PORT RYERSE
WIND POWER PROJECT
PROJECT DESCRIPTION REPORT

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Prepared for:

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Record of Revisions

Revision	Date	Description
0	November 2011	Initial Submission to the Ministry of Environment (Reports produced by M.K. Ince and Associates Ltd. on behalf of UDI Renewables Corp.)
1	November 2012	Submission to Municipalities and Aboriginal Communities
2	December 2012	Submission to Public
3	March 2013	Submission to the Ministry of the Environment

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1.0 Introduction

1.1 PROJECT OVERVIEW

Boralex Inc. (Boralex), in association with UDI Renewables Corporation (UDI), is proposing to develop the Port Ryerse Wind Power Project (the Project) east of the hamlet of Port Ryerse in Norfolk County , Ontario, in response to the Government of Ontario's initiative to promote the development of renewable electricity in the province. The Project was awarded a Feed-In-Tariff (FIT) contract with the Ontario Power Authority (OPA) on February 25, 2011. Further information on the Project can be found on the Project-specific website at http://www.udi-canada.com. Boralex Inc. is a power producer whose core business is dedicated to the development and operation of renewable energy facilities. Further information on Boralex can be found at http://www.Boralex.com/en/ .

The Renewable Energy Approval (REA) process for the Port Ryerse Project was originally initiated by UDI with the assistance of M.K. Ince and Associates Ltd. Boralex is considering acquisition of the Project from UDI and retained Stantec Consulting Ltd. (Stantec) to complete the REA Application, as required under Ontario Regulation 359/09 - Renewable Energy Approvals under Part V.0.1 of the Act 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.

The Project Study Area is generally bounded by i) Woolley and Gilbert Roads to the north; ii) Port Ryerse Road to the west; iii) Hay Creek to the east and iv) Avalon Lane to the south (**Appendix A, Figure 1**). The proposed Project Location includes all parts of the land in, on, or over which the Project is proposed. The Project Location (**Appendix A, Figure 2**), including all Project infrastructure, is sited on privately-owned lands, where landowners have entered into a lease agreement with Boralex/UDI. Permissions to access these properties have been obtained through verbal discussions with landowners, as a requirement of their signed agreements with Boralex/UDI.

Three wind turbine models were initially assessed as part of the REA process, the Siemens SWT 3.0 113, ENERCON E-92 2.35 MW and ENERCON E-82 E2 2.3MW; however one turbine model has been selected as the preferred alternative; the Siemens SWT 3.0 113.

The Project will include four Siemens SWT 3.0 113 wind turbine generators. The 3.0 MW turbines will be customized to a nameplate capacity of 2.5 MW for this Project. The total maximum installed nameplate capacity of all four turbines will not exceed 10 MW. Other basic components include step-up transformers located adjacent to the base of each turbine (step up voltage from approximately 0.69 kV to 27.6 kV), a 27.6 kV underground collector system, fibre optic data lines, a distribution substation, a permanent parking lot (if required), a meteorological tower and turbine access roads.

Temporary components during construction include laydown areas at the turbine locations and crane pads. No operations and maintenance building or transmission line is anticipated to be required for the Project. No Project components are located within municipal road Rights of Way (ROWs).

The 27.6 kV underground collector lines will transport the electricity generated from each turbine to the distribution substation located on private property east of Port Ryerse Road. Directional bore techniques will be used where the underground collector lines cross valleylands and watercourses. At the substation, a dip-pole connection will be made directly into the local distribution system.

1.2 REPORT REQUIREMENTS

This document provides a description of the proposed Port Ryerse Wind Power Project (the Project). This Project Description Report has been written in accordance with Ontario Regulation 359/09 (Renewable Energy Approvals under Part V.0.1 of the Act) under the *Environmental Protection Act,* and the Ministry of the Environment's (MOE's) guidance document "*Technical Guide to Renewable Energy Approvals"* (MOE, March 2012).

O.Reg.359/09 sets out specific content requirements for the Project Description Report as provided in **Table 1.1**.

Table 1.1: Project Description Report Contents

Content	Location within Project Description Report
1. Any energy sources to be used to generate electricity at the renewable energy generation facility.	Section 3.1
2. The facilities, equipment or technology that will be used to convert the renewable energy source or any other energy source to electricity.	Section 3.3
3. If applicable, the class of the renewable energy generation facility.	Section 1.1
4. The activities that will be engaged in as part of the renewable energy project.	Section 3.6
5. The name plate capacity of the renewable energy generation facility.	Section 1.1
6. The ownership of the land on which the project location is to be situated.	Section 3.2
7. If the person proposing to engage in the project does not own the land on which the project location is to be situated, a description of the permissions that are required to access the land and whether they have been obtained.	Section 1.1
8. Any negative environmental effects that may result from engaging in the project.	Section 4.0 and Appendix B
9. if the project is in respect of a Class 2 wind facility and it is determined that the project location is not on a property described in Column 1 of Table to section 19, a summary of the matters addressed in making the determination.	N/A
10. If the project is in respect of a Class 2 wind facility in respect of	N/A

Table 1.1: Project Description Report Contents

Content	Location within Project Description Report
which section 20 applies and it is determined that the project location does not meet one of the descriptions set out in subsection 20 (2) or that the project location is not in an area described in subsection 20 (3), a summary of the matters addressed in making the determination.	
11. An unbound, well marked, legible and reproducible map that is an appropriate size to fit on a 215 millimetre by 280 millimetre page, showing the project location and the land within 300 metres of the project location.	Appendix A

2.0 General Requirements

2.1 PROJECT LOCATION

The Project will be located on privately-owned lands east of the hamlet of Port Ryerse in Norfolk County, Ontario (**Appendix A, Figure 1**).

O. Reg. 359/09 defines the Project Location as:

"*a part of land and all or part of any building or structure in, on or over which a person is engaging in or proposes to engage in the project and any air space in which a person in engaging in or proposes to engage in the project*".

For the purposes of this Project, the Project Location includes the footprint of the facility components, plus any temporary work and storage locations. The boundary of the Project Location is used for defining setbacks and site investigation distances according to O.Reg.359/09. The buildable area (construction area), which includes the footprint of the facility components, plus any temporary work and storage locations, would be staked on private lands. All construction and installation activities would be conducted within this designated area, including construction vehicles and personnel.

Although O. Reg. 359/09 considers the REA process in terms of the Project Location, the siting process for wind projects is an iterative process, and therefore final location of Project components is not available at Project outset. Therefore, a Study Area is developed to examine the general area within which the wind Project components may be sited; information gathered within this larger area feeds into the siting exercise. The Study Area (see **Appendix A**) was determined through professional judgment and experience with the well-known and generally predictable environmental effects of the construction and operation of wind facilities.

Project siting was refined over the course of the Project assessment, allowing results to be presented in terms of Project Location instead of Study Area, although the Study Area continued to be used for public notification.

2.2 CONTACTS

Applicant

The applicant and proponent for the Project are Boralex Inc. and UDI Renewables Corporation. Contact information is as follows:

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The lead consultant for preparation of the Renewable Energy Approval (REA) application is Stantec Consulting Ltd. (Stantec). Stantec provides professional consulting services in planning, environmental sciences, engineering, architecture, interior design, landscape architecture, surveying, project management, and project economics for infrastructure and facilities projects. The consultant's office and Project contact is:

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2.3 AUTHORIZATIONS REQUIRED

At the federal, provincial, and municipal level multiple permits, licences, and authorizations may be required to facilitate the development of the Project, in addition to the REA. The ultimate applicability of all permits and authorizations will be determined based on the Project's detailed design.

2.3.1 Federal

It is expected that a Federal Environmental Assessment will not be required for the Project, as the Project is not listed in the Regulations Designating Physical Activities under the new *Canadian Environmental Assessment Act, 2012* (CEAA 2012).

However, the agency consultation program for the Project includes all federal departments and agencies typically interested in wind power projects (e.g., Department of National Defense, Environmental Canada, Transport Canada, etc.). All required federal permits and authorizations required for the Project will be determined, and may include those listed in **Table 2.1.**

Table 2.1: Key Federal Permits and Authorizations

Permit / Authorization	Administering Agency	Rationale
Aeronautical Obstruction Clearance	Transport Canada – Aviation Division	Turbine lighting and marking.
Land Use Clearance	NavCanada	Aeronautical safety mapping and designations.
Scientific Collector's Permit under the Migratory Bird Convention Act, 1994 (MBCA)	Environment Canada/Canadian Wildlife Service	Allow the wind company and its agents to collect, possess, to utilize for scientific research purposes, deceased specimens of migratory birds obtained from the study area during post-construction monitoring.

2.3.2 Provincial

All provincial permits, licenses and authorizations required for the Project will be determined, and may include those listed in **Table 2.2**.

Table 2.2: Key Provincial Permits and Authorizations

Key Permit / Authorization	Administering Agency	Rationale
Approval of Connection	IESO	Electrical interconnect with IESO regulated network
Connection Assessment	IESO	Integration of Project with IESO-controlled transmission system
Customer Impact Assessment	Hydro One Networks Inc. (HONI)	Integration of Project with HONI and effects to customers.
Connection Cost Recovery Agreement (CCRA)	HONI	Recovery of costs to grid operator of changes to allow connection.
Development, Interference with Wetlands, and Alterations to Shorelines and Watercourses Permit	Long Point Region Conservation Authority (LPRCA)	Work within floodplains, water crossings, river or stream valleys, hazardous lands and within or adjacent to wetlands. Projects requiring review, *Fisheries Act* authorization and/or assessment under the *Canadian Environmental Assessment Act* are forwarded to the Department of Fisheries and Oceans (DFO).
Overall Benefit Permit under the *Endangered Species Act*	Ministry of Natural Resources (MNR)	Permit to potentially impact habitat of Species at Risk.
Permit To Take Water	Ministry of the Environment (MOE)	Required if water taking exceeds 50,000 litres per day.

Table 2.2: Key Provincial Permits and Authorizations

Key Permit / Authorization	Administering Agency	Rationale
Certificate of Inspection	Electrical Safety Authority (ESA)	A record that electrical work complies with the requirements of the Ontario Electrical Safety Code.
Generator's License	Ontario Energy Board (OEB)	Generation of electrical power for sale to grid
Notice of Project	Ministry of Labour	Notify the Ministry of Labour before construction begins.
Special vehicle configuration permit	Ministry of Transportation (MTO)	Use of non-standard vehicles to transport large components.
Transportation Plan	MTO	Adherence to road safety and suitability.
Change of Access and Heavy/Oversize Load Transportation Permit	MTO	Compliance with provincial highway traffic and road safety regulations.
Wide or excess load permit	MTO	Transportation of large or heavy items on provincial highways.

2.3.3 Municipal

Several permits and authorizations may be required from the Norfolk County (**Table 2.3**); these will be confirmed during the municipal consultation process as set out under O. Reg. 359/09.

Table 2.3: Key Municipal Permits and Authorizations

Key Permit / Authorization	Rationale
Building Permit	Compliance with building codes
Demolition Permit	Required prior to the demolition of the Project.
Entrance Permit	Entrance from county roads.
Oversize/Overweight Permit	Transportation of heavy and/or large items on county roads
Road Occupancy and Access Permit	Entrance from township and county roads.
Sign Permit	As necessary.
Road Condition Survey	Assessment of pre and post construction conditions of roads to be used for material delivery and construction equipment movement.

3.0 Project Information

3.1 ENERGY SOURCES

Wind turbines capture the kinetic energy in surface winds and convert it into electrical energy in the form of electricity. In addition to the tower, wind turbines are comprised of three basic parts: blades, a drive shaft, and a generator. As wind moves over the turbine's blades it causes "lift"; the same effect used by airplane wings. This lift force causes the blade assembly to rotate. The rotational energy resulting from the movement of the blades is directly transferred to the drive shaft. The rotating shaft transfers the energy through a direct-drive machine and into an alternating current generator which then converts the mechanical energy into useable 60 Hz electricity.

No supplementary fuel sources would be used to generate electricity for the Project.

3.2 LAND OWNERSHIP

The Project will be located on privately-owned lands east of the hamlet of Port Ryerse in Norfolk County, Ontario (**Appendix A**). The legal descriptions of the parcels of land that will be used for the Project are provided in **Appendix C**.

3.3 PROJECT COMPONENTS

3.3.1 Wind Turbine Generators

The Project will consist of four Siemens SWT 3.0 113 wind turbine generators. The 3.0 MW turbines will be customized to a nameplate capacity of 2.5 MW for this Project. The total maximum installed nameplate capacity of all four turbines will not exceed 10 MW. A summary of the basic specifications of the turbine model is provided in **Table 3.1** below. Detailed specification about the turbine model is provided in the Wind Turbine Specifications Report.

Table 3.1: Siemens SWT-3.0-113 - Wind Turbine Specifications

Operating Data	Specification
General	
Manufacturer	Siemens
Model	SWT 3.0 113
Name plate capacity (MW)	3.0 MW (customized to 2. 5MW)
Cut-in wind speed (m/s)	3-5 m/s (10.8 – 18 km/hr)
Cut-out speed (m/s)	25 m/s (90 km/hr)
Frequency (Hz)	50 or 60 Hz
Sound power (dBA)	102.5 dBA
Tonal audibility	<2dB
Rotor	
Blade length (m)	55 m
Rotor diameter (m)	113 m
Rotor swept area ($m^{2)}$	10,000 m^2
Rotational speed (rpm)	6.0 – 15.5 rpm

Table 3.1: Siemens SWT-3.0-113 - Wind Turbine Specifications

Tower	
Hub height (m)	99.5 m
Maximum total turbine height (m)	154.5 m

Turbine coordinates for the Project are provided in **Table 3.2** below.

