Ve come.

Thank you for coming to the second public meeting for the North Kent Wind 1 Project.

Your questions and comments are important to us. Please sign in and complete a comment sheet.

North Kent Wind 1 | northkentwind.com

SAMSUNG

Why Are We Here?

Good Planning Involves the Community

This Public Meeting continues the conversation about the North Kent Wind 1 Project.

The purpose of this meeting is to:

 Provide an update on the North Kent Wind 1 Project, review the proposed Project layout and learn about where we are in the Renewable Energy Approval (REA) process



- Provide an opportunity to speak with the project team and have your questions answered
- » Obtain community input on the studies and investigations that have been conducted to date



Who We Are



North Kent Wind 1

North Kent Wind 1 LP, by its general partner, North Kent Wind 1 GP Inc. (North Kent Wind 1), is a joint venture limited partnership owned by affiliates of Pattern Renewable Holdings Canada ULC (Pattern Development) and Samsung Renewable Energy Inc. (Samsung Renewable Energy).

The proposed Project would produce a total nameplate capacity of up to 100 megawatts (MW) of electricity. The total number of turbines constructed will be dependent on the individual MW generation capacity of each turbine and potential changes to the overall nameplate capacity.

Samsung Renewable Energy

Samsung Renewable Energy, together with some of the world's leading renewable energy companies, has made an unprecedented \$5-billion private-sector investment in Ontario to create the largest cluster of wind and solar power anywhere on the planet. Thanks to Samsung's Green Energy Investment Agreement with the Government of Ontario, we are creating 9,000 jobs while producing 1,369 MW of clean energy.

Pattern Development

Pattern Development is a leader in developing renewable energy and transmission assets. With a global footprint spanning Canada, the United States, Mexico, Chile and Japan, Pattern Development's highly-experienced team has brought more than 4,000 MW of renewable power to market and is currently advancing a 5,900 MW pipeline of projects. Our mission is to develop high performance renewable energy and transmission projects built to last for the long-term. Pattern Development's affiliate company, Pattern Energy Group Inc. (Pattern Energy), is an independent power company listed on the NASDAQ and Toronto Stock Exchange with a portfolio of 16 wind power projects and a total owned interest of 2,282

MW.



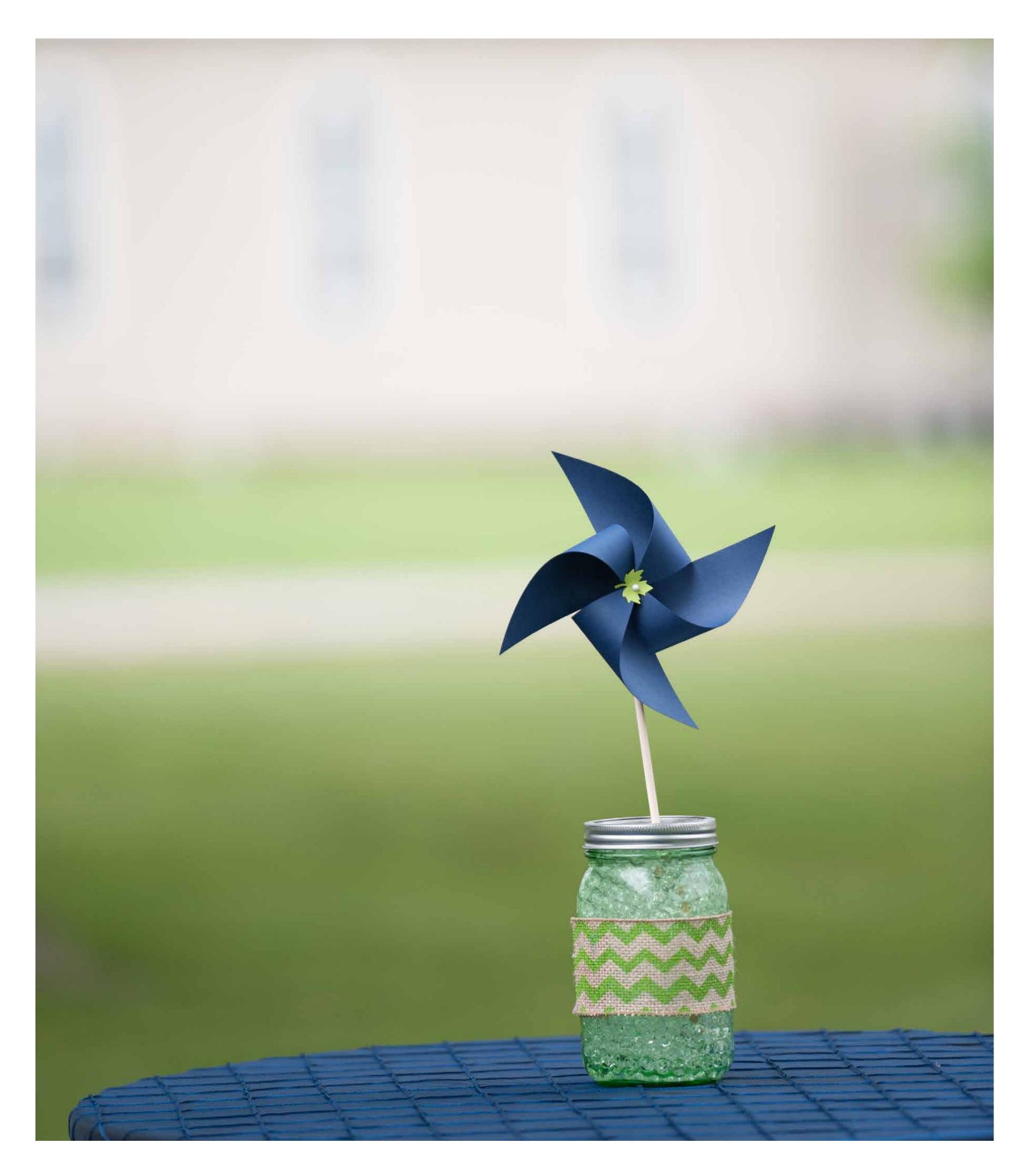
How Can You Get Involved?

We're Interested in What You Have to Say!

As you are reviewing the information presented, we encourage you to ask questions and provide your thoughts about the North Kent Wind 1 Project.

Throughout the course of the North Kent Wind 1 Project REA process, you may visit our website at: www.northkentwind.com to access up-to-date information.

