

# OPERATIONS PLAN for the Construction of the Amherst Island Wind Project

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Revision – February 7, 2017

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# 1 Introduction

This Operations Plan for the Amherst Island Wind Project (the "Project") has been written by Windlectric Inc. (Windlectric) and is provided to The Corporation of Loyalist Township (the "Municipality" or "Township") as prescribed by the Road Use Agreement<sup>1</sup> made between Windlectric and the Municipality on January 26, 2016, and commitments in the Renewable Energy Approval application. This Operations Plan is comprised of: (i) a Traffic and Construction Management Plan, (ii) a Communications Plan, and (iii) a Public Safety Plan. The purpose of the Operations Plan is to "demonstrate how prudent and reasonable practices will be utilized to minimize the level of disruption, disturbance and inconvenience to the Municipality's residents, given the scope of the Project. The Operations Plan will also demonstrate how the continuing function of its roads and other municipal services and facilities will be maintained to the extent reasonably possible and how the Municipalities residents' access to emergency services will be maintained at all times."<sup>2</sup>

Windlectric has made several significant changes to the Project to further minimize the level of disruption, disturbance, and inconvenience to the Municipality's residents including:

- Reducing the number of turbine locations from 33 to 26,
- Eliminating the turbine closest to Amherst Island Public School,
- Eliminating all Heavy Load deliveries in front of the Amherst Island Public School and through the village of Stella (except four sets of Major Turbine Components<sup>3</sup>),
- Relocating the collector system path around the village of Stella,
- Relocating the collector system 'side of the road' where necessary to eliminate any expected tree fatality due to collector system installation,
- Ensuring that the collector system is located on the west 'side of the road' in the vicinity of St. Paul's Presbyterian church in order to protect the root structure of the trees in front of this Cultural Heritage Resource,
- Ensuring that the collector system is located on the south 'side of the road' in the vicinity of the Pentland Cemetery in order to minimize any risk of harm to this Cultural Heritage Resource,
- Committing to the elimination of blasting as a construction technique within the public road allowances,
- Committing to zero overnight road closures,

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<sup>1</sup> Reference is made to the Road Use Agreement made on January 26, 2016 between Windlectric Inc. and The Corporation of Loyalist Township available on the Loyalist Townships website ([www.loyalisttownship.ca](http://www.loyalisttownship.ca)).

<sup>2</sup> Road Use Agreement clause 35.

<sup>3</sup> Turbine blades, turbine pods ("nacelles"), turbine rotor hubs or turbine tower sections (each a "Major Turbine Components").

- Committing to delay the start of all full Road Closures on any of the public school bus routes until the public school buses have passed,
- Utilizing access road on private land from turbine S02 to South Road to reduce the impact to public roads from construction and deliveries,
- Committing to adjust the Project schedule to ensure that certain key community events will be able to proceed unaffected by Project activities, and
- Committing to a minimum 3m lane width for traffic during Single Lane Restrictions to ensure that emergency vehicles will always be able to pass by these work zones.

## 2 Traffic and Construction Management Plan

A technical Traffic Management Report is provided as Schedule 02 to this Operations Plan.

### 2.1 Haul Routes for Oversized and Heavy Loads

All Project deliveries—with the exception of Major Turbine Component deliveries for turbines S30, S26, S18 and S13—will cross Front Road onto a Project road that provides access to Concession Road 2. This routing greatly reduces the number of deliveries that will need to travel through the village of Stella, or in front of Amherst Island Public School. Additional benefits of utilizing this access road include:

- a straight-through path at the intersection of Front Road and Stella 40 Foot Road for those deliveries, and
- elimination of any construction-related disruption that otherwise might have been necessary to enable a right hand turn for oversized deliveries at this intersection.

Using a Project road rather than the Stella 40 Foot Road between Front Road and Concession Road 2 minimizes the level of disruption, disturbance and inconvenience to the Municipality’s residents related to traffic at the main intersection in the village of Stella and in particular resident’s access to the ferry due to delivery of material and equipment.

The Project road for turbines 02, 27 and 37 will also be used as a delivery bypass to eliminate all Major Turbine Component and Heavy Load traffic from the southernmost segment of Stella 40 Foot Road and a segment of South Shore Road. This routing also eliminates the need for construction activities related to upgrading these segments of public road, and the need to upgrade the intersection of Stella 40 Foot Road and South Shore Road.

Deliveries on the island that will require temporary road closure will include the delivery of Major Turbine Components for each turbine, as well as the main power transformer, construction crane components and 3 utility pole delivery trucks for the transmission line. Approximate dimensions of the Major Turbine Components delivery trucks are provided in Schedule 01 (WTG Component Delivery Vehicle Dimensions).

### **2.1.1 Major Turbine Component Delivery Routes:**

The routes and the direction of travel for the delivery of Major Turbine Components are identified in Schedule 02 (see Transport Traffic Management Plan drawings AMHST-206 “Delivery Routes for Turbines”). Minor turbine components (those turbine components other than the Major Turbine Components) will follow the Delivery Routes for Heavy Loads. The Major Turbine Components will follow the Delivery Routes for Turbines, described as follows:

- The Major Turbine Components for turbines 30, 26, 18, and 13 will arrive at the Project’s island dock and turn left onto Front Road (eastbound) passing through the Village of Stella and onward to a Project road related to these particular turbines.
- The Major Turbine Components for turbines 31, 34, 20, 05, 22, 16, 04, 29, and 01 will arrive at the Project’s island dock and cross Front Road onto the Project road that provides access to Concession Road 2. These components then turn right (westbound) on Concession Road 2 to the appropriate Project road.
- The Major Turbine Components for turbines 11, 03 and 09 will arrive at the Project’s island dock and cross Front Road onto the Project road that provides access to Concession Road 2. These component deliveries will then turn left (eastbound) on Concession Road 2, then turn right onto Stella 40 Foot Road (southbound), and then turn right onto Concession Road 3 (westbound) until reaching the Project road related to these particular turbines.
- The remaining Major Turbine Components will arrive at the Project’s island dock and cross Front Road onto the Project road that provides access to Concession Road 2. These component deliveries will then turn left (eastbound) on Concession Road 2, then turn right onto Stella 40 Foot Road (southbound) and then enter the appropriate private access road either on the west for turbines 19, 21, and 36 or east for turbines 37, 27, 02, 14, 07, 12, 33, and 28. The Major Turbine Components for turbines 14, 07, 12, 33 and 28 will continue southbound until turning left on South Shore Road (eastbound) before turning north onto the appropriate Project road.

Windlectric will continue to evaluate if hub or nacelle deliveries for S30, S26, S18 and S13 can be made following an alternative route that would further reduce the number of components travelling through the Village of Stella (the “Alternate Turbine Delivery Route”). The Alternative Turbine Delivery Route passes the Project road to turbines 12, 33 and 28 continuing (eastbound) along South Shore Road, then turns left onto Lower 40 Foot Road (northbound), then turns left onto Front Road (westbound), and then turns left onto the Project road for these turbines. The Alternative Turbine

Delivery Route will (only) be used for those components for turbines S30, S26 S18 and S13 that can be reasonably delivered along this route within the context of the REA Approval, using conventional delivery equipment, and without adding to the road modifications required for the delivery of Heavy Loads. It has already been established that the blades and tower sections for these turbines cannot use the Alternative Turbine Delivery Route.

### 2.1.2 Heavy Load Delivery Routes:

Heavy Loads include all material and equipment trucks which are not turbine component deliveries (the “Heavy Loads”). All trucks not used for personnel transport will be classified as “Heavy Load” trucks in the Traffic Plan. Examples of these vehicles include (but are not limited to) delivery of aggregate (crushed rock), concrete trucks, float trucks for relocating heavy equipment such as excavators, cranes and trucks containing crane parts, tool containers, direct boring drill rigs, water trucks, trucks containing tankers with dry cement powder, reinforcing steel bars, medium-voltage pad-mount transformers, batch plant equipment, substation equipment, spools of electrical cable and minor turbine components (i.e. turbine components other than those blades, tower sections, nacelles and hubs). The routes and the direction of travel for the delivery of Heavy Loads are identified in Schedule 02 (see drawing AMHST-206 “Delivery Routes for Heavy Loads”).