Table 3.2: Turbine Coordinates

Turbine #	Easting UTM NAD83 Zone 17	Northing UTM NAD83 Zone 17
1	561114	4734743
2	561623	4735211
3	561217	4735252
4	561987	4735411

3.3.2 Electrical Infrastructure

Electrical Collector Lines

A step-up transformer, adjacent to each turbine, is required to transform the electricity generated in the nacelle to a common collection system line voltage (i.e. 0.69 kV to 27.6kV). From each step-up transformer, 27.6 kV underground collector lines would carry the electricity generated by the turbines to the Project's distribution substation where a dip-pole connection will be made directly from an underground line into a LDC existing distribution system. Fibre optic data lines used for monitoring and control of each turbine will run with the collector lines. Where possible, underground collector lines have been incorporated into the design of the access roads to reduce the area required for construction and to minimize potential construction impacts; the cables would be installed immediately to one side of the access road, just off the gravelled surface. Approximately 2.41 km (2,410 m) of underground collection line would be installed as part of the Project. Typically the collector lines would be buried to a depth of 1 m.

Where there are crossings of watercourses, the underground collector lines would be installed by directional drilling. If site conditions require directional drilling to cross roads, streams, valleylands or other obstacles, lines may be installed in plastic conduits.

No transmission lines would be constructed for the Project.

Distribution Substation

The Project's distribution substation yard would be approximately 1800 m^2 (30 m x 60 m) in size and would be located on private property east of the intersection of Port Ryerse Road and Cookson Street (**Figure 2**). The substation site would house the disconnection switches, control devices, and communication and metering systems required to support the operation of the substation. The area may also be used to temporarily act as a Project office site with one or two modular trailers.

3.3.3 Access Roads and Parking Lot

An estimated 560 m section of Avalon Line will require upgrades and 2.33 km of new access roads would be required to support construction/operation vehicles. There are two alternative 6 m wide access roads/entrances to Turbine 1. Final selection of one alternative will be based on discussions with the turbine manufacturer. Access to Turbines 2, 3 and 4 would be achieved by upgrading Avalon Lane which will connect to three Project access roads 11 m wide**.** The 11 m wide roads connecting Turbines 2, 3, and 4 will be reduced to the width of a common driveway once construction is completed. All roads will require wider turning radii for construction equipment.

All new access roads will be sited in active agricultural fields. Access roads have been planned in consultation with the landowners, where possible, parallel property boundaries to reduce potential impacts to drainage systems, farm operations and agricultural lands. No temporary structures (such as culverts) and no direct impacts to on-site woodlots or vegetation are anticipated during access road construction. No blasting would be required for the access roads; excavation is expected to be above the water table at all times. It is anticipated that entrance permits will be obtained from Norfolk County for the access roads.

A 15 m x 15 m permanent parking lot (if required) off Avalon Lane, south of Gilbert Road will be used during construction/decommissioning and operation of the Project. Construction of the parking lot would follow the same steps and use the same material as the access roads construction. The parking lot will not be used as a laydown area. The parking lot may accommodate temporary facilities such as a construction trailer (alternative location may be adjacent to substation infrastructure), sanitary facilities (self-contained), health and safety/first aid facility, lunch facilities, training and site security. Additionally, the footprint of the parking lot will include adequate parking for employee, contractor and service vehicles (approximately 2-3 vehicles).

The new access roads and parking area will be built on private lands and will be privately maintained throughout the life of the Project for ongoing turbine monitoring and maintenance.

3.3.4 Stormwater Management System

Stormwater management features will be incorporated into the access roads and constructed in accordance with appropriate regulations and local municipal engineering guidelines. In addition, area drainage from the distribution substation will be accomplished through swales/ditches adjacent to the proposed access road that will collect and convey runoff from the substation area and the associated access road. The total drainage area associated with the substation and access road "hard" surfaces is less than 2 ha and therefore a "wet" water quality control pond (i.e. one containing a permanent pool) is inappropriate, as per the MOE *SWM Planning and Design Guidelines Manual* (2003). In addition to the conveyance of runoff, the swales will also provide water quality control, which is a suitable stormwater management practice for such an area according to the MOE guidelines.

3.3.5 Meteorological Tower

A meteorological tower (met tower) was installed in 2009 on private property, east of the intersection of Port Ryerse Road and Cookson Street (**Figure 2**). This met tower has been used to identify the quality of the wind resource for the proposed Project. It may remain in use during the construction and operation phases of the Project.

3.4 TEMPORARY USES OF LAND

Lands to be temporarily used during construction are laydown areas at the turbine locations and crane pads. If required by the Construction Contractor, a small portable trailer may be used as a construction office. This would generally be placed adjacent to the substation infrastructure (an alternative location may be the parking lot). Any temporary structures used during construction would not be serviced, and would be placed within the delineated construction work areas.

The land use prior to construction at all of these areas is agricultural. Following construction activities, all temporary work locations would be restored to pre-impact conditions. Restoration work would start following installation of each wind turbine and removal of all construction materials and equipment from each turbine site. This includes removal of the aggregate, granular and geotextile materials from applicable areas (based on landowner preference). Restoration activities would follow the Site Restoration activities that will be developed as part of the Decommissioning Plan Report.

3.4.1 Laydown Areas

A turbine laydown area covering approximately 1 hectare in size will be required around each turbine (**Figure 2**) for temporary storage of the turbine components, construction materials, crane pad and foundation spoil pile.

Turbine components would be delivered directly to the laydown areas for temporary storage until assembled.

Excavation and grading of the laydown areas (if required) will be determined on a site by site basis. Laydown areas would not be gravelled, and would be restored to pre-existing conditions at the end of the construction phase. Turbine laydown areas will be actively used throughout the construction phase, to varying degrees during all construction activities at the turbine.

3.4.2 Crane Pads

Temporary crane pads would be constructed at the same time as the access roads and would be adjacent to each turbine location, within the turbine laydown area. These pads will be capable of supporting the necessary cranes and equipment required for the installation of the wind turbines. The general crane pad area would be approximately 40 m x 22 m. The process for crane pad construction includes; surface material will be stripped and stockpiled (topsoil separate from subsoil), and an aggregate base applied with a gravel surface. The excavated topsoil will be re-used on site as feasible.

Once the turbine erection is complete, the crane pad areas will be rehabilitated to pre-existing conditions unless the landowner asks for the crane pads to remain. Perimeter surface hydrology will be maintained during crane pad construction.

3.4.3 Temporary Watercourse Crossings

Approximately 218 m of underground cabling are required to cross two watercourses between Turbines 1 and 2. The buried lines will be installed using directional drilling techniques in suitably sized plastic conduits at a sufficient depth below the watercourse to prevent any possibility of accidental damage due to dredging or over excavation. Signs indicating the presence and location of the cables will also be placed on either side of the watercourse.

All temporary crossings would comply with the Department of Fisheries and Oceans Canada (DFO's) Ontario Operation Statement 'Temporary Stream Crossings' where possible. As works will likely be undertaken within a Regulated Area permit approval will also be required from the Long Point Region Conservation Authority (LPRCA).

3.5 PROJECT SCHEDULE

An overview of the projected dates associated with the REA phase of the Project is provided in **Table 3.3.**

Table 3.3: Project Schedule Overview

Milestone	Approximate Date
Public Meeting #1	November 15, 2011
Draft REA Reports to Public	Fall/Winter 2012
Public Meeting #2	Early 2013
REA submission to MOE	Early 2013
Start of Construction	August 2014
Commercial Operation (COD)	November 2014

Table 3.3: Project Schedule Overview

Milestone	Approximate Date
Repowering/Decommissioning	Approximately 20 years after COD

3.6 PROJECT ACTIVITIES

A general overview of the activities during construction, operation, and decommissioning phases of the Project is provided in **Table 3.4**. More specific details on the project phases and related activities are outlined in the Construction Plan Report, Design and Operations Report, and the Decommissioning Plan Report.

Table 3.4: Key Project Activities

Project Phase	Activities
Construction	**Turbine Sites**
	OLS survey and staking
	Geotechnical works
	Delineation and staking of temporary work areas
	Preparation of laydown areas
	Access road construction
	Completion of necessary site clearing and grading
	Delivery of project components
	Installation of tower and foundations
	Installation of crane pads
	Tower/turbine erection
	Installation of step-up transformer and required wiring
	Installation of collector lines, usually parallel to access roads
	Reclamation of temporary work areas
	Site landscaping (final grading, topsoil replacement, etc.)
	Off-Site Activities
	Installation of distribution substation
	Installation of parking lot
Operation	**Turbine Sites**
	Preventative maintenance
	Unplanned maintenance
	Access road routine maintenance and snow clearing
	Post-construction follow-up surveys
	Meter calibrations
	Grounds keeping
	Off-Site Activities
	Preventative maintenance for distribution substation
	Unplanned maintenance for distribution substation
	Electrical line maintenance and inspection

Table 3.4: Key Project Activities

Project Phase	Activities
Decommissioning	**Turbine Sites**
	Removal of turbine infrastructure
	Removal of step-up transformers
	Site grading (dependent upon new proposed use)
	Possible removal of access roads dependent upon agreement with property owner
	Possible excavation and removal of collector lines depending upon agreement with property owner
	Off-Site Activities
	Possible removal of distribution substation
	Possible removal of parking lot

Maintenance activities will occur as required throughout the life of the Project, and are detailed in the Design and Operations Report. Barring routine scheduled maintenance, the turbines are expected to be operational 24 hours a day, 7 days a week, assuming appropriate wind conditions. While the specific schedule for decommissioning will be determined at the time it is undertaken, the general staging of undertakings are outlined in the Decommissioning Plan Report. The wind turbines used for the Project can be expected to be in service for the term of the 20 year Ontario Power Authority Feed-In Tariff contract. Following the term of the contract, a decision would be made regarding whether to extend the life of the facility or to decommission.

3.6.1 Waste Generation and Emissions

3.6.1.1 Waste Generation

During construction, waste material will be generated at, and transported from, the Project Location. Waste material produced by the Project is expected to consist of construction material (e.g., excess fill/soil, scrap, banding, plastic wrap removed from palletized goods, etc.) and a small amount of domestic waste. Similar waste material may be generated during decommissioning.

All wastes will be handled and recycled or disposed of in accordance with regulatory requirements.

3.6.2 Air Emissions and Dust Generation

3.6.2.1 Construction and Decommissioning

Construction and decommissioning activities would rely on a wide range of mobile equipment, such as bulldozers, dump trucks, and cranes. The engine exhaust from these vehicles, especially from those operating on diesel fuel, represents a source of particulate and other emissions.

Construction related traffic and various construction activities (e.g. excavation, grading, soil stripping and exposed areas) have the potential to create nuisance dust effects in the immediate vicinity of the Project.

3.6.2.2 Operation

During operations minor localized air emissions would occur from the periodic use of maintenance equipment over the life of the Project. In addition, personnel vehicles and waste management haulers would travel to and from the sites during regular business hours. Operations related traffic has the potential to create nuisance dust effects in the immediate vicinity of the facility; however effects are anticipated to be short-term in duration and highly localized. An examination of the Project's air emissions was undertaken in context of the requirements of O. Reg.419/05, and is provided in the Design and Operations Report. It was determined that since O. Reg. 419/05 does not apply to discharges of contaminants from motor vehicles, and all other facility sources can be considered negligible, no further assessment is required.

3.6.3 Noise Emissions

3.6.3.1 Construction and Decommissioning

During construction and decommissioning of the Project, noise would be generated by the operation of heavy equipment at each of the work areas and associated vehicular traffic on-site and on haul routes.

3.6.3.2 Operation

Aerodynamic noise would be emitted from the wind turbines. A Noise Assessment Report has been completed for the Project in accordance with the MOE Noise Guidelines for Wind Farms, (October 2008) and O. Reg. 359/09, and is included as an appendix to the Design and Operations Report.

Based upon the Project design, the analysis carried out in the Noise Assessment Report indicates that noise produced by the Project would be within the acceptable limits established by the MOE at all noise receptors.

3.6.4 Hazardous Materials

3.6.4.1 Construction and Decommissioning

Hazardous materials are limited to fuels and lubricants that would be on-site for use in equipment. These materials would be stored in appropriate storage containers during the construction phase by the Construction Contractor. Designated storage areas and the type of storage areas would be confirmed by the Construction Contractor prior to construction.

3.6.4.2 Operation

Hazardous materials to be used during the course of Project operation are limited to lubricants and fluids for the operation and maintenance of the turbines, substation, and other equipment. There are no other known hazardous by-products of the wind energy generation process itself.

Typical containment facilities and emergency response materials will be maintained on-site as required. Disposal of any hazardous materials will be in accordance with regulatory requirements. The process for final disposal of any hazardous waste will be developed during the REA process.

3.6.5 Sewage and Stormwater Management

Sanitary waste generated by the construction crew will be collected via portable toilets and wash stations supplied by the construction contractor. Disposal of these wastes will be the responsibility of the contracted party and will be done in accordance with regulatory requirements.

Stormwater management features will be incorporated into the access roads and constructed in accordance with appropriate regulations and local municipal engineering guidelines. In addition, as per the MOE *Stormwater Management Planning and Design Guidelines Manual* (2003) the total drainage area associated with the distribution substation and access road “hard” surfaces is less than 2 ha and therefore a “wet” water quality control pond is not required. In addition to the conveyance of runoff, the swales will also provide water quality control, which is a suitable stormwater management practice for such an area according to the MOE guidelines.

3.6.6 Water-taking Activities

3.6.6.1 Construction and Decommissioning

A Geotechnical Investigation was undertaken for the Project (Stantec, 2012). The investigation determined that groundwater was found at depths ranging from 4.7 m to 11.1 m. Therefore given the depths to groundwater it is unlikely that groundwater will be encountered during the installation of turbine foundations, access roads, underground collector lines, fibre optic cable and distribution substation foundation. It was noted however that groundwater may be encountered in deeper excavations. Therefore, it is possible that some dewatering activities would be required (although a Permit to Take Water is not anticipated). Ultimately groundwater

infiltration in open excavations is anticipated to be minimal; however the dewatering requirements will be determined by the Construction Contractor once the final design has been completed.

3.6.6.2 Operation

No groundwater or surface water-taking activities are planned as part of the operation of the facility.

