

This is the Second Public Open House for the Wind Project, where project staff are available to answer any questions and receive input from attendees. This process is being undertaken as part of the Alberta Electricity System Operator Request for Proposal process for Round 2/3 of their Renewable Electricity Program. We have prepared a series of boards that outline the Willow Ridge Wind Project. Please feel free to ask questions and fill out our survey.

After this Open House we will be taking your feedback and inputting the information collected into our development and consultation strategy.

Open House Boards Summary

1. About Us
2. About the Project
3. About Wind Power
4. Buildable Areas
5. Decommissioning



Liberty Power

A subsidiary of Algonquin Power & Utilities Corp., Liberty Power is a non-regulated generation business that has interests in a portfolio of North American based contracted wind, solar hydroelectric, and natural gas powered generating facilities representing approximately 1.5 GW of installed capacity.

Dillon Consulting

An employee-owned professional firm specializing in planning, engineering, environmental science and management, that partners with clients to provide committed, collaborative and inventive solutions to complex, multi-faceted problems. Proudly Canadian since being founded in 1946 in London, Ontario, we have never stopped innovating, growing, building and leading towards a better tomorrow.



LEGEND

- Liberty Power Facility
- Liberty Power Development Project

DEVELOPER: Liberty Power

PROJECT NAME: Willow Ridge Wind Project

MUNICIPAL DISTRICT: Municipal District of Willow Creek

PROJECT SIZE: Up to 150 MW

TURBINE: Up to 60 Turbines

OFFTAKE: Alberta Electricity System Operator Renewable Energy Procurement Round 2/3 (Up to 300 MW)

POINT OF INTERCONNECTION:

- We are investigating nearby 138 kV and 240 kV systems

COLLECTION SYSTEM:

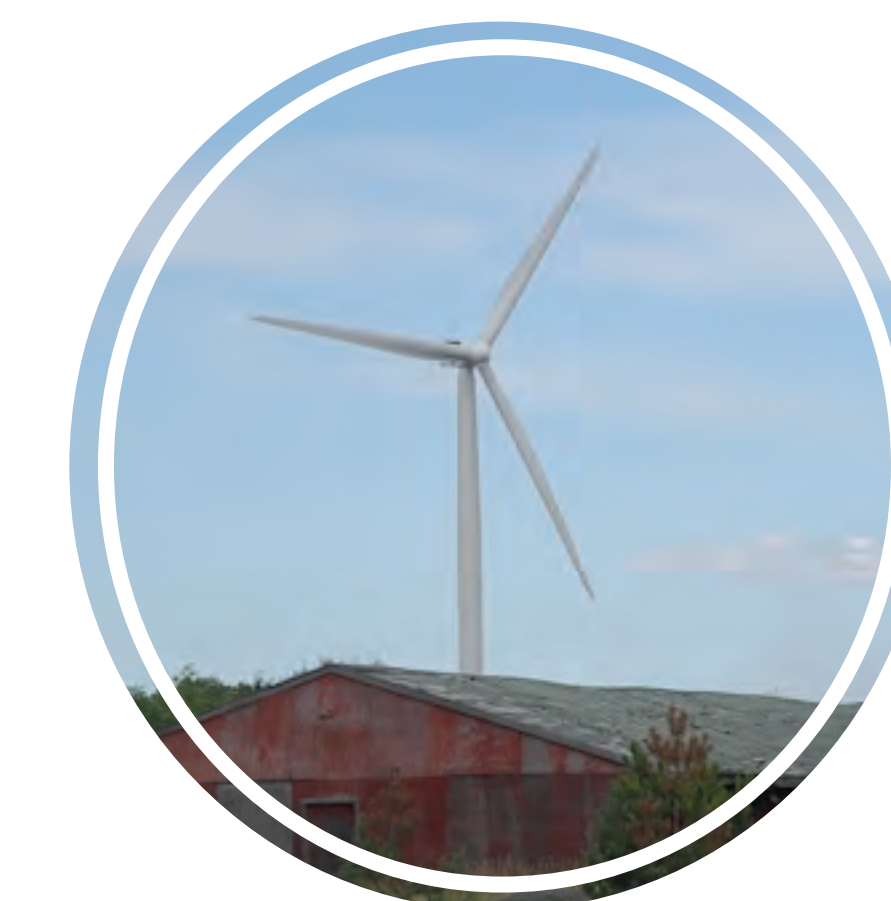
- The collection system will be a combination of underground and/or overhead cables that will be connected to the Willow Ridge Substation.