Heavy Load deliveries on the island will originate from either the Project’s island dock or the central staging and laydown area located on a private land access road between Front Road and Concession Road 2. Heavy Loads will follow the same routes as those described above for the Major Turbine Components with the exception of Heavy Load deliveries to turbines 30, 26, 18 and 13. Heavy Loads for those four turbines will take the same route as for turbine 33 but will continue along South Shore Road to Lower Forty Foot Road, travel north to Front Road and then west to the private land access road for these turbines. Heavy Load delivery trucks will not pass in front of the school or through the Village of Stella. A table containing a breakdown of the different Heavy Load truck types is provided in Schedule 03 (Heavy Load Traffic by Road). Many of these trucks will be transported to the island by barge. It is currently estimated that there will be two barges transporting personnel and materials for the Project throughout the construction period, and that each barge will make five to six trips each day. This number, however, will vary depending on weather conditions, changes in material delivery logistics, and unplanned events.

Some of the island-based Heavy Load truck trips will not require a corresponding barge trip because:

- Water trucks will be filled from Lake Ontario. These Heavy Load Trips are included in the count of island based traffic, but not in the barge trip count.
- Concrete delivery trucks will travel between the island batch plant and turbine foundations.
- Equipment utilized in road maintenance activities will be located overnight at the laydown area on the island.

Schedule 03 (Heavy Load Traffic by Road) displays the estimated quantity of Heavy Load delivery trucks on each road.

### **2.1.3 Other Large Transports:**

In addition to the larger sized deliveries described above, residents may encounter transports moving larger equipment loaded on a trailer from one construction site to another. The dimensions of the largest planned wide loads are listed in Schedule 10 (Largest Wide Load). The drivers of the transports moving over-width equipment will be instructed to give way to residents travelling on any narrow sections of public roads and will move to the side of the roadway in a convenient location to allow traffic to pass. Prior to movement of over-width deliveries, the construction site team will assess the planned route for the movement. If such route is too narrow to allow on-coming traffic to pass safely, the movement will be performed using flag-staff and will be treated as a Traffic Interruption.

The main turbine erection crane will be a Liebherr LTM-1750 or equivalent rubber-tired crane (or equivalent). General specifications for this crane are provided in Schedule 16 (Main Erection Crane). This model crane provides excellent maneuverability on narrow public roads. In order to minimize any traffic interruption related to the main erection crane movement, this crane will not be moved on public roads with the boom raised—a practice that is often employed as part of prudent wind farm construction practice.

## **2.2 Public Road Profile Modifications**

The planned Public Road Modifications are detailed in Schedule 11 (Public Road Modifications).

## **2.3 Public Road Closures and Delays**

Windlectric is committed to take every reasonable measure—consistent with prudent wind energy practice, prudent road construction practices, and applicable law—to minimize the number and duration of traffic delays related to: (i) Traffic Interruptions due to delivery of Major Turbine Components, movement of other wide equipment, and very short interruptions to allow construction equipment to reposition in working areas; (ii) Single Lane Restrictions; and (iii) full Road Closures. A summary of all planned road closures and associated recommended detour routes is provided as Schedule 14 (Road Closures and Recommended Detour Routes).



Advanced notice of daily construction activities that will affect usual traffic patterns including notice of all Single Lane Restrictions, Road Closures and recommended detour routes will be provided daily as is more fully described in Section 3 (Communications Plan).

Traffic Interruptions: Very short term (less than 30 minute) closures of public road segment(s) will be required at various instances during construction of the Project. Traffic moving in the same direction as the over-width delivery will experience a much shorter ‘full stop’ interruption and will then be allowed to proceed behind the over-width delivery. Traffic interruptions will be planned to start just as ferry-bound traffic has passed through the Traffic Interruption road segment<sup>4</sup>. Each Traffic Interruption will be staffed by a minimum of two traffic control flag persons at either end of the Traffic Interruption road segment—flag persons will have knowledge of alternative routes available and the time that the Traffic Interruption is expected to conclude. The position of the flag staff will be selected to ensure traffic will not have to back-track in order to take advantage of the recommended alternative route.

Single Lane Restrictions: Closures of public road segment(s) that will limit traffic flow to a single lane of traffic will be required at various instances during construction of the Project (a “Single Lane Restriction”). Single Lane Restrictions will be most often associated with electrical collector installation and road widening activities. Every Single Lane Restriction will allow single lane traffic with a minimum lane width of 3m width. Traffic will be permitted in alternating directions as necessary to mitigate residential traffic delays. Flag persons will be aware of the MTO ferry schedule and will give priority to traffic bound for the ferry dock. During Single Lane Restriction traffic control, flag persons will be used, in compliance with Ministry of Transportation (MTO) *Ontario Book 7* traffic safety requirements.

Activities which may result in partial constraints of a public roadway (i.e. a Single Lane Restriction or Traffic Interruption) include:

- Trenching along the roadside for the collection system which does not require full road closure.
- Laying material, grading and compacting gravel on public roads to improve the strength and bearing capacity will be generally performed while maintaining single lane use by local residential traffic and emergency services.
- Culvert installation at access road entrances will require partial blockage of the public road way.
- Slow moving oversized load vehicles for the transportation of main crane components between sites and for Major Turbine Component deliveries are expected to require closure of public roads ahead of the direction of travel of these vehicles for up to 20 minutes at a time (5 to 10 minutes will be more typical). Traffic will be allowed to follow these vehicles; however, traffic speeds will be reduced to between 10 km/h and 40 km/h until these vehicles are able to turn off of the public roads onto the relevant Project road. The Major Turbine Components are planned

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<sup>4</sup> Project staff will not interrupt traffic flow in the direction of the ferry until 5 minutes after the instant in time that a vehicle travelling from the point of closure could safely reach the scheduled ferry departure from Stella (travelling at maximum permitted speed).

to be delivered Monday through Friday over a seven week period. Note there may be special conditions (e.g. weather interruptions causing a delivery to be rescheduled) which will require Major Turbine Component deliveries to occur on a Saturday. Such changes in schedule will be communicated in accordance with the Communications Plan.

- Oversized loads may move slower through intersections and when entering or exiting a public road. The pilot vehicle and driver of the oversized load will wait for a sufficient gap in traffic to make the turn or proceed through the intersection. A traffic spotter will be deployed for areas where sightlines are not sufficient.
- The schedule for the Major Turbine Component deliveries for turbines 13, 18, 26, and 30 that will travel through Stella will be coordinated with the ferry schedule, for example, by delaying travel through Stella until shortly after the ferry has started its return trip to the mainland.
- Public traffic may be temporarily interrupted for several minutes on Concession Road 2 to allow the main erection crane to travel between private access road entrances. Although the crane will be disassembled into its road configuration for these movements (i.e. the crane will not be 'walked' with the boom up), traffic along Concession may need to be interrupted due to the width and turning radius of the crane. Six such crane movements involving the large main erection crane are planned between Dump Road and Emerald 40 Foot Road. Appropriate road signage, traffic marshals and flag-persons will be deployed. Advanced coordination with residents and emergency services will be completed to minimize potential impacts. The Windlectric on-site construction management team will ensure the two detour routes (Front Road and Concession Road 3) are identified as per MTO regulations and are clear of construction traffic during the times when Concession Road 2 is restricted.
- Oversized load transport will be managed by a contractor site management representative designated as the traffic coordinator to ensure that vehicles adhere to the ferry-related restrictions outlined above.
- For safety purposes, the movement of oversized load vehicles must follow the prescribed routes. These vehicles will follow a pilot vehicle which may be an Ontario Provincial Police cruiser or other private escort vehicle.
- Construction trucks carrying aggregate materials or concrete or other Heavy Loads will also reduce speeds as determined by road conditions and will, at all times, adhere to the posted speed limits on all Township roads. Vehicle speeds on Project site roads on private land will be restricted.
- Stella 40 Foot Road will be subject to a Traffic Interruption at the intersection with the site access roads between Turbine numbers S19 and S37 to allow the main erection crane to cross.