4.0 Description of Potential Environmental Effects

Based on the current understanding of the potential effects of constructing, operating, and decommissioning a wind project, Project-specific issues and potential effects have been identified (see **Appendix B**). **Appendix B1** describes potential effects and mitigation measures for construction and decommissioning of the Project, whereas **Appendix B2** describes potential effects and mitigation measures for operation and maintenance of the Project. **Appendix B3** outlines monitoring plans for all phases of the Project. Detailed descriptions of all potential effects, mitigation measures, and monitoring plans are provided in the following reports:

- Construction Plan Report;
- Design and Operations Report, includes:
  - Property Line Setback Assessment;
  - Environmental Effects Monitoring Plan For Wildlife; and,
  - Noise Assessment Report.
- Decommissioning Plan Report;
- Natural Heritage Assessment and Environmental Impact Study;
- Water Assessment and Water Body Report;
- Stages 1 Archaeology Assessment and Stage 2-3 Archaeology Assessments Reports; and,
- Heritage Assessment Report.

Based upon the screening of environmental features, site investigations and records reviews, the proposed Project site plan, experience gained during Project planning, and the requirements of the REA process, Project-specific issues and potential effects have been identified and have been further assessed as part of the REA application process:

- Heritage and Archaeological Resources;
- Natural Heritage Resources;
- Watercourses;
- Air, Odour, Dust;
- Environmental Noise;
- Land Use and Resources;
- Provincial and Local Infrastructure; and,
- Public Health and Safety.

4.1 PROJECT RELATED SETBACKS

A key component of the REA process is the establishment of common setbacks for all renewable energy facilities in the Province. The Project was designed to meet the mandatory setbacks within O. Reg. 359/09 in all cases. Within the regulation there are some setbacks for which studies that identify potential negative environmental effects and mitigation measures can be conducted in lieu of meeting the setback requirements. In some instances in the proposed design, Project components are proposed within the defined setbacks for natural features. In these instances, additional assessments have been conducted as per the requirements of O.Reg.359/09 and results have established that impacts would be low or not expected with the implementation of recommended mitigation measures. The results of the assessments are provided in the Natural Heritage Assessment and Environmental Impact Study and the Water Assessment and Water Body Report.

Mapping that identifies on-site and off-site land uses within 300 m of the Project Location, including natural heritage features, water bodies, and built heritage features as identified in the records review and site investigations, is provided in **Appendix A, Figure 3**.

Key setbacks which will be applied throughout the design of the Project are provided in **Table 4.1**.

Table 4.1: Key Potential Project Setbacks

Feature	Setback Distance	Study Alternative When Within Setback
Non-participating receptor	550 m (from turbine base)	An Environmental Noise Impact Assessment will be completed for the Project according to MOE Noise Guidelines.
Public road right-of-way and railway right-of-way	Turbine blade length + 10 m (from turbine base)	N/A
Property line	Turbine height (excluding blades) (from turbine base)	Does not apply to parcels of land if the abutting parcel of land is a participant in the Project or if it is demonstrated that the wind turbine will not result in adverse impacts on nearby business, infrastructure, properties or land use activities.
Petroleum resources operation	75 m *	Development and site alteration may be possible within setback area; engineering report required.
Provincially significant southern wetland	120 m *	Development not permitted within feature. Development and site alteration may be possible within setback area; EIS required.
Provincially significant ANSI (Earth Science)	50 m *	Development and site alteration may be possible within natural feature and setback area; EIS required.
Provincially significant ANSI (Life Science)	120 m *	Development and site alteration may be possible within natural feature and setback area; EIS required.
Significant woodland	120 m *	Development and site alteration may be possible within natural feature and setback area; EIS required.
Significant wildlife habitat	120 m *	Development and site alteration may be possible within natural feature and setback area; EIS required.
Lake	120 m from the average annual high	Development and site alteration may be possible within water body and setback area; additional report required.

Table 4.1: Key Potential Project Setbacks

Feature	Setback Distance	Study Alternative When Within Setback
	water mark *	
Lake Trout lake that is at or above development capacity	300 m from the average annual high water mark *	Development and site alteration may be possible within water body and setback area; additional report required.
Permanent or intermittent stream	120 m from the average annual high water mark *	No turbine or transformer located within a permanent or intermittent stream or within 30 m of the average annual high water mark. Development and site alteration may be possible within setback area; additional report required.
Seepage area	120 m *	No turbine or transformer located within 30 m of a seepage area. Development and site alteration may be possible within setback area; additional report required

Note: No areas are protected under specified Provincial Policies and Plans (i.e., Greenbelt Plan, Oak Ridges Moraine Conservation Plan, Niagara Escarpment Plan, or the Lake Simcoe Watershed Plan); all related setbacks have therefore been removed from the list.

** Setback distances are measured from Project location as defined in O. Reg. 359/09.*

5.0 Closure

This Project Description Report for the Port Ryerse Wind Power Project has been prepared by Stantec for Boralex/UDI in accordance with Ontario Regulation 359/09, and the "*Technical Guide to Renewable Energy Approvals*" (MOE, March 2012).

This report has been prepared by Stantec for the sole benefit of Boralex/UDI, and may not be used by any third party without the express written consent of Boralex /UDI. The data presented in this report are in accordance with Stantec's understanding of the Project as it was presented at the time of the Report.

Respectfully submitted,
STANTEC CONSULTING LTD.

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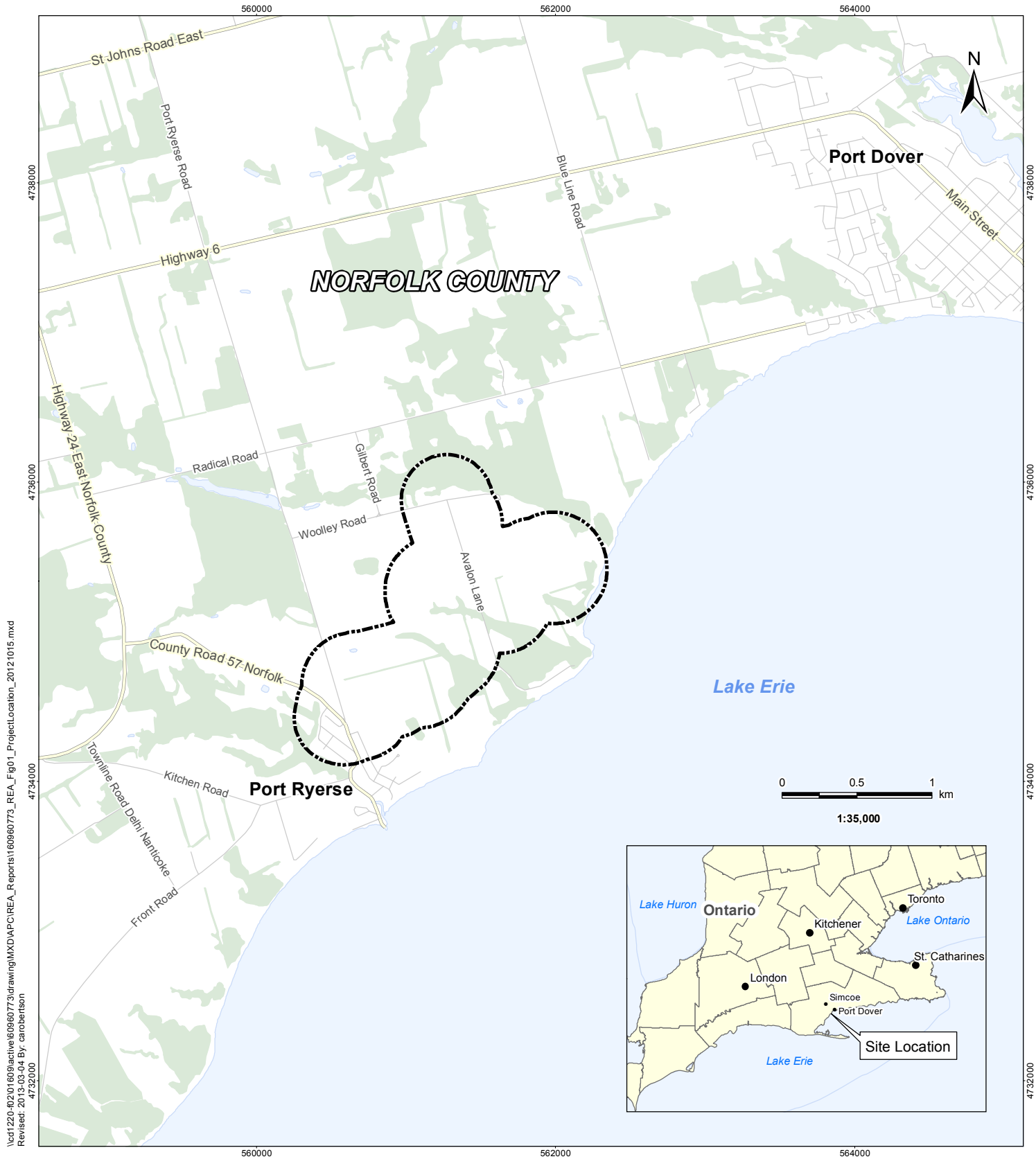
Appendix A

Figures



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Revised: 2013-03-04 By: carobertson

March 2013
160960773

Stantec

Legend

- Study Area
- Major Road
- Local Road
- Wooded Area
- Waterbody

Notes

1. Coordinate System: NAD 1983 UTM Zone 17N
2. Base features produced under license with the Ontario Ministry of Natural Resources © Queen's Printer for Ontario, 2012.

Client/Project
Boralex/ UDI
Port Ryerse Wind Farm
Port Ryerse, Ontario

Figure No.
1

Title
Project Location

560000 561000 562000

4736000

4735000

Radical Road
Gilbert Road
Woolley Road
Port Ryerse Road
Avalon Lane
County Road 57 Norfolk
Cookson Street
Ralph Street North
Young Creek Road
King Street North
Hillcrest Drive
Ralph Street South
Port Ryerse

T1
T2
T3
T4

N

Lake Erie

0 100 200 m
1:8,500

Legend

- Participating Properties Boundary
- Zone of Investigation (120 m)
- Zone of Investigation (300 m)

Proposed Project Components

- Proposed Turbine
- MET Tower
- Bladeswept Area / Rotor Diameter (113 m)
- Proposed Access Road
- Turning Radius
- Proposed Collector Line
- Component Laydown Area and Crane Pad
- Substation/ Distribution
- Proposed Permanent Site Parking Lot

Existing Features

- Water Well Record (MOE)
- Contour Line (5m Intervals)
- Major Road
- Local Road
- Hazard Lands
- Watercourse
- Waterbody
- Wooded Area

Noise Receptors

- Participating
- Non-Participating, Occupied
- Non-Participating, Vacant

Petroleum Wells

- Abandoned Well
- Active Well
- Status Unknown

Setbacks

- Property Line Setback (99.5m)
- Road Setback (65.5m)

Notes

1. Coordinate System: NAD 1983 UTM Zone 17N
2. Base features produced under license with the Ontario Ministry of Natural Resources © Queen's Printer for Ontario, 2012.
3. Orthographic Imagery Source: © First Base Solutions, 2011. Imagery taken in Spring 2010.

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160960773

Client/Project
Boralex/ UDI
Port Ryerse Wind Farm
Port Ryerse, Ontario

Figure No.
2

Title
Socio-Economic Features

W:\active\60960773\drawing\MXD\APC\REA_Reports\160960773_REA_Fig02_SocioEconomicFeatures_20130304.mxd
Revised: 2013-03-06 By: dharvey

561000 562000

4736000 4735000 4734000

N

WO03

98 m

57 m

Gilbert Road

Woolley Road

Avalon Lane

T4

9 m

16 m

T2

T3

SCS01

WO02

Port Ryerse Road

WO02

LBMS01

T1

County Road 57/ Norfolk

Cookson Street

Ryerson Street

Ralph Street North

Port Ryerse

Youngs Creek Road

King Street North

Hilltop Drive

Ralph Shea Street South

King Street North

Pond Road

Lake Erie

0 100 200 m

1:8,000

561000 562000

4736000 4735000 4734000

W:\active\60960773\drawing\MXD\APC\REA_Reports\160960773_REA_Fig03_SignificantNaturalFeatures_20130312.mxd
Revised: 2013-03-12 By: dharvey

Legend

- Participating Properties Boundary
- Zone of Investigation (120 m)
- Zone of Investigation (300 m)
- Proposed Turbine
- MET Tower
- Bladeswept Area / Rotor Diameter (113 m)
- Proposed Access Road
- Turning Radius
- Proposed Collector Line
- Component Laydown Area and Crane Pad
- Substation/ Distribution
- Proposed Permanent Site Parking Lot
- Major Road
- Local Road
- Watercourse
- Waterbody
- Significant Woodland

Natural Features

- Pignut Hickory Candidate
- Significant Landbird Migratory Stopover Area (LBMS)
- Significant Pignut Hickory Habitat (SCS)
- Distances Between Features and Project Components On This Map Are Described In Detail In Table 3.9 In The NHA/ EIS
- REA Water Body

Setbacks

- REA Water Body Setback (30m)

Notes

1. Coordinate System: NAD 1983 UTM Zone 17N
2. Base features produced under license with the Ontario Ministry of Natural Resources © Queen's Printer for Ontario, 2012.
3. Orthographic Imagery Source: © First Base Solutions, 2011.
   Imagery taken in Spring 2010.

