulting Ltd. (Stantec) was retained by Niagara Region Wind Corporation (NRWC) to prepare a Renewable Energy Approval (REA) Application, as required under Ontario Regulation 359/09 – Renewable Energy Approvals under Part V.0.1 of the Environmental Protection Act (O.Reg. 359/09). Specific sections of O.Reg. 359/09 pertain to Heritage Resources, specifically protected properties. In order to meet the conditions of the Regulation, a Protected Properties Assessment was conducted for the location of the proposed Project.

The Protected Properties Assessment included a review of records and inventories held by: Niagara Region; Haldimand County; the Town of Grimsby; the Townships of Wainfleet, West Lincoln, and Lincoln; the Ontario Ministry of Tourism, Culture and Sport; and the Ontario Heritage Trust.

The findings of the report conclude that:

- No properties that are the subject of an agreement, covenant or easement entered into under clause 10(1)(b) of the *Ontario Heritage Act (OHA)* have been identified within or adjacent to the Study Area;
- No properties in respect for which a notice of intention to designate as being of cultural heritage value or interest has been given in accordance with section 29 of the *OHA* have been identified within or adjacent to the Study Area;
- Twelve (12) properties designated by a municipal by-law made under section 29 of the *OHA* have been identified within or adjacent to the Study Area;
- No properties designated by order of the Minister of Culture under section 34.5 of the *OHA* have been identified within or adjacent to the Study Area;
- No properties in respect for which a notice of intention to designate as being of cultural heritage value or interest of provincial significance has been given in accordance with section 34.6 of the *OHA* have been identified within or adjacent to the Study Area;
- No properties that are the subject of an agreement, covenant or easement entered into under section 37 of the *OHA* have been identified within or adjacent to the Study Area;
- No properties that are part of an area designated by a municipal by-law made under section 41 of the *OHA* as a heritage conservation district have been identified within or adjacent to the Study Area; and
- No properties designated as a historic site under Regulation 880 of the Revised Regulations of Ontario, 1990 (Historic Sites) made under the *OHA* have been identified within or adjacent to the Study Area.

For each protected property, a heritage impact assessment was undertaken in order to identify potential Project-related negative impacts. Impacts evaluated include: destruction; alteration; shadows; isolation; direct or indirect obstruction of significant views; and changes in land use. Constraints related to Section 19, O.Reg.359/09 and the *Ontario Heritage Act* have also been identified, where applicable.

Potential negative impacts and constraints have been identified with respect to one property: the Comfort Barn, (PP2).

Given that the proposed undertaking will alter the property on which the Comfort Barn (PP1) is located, it was recommended that written authorization be obtained from the Township of West Lincoln to be submitted as part of the REA submission as per Section 19, Ontario Regulation 359/09. The Township of West Lincoln Heritage Committee has reviewed the proposal for the installation of a wind turbine on the subject property and has determined that the cultural heritage values of the Comfort Barn will not be negatively affected (Appendix A).

TABLE OF CONTENTS

EXECUTIVE SUMMARY I

1 INTRODUCTION 1

1.1 O.Reg. 359/09 Requirements, Protected Properties 1

1.2 Project Description 3

 1.2.1 Project Location..... 3

 1.2.2 Transmission Lines 4

 1.2.3 Collector Lines..... 5

1.3 Study Methodology..... 5

 1.3.1 Impact Assessment Methodology 6

2 STUDY AREA 11

3 PROTECTED PROPERTIES 13

4 IMPACT ASSESSMENTS 33

4.1 2511 North Shore Drive (Furry Tavern), PP1 33

4.2 1639 Rosedene Road (Comfort Barn), PP2 33

4.3 2663 Moote Road (Former Moot House), PP3 34

4.4 139 St. Catherines Street, Smithville, PP4..... 35

4.5 205 Canborough Street, Smithville, PP5 36

4.6 289 Station Street, Smithville (Smithville Train Station), PP6..... 36

**4.7 4966 Beam Street, Beamsville (Clinton Town Hall and Lincoln Public
Library), PP7..... 37**

4.8 5499 Philp Road (Marlatt Farmstead), PP8..... 37

4.9 5567 Fly Road (Durham-Devries House), PP9..... 38

4.10 5053 King Street (Beam-Barnes House), PP10 39

4.11 4271 Queen Street (The Howard House), PP11..... 40

4.12 5600 King Street (The William D. Kitchen House), PP12 40

5 STUDY RESULTS AND RECOMMENDATIONS 42

6 CLOSURE..... 43

7 REFERENCES 44

7.1 Literature Cited 44

7.2 Personal Communications 46

LIST OF FIGURES

Figure 1: Overview Draft Site Plan 12
Figure 2: Location of Protected Properties and Project Components, Area 1 15
Figure 3: Location of Protected Properties and Project Components, Area 2 17
Figure 4: Location of Projected Properties and Project Components, Area, 3 19
Figure 5: Locations of Protected Properties and Project Components, Area, 4 21
Figure 6: Location of Protected Properties and Project Components, Area 5 23
Figure 7: Location of Protected Properties and Project Components, Area 6 25
Figure 8: Location of Protected Properties and Project Components, Area 7 27
Figure 9: Location of Protected Properties and Project Components, Area 8 29
Figure 10: Location of Protected Properties and Project Components, Area 9 31

LIST OF TABLES

Table 1: Table from Section 19, O.Reg. 359/09 2
Table 2: Properties within the Study Area protected under Section 19, O.Reg.359/09 13

LIST OF VISUAL AIDS

Visual Aid 1: Wind Turbine Scale Schematic (124m hub height) 8
Visual Aid 2: Wind Turbine Scale Schematic, with trees (124m hub height) 9
Visual Aid 3: Wind Turbine Scale Schematic (135m hub height) 10
Visual Aid 4: Wind Turbine Scale Schematic, with trees (135m hub height) 10

APPENDICES

- APPENDIX A Correspondence
- APPENDIX B Designation By-Laws
- APPENDIX C Site Photographs

PROJECT PERSONNEL

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- Archival Research Stephen Jarrett, M.A.
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Colin Varley, M.A., R.P.A.

1 INTRODUCTION

Stantec Consulting Ltd. (Stantec) was retained by Niagara Region Wind Corporation (NRWC) to prepare a Renewable Energy Approval (REA) Application for the Niagara Region Wind Farm (the Project), as required under *Ontario Regulation 359/09 – Renewable Energy Approvals under Part V.0.1 of the Environmental Protection Act* (O.Reg. 359/09). According to subsection 6.(3) of O.Reg. 359/09, the Project is classified as a Class 4 Wind Facility and will follow the requirements identified in O.Reg.359/09 for such a facility.

This Protected Properties Assessment is one component of the REA Application for the Project, and has been prepared in accordance with O.Reg. 359/09. The study was undertaken by Christienne Uchiyama, M.A., and Nancy Oakley, M.A., Heritage Planning Consultants with Stantec. Colin Varley, M.A., R.P.A., Senior Archaeologist and Heritage Planning Consultant, acted as Senior Reviewer.

1.1 O.Reg. 359/09 Requirements, Protected Properties

This Protected Properties Assessment has been conducted in accordance with O.Reg. 359/09, s.19, which states that:

19. (1) A person who proposes to engage in a renewable energy project shall determine whether the project location is on a property described in Column 1 of the Table to the section.

Section 4 of this report outlines those properties identified within the Study Area which are protected as outlined in the table in Section 19 (Table 1), specifically those protected properties which are located on or abutting the location of Project components (*i.e.*, project locations).

The Regulation further states that:

(2) If the project location is on a property described in Column 1 of the Table to this section, a person mentioned in subsection (1) shall submit, as part of the application for the issue of a renewable energy approval, a copy of the written authorization,

(a) of the person or body set out opposite the description in Column 2 of the Table; and

(b) of the type set out opposite the description in Column 3 of the Table.

Table 1: Table from Section 19, O.Reg. 359/09

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

1.2 Project Description

Niagara Region Wind Corporation (NRWC) is proposing to develop, construct, and operate the 230 Megawatt (MW) Niagara Region Wind Farm (the Project) within the Townships of West Lincoln and Wainfleet and the Town of Lincoln within the Niagara Region and within Haldimand County in Southern Ontario, in response to the Government of Ontario's initiative to promote the development of renewable electricity in the province.

The basic components of the Project include 77 wind turbine generators (80 potential locations identified) each with a rated capacity of approximately 3.0 MW for a maximum installed nameplate capacity of 230 MW. An overhead and/or underground collection system connects each turbine to one of two transformer substations along a series of 34.5 kilovolt (kV) lines. Turbines are grouped into eight collector circuits that bring power (and data via fibre optic lines) to one of the transformer substations. Voltage is stepped up from 34.5kV to 115kV at each transformer substation by means of a 100 MVA base rated transformer with two stages of cooling (via fans). A 115kV transmission line transports power from each of the two transformer substations north to the tap-in location where the Project is connected to the Hydro One Networks Inc. (HONI) owned transmission line, south of the Queen Elizabeth Way (QEW) in the Town of Lincoln. Power generated from this Project will be conveyed along the existing HONI transmission line to the Beach Transformer Station in Hamilton.

Alternate transmission and collector lines routes have been identified and assessed to provide options during detailed design, the final selection of which route to follow will be confirmed following the consultation process with local distribution companies, agency review and detailed design.

Other Project components include access roads, junction boxes (or pad-mounted disconnect switches) and associated culverts at swales and waterbody crossings. Temporary components during construction may include temporary laydown areas (for storage and staging areas at each turbine location), crane pads or mats, staging areas along access roads, delivery truck turnaround areas, central construction laydown areas and crane paths. All Project components are illustrated on Figures 2 through 10.

1.2.1 Project Location

In accordance with O. Reg. 359/09, the "Project Location" includes all land and buildings/structures associated with the Project and any air space in which the Project will occupy. This includes structures such as turbines, access roads and power lines as well as any temporary work areas (the 'constructible area' for the Project) which are required to be utilized during the construction of the Project.

The "Project Study Area" was established to scope the siting of the proposed wind turbines, collector lines, access roads and temporary work areas. Similarly, the "Interconnector Study Area"

was established to scope the location of the proposed 115kV transmission line, transformer substations and tap-in location. These two terms are intended to assist with background data collection and consultation, however have no formal definition or application under O.Reg. 359/09. Figure 1 identifies both Study Areas, which include portions of the Townships of West Lincoln and Wainfleet and the Towns of Grimsby and Lincoln within the Niagara Region and within Haldimand County in Southern Ontario. Project infrastructure such as collector lines and transmission lines will be sited along the boundaries of the Township of Pelham and Town of Grimsby, but will be sited outside of these municipalities on the opposite side of the road.

1.2.2 Transmission Lines

To facilitate the Project's connection to the provincial grid, a new 115 kV transmission line approximately 44 km in length will be constructed as part of the Project. A preferred transmission line route has been identified in the REA, as well as some alternate transmission line routes where further consultation with municipalities and local distribution companies will help to select the most ideal route. The configuration and routes for the preferred and alternate transmission lines are shown in Figure 1.

The poles of the transmission line will be up to 23 m in height and vary in spacing from approximately 60m to 150m as required. Smaller spans or taller poles may be required for some areas where narrow rights of way, angles or unforeseen problems make construction difficult. Wood monopoles will be used where practical and steel or concrete monopoles may be used in some cases depending on site conditions.