We also encourage you to provide feedback

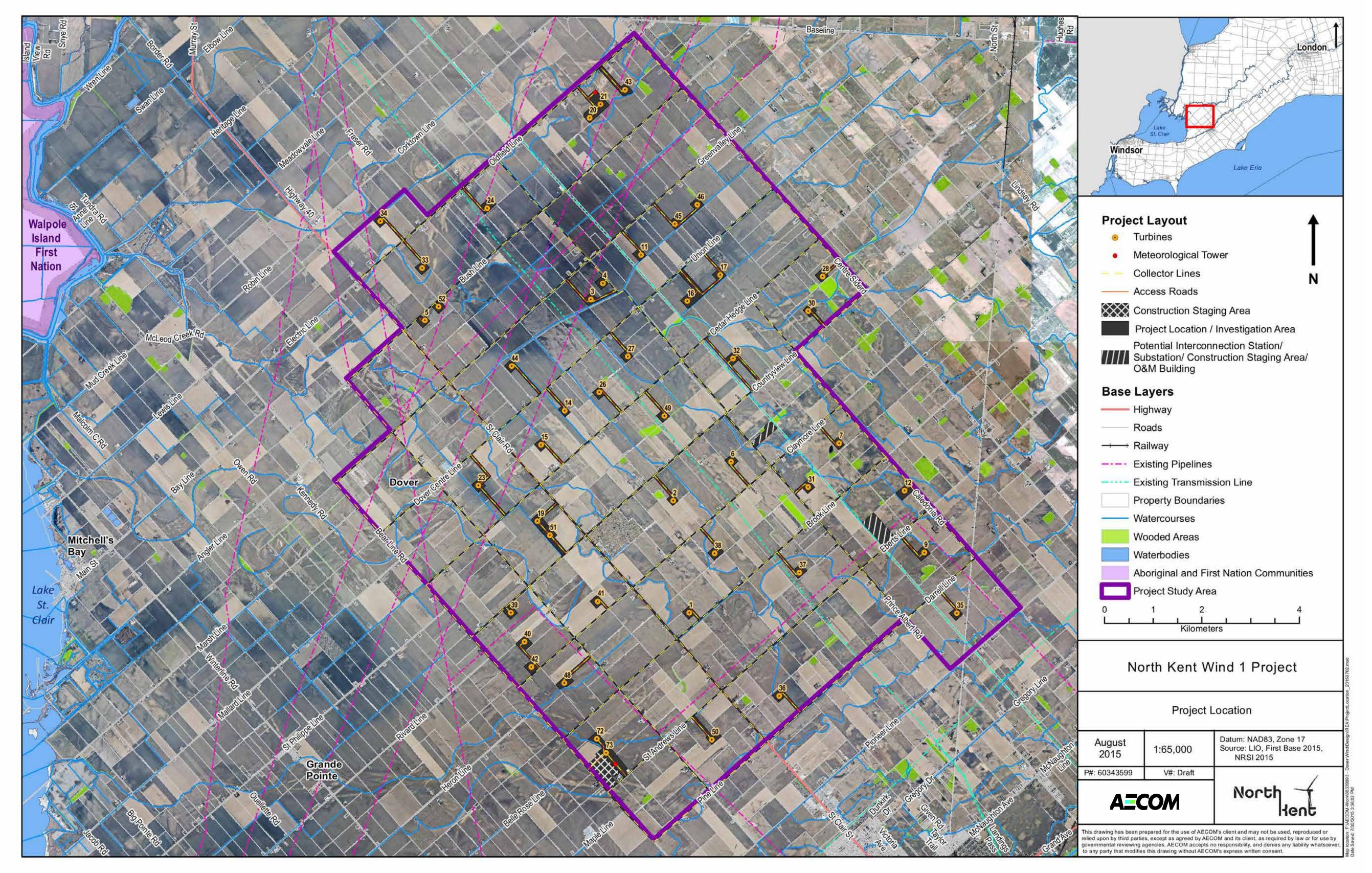


to the project team at any point during the study process by contacting us at:

info@northkentwind.com.



Project Location



According to Ontario Regulation 359/09, the Project Location is "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 airspace in which a person is engaging in or proposes to engage in the Project and any airspace in which a person is engaging in or proposes to engage in the Project and any airspace in which a person is engaging in or proposes to engage in the Project and any airspace in which a person is engaging in or proposes to engage in the Project and any airspace in which a person is engaging in or proposes to engage in the Project and any airspace in which a person is engaging in or proposes to engage in the Project."



Project Layout Changes

Modifications to the Project Location

- » Review of construction plans identified the opportunity to avoid archaeological resources within the Project Location
- » North Kent Wind 1 has removed small sections of the Project Location presented in the Draft REA reports in order to avoid these resources
- » Given the proximity of construction



activities to these resources, fencing and monitoring will be used during construction to protect the cultural resources

» An environmental inspector will monitor the installation and maintenance of the fencing during construction

Renewable Energy Approval Process

REA Process

The REA is issued under Ontario Regulation 359/09 (Renewable) Energy Approvals under Part V.0.1 of the Act) under the **Environmental Protection Act.**

The REA application will outline how North Kent Wind 1 proposes to design, build, operate and decommission the Project.

The Project is considered to be a Class 4 wind facility which means it has a nameplate capacity of 50 kilowatts or greater and is not in direct contact with surface water, other than a wetland.

A Consultation Report documenting all consultation and engagement activities will be prepared and submitted with the REA application.

Additional environmental approval and permitting requirements from agencies will be addressed as part of and subsequent to the North Kent Wind 1 Project REA application. Some of these agencies include:

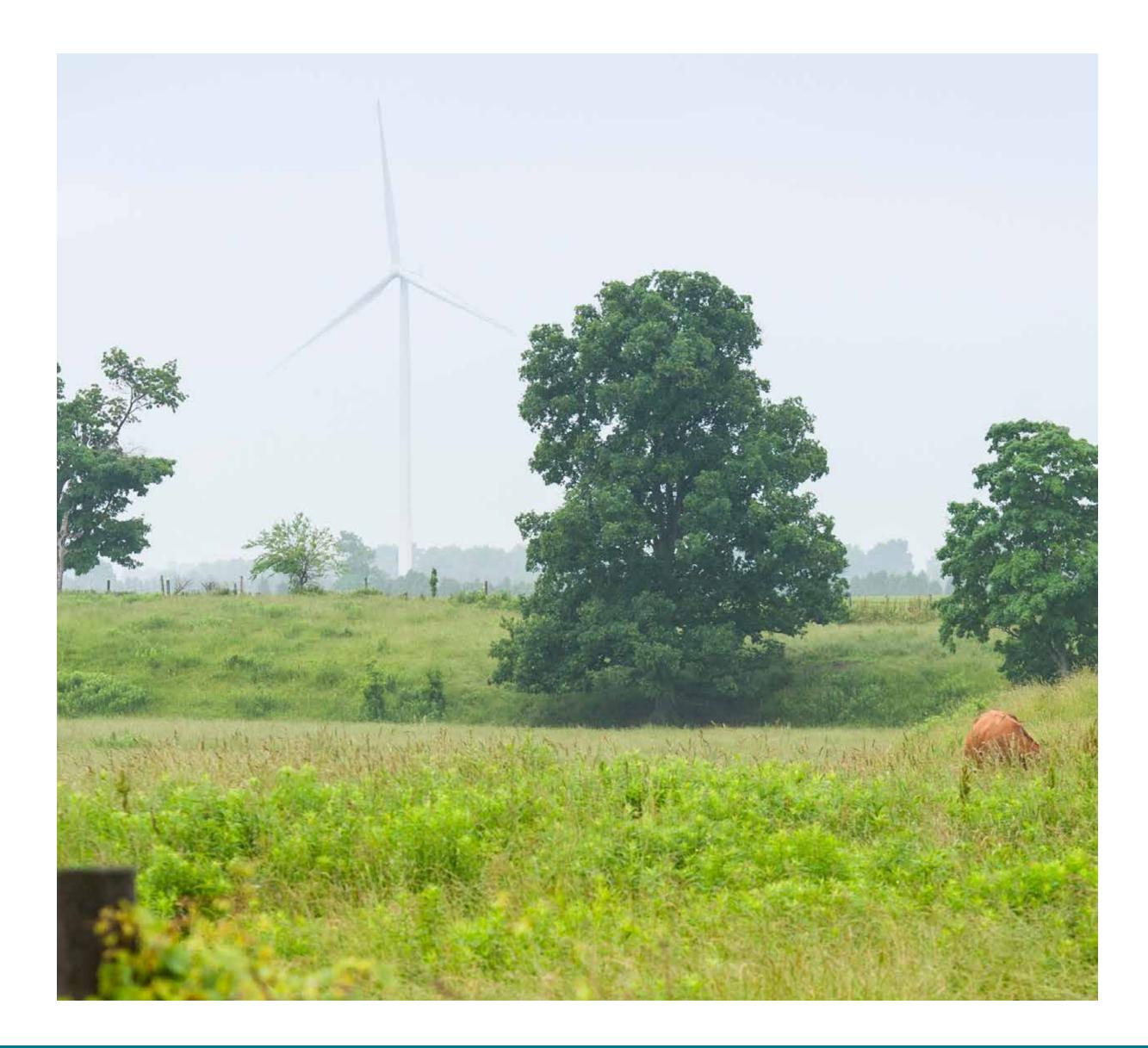
- Ministry of Natural Resources and Forestry
- Ministry of Tourism, Culture and Sport
- Conservation Authorities (St. Clair Region Conservation Authority) / Lower Thames Valley Conservation Authority)
- Ministry of the Environment and Climate Change