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Client/Project
Boralex/ UDI
Port Ryerse Wind Farm
Port Ryerse, Ontario

Figure No.
3

Title
Significant Natural Features & Water Bodies

Appendix B

Overview of Potential Environmental Effects and Monitoring Plans

Appendix B1: Summary of Potential Environmental Effects and Mitigation Strategy for Construction and Decommissioning of the Project

PROJECT PHASE: CONSTRUCTION & DECOMMISSIONING			
Environmental Feature	**Potential Adverse Effects**	**Mitigation Strategy**	**Net Effects**
Heritage and Archaeological Resources			
Protected Properties and Heritage Resources	• None anticipated.	• N/A	• None.
Archaeological Resources	• Damage of buried artefacts during excavation.	• A Stage 1 Archaeological Assessment and Stage 2-3 Archaeological Assessments have been undertaken. • The Stage 2-3 Archaeological Assessments recommended: - Archaeological monitoring by a licensed archaeologist for all construction activities within 70 m of the site; - Placing temporary barriers around six of the eight find spots located between 20 to 70 m away from the Project Location during construction. A licensed archaeologist should monitor these barriers to ensure that unintentional Project impacts do not occur; - Of the six find spots within 70 m of the site, two find spots should be subjected to a site-specific Stage 3 archaeological investigation if any future developments are planned in their immediate vicinity, or if the Project Location is revised at a later date to include these areas; and, - Construction monitoring of the find spot where a partial Stage 3 assessment was undertaken to ensure that unintentional Project impacts do not occur to the remainder of the site. • Construction Contractor would be notified of the stop work protocol should artefacts and/or human remains be encountered during excavation as described in the Construction Plan Report.	• None.
Natural Heritage Resources			
Wetlands	• No features identified within the Study Area.	• N/A	• None.
Areas of Natural and Scientific Interest (ANSIs)	• No features identified within the Study Area.	• N/A	• None.
Woodlands	• Two significant woodlands	• Primary mitigation strategy is avoidance of the significant woodland	• Any indirect

Appendix B1: Summary of Potential Environmental Effects and Mitigation Strategy for Construction and Decommissioning of the Project

PROJECT PHASE: CONSTRUCTION & DECOMMISSIONING			
Environmental Feature	**Potential Adverse Effects**	**Mitigation Strategy**	**Net Effects**
	within the 120 m Zone of Investigation; one significant woodland is within the Project Location and contains Project infrastructure. • No direct loss of woodland habitat as a result of the Project. • Indirect impacts include accidental damage to critical root zones and loss of trees or damage to limbs. • Other indirect impacts include dust, sedimentation and erosion, the potential for accidental spills, increased traffic and improper disposal of wastes.	through the use of directional drilling during installation of underground collector lines. *For all significant natural features identified within the 120 m Zone of Investigation:* - Clearly delineate work area using a barrier such as a silt fence to avoid accidental encroachment on the feature that would lead to damage of trees and root zones; - Erect silt fencing to prevent sedimentation within critical root zones; - Implement a sedimentation and erosion control plan; - Stockpile materials >30 m from significant natural features. Where this is not possible stockpiles will be covered when not in use, especially during rain events or high wind events; - Re-vegetate disturbed areas with fast growing native species as soon as construction activity within the disturbed areas is complete; - Implement infiltration (i.e. minimize paved surfaces and design roads to promote infiltration) techniques to the maximum extent possible to avoid changes in soil moisture and compaction; - All maintenance activities, vehicle refueling or washing and chemical storage will be located more than 30 m from significant natural features; - Implement infiltration (i.e. minimize paved surfaces and design roads to promote infiltration) techniques to the maximum extent possible to avoid changes in soil moisture and compaction; - Locate horizontal directional drill entry/exit pits at least 30 m from any significant natural feature; - Collect drill cuttings as they are generated and place in a soil bin or bag for off-site disposal; and, - Restore and re-vegetate entry/exit pits to pre-construction conditions as soon as possible after construction. • As appropriate and prior to construction the Project Location limits will be staked and the Construction Contractor will ensure that no construction	adverse net effects are anticipated to be short-term in duration and intermittent.

Appendix B1: Summary of Potential Environmental Effects and Mitigation Strategy for Construction and Decommissioning of the Project

PROJECT PHASE: CONSTRUCTION & DECOMMISSIONING			
Environmental Feature	**Potential Adverse Effects**	**Mitigation Strategy**	**Net Effects**
		disturbance occurs beyond the staked limits. • Should monitoring reveal that clearing is occurring beyond defined limits, mitigation action will be taken that could include rehabilitation of the disturbed area. • Mitigation measures related to dust emissions are outlined in '*Dust and Odour Emissions*'. • Mitigation measures related to traffic are outlined in '*Local Traffic*'. • Mitigation measures for spills and wastes are outlined in '*Waste Management and Contaminated Lands*'.	
Provincial Parks and Conservation Reserves	• No features identified within the Study Area.	• N/A	• None.
Other Designated Natural Areas	• No features identified within the Study Area.	• N/A	• None.
Significant Wildlife and Wildlife Habitat	• Three significant wildlife habitats within the 120 m Zone of Investigation: - Landbird Migratory Stopover Area; and, - Pignut Hickory Habitat. • Indirect impacts include habitat avoidance/disturbance caused by noise and dust.	• The following mitigation measures will be implemented: - Avoid where possible construction within 120 m of significant migratory landbird stopover habitat from April to May and August to October; - Implement standard construction site best management practices to prevent fugitive dust generation and off site transport across the Project Location; and, - Re-vegetate disturbed areas with fast growing native species as soon as construction activity within the disturbed areas is complete. • Mitigation measures related to dust emissions are outlined in '*Dust and Odour Emissions*'. • Mitigation measures related to noise are outlined in '*Environmental Noise'.*	• Any indirect adverse net effects are anticipated to be short-term in duration and intermittent. • Post-construction disturbance and mortality monitoring would be conducted to verify effects predictions and additional operational

Appendix B1: Summary of Potential Environmental Effects and Mitigation Strategy for Construction and Decommissioning of the Project

PROJECT PHASE: CONSTRUCTION & DECOMMISSIONING			
Environmental Feature	**Potential Adverse Effects**	**Mitigation Strategy**	**Net Effects**
			mitigation would be implemented if unanticipated effects occur.
Generalized Significant Wildlife Habitat	• 4 Generalized Significant Wildlife Habitats within the 120 m Zone of Investigation but not within the Project Location. • Generalized impacts are outlined in **Section 1.1.7** of the Construction Plan Report and Table 10 of the NHA/EIS report.	• Detailed mitigation measures are outlined in Table 10 of the NHA/EIS report. • Mitigation measures related to dust emissions are outlined in '*Dust and Odour Emissions*'. • Mitigation measures related to traffic are outlined in '*Local Traffic*'. • Mitigation measures related to noise are outlined in '*Environmental Noise*'. • Mitigation measures related to accidental spills are outlined in '*Accidental Spills'*.	• Any adverse net effects are anticipated to be short-term in duration and intermittent. • There is some potential for disturbance to local wildlife as a result of noise and increased human activity, particularly increased traffic. • Some limited mortality is possible; however long-term effects to wildlife populations from mortality and from barrier effects are anticipated to be minimal because

Appendix B1: Summary of Potential Environmental Effects and Mitigation Strategy for Construction and Decommissioning of the Project

PROJECT PHASE: CONSTRUCTION & DECOMMISSIONING			
Environmental Feature	**Potential Adverse Effects**	**Mitigation Strategy**	**Net Effects**
			of the temporary nature of the increased traffic activity.
Significant Flora and Vegetation Communities	• One provincially rare plant species, Pignut Hickory, within the 120 m Zone of Investigation. • No direct impact to Pignut Hickory is anticipated as no removal of trees is proposed for the Project. • Indirect impacts include habitat avoidance/disturbance caused by noise and dust.	• Mitigation measures for Pignut Hickory habitat is outlined in '*Significant Wildlife Habitat*'. • A health assessment survey of the Pignut Hickory tree identified within 120 m of an access road will be conducted pre-construction as well as for one year post-construction. • Mitigation measures related to noise are outlined in '*Environmental Noise*'. • Mitigation measures related to dust emissions are outlined in '*Dust and Odour Emissions*'.	• Any indirect adverse net effects are anticipated to be short-term in duration and intermittent. • Post-construction disturbance monitoring would be conducted to verify effects predictions and additional operational mitigation would be implemented if unanticipated effects occur.
Other Flora and Vegetation Communities	• Limited vegetation removal in hedgerows for Project components (including temporary work areas). • Indirect impacts due to dust emissions.	• Mitigation measures related to dust emissions are outlined in '*Dust and Odour Emissions*'. • The limits of construction activities will be staked prior to construction to ensure that no disturbance occurs outside of the Project Location boundary.	• Effects are expected to be short-term in duration intermittent.

Appendix B1: Summary of Potential Environmental Effects and Mitigation Strategy for Construction and Decommissioning of the Project

PROJECT PHASE: CONSTRUCTION & DECOMMISSIONING			
Environmental Feature	**Potential Adverse Effects**	**Mitigation Strategy**	**Net Effects**
Water Bodies and Aquatic Resources			
Groundwater	• Some dewatering activity possible during excavations; would not exceed 50,000 litres (L) per day. • Potential for contamination through accidental spills.	• If groundwater is encountered during excavations, good practices would be used, including the following key measures: - minimizing the length of time that the excavation is open; - monitoring seepage into the excavation; - energy dissipation techniques would be used for any pumped water to reduce the potential for erosion and sourcing; and, - If energy dissipation measures are found to be inadequate, the rate of dewatering would be reduced or ceased until satisfactory mitigation measures are in place. • In the event that a turbine is located within 100m of an undocumented private residential well of participating landowners, the Construction contractor may, at the landowner's request, monitor the quality and quantity of the well over the course of construction to ensure there is no interruption in use of, or impact on, the water. In the event that well water quality or quantity is disturbed as a result of construction, Boralex/UDI would provide a temporary potable water supply until corrective measures are taken and would comply with MOE's Guideline B-9: Resolution of Groundwater Interference Problems. • Mitigation measures related to accidental spills are outlined in '*Accidental Spills'*.	• Some localized and temporary disturbance to groundwater may be possible. • Any potential effects will be short term in nature and have little to no effect on groundwater flow conditions or adjacent private water wells.
Surface Water, Fish and Fish Habitat	• Three REA water bodies within the 120 m Zone of Investigation; Two will be crossed by underground collector lines and one access road is located within 120 m of a water body (access road do not require water body	• Standard mitigation measures for working around fish habitat and underground collector lines installation are provided in the Water Assessment and Water Body Report. • Timing windows do not apply as no in-water work is proposed. • Construction activities will likely occur within a Regulated Area therefore permit approval from Long Point Region Conservation Authority (LPRCA) will also likely be required. • Erosion and sediment control measures will be used. • Barriers will be inspected regularly to ensure proper functioning and	• Any potential net effects are anticipated to be spatially and temporally limited.

Appendix B1: Summary of Potential Environmental Effects and Mitigation Strategy for Construction and Decommissioning of the Project

PROJECT PHASE: CONSTRUCTION & DECOMMISSIONING			
Environmental Feature	**Potential Adverse Effects**	**Mitigation Strategy**	**Net Effects**
	crossings). • Potential impacts to watercourses within the 120 m Zone of Investigation: - Short-term increase in turbidity from runoff, sedimentation and soil erosion during construction; - Loss of shade; - Reduced bank stability; - Reduced allochthonous inputs; and, - Water quality and habitat disturbance effects to aquatic habitat. • Potential impacts to fish and fish habitat related to the installation of underground collector lines: - Erosion and sedimentation from site disturbance and potential dewatering; - Collapse of the punch or bore hold under the stream; and, - Disturbing riparian vegetation can reduce	maintenance. • Materials removed or stockpiled will be deposited and contained in a manner to ensure sediment does not enter a watercourse. • Mitigation measures related to accidental spills are outlined in '*Accidental Spills'*.	

Appendix B1: Summary of Potential Environmental Effects and Mitigation Strategy for Construction and Decommissioning of the Project

PROJECT PHASE: CONSTRUCTION & DECOMMISSIONING			
Environmental Feature	**Potential Adverse Effects**	**Mitigation Strategy**	**Net Effects**
	shoreline cover, shade and food production areas.		
Air Quality and Environmental Noise			
Air Emissions	• The engine exhaust from vehicles represents a source of particulate and other emissions. • Traffic delays result in increased emissions from vehicles traveling slowly through construction zones. • The delivery of materials can generate emissions, especially for sites that are relatively far from material manufacturers.	• Multi-passenger vehicles should be utilized to the extent practical. • Company and contractor personnel should avoid idling of vehicles when not necessary for construction activities. • Equipment and vehicles should be turned off when not in use unless required for activities and/or effective operation. • Equipment and vehicles should be maintained in good working order with functioning mufflers and emission control systems as available. • All vehicles should be fitted with catalytic converters as required. • All construction equipment and vehicles should meet the emissions requirements of the Ministry of the Environment (MOE) and/or Ministry of Transportation (MTO). • As appropriate, records of vehicle maintenance should be retained and made available for periodic review by the Contractor. • All vehicles identified through the monitoring program that fail to meet the minimum emission standards would be repaired immediately or replaced as soon as practicable.	• Limited to the work areas, and the magnitude of combustion emissions are limited. • Any adverse net effects are anticipated to be short-term in duration and highly localized.
Dust and Odour Emissions	• Winds may erode and disperse loose soil material, storage piles and road surfaces, which may be a nuisance to residential properties and have various impacts on the natural environment. • No odour emissions are anticipated from the Project.	• The Contractor should implement good site practices which may include: - Maintaining equipment in good running condition and in compliance with regulatory requirements; - Protecting stockpiles of friable material with a barrier or windscreen and in the event of dry conditions and excessive dust; - Dust suppression (e.g. water and/or calcium chloride) of source areas; and; - Covering loads of friable materials during transport. • An Environmental Management Plan would be developed by the Contractor that would include protocols for dust emission control.	• Any adverse net effects to air quality from dust emissions are anticipated to be short-term in duration and highly localized.