Transmission lines will be installed overhead along municipal road right of ways, as well as where it is proposed to cross the Welland River and associated wetland. Through the approval of a Development Permit from the Niagara Escarpment Commission to be obtained prior to submission of the REA application, the transmission line will be buried within the municipal right of way along Mountainview Road where it crosses the Niagara Escarpment Plan Area. It will also continue underground to the tap-in location, and may be buried along other sections of the transmission line route. Both underground and overhead options have been considered in the Natural Heritage Assessment and Environmental Impact Study. Details on the method of installation are provided in the Construction Plan Report.

The transmission line will connect to the existing Hydro One Networks Inc. 115 kV transmission line which runs parallel to the south side of the QEW and intersects Mountainview Road in Lincoln. At this tap-in location there will be either a pole-mounted Mid Span Opener (MSO) or a pad-mounted disconnect switch to allow for manual disconnect of the Project from the HONI line. A short access road will be required to allow for access to the tap-in location, which will also be enclosed with fencing and warning signage to alert the public.

1.2.3 Collector Lines

From the turbine switchgear, underground 34.5 kV collector lines carry the electricity to the municipal road allowances along the turbine access roads or other defined routes. Along the municipal road allowances, underground and/or overhead collector lines on new poles organized into several circuits will transport the electricity to one of the transformer substations.

Overhead lines will be installed on poles that will be designed to meet the requirements of the local distribution companies, and in some cases, the assets of the local distribution companies may share the poles with the project assets. Wood monopoles will be used where feasible, but some concrete or steel monopoles may be required to avoid guy wires spanning outside of municipal road allowances (to be confirmed during detailed design).

The monopoles carrying the collector lines will vary in height depending on the number of circuits installed. A minimum pole height of 19 m and maximum pole height of 30 m is expected with varied pole spacing up to 60 m.

Collector lines are proposed to be installed overhead at two of the wetland crossings, specifically over the Welland River and over the Welland Feeder Canal. However, all other collector lines on private properties will be installed underground, including where they are proposed to cross wetland or woodland areas. Details on the method of installation are provided in the Construction Plan Report.

Where two or more collector lines connect and continue as one collector line, a junction box or pad-mounted disconnect switch will be installed. The unit is an enclosed metal box approximately 2m high, 3m long and 2m wide. The unit is safe to touch and locked to prevent unauthorized entry. The units are brought to site by truck and lowered onto cast-in place concrete pads. Collector lines are fed into the box from underground.

1.3 Study Methodology

The Protected Properties Assessment was composed of a program of archival research and information obtained from the Heritage Registers and inventories held by: Niagara Region; Haldimand County; the Town of Grimsby; the Townships of Wainfleet, West Lincoln, and Lincoln; the Ontario Ministry of Tourism, Culture and Sport; and the Ontario Heritage Trust. Designation By-Laws and other documentation received are included in Appendix B. Local heritage non-governmental organizations were not contacted as part of the protected properties desktop research process as the municipalities contacted had up-to-date information regarding protected properties.

The properties included in this report are all located within the general Study Area. For each protected property identified a heritage impact assessment (HIA) was undertaken in order to identify

potential Project-related negative impacts. Impacts evaluated include: destruction; alteration; shadows; isolation; direct or indirect obstruction of significant views; and changes in land use.

1.3.1 Impact Assessment Methodology

Assessment of potential direct or indirect impacts of the project on protected properties in the Study Area considered Ministry of Tourism and Culture guidelines concerning *Heritage Impact Assessments and Conservation Plans* (MTCS, 2006a).

The Ministry of Tourism and Culture outlines seven potential negative impacts on heritage resources:

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

Land disturbances are being assessed in a separate Stage 1 Archaeological Assessment and have not been included in the current evaluation.

Identification of potential impacts considered the proposed site plan in relation to identified cultural heritage resources (Figures 2 through 10).

The hub height of the proposed wind turbines will be either 124 m or 135 m with a blade length of 48.5 m. In order to evaluate the potential visual impact of turbines, general topographical conditions and land-use recorded during the site visit, aerial imagery, and comparative examples from similar projects were reviewed. Visual modelling was also used to inform the evaluation with respect to assessing the scale of new turbines relative to existing built features. Visual Aid 1 presents the scale of a turbine with a 124 m hub height at a distance of 550 m and 1000 m from a typical two storey residential building. Visual Aid 2 presents that same model with trees at various locations and distances in order to evaluate the effectiveness of tree-cover as an effective mitigative measure. Visual Aids 3 and 4 present similar models with a hub height of 135 m.

In addition to direct impacts related to destruction, this assessment also evaluated the potential for indirect impacts resulting from the vibrations of construction and the transportation of Project components and personnel. Although the effect of traffic and construction vibrations on historic period structures is not fully understood, negative effects have been demonstrated on buildings with a setback of less than 40 m from the curbside (Crispino and D'Apuzzo, 2001; Ellis, 1987; Rainer, 1982; Wiss, 1981). The proximity of Project components to resources of cultural heritage value was considered in this assessment, particularly those within 50 m.

One important consideration of interventions on resources and landscapes of heritage value is the **reversibility** of any new features. English Heritage (officially known as the Historic Buildings and Monuments Commission for England), a governmental statutory adviser on the historic environment in the United Kingdom, has prepared guidance on the assessment of impacts of renewable energy projects on the Historic Environment which addresses reversibility. English Heritage states that, as a best practice, "consideration should always be given to the reversibility of wind energy projects" (English Heritage, 2005). Their 2005 guidance document further states that,

Planning authorities should therefore make provision, as part of any planning permission, for the long-term protection of the landscape by requiring legal agreements for the remediation and restoration of wind farm sites and their infrastructure when they are decommissioned.

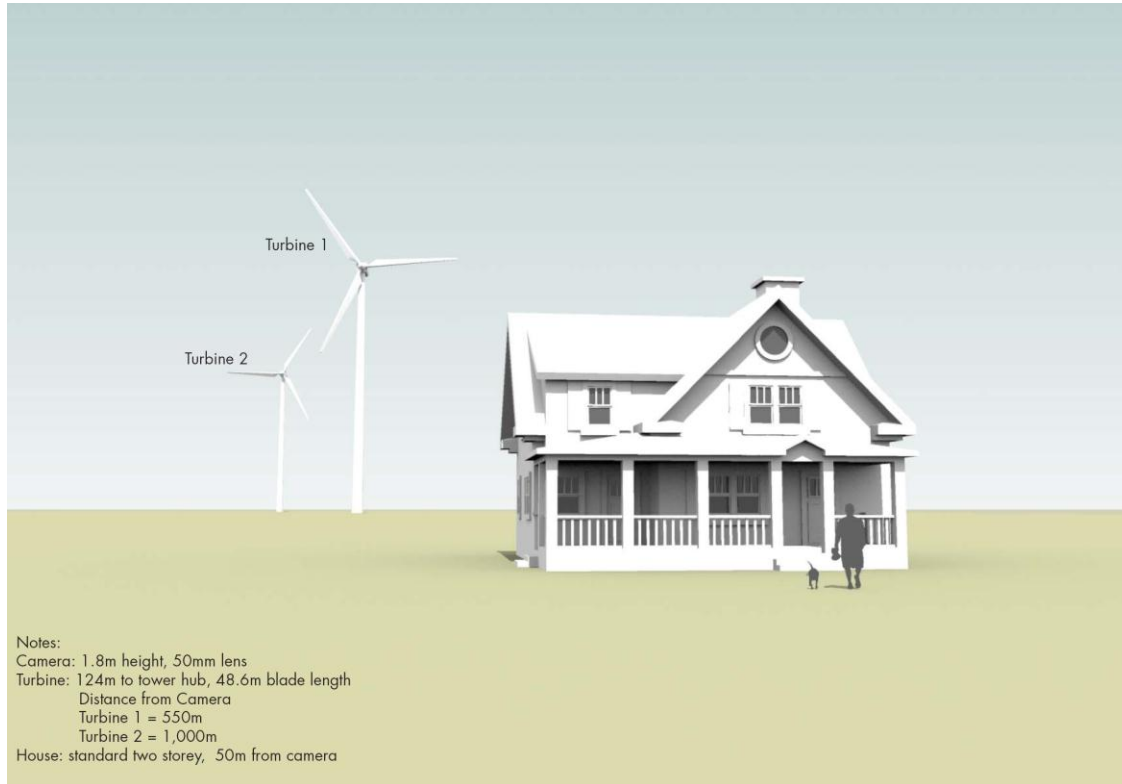
A Decommissioning Plan Report has been prepared for the Project, in accordance with O.Reg. 359/09, which sets out specific content requirements for the Decommission Plan Report in Table 1, Item 3 of the Ministry of Environment's (MOE's) draft guidance document "Technical Guide to Renewable Energy Approvals" (MOE, March 2012). The Decommission Plan Report provides the following information with respect to plans for site rehabilitation or restoration following the lifespan of the Project.

The operator of the Project will develop a Rehabilitation Plan that is designed to restore habitat in areas affected by Project-related equipment. This plan will be developed in consultation with the appropriate agencies prior to the decommissioning of the Project.

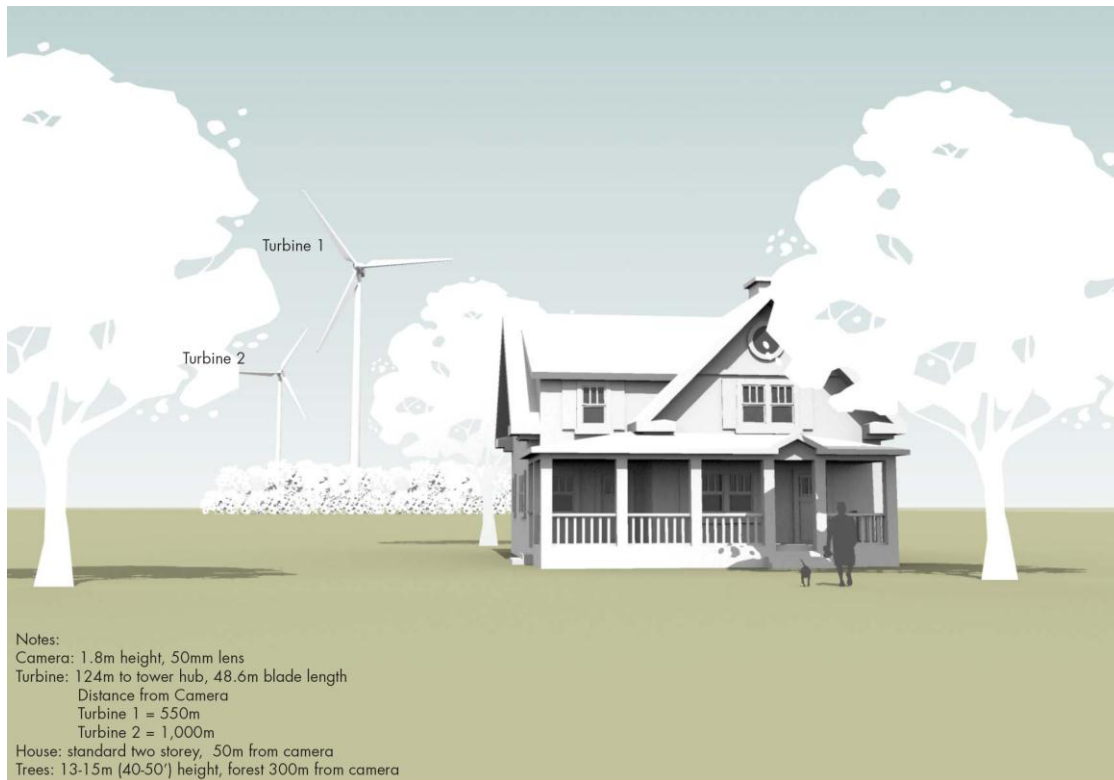
It is envisioned that the Rehabilitation Plan will include, but not be limited to the following;