TIMELINE

PROJECT MILESTONE

Q4 2016	— ■ —	Liberty Power Acquired the Project
Q2-Q4 2018	— ■ —	Environmental Field Studies
Q2 2018	— ■ —	First Open House
Q2 2018	— ■ —	Request for Qualification (RFQ) Submission
Q3 2018	— ■ —	Second Open House
Q3 2018	— ■ —	Submission of Municipal Development Permit Application
Q4 2018	— ■ —	Request for Proposal (RFP) Submission
Q4 2018	— ■ —	Submission of Rule 007 Application to Alberta Utility Commission (AUC)
Q4 2018	— ■ —	Anticipated Award of Renewable Electricity Support Agreement (RESA)
Q4 2018	— ■ —	Submission of Environmental Evaluation Report to Alberta Environment & Parks (AEP)
Q4 2018	— ■ —	Alberta Environment & Parks (AEP) Approval Anticipated
Q1 2019	— ■ —	Alberta Utility Commission Approval Anticipated
Q2 2019	— ■ —	Start of Construction



The following plans will be implemented:

Public Health and Safety Plan

- Liberty Power has overarching responsibility for public and worker health and safety for the project.

Traffic Management Plan

- Safe management of traffic and delivery of materials along public roads.
- Limiting access to construction sites to minimize hazards to the public.

Emergency Response & Communication Plan

- Intended to advise onsite personnel and contractors on the procedures they must follow and how to communicate in the event of an emergency situation during the construction and initial operations phase (pre-commissioning) of the Facility.

Spill Response Plans

- Response (contingency) plan to respond to an accidental release of substances into the environment.

Training for Construction Staff

- Environmental Identification, Site Safety, Emergency Training, etc.

Wind Turbine Manufacturer Safety

- Wind Turbine Manufacturers implement safety standards in to the wind turbine design process.
- Project turbines will be supplied by a qualified turbine manufacturer.



SETBACK DISTANCES

- Setbacks from infrastructure, residences and environmental features based on the results of field studies and provincial and municipal requirements.

MUNICIPAL BY-LAWS

Distance from Infrastructure

INDUSTRY STANDARDS & PRACTICES

Best Practices identified by CANWEA and/or Liberty/Dillon experience

PROVINCIAL WIND SITING GUIDELINES

Distance from environmental features (AEP Directive)

NOISE

Guidelines set out by the Province of Alberta (Rule 012)

ARCHEOLOGICAL INVESTIGATION

Tabletop & Fieldwork

ENVIRONMENTAL SURVEYS & STUDIES

Avoidance of Sensitive Areas
(examples: wetlands & sensitive wildlife habitat)

WIND ANALYSIS

Speed, Elevation, Direction



The following Environmental Studies have been utilized in the siting process to avoid potential impacts on wildlife and wildlife habitat. These studies began in April 2018 and will be completed by November 2018.