Road Closures: Full closures of public road segment(s) will be required at various instances during construction of the Project (a "Road Closure"). Road Closures are planned to occur during daylight hours (only). The closed road length will typically be less than 50 metres in length at any time, and will occur within a working area that will typically be limited to 500 metres in length. In the case of electrical collector line installation, the closed length will typically advance through the working area

at a pace of approximately 300 metres per day. Where a driveway will be temporarily cut-off within a working area, a steel plate will be used to maintain access to the public road. The length of time that resident's driveways will be blocked will most often be limited to a few minutes. Affected driveways will be restored to original or improved condition upon completion.

Each Road Closure will be planned with a detour route. Road closures will only be performed when the planned detour route is available.

There will be no Traffic Interruptions due to Major Turbine Component Deliveries occurring on Road Closure detour routes. Traffic interruptions on detour routes due to equipment movement, and safe repositioning of equipment in work zones on public roads, are expected to be very infrequent and will be of short duration (10 minutes or less). The possibility of Traffic Interruptions occurring on detour routes cannot be entirely eliminated due to the need to adjust the project schedule to adapt to actual progress and unexpected changes in the project plan. Traffic interruptions occurring on detour routes will always be performed with consideration to avoiding any interruption that might interfere with public access to the departure of the public ferry.

Construction activities which will result in temporary Road Closures are planned to be limited to the following activities:

- Turning radius improvement to Concession Road 3 at approximately 1.6 km west of Stella 40 Foot Road (estimated duration of closure is two days<sup>5</sup>),
- Road improvements and collector system installation on a 100 metre segment of Concession Road 3 located approximately 2.7 km west of Stella 40 Foot Road (estimated duration of closure is one half day),
- Electrical collector system installation and road improvements along South Shore Road from a point 1.3 km east of the intersection of Stella 40 Foot Road and South Shore Road to a point 2.4 km west of the intersection of South Shore Road and Lower 40 Foot Road (15 individual days<sup>6</sup>),
- Road improvements to Dump Road for a 0.8 km segment north of Concession Road 2 (estimated duration of closure is 3 days<sup>7</sup>), and
- Road improvements (grade adjustment) to Stella 40 Foot Road along a 250 metre segment in front of St. Paul's Presbyterian Church (if necessary to deliver Major Turbine Components) (estimated duration of closure is 2 days<sup>8</sup>).

## 2.4 Waste Management and Hazardous Materials

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<sup>5</sup> With no overnight closure.

<sup>6</sup> With no overnight closure.

<sup>7</sup> With no overnight closure.

<sup>8</sup> With no overnight closure.

All waste will be promptly removed from the island in accordance with appropriate provincial legislation including Ontario Regulation 347, the *General - Waste Management Regulation*.

Non-hazardous waste will be deposited in appropriately labeled and controlled receptacles located at the site laydown area. These waste receptacles will be provided and maintained by a licensed third party contractor who will also be responsible for the transport and reuse, recycling and/or disposal at an approved Ministry of Environment and Climate Change (MOECC) off-site facility as required by applicable law. Sanitary waste generated during the construction phase will be collected via portable toilets and wash stations supplied and maintained by a licensed third party contractor which will be retained prior to the start of construction activities.

A dedicated receptacle meeting appropriate regulations and standards will be maintained at the central staging and laydown area for any hazardous waste. Hazardous waste materials will be transported to the mainland regularly for recycling or disposal at a licensed facility. Transport and disposal of all hazardous waste will be by a licensed third-party contractor.

All contractor personnel and subcontractors working at the site will be properly trained on the Workplace Hazardous Materials Information System (WHMIS) prior to the commencement of the work.

There will be no long-term storage of waste during the construction of the Project and final disposal of waste will be conducted by a third-party contractor at an MOECC-approved facility. No waste will be deposited at the Amherst Island waste disposal facility and all third party contractors involved in waste management will be prohibited from using the public ferry for their activities related to the Project and will be required to use Project barges.

## 2.5 Navigable Waters

The primary Project-related factor that has the potential to affect marine navigation in the North Channel between Amherst Island and the mainland is increased vessel traffic (which includes the transport barges, associated tug boats and personnel vessels):

- Vessel traffic is governed by the *Collision Regulations of chapter 1416 of the Canada Shipping Act*. All marine equipment, whether anchored, at a dock, or under way, will comply with these regulations. During emergency situations (e.g. a 911 call) all Project marine traffic will yield to the public ferry. Dedicated Project docks will be constructed on the mainland (temporary) and the island (permanent) so there will be no impact to use of the existing MTO ferry docks.
- There will be continuous communication between the Project marine vessels and the Frontenac II ferry (or any temporary replacement) in accordance with marine protocol and Collision Regulations.

- It may be necessary to have the outer mooring dolphins of the Project docks lit at night; this determination will be made by Transport Canada.
- All Project marine vehicles and Project docks must adhere to Transport Canada requirements at all times.

## 2.6 Road Maintenance

- The contractor's Construction Superintendent will be in close communication with the Township's Transportation and Solid Waste Manager (or other Township designated representative) allowing them to address any concerns directly.
- At the end of each day during construction of the project, the contractor will inspect and prepare a Public Road Daily Inspection Report using the form provided as Schedule 18 (Form of Daily Public Road Inspection Report) on the condition of the Heavy Load Routes and any Turbine Delivery Routes used that day. The Public Road Daily Inspection Report will be prepared using the template made available to the Township's Transportation and Solid Waste Manager upon request (including providing a daily email if requested).
- The construction manager will respond to any request by Township's Transportation and Solid Waste Manager to correct any section of the road in which the condition of the road has deteriorated, or been left, in a condition that might reasonably be considered unsafe to the public.
- The contractor will inspect the condition of the public road at each site entrance being used at the end of the day and any excess mud, stone and debris will be cleared after the final vehicles have left the site road. Inspection sheets will be completed by contractor personnel to ensure that each entrance is clear before closing the site.
- Complaints from all sources will be addressed via the Complaint Resolution Protocol in accordance with the requirements of the REA.
- A dedicated road sweeper and dust control water truck will be maintained on-site and will sweep Front Road at the barge dock access road twice per day and will move around the island to clean roads at private access road entrances as necessary. The mainland construction barge dock will be maintained in a similar manner.
- There will be a road maintenance crew with a grader deployed on roads being used for construction. The contractor will have a grader on site to maintain existing roads throughout Heavy Load deliveries. The grader will plan efforts based on the traffic plan but will also be dispatched to take care of reasonable road problem complaints.
- Construction personnel will frequently monitor the condition of the roads and report any issues for coordination of remedial work to the contractor's Roads Superintendent or designee.
- The contractor's Construction Superintendent will consult with the Township's Transportation and Solid Waste Manager (or other Township designated representative) in order to determine which temporary intersection improvements will be made available for use by non-construction traffic (if any). All temporary intersection improvements, whether made available for use to

non-construction traffic or not, will be signed in accordance with Ministry of Transportation (MTO) *Ontario Book 7* traffic safety requirements.

## 2.7 Impact Mitigation

The following outlines further specific mitigation measures that will be utilized to minimize the level of disruption, disturbance and inconvenience to the Municipality's residents which will be employed as necessary in order to reduce the potential impacts from Project activities. The following section provides details of unique mitigation and communication plans with specific stakeholders, such as the school, agricultural traffic, public parking and community events. A very important component of the impact mitigation will be the implementation effectiveness of the Communication Plan (Section 3), including any stakeholder concerns or complaints which are specifically detailed in Section 3.2)

### 2.7.1 Bicycle Traffic

- Informational materials with maps identifying construction road traffic routes will be provided at various locations in the community including the post office, museum, ferry terminal and others as described in Section 3 (Communications Plan).
- All site personnel will be warned to pay particular attention to cyclists during their mandatory site safety orientation prior to commencing work and will be reminded at daily morning site meetings. Daily morning site meetings are mandatory and will be used to disseminate new information and to re-enforce existing site rules. Sample representative content of the mandatory site safety orientation meeting is provided in Schedule 04 (Site Safety Orientation).
- All construction traffic will be courteous to cyclists and will provide them the right of way as per highway traffic law and the site construction rules. Interaction between Project-related traffic and pedestrian and cyclist activity on the public roads will be governed by specific Contractor safety policies that will include the following measures whenever construction vehicles encounter pedestrians or cyclists on the public roads: (i) a maximum vehicle speed of 20 km per hour within 50m of a cyclist or pedestrian; (ii) a minimum separation of 2m when passing a cyclist or pedestrian, and (iii) construction vehicles will remain behind cyclists or pedestrians until it is safe to pass. It will be a policy of the Contractor that failure to comply with these Constructor safety rules will be grounds for driver dismissal from the Project.
- Areas of active construction activity on private land will be off-limits to bicycle traffic and will be clearly indicated as such. Bicycle traffic on public roadways will be treated as vehicular traffic and directed accordingly through active construction sites.