- *Agricultural areas, which comprise most of the pre-developed Project Location, will be restored such that normal farming practices may resume. Any damaged tile drains will be fixed.*
- *Cultural areas will be revegetated using native plant material and seeds appropriate for the Project site or allowed to revegetate naturally.*
- *Areas such as turbine staging areas, crane pads and access roads which may become compacted during decommissioning will be decompact and restored to pre-existing conditions.*

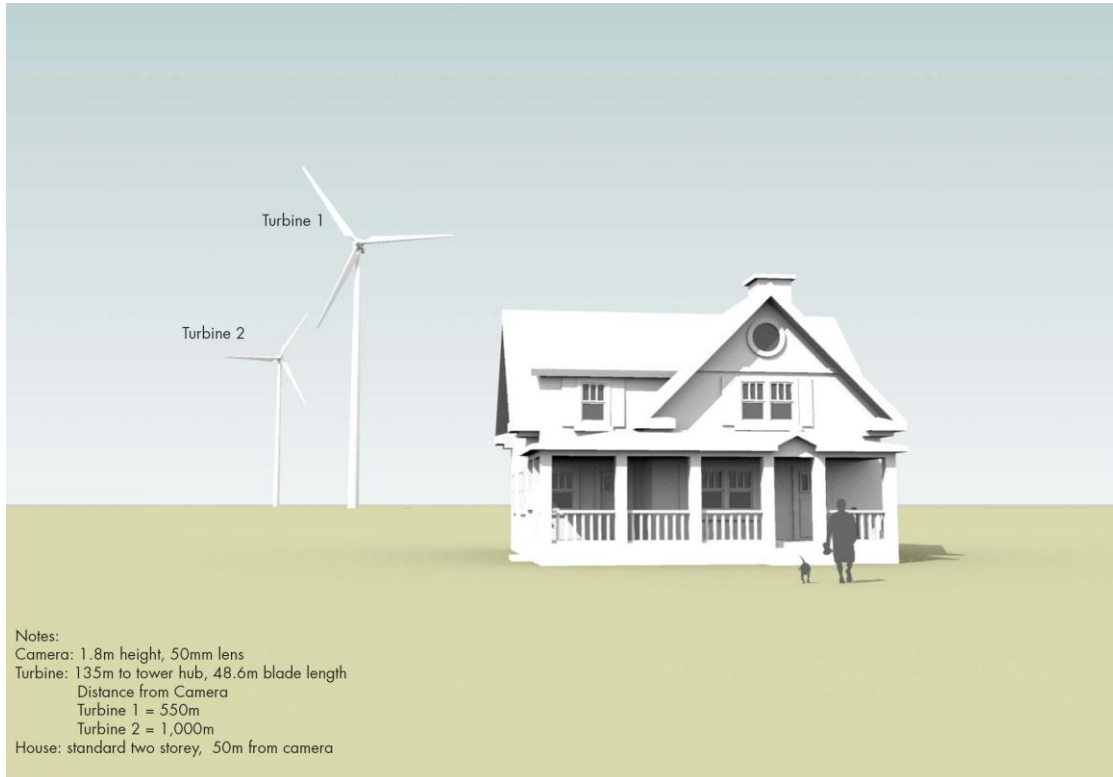
The Rehabilitation Plan may also involve a monitoring period which allows for the Project site to experience seasonal changes and help determine if additional restoration is required (Stantec, 2012).



Visual Aid 1: Wind Turbine Scale Schematic (124m hub height)



Visual Aid 2: Wind Turbine Scale Schematic, with trees (124m hub height)



Visual Aid 3: Wind Turbine Scale Schematic (135m hub height)



Visual Aid 4: Wind Turbine Scale Schematic, with trees (135m hub height)

2 STUDY AREA

The Project will be located on privately owned lands and within municipal rights of way. The legal description of the parcels of land that will be used for the Project will be provided as part of the REA Application.

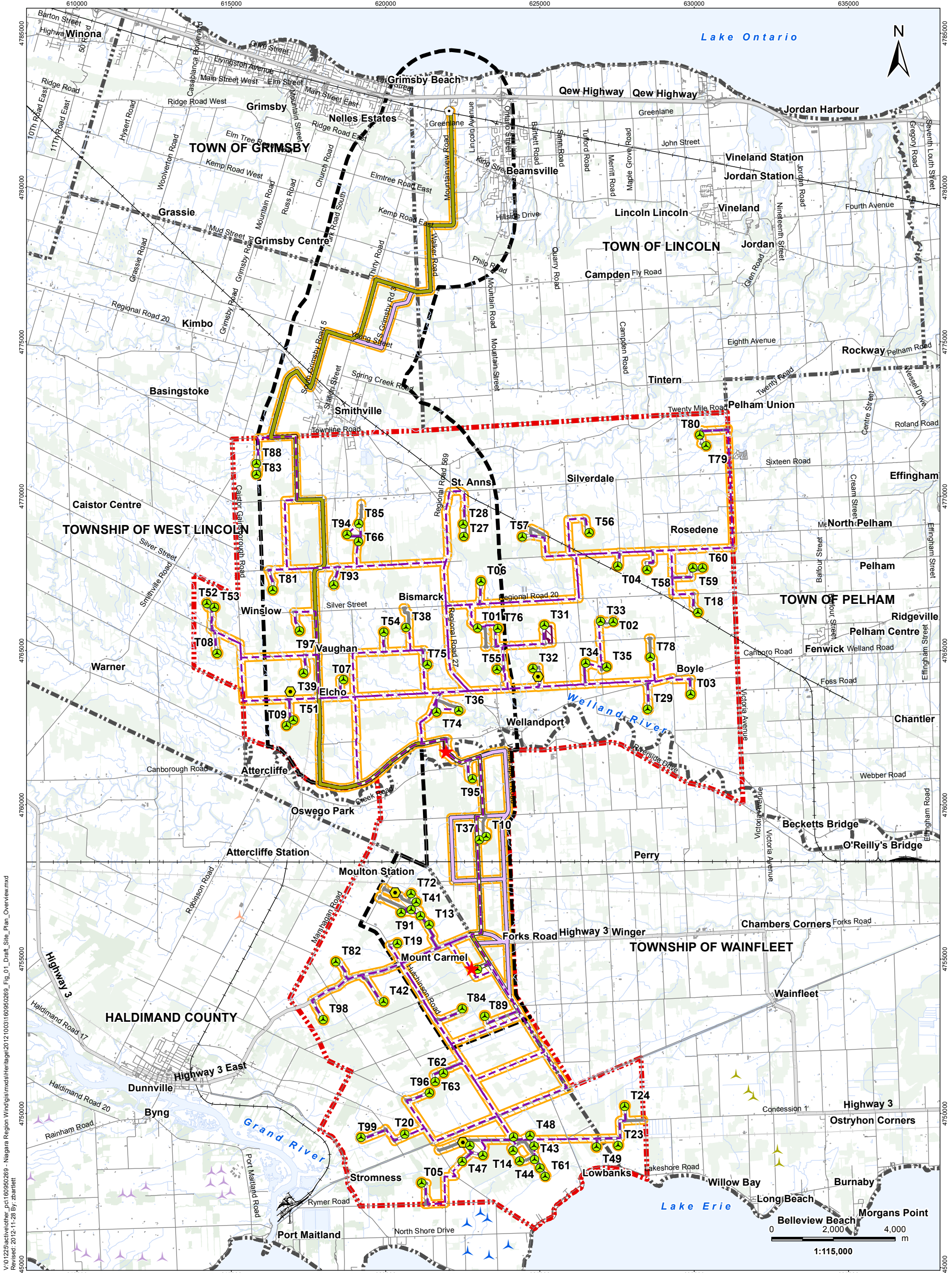
The Project will be entirely located within the Townships of West Lincoln, and Wainfleet and the Town of Lincoln within the Niagara Region and within Haldimand County in Southern Ontario. The Project Study Area covers approximately 33,747.5 ha and is generally bounded by Castor Gainsborough Road to the West; the Queen Elizabeth Way to the North; the north shore of Lake Erie to the South; and Balfour Street to the East (Figure 1).

Settlements in the general vicinity of the Project include Saint Ann's, Silverdale, Rosendene, Bismark, Boyle, Fenwick, Vaughan, Elcho, Perry, Becketts Bridge, Wellandport, Mount Carmel, Forks Road, Lowbanks, Willow Bay, Beamsville, Smithville and Grimsby. Study Area land use is primarily rural agricultural with small settlements scattered throughout the landscape, with more urban land uses located in the north along the south shore of Lake Ontario. Many woodlands and wetlands occur throughout the Study Area, which includes portions of the Niagara Escarpment and Greenbelt Areas. Short Hills Provincial Park is located to the east of the Project Study Area and Rock Point Provincial Park is located to the south.

In accordance with O.Reg. 359/09, the Project Location includes all land and buildings/structures associated with the Project and any air space in which the Project will occupy. This includes structures such as turbines, access roads and power lines as well as any temporary work areas (the 'constructible area' for the Project) which are required to be utilized during the construction of the Project.

The Study Area is located in the Haldimand Clay Plain physiographic region, a large region that occupies the majority of the Niagara Peninsula south of the Niagara Escarpment down to Lake Erie. It is a region of approximately 1,350 square miles characterized by recessional moraines in the northern part, deep river valley in the middle, and flat and low lying ground in the south (Chapman and Putnam, 1984).

The vast majority of the surficial geology of the Study Area is silty heavy clay loam till and alluvial deposits in flood plains spanning the length of region's waterways. In the historic Lincoln County the dominate soil series is Haldimand clay loam with small pockets of Lincoln clay till, predominately along waterways (Wicklund and Mathews, 1963). The surficial geology in the historic Welland County is similar, although Berrien and Wauseon series sandy loam soils are also found within the Study Area (Presant and Kingston, 1989).



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 Revised: 2012-11-28 By: zbarlett



Legend

- Project Study Area
- Interconnector Study Area
- 120m Zone of Investigation
- Transformer Substation
- Proposed Turbine Location
- Tap-in Location
- Existing Met Tower
- Potential Access Road
- Collector Lines - Underground or Overhead
- Preferred Transmission Route
- Alternate Transmission Route
- Potential Construction Laydown Area
- Road
- Expressway / Highway
- Active Railway
- Abandoned Railway
- Existing Structures
- Watercourse
- Existing Transmission Line
- Waterbody
- Wooded Area
- Municipality Lower Tier

- Other Wind Turbines**
- Mohawk Wind Farm (Existing)
 - Rosa Flora Turbine (Existing)
 - Wainfleet Wind Energy Project (Proposed)
 - HAF Wind Energy Project (Proposed)
 - Grand Renewable Energy Park (Proposed)

Notes

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Figure No.
 1

Title
Project Location

November 2012
 160950269

3 PROTECTED PROPERTIES

There are a total of twelve (12) protected properties as outlined in the table in Section 19, O.Reg.359/09 located within or adjacent to the Study Area (Table 2).