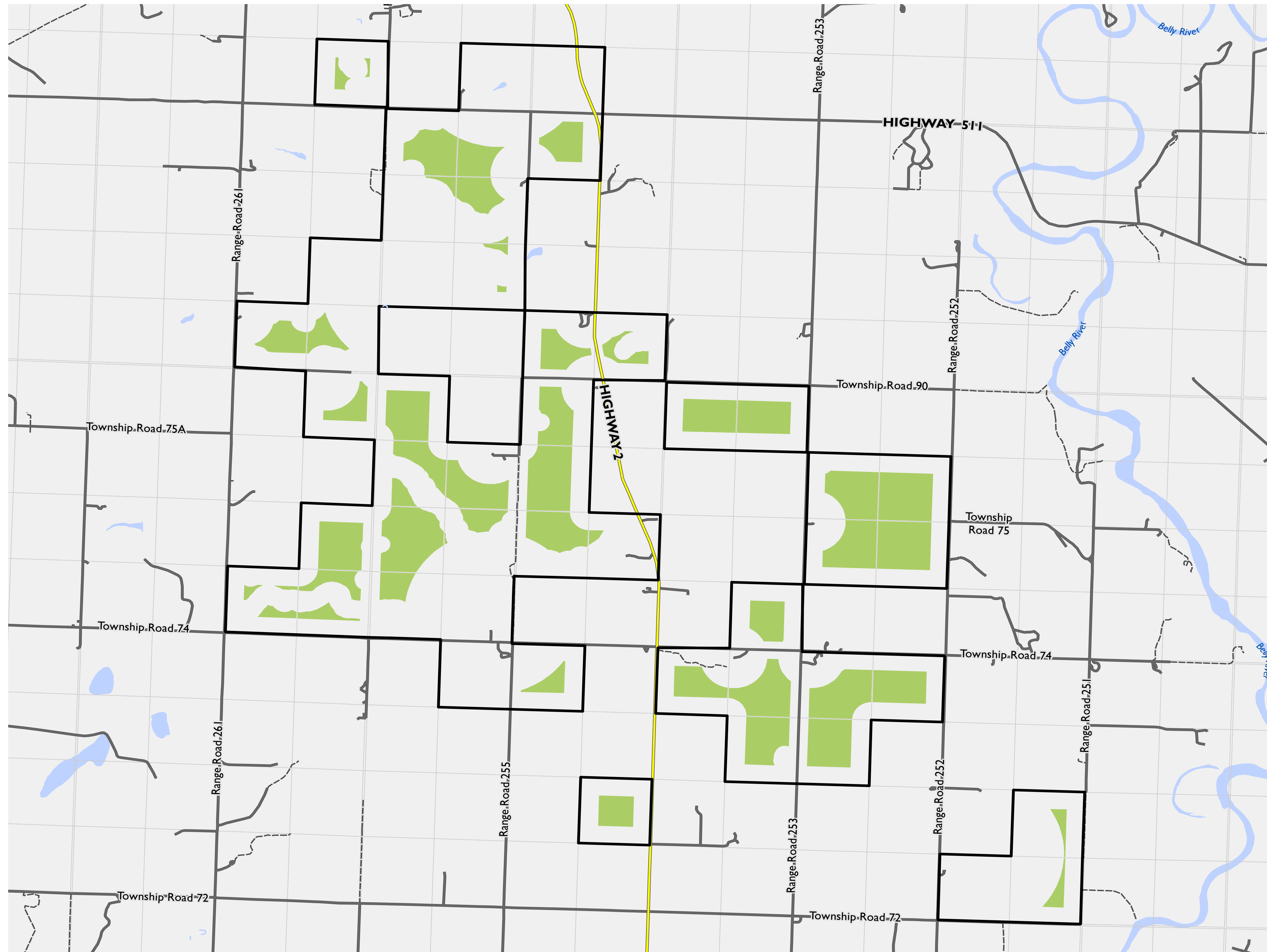
Completed Studies:

- Spring Bird Migration Survey
- Grouse Lek Survey
- Grassland Breeding Bird Survey
- Prairie Raptor Survey
- Spring Acoustic Bat Survey
- Land Cover Verification
- Vegetation Community Assessment
- Wetland Assessment and Classification
- Early Season Rare Plant Survey

Upcoming Studies:








- Fall Bird Migration Survey
- Fall Acoustic Bat Survey
- Late Season Rare Plant Survey