### 2.7.2 School Functions

- Prior to the start of major civil construction a coordination meeting will be scheduled with the school principal to review traffic management and safety plans.
- Regular meetings will be organized with the school principal or other designated representative(s) to provide advance notice of traffic routing and schedules. These meetings will be scheduled by mutual agreement and will be as frequent as requested by the school representative.
- Construction work will be planned in order to mitigate the impact on special school functions and these mitigation plans will be communicated to the site personnel via the daily morning meetings leading up to the school functions.
- The school representative will be invited to attend the daily coordination meeting to communicate directly with site staff if they wish. School staff will have access to the site construction planning map referred to in Section 3 (Communications Plan). As soon as practicably possible, the school principal and any other school representatives so designated, will be oriented to the project's Communication Plan, specifically those sections that relate to the two-way access to multiple channels for providing the Project team with feedback including: the Complaint Response Protocol, the CLC, and the CWG, sending an email to the Project team or the CLC or CWG at [Windlectric@amherstislandwindproject.com](mailto:Windlectric@amherstislandwindproject.com), or contacting the Project site team at the Project site team telephone number.
- A calendar of scheduled school functions including but not limited to bus times, PD days, parent nights, and theatrical productions will be posted in a location of high visibility at the site health and safety trailer and reviewed regularly. Site management will bring attention to special dates as required.
- In the event of an unplanned school event such as school closure due to mechanical/electrical problems at the school or snow day, the school will have the direct cell phone numbers of the senior site management team who will immediately review construction planning for the day and respond reasonably, in relation to traffic management and safety.
- During transportation of the Major Turbine Components in front of the school, a traffic safety monitor will be situated near the school entrance to ensure traffic flow is maintained and safety is regulated at all times. This traffic safety monitor may include uniformed OPP or pilot cars as necessary and will be in constant contact with the site manager.

### **2.7.3 Student Transportation**

- Presently, public school bus services on the island are provided by two 30 passenger buses for senior students and one bus for the Amherst Island School. The buses for the senior students operate in the morning from 6:30 am to 7:00 am, one bus on one side of the island and one on the other side, that eventually make their way to the ferry to take the senior students to their school on the mainland. The Amherst Island Pubic School bus travels on the island in the morning from 7:20 am to 8:25 am. In the afternoon, the senior student buses return to the

island at 4:00 pm. The Amherst Island Public School drops off students between 3:30 pm and 4:35 pm.

- The site team, and in particular the Safety Supervisor, will coordinate with school officials to ensure appropriate safety precautions are set in place for any construction activities which may impact student transportation.
- The TriBoard Student Transportation Service--that is responsible for the public school bus services on the island—was contacted as part of the development of this Operations Plan. The TriBoard has requested that they be notified of any Road Closures at least one week in advance so that its drivers can make route adjustments. Weekly notification of Road Closures will be provided to the TriBoard as part of the Communications Plan. The Project team will co-operate with the TriBoard if any reasonable change is requested to this notification plan.
- There will be no impact to school buses on their way to the ferry in the morning as any Road Closure on a school bus route on school days will be delayed until both school buses have passed (a Single Lane Restriction may be in place to initiate work). Furthermore, deliveries of Major Turbine Components will be scheduled to ensure that school bus service to the ferry will not be interrupted.
- Turn-arounds will be provided on either side of each Road Closure to ensure that school buses can complete all their regular drop-off stops using modified routes if necessary. These turn-arounds will be provided either using existing driveways off of public roads, nearby existing intersections, or via a specifically constructed turn-around feature in the road allowance. These latter specifically constructed turn-around features may incorporate existing turn-offs to agricultural fields.

#### **2.7.4 Agricultural Traffic**

- Types of agricultural traffic expected are transporters with animals, herds or flocks on foot, and farming equipment. Seasonal agricultural traffic will be taken into consideration in the day-to-day construction planning. The site team will communicate closely with farmers as per the Communications Plan, and will thus be aware of the agricultural traffic to be expected. This information will then be coordinated with the construction management team during Plan Of Day (POD) meetings and with the general site personnel during mandatory daily morning meetings.
- Agricultural traffic awareness training will also be provided to each worker during their mandatory pre-work site orientation meeting. This training will include details communicated to workers regarding the timing, types, size, location, speed and extent of agricultural traffic to be expected.
- The site Safety Supervisor will coordinate with local farmers to understand their individual needs and work to mitigate the impact. This will include providing farmers with phone numbers to call in advance of particular equipment movements as well as regular meetings.
- If a large piece of agricultural equipment such as a tractor or combine does encounter a construction transport vehicle, the construction vehicle will pull over as far as possible onto the



shoulder and come to a complete stop to allow the farm equipment to pass. If there is still not enough room the construction vehicle will summon a pilot vehicle and back up to a suitable location where the farmer can pass.

### 2.7.5 Vehicular Traffic to and From the Public Docks

- Mainland: A traffic coordinator will be located on the mainland to ensure construction traffic does not impede commuter traffic to and from the MTO ferry on Highway 33. The mainland traffic coordinator will marshal traffic between Project parking areas and the construction barge dock.
- Island: A traffic coordinator at the intersection of Front Road and the entrance to the Project island dock will control the timing of Project traffic travelling towards the public dock area to ensure that construction traffic does not impact ferry traffic at the intersection of Front Road and Stella 40 Foot Road, or access to the pre-boarding area.
- For further clarity, during initial weeks of construction traffic at both the above-referenced Mainland and Island locations, the traffic coordinators will be present on a full-time basis to ensure traffic flows safely and smoothly. The traffic coordinators will ensure that construction traffic operators are aware of protocols and all public traffic and safety implications. Also, during known periods of heavy construction traffic activity, (i.e. delivery of Major Turbine Components) a traffic coordinator will also be located in these locations on a full-time basis. During all other periods, various other construction contractor supervisors will be trained and responsible to act as traffic coordinators in the event such coordination is required.

### 2.7.6 Parking

- There will be sufficient parking areas at the Project's mainland dock for staging of construction traffic preparing to board the construction barge to avoid traffic congestion on Highway 33.
- With the exception of the island dock construction, no construction vehicles will be permitted to use the MTO ferry or to park at either the island or mainland MTO ferry terminal parking area.
- Site personnel will park on the mainland and be bussed to the crew ferry barge and from the island construction barge terminal to the laydown area. Crew trucks and vans will be used on the island for those carrying tools and other equipment. Management vehicles (typically pickup trucks) will travel on the barge on a daily basis as required.
- Work vehicles which are brought to the island for crew and equipment transport will be parked at the site trailer offices, the construction laydown areas and turbine work areas during the construction period. Construction equipment will also be parked at turbine sites and on private access roads during the construction period.
- Parking Restrictions - Delivery of the Major Turbine Components will generally require an available road width of 5 metres (the widest Major Turbine Component has a width of 4.5 metres and a wheel base of 2.5 metres, road widths of less than 5 metres may be considered by the turbine delivery contractor for short stretches of straight road on a case by case basis). The

more obstructed the route is with parked cars, the longer the delivery will take, which will result in more inconvenience to road users. In order to ensure that an unobstructed route is available for delivery of the Major Turbine Components along the Delivery Routes for Turbines identified on Figure 2 of Schedule 2 (Traffic Management Plan) and the inconvenience to the road users is minimized, Windlectric will request a temporary restriction to public parking on one side, or on both sides if required, of the public roads along the Delivery Routes for Turbines. Such request would be limited to the period during the turbine deliveries take place which is presently anticipated to take seven weeks. The parking restrictions may also be limited to only those days upon which deliveries are taking place along a specific route; for example, parking restrictions on Front Road could be limited to 4 days.