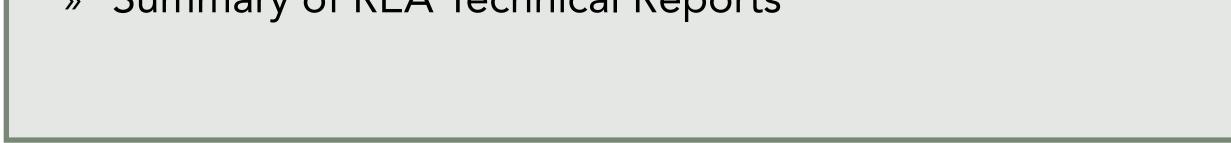
Municipal permits (e.g., Building Permit, Entrance Permit) will

The following reports were prepared and made available for public review as part of the REA process:

- » Draft Project Description Report
- » Draft Construction Plan Report
- » Draft Design and Operations Report
- » Draft Decommissioning Plan Report
- » Draft Wind Turbine Specifications Report
- » Stage 1 and Stage 2 Archaeological Assessment Reports
- » Heritage Impact Assessment Report
- » Natural Heritage Record Review
- » Natural Heritage Site Investigation
- » Natural Heritage Evaluation of Significance
- » Natural Heritage Environmental Impact Study
- » Water Body Report and Water Body Assessment
- » Summary of REA Technical Reports

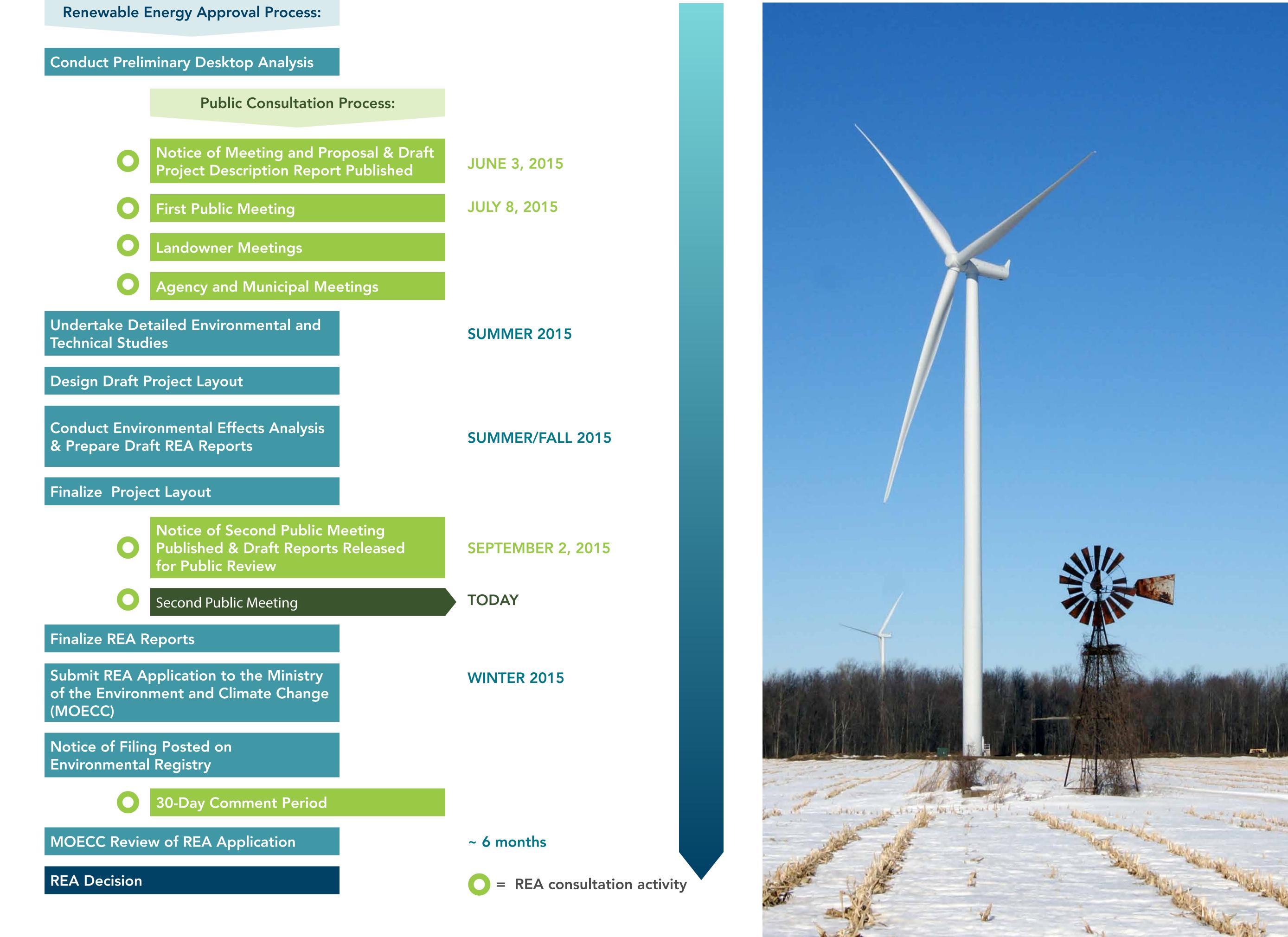
also be required from the Municipality of Chatham-Kent prior to construction.







REA Process Diagram







Turbine Siting Process

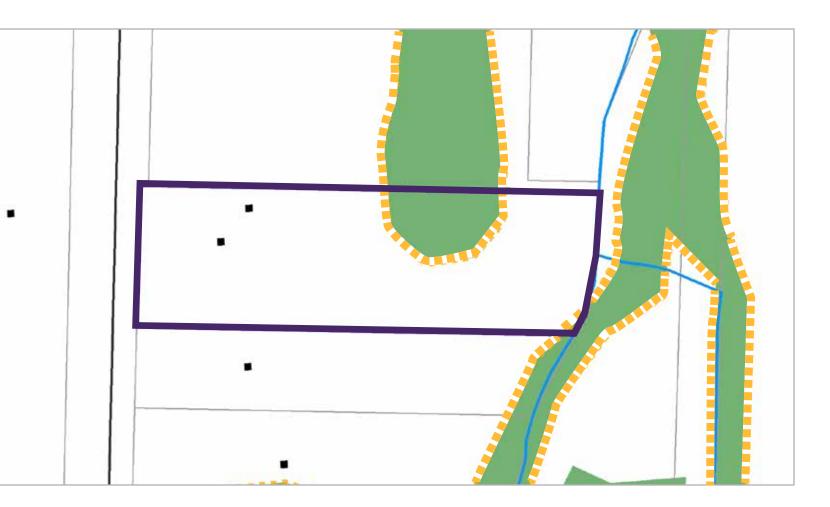
Steps for Developing a Site Plan

- Identify a sufficient wind resource and study the wind regime for several consecutive years.
- 2. Work with local landowners to option land for wind turbines and supporting Project infrastructure (i.e., collection lines and access roads).
- 3. Identify technical and environmental constraints based on input from Project engineers, ecologists and aquatic biologists, cultural experts, local landowners, First Nation and other Aboriginal groups as well as government agencies.