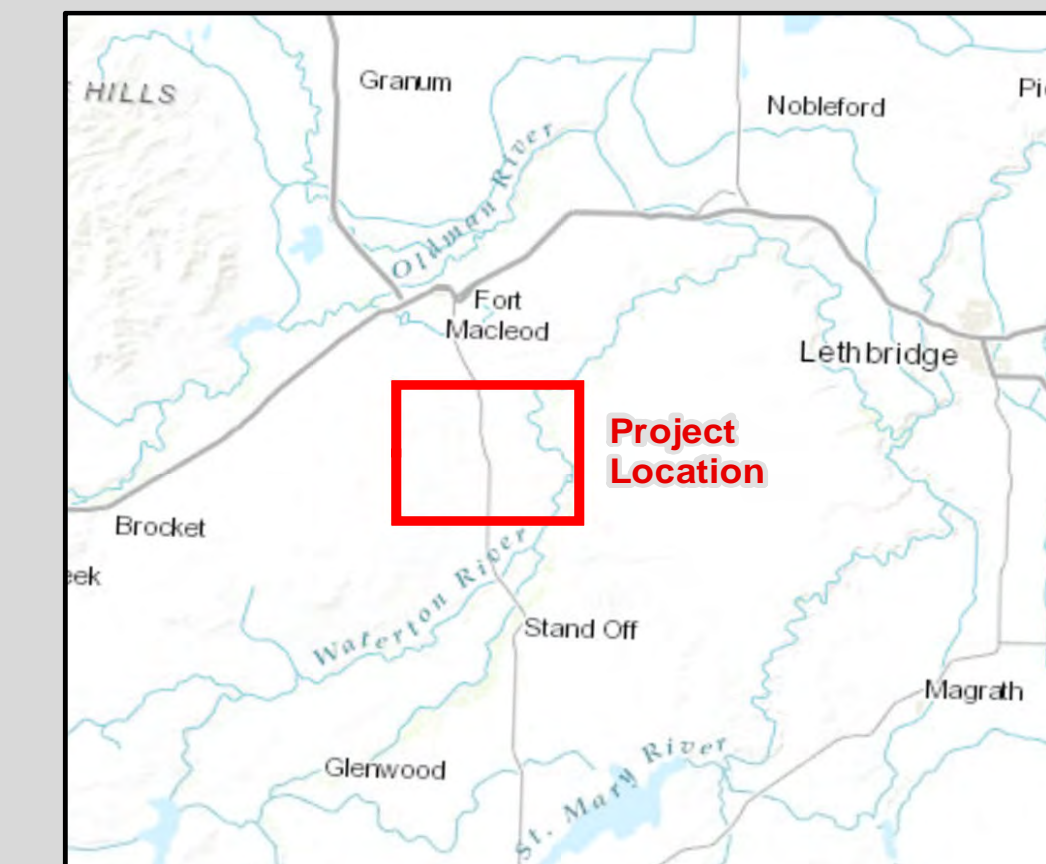




ALGONQUIN POWER & UTILITIES CORPORATION
WILLOW RIDGE WIND PROJECT

FIGURE 2
BUILDABLE AREA

-  Leased Lands
-  Buildable Area
- Base Features**
-  Paved Road
-  Road
-  Truck Trail
-  Cadastral Boundary
-  Water Body