There are no properties located within or adjacent to the Study Area which are subject to an agreement, covenant, or easement with the Ontario Heritage Trust under clause 10(1)(b) of the *Ontario Heritage Act* (Fraser, 2011).

There are no properties located within or adjacent to the Study Area which have been designated under Section 34.5 of the *Ontario Heritage Act* or under Regulation 880 of the Revised Regulations of Ontario, 1990 (MTCS, 2011).

Locations of Protected Properties are shown on Figures 2 through 10.

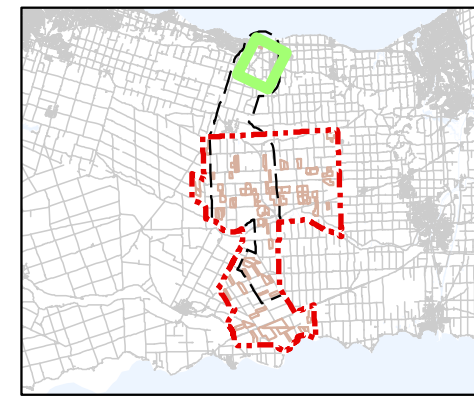
Table 2: Properties within the Study Area protected under Section 19, O.Reg.359/09

Protected Property Number	Address/Property Name	Municipality or Approval Authority	Type of Designation under the <i>Ontario Heritage Act</i>	Figure #
PP1	2511 North Shore Drive - <i>Furry Tavern</i>	Haldimand County	Part IV, Section 29	10
PP2	1639 Rosedene Road - <i>Comfort Barn</i>	Township of West Lincoln	Part IV, Section 29	6
PP3	2663 Moote Road - <i>Former Moot House</i>	Township of West Lincoln	Part IV, Section 29	6
PP4	139 St. Catherines Street, Smithville	Township of West Lincoln	Part IV, Section 29	4
PP5	205 Canborough Street, Smithville	Township of West Lincoln	Part IV, Section 29	4
PP6	289 Station Street, Smithville - <i>Smithville Train Station</i>	Township of West Lincoln	Part IV, Section 29	4
PP7	4966 Beam Street - <i>Clinton Town Hall and Lincoln Public Library</i>	Town of Lincoln	Part IV, Section 29	2
PP8	5499 Philp Road - <i>Marlatt Farmstead</i>	Town of Lincoln	Part IV, Section 29	2 and 3
PP9	5567 Fly Road - <i>Durham-Devries House</i>	Town of Lincoln	Part IV, Section 29	3
PP10	5053 King Street - <i>Beam-Barnes House</i>	Town of Lincoln	Part IV, Section 29	2
PP11	4271 Queen Street - <i>The Howard House</i>	Town of Lincoln	Part IV, Section 29	2
PP12	5600 King Street - <i>The William D. Kitchen House</i>	Town of Lincoln	Part IV, Section 29	2



Legend

- Protected Property
- Proposed Turbine Location
- Junction Box / Pad-Mounted Disconnect Switch
- Existing Met Tower
- Proposed Culvert
- Preferred Transmission Line Route
- Alternate Transmission Line Route
- Proposed Collector Line (underground or overhead)
- Temporary Laydown Area
- Potential Access Road
- Proposed Fibre Optic Line
- Transformer Substation
- Potential Construction Laydown Area
- Access Road 20m Construction Area
- Participating Property
- Property Boundary
- Interconnector Study Area
- 120m Zone of Investigation
- Project Study Area



Notes

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Figure No.
2

Title
Location of Protected Properties and Project Components - Area 1

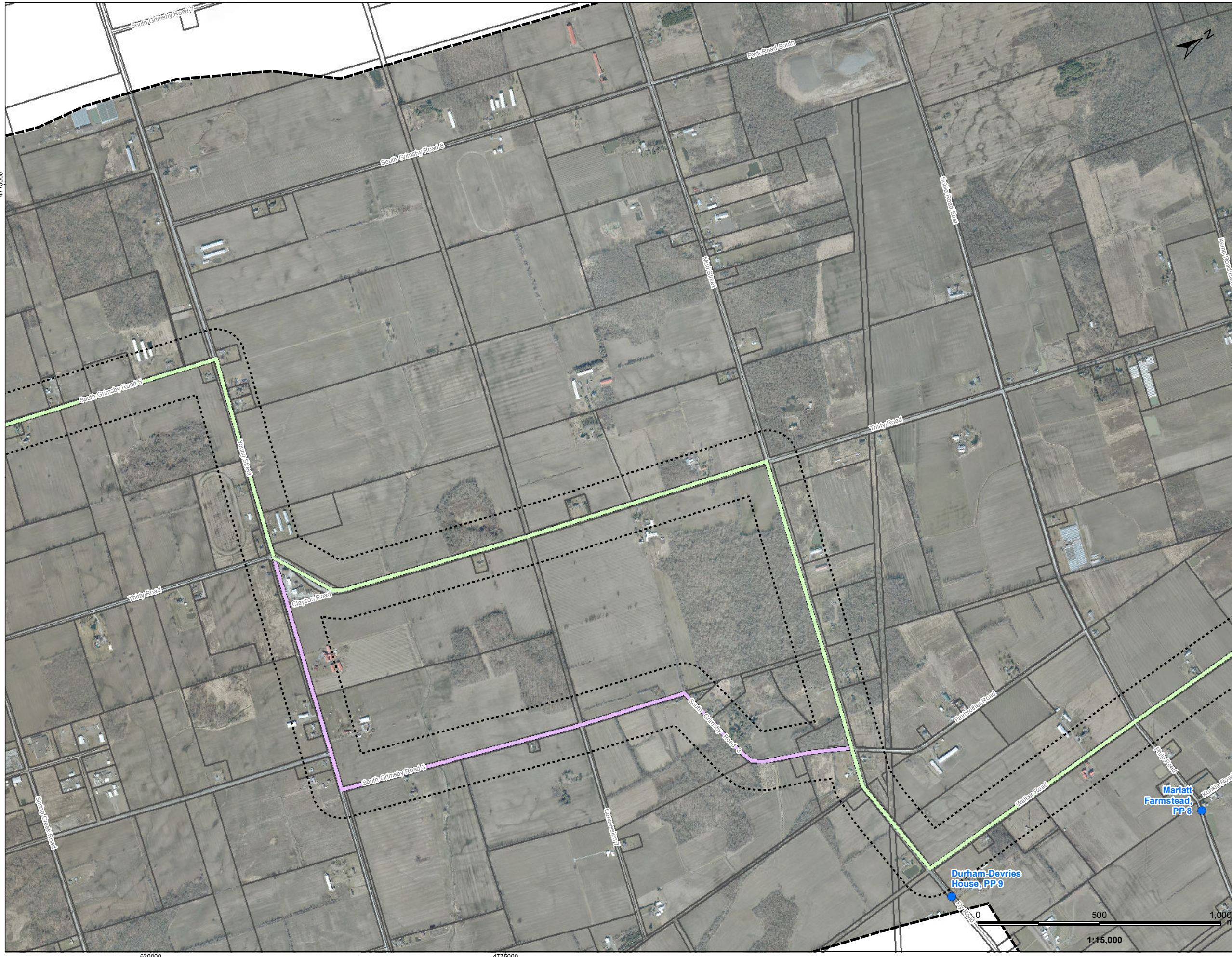
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Revised: 2013-04-02 By: sarcojers

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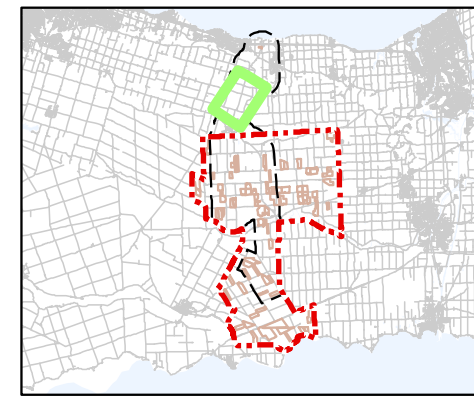
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 Revised: 2013-04-02 By: sarcojers



- ### Legend
- Protected Property
 - Proposed Turbine Location
 - Junction Box / Pad-Mounted Disconnect Switch
 - ⬡ Existing Met Tower
 - Proposed Culvert
 - Preferred Transmission Line Route
 - Alternate Transmission Line Route
 - Proposed Collector Line (underground or overhead)
 - Temporary Laydown Area
 - Potential Access Road
 - Proposed Fibre Optic Line
 - Transformer Substation
 - Potential Construction Laydown Area
 - Access Road 20m Construction Area
 - Participating Property
 - Property Boundary
 - Interconnector Study Area
 - 120m Zone of Investigation
 - Project Study Area



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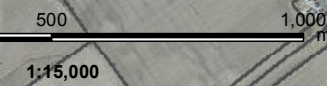


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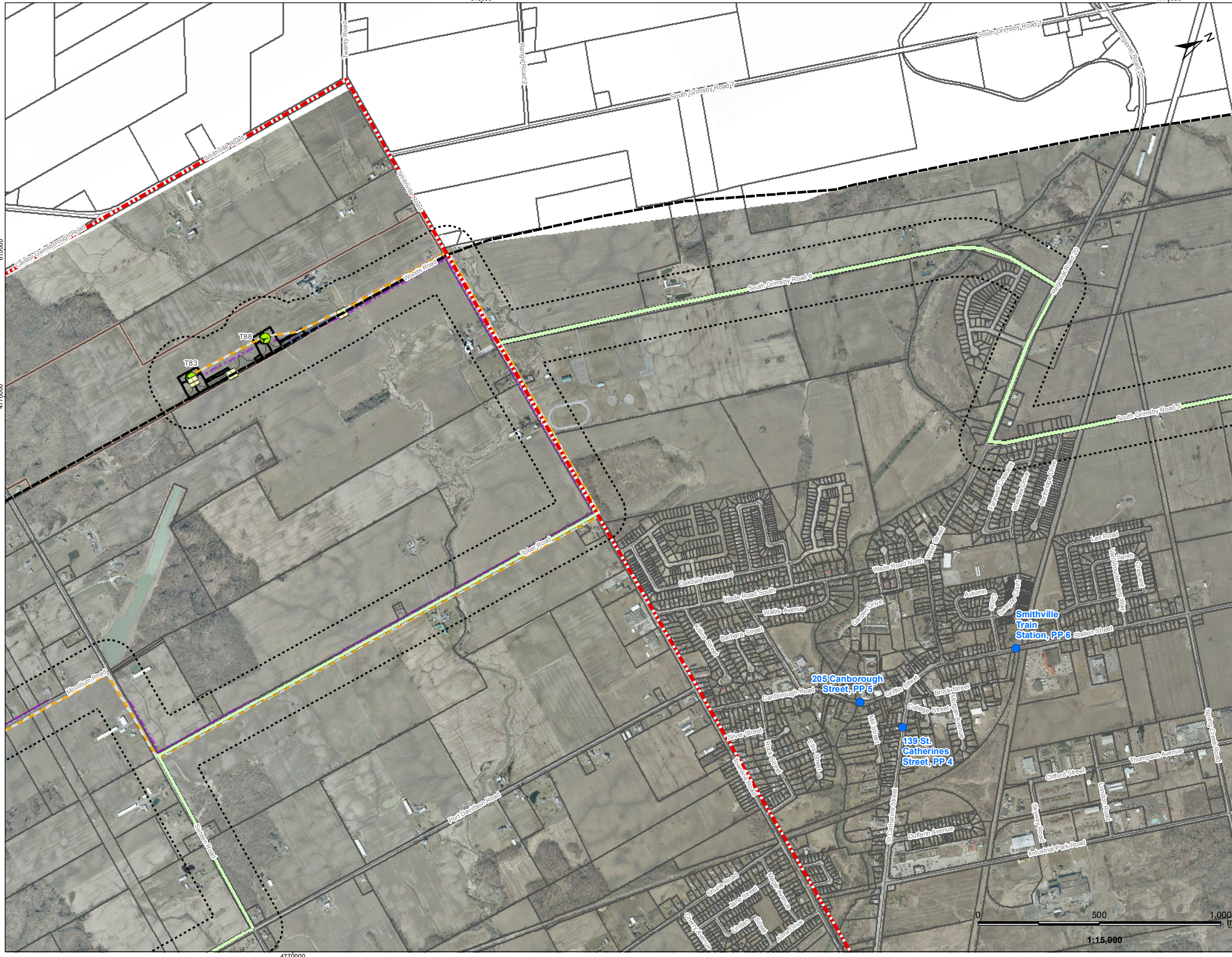
Figure No.
 3

