



The Corporation of Loyalist Township
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June 12, 2017

Algonquin Power Co.
354 Davis Road
Oakville, ON
L6J 2X1

Attn: Ariel Bautista, Senior Project Manager

Dear Mr. Bautista:

Re: Review of Draft Operations Plan Revision 5 – Windlectric Project

As has been reiterated with each submission of the Operations Plan, Loyalist Township expects a high level of detail in all submissions in order to be able to complete a thorough review of the plan, understand the proposed work, and assess any mitigation measures proposed in the plan.

Correspondence dated May 29, 2017, from Mr. Jeff Norman states *'Since October 2016, Windlectric has worked to prepare an OP that demonstrates how 1) prudent and reasonable practices will be used to minimize the impact of the Amherst Island Wind Project's construction on the area's local residents and 2) other objectives of the Road Use Agreement will be achieved. Windlectric has submitted five iterative versions of the OP to the Township, received written feedback on those submittals, attended numerous meetings with the Township's staff, hosted a town hall meeting with local residents, and worked to address the concerns that were raised. During this process, Windlectric conducted good faith negotiations with Staff with a view to resolving outstanding issues concerning the OP. All of this process was undertaken with a view to preparing an OP that would meet the obligations of the Road Use Agreement, address concerns of Township staff and community residents, and obtain Council approval.'*

The first submissions of the Pre-Construction Study and the Operations Plan were very limited in specifics relevant to Amherst Island and the local roads, with the first submission being deemed incomplete. Successive submissions have added more detail. Having the opportunity to see more detail has resulted in Township staff and our consultants having further questions on the specifics of this project.

To date, the full extent of the proposed improvements have yet to be identified. The most recent submission of the Operations Plan contains conflicting information about materials to be used, identifies improper slopes, and omits depths of materials to be placed and where. This information is necessary in order to determine the overall width of the improvement and allow an assessment of the potential impacts to private property. The suggestion to *'restore the travelled surface of the municipal roads on Amherst Island to a 6m width so that bi-directional traffic can easily take place...'* again, assumes that it is possible to implement the road modifications within the municipal road allowance. Specific details, which should be provided in the recommendations of the Municipal Roads Geotechnical Borehole Investigation, are still needed regarding the proposed improvements.

Having identified areas of potential concern, Windlectric can identify the areas that require a legal survey to establish the property line to a more accurate legal standard of $\pm 0.030\text{m}$ in order to ensure proposed works do not encroach on private property.

The Operations Plan contemplates working outside of the municipal noise by-law. The most recent submission also requests an exemption to the half-load restriction by-law, amendment to the parking by-law, Township assistance with winter control, speed reductions, and removal of street signs. As several of these issues have only been presented in the most recent submission of the Operations Plan, they are unresolved and may have a significant impact on the proposed works. These items must be resolved prior to finalizing the Operations Plan, and may require specific consideration by and decision of Loyalist Township Council.

Once again, with the most recent submission of the Operations Plan, the plan has evolved further into the fulsome document needed to achieve the objectives of the Road Use Agreement. In an effort to finalize the plan, we provide the following comments;

Comments

It should be noted that Loyalist Township received many written comments in advance of the May 29th, 2017 Council meeting. It is expected that Algonquin Power will review and respond to these comments and that the responses will be provided to the Township.

Proposed works contravening municipal by-laws must be resolved.

The full extent of proposed road modifications must be provided.

All locations requiring a legal survey, as defined above, must be identified and surveyed. Issues relating to the Township's jurisdiction over forced roads must be resolved before improvements are undertaken and before the collection system is installed.

The intended use of proposed detour routes by construction traffic must be defined and appropriate improvements identified.

Gaps and inconsistencies in the Operation Plan schedules must be addressed.

Title Page

- Now includes Revision number and submission date - GOOD

Framework

- The newly added "Framework" section asserts that the Operations Plan and the Pre-Construction Study are "separate and distinct" documents; Windlectric added this section of their own accord and not based on any feedback received from the Township; it is the opinion of the Township that these are not separate and distinct but rather integral documents as each informs the other and together they form a complete document (for example, the Traffic Management plan, Schedule 02 of the Operations Plan references the Pre-Construction Study; this statement should be removed

Revision History

- A revision history has been added to the document

Section 1 INTRODUCTION

- Paragraph 3 contains a reference error

- Paragraph 4 discusses MTO Standard for boundary survey illustration with a tolerance of 0.3m; this concept to be discussed further; commits to project elements 'generally' being kept at least 0.6m from the surveyed boundaries – this requires a firmer commitment from Windlectric – to be discussed with OLS and Township solicitor; Windlectric commits to completing legal survey work in areas where proposed work may be within 0.3.m of the established limits – GOOD; however 'legal' should be defined as having a tolerance of ± 0.030 , and completed by a licensed OLS.
- Paragraph 5 - Windlectric has committed to directional drilling at St. Paul's to reduce impacts – GOOD
- Paragraph 5 - the first bullet indicates that the number of turbine locations has been reduced from 33 to 26, but Figure No. 1 and others still show 27 turbine locations. Determination on the turbine locations should be finalized.
- Turbine S37 appears to be too close to Road Allowance.