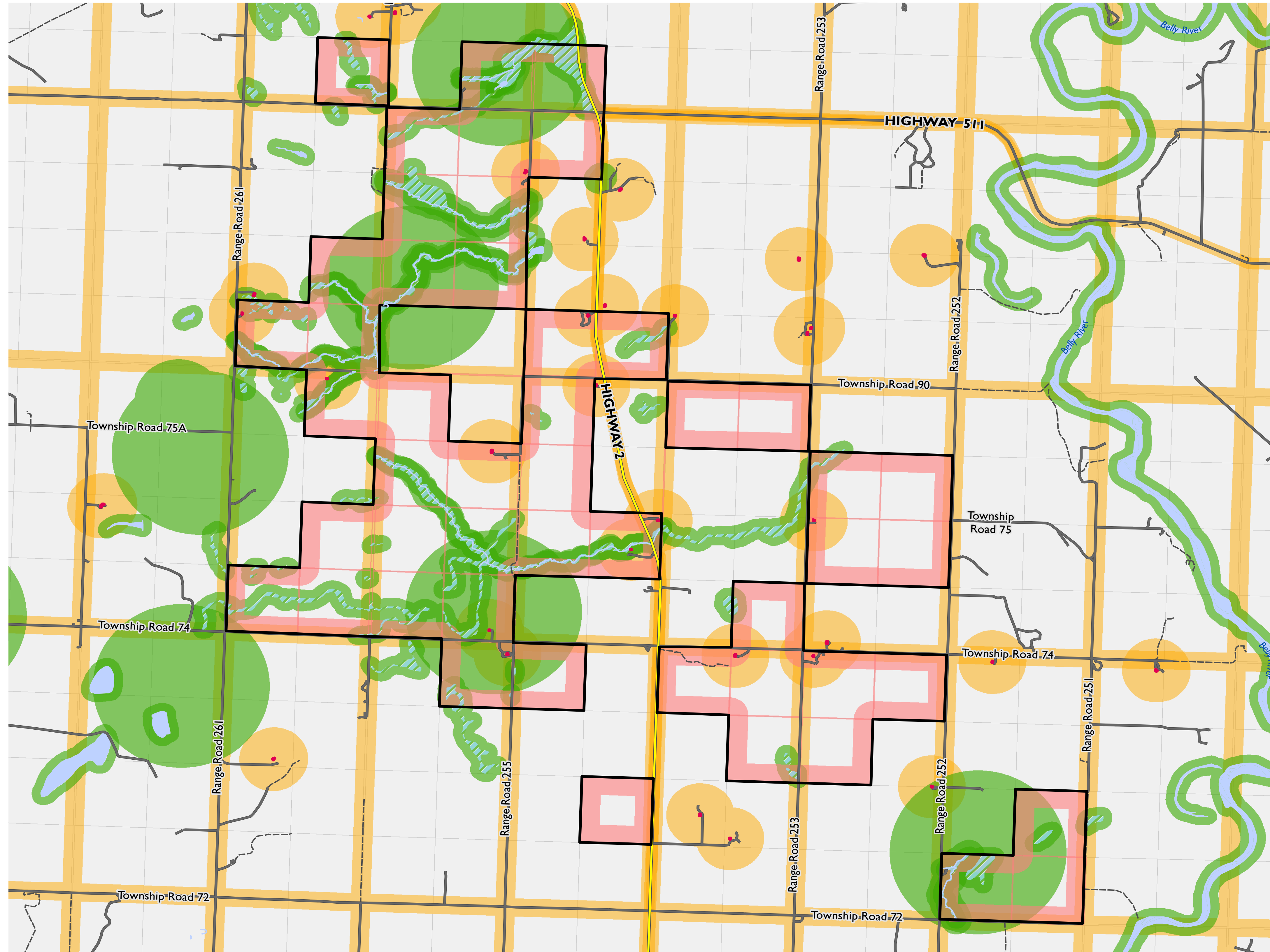
1:44,000
0 0.5 1 2 km

MAP DRAWING INFORMATION:
DATA PROVIDED BY GEOGRATIS, NRCAN, ALTALIS, DILLON CONSULTING LTD
MAP CREATED BY: LK
MAP CHECKED BY: MB
MAP PROJECTION: NAD 1983 UTM Zone 12N



PROJECT: 17-6776
STATUS: DRAFT
DATE: 2018-08-10

FILE LOCATION: I:\GIS\176776 - Algonquin Willow Ridge\mxd\BuildableArea\Figure2_BuildableAreaDraft.mxd