Title
Location of Protected Properties and Project Components - Area 2

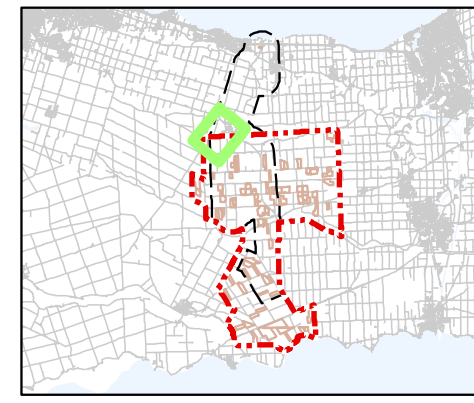


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 Revised: 2013-04-02 By: sarcojers



- ### Legend
- Protected Property
 - Proposed Turbine Location
 - Junction Box / Pad-Mounted Disconnect Switch
 - Existing Met Tower
 - Proposed Culvert
 - Preferred Transmission Line Route
 - Alternate Transmission Line Route
 - Proposed Collector Line (underground or overhead)
 - Temporary Laydown Area
 - Potential Access Road
 - Proposed Fibre Optic Line
 - Transformer Substation
 - Potential Construction Laydown Area
 - Access Road 20m Construction Area
 - Participating Property
 - Property Boundary
 - Interconnector Study Area
 - 120m Zone of Investigation
 - Project Study Area



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Figure No.
 4

Title
Location of Protected Properties and Project Components - Area 3

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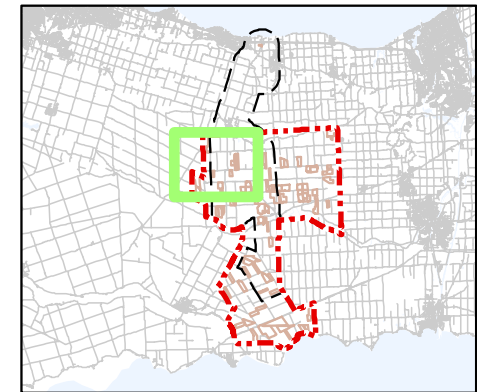
620000

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Legend

- Protected Property
- ⬆ Proposed Turbine Location
- Junction Box / Pad-Mounted Disconnect Switch
- ⬠ Existing Met Tower
- Proposed Culvert
- Preferred Transmission Line Route
- Alternate Transmission Line Route
- Proposed Collector Line (underground or overhead)
- Temporary Laydown Area
- Potential Access Road
- Proposed Fibre Optic Line
- Transformer Substation
- Potential Construction Laydown Area
- Access Road 20m Construction Area
- Participating Property
- Property Boundary
- Interconnector Study Area
- 120m Zone of Investigation
- Project Study Area



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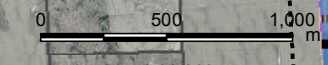
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Niagara Region Wind Farm

Figure No.

5

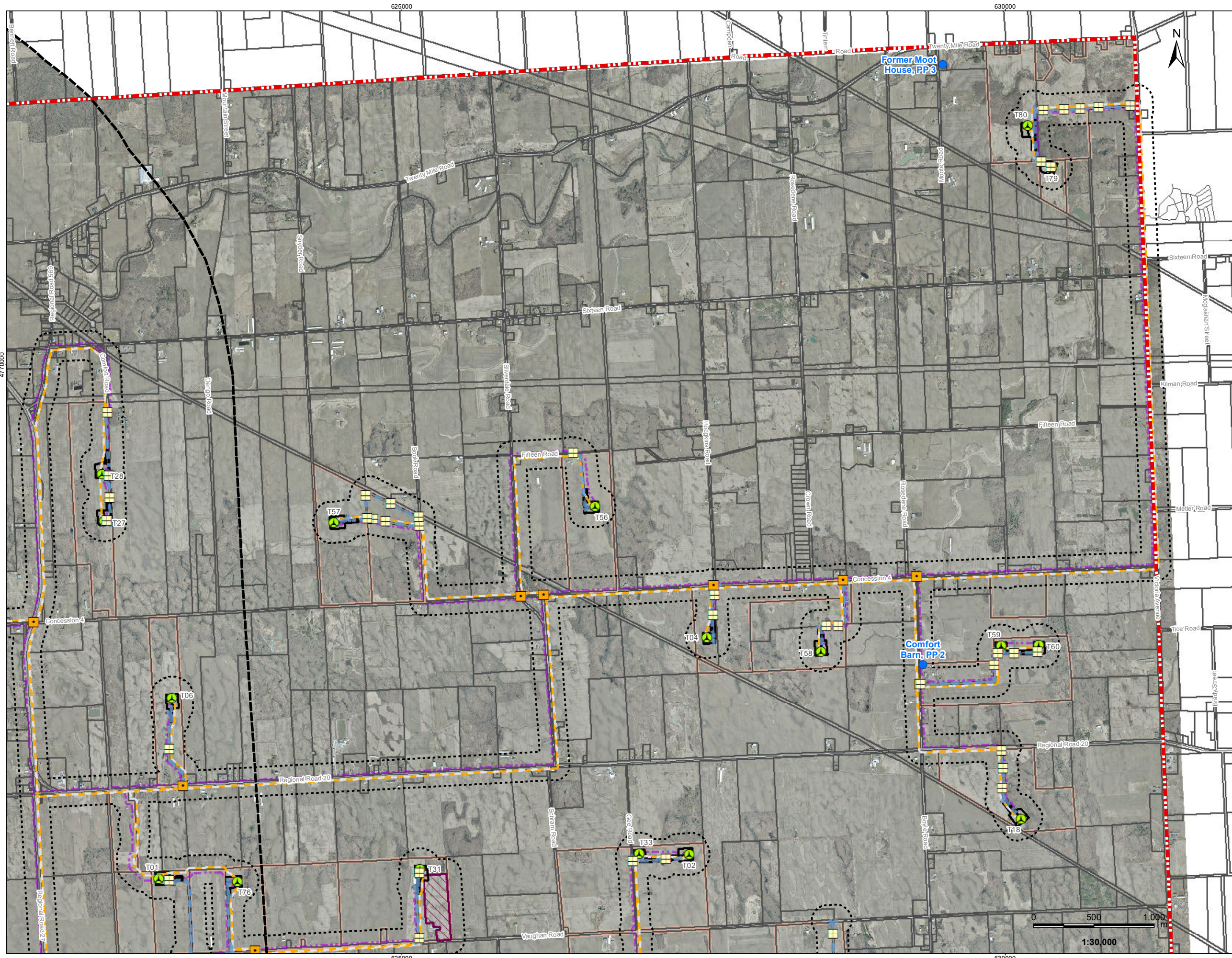
Title

Location of Protected Properties and Project Components - Area 4



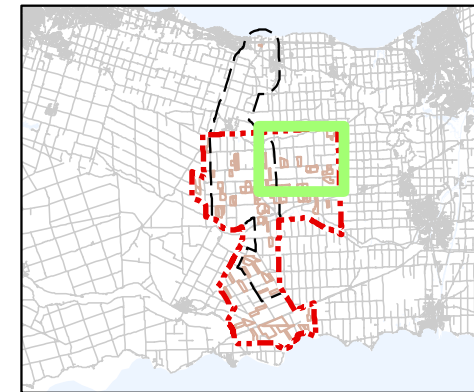
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Legend

- Protected Property
- ⊙ Proposed Turbine Location
- Junction Box / Pad-Mounted Disconnect Switch
- ⬡ Existing Met Tower
- ▤ Proposed Culvert
- Preferred Transmission Line Route
- Alternate Transmission Line Route
- Proposed Collector Line (underground or overhead)
- Temporary Laydown Area
- Potential Access Road
- Proposed Fibre Optic Line
- Transformer Substation
- Potential Construction Laydown Area
- Access Road 20m Construction Area
- Participating Property
- Property Boundary
- Interconnector Study Area
- 120m Zone of Investigation
- Project Study Area



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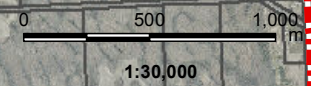
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Figure No.