Appendix B1: Summary of Potential Environmental Effects and Mitigation Strategy for Construction and Decommissioning of the Project

PROJECT PHASE: CONSTRUCTION & DECOMMISSIONING			
Environmental Feature	**Potential Adverse Effects**	**Mitigation Strategy**	**Net Effects**
Environmental Noise	• Noise would be generated by the operation of heavy equipment at each of the work areas and associated vehicular traffic on-site and on haul routes.	• All engines associated with construction and decommissioning equipment would be equipped with mufflers and/or silencers in accordance with MOE and/or MTO guidelines and regulations. • To the greatest extent possible, activities that could create excessive noise would be restricted to regular construction hours. If activities that cause excessive noise must be carried out outside of these time frames, adjacent residents would be notified in advance, as required. • Sources of continuous noise, such as portable generator sets, would be shielded as appropriate or located so as to minimize disturbance to local residents.	• Intermittent noise would increase during regular construction hours at the work areas and/or along the haul route. Any adverse net effects due to noise are anticipated to be short-term in duration and intermittent.
Land Use and Socio-Economic Resources			
Areas Protected Under Provincial Plans & Policies	• No areas protected under provincial plans and policies within the Project Location.	• N/A	• None.
Existing Land Uses	• Agricultural lands where Project infrastructure is located would be changed from present land use for the duration of the Project. • There would be a temporary increase in noise and dust levels around the work and haul areas resulting in potential effects to adjacent	• Landowners would be compensated by Boralex/UDI for agricultural land that would be taken out of production during the lifespan of the Project through the land lease agreements. • Mitigation measures related to noise from construction and decommissioning activities are outlined in '*Environmental Noise'*. • Mitigation measures related to dust are outlined in '*Dust and Odour Emissions*'.	• Disturbance would be short-term in duration, temporary, and would be minimized through the implementation of good site practices, transportation

Appendix B1: Summary of Potential Environmental Effects and Mitigation Strategy for Construction and Decommissioning of the Project

PROJECT PHASE: CONSTRUCTION & DECOMMISSIONING			
Environmental Feature	**Potential Adverse Effects**	**Mitigation Strategy**	**Net Effects**
	land uses.		planning, and communication with the community.
Hazard Lands	• Three hazard lands (valleylands) within the 120 m Zone of Investigation; two of these hazard lands contain Project infrastructure. • Indirect impacts include accidental damage to critical root zones and loss of trees or damage to limbs. • Other indirect impacts include sedimentation and erosion.	• Primary mitigation strategy is avoidance of significant hazard lands through the use of directional drilling during installation of underground collector lines. • Mitigation measures related to significant natural features including erosion and sediment control measures are outlined in '*Woodlands*'.	• Any indirect adverse net effects are anticipated to be short-term in duration and intermittent.
Recreation Areas	• No recreational areas within the 120 m Zone of Investigation. • There would be a temporary increase in noise and dust levels around the work and haul areas resulting in potential effects to nearby recreational activities.	• Mitigation measures related to noise from construction and decommissioning activities are outlined in '*Environmental Noise'*. • Mitigation measures related to dust are outlined in 'Du*st and Odour Emissions*'. • Mitigation measures related to construction and decommissioning traffic are provided in '*Local Traffic*'.	• Noise, dust and traffic effects are anticipated to be short term and intermittent.
Agricultural Lands and Operations	• Inconvenience to operations, including site-specific cropping patterns. • Use of agricultural land for the facility components and	• Detailed mitigation measures for impacts to agricultural lands and operations are provided in the Construction Plan Report. Key measures include: - Implementing a wet soil shutdown practice; - Monitoring of topsoil stripping in areas to be restored after the	• Disturbances to agricultural lands and operations are expected to be temporary and

Appendix B1: Summary of Potential Environmental Effects and Mitigation Strategy for Construction and Decommissioning of the Project

PROJECT PHASE: CONSTRUCTION & DECOMMISSIONING			
Environmental Feature	**Potential Adverse Effects**	**Mitigation Strategy**	**Net Effects**
	temporary work areas, including areas of prime agricultural land. • Potential impacts to soil. • Adverse effects could occur to artificial drainage • Potential for transportation of soybean cyst nematode (SCN) contaminated soil to non-infested fields.	construction/decommissioning activity; - Decompaction as required; - Topsoil replacement; - Artificial tile drainage would be repaired and monitored; and, - A soil sampling program should be implemented to identify potential SCN infestation.	spatially limited.
Mineral, Aggregate, and Petroleum Resources	• No lands designated for aggregate resource extraction, including licensed pits and quarries, within the Project Study Area. • Three abandoned and two (unknown status) petroleum wells are within the 120 m Zone of Investigation. • No adverse effects are anticipated to the wind facility; however in an extreme case a fire or small spill may occur at wells not decommissioned and likely delay construction activities. A spill could potentially contaminate the Project site.	• Ensure the area between the Project infrastructure and petroleum well is sloped with the Project infrastructure located at a higher elevation. • Access to the site and the construction activities will take place on the north side of the proposed Project infrastructure, farther from the petroleum well and at a higher elevation. • Underground locates would be conducted prior to construction given the potential for unrecorded, improperly decommissioned wells. • Mitigation measures related to accidental spills are outlined in '*Accidental Spills*'.	• None.

Appendix B1: Summary of Potential Environmental Effects and Mitigation Strategy for Construction and Decommissioning of the Project

PROJECT PHASE: CONSTRUCTION & DECOMMISSIONING			
Environmental Feature	**Potential Adverse Effects**	**Mitigation Strategy**	**Net Effects**
Game And Fishery Resources	• Sensory disturbance to game species may occur due to noise from construction and decommissioning activities.	• It is anticipated that those who participate in hunting, fishing, and other outdoor recreation will choose an alternate location for their recreation during construction. • Mitigation measures related to noise from construction and decommissioning activities are outlined in '*Environmental Noise'*.	• Construction and decommissioning noise is expected to be temporary and intermittent.
Local Traffic	• The increase in traffic, including excess load traffic, may result in short-term, localized disturbance to traffic patterns, increase in traffic volume, and create potential traffic safety hazards.	• The Contractor would implement a Traffic Management Plan.	• Net effects of increased traffic and road safety are anticipated to be limited, short-term effects.
Local Economy	• Direct employment during construction. • Indirect and induced employment. • Potential disruption to use and enjoyment of businesses (if present) may occur in the area surrounding the Project Location. • Potential disruption to local residents could be caused by physical effects from traffic, noise and dust.	• Construction and decommissioning phases of the Project would provide positive economic benefits; therefore no mitigation measures are required. • Disruptions in the vicinity of local businesses will be largely due to an increase in traffic, and will be short term and are not expected to affect use of these businesses. • Mitigation measures related to noise from construction and decommissioning activities are outlined in '*Environmental Noise'*. • Mitigation measures related to dust are outlined in *'Dust and Odour Emissions*'. • Mitigation measures related to dust are outlined in '*Local Traffic'*.	• Traffic effects will be temporary, of short duration, and cease upon completion of the construction of the Project.

Appendix B1: Summary of Potential Environmental Effects and Mitigation Strategy for Construction and Decommissioning of the Project

PROJECT PHASE: CONSTRUCTION & DECOMMISSIONING			
Environmental Feature	**Potential Adverse Effects**	**Mitigation Strategy**	**Net Effects**
Existing Local Infrastructure			
Provincial, Municipal and other major infrastructure	• The increase in traffic, including excess load traffic, may result in short-term, localized disturbance to traffic patterns, increase in traffic volume, create potential traffic safety hazards, and/or produce abnormal wear on the roads. • Transportation of excess loads and large turbine components may produce abnormal wear on the County roads.	• The Contractor would implement a Traffic Management Plan. • Boralex/UDI will undertake consultation with the County regarding any necessary agreements related to wear on roads from transportation of Project materials in addition to obtaining required permits for use of County roads. • Boralex/UDI would undertake consultation with the MTO regarding any necessary agreements related to wear on roads from transportation of Project materials in addition to obtaining the required permits for use of provincial highways.	• Net effects are anticipated to be limited and short-term.
Utilities	• There is the potential to interfere with local utilities.	• Boralex/UDI will undertake consultation with local utility providers, and obtain all necessary permits and authorizations.	• None.
Navigable Waters	• None	• N/A	• None.
Waste Management and Contaminated Lands			
Landfill Sites	• None	• N/A	• None.
Contaminated Lands	• There is potential for finding contaminated sites and improperly decommissioned oil and gas wells or pipelines.	• In the event that previously unknown contaminated soils, such as buried tanks, drums, oil residue or gaseous odour, are uncovered or suspected of being uncovered, activities would cease in that location until the source of the contamination is further investigated. • In such an instance, Boralex/UDI would seek expert advice on assessing and developing a soil sampling, handling and remediation plan. All contaminated material would be managed in accordance with the applicable sections of the Environmental Protection Act and Regulation 347.	• None.

Appendix B1: Summary of Potential Environmental Effects and Mitigation Strategy for Construction and Decommissioning of the Project

PROJECT PHASE: CONSTRUCTION & DECOMMISSIONING			
Environmental Feature	**Potential Adverse Effects**	**Mitigation Strategy**	**Net Effects**
Waste Generation	• Improper disposal of waste material generated may result in contamination to soil, groundwater, and/or surface water resources on and off the Project sites. Litter generated may also become a nuisance to nearby residences if not appropriately contained and allowed to blow off the site.	• The Contractor would implement a site-specific waste collection and disposal management plan, which may include site practices such as: - systematic collection and separation of waste materials; - all waste materials and recycling would be transported off-site by private waste material collection contractors licensed with a Certificate of Approval – Waste Management System; - contractors would be required to remove their excess materials from the site; - excess materials generated during the course of construction excavations of soil would be handled in accordance with the MOE's Protocol for the Management of Excess Materials in Road Construction and Maintenance; - excess excavated soils may be reused elsewhere on the property with landowner permission; - labelling and proper storage of hazardous and liquid wastes (e.g. used oil, drained hydraulic fluid, and used solvents) in a secure area that would ensure containment of the material in the event of a spill; - dumping or burying wastes within the Project sites would be prohibited; - should contaminated soil be encountered during the course of excavations the contaminated material would be disposed of in accordance with the current appropriate provincial legislation, such as Ontario Regulation 347, the General – Waste Management Regulation; - disposal of non-hazardous waste at a registered waste disposal site(s); - if waste is classified as waste other than solid non-hazardous, a Generator Registration Number is required from the MOE and the generator would have obligations regarding manifesting of waste. Compliance with Schedule 4 of Regulation 347 is mandatory when determining waste category; - implementation of an on-going waste management program	• Minor incremental effect on soil, groundwater, and surface water at the waste disposal site(s) depending on municipal on-site containment practices and quality of the landfill protection mechanisms.

Appendix B1: Summary of Potential Environmental Effects and Mitigation Strategy for Construction and Decommissioning of the Project

PROJECT PHASE: CONSTRUCTION & DECOMMISSIONING			
Environmental Feature	**Potential Adverse Effects**	**Mitigation Strategy**	**Net Effects**
		consisting of reduction, reuse, and recycling of materials; and, - disposal of sanitary wastes would be the responsibility of the contracted third party and they would ensure disposal in accordance with appropriate legislation, standards and policies. • During construction, the cement provider would be responsible for ensuring that wash water is done in a manner compliant with regulatory requirements and acceptable to stakeholders	
Accidental Spills	• Some materials, such as fuel, lubricating oils and other fluids, have the potential for discharge to the on-site environment through accidental spills.	• Accidental Spills: the Emergency Response Plan developed by the Contractor and/or Boralex/UDI would include protocols for the proper handling of material spills and associated procedures to be undertaken in the event of a spill. Key measures include: - standard containment facilities and emergency response materials would be maintained on-site as required; and, - refuelling, equipment maintenance, and other potentially contaminating activities would occur in designated areas. • As appropriate spills would be reported immediately to the MOE Spills Action Centre.	• None.
Public Health and Safety			
Public Health and Safety	• Potential effects to public health and safety are largely in the form of increased traffic, dust emissions, construction noise and unauthorized access of the public to the work sites.	• A detailed Traffic Management Plan, Emergency Response and Communications Plan and Health and Safety Plan would be prepared and implemented by the Contractor. • Mitigation measures related to the increased traffic is outlined in '*Local Traffic*'. • Mitigation measures related to dust emissions is provided in *'Dust and Odour Emissions*'. • Mitigation measures related to noise from construction and decommissioning activities is provided in '*Environmental Noise'*. • Land access would be controlled through signage and restricted to authorized personnel only. The Health and Safety Plan would consider both public and occupational health and safety issues. This may include protecting the public from equipment and areas by posting warning signs,	• There is minimal increased or new risk to public health and safety from construction and/or decommissioning of the Project.

Appendix B1: Summary of Potential Environmental Effects and Mitigation Strategy for Construction and Decommissioning of the Project

PROJECT PHASE: CONSTRUCTION & DECOMMISSIONING			
Environmental Feature	**Potential Adverse Effects**	**Mitigation Strategy**	**Net Effects**
		use of personal protective equipment, accident reporting, equipment operation, and confined space entry. • Discussions have been undertaken, and would continue, with local emergency services personnel. Boralex/UDI would participate in a training session for these workers.	

Appendix B2 – Summary of Potential Environmental Effects and Mitigation Strategy for Operation of the Project

PROJECT PHASE: OPERATION			
Environmental Feature	**Potential Adverse Effect**	**Mitigation Strategy**	**Net Effects**
Heritage and Archaeological Resources			
Protected Properties and Heritage Resources	• No operational and maintenance activities will occur on the properties containing the built heritage resources and cultural heritage landscapes; therefore no adverse effects on heritage resources are anticipated during operations.	• None.	• None.
Archaeological Resources	• There are no areas that will be excavated during the operation phase that will not have been assessed by a Stage 2 Archaeology Assessment; therefore no potential effects are anticipated to archaeological resources.	• None.	• None.
Natural Heritage Resources			
Wetlands	• As no wetlands were identified, there are no anticipated impacts.	• N/A	• None.
Areas of Natural and Scientific Interest	• As no Areas of Natural and Scientific Interest were identified, there are no anticipated impacts.	• N/A	• None.
Woodlands	• Contamination through accidental spills. • Dust emissions during operation and maintenance. • Erosion and sedimentation during maintenance activities.	• Mitigation measures related to accidental spills are outlined in '*Accidental Spills*'. • Mitigation measures related to dust emissions are outlined in '*Dust and Odour Emissions*'. • Mitigation measures for erosion and sedimentation are outlined in **Section 3.3.3** of the Construction Plan Report.	• Indirect impacts are expected to be short-term in duration, and highly localized. • Accidental spills would be spatially limited and of short duration and protocols to minimize their impact would be provided in the Emergency Response Plan.