- Any such temporary parking restrictions will be communicated to the community as part of the regular traffic information updates provided in accordance with the Communications Plan.
- In addition to the above communication of parking restrictions via Communication Plan updates, the traffic coordinator working for the Windlectric team will be located along the Delivery Route in question on the day of the Major Turbine Component delivery to implement the parking restriction to users of the road wishing to park along the route in question.

### 2.7.7 Community Events

- The Project team is aware of the community events listed in Schedule 12 (Amherst Island Community Events).
- No construction activities are planned for any Sunday.
- No construction activities are permitted after 8:00 pm (with the exception of those activities listed in Section 2.9 (Hours of Operation)).
- Processions related to special church services (i.e. weddings and funerals) should be coordinated by contacting the Windlectric Site Manager at (613) 985-4466. The project team will take reasonable steps to minimize (the goal will be to eliminate) the impact of traffic disruptions on these processions if sufficient advance notice is received.
- To the extent possible, as Windlectric staff become aware of the above types of special church services, or other community events not listed on Schedule 12 and known as of the publication date of this Operations Plan, the project team will also take reasonable steps to minimize the impact on these events.
- In all cases, and to the extent possible, Windlectric staff will communicate with contact persons involved in the community events to fully understand the timing and location implications of the event (i.e. parking, traffic routes, etc.), such that construction activities, or the event, can be re-arranged or otherwise planned to minimize the impact on these events to an extent that is reasonably possible.
- A comparison of the current planned schedule for the Project Construction and known community events indicates the following overlaps that are mitigated as follows:
  - To ensure that there is no interference with the Fish Fry at St. Paul's Presbyterian Church on September 3, 2017, the Project will not use Stella 40 Foot Road on this date after 3:00 pm.

- The Walling and Carving workshop on Saturday October 21 is not located near any planned Project activities except Delivery of Major Turbine Components to S30, S26, S18 and S23. Delivery of Major Turbine Components along Front Road to these sites will not be performed on Saturday October 21.
- To ensure there is no interference with St. Paul's Christmas Bazaar on Saturday November 18, 2017, the Project will not deliver Major Turbine Components along Front Road on this date.

## **2.8 Enforcement of Speed Limits and Traffic Management Plan Training**

The Site Safety Supervisor will have the authority and responsibility to ensuring that all Project staff comply with public and Project-specific speed limits, and obey traffic rules in accordance with the Operations Plan. The Project's employee training procedures and enforcement policies are described in Section 4.4 (Employee Training and Enforcement).

## **2.9 Hours of Operation**

Construction activity will take place within the time periods specified in the Municipality's noise bylaw 2011-6 (as amended by bylaw 2012-046). There are exceptional circumstances however when work could occur outside of these hours as outlined in Sections 2.9.1 to 2.9.4.

### **2.9.1 Emergency Circumstances**

As is recognized by the noise bylaw, certain emergency service responders including ambulance, police, fire trucks, or helicopter ambulance may operate outside of the standard hours of operation.

### **2.9.2 Turbine Foundation Pours**

Each wind turbine foundation is poured in a continuous process which cannot be interrupted. These pours will be planned to complete within the normal working day. However, in the exceptional circumstance of an interruption due to mechanical or weather-related event, the pour may need to be continued beyond the normal working day until it is completed.

### **2.9.3 Turbine Erection**

During the erection of a given turbine there are certain specific erection milestones which have to be completed once the lift has begun. Daily lift work will be planned to allow completion by end of

normal daily working hours, but in the event of weather or mechanical delay there is a possibility that the work will need to proceed beyond normal working hours. Completion of turbine erection at night is consistent with prudent wind energy practice.

#### **2.9.4 Main Transformer Fill**

The Main Power Transformer (MPT) is located at the island substation. The MPT must be shipped empty of oil and will be filled on site during the MPT installation and commissioning process. This filling process may take longer than a single work day and must be completed once it has commenced. This is a one-time task that will be limited to the substation location.

#### **2.9.5 Nightshift Electrical Work**

Nightshift electrical work or commissioning activity is not currently planned to be required during Project construction. However, it may be necessary to perform such work at the Project island substation and/or at the turbine sites in order to maintain schedule. These activities will be limited to work that can be carried out with portable hand-tools. Workers will travel to the worksites using pickup trucks or vans. The quiet nature of this work, and the large distance between the location(s) of this work from noise receptors, will ensure that such work will not disturb residents.

### **2.10 Construction Noise Mitigation**

Sources of noise from typical wind farm construction activities include, but are not limited to:

- Foundation construction - excavators, loaders, steel transport on flatbed trucks, concrete trucks, concrete tele-belt or pump trucks, dewatering pumps, crane, compaction equipment, mechanical rock breakers;
- Road construction - bulldozers, loaders, gravel trucks, smooth drum and sheep's foot rollers;
- Trench construction - excavation by trencher or excavator, trucks for cable delivery and placement, loader and compaction equipment for backfilling, direct boring drill machines and materials delivery; and
- Wind turbine generator erection - multiple cranes, impact ratchet equipment, hydraulic pumps for tower bolting equipment, generators.

Noise during construction will be unavoidable, but the contractor will take all reasonable measures consistent with prudent wind energy practice in order to mitigate noise impacts. Such efforts include: optimizing work practice efficiency to reduce equipment run times, controlling the amount of re-work through the use of quality controls, ensuring all equipment is serviced and operating properly, and ensuring all regulatory compliance noise suppressing equipment is installed and functional by performing regular equipment inspections and audits.

Prior to collector system trenching work along public roads near households, the trenching crew foreman will personally visit residences to make sure occupants are aware of the pending activity, and to provide a description of the anticipated noise level and duration. This day-of-the-work courtesy notice will be in addition to notices provided in accordance with Section 3 of this Report (Communications Plan).

The construction sequence schedule will be set to ensure that construction noise does not interfere with the annual Emerald Island Music Festival. This Festival is located at 12675 Front Road and is generally scheduled for the first weekend following the August long weekend (next summer's festival is August 11 to 13, 2017). The location of the festival is 1800 metres from the nearest construction activity. At this distance the construction work will be barely audible but to reduce general disturbance the contractor will avoid particularly noisy activities at the nearest turbines 1, 29 and 4 during these days.

## **2.11 Road Dust Control**

A water truck will be on-site full time once road construction begins until completion of major construction. The water truck route and water spraying activity will be planned based on road conditions and the work planned for the day. The water truck will also be dispatched to locations where additional dust control is required. All water for construction purposes will be drawn from Lake Ontario at approved locations.

The concrete batch plant will be equipped with Best Available Control Technology (BACT) to control fugitive dust from normal operations and meet all applicable law and permit requirements. Conveyors used for stockpiling aggregate materials will employ dust collection systems including discharge chutes to mitigate fugitive dust. Water will also be used at the batch plant and on stockpiles to suppress dust. The contractor will make routine inspections and prepare an audit including dust mitigation measures being employed on the Project. This audit of environmental controls will identify if a control measure is in place and functioning and if corrections identified from previous inspections have been completed. This audit will be included with the inspections of Erosion and Sediment Controls and shared with the Municipality's Engineer. The Township's Engineer will have the inspection schedule and may witness any and all inspections at his or her discretion.

## **2.12 Impact to Trees and Vegetation Along Municipal Road Allowances**

Trees in the public road allowances may be impacted by specific Project-related activities: (i) installation of the collector system, (ii) removal of trees located at turns in the road that will interfere with Major Turbine Component Deliveries, (iii) removal of trees located at entrances to new turbine access roads, and (iv) trimming of overhanging branches that are expected to interfere with Major Turbine Component Deliveries. Any Emerald Ash Borer affected tree material will be removed in accordance

with the applicable Canadian Food Inspection Agency guidelines ([www.inspection.gc.ca/plants/plant-pests-invasive-species/insects/emerald-ash-borer/faq/eng/1337355937903/1337356019017](http://www.inspection.gc.ca/plants/plant-pests-invasive-species/insects/emerald-ash-borer/faq/eng/1337355937903/1337356019017)).