6

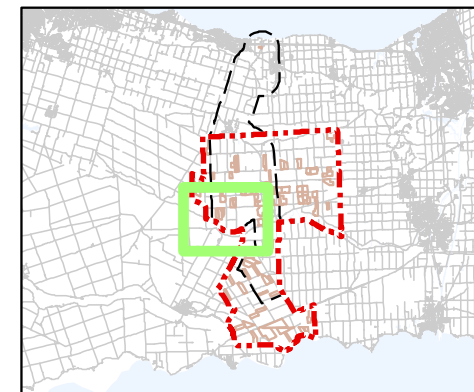
Title

Location of Protected Properties and Project Components - Area 5





- ### Legend
- Protected Property
 - Proposed Turbine Location
 - Junction Box / Pad-Mounted Disconnect Switch
 - Existing Met Tower
 - Proposed Culvert
 - Preferred Transmission Line Route
 - Alternate Transmission Line Route
 - Proposed Collector Line (underground or overhead)
 - Temporary Laydown Area
 - Potential Access Road
 - Proposed Fibre Optic Line
 - Transformer Substation
 - Potential Construction Laydown Area
 - Access Road 20m Construction Area
 - Participating Property
 - Property Boundary
 - Interconnector Study Area
 - 120m Zone of Investigation
 - Project Study Area



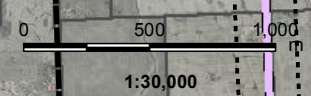
- ### Notes
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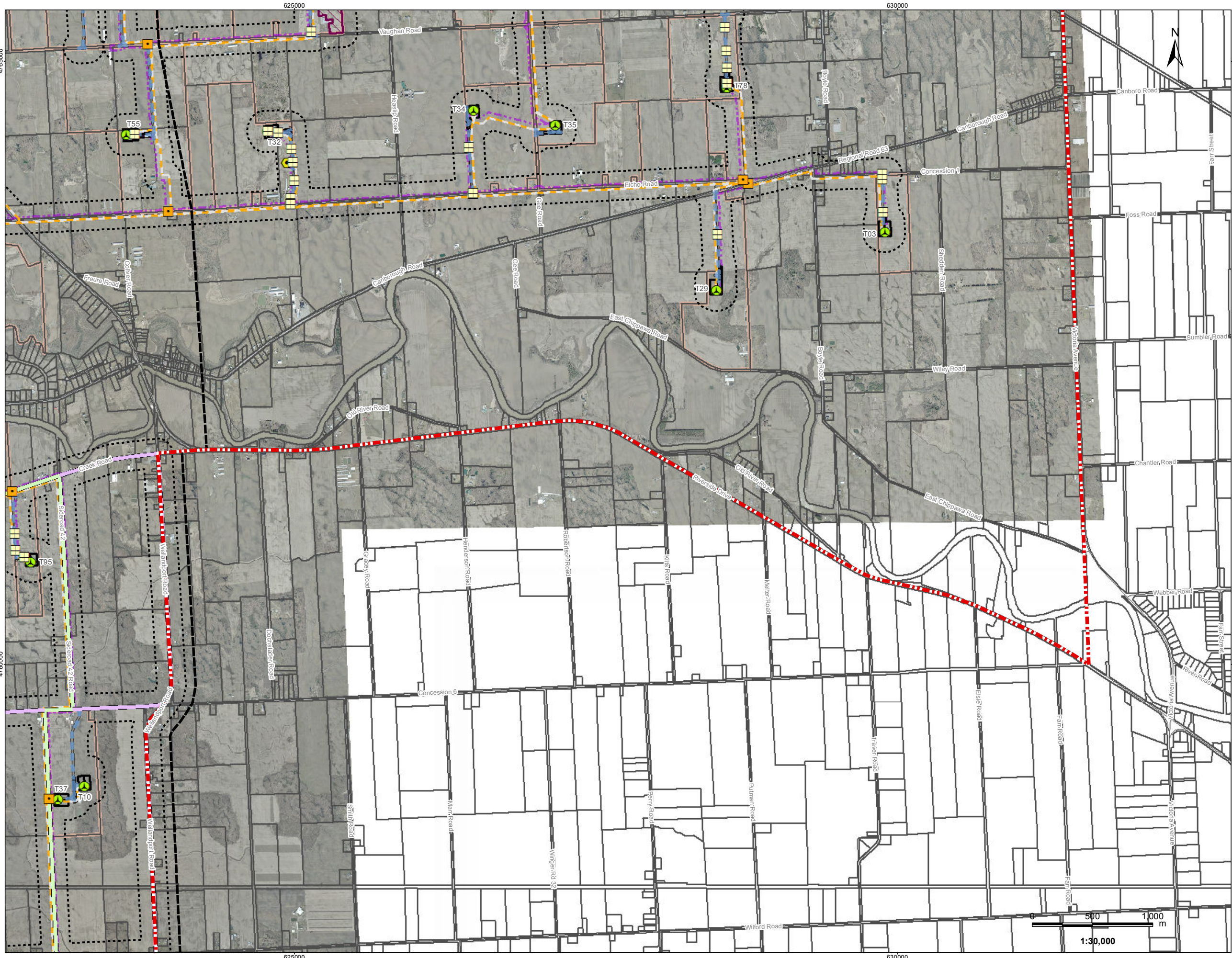


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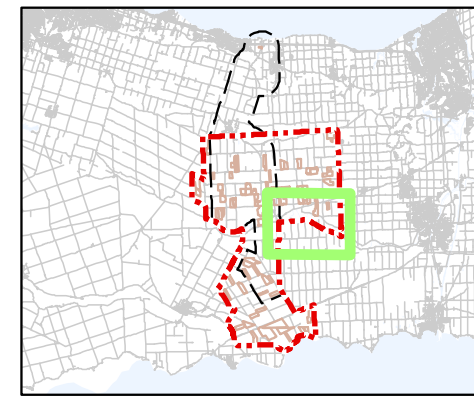
Figure No.
 7

Title
Location of Protected Properties and Project Components - Area 6





- ### Legend
- Protected Property
 - ⊙ Proposed Turbine Location
 - Junction Box / Pad-Mounted Disconnect Switch
 - Existing Met Tower
 - Proposed Culvert
 - Preferred Transmission Line Route
 - Alternate Transmission Line Route
 - Proposed Collector Line (underground or overhead)
 - Temporary Laydown Area
 - Potential Access Road
 - Proposed Fibre Optic Line
 - Transformer Substation
 - Potential Construction Laydown Area
 - Access Road 20m Construction Area
 - Participating Property
 - Property Boundary
 - Interconnector Study Area
 - 120m Zone of Investigation
 - Project Study Area



- ### Notes
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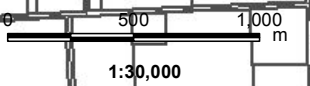


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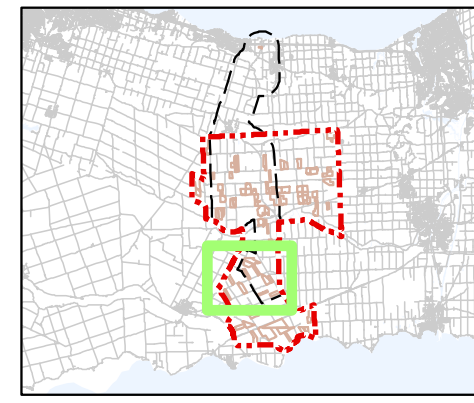
Figure No.
 8

Title
Location of Protected Properties and Project Components - Area 7





- ### Legend
- Protected Property
 - ⊙ Proposed Turbine Location
 - Junction Box / Pad-Mounted Disconnect Switch
 - ⬢ Existing Met Tower
 - Proposed Culvert
 - Preferred Transmission Line Route
 - Alternate Transmission Line Route
 - Proposed Collector Line (underground or overhead)
 - Temporary Laydown Area
 - Potential Access Road
 - Proposed Fibre Optic Line
 - Transformer Substation
 - Potential Construction Laydown Area
 - Access Road 20m Construction Area
 - Participating Property
 - Property Boundary
 - Interconnector Study Area
 - 120m Zone of Investigation
 - Project Study Area



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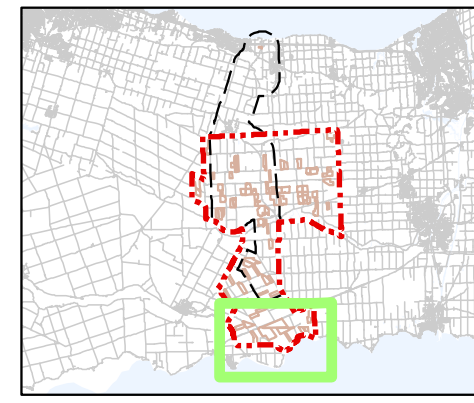
Figure No.
 9

Title
Location of Protected Properties and Project Components - Area 8



Legend

- Protected Property
- ⊙ Proposed Turbine Location
- Junction Box / Pad-Mounted Disconnect Switch
- Existing Met Tower
- Proposed Culvert
- Preferred Transmission Line Route
- Alternate Transmission Line Route
- Proposed Collector Line (underground or overhead)
- Temporary Laydown Area
- Potential Access Road
- Proposed Fibre Optic Line
- Transformer Substation
- Potential Construction Laydown Area
- Access Road 20m Construction Area
- Participating Property
- Property Boundary
- Interconnector Study Area
- 120m Zone of Investigation
- Project Study Area



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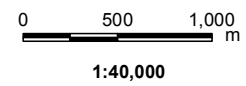


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Figure No.
 10

Title
Location of Protected Properties and Project Components - Area 9



4 IMPACT ASSESSMENTS

A total of twelve (12) protected properties as outlined in the table in Section 19, O.Reg.359/09 have been identified within the Study Area (Table 1). Potential Project-related negative impacts have been assessed for each of the properties. Methodology for this assessment is outlined in Section 1.4.1. Constraints related to Section 19, O.Reg.359/09 and the *Ontario Heritage Act* (OHA) have also been identified, where applicable.

4.1 2511 North Shore Drive (Furry Tavern), PP1

The property at 2511 North Shore Drive was designated by municipal by-law in November 2004 (By-law 548/04). The designation protects the building and associated land under Section 29 of the OHA. The Furry Tavern is a two-storey frame building constructed of sawn lumber with a gable roof. It was originally built as a residence for Lawrence Furry and his family, among the first settlers to the area. Value defining features include: 12-over-8 and 8-over-8 sash windows; a dated roof plank (1821) located in the attic; original pine flooring throughout; beaded board walls in the hallway above the first flight of stairs; and its original doors and hardware (Appendix C, Photos 1 – 7).

2511 North Shore Drive is not situated on or adjacent to a Project location (Figure 10). The building is located approximately 1500 m south of the nearest Project component (T61). No Project activities will take place on the property at 2511 North Shore Drive.

Destruction – PP1 will not be destroyed or removed by the proposed Project.

Alteration - No Project-related negative impacts are expected with respect to alteration.

Shadows - No Project-related negative impacts are expected with respect to shadows.

Isolation – No Project-related negative impacts are expected with respect to isolation.

Direct or indirect obstruction of significant views – No significant views will be directly or indirectly obstructed by the proposed Project.

Change in land-use - No change in land-use will occur as a direct result of the Project.

No mitigation has been recommended.

4.2 1639 Rosedene Road (Comfort Barn), PP2

The property at 1639 Rosedene Road was designated by municipal by-law in August, 2007 (By-law 2007-88). The designation protects the building and associated land under Section 29 of the OHA. The property consists of a farmhouse and several outbuildings. Of significance is the Comfort Barn, which is a unique example of Pennsylvania barn design featuring a gabled roof, horizontal wooden

plank siding, half round ventilators along one eave side, and a forebay overhang along the opposite eave side (Appendix C, Photos 8 – 13).

The Comfort Barn (PP2) is located on a Project location, approximately 665 m west of T59 and 1000 m west of T60 (Figure 6).

Destruction – PP2 will not be destroyed or removed by the proposed Project.

Alteration - No Project-related negative impacts are expected with respect to alteration.

Shadows - No Project-related negative impacts are expected with respect to shadows.

Isolation – No Project-related negative impacts are expected with respect to isolation.

Direct or indirect obstruction of significant views – The Project will not directly obstruct views of the Comfort Barn (PP2). It is likely that Turbines 59 and 60 will be visible when viewing the Comfort Barn from certain vantage points. However, at distances of 665 m and 1000 m, the turbines will not detract greatly from views of the barn. Furthermore, the impact is reversible following the lifespan of the Project.