Appendix B2 – Summary of Potential Environmental Effects and Mitigation Strategy for Operation of the Project

PROJECT PHASE: OPERATION			
Environmental Feature	**Potential Adverse Effect**	**Mitigation Strategy**	**Net Effects**
Provincial Parks and Conservation Reserves	• As no Provincial Parks or Conservation Reserves were identified, there are no anticipated impacts.	• N/A	• None.
Other Designated Natural Areas	• As no Other Designated Natural Areas were identified, there are no anticipated impacts.	• N/A	• None.
Significant Wildlife and Wildlife Habitat	Landbird Migratory Stopver Area: • Loss of species diversity and abundance through habitat displacement or avoidance. Pignut Hickory Habitat: • Loss of species habitat through removal or vegetation change. •	Landbird Migratory Stopver Area: • Utilize lighting scheme that will minimize risk to bird disturbance while fulfilling Transport Canada requirements. • Post construction monitoring for disturbance and mortality. Pignut Hickory Habitat: • Post construction monitoring for disturbance.	• Minimal net effects are predicted for significant wildlife habitats. • Post-construction disturbance and mortality monitoring would be conducted to verify effects predictions and additional operational mitigation would be implemented if unanticipated significant effects occur.
Generalized Significant Wildlife Habitat	• Disturbance to wildlife. • Direct mortality to birds and bats.	• See '*Significant Wildlife and Wildlife Habitat'*. • Mitigation measures related to traffic are outlined in '*Local Traffic*'. • Mitigation measures related to noise are outlined in '*Environmental Noise'*. • Mitigation measures related to accidental spills are outlined in '*Accidental Spills*'. • Mitigation measures related to dust emissions are outlined in '*Dust and Odour Emissions*'. • Mortality thresholds. • Implementation of contingency measures discussed with MNR if thresholds are exceeded.	• Any adverse net effects on wildlife from operations are anticipated to be non-significant. • Some potential for disturbance to wildlife during operations and maintenance of the Project as a result of increased human activity. • Some limited mortality is possible; however potential long-term effects to wildlife populations from this mortality and from barrier effects are anticipated to be minimal.

Appendix B2 – Summary of Potential Environmental Effects and Mitigation Strategy for Operation of the Project

PROJECT PHASE: OPERATION			
Environmental Feature	**Potential Adverse Effect**	**Mitigation Strategy**	**Net Effects**
Significant Flora and Vegetation Communities	• Dust emissions during operation and maintenance.	• Mitigation measures related to dust emissions are outlined in '*Dust and Odour Emissions'*.	• Any indirect adverse net effects are anticipated to be short-term in duration and intermittent.
Other Flora and Vegetation Communities	• Disturbance to other flora and vegetation from dust emissions.	• Mitigation measures related to dust emissions are outlined in '*Dust and Odour Emissions'*.	• Any indirect adverse net effects are anticipated to be short-term in duration and intermittent.
Birds	• Direct mortality.	• Mortality thresholds. • Implementation of contingency measures discussed with MNR if thresholds are exceeded.	• Some limited mortality is possible; however potential long-term effects to wildlife populations from this mortality and from barrier effects are anticipated to be minimal.
Bats	• Direct mortality	• Mortality thresholds. • Implementation of contingency measures discussed with MNR if thresholds are exceeded.	• Some limited mortality is possible; however potential long-term effects to wildlife populations from this mortality and from barrier effects are anticipated to be minimal.
Water Bodies and Aquatic Resources			
Groundwater	• Potential contamination from accidental spills.	• Mitigation measures related to accidental spills are outlined in '*Accidental Spills'*.	• Accidental spills would be spatially limited and of short duration and protocols to minimize any impact will be provided in the Emergency Response Plan.
Surface Water,	• Potential contamination from	• Mitigation measures related to accidental spills are	• None.

Appendix B2 – Summary of Potential Environmental Effects and Mitigation Strategy for Operation of the Project

PROJECT PHASE: OPERATION			
Environmental Feature	**Potential Adverse Effect**	**Mitigation Strategy**	**Net Effects**
Fish, and Fish Habitat	accidental spills. • Erosion, sedimentation, and surface water turbidity during maintenance activities.	outlined in '*Accidental Spills'*. • Mitigation measures for erosion and sedimentation would be the same measures described in **Section 3.4.2** of the Construction Plan Report.	
Air Quality and Environmental Noise			
Air Quality	• Emissions from operation and maintenance activities, including equipment and vehicles.	• Operations staff will operate vehicles in a manner that reduces air emissions to the extent practical, including: - Using multi-passenger vehicles as possible; and, - Avoid idling vehicles. • Equipment and vehicles will be maintained in a manner that reduces air emissions, including: - Using mufflers and emission control systems as available; - Using catalytic converters as required; - Meet emissions requirements of the MOE and/or MTO; - As appropriate, records of vehicle maintenance will be retained and made available for periodic review by Boralex/UDI and/or the Operation and Maintenance Contractor; and, - All vehicles identified through the monitoring program that fail to meet the minimum emission standards will be repaired immediately or replaced as soon as practicable.	• Increased emissions would be short-term in duration and highly localized.
Dust & Odour	• Dust emissions from operation and	• Maintaining equipment in good running condition and in	• Increased dust would be short-term

Appendix B2 – Summary of Potential Environmental Effects and Mitigation Strategy for Operation of the Project

PROJECT PHASE: OPERATION			
Environmental Feature	**Potential Adverse Effect**	**Mitigation Strategy**	**Net Effects**
Emissions	maintenance vehicles.	compliance with regulatory requirements. • Dust suppression (e.g. water) of source areas as necessary. • Covering loads of friable materials during transport.	in duration and highly localized.
Environmental Noise	• Noise emitted from a turbine. • Noise emitted from traffic and/or vehicles.	• Adherence to all noise setback requirements. • All engines associated with maintenance equipment will be equipped with mufflers and/or silencers in accordance with MOE and/or MTO guidelines and regulations. • Noise levels arising from maintenance equipment will also be compliant with sound levels established by the MOE. • Routine Project maintenance to ensure infrastructure is operating properly and efficiently. • To the greatest extent possible, operations activities that could create excessive noise will be restricted to regular business hours, when residents are less sensitive to noise, and adhere to any local noise by-laws.	• Any adverse net effects due to are anticipated to be short-term in duration and intermittent.
Land Use and Socio-Economic Resources			
Areas Protected Under Provincial Plans and Policies	• None.	• N/A	• None.
Existing Land Uses	• Temporary increase in noise and dust levels. • Minor increase in traffic.	• Mitigation measures related to noise are outlined in '*Environmental Noise'*. • Mitigation measures related to dust emissions are outlined in '*Dust and Odour Emissions'*. • Mitigation measures related to traffic are outlined in '*Local Traffic*'.	• Disturbance is expected to be short-term in duration, temporary, highly localized, and will be minimized through the implementation of good site practices, transportation planning, and communication with the

Appendix B2 – Summary of Potential Environmental Effects and Mitigation Strategy for Operation of the Project

PROJECT PHASE: OPERATION			
Environmental Feature	**Potential Adverse Effect**	**Mitigation Strategy**	**Net Effects**
			community.
Hazard Lands	• Erosion of slopes due to maintenance activities.	• Mitigation measures for erosion and sedimentation would be the same measures described in **Section 3.3.3** of the Construction Plan Report'.	• Any potential net effects are anticipated to be spatially and temporary limited.
Recreation Areas	• Potential disruption to use of recreational areas caused by effects due to traffic, noise, and dust.	• Mitigation measures related to noise are outlined in '*Environmental Noise'*. • Mitigation measures related to dust emissions are outlined in '*Dust and Odour Emissions'*. • Mitigation measures related to traffic are outlined in '*Local Traffic*'.	• Noise, dust and traffic effects are anticipated to be short term and intermittent.
Agricultural Lands and Operations	• Inconvenience to operations from traffic and dust.	• Mitigation measures related to dust emissions are outlined in '*Dust and Odour Emissions*'.	• Dust emissions are expected to be short-term in duration and highly localized.
Mineral, Aggregate, and Petroleum Resources	• Potential for a fire at the Project facility. • Potential contamination to Project site as a result of oil spill.	• Project infrastructure will be sited at a higher elevation and the distribution substation on a slightly elevated concrete foundation.	• None.
Game And Fishery Resources	• Disturbance to game species from noise.	• Turbines will be placed in agricultural lands away from woodlands and within REA setback requirements.	• None.
Local Traffic	• Negligible increase in traffic.	• There may be instances where excess loads (e.g. turbine components) will require special traffic planning, widening turning radiuses and road widths and the creation of new ingress/egress nodes. • Necessary permits will be obtained. • As appropriate, for public safety all non-conventional loads will have front and rear escort or "pilot" vehicles accompany the truck movement on public roads. May provide notification of non-conventional load movements.	• Potential for accidents along the haul routes and on-site cannot be totally disqualified. • Truck traffic will increase on some roads during maintenance activities and from personnel vehicles; however this traffic will be short-term in duration and intermittent. • The effect of operating the Project is anticipated to have a limited,

Appendix B2 – Summary of Potential Environmental Effects and Mitigation Strategy for Operation of the Project			
PROJECT PHASE: OPERATION			
Environmental Feature	**Potential Adverse Effect**	**Mitigation Strategy**	**Net Effects**
			short-term effect on traffic.
Local Economy	• Increase in direct, indirect and induced employment over the operations period. • Local economic benefits from land lease payments, municipal taxes, etc.	• To the extent possible Boralex/UDI and/or the Operation and Maintenance Contractor will source required goods and services from qualified local suppliers. •	• Positive.
Viewscape	• Disruption to viewscape from siting of Project infrastructure.	• Landscaping at the distribution substation property.	• Some disturbance to the viewscape is unavoidable due to the height of the turbines. • Infrastructure would be present during the life of the Project.
Existing Infrastructure			
Provincial, municipal and other major infrastructure	• Low potential for damage to local roads. • Permits from the MTO may be required. • See '*Local Traffic*'.	• Consultation with MTO regarding any necessary agreements related to wear on roads from transportation of Project materials in addition to obtaining the required permits for use of provincial highways. • Consultation with the County regarding excess loads with potential to damage County roads. • Mitigation measures related to traffic are outlined in '*Local Traffic*'.	• See '*Local Traffic*'.
Navigable Waters	• None	• N/A	• None.

Appendix B2 – Summary of Potential Environmental Effects and Mitigation Strategy for Operation of the Project			
PROJECT PHASE: OPERATION			
Environmental Feature	**Potential Adverse Effect**	**Mitigation Strategy**	**Net Effects**
Radio communication, radar and seismoacoustic systems	• Potential to interfere with radio communication systems.	• Boralex/UDI will consult with relevant agencies and licensed providers to identify any likely effects to radio communication, radar and seismoacoustic systems. • Complaints of degraded quality related to television and FM radio receivers within 15 km of the wind farm will be monitored and if need be mitigated post-construction by means agreed upon by Boralex/UDI and impacted party. • In the unlikely event that signal disruption is experienced, mitigation measures may include: - Switching to an alternate means of receiving the information.	• Any adverse effects would be limited and of short-duration.
Aeronautical Systems	• Aeronautical obstruction.	• Turbine lighting must conform to Transport Canada standards. Turbine lighting will be selected with the minimal allowable flash duration, narrow beam, and will be synchronized. • Nav Canada will be responsible for updating all aeronautical charts with the turbine locations.	• None.
Waste Management and Contaminated Lands			
Waste Generation	• Improper disposal of waste material may result in contamination to soil, groundwater, and/or surface water resources on and off the Project sites. • Litter may become a nuisance to nearby residences if not appropriately contained and allowed to blow off the site.	• Contractors will be required to remove all waste materials from the turbine siting areas during maintenance activities. • All waste materials and recycling will be transported off-site by private waste material collection contractors licensed with a Certificate of Approval – Waste Management System. • Dumping or burying wastes within the Project sites will be prohibited. • Labelling and proper storage of liquid wastes (e.g. used oil, drained hydraulic fluid, and used solvents) in a secure area that will ensure containment of the material	• Minor incremental effect on soil, groundwater, and surface water at the waste disposal site(s) depending on municipal on-site containment practices.

Appendix B2 – Summary of Potential Environmental Effects and Mitigation Strategy for Operation of the Project			
PROJECT PHASE: OPERATION			
Environmental Feature	**Potential Adverse Effect**	**Mitigation Strategy**	**Net Effects**
		in the event of a spill. As per s.13 of the *Environmental Protection Act*, all spills that could potentially have an adverse environmental effect, are outside the normal course of events, or are in excess of the prescribed regulatory levels will be reported to the MOE's Spills Action Centre. • Disposal of non-hazardous waste at a registered waste disposal site(s). • If waste is classified as waste other than solid non-hazardous, a Generator Registration Number is required from the MOE and the generator will have obligations regarding manifesting of waste. • Implementation of an on-going waste management program consisting of reduction, reuse, and recycling of materials. • See '*Accidental Spills'.*	
Accidental Spills	• Potential contamination from accidental spills.	• Labelling and proper storage of liquid wastes (e.g. used oil, drained hydraulic fluid, and used solvents) in a secure area that will ensure containment of the material in the event of a spill. • As per s.13 of the *Environmental Protection Act*, all spills that could potentially have an adverse environmental effect, are outside the normal course of events, or are in excess of the prescribed regulatory levels will be reported to the MOE's Spills Action Centre. • As appropriate, spill kits (e.g. containing absorbent cloths and disposal containers) will be provided on-site during maintenance activities. • Standard containment facilities and emergency response materials will be maintained on-site as	• None.

Appendix B2 – Summary of Potential Environmental Effects and Mitigation Strategy for Operation of the Project

PROJECT PHASE: OPERATION			
Environmental Feature	**Potential Adverse Effect**	**Mitigation Strategy**	**Net Effects**
		required. • Refuelling, equipment maintenance, and other potentially contaminating activities will occur in designated areas. • Spills should be reported immediately to the MOE Spills Action Centre, as applicable.	
Public Health and Safety			
Structural failure	• Public Health and Safety.	• Adherence to required setbacks. • Design, install, operate, and maintain turbines according to applicable industry standards/certifications. • Use of lightning protection systems. • Proper training and education of staff.	• None.
Ice fall and shed	• Public Health and Safety.	• Adherence to required setbacks. • Design of turbine tower reduces ice accumulation. • Automatic turbine shutdown due to weight imbalances. • Signage in areas where potential icing exists.	• None.
Extreme Weather Events	• Potential damage to project infrastructure from extreme weather events.	• Project components have been designed to withstand the effects from extreme events. • Design, install, operate, and maintain turbines according to applicable industry standards/certifications. • Failsafe devices are capable of shutting down the turbine blades in the event of excessive wind conditions, imbalance, or malfunction of other turbine components.	• None.
Third Party Damage	• Possibility of accidental collision from off-road and maintenance vehicles.	• Access to the towers will be restricted to avoid potential accidents to unqualified persons.	• None.