Section 2 TRAFFIC AND CONSTRUCTION MANAGEMENT PLAN

• 2.1 Haul Routes for Oversized and Heavy Loads

• 2.1.1 – Major Turbine Component Delivery Routes

The previous comments provided on this section have been addressed;

- Schedule 19 has been corrected and included in this submission - GOOD
- Paragraph 3 – provides reason that the alternative delivery route could not be used – GOOD

• 2.1.2 – Heavy Load Delivery Routes

The previous comments provided on this section have been addressed;

- Excavated material is to be regraded on site or incorporated into access road construction
- Schedule references have been corrected

• 2.1.3 – Other Large Transports

- Paragraph 1 – discusses pre-assessment of the planned route for deliveries – if roads are to be improved, all roads should be adequate; if proposed improvements are not adequate to facilitate movement of over width equipment, these movements should be completed through a 'Road Closure'; this would be safer, eliminate the need for vehicles having to back up, and allow the information to be included in the Communications Plan and communicated appropriately;
- Paragraph 2 – movement of the erection crane should also be handled as a 'Road Closure'; Schedule 02 contemplates the use of 2 cranes; movement requirements for both cranes should be considered in the this section;

• 2.1.4 – Management of Inoperable Equipment in the Public Right of Way

- Paragraph 1 – notes the 'Public Road Modifications will generally restore the travelled surface of the Township gravel roads on Amherst Island to a 6 metre width' for the purpose of facilitating bi-directional traffic. Loyalist Township has confirmed that not all the proposed roads to be used by Algonquin have a width of 6m. There are several sections of road where the

width of travelled surface ranges from approximately 5.0m – 6.0m. The preceding statement requires modification. The reduced width may have additional impacts to the Operations Plan.

- The Operations Plan does not confirm whether construction traffic will be utilizing detour routes during construction, specifically when there is a road closure in effect; detour routes were not included in the geotechnical assessment – Windlectric must confirm that construction traffic will not be utilizing the detour routes; if emergency services are to utilize the detour routes, waiting for a tow truck to remove an inoperable vehicle is not an acceptable solution.

- **2.2 – Public Road Modifications**

- Paragraph 1 – states that ‘Public Road Modifications will be fully contained within the surveyed boundaries’ however the full extent of the proposed modifications has not been provided and/or determined
- Paragraph 2 – notes that gravel roads will be crowned and restored to a minimum of 6m; as per recent discussions, all areas where proposed improvements, including drainage, will be within 0.6m of the identified property lines will require a legal survey; Windlectric should provide a list of these locations
- Paragraph 2 – states that roads will be maintained to Minimum Maintenance Standards. The Township feels that the proposed improvement improvements of simply adding Granular A is grossly inadequate.
- Figure 3 – typical ditch foreslope is 3:1; Section 2.6 discusses the use of Granular B Type II for capping and widening – Granular A crushed quarried limestone is preferred, Schedule 02 contemplates the use of base and sub-base material (a preferred methodology); information needs to be consistent – the full extent of the proposed modifications must be provided
- Figure 4 – widening must include stripping of organics; see previous bullet regarding materials; should identify capping depth as discussed in the Pre-Construction Study
- Paragraph 8 - Roadway modifications should include the culvert replacements discussed in the Pre-Construction Study
- Proposed road modifications need to be confirmed – stripping, granulars, slopes - in order to confirm they can be implemented within the limits of the road allowance

- **2.3 - Public Road Closures and Delays**

- ‘Traffic Interruptions’ are still road closures and must be handled as such in regards to the Communications Plan and emergency services. More information will be required as to how changing road condition information will be coordinated.
- There are still concerns regarding the feasibility of single lane restrictions, investigation into structural capacity of the road is on-going
- Traffic interruptions cannot occur on detour routes