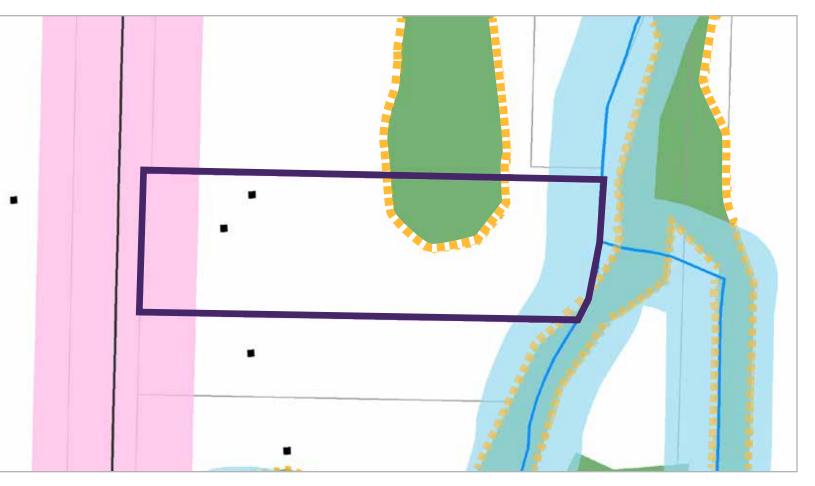


Work with local landowners to option land

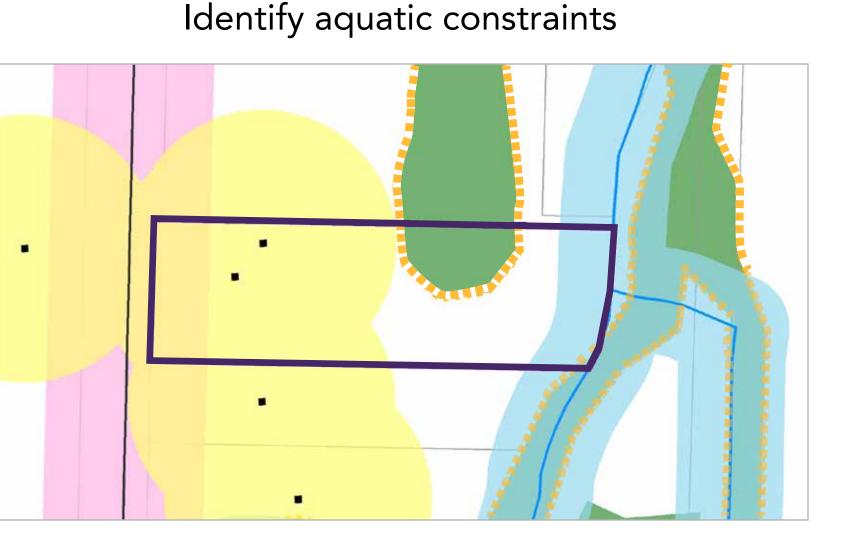




Identify natural constraints

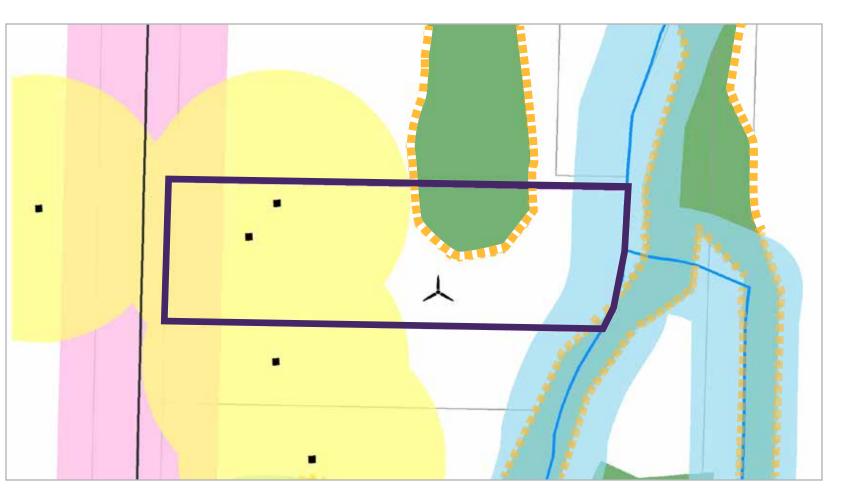


- 4. Identify locations to site Project infrastructure by balancing these technical and environmental constraints while adhering to the setback distances prescribed by the province (i.e., Ontario Regulation 359/09).
 - Project components can be sited within the setbacks for some terrestrial features provided that an Environmental Impact Study is completed and mitigation measures are identified.

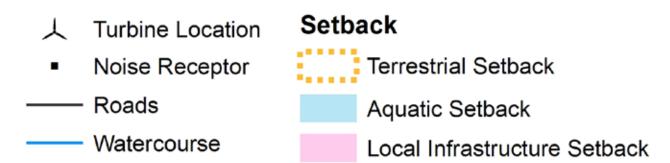


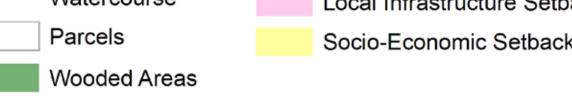
Identify socio-economic constraints

Identify local infrastructure constraints



Site turbine within remaining land available







Wind Turbine Setback Requirements

Project Related Infrastructure

Under the REA process, the MOECC has established required setback distances from receptors for all renewable energy facilities.

If Project related infrastructure (turbines, access roads, collection system, etc.) is located within the setback distances, additional analysis (e.g., Environmental Impact Study) will be provided in the REA application.

Setback Requirements



Setback Requirement

What Is a Receptor?

Existing buildings (e.g., homes) or vacant lots that are or could potentially be used for overnight accommodation or as an educational facility, health care facility, day nursery or place of worship.

Hospital

School



Non-participating receptor (see definition)	»	550 metres from turbine base
Public road right-of-way and railway right-of-way	»	Turbine blade length plus 10 metres from turbine base
Property line	»	Turbine height (excluding blades) from turbine base
Provincially Significant Wetland	»	120 metres
Significant woodland	»	120 metres

Feature	Se	tback Requirement
Provincially significant Area of	»	120 metres
Natural and Scientific Interest		
(ANSI) (Life Science)		
Provincially significant ANSI	»	50 metres
(Earth Science)		
Significant wildlife habitat	»	120 metres
Lake	»	120 metres from the average annual high water mark
Permanent or intermittent	»	120 metres from the average annual high water
stream		mark
Groundwater seepage area	»	120 metres

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SAMSUNG RENEWABLE ENERGY INC.

Planning and Design

Draft REA Reports have been prepared for the North Kent Wind 1 Project.

The Project is proposed to include the installation of up to 36 wind turbines that will produce up to 100 MW of energy.