Appendix B3: Summary of Monitoring Plans for Construction, Operation and Decommissioning of the Project

Environmental Feature	Construction	Operation	Decommissioning
Heritage and Archaeological Resources			
Protected Properties and Heritage Resources	• N/A	• N/A	• N/A
Archaeological Resources	• Monitoring would be required following the unlikely event of the discovery of previously unknown archaeological resources, in consultation with the Ministry of Culture.	• N/A	• N/A
Natural Heritage Resources			
Wetlands	• Stringent monitoring of vegetation clearing and disturbance to ensure terrestrial flora and fauna are protected. • Vegetation clearing activities would be conducted under constant observation and monitoring of the Construction Contractor to ensure that vegetation is cleared only from designated areas. Areas outside the designated construction-sites would not be disturbed. • Silt fencing along the periphery of significant natural features will be monitored daily when construction activities occur within the	• N/A	• Follow-up monitoring for one year after site restoration would be conducted, to allow for the Project area to experience seasonal changes and help determine if additional restoration is required, as determined by an environmental advisor. • A monitoring plan would be prepared prior to decommissioning.
Areas of Natural and Scientific Interest		• N/A	
Woodlands		• See '*Waste Management and Contaminated Lands*'. • See '*Dust and Odour Emissions*'. • See **Section 3.3.3** of the Construction Plan Report for erosion and sedimentation controls.	
Provincial Parks and Conservation Reserves		• N/A	
Other Designated Natural Areas		• N/A	
Significant Wildlife and Wildlife Habitat		Disturbance Monitoring for Birds *Landbird Migratory Stopver Area* : • Post construction monitoring of landbird migratory stopver area ten weeks during the migration season (March-May and August to October), with 2 surveys per week, with at least 1 day between surveys, annually for three years. • Submission of annual reports to MNR and contingency measures, if required, will be	

Appendix B3: Summary of Monitoring Plans for Construction, Operation and Decommissioning of the Project

Environmental Feature	Construction	Operation	Decommissioning
	immediate vicinity of the significant natural feature and when inclement weather is anticipated. • Covers on stockpiles will be monitored when inclement weather is anticipated. • Re-seeded areas will be monitored within one growing season. • Regular monitoring of the limits of clearing will be employed to ensure the objective of minimal disturbance. Should monitoring reveal that clearing is occurring beyond defined limits, mitigation action will be taken that could include rehabilitation of the disturbed area. • Visual monitoring of visible dust plumes during construction will be conducted throughout construction site.	determined in consultation with MNR. <u>Disturbance Monitoring for Vegetation</u> *Pignut Hickory Habitat*: • Overall health assessment will be completed for Pignut Hickory tree identified during <u>NHA/EIS</u> site investigations within 120 m of an access road, , in June 2014. • Submission of report to MNR and contingency measures, if required, will be determined in consultation with MNR. <u>Mortality Monitoring for Birds</u> • Post-construction monitoring of bird carcass searches twice-weekly at all turbines, May 1- October 31, and raptor mortality surveys weekly, November 1- November 30 for three years. • Searcher efficiency and carcass removal trials will be conducted seasonally (spring, summer, and fall) between May 1 and October 31st, and repeated for each searcher. • Searcher efficiency and carcass removal rates are known to be more variable for bats than for birds throughout the year and depending on habitat (in part due to the relative size of the species). • Regular reporting that includes analysis and submission of results to the MOE and MNR.	
Generalized Significant Wildlife Habitat		• See '*Significant Wildlife and Wildlife Habitat*'. • See '*Local Traffic*'. • See '*Environmental Noise*'. • See '*Dust and Odour Emissions*'. • See '*Accidental Spills*'.	
Birds		• Post-construction monitoring of bird carcass	

Appendix B3: Summary of Monitoring Plans for Construction, Operation and Decommissioning of the Project

Environmental Feature	Construction	Operation	Decommissioning
		searches twice-weekly at all turbines, May 1- October 31, and raptor mortality surveys weekly, November 1- November 30 for three years. • Mitigation as specified by current provincial guidance (at the time of writing, thresholds are: 14 birds/ turbine/year, or 10 or more birds at any one turbine, or 33 or more birds at multiple turbines on any one visit, or 2 raptors at the Project. Mitigation may include additional scoped mortality and effects monitoring and operational controls, such as periodic shut-down on select turbines or blade feathering at specific times of the year, depending on the species affected. • Searcher efficiency and carcass removal trials will be conducted seasonally (spring, summer, and fall) between May 1 and October 31st, and repeated for each searcher. Searcher efficiency and carcass removal rates are known to be more variable for bats than for birds throughout the year and depending on habitat (in part due to the relative size of the species). • Regular reporting that includes analysis and submission of results to the MOE and MNR.	
Bats		• Post-construction monitoring of mortality rates; carcass searches twice-weekly at all turbines, May 1- October 31 for three years. • Potential operational controls as specified by current provincial guidance (at the time of writing, threshold is 10 bats/ turbine/year). Mitigation may include operational controls, such as periodic shut-down on select turbines or blade feathering at specific times of the year.	

Appendix B3: Summary of Monitoring Plans for Construction, Operation and Decommissioning of the Project

Environmental Feature	Construction	Operation	Decommissioning
		• Searcher efficiency and carcass removal trials will be conducted seasonally (spring, summer, and fall) between May 1 and October 31st, and repeated for each searcher. Searcher efficiency and carcass removal rates are known to be more variable for bats than for birds throughout the year and depending on habitat (in part due to the relative size of the species). • Regular reporting that includes analysis and submission of results to the MOE and MNR.	
Significant Flora and Vegetation Communities		• See '*Dust and Odour Emissions*'. • See '*Significant Wildlife and Wildlife Habitat*'.	
Other Flora and Vegetation Communities		• See '*Dust and Odour Emissions*'.	
Water Bodies and Aquatic Resources			
Groundwater	• In the event that turbines are located within 100 m of non-documented private residential wells of participating landowners, the Contractor may, at the landowner's request, hire a hydrogeologist to undertake monitoring of the quality and quantity of these wells over the course of construction. • In the event that well water quality or quantity is disturbed as a result of construction, Boralex/UDI would provide a temporary potable water supply until corrective	• See '*Accidental Spills*'.	• In the event that turbines are located within 100 m of private residential wells of participating landowners, the Contractor may, at the landowner's request, monitor the quality and quantity of the well over the course of decommissioning. • In the event that well water quality or quantity is disturbed as a result of decommissioning, Boralex/UDI would provide a temporary potable water supply until corrective measures are taken and

Appendix B3: Summary of Monitoring Plans for Construction, Operation and Decommissioning of the Project

Environmental Feature	Construction	Operation	Decommissioning
	measures are taken and would comply with MOE's Guideline B-9: Resolution of Groundwater Interference Problems. All corrective measures, including determination of when corrective measures are no longer required, would be outlined in the well monitoring program.		would comply with MOE's Guideline B-9: Resolution of Groundwater Interference Problems. All corrective measures, including determination of when corrective measures are no longer required, would be outlined in the well monitoring program.
Surface Water, Fish and Fish Habitat	• The Construction Contractor will ensure that pre-construction preparation is completed prior to commencement of in-stream work and that bank, bed, and floodplains are restored to pre-existing conditions, as possible, following completion of the construction activities • The Construction Contractor will monitor weather forecasts prior to work near aquatic habitats • Environmental inspection following spring run-off the year after construction (first year of operations) may also be considered to ensure surface drainage has been	• See '*Accidental Spills*'. • See **Section 3.4.2** of the Construction Plan Report.	• N/A

Appendix B3: Summary of Monitoring Plans for Construction, Operation and Decommissioning of the Project

Environmental Feature	Construction	Operation	Decommissioning
	maintained. • If adverse effects are noted, appropriate remedial measures will be completed as necessary (i.e. such as site rehabilitation and revegetation) and additional follow-up monitoring conducted as appropriate, under the direction of an environmental advisor.		
Air Quality and Environmental Noise			
Air Emissions	• As appropriate, records of vehicle maintenance would be retained and made available for periodic review by the Construction Contractor. All vehicles identified through the monitoring program that fail to meet the minimum emission standards would be repaired immediately or replaced as soon as practicable from the construction area.	• None required.	• As appropriate, records of vehicle maintenance would be retained and made available for periodic review by the Contractor. All vehicles identified through the monitoring program that fail to meet the minimum emission standards would be repaired immediately or replaced as soon as practicable from the decommissioning area.
Dust and Odour Emissions	• The Contractor would monitor to ensure that temporary topsoil storage piles are stabilized with appropriate means.	• Adherence to Complaint Response Protocol.	• The Contractor would monitor to ensure that temporary topsoil storage piles are stabilized with appropriate means.
Environmental Noise	• N/A	• Noise monitoring (if required), will be conducted in accordance with the REA for the Project. • Turbine shutdown as appropriate in the event of a	• N/A

Appendix B3: Summary of Monitoring Plans for Construction, Operation and Decommissioning of the Project

Environmental Feature	Construction	Operation	Decommissioning
		• malfunctioning turbine or extreme weather event. • Turbine maintenance to ensure turbines are running properly and efficiently. • Adherence to Complaint Response Protocol.	
Land Use and Socio-Economic Resources			
Areas Protected Under Provincial Plans & Policies	• N/A	• N/A	• N/A
Existing Land Uses	• N/A	• See '*Environmental Noise*'. • See '*Dust and Odour Emissions*'. • See '*Local Traffic*'.	• N/A
Hazard Lands	• See '*Natural Heritage Resources*'	• See **Section 3.3.3** of the Construction Plan Report.	• N/A
Recreation Areas & Features	• N/A	• See '*Environmental Noise*'. • See '*Dust and Odour Emissions*'. • See '*Local Traffic*'.	• N/A
Agricultural Lands and Operations	• For a period of one year after restoration of temporary work areas on agricultural lands, potential soil problem areas including subsidence, soil erosion and/or stoniness would be visually monitored by a soil specialist (such as a professional agrologist), or as per agreements with the landowner. • If adverse impacts are noted during monitoring, appropriate remediation measures would be developed by the soil	• Adherence to Complaint Response Protocol.	• For agricultural land, potential soil problem areas including trench subsidence, soil erosion and/or stoniness would be noted. • Additional monitoring activities may also be conducted, depending upon the site conditions at the time of decommissioning. If negative impacts are noted during monitoring activities, appropriate remediation measures would be implemented as necessary,

Appendix B3: Summary of Monitoring Plans for Construction, Operation and Decommissioning of the Project

Environmental Feature	Construction	Operation	Decommissioning
	specialist, or as per agreements with the landowner. Additional follow-up monitoring would be conducted, under supervision of the soils specialist, until adverse impacts are no longer evident.		and additional follow-up monitoring would be conducted, as determined by an environmental advisor.
Mineral, Aggregate, and Petroleum Resources	• N/A	• See '*Accidental Spills*'.	• N/A
Game And Fishery Resources	• N/A	• None required.	• N/A
Local Traffic	• N/A	• Adherence to Complaint Response Protocol.	• N/A
Local Economy	• N/A	• None required.	• N/A
Viewscape	• N/A	• Adherence to Complaint Response Protocol.	• N/A
Existing Local Infrastructure			
Provincial , municipal and other major infrastructure	• For a period of one year after construction (first year of operations), roads would be monitored following a heavy rain event and following spring runoff, as defined by applicable agreements, to ensure no erosion, bank	• See '*Local Traffic'*.	• N/A

Appendix B3: Summary of Monitoring Plans for Construction, Operation and Decommissioning of the Project

Environmental Feature	Construction	Operation	Decommissioning
	slumpage, road subsidence or major rutting has occurred as a result of construction activities. As appropriate, affected roadside ditches and drains would be repaired if required and monitored to ensure that they are functioning properly. • If adverse impacts are noted during the above post-construction monitoring, appropriate remediation measures would be developed as per applicable agreements. As appropriate, affected road substrate would be repaired and roadside ditches and drains would be revegetated. Additional follow-up monitoring would be conducted, as per applicable agreements, until adverse impacts are no longer evident.		
Navigable Waters	• N/A	• N/A	• N/A
Radio communication, radar and seismoacoustic systems	• N/A	• Adherence to Complaint Response Protocol. • Boralex/UDI will review potential incidents related to interference of radio communication systems on a case by case basis.	• N/A
Aeronautical Systems	• N/A	• Routine maintenance of the turbines and replacement of safety lighting in the event of	• N/A

Appendix B3: Summary of Monitoring Plans for Construction, Operation and Decommissioning of the Project

Environmental Feature	Construction	Operation	Decommissioning
		malfunction.	
Waste Management and Contaminated Lands			
Waste Generation	• As appropriate, records of waste generation and hauling would be maintained. Where a third party's activities are identified as non-compliant or insufficient, the Construction Contractor would seek out an alternative recycling or disposal solution. • Stringent monitoring of waste disposal to ensure terrestrial flora and fauna are protected.	• See '*Accidental Spills*'.	• N/A
Accidental Spills	• Stringent monitoring of accidental spills and/or leaks to ensure terrestrial flora and fauna are protected. • Monitoring would be required following the unlikely event of contamination from an accidental spill or leak. Contaminated soils would be removed and replaced as appropriate. All such activities would follow procedures outlined in the Emergency Response Plan for the CEMP.	• Monitoring would be required following the unlikely event of contamination from an accidental spill or leak (method for monitoring may be developed in consultation with the Spills Action Centre of the MOE). • Contaminated soils would be removed and replaced as appropriate.	• N/A
Public Health and Safety			