- Crane movements (both cranes) will result in a road closure and should be treated as such as this relates to the Communications Plan
- Although the hard-topped roads are believed to adequate for the proposed construction traffic, the Operations Plan should include proposed maintenance and reinstatement for these roads
- Need to confirm the ability to maintain a 3.0m lane width for lane closures
- **2.4 – Waste Management and Hazardous Materials**
 - The previous comments provided on this section have been addressed.
- **2.5 - Navigable Waters**
 - Marine Logistics Plan should be referenced; One document informs the other; the Operations Plan should acknowledge the Marine Logistics Plan or it should be included as a schedule
- **2.6 - Road Maintenance**
 - Section contains references to several different people; single point of contact needs to be confirmed and provided to the Township
 - Inspections of the roads must occur throughout the day
 - Potential Road Failure should be addressed prior to construction – if roads have been deemed inadequate for the proposed loading, they should be improved prior to being subjected to heavy truck traffic
 - The use of Granular B Type II for the driving surface in unacceptable – Granular B Type II sub-base along with Granular A crush quarried material must be used
 - Project Closure Protocol – roads must be returned to pre-construction condition or better
 - The maintenance procedure indicates that Windlectric will determine if road structural improvements are required due to road failure. Proposed methodology is reactive – Windlectric needs to be proactive; the Pre-Construction Study has identified roads that have insufficient structural adequacy, these roads should be improved, based on the recommendations of the Pre-Construction Study prior to being subjected to heavy truck traffic
 - All roads should be returned to pre-construction condition as a minimum; Township to provide direction on leaving the modifications in place closer to the time when Windlectric will no longer need to use the roads for project construction purposes.
- **2.6.1 - Winter Conditions**
 - Township Council to decide if they would like to enter into an agreement to provide additional winter control for the project;
 - Road maintenance procedures listed in 2.6 will require modifications during winter control, specifically with respect to barricades on by-passes and temporary intersection improvements

- Current plan does not discuss how Township forces will safely carry out winter control operations around both stationary and moving construction operations.
- At a meeting on April 24th Algonquin Power discussed the need for a snow dump at the central laydown area – the intended use and operation of the snow dump should be discussed in this section. Algonquin should confirm with MOECC whether specific approvals are required for the intended snow dump area.
- **2.7 - Impact Mitigation**
 - **2.7.1 – Bicycle Traffic**
 - How will traffic be monitored? Will this be a reactive approach based on complaints? If so, residents may not be able to provide adequate information to allow the enforcement procedures.
 - **2.7.2 - School Functions**
 - School representatives should have one point of contact for the project; all concerns should be directed to that person for dissemination to the contractor and subcontractors; section identifies several positions (transportation coordinators, site manager, senior site management team)
 - **2.7.3 - Student Transportation**
 - Additional details should be provided on the ‘turn-arounds’
 - **2.7.4 - Agricultural Traffic**
 - Section references several points of contact; needs to be streamlined to one point of contact
 - There should not be an occurrence of agricultural traffic passing construction traffic if the communication protocol is being followed
 - **2.7.5 - Vehicular Traffic To and From the Public Ferry Docks**
 - Section references several points of contact; needs to be streamlined to one point of contact
 - **2.7.6 - Parking and Public Ferry**
 - Not the Public Works Manager's responsibility to allow or enforce parking restrictions;
 - **2.7.7 - Community Events**
 - Item 3 discusses activities which are permitted after 8:00pm – no activities are permitted after 8:00pm
 - **2.7.8 – Wells**
 - Section added for Rev5
 - All water and electrical lines within ROW must be located;
 - Not common to have buried joints in water services or underground electrical; if the service is damaged, it should be replaced such that there are no buried joints under the travelled surface;

- Material excavated using a hydrovac cannot be reused; what is the proposed road reinstatement?

- **2.9 - Hours of Operation**

There are currently no operations permitted outside of the municipal noise by-law; all work must conform to municipal by-laws

- **2.9.2 - Turbine Foundation Preparation and Foundation Curing**

- Based on the information that has been provided, concrete pours should not occur outside the by-law with proper planning

- **2.9.3 - Turbine Foundation Placement and Finishing**

- Section states concrete delivery will begin at 7:00am – batch plant cannot begin operation until 7:00am;

- **2.9.4 - Turbine Erection**

- The need to achieve certain milestones during the erection process is understood, however no operations are permitted outside the municipal noise by-law

- **2.9.5 - Main Transformer Fill**

- It is understood that this is a process that cannot be stopped once it is started; this is a one time operation, however no operations are permitted outside of the municipal noise by-law

- **2.9.6 - Operations Outside of Noise By-Law Time Limits**

- Windlectric has asked Township Council to consider providing an exemption to the noise by-law for items 2.9.2 through to 2.9.5. **Requests to modify municipal by-laws should not be structured within the Road Use Agreement.**

- **2.10 - Construction Noise Mitigation**

- It should be noted that any material excavated using the hydrovac cannot be reused; what is proposed reinstatement?