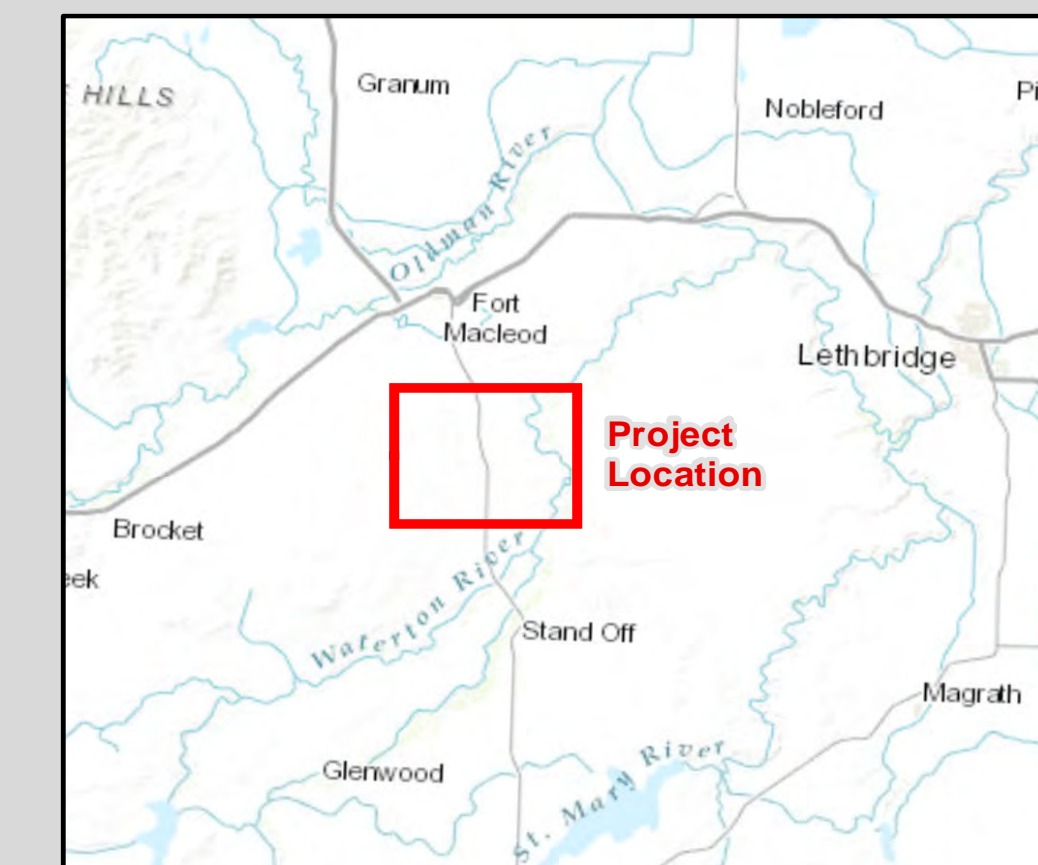


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ALGONQUIN POWER & UTILITIES CORPORATION
WILLOW RIDGE WIND PROJECT

FIGURE 1
SETBACKS

- Leased Lands
- Base Features**
 - Paved Road
 - Road
 - Truck Trail
 - Cadastral Boundary
 - Watercourse
 - Water Body
- Constraints and Setbacks**
 - Setbacks from Environmental Features
 - Setbacks from Property Lines
 - Setbacks from Roads and Residences
 - Class III, IV, or V Wetland
 - Dwelling (Aerial Identified)



1:44,000
0 0.5 1 2 km

MAP DRAWING INFORMATION:
DATA PROVIDED BY GEOGRATIS, NRCAN, ALTALIS, DILLON CONSULTING LIMITED, DIGITAL GLOBE
MAP CREATED BY: LK
MAP CHECKED BY: MB
MAP PROJECTION: NAD 1983 UTM Zone 12N



PROJECT: 17- 6776
STATUS: DRAFT
DATE: 2018-08-10

LOCAL BENEFITS*

Economic & Social Benefits

- New tax revenues
- Stable income for farmers and landowners from land lease agreements

Land Use

- As little as 1% of the quartersection is needed for a turbine and an access road

Employment

- Potential employment opportunities for local trades people and contractors
- Full time jobs once project is operational.

Direct Investment

- Contracts and infusion of dollars to local services and retail businesses.

PROVINCIAL BENEFITS

- By 2030 the AESO program is expected to attract approximately \$10 billion in new private investment in the Alberta economy and create about 7,000 jobs for Albertans as projects are built.
- The province's wind farms produce enough electricity each year to power 625,000 homes, equivalent to about 8% of Alberta's electricity demand.

NATIONAL BENEFITS

Wind Industry

- Growing on average of 15% per year
- In Canada, in the last 5 years, wind energy has been the dominant form of electricity generation built, leading to Canada being ranked ninth in the world for total installed wind energy capacity.