Trees and the Collector System: No trees in the public road allowances are planned to be removed to install the collector system. The trees along the collector path in the public road allowance were studied by a professional arborist, and the location (particular side of the road) of the collector system was adjusted in order to minimize damage to the roots of existing trees in the public right-of-way. As a result, no trees are expected to be killed due to root damage caused by installation of the collector system. The revised arborists report based on the updated location of the collector system is included as Schedule 13 (Arborist's Collector System Tree Impact Assessment). The Arborist's report identifies several trees that may experience 'Moderate' negative impact due to installation of the collector system. The Project will obtain a Tree Permit from Loyalist Township for each tree moderately impacted that is greater than 15cm diameter as measured at chest height in accordance with Loyalist Township's Tree By-Law and will plant replacement trees in accordance with such permit(s). For further clarity, the important tree line at the St. Paul's Presbyterian site has been part of the Arborist's Collector System Tree Impact Assessment. It is further detailed on Drawing No. L904, Sheet 5 of 12, of the "34.5 kV Collector System Tree Inventory Plan" portion of Schedule 13, "Arborist's Collector System Tree Impact Assessment".

Tree Removal To Allow Major Turbine Component Deliveries, and at Access Road Entrances: A list of trees (have a trunk diameter larger than 15cm diameter, as measured at chest height) within the public road allowance that will be removed as part of the Project's construction activities is provided in Schedule 19 (Tree Removal in Municipal Road Allowances). These trees will be removed to facilitate Major Turbine Component deliveries or will be removed during the construction of the access roads to turbine sites. The Project will obtain a tree permit for each tree removal in accordance with Loyalist Township's Tree By-Law and tree replacements will be made in accordance with such tree removal permit(s).

Tree Trimming to Allow Delivery of Major Turbine Components: The anticipated blade delivery trucks require 5.7 meters of height over a narrow span near the truck's centerline and the anticipated nacelle delivery trucks require 5 meters of height and 4 meters of width. A professional arborist will be employed to evaluate and provide a report regarding the expected level of damage to trees in the public road allowance due to trimming. The Project will obtain a Tree Permit from Loyalist Township for each tree that is greater than 15cm diameter as measured at chest height that the arborist determines may experience 'Severe' or 'Moderate' negative impact due to trimming. The Project will plant replacement trees in accordance with such permit(s).

The following locations have tree cover which will be measured for transport clearance to assess the need for tree trimming:

- Front Road approximately:
  - 930 m west of Stella 40 Foot Road
  - 720 m west of Stella 40 Foot Road

- 225 m east of Stella 40 Foot Road
- 290 m east of Stella 40 Foot Road
- 536 m east of Stella 40 Foot Road
- Foot of Preston Cove
- 700 m west of Lower Forty Foot Road
- Intersection with Lower Forty Foot Road
- South Shore Road approximately:
  - 230 m east of Stella 40 Foot Road
  - 450 m east of Stella 40 Foot Road
  - 550 m east of Stella 40 Foot Road
  - 700 m east of Stella 40 Foot Road
  - 1450 m east of Stella 40 Foot Road
- Concession Road 3 Road approximately:
  - 600 m west of Stella 40 Foot Road
  - 840 m west of Stella 40 Foot Road
  - 3750 m west of Stella 40 Foot Road
- Concession Road 2 Road approximately:
  - 850 m west of Stella 40 Foot Road
  - 1150 m west of Stella 40 Foot Road
  - 2400 m west of Stella 40 Foot Road
  - 2700 m west of Stella 40 Foot Road
  - 4540 m west of Stella 40 Foot Road
  - 5450 m west of Stella 40 Foot Road

## 2.13 Cultural Heritage Features

The mitigation measures related to Cultural Heritage Features described herein are based upon the recommendations of the Heritage Assessment Report (as modified by REA Amendment 4) and the further recommendations of the Ministry of Tourism, Culture and Sport. The Heritage Assessment Report is available on the Project website<sup>9</sup>.

The Cultural Heritage Features exposed to Project activities are:

<u>Cultural Heritage Landscapes (CHL)</u>		
CHL 1	Village of Stella	Related structures
CHL 3	St. Paul's Presbyterian Church	Related structures
CHL 4	Ferry Landscape	Related structures, vista
<u>Built Heritage Resources (BHR)</u>		

<sup>9</sup> [www.amherstislandwindproject.com](http://www.amherstislandwindproject.com) (the Heritage Assessment Report can be accessed on the web site under the 'Public Information' drop-down, by selecting the 'Final Renewable Energy Approval Technical Documents' link).

BHR 1	1830 South Shore Road*	Structure
BHR 2	2090 South Shore Road*	Structure
BHR 3	2450 South Shore Road	Structure
BHR 4	3500 South Shore Road	Structure
BHR 5	4125 South Shore Road	Structure
BHR 6	2750 Front Road	Structure
BHR 7	3190 Front Road	Structure, stone fence
BHR 19	3475 Second Concession Road	Structure
BHR 20	4725 Second Concession Road	Structure

\*Mitigation not required for these features per the Heritage Assessment Report

The general preventative and mitigation efforts related to the Cultural Heritage Features within the Project study area are detailed in Section 2.13.1 (General Preventative and Mitigation Efforts). Specific preventative and mitigation measures with the monitoring program for each of the cultural heritage features that are expected to be exposed to Project activities will be performed in accordance with the monitoring program included in this plan as Schedule 17 (Cultural Heritage Feature Monitoring Program).

The recommendations of the Ministry of Tourism, Culture and Sport to mitigate Project-related negative impacts to Cultural Heritage Features are summarized in the Heritage Assessment Report and provided below for reference:

*In order to lessen or avoid potential indirect negative impacts from construction vibrations on BHRs 4, 5, 6, 19, 20 and 21 and components of CHLs 1 and 3, the following recommendations have been made:*

- *Project activities should be avoided within 50 m of identified BHRs and any structures or buildings within identified CHLs.*
- *If Project activities within a 50 m buffer zone cannot be avoided, maximum acceptable vibration levels, or peak particle velocity (PPV) levels, should be determined by a qualified engineer with previous experience working with built heritage resources under similar circumstances.*
- *Project activities within the 50 m buffer zone should be monitored to ensure that PPV levels are not exceeded.*
- *Photographically record condition of burial vault and monitor its physical condition during construction process;*
- *All Project activities should cease immediately if levels are exceeded, or changes to resources occur, until a solution can be determined.*

*With respect to the dry stone walls associated with BHRs 7 and 18, the following recommendations have been made:*

- *It is recommended that Project activities be avoided within a 50 m buffer zone of any dry stone walls.*
- *In the event that Project activities cannot be avoided within 50 m of any dry stone wall, the wall should be documented prior to the commencement of said activities.*



- *The stone wall should be assessed periodically by a qualified individual during Project activities to ensure that no damage is occurring.*
- *Project activities should cease immediately if vibrations are found to be resulting in damage until the wall can be adequately reinforced or supported.*
- *The stone wall should be evaluated by a qualified mason or engineer following Project activities to ensure that no damage has occurred and any damage to the wall should be repaired immediately following Project activities.*

*Finally, prior to construction of shoreline Project infrastructure, views from the Ferry Landscape should be more thoroughly documented, particularly towards the proposed locations of new permanent and temporary infrastructure. This documentation should include, at the very least, a photographic record of existing conditions and views<sup>10</sup>.*

### **2.13.1 General Preventative and Mitigation Efforts**

The locations of the historically-significant sites identified in: (i) the Heritage Assessment Report, (ii) the Amherst Island Wind Energy Project Irish Stone Fence Detailed Review, and (iii) those specific locations identified in the Road Use Agreement<sup>11</sup>, will be indicated on the site map issued to all site personnel. Appropriate signage or warning flagging will be installed at any of these sites that would reasonably be expected to be impacted by Project activities in order to bring them to the attention of site personnel working in the area. The contractor's site quality representative will audit these flagged sites on a regular basis to ensure all required signage is in place.