- **2.11 Road Dust Control**

- Pre-Construction Study discusses road material and impact of water on the deterioration of the roads – how will the use of water for dust control and the increased heavy truck traffic impact/accelerate the deterioration of the roads? Proposed methodology may unnecessarily accelerate the deterioration of municipal roads – the use of calcium is supported by the Township and should be considered. Algonquin must confirm requirements regarding Permit to Take Water for the project.

- **2.12 Impact to Trees and Vegetation Within Municipal Road Allowances**

- Have ash trees been assessed for emerald ash borer?
- Will trees on private property need to be trimmed?
- Section discusses directional drilling at St. Paul's Presbyterian Church – information on the directional drilling needs to be provided either in this

section or the section on the Collector System; any entry/exit pits, reinstatement methods, etc.

- Arborists report identifies 30 locations where tree trimming is required including at St. Paul's; Trees at St. Paul's are considered part of the heritage landscape; depending on the extent, trimming of trees in this area may change the landscape
- Trees to be removed that are on or very close to the property line may need to be confirmed with a legal survey;

- **2.13 - Cultural Heritage Features**

- 2450 South Shore Road is listed as a Built Heritage Resource (but not in the original REA Condition M1 as this property was added as a result of REA Amendment 4); Schedule 17 (Cultural Heritage Feature Monitoring Program) discusses monitoring in relation to the nine Built Heritage Resources identified as requiring protection under section M1 of the REA; confirm that 2450 South Shore Road is included in the Cultural Heritage Feature Monitoring Program;
- Indicate why 5170 Front Road and 5555 Front Road, which are listed in the REA Condition M1 are not listed in the Operations Plan? Are these structures intended to be covered as part of the Cultural Heritage Landscape for the Village of Stella?
- 5950 Second Concession is also noted in Condition M1 as a Built Heritage Resource but not in the Operations Plan. This property is no longer on the main route but is on a detour route and should continue to be protected during those times the detour route is in use.

- **2.13.1 General Preventative and Mitigation Efforts**

- Location of heritage features should be identified on the construction drawings
- Stone walls on detour routes have not been identified – heavy trucks must not use the proposed detour routes

- **2.14 - Drainage, Grading, and Fences**

- Limits of the road allowance need to be established with a legal survey prior to moving any fences; locations where fences will be impacted should be identified – Windlectric should provide a list, Station to Station, left or right of centreline, where fences will be impacted; Fences cannot be constructed with a 0.3m tolerance MTO standard is to install the fences on the property line

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

- Directional drilling may still require excavation for entry/exit pits – additional details on this operation are required
- Section notes project-related negative impacts of significant magnitude are not expected in proximity of the cemetery – are any negative impacts expected?

Section 3 COMMUNICATION PLAN

- A list of contacts including name, cell number, email, position, etc, should be provided as part of the Communications Plan – many positions are referenced throughout the Operations Plan and the Township and public must know who they are to contact for any given situation – a single point of contact would be best
- **3.2 - Complaint Response Protocol**
 - Windlectric has committed to acknowledgement of complaints within 1 business day of receipt of the complaint – GOOD and a response to the complaint within 5 business days of receipt of the complaint - GOOD
 - More frequent posting of questions may minimize the number of questions
- **3.3 - On-site Staff**
 - Will the 'site execution team' be on the island all day or just periodically?
 - What authority will the security detail have to mobilize staff and/or resources in response to an emergency situation?

Schedule 02 TRAFFIC MANAGEMENT PLAN

- **2.1.2 - Modifications to the Public Roads**
 - Section contemplates sub-base and base material; this is preferred but different than what is suggested in Section 2.2 of the Ops Plan
- **Dwg 2 - Example Full Road Closure on South Shore Road**
 - Drawing 2: Marshall 40 Foot Road is not illustrated in Drawing 2 but it appears that this road is to be used as part of a detour route, following sign TC-10 BR. Marshall 40 Foot Road is not maintained (not plowed) and is therefore not available for detours.
 - References to TC-51C should be revised to TC-54 Revise and resubmit Need to confirm if a seasonal road is to be used as a detour route
 - Schedule indicates work requiring the use of Marshall 40' may be completed in the winter – who will be responsible for maintenance?
- **Dwg 3 - Example Lane Closure on 2nd Concession Road**
 - References to TC-51C should be revised to TC-54
- **2.4 - Types of Construction Vehicles**
 - Definitions need to be updated to reflect the definitions in the Ops Plan