Appendix B3: Summary of Monitoring Plans for Construction, Operation and Decommissioning of the Project

Environmental Feature	Construction	Operation	Decommissioning
Turbine Blade and Structural Failure	• N/A	• Inspections of turbines would occur after extreme events and contingency measures such as turbine shutdown would be implemented in the event of structural damage. • Turbine maintenance to ensure turbines are running properly and efficiently.	• N/A
Ice Fall and Shed	• N/A	• Inspections of turbines would occur after extreme events and contingency measures such as turbine shutdown would be implemented in the event of structural damage and/or icing to a turbine(s). • Turbine maintenance to ensure turbines are running properly and efficiently.	• N/A
Extreme Events	• N/A	• Turbine shutdown in the event of a malfunctioning turbine or extreme weather event. • Turbine maintenance to ensure turbines are running properly and efficiently. • See 'Turbine Blade and Structural Failure'.	• N/A
Third Party Damage	• N/A	• None.	• N/A

Appendix C

Legal Descriptions of Project Land Parcels

PARCEL IDENTIFICATION NUMBER (PIN)	DESCRIPTION OF LICENSED LANDS
PIN 50208-0223(LT) PIN 50208-0222(LT)	Part of Lot 5, Concession Broken Front (Woodhouse), designated as Part 1 on Reference Plan 37R-1495; Save and Except Parts 1 and 2 on Reference Plan 37R-8671; Together With as in Instrument No. NR449776; Norfolk County Part of Lot 5, Concession Broken Front (Woodhouse), designated as Part 2 on Reference Plan 34R-8671; Norfolk County
PIN 50208-0224(R)	**FIRSTLY**: ALL AND SINGULAR that certain parcel or tract of land and premises, situate, lying and being in the County of Norfolk (geographic Township of Woodhouse) and being composed of part of Lot 4 in the Broken Front Concession, and containing by admeasurement 94 acres more or less, which said parcel may be more particularly described as follows: COMMENCING at a point in the Southerly limit of the given road crossing said Lot 4 which said point is distant 518.76 feet measured Westerly along said South limit of said road from its intersection with the East boundary of said Lot 4; THENCE from said point of commencement, South 78 degrees 30 minutes West along the Southerly limit of said road 473.88 feet; THENCE South 15 degrees and 40 minutes East 473.88 feet; THENCE North 74 degrees and 20 minutes East 114.18 feet; THENCE South 15 degrees and 40 minutes East, 4,758.60 feet more or less to the high water mark of the waters of Lake Erie;

PARCEL IDENTIFICATION NUMBER (PIN)	DESCRIPTION OF LICENSED LANDS
	THENCE following in an Easterly direction to the said high water mark of Lake Erie, be the distance what it may to a point where said high water mark is intersected by a line along the Easterly limit of said Lot 4, bearing South 15 degrees and forty minutes East and distant 4,746.06 feet from the Southerly boundary of said road; THENCE from said point of intersection, North 15 degrees, 40 minutes West, 4,237.86 feet; THENCE South 78 degrees and 30 minutes West 516.78 feet; THENCE North 15 degrees and 40 minutes West 508.20 feet more or less, to the place of beginning. ***SUBJECT TO*** a right-of-way for persons, animals and vehicles over, around and upon the lands hereinafter described, that is to say: ALL AND SINGULAR that certain parcel or tract of land and premises situate, lying and being in the County of Norfolk (geographic Township of Woodhouse), being composed of parts of Lots 4 and 5 in the Broken Front Concession of the said Township containing by admeasurement 6 acres, more or less, and premising the bearing of Gilbert Road to be South 82 degrees and 30 minutes West, the parcel which is of uniform width of 22 feet on either side of a centre line, to wit: COMMENCING at a point in the Southerly limit of Gilbert Road distant 507.5 feet Westerly thereon from the intersection of said Limit of Gilbert Road with the East limit of said Lot 4, the Northerly end of the centre line, the point of commencement; THENCE South 15 degrees and 40 minutes East, 4,227 feet; THENCE on a 26 degree curve to the left, with a chord distance of 152 feet;

PARCEL IDENTIFICATION NUMBER (PIN)	DESCRIPTION OF LICENSED LANDS
	THENCE South 55 degrees and 36 minutes East, 20 feet; THENCE on an 8 degree curve to the right, on a chord distance of 330 feet; THENCE South 28 degrees and 40 minutes East, 63 feet; THENCE on a 21 degree curve to the left, on a chord distance of 205 feet; THENCE South 72 degrees and 56 minutes East, 59 feet; THENCE on a 17 degree curve to the left, on a chord distance of 173 feet; THENCE North 75 degrees and 44 minutes East, 9 feet; THENCE on an 8 degree curve to the left, on a chord distance of-248 feet; THENCE North 53 degrees and 24 minutes East, 325 feet more or less to a point in the West limit of a parcel known as Avalon Park, distant Southerly thereon 173.3 feet from the North-West angle thereof. ***SAVING AND EXCEPTING*** thereout and therefrom a parcel more particularly described as follows: COMMENCING at a wooden stake planted in the Westerly limit of a plan registered in the Registry Office for the Registry Division of Norfolk as Plan No. 257, said stake being distant 11.25 feet measured Northerly thereon from the North-West angle of Lot 24 according to Plan 257; THENCE South 16 degrees 22 minutes East along the said Westerly limit a distance of 265 feet more or less to the High Water Mark of Lake Erie;

PARCEL IDENTIFICATION NUMBER (PIN)	DESCRIPTION OF LICENSED LANDS
	THENCE Westerly along the said High Water Mark a distance of 200 feet more or less to where the said High Water Mark is intersected by a line drawn parallel to the Westerly limit of said Plan 257 and distant 179.87 feet measured Westerly at right angles therefrom; THENCE North 16 degrees 22 minutes West along the last mentioned line a distance of 403.8 feet more or less to the Southerly limit of a right-of-way; THENCE Southerly along a curve having a radius of 296.37 feet and arc distance of 20.68 feet, the chord equivalent being 20.85 feet measured on a course of South 70 degrees 55 minutes East; THENCE South 72 degrees 56 minutes East still along the Southerly limit of said right-of-way a distance of 59 feet; THENCE on a curve having a radius of 360.27 feet an arc distance of 124.66 feet more or less to the place of beginning, the chord equivalent being 124.05 feet measured on a course of South 82 degrees 51 minutes East; All as shown outlined in red on a sketch attached to Instrument No. 237007. ***TOGETHER WITH*** a right-of-way for persons, animals and vehicles, in, over, along and upon the lands hereinafter described, that is to say a part of Lots 4 and 5 in the Broken Front Concession of the said County of Norfolk (geographic Township of Woodhouse), containing by admeasurement, 6 acres more or less, and premising the bearing of Gilbert Road to be South 82 degrees, 30 minutes West, the parcel which is of uniform width of 22 feet on either side of the centre line is more particularly described by the following courses and distances of the centre line, to wit: COMMENCING at a point in the Southerly limit of Gilbert Road distant 507.5 feet Westerly

PARCEL IDENTIFICATION NUMBER (PIN)	DESCRIPTION OF LICENSED LANDS
	thereon from the intersection of said limit at Gilbert Road with the East limit of said Lot 4, the Northerly end of said centre line being the point of commencement; THENCE South 15 degrees 40 minutes East a distance of 4,227 feet; THENCE on a 26 degree curve to the left with a chord distance of 152 feet; THENCE South 55 degrees 36 minutes East, a distance of 20 feet; THENCE on an 8 degree curve to the right on a chord distance of 330 feet; THENCE South 28 degrees 46 minutes East, a distance of 63 feet; THENCE on a 21 degree curve to the left on a chord distance of 205 feet; THENCE South 72 degrees 56 minutes East, a distance of 59 feet; THENCE on a 17 degree curve to the left on a chord distance of 173 feet; THENCE North 75 degrees 44 minutes East, a distance of 9 feet; THENCE on an 8 degree curve to the left on a chord distance of 248 feet; THENCE North 53 degrees 24 minutes East, a distance of 325 feet more or less to a point on the West limit of a parcel known as Avalon Park, distant Southerly thereon 173.3 feet from the North-West angle thereof. ***SUBJECT TO*** a free and uninterrupted right-of-way in common with all others entitled thereto, for persons, animals, motor vehicles and vehicles through, along, over and upon a part of Lot 4 in the Broken Front Concession of the County of Norfolk (geographic Township of Woodhouse)

PARCEL IDENTIFICATION NUMBER (PIN)	DESCRIPTION OF LICENSED LANDS
	over part of Charlotte Street according to Plan 257 of the Norfolk Registry Office containing by admeasurement 6 acres more or less and premising the bearing of Gilbert Road to be South 82 degrees and 30 minutes West, the parcel which is of a uniform width of 22 feet on either side of a centre line is more particularly described as by the following courses and distances of the centre line, to wit: COMMENCING at a point in the Southerly limit of Gilbert Road distant 507.5 feet measured Westerly thereon from the intersection of said limit of Gilbert Road with the East limit of said Lot 4, the Northerly end of said centre line being the place of beginning; THENCE South 15 degrees and 40 minutes East a distance of 4,227 feet; THENCE on a 26 degree curve to the left, the chord distance of 152 feet; THENCE South 55 degrees and 36 minutes East a distance of 20 feet; THENCE on an 8 degree curve to the right, the chord distance of 330 feet; THENCE South 28 degrees and 46 minutes East a distance of 63 feet; THENCE on a 21 degree curve to the left, the chord distance of 205 feet; THENCE South 72 degrees and 56 minutes East, a distance of 59 feet; THENCE on a 17 degree curve to the left, the chord distance of 173 feet; THENCE North 75 degrees and 44 minutes East, a distance of 9 feet; THENCE on an 8 degree curve to the left, a chord distance of 248 feet;

PARCEL IDENTIFICATION NUMBER (PIN)	DESCRIPTION OF LICENSED LANDS
	THENCE North 53 degrees and 24 minutes East, a distance of 325 feet, more or less, to a point on the West limit of the parcel known as Avalon Park, distant Southerly thereon 173.3 feet from the North-West angle thereof. **SECONDLY**: ALL AND SINGULAR that certain parcel or tract of land and premises, situate, lying and being in the County of Norfolk (geographic Township of Woodhouse) and being composed of part of Lot 4 in the Broken Front Concession which said parcel is more particularly described as follows: Premising the bearing of the Easterly limit of said Lot 4 to be North 15 degrees 40 minutes West and relating all bearings herein thereto. COMMENCING at a point in the Easterly limit of said Lot 4 distant 174 feet measured on a course of South 15 degrees 40 minutes East along the Easterly limit of said Lot 4 from the intersection of the Easterly limit of said Lot 4 with the Southerly limit of Gilbert Road; THENCE South 81 degrees 54 minutes West 336.78 feet to an iron bar planted; THENCE South 15 degrees 40 minutes East 6 feet to an iron bar planted; THENCE South 81 degrees 54 minutes West 150 feet; THENCE South 15 degrees 40 minutes East 326.32 feet more or less to the Southerly limit of lands described in an instrument registered in the Registry Office for the Registry Division of Norfolk as No. 176798; THENCE North 81 degrees 54 minutes East along the Southerly limit of lands described in said Instrument No. 176798, 486.78 feet more or less to the Easterly limit of said Lot 4; THENCE North 15 degrees 40 minutes West along the Easterly limit of said Lot 4, 332.22 feet

PARCEL IDENTIFICATION NUMBER (PIN)	DESCRIPTION OF LICENSED LANDS
	more or less to the place of commencement. This parcel being further shown outlined in red on a Plan of Survey attached to Instrument No. 323815.
	Part of Lot 4, in the Broken Front Concession (geographic Township of Woodhouse), in Norfolk County, containing by admeasurement forty-seven and five-tenths acres more or less, which said parcel is more particularly described as follows: PREMISING the Southerly limit of Gilbert Road to be North 78° 34' East and relating all other bearings herein thereto; COMMENCING on a point in the Southerly limit of a road known as the Gilbert Road crossing said lot in an Easterly and Westerly direction which said point is distant 513 feet measured Easterly along said Southerly limit from the intersection of said Southerly limit with the Westerly limit of lot number 4; THENCE from said point of admeasurement North 78 degrees and 30 minutes East along said Southerly limit of said Gilbert Road, 381.30 feet; THENCE South 15 degrees and 40 minutes East, 181.80 feet; THENCE North 78 degrees and 34 minutes East, 118 feet; THENCE South 15 degrees and 40 minutes East, 295 feet; THENCE North 78 degrees and 30 minutes East, 114.50 feet; THENCE South 15 degrees and 40 minutes East, 3,343 feet more or less to the centre line of the bottom of a gully;

PARCEL IDENTIFICATION NUMBER (PIN)	DESCRIPTION OF LICENSED LANDS
	THENCE following said centre line of said gully in a Northwesterly direction be the distance what it may to a point which said point is distant 3,278 feet measured on a course of South 15 degrees and 40 minutes East from the point of commencement THENCE North 15 degrees and 40 minutes West, 3,278 feet to the place of beginning, as previously described in Instrument No. NR605443 (as amended by Instrument No. 605611).
PIN 50208-0130(LT)	Parts of Lots 3 and 4, Concession Broken Front (Woodhouse) and part of Wellington Street South, Plan 17B, closed by Instrument No. NR531066, as in Instrument No. NR532292, amended by Declaration Nos. NR532734 and NR599097; Norfolk County
PIN 50208-0129(LT)	Lot 12, Block 19, Plan 17B; Lots 13, 15 and 16, Block 17, Plan 17B; part of Lot 16 and 17, Block 16, Plan 17B; part of Lot 3, Concession Broken Front (Woodhouse); part of St. George Street and Wellington Street North, Plan 17B as closed by Instrument Nos. NR329649 and NR329650, and as closed by Instrument Nos. NR403438 and NR531066; part of the laneway between Block 16 and 17, Plan 17B, closed by Instrument No. NR362805; now designated as Parts 1, 2 and 3 on Registered Plan 37R-7749; Norfolk County