All site construction personnel will receive training during site orientation on the specific Cultural Heritage Features and protected properties located on the island, the importance of protecting these features, and the mitigation procedures and systems put in place to protect them.

A qualified consultant to give an informational presentation periodically to all site personnel in order to provide context to the heritage features of concern and thereby deepen the understanding of the construction personnel related to cultural features.

In the cases in which the Heritage Assessment Report has indicated that there are potential effect(s) from vibration related to Project activities that will occur within a 50 metre buffer zone around a Cultural Heritage Resource, the maximum acceptable vibration level at such Cultural Heritage Resource will be determined by a qualified engineer prior to the start of Project activities. Each of these potentially affected Cultural Heritage Resources will be photographically recorded prior to any work in the area.

Peak Particle Velocity (PPV) vibration levels will be monitored and logged around a Cultural Heritage Resource during Project activity within a 50 metre buffer zone around a Cultural Heritage Resource

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<sup>10</sup> The views from the Ferry Landscape have been photographed at the time of writing.

<sup>11</sup> Specifically 360 MacDonald Lane, 6345 and 9000 Second Concession Road and 4000, 5675 and 15095 Front Road, and stone walls erected as part of the Stone Wall Festival at 5830 Front Road.

by a qualified vibration analyst to ensure established thresholds are not exceeded in accordance with the Heritage Assessment Report, this Operations Plan. The contractor will cease construction activities if PPV levels are exceeded and will alter construction activities to ensure compliance with PPV levels. The contractor will also periodically visually monitor these structures during periods when Project activities are taking place within the related 50 metre buffer zone to ensure no damage is occurring. A qualified mason or engineer with appropriate expertise will visually evaluate the stone structures before and after Project activities to ensure that no damage has occurred; any damage will be recorded, reported and repaired by a qualified professional.

Baseline vibration studies will be performed at a location (or locations) away from any Cultural Heritage Feature to determine typical PPV vibration levels produced by: (i) collector cable trenching activities, and (ii) construction traffic. The studies will be carried out at location(s) representative of typical road and geotechnical structures to determine PPV vibration levels at different distances from the road. For the traffic-related PPV studies, expected vibration levels will be studied using loaded concrete and aggregate trucks at various speeds.

The Project will comply with the requirements of condition M of the REA issued for the Project attached as Schedule 05 (REA Condition M).

## **2.14 Drainage, Grading and Fencing**

Best management practices will be utilized to control erosion and sediment runoff while maintaining drainage as per the Condition H of the REA (attached as Schedule 06 (REA Condition H)). Typical erosion and sediment control details for the Project are attached in Schedule 07 (Erosion and Sediment Control Typical Details).

Windlectric will retain the services of a professional environmental monitor to ensure that the contractor has the required erosion and sediment controls put in place and ensure they are constructed per the contractor's engineered plans. A weekly audit of all drainage, erosion and sediment controls will be conducted by Windlectric's environmental monitor and the contractor to ensure these controls are installed per the plans and are maintained continuously. The Township's Engineer may choose to witness these inspections and provide reasonable direction for improvements. The Township's Engineer's directions will be forwarded to the contractor's engineers for review and approval. Once approved, the contractor will implement them.

Impacts from construction activities to private fencing and other private improvements (e.g. signage) located within the public road allowance will be avoided to the extent reasonably possible. Whenever impacts to fencing cannot be avoided, the fence line will be moved temporarily to the boundary of the road allowance to maintain continuity with yard fencing as needed to maintain equivalent security to the property it surrounds. Following construction activities, a fence with the same or superior quality

will be installed on either the original fence line, or at the property line at the discretion of the Township.

## **2.15 Village of Stella, the Ferry Landscape, St. Paul's Presbyterian Church, and the Catholic Cemetery**

The specific mitigation efforts and preventative measures planned to mitigate impacts on the historic Village of Stella, Catholic Cemetery, St. Paul's Presbyterian Church, and the Ferry Landscape are encompassed in the mitigation efforts described in Section 2.13.

## **2.16 Ferry Operations**

The Project will not use the public ferry for construction purposes with the exception of use of the public ferry for transport of personnel, equipment and materials required for the construction of the Project's island dock. The island dock construction contractor will ensure that its use of the public ferry will cause no delay or restriction on the public use of the ferry, and will ensure that the public ferry is able to offload and reload without causing delay to its schedule caused by the contractor.

The contractor's barge operator shall be required to manage the Project's water-based activities in such a way to ensure that operations of the public ferry are not delayed. Radio communication and coordination between the barge operator and the ferry captains will ensure that there is no impact to the ferry schedule. The contractor's barge operator will be required to meet with the public ferry's captain in order to review Project barge operational and communication procedures. The *Collision Regulations chapter 1416 of the Canada Transport Act* will govern the communication and sharing of the waterway between the various vessels.

### 3 Communications Plan

Efficient and prompt communications will be a fundamental requirement for good relations between the various parties. This Communications Plan describes the means and methods that will be used by Windlectric to communicate Project activities to the public, and in particular any activities that may disrupt, disturb or inconvenience the Municipality's residents. The Communication Plan will use multiple channels to ensure that the Municipality's residents are able to access updates using means that different residents find most convenient. The multiple channels will include the internet, social media, radio, and weekly mail.

The Communications Plan will also ensure communication between the Project and the public is two-way. The public will be able to access multiple channels for providing the Project team with feedback including: a Complaint Response Protocol, through access to the Community Liaison Committee (the CLC), and the Community Working Group (the CWG), sending an email to the Project team (or the CLC or CWG) at [Windlectric@amherstislandwindproject.com](mailto:Windlectric@amherstislandwindproject.com), or contacting the Project site team at the Project site team telephone number<sup>12</sup>.

#### 3.1 Municipality and Resident Notice

A construction activity map will be produced on a weekly basis to provide a simple visual description of which roads will be impacted on a particular week. The map will identify trenching, aggregate deliveries, concrete deliveries and component deliveries with separate colours. The construction activity map will be updated weekly and will be publicly available through a Project website, the Project Facebook page (search Facebook for 'Amherst Island Wind Project'), and Twitter (@Amherst\_WindP).

Daily reminders of expected Traffic Interruptions, Single Lane Restrictions, and Road Closures will be issued via the Project website, Facebook, Twitter (including Tweeting at YGKTraffic). The Project team will ensure the school, the TriBoard student transportation services, and EMS personnel have the latest information and website updates. In addition to the social media feed, the local radio station will also be provided with communication from the site construction management in order to relay it to listeners if they wish.

A general photographic information brochure on the nature of each type of construction activity will be produced and made available to the public on the Project website.

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<sup>12</sup> The public access '1-800' telephone number will be communicated to the public using the Communications Plan multi-channel protocol ahead of major construction starting on the island.

Windlectric has assembled a committee of representatives from the island and surrounding community to act as the Community Liaison Committee (the CLC). This committee will review the log of all complaints and the resolution of these complaints. The CLC will convene at least 2 meetings per year that will be open to observation by the public. The CLC meetings will be augmented by a Community Working Group (the CWG) that will meet monthly in between the CLC meetings. The CWG meetings will not be open to the public so that members of the group will feel comfortable expressing their views frankly and openly. The CWG will be composed of the CLC members and will be joined by additional parties as the CWG may invite (e.g. the Project contractor, the Project's management team, emergency services, subject matter experts, etc.). The CLC and CWG can be accessed by sending an email to the Project website (such email will be forwarded to the members of these committees).

### 3.2 Complaint Response Protocol

- Written complaints during construction will be accepted by the Project team via email at [Windlectric@amherstislandwindproject.com](mailto:Windlectric@amherstislandwindproject.com). Each complaint will be transferred to a Complaint Form by Project staff, and logged. A sample complaint form is provided as Schedule 15 (Sample Complaint Form).
- All telephone complaints received by the Project team will be transferred to a Complaint Form and logged. Information will include complainant name, time, location and description of complaint. The Complaint Form will also record the Project Team's response to the complaint including what will be done, if appropriate, to mitigate the issue.
- Complaints that require immediate action (e.g. a driveway inadvertently blocked by construction activities) can be directed to the Windlectric Site Manager by calling (613) 985-4466.
- The project team will acknowledge each and every complaint within three business days of receipt, and will work to a service level response of 5 business days for either a full or initial response. Some complaints may not receive a fulsome answer within the 5 business days due to either the complexity of the required response, and/or the availability of subject matter experts.
- The construction team will make every reasonable effort to resolve all complaints in a timely manner.