Change in land-use - No change in land-use will occur as a direct result of the Project.

As per Section 19 of O.Reg.359/09, written authorization from the Municipality must be submitted as part of the REA Application “if, as part of the renewable energy project, the alteration of the property or the demolition or removal of a building or structure on the property is proposed”. Given that the proposed undertaking will alter the subject property, written authorization from the Township of West Lincoln for alterations to the subject property must be submitted as part of the REA submission. The Township of West Lincoln Heritage Committee has reviewed the proposal for the installation of a wind turbine on the subject property and has determined that the cultural heritage values of the Comfort Barn will not be negatively affected (Appendix A).

4.3 2663 Moote Road (Former Moot House), PP3

The property at 2663 Moote Road was designated by municipal by-law in November, 2008 (By-law 2008-141). The designation protects the building and associated land under Section 29 of the OHA. The property features a two storey, cross-gable brick farmhouse in the Victorian style. Value defining features include a pair of porches which flank the central structure with decorated freizes and columns, 2-over-4 windows with carved entablature, and bargeboard gable detailing (Appendix C, Photos 14 - 16).

The Former Moot House (PP3) is located adjacent to a Project location, approximately 900 m northwest of T80 and 1250 m northwest of T79 (Figure 6). No Project activities will take place on the property at 2663 Moote Road.

Destruction – PP3 will not be destroyed or removed by the proposed Project.

Alteration - No Project-related negative impacts are expected with respect to alteration.

Shadows - No Project-related negative impacts are expected with respect to shadows.

Isolation – No Project-related negative impacts are expected with respect to isolation.

Direct or indirect obstruction of significant views – The Project will not directly obstruct views of the Former Moote House (PP3). It is likely that Turbines 80 and 79 will be visible when viewing the former Moote farmstead from certain vantage points. However, at distances of greater than 900 m, the turbines will not detract greatly from views of the farmhouse. Furthermore, the impact is reversible following the lifespan of the Project.

Change in land-use - No change in land-use will occur as a direct result of the Project.

No further mitigation is recommended.

4.4 139 St. Catherines Street, Smithville, PP4

The property at 139 St. Catherines Street was designated by municipal by-law in January, 1989 (By-law 89-6). The designation protects the building and associated land under Section 29 of the OHA. The one and a half storey brick house was constructed in the Gothic Revival style. Value defining features include a front door with sidelights, and 2-over-2 hung windows with stone sills and shaped trim (Appendix C, Photos 17 - 19).

139 St. Catherines Street (PP4) is not situated on or adjacent to a Project location. PP4 is approximately 1250 m from the nearest Project component, the interconnector route (Figure 4). No Project activities will take place on the property at 139 St. Catherines Street.

Destruction – PP4 will not be destroyed or removed by the proposed Project.

Alteration - No Project-related negative impacts are expected with respect to alteration.

Shadows - No Project-related negative impacts are expected with respect to shadows.

Isolation – No Project-related negative impacts are expected with respect to isolation.

Direct or indirect obstruction of significant views – No significant views will be directly or indirectly obstructed by the proposed Project.

Change in land-use - No change in land-use will occur as a direct result of the Project.

No further mitigation is recommended.

4.5 205 Canborough Street, Smithville, PP5

The property at 205 Canborough Street was designated by municipal by-law in January, 1990 (By-law 90-2). The designation protects the building and associated land under Section 29 of the OHA. The property is the site of a former carriage factory (Appendix C, Photos 20 and 21).

205 Canborough Street (PP5) is not situated on or adjacent to a Project location. PP5 is approximately 1250 m from the nearest Project component, the interconnector route (Figure 4). No Project activities will take place on the property at 205 Canborough Street.

Destruction – PP5 will not be destroyed or removed by the proposed Project.

Alteration - No Project-related negative impacts are expected with respect to alteration.

Shadows - No Project-related negative impacts are expected with respect to shadows.

Isolation – No Project-related negative impacts are expected with respect to isolation.

Direct or indirect obstruction of significant views – No significant views will be directly or indirectly obstructed by the proposed Project.

Change in land-use - No change in land-use will occur as a direct result of the Project.

No further mitigation is recommended.

4.6 289 Station Street, Smithville (Smithville Train Station), PP6

The property at 288 Station Street was designated by municipal by-law in June, 1992 (By-law 92-30). The designation protects the building and associated land under Section 29 of the OHA. The Smithville Train Station was built in 1903. The station is a one storey, hipped roof structure set on a rectangular plan. Value defining features include: a turret with narrow bay windows, fishscale shingling and paneling; and a set of triangular dormers with fishscale shingling (Appendix C, Photos 22 and 23).

The Smithville Train Station (PP6) is not situated on or adjacent to a Project location. PP6 is approximately 750 m from the nearest Project component, the interconnector route (Figure 4). No Project activities will take place on the property at 288 Station Street.

Destruction – PP6 will not be destroyed or removed by the proposed Project.

Alteration - No Project-related negative impacts are expected with respect to alteration.

Shadows - No Project-related negative impacts are expected with respect to shadows.

Isolation – No Project-related negative impacts are expected with respect to isolation.

Direct or indirect obstruction of significant views – No significant views will be directly or indirectly obstructed by the proposed Project.

Change in land-use - No change in land-use will occur as a direct result of the Project.

No mitigation has been recommended.

4.7 4966 Beam Street, Beamsville (Clinton Town Hall and Lincoln Public Library), PP7

The property at 4966 Beam Street was designated by municipal by-law in September, 1979 (By-law 79-85). The designation protects the building and associated land under Section 29 of the OHA. The two storey public building was built in 1851 as a Township Hall for Clinton Township. It was constructed of brick on a rectangular plan, with a gabled roof. Value defining features of the building include 6-over-6 sash windows and returned eaves (Appendix C, Photo 24).

4966 Beam Street is not situated on or adjacent to a Project location. The property is located approximately 1500 m east of the preferred interconnector route (Figure 2). No Project activities will take place on the property at 4966 Beam Street.

Destruction – PP7 will not be destroyed or removed by the proposed Project.

Alteration - No Project-related negative impacts are expected with respect to alteration.

Shadows - No Project-related negative impacts are expected with respect to shadows.

Isolation – No Project-related negative impacts are expected with respect to isolation.

Direct or indirect obstruction of significant views – No significant views will be directly or indirectly obstructed by the proposed Project.

Change in land-use - No change in land-use will occur as a direct result of the Project.

No further mitigation is recommended.

4.8 5499 Philp Road (Marlatt Farmstead), PP8

The property at 5499 Philp Road was designated by municipal by-law in April, 1995 (By-law 95-58). The designation protects the buildings and associated land under Section 29 of the OHA. The property consists of an agricultural complex that includes: a neoclassical vernacular farmhouse, constructed in approximately 1850; and several farm outbuildings, including the Main Barn, an example of early 1800s Loyalist Barn in the English, three bay style (Appendix C, Photo 25).

5499 Philp Road is not situated on or adjacent to a Project location. The property is located approximately 425 m east of the preferred interconnector route which runs along Walker Road between Fly Road and Mountainview Road (Figure 2). No Project activities will take place on the property at 5499 Philp Road.

Destruction – PP8 will not be destroyed or removed by the proposed Project.

Alteration - No Project-related negative impacts are expected with respect to alteration.

Shadows - No Project-related negative impacts are expected with respect to shadows.

Isolation – No Project-related negative impacts are expected with respect to isolation.

Direct or indirect obstruction of significant views – No significant views will be directly or indirectly obstructed by the proposed Project.

Change in land-use - No change in land-use will occur as a direct result of the Project.

No further mitigation is recommended.

4.9 5567 Fly Road (Durham-Devries House), PP9

The property at 5567 Fly Road was designated by municipal by-law in April, 1995 (By-law 95-59). The designation protects the building and associated land under Section 29 of the OHA. The two storey house was built in 1832 and constructed with a white stucco exterior. Value-defining architectural features include the multiple paned, 12-over-12 windows, a front door with flanking sidelights, and original red pine floors, baseboards, and hand-hewn beams throughout the house (Appendix C, Photo 26).

5667 Fly Road is adjacent to the preferred transmission route where it runs along Walker Road between Fly Road and Mountainview Road (Figure 6). Agricultural fields associated with the property are adjacent to Walker Road, although the buildings on the property are located approximately 100 m east of the preferred interconnector route at its closest point (Figure 6). No Project activities will occur on the designated property.

Destruction – PP9 will not be destroyed or removed by the proposed Project. *Alteration* - No Project-related negative impacts are expected with respect to alteration.

Shadows - No Project-related negative impacts are expected with respect to shadows.

Isolation – No Project-related negative impacts are expected with respect to isolation.

Direct or indirect obstruction of significant views – No significant views will be directly or indirectly obstructed by the proposed Project. Potential visual impacts were considered for above-ground

transmission infrastructure with respect to views of the property from Walker Road. Transmission lines supported on monopoles of varying sizes are located throughout the general Study Area. This type of transmission line has become a ubiquitous feature of the rural landscapes in Southern Ontario and is already found along Walker Road and Fly Road adjacent to the Durham-Devries House property. Although additional poles, if required, may be taller than existing poles, the introduction of transmission infrastructure which is generally consistent with existing infrastructure will not have a negative impact on the overall character of the area. With respect to the obstruction of views from any additional poles which may be required, these visual impacts would be localized to specific vantage points where additional poles would be situated directly between the viewer and the landscape. As such, any direct obstruction from overhead transmission infrastructure is not considered to be of significant magnitude as to warrant mitigation.

Change in land-use - No change in land-use will occur as a direct result of the Project. No further mitigation is recommended.

4.10 5053 King Street (Beam-Barnes House), PP10

The property at 5053 King Street was designated by municipal by-law in February, 1997 (By-law 97-19). The designation protects the building and associated land under Section 29 of the OHA. The one and a half storey house was built between 1852 and 1855 and consists of a frame building in the Gothic Revival style. Value defining features include sharply pitched gable roofs, carved finials, bargeboard featuring cutout quatrefoils, a front door with paned transom and sidelights, and windows with shaped lintels and decorative keystones (Appendix C, Photo 27).

5053 King Street is not situated on or adjacent to a Project location. The property is located approximately 1400 m from the preferred interconnector route (Figure 2). No Project activities will occur on the designated property.

Destruction – PP10 will not be destroyed or removed by the proposed Project.

Alteration - No Project-related negative impacts are expected with respect to alteration.

Shadows - No Project-related negative impacts are expected with respect to shadows.

Isolation – No Project-related negative impacts are expected with respect to isolation.

Direct or indirect obstruction of significant views – No significant views will be directly or indirectly obstructed by the proposed Project.

Change in land-use - No change in land-use will occur as a direct result of the Project.

No further mitigation is recommended.

4.11 4271 Queen Street (The Howard House), PP11

The property at 4271 Queen Street was designated by municipal by-law in May, 2001 (By-law 01-38). The designation protects the building and associated land under Section 29 of the OHA. Originally built as a schoolhouse in 1847, the one and a half storey brick building was constructed on a rectangular plan, with a rubblestone foundation and gabled roof. Value defining features include common bond, six course headers, large, double-hung windows topped with segmented bricks and shutters on all sides, hardwood floors, and original mouldings including baseboards and window sills (Appendix C, Photo 28).