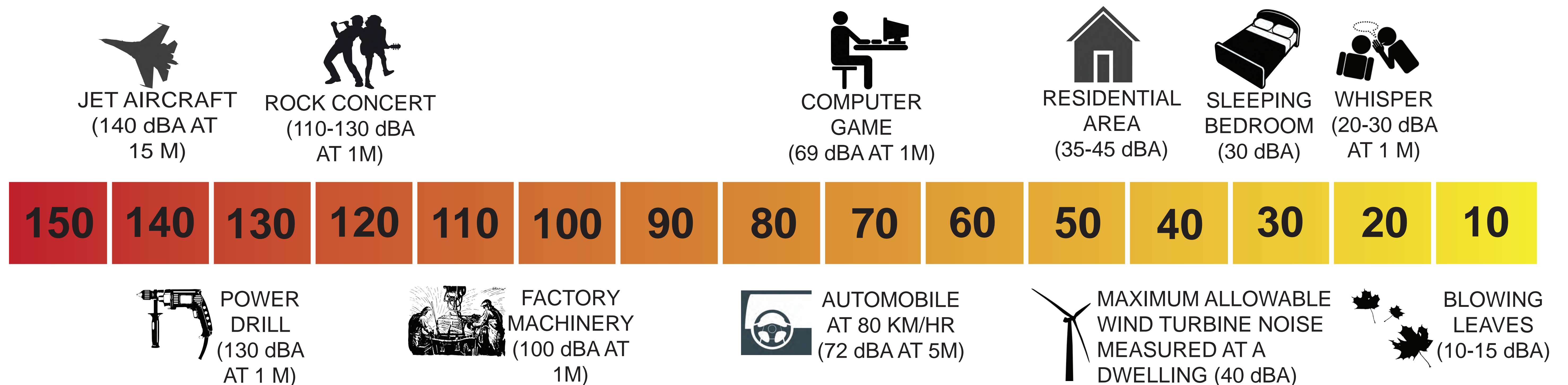
Noise Mitigation

- Ensuring all equipment is serviced and operating properly
- Ensuring all regulatory compliance noise suppressing equipment is installed and functional by performing regular equipment inspections and audits.

A Noise Impact Assessment will be conducted, as this is a critical step in the design of the turbine layout and its components.