The major components of the Project include:

- Wind turbine foundations and generators
- Pad-mounted step-up transformers
- Collector lines
- Collector substation



- Microwave tower
- Meteorological towers
- Access roads
- Interconnection station
- Operations and maintenance building
- Temporary staging areas







How Wind Works

Harnessing the Wind

- » Wind turbines capture kinetic energy in surface winds and convert it into electrical energy using aerodynamic blades mounted on towers
- » As wind moves over turbine blades, it causes "lift" – the same effect used by airplane wings
- » Lift makes the blade rotate, which turns the shaft

Main Components

- » Blades which convert the wind's energy into rotational shaft energy
- » A nacelle (enclosure) containing a drive train, usually including a gearbox and generator
- » A tower to support the rotor and drive train
- Electronic equipment such as controls, **》** electrical cables, ground support and

Ancillary Components

- » Operations and maintenance building to monitor day-to-day operations
- » Collector system to carry electricity from the turbines to the collector substation
- » Collector substation to collect the electrical collector lines and transform the collector line voltage (34.5 kV) to a transmission voltage (230 kV)

The turning shaft creates electricity **》** within a generator, which in turn creates electricity that can be sent to the power grid

equipment

» Transformer which converts the electricity to a common voltage

Gearbox (internal) Generator (internal) Hub Nacelle Blades (3) Tower **Overhead** Collection **Transmission** System Line **Operations &** Maintenance Collector (O&M) Building **Substation Pad-mounted Foundation** Transformer

« Diagram of a Typical Wind Farm *not to scale







Benefits of Wind Energy



Community

- » Direct financial benefits from equity ownership, property taxes and a community benefits contribution.
- » Long term service agreements with local businesses and contractors.
- » Provides local employment.
- » Compatible with mixed land use (e.g., grazing, agriculture and recreational).
- » Supports the local economy as Ontario goods and labour will be used during construction and operation.

Economic

- » Reduces reliance on imported fossil fuels.
- » Quick to install and require low maintenance during operation.
- » Helps stabilize the cost of energy.
- » Creates "green-collar" jobs in construction, operation and manufacturing.

Environmental

- » Wind is a clean and inexhaustible resource.
- » Modern wind energy generating equipment is efficient, reliable and environmentally friendly.
- » Renewable energy will help reduce dependence on other forms of electricity generation that contribute to greenhouse gas emissions and poor air quality.
- » Wind power generation can help reduce the amount of carbon dioxide, sulphur dioxide and nitrogen oxides that are produced by other forms of electricity generation.



Providing Clean and Safe Power

Ontario doctors, nurses and other health professionals support energy conservation combined with wind and solar power to help us move away from the use of fossil fuels for energy generation.

More than 80 countries around the world are using commercial wind power today, and wind energy is broadly understood to be one of the safest and most environmentally-friendly forms of electricity generation.

With more than 318,000 MW of installed wind energy capacity and 225,000 wind turbines operating around the world, hundreds of thousands of people safely live near and work at operating wind projects.

The balance of scientific evidence and human experience to date clearly concludes that wind turbines do not adversely impact human health. These conclusions are supported by a body of work by medical and scientific experts.



"According to the scientific evidence, there isn't any direct causal link between wind turbine noise and adverse health effects." – Dr. Arlene King, Former Chief Medical Officer of Health, Province of Ontario

"Opposition to wind farms on the basis of potential adverse health consequences is not justified by the evidence." – Dr. David Colby, Medical Officer of Health, Chatham-Kent

Source: Canada Association of Physicians for the Environment, Registered Nurses' Association of Ontario, the Lung Association, the Asthma Society of Canada, and Ontario College of Family Physicians. Global Wind Energy Council, Global Statistics 2013.





Wind Turbine Specifications

The Project will use the Siemens SWT-3.2-113 wind turbine.

The Siemens SWT-3.2-113 wind turbine has a nominal power rating of approximately 2.3 to 3.2 MW.

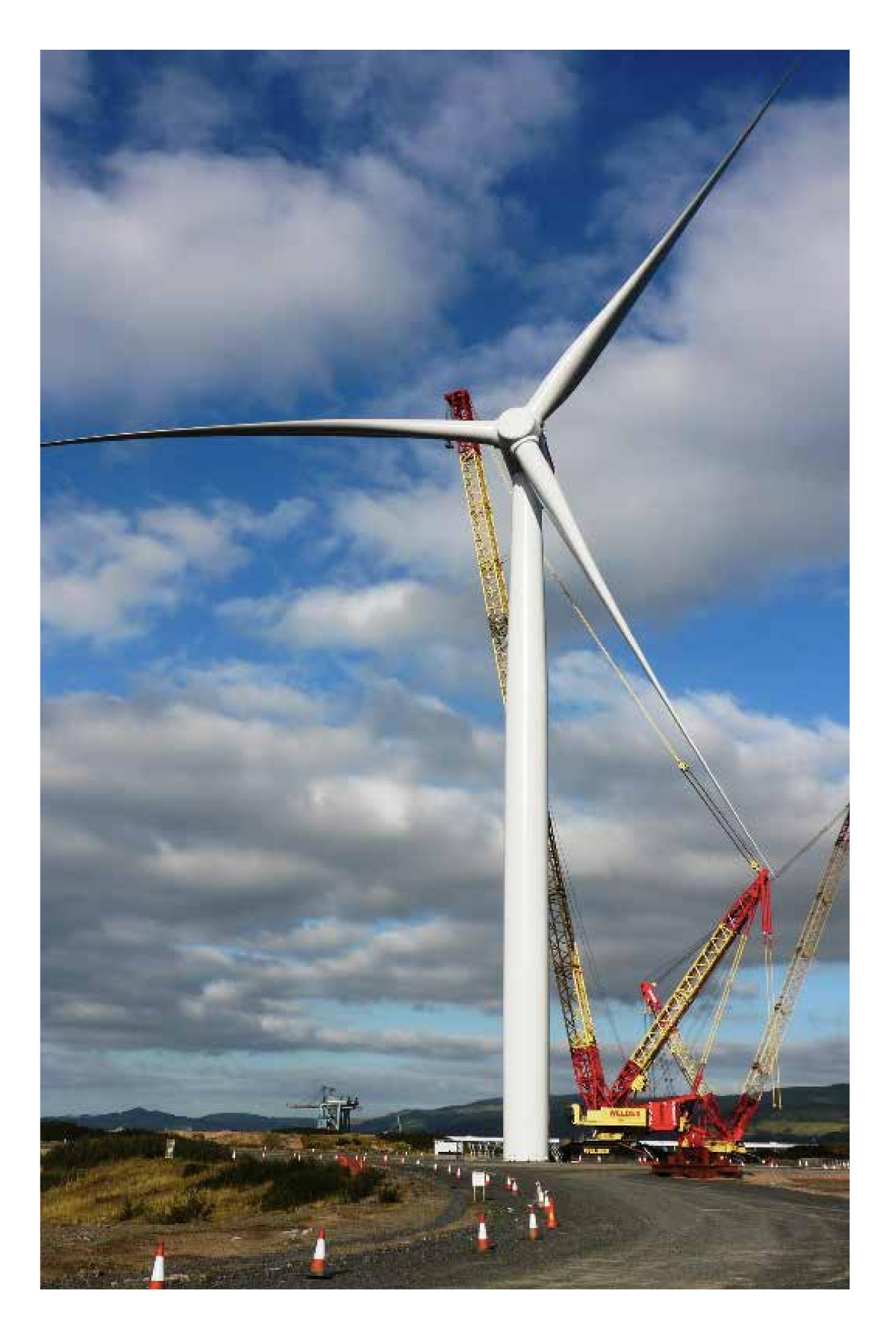
Each turbine tower is anticipated to have an underground concrete foundation up to 25 metres wide and 2.5 metres deep.