4271 Queen Street is not situated on or adjacent to a Project location. The property is located approximately 1600 m east of the preferred route of the interconnector cable (Figure 2). No Project activities will occur on the designated property.

Destruction – PP11 will not be destroyed or removed by the proposed Project.

Alteration - No Project-related negative impacts are expected with respect to alteration.

Shadows - No Project-related negative impacts are expected with respect to shadows.

Isolation – No Project-related negative impacts are expected with respect to isolation.

Direct or indirect obstruction of significant views – No significant views will be directly or indirectly obstructed by the proposed Project.

Change in land-use - No change in land-use will occur as a direct result of the Project.

No further mitigation is recommended.

4.12 5600 King Street (The William D. Kitchen House), PP12

The property at 5600 King Street was designated by municipal by-law in May, 2001 (By-law 01-40). The designation protects the building and associated land under Section 29 of the OHA. The two storey brick building was constructed in 1885 in the Queen Anne style. Value defining features include: a turret with square and rounded cedar shingles; two tall, corbeled chimneys; a hipped roof with a flat belvedere; gables with carved brackets and bargeboard; and tall bay windows topped with segmental arches and decorative keystones (Appendix C, Photo 29).

5600 King Street is not situated on or adjacent to a Project location. The property is located approximately 750 m west of the preferred route of the interconnector cable (Figure 2). No Project activities will occur on the designated property.

Destruction – PP12 will not be destroyed or removed by the proposed Project.

Alteration - No Project-related negative impacts are expected with respect to alteration.

Shadows - No Project-related negative impacts are expected with respect to shadows.

Isolation – No Project-related negative impacts are expected with respect to isolation.

Direct or indirect obstruction of significant views – No significant views will be directly or indirectly obstructed by the proposed Project.

Change in land-use - No change in land-use will occur as a direct result of the Project.

No further mitigation is recommended.

5 STUDY RESULTS AND RECOMMENDATIONS

A total of twelve (12) protected properties as outlined in the table in Section 19, O.Reg.359/09 were identified within the Study Area (Table 2). Potential Project-related negative impacts and constraints have been assessed for each of the identified protected properties.

Constraints related to Section 19, O.Reg.359/09 have been identified with respect to one property, the Comfort Barn (PP2).

As per Section 19 of O.Reg.359/09, written authorization from the Municipality must be submitted as part of the REA Application “if, as part of the renewable energy project, the alteration of the property or the demolition or removal of a building or structure on the property is proposed”. Given that the proposed undertaking will alter the property on which the Comfort Barn (PP1) is located, written authorization from the Township of West Lincoln for alterations to the subject property must be submitted as part of the REA submission. The Township of West Lincoln Heritage Committee has reviewed the proposal for the installation of a wind turbine on the subject property and has determined that the cultural heritage values of the Comfort Barn will not be negatively affected (Appendix A).

6 CLOSURE

This report has been prepared for the sole benefit of Niagara Region Wind Corporation (NRWC) and may not be used without the express written consent of Stantec Consulting Ltd and NRWC. Any use which a third party makes of this report is the responsibility of such third party.

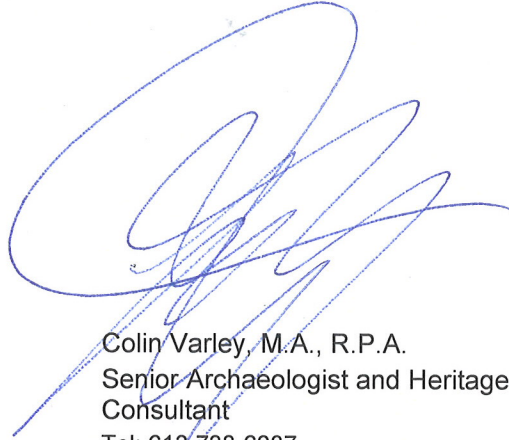
We trust this report meets your current requirements. Please do not hesitate to contact us should you require further information or have additional questions about any facet of this Project.

Yours truly,

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7 REFERENCES

7.1 Literature Cited

Chapman, L.J., and D.F. Putnam, 1984. **The Physiography of Southern Ontario (3rd Edition)**. Ontario Geological Survey, Special Volume 2. Toronto: Ontario Ministry of Natural Resources.

Crispino, M. and M. D'Apuzzo, 2001, *Measurement and Prediction of Traffic-induced Vibrations in a Heritage Building*. **Journal of Sound and Vibration**. 246, 2: 319-335.

Ellis, Patricia, 1987, *Effects of Traffic Vibration on Historic Buildings*. **The Science of the Total Environment**. 59, 37-45.

English Heritage, 2005. **Wind Energy and the Historic Environment**. Accessed October, 2012 at <http://www.english-heritage.org.uk/content/publications/publicationsNew/guidelines-standards/wind-energy-and-the-historic-environment/windenergyfinal.pdf>.

Haldimand County, 2008. *Properties of Potential Heritage Significance Identified by Heritage Haldimand LACAC*. Passed by Council, October 20, 2004.

---, 2004. By-law 548/04. Passed by Council, November 8, 2004.

Ministry of Environment (MOE), 2012. **Technical Guide to Renewable Energy Approvals**. Accessed August, 2012 at http://www.ene.gov.on.ca/stdprodconsume/groups/lr/@ene/@resources/documents/resource/stdprod_088422.pdf.

Ministry of Tourism, Culture and Sport (MTCS), 2011. **Protected Properties, Archaeological and Heritage Resources: An information bulletin for applicants addressing the cultural heritage component of projects subject to Ontario Regulation 359/09 Renewable Energy Approvals**. Accessed March, 2012 at http://www.mtc.gov.on.ca/en/publications/Info_Bulletin-SelfAssessment.pdf.

---, 2006a. **InfoSheet #5 Heritage Impact Assessments and Conservation Plans**. Sheet No. 5, Information Sheet Series from Heritage Resources in the Land Use Planning Process: Cultural Heritage and Archaeology Policies of the Ontario Provincial Statement, 2005. Toronto: Queen's Printer for Ontario.

Ontario Regulation 359/09, Renewable Energy Approvals Under Part V.0.1 Of The Environmental Protection Act, 2009.

Presant, E.W. and M.S. Kingston, 1989. **The Soils of the Regional Municipality of Niagara, Vol. 1 and 2**. Report No. 60 of the Ontario Soils Survey. Guelph: Research Branch Agriculture Canada, Soil and Water Management Branch Ontario Ministry of Agriculture and Food, Department of Land Resource Science University of Guelph.

Rainer, J.H., 1982, *Effect of Vibrations on Historic Buildings*. **The Association for Preservation Technology Bulletin**. XIV, No. 1: 2-10.

Stantec Consulting Ltd. (Stantec), 2012. **Niagara Region Wind Farm, Decommissioning Plan Report**. Draft Report. Prepared for Niagara Region Wind Corporation.

Town of Grimsby, 2008. List of Properties Council Believes to be of Cultural or Heritage Value or Interest Under Section 27.(1.2) of the Ontario Heritage Act. Approved by Council, February 4, 2008.

Town of Lincoln. **Heritage Property Index**. Accessed September, 2012 at <http://www.lincoln.ca/siteengine/activepage.asp?PageID=192>.

1985 *A By-law to designate the Property Known Municipally as 62 Mountain Street, Beamsville, Being Lot 269, Corporation Plan 3, as Being of Architectural and Historical Value and Interest*. By-law No. 79-85, passed September 1979.

1995 *A By-law to Designate the Property Known Municipally as the Marlatt Farmstead, 5499 Philp Road, Part of Lots 20 and 21, in Concessions 5 & 6, of the Former Township of Clinton, now in the Town of Lincoln, as Being a Structure of Architectural and Historical Value or Interest*. By-law No. 95-58, passed April 1995.

A By-law to Designate the Property Known Municipally as the Durham-DeVries Home, 5567 Fly Road, Part of Lot 22, Concession 6, Former Township of Clinton, now in the Town of Lincoln, as Being a Structure of Architectural and Historical Value or Interest. By-law No. 95-59, passed April 1995.

1997 *A By-law to Designate the Property Known Municipally as the Beam-Barnes House, 5053 King Street, in Lot 33, on Corporation Plan. 3, Former Town of Beamsville, now in the Town of Lincoln, as Being a Structure of Architectural and Historical Value or Interest*. By-law No.97-19, passed February 1997.

2001 *A By-law to Designate a Property Known Municipally as the Howard House, 4271 Queen Street, in Lot 284, Corporation Plan No. 3, now in the Town of Lincoln, as Being a Structure of Architectural and Historical Value or Interest*. By-law No. 01-38, passed May 2001.

A By-law to Designate the Property Known Municipally as the William D. Kitchen House, 5600 King Street, Lots 22 and 23, Concession 2, Former Township of Clinton, now in the Town of Lincoln, as Being a Structure of Architectural and Historical Value or Interest. By-law No. 01-40, passed May 2001.

Township of West Lincoln

1989 *Designate 139 St. Catherine Street*. By-law 89-6, passed January 30, 1989.

1990 *A By-law to designate the property known Municipally as Lot 1, in Plan M-87, 205 Canborough Street, Village of Smithville, Township of West Lincoln as being of Architectural and/or Historical Value or Interest*. By-law 90-2, passed January 15, 1990.

1992 *A By-law to designate the property known Municipally as "The Smithville Railway Station", part of lot 1 M-96, Parts 1 & 2, Plan 30 R-6328, 288 Station Street, Village*

of Smithville, Township of West Lincoln as being of architectural and/or historical value or interest. By-law 92-30, passed June 1, 1992.

2007 A By-law to designate the property known Municipally as Part of Lot 24 and Part of Lot 25, Concession 4, 1639 Rosedene Road, former Township of Gainsborough, Township of West Lincoln as being the site of the comfort barn (c. 1870) as a property of architectural, historical, and/or contextual value or interest. By-law 2007-23, passed March 26, 2007.

2008 A By-law to designate the property known Municipally as 2663 Moote Road, Part of Lot 4, Part road allowance between lots 3 & 4, Concession 6 former Township of Gainsborough, Township of West Lincoln. By-law 2008-141, passed November 24, 2008.

Wicklund, R.E. and B.C. Mathews, 1963. **Soil Survey of Lincoln County**. Report No. 34 of the Ontario Soil Survey. Guelph, ON: Research Branch, Canadian Department of Agriculture and the Ontario Agricultural College.

Wiss, J.F., 1981. *Construction Vibrations: State-of-the-Art*. **Journal of Geotechnical Engineering Division** 107:167-181.

7.2 Personal Communications

Fraser, Sean, Manager, Conservation Services, Ontario Heritage Trust. Letter dated August 3, 2011.

Hogg, Janice. Planner I, Planning Department, Town of Grimsby. Email August 16, 2012.

Kolasa, William. Director of Corporate Services/Clerk, Town of Lincoln. Email August 13, 2012.

Larocque, Rachelle. Planner II, Township of West Lincoln. Email July 24, 2012.

Munday, Grant. Manager of Planning. Township of Wainfleet. Telephone Conversation September 4, 2012.

Unyi, Anne. Head Curator, Community Development and Partnerships Division. Haldimand County. Email July 13, 2012.