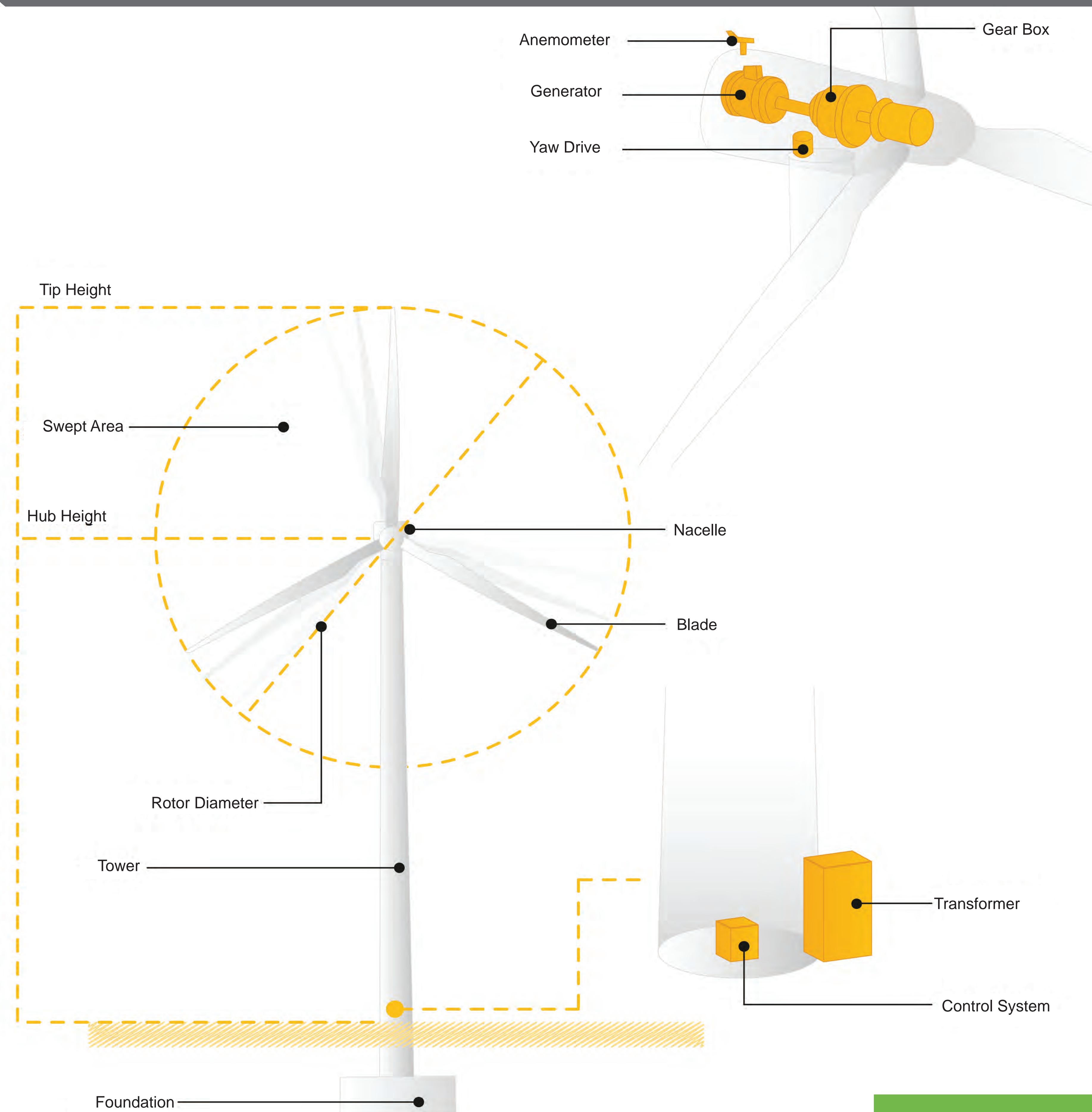
Noise Impact Assessment

- A Noise Impact Assessment (NIA) must be completed in accordance with Rule 012 for any power plan with a name plate capacity greater than or equal to 10 MW.
- Noise impacts are determined using modelling software and determine sound power levels within 1.5 km of the project site.
- If there are other known facilities within 1.5 km of the project site, these need to be considered as they would contribute to cumulative noise impacts of the area.



HOW IT WORKS

- (1) When the blades start moving, they spin a shaft that leads to a generator.
- (2) The generator consists of conductor, such as a coiled wire, that is surrounded by magnets.
- (3) The rotating shaft turns the magnets around the conductor and generates an electrical current.
- (4) Sensors cause the top of the turbine to rotate to face into the wind and the blades change their angle to best catch the wind. The blades are flexible and stop spinning if wind is too strong.



We are currently drafting a Decommissioning Plan which will be submitted to the MD of Willow Creek as part of the Development Permit application. The Decommissioning Plan outlines how the land will be remediated after end of operations. The Decommissioning Plan will be updated prior to the start of decommissioning, as some standards and practices may change over the 20+ year life of the project.

Turbines

- Turbines would be dismantled and taken away.
- Reusable material would be sold or recycled, if possible.

Turbines Foundations

- Turbine foundations would be removed so that normal agricultural practices can occur afterwards.

Land

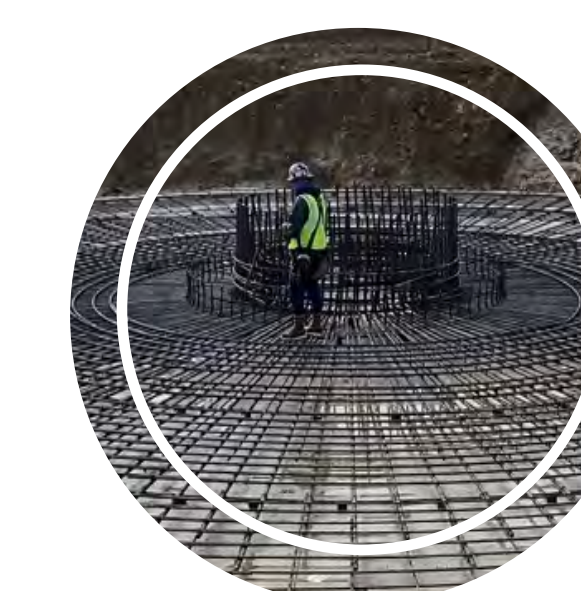
- Impacted agricultural land will be restored to a state suitable for the intended future use of the land.

Electrical Infrastructure

- Above ground lines would be removed and disposed.
- Underground lines would be cut and buried. Normal agricultural practices would be able to occur afterwards.
- Transformers would be removed.

Access Roads

- Access roads would be removed and land returned to similar condition as before the project; in consultation with the landowner.



THANK YOU FOR ATTENDING

Don't Forget to:

Sign In at the Front Table & Fill out our Survey

**Check out our website:
<https://willowridgewindproject.com/>**

**Contact Us:
WillowRidge.WindProject@algonquinpower.com**

NEXT STEPS

- 1. Environmental Studies to be completed by Dillon by November 2018**
- 2. Finalize Turbine Layout**
- 3. Submit Applications to Government Jurisdictions**