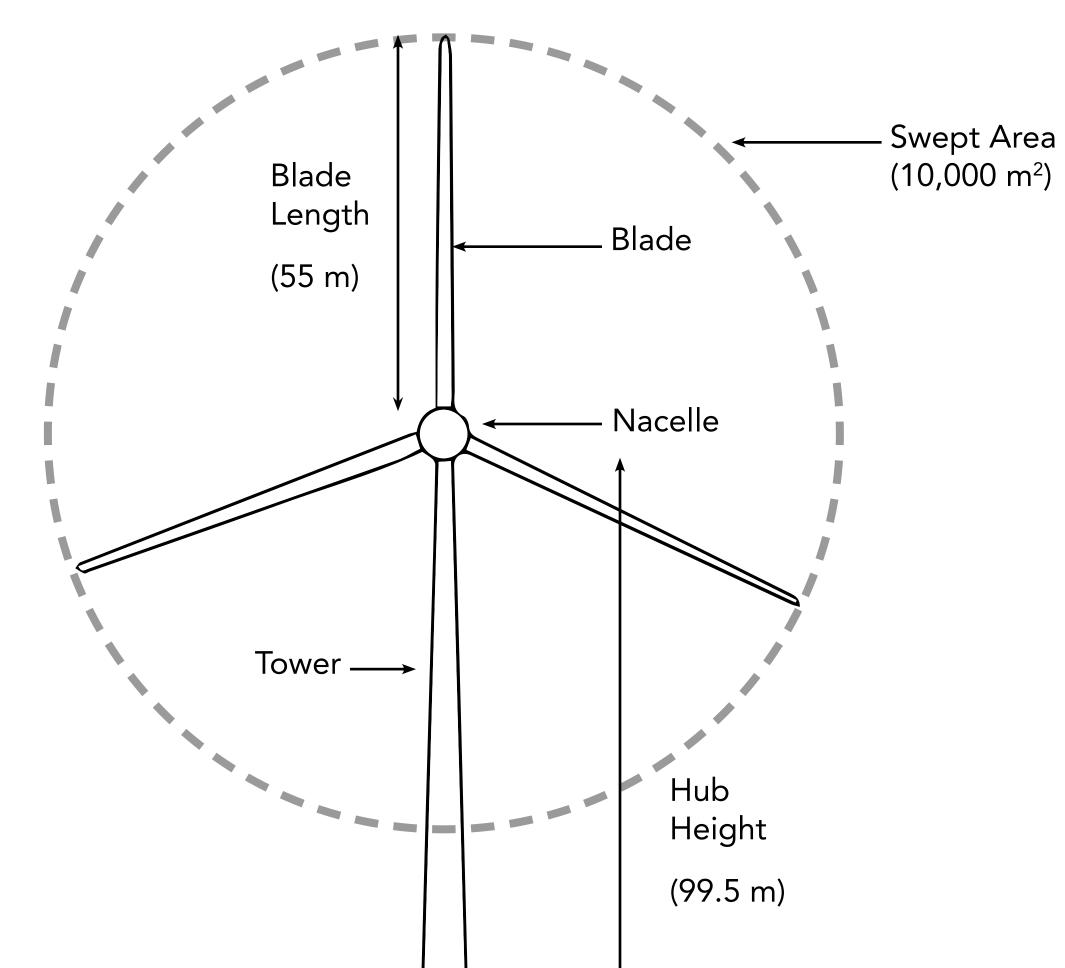
A spread-foot type foundation will be constructed, except where geotechnical conditions require the use of a pile type foundation.

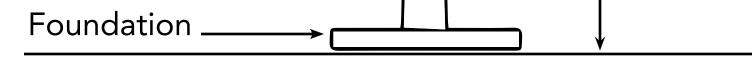
The turbine has a hub height of 99.5 metres and rotor diameter of 113 metres.

The 'cut-in wind speed,' or when the wind turbines begin to spin, is 3 to 5 metres per second.

The 'cut-out wind speed,' or when the wind turbines automatically stop spinning, is 32 metres per second.









Construction Activities

Overview of Construction Activities

Site Preparation

- » Staking and surveying, clearing and grubbing
- » Preparation of construction staging areas

Construction of Facility

- » Construction of access roads (8 to 15 metres with shoulder during construction)
- » Installation of foundations for turbines (25 metre diameter)
- » Base preparation for substation (approximately 10 acres)
- » Wind turbine, substation and interconnection station installation

Potential Effects and Mitigation Measures

The potential effects during the construction phase will mainly be related to dust, noise and traffic congestion.

- » Dust will be mitigated by using best management practices including dust suppressants, implementing speed limits and revegetating cleared areas as soon as possible
- » Noise will be mitigated by keeping all equipment in good repair and not exceeding noise limits specified by the Ministry of the Environment and Climate Change
- » Traffic congestion will be mitigated by developing a traffic
- » Construction of operations and maintenance building (approximately 7 acres)
- » Installation of collector lines
- » Testing and commissioning

Site Restoration

- » Removal and disposal of all construction materials and temporary facilities
- » Backfilling of topsoil, where appropriate, to achieve proper drainage
- » Re-vegetation as needed

Traffic and Roads

- » North Kent Wind 1 will work closely with the Municipality of Chatham-Kent to develop a traffic management plan. The plan will ensure:
 - Only designated transportation routes will be followed
 - Proper signage for detours will be prominently displayed
 - Traffic controllers and police escorts will be used as necessary

management plan in coordination with the Municipality of Chatham-Kent





Operations and Maintenance

Overview of Operations and Maintenance Activities

- » Real-time monitoring of the Project will occur locally and remotely to maintain the performance and safety of the wind turbines
- » Performance and reliability will be maintained through a state-ofthe-art Supervisory Control and Data Acquisition system
- » Routine and unplanned maintenance of Project components will be undertaken
- » An Emergency Response and Communication Plan is outlined in the Draft Design and Operations Report

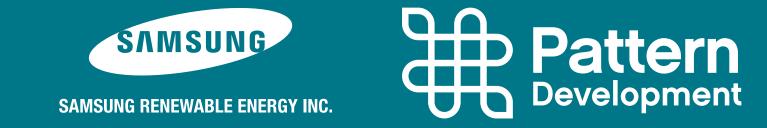
Potential Effects and Mitigation Measures

- » Post-construction monitoring of potential environmental impacts will be completed for at least three (3) years at this facility
- » The potential effects during the operation phase will mainly be related to wildlife and noise
 - Wildlife effects will be mitigated through lighting that is least likely to attract birds and/or bats
 - Noise will be mitigated by following Ontario regulations for minimum setbacks and turbines will be monitored remotely or from an operation centre
- The anticipated lifespan of the Project (commercial operation) is
 20 years









Decommissioning Activities

It is anticipated that the Project will have a commercial operational life of 20 years, which can be extended further with proper maintenance, component replacement and repowering.

At the end of the Project's operational life, all components will be shut down and isolated from external electrical lines.

North Kent Wind 1 is responsible for all aspects of the decommissioning of the Project including the associated costs.

Overview of Decommissioning Activities:



- » Removal of the wind turbines for re-use or disposal
- » Removal of foundations (to depth of approximately 1 metre) and any access roads, to a depth suitable for ploughing, except where the road is assumed for farming use
- » Replacement of subsoil and topsoil to match adjacent undisturbed land
- » Former agricultural lands will be restored to allow agricultural activities to continue
- » All activities will be carried out to minimize environmental impacts through the use of best management practices

Potential effects and mitigation measures during decommissioning are expected to be similar to those during construction.





Archaeological Assessments

A Stage 1 archaeological background study was conducted to determine the archaeological potential of the North Kent Wind 1 Project Study Area. Following the recommendation determined from background research, a Stage 2 archaeological assessment was also completed.

During Stage 2 field work, over 3,300 acres of land was assessed.

The Stage 2 archaeological assessment identified 58 locations with cultural material. Ten (10) of the 58 archaeological locations exhibited cultural heritage value or interest.

Only one (1) location with cultural heritage value or interest is within the footprint of the Project.