### 3.3 On-site Staff

- There will be a dedicated site execution team comprised of construction contractor and Windlectric representatives located on the island on a daily basis.
- A two-person security detail will be present on the island Project site overnight, and during holidays and weekends, to ensure round-the-clock response to emergency situations. This security detail will be present during the following construction activities: i) road construction, ii) collector line construction, (iii) island electrical substation construction, (iv) turbine component delivery, (v) turbine erection, (vi) turbine mechanical completion, and (vii) turbine and wind farm commissioning.

- The site team will establish a regular time slot for meeting with the Township. This will be a scheduled meeting at the construction site office or another suitable location with at least two members of the construction management team in attendance. These meetings will be documented and minutes will be issued.
- Urgent or emergency issues will be received by the site construction management team at any time.

## 4 Public Safety Plan

### 4.1 Emergency Services

- Construction planning will ensure that Emergency Services (ES) will have access to all residences at all times during construction. Each full road closure, and its related detour route, will be communicated to Emergency Services at least one week in advance. Full road closures will not be left in place overnight.
- All Single Land Restrictions will have a minimum 3m width<sup>13</sup> in order to ensure that emergency service vehicles have room to pass; flagstaff at single road closures will give priority to Emergency Services vehicles.
- If any emergency service vehicle is called to a particular location on the island, the ES team will be able to contact the contractor's On-site Safety Representative who will immediately stop all contractor work across the entire site, ensure all trucks and other equipment are moved off the roads along the route immediately, and will offer to provide guidance to ES regarding any alternative routing related to the site of the emergency.
- The contractor's safety supervisor will be available for weekly meetings with ES personnel to discuss any ongoing activities or concerns. ES will be advised of the construction activities scheduled for the following week and ES will have the opportunity to propose revisions or additions to the Public Safety Plan, the contractor's Health and Safety Plan, and the Emergency Response Plan.
- ES will have access to the emergency radio frequency and radio equipment (if necessary) that will be used by the contractor and will have the authority to cut in at any time in order to direct traffic in an emergency situation.
- ES personnel will be invited to speak at the Plan of Day (POD) coordination meeting to ensure all Project personnel fully understand the emergency response plans and systems in place on the island. This information will also be presented to each site personnel during the mandatory site orientation.
- All contractor vehicles will be equipped with fire extinguishers and all vehicle operators will be trained in the use of this equipment.
- All contractor vehicles will be equipped with a first aid kit.
- The contractor's safety supervisor or their designee will be on site and available at all times during construction activities and in the event of an emergency he/she will be able to communicate with all site personnel via a dedicated safety channel on radio communication. Each work site will be equipped with at least one radio.

### 4.2 Public Health and Safety Plan

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<sup>13</sup> The largest emergency vehicle width on the island has been measured to have a width of 2.5m.

Safety will be the top priority every day, for all Project staff on site. Field personnel and work crews are trained to provide themselves with a safe workplace and to plan their work with safety as the top priority including public safety when worksites overlap with public spaces.

The contractor will be responsible for planning activities in a safe manner and for implementing the Public Health and Safety Plan on a day-to-day basis in accordance with the applicable regulations. In addition, Windlectric will have full-time safety management personnel on-site to monitor the performance of all contractors and stop any potentially unsafe work immediately. The municipal engineer engaged by Loyalist Township will also have the authority to direct work stoppages to address public safety concerns. The public will not be permitted to access active construction areas both on private and municipal property. Public safety will be maintained through implementation and strict adherence to the Traffic Management Plan, the Emergency Response and Communications Plan, and the Public Health and Safety Plan.

The Project-specific Public Health and Safety Plan is attached as Schedule 08 (Public Health and Safety Plan). This Public Safety Plan is authored by the contractor and will govern the safety practices of all personnel at the site including contractor's staff, subcontractor's staff, and Windlectric's staff.

### **4.3 Emergency Response and Communications Plan**

The Emergency Response and Communication Plan is attached as Schedule 09 (Emergency Response Plan).

### **4.4 Employee Training and Enforcement**

Every person who works at the site must attend a mandatory site orientation training session. These site orientation training sessions will be conducted in small groups and will be led by the site Safety Supervisor. These orientation sessions will include a presentation of the site environmental and traffic rules, site specific health and safety training including emergency response training, traffic management, accident/incident reporting processes, and training regarding the heritage and protected properties located on the island.

The training session will include a question and answer period to address any questions and to ensure complete understanding. At the end of each session there will be a test to confirm understanding of the material. If an individual is unsuccessful at the test, the Safety Supervisor will have the discretion to provide additional resources to assist the individual with the material, or remove the worker from the site.



On completion of the session, each trainee and the trainer will sign a certificate to confirm successful completion of the orientation and the commitment of the trainee to abide by all the site rules. A hard hat sticker will be issued to workers that have successfully completed site orientation. All personnel must have a valid and site-specific orientation sticker affixed to their hard hat in order to work on the site.

Orientation training will be supplemented by mandatory attendance at the daily morning safety meeting. The daily morning safety meetings will provide the Safety Supervisor and Project management staff the opportunity to: convey any reports from the Township or public regarding traffic interruption or safety, introduce any new mitigation efforts, and to re-enforce orientation training.

Individuals in violation of any site safety or traffic rules may be removed from site depending on severity of the infraction or a repeated offence. By signing the orientation certificate, each worker will have agreed to such disciplinary measures. Each vehicle will have a site map with relevant information and reminders of specific site safety rules. Each worker will carry a copy of the site specific safety rules and emergency contact number card with them at all times.

## **5 Operations Plan Evaluation and Revision**

The effectiveness of the planned mitigation measures included in the Operations Plan will be subject to evaluation and revision during Project construction. Project staff will rely on the measures detailed in the Communications Plan to receive and collect feedback from all stakeholders in the Project. Stakeholder feedback on actual impacts, and changes to planned Project activity, will be reviewed by the Project team to evaluate opportunities to further minimize the level of disruption, disturbance and inconvenience to the Municipality's residents, or improve public or worker safety.

Once the Project team has completed the evaluation of feedback, reasonable changes to mitigation measures outlined in the Operations Plan may be implemented. Staff from Loyalist Township and members of the Community Liaison Committee will be kept informed of feedback received in accordance with the Communications Plan (Section 3) and will be advised of any planned or implemented changes in Project mitigation efforts. Windlectric may elect to immediately implement changes to mitigation efforts that improve safety of the public or workers, or as required by applicable law; with subsequent notification to Loyalist Township and the Community Liaison Committee.

This evaluation process will be used on a continuing basis during construction.

## SCHEDULES

- SCHEDULE 01 – WTG Component Delivery Vehicle Dimensions
- SCHEDULE 02 – Traffic Management Plan
- SCHEDULE 03 – Heavy Load Traffic by Road
- SCHEDULE 04 – Site Safety Orientation
- SCHEDULE 05 – Renewable Energy Approval Condition M
- SCHEDULE 06 – Renewable Energy Approval Condition H
- SCHEDULE 07 – Erosion and Sediment Control - Typical Details
- SCHEDULE 08 – Public Safety Plan
- SCHEDULE 09 – Emergency Response Plan
- SCHEDULE 10 – Largest Wide Load
- SCHEDULE 11 – Public Road Modifications
- SCHEDULE 12 – Amherst Island Community Events
- SCHEDULE 13 – Arborist’s Collector System Tree Impact Assessment
- SCHEDULE 14 – Road Closures and Recommended Detour Routes
- SCHEDULE 15 – Sample Complaint Response Form
- SCHEDULE 16 – Main Erection Crane
- SCHEDULE 17 – Cultural Heritage Monitoring Program
- SCHEDULE 18 – Form of Daily Public Road Inspection Report
- SCHEDULE 19 – Tree Removal in Municipal Road Allowances