Schedule 03 HEAVY LOAD TRAFFIC BY ROAD

- **3.2.2 - General Impacts**
 - How will an escort vehicle pull over oncoming vehicles?
- **3.3.1 - Construction-Related Traffic Routes**
 - The Schedule suggests Stella 40' will be closed for 12 days; will construction traffic be expected to use the detour routes during this closure? The ability of Emerald 40' to support heavy truck traffic must be confirmed if it is intended to be used for construction traffic

- 3.3.12 - Construction Vehicle Driver Instructions & Supervision
 - Section mentions traffic pattern monitoring but do not indicate who will be monitoring and the frequency of the monitoring. More specific details are required regarding the monitoring task.
- 3.3.13 - Oversight of Traffic Management Strategies
 - Section mentions traffic pattern monitoring but do not indicate who will be monitoring and the frequency of the monitoring. More specific details are required regarding the monitoring task

Schedule 04 SITE SAFETY ORIENTATION

- Safety measures included in the Operations Plan and Traffic Management Plan should be included in this document

Schedule 08 PUBLIC SAFETY PLAN

- Document needs to be consistent with the Operations Plan, Traffic Management Plan, and Site Safety Orientation document
- Detour routes must be confirmed prior to commencing work

Schedule 09 EMERGENCY RESPONSE PLAN

- Maintenance of emergency routes has not been addressed
- Need for foam fire suppressants at any location to be confirmed with Township Fire Chief.
- All contact information must be provided
- Appendix A is not clear about the notification process for emergencies and decision making

Schedule 13 TREE REMOVAL IN MUNICIPAL ROAD ALLOWANCE

- All supplemental information/memos provided by the arborist should be included in the final report

Schedule 16 MAIN ERECTION CRANE

- Confirm 1 or 2 crane(s) to be used during construction

Schedule 17 CULTURAL HERITAGE MONITORING PROGRAM

- **1.1.1 Built Heritage Resources**
 - Section indicates that where built heritage resources require monitoring (those within 50 metre buffer zone), it will be determined whether the building requires instrumentation to monitor PPV. The REA Condition M5 requires specific actions when PPV levels are exceeded during monitoring. How is it proposed to assess whether the PPV levels are within acceptable levels throughout construction when there is no instrumentation to monitor PPV?
 - Page 35 of the Operations Plan indicates that PPV levels will be monitored and logged around a Cultural Heritage Resource during project activity with a 50 metre buffer to ensure thresholds are not exceeded. Schedule 17 and the Operations Plan are therefore inconsistent in this regard.
- **1.1.3 Dry Stone Walls**

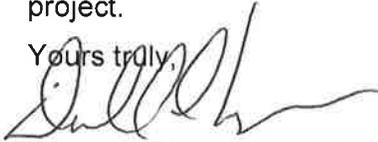
- Section states that baseline testing will be done for peak large vehicle movement for the 3 stone walls that are in poor condition (and if within 50 metre buffer zone). The paragraph also discusses work being conducted for each of the stone walls identified in the report; Could it be clarified whether this baseline testing is being done for the 3 stone walls in poor condition or all the walls?
- **1.1.4 Additional Stone Walls Recently Recommended for Designation**
 - This is a new section. It is recognized that these stone walls are now being reflected in the monitoring plan but it should be noted that 6345 Second Concession Road, 9000 Second Concession Road, 4000 Front Road and 15095 Front Road are not being recommended for designation they have been designated under the Ontario Heritage Act since July 2016.
 - Section states that monitoring for the additional stone walls will be conducted in general accordance with the visual procedures. The additional stone walls identified in the Road User Agreement should have the same protection as the stone walls identified in Condition M of the REA.

Schedule 20 STORMWATER MANAGEMENT PLAN REPORT

- To date, concerns regarding stormwater management have been addressed through fill permits

We look forward to continued dialogue and progress with Algonquin Power on the Windlectric project.

Yours truly,



David C. Thompson, P.Eng.
Director of Infrastructure Services

CC: Robert Maddocks, CAO
Murray Beckel, Director of Planning and Development Services
David MacPherson, Public Works Manager
Dan Fencott, Jewell Engineering
Guy Laporte, AECOM (retired)