Mitigation Measures:

- » The ten (10) locations that exhibited cultural heritage value or interest were recommended for a Stage 3 site-specific archaeological assessment
- » Nine (9) sites will be protected and avoided during construction and the one (1) site within the footprint of the Project will have a Stage 3 site-specific archaeological assessment conducted. A Stage 4 archaeological assessment will be undertaken, if required
- » The nine (9) sites not impacted by the Project Location will be surrounded by a 20 metre protective buffer where no ground alteration activities will take place
- » Where required, a licensed archaeologist will monitor construction activities

By using these mitigation measures, no significant negative effects to archaeological resources are expected.





Heritage Impact Assessment

The majority of the land within the Project Study Area is used for agricultural purposes.

Cultural heritage landscapes are geographical areas that may have been modified by human activity and are identified as having cultural heritage value or interest by a community, including an Aboriginal community.

Through a windshield survey, 14 potential built heritage resources (11 residences and three (3) barns) and six (6) potential cultural heritage landscapes 40 years of age or older were documented. Of these, eight (8) were identified to have potential cultural heritage value or interest. Six (6) cultural heritage landscapes were also evaluated, with only one (1) identified as containing cultural heritage value or interest. None of the eight (8) resources are designated as protected.



Only one (1) property was identified as potentially experiencing indirect impacts as a result of the Project. Retaining the existing vegetative screening would sufficiently mitigate negative indirect impacts from the Project.

No further direct or indirect negative effects are anticipated as a result of the Project, therefore no further mitigation is recommended.



Natural Heritage Assessment

A review of available background resources was completed to identify any potentially significant natural features such as woodlands, wetlands and Significant Wildlife Habitat within 120 metres of the Project Location.

Site investigations were conducted and included planning and undertaking field work, compiling records and reporting results.

The significance of each natural feature within 120 metres of the Project Location was evaluated using Ministry of Natural Resources and Forestry accepted standards, guidelines and literature.

Significant natural features included:



- » Five (5) wetlands
- » 89 wildlife habitats
- » 13 woodlands

Based on the implementation of the planned mitigation measures, monitoring programs and contingency plans (if necessary), it is unlikely that there will be any significant impacts to natural heritage features.

Monitoring of potential post-construction environmental impacts will be completed for at least three (3) years at this facility.





Potential Effects on Natural Heritage Features and Mitigation

The table below presents a summary of the potential effects on natural heritage features and some of the associated mitigation measures.

Potential Effect	Mitigation Measure		
Damage to, or loss of, woodlands, wetlands and other natural features	 » Develop and implement an Erosion and Sediment Control Plan » Store stockpiled material more than 30 metres from a wetland, woodland or water body » Implement fugitive dust suppression techniques 		
Soil compaction	 » Minimize vehicle traffic on exposed soils » Minimize paved surfaces and design roads to promote infiltration 		
Soil or water contamination	 » Develop a Spill Response Plan and train staff on appropriate procedures » Store hazardous materials in designated areas and dispose of waste material by authorized vendors » Locate all maintenance activities, vehicle re-fuelling or washing, as well as the storage of chemical and construction equipment more than 30 metres from significant features 		
Disturbance and/ or mortality to local wildlife	 Schedule construction activities near significant wildlife habitat to take place outside of sensitive timing windows for wildlife (e.g., breeding season and migration period) Clearly post construction speed limits 		
Damage or removal (including accidental instances) of vegetation and increased species competition	 » Install protective fencing » Re-vegetate cleared areas as soon as reasonably possible » No use of herbicides (Project-related activities only) » Vehicle use will occur primarily on access roads and in agricultural habitats, where invasive and non-native vegetation species are less likely to be concentrated 		
Changes in water levels, temperature and drainage	 » Control quantity and quality of water discharge using best management practices » Restrict taking of groundwater and surface water during extreme low flow time periods 		

For more details on potential effects and mitigation measures, please refer to the Natural Heritage Assessment – Environmental Impact Study report available at www.northkentwind.com.



Water Bodies Assessment

An assessment of the water bodies (i.e., lakes, seepage areas and





Potential Effects on Water Bodies and Mitigation

The table below presents a summary of the potential effects on water bodies and some of the associated mitigation measures.

Potential Effect	Mitigation Measure
Increased erosion, sedimentation and turbidity	» Develop and implement an Erosion and Sediment Control Plan
	» Avoid construction during high volume rain events and significant snow melt/thaw events, where possible, and resume once soils have stabilized or mitigation measures have been installed
	» Minimize disturbance to water body banks and stay outside of the water body and bank area
	» Horizontal directional drilling should be executed at a depth that limits the potential impacts associated with a frac-out
	» Develop and implement an emergency frac-out response plan
Soil compaction and increase surface runoff	» Restrict construction equipment to designated, controlled vehicle access routes
	» Develop a Flood Response Plan
Minor, isolated, short term dewatering of shallow groundwater from excavation areas	» Evaluate dewatering discharge rates so as not to result in erosion and sedimentation
	» Remove construction debris from the site and stabilize it to prevent it from entering the nearby water bodies
	» Perform in-water work (if required) in the dry where possible
	» Ensure machinery arrives on site in clean condition and is checked and maintained free of fluid leaks
	» Store fuel and other construction related materials away from any drainage features and locate construction staging areas 30 metres away from any water body
	» Develop a Spill Prevention and Response Plan prior to construction

For more details on potential effects and mitigation measures, please refer to the Water Bodies Report available at www.northkentwind.com.



Noise Impact Assessment

A noise impact assessment was completed to identify noise levels at receptors within 1,500 metres of the wind turbines or the collector substation.

The assessment was comprised of the following steps:

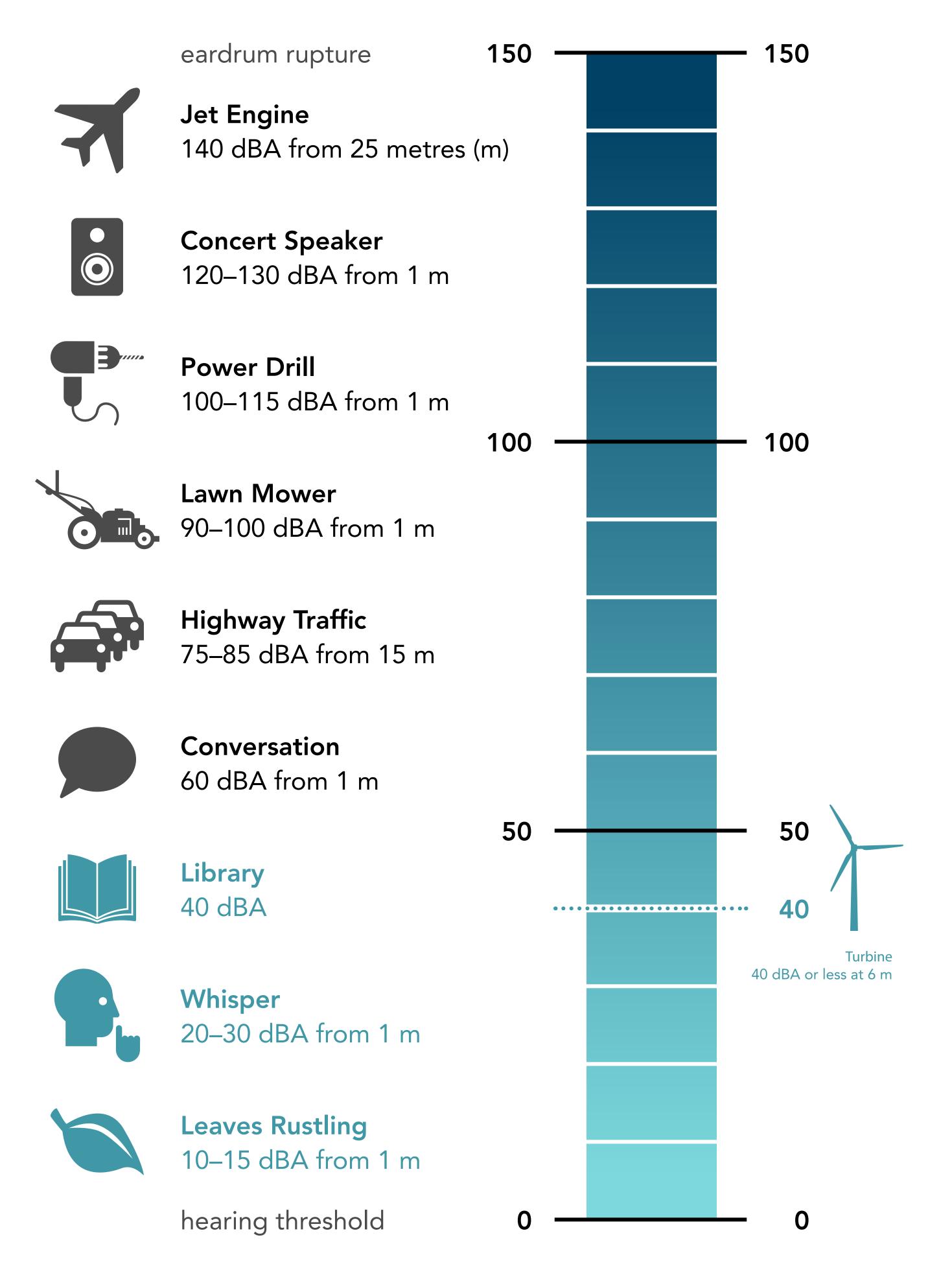
» Step 1

 Identify points of reception – dwellings (typically houses) that are within 1,500 metres of wind turbines or the collector substation

» Step 2

• Obtain wind turbine specifications and noise emission ratings from the manufacturer

Decibels (dBA) Of Common Sounds



- » Step 3
 - Incorporate the turbine and substation locations and sound power levels into a noise model to predict overall noise levels at each point of reception
- » Step 4
 - Adjust turbine locations during modelling to minimize noise levels at identified receptors
- There are 810 receptors located within 1,500 metres of a wind turbine or the substation that were assessed, 299 of which are vacant lots (i.e., property with no buildings or structures).
- The results of the Noise Impact Assessment show that the Project complies with the Provincial Noise Guidelines.



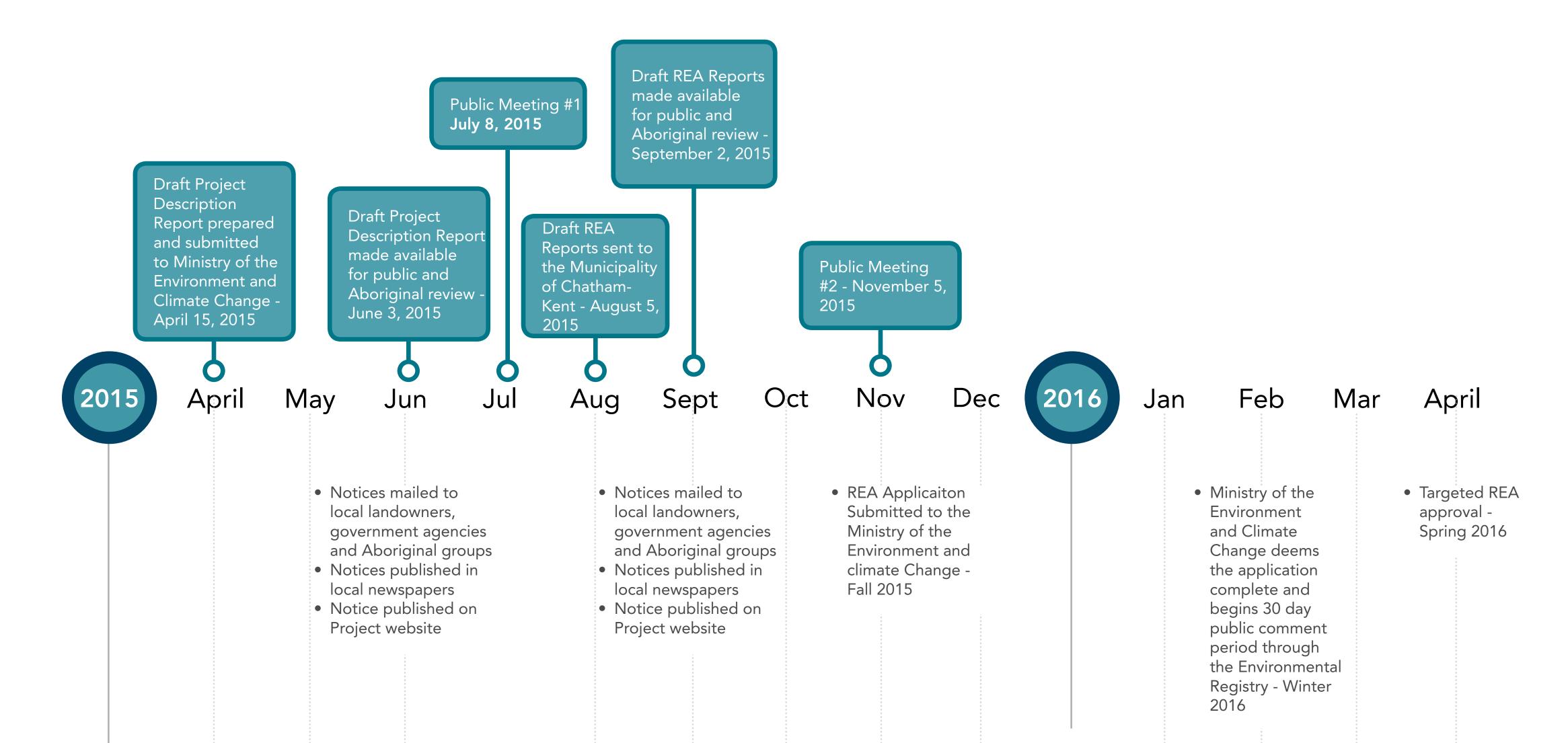
Consultation and Engagement

North Kent Wind 1 believes that your input is an important part of the REA process. All consultation and engagement activities will be reflected in the Consultation Report which will be submitted with the REA application.

Key Consultation and Engagement Milestones

- » Draft Project Description Report made available for public and Aboriginal review June 3, 2015
- » Public Meeting #1 July 8, 2015

- » Draft REA Reports made available for public and Aboriginal review September 2, 2015
- » Public Meeting #2 November 5, 2015
- » REA Application submitted to the Ministry of the Environment and Climate Change – Fall 2015
- » Ministry of the Environment and Climate Change deems the application complete and begins 30 day public comment period through the Environmental Registry Winter 2016
- » Targeted REA approval Spring 2016
- » Draft REA Reports sent to the Municipality of Chatham-Kent August 5, 2015





I Dank Vou

For attending the second public meeting

Next Steps for the Project:

- » Summarize and respond to feedback received at this Public Meeting
- » Finalize REA Reports and submit to the Ministry of the Environment and Climate Change as part of the REA application
- » Review of the Final REA Reports by the Ministry of the Environment and Climate Change and the public
- » Minister of the Environment and Climate Change makes a decision about whether to approve the REA application

We value your feedback and want to hear what you think. Please help yourself to some refreshments and complete a comment sheet before you leave or send it to us before November 12, 2015.

To learn more about the Project or to provide feedback, please visit our website using the following link: www.northkentwind.com or contact us using the following email address:

info@northkentwind.com

