



File: D03 – Windlectric

February 4, 2016

Algonquin Power Co.
354 Davis Road, Suite 100
Oakville, Ontario
L6J 2X1

Attn: Alex Tsopelas, Project Manager, Renewables

Dear Alex:

Re: Review of Traffic Management Plan

Thank you for providing the above-noted report for our review. Our consultant, AECOM, has prepared a response compiled from their observations as well as Loyalist Township staff comments on the report. We are pleased to attach these for your review and comment.

Please do not hesitate to contact the undersigned at 613-386-7351, ext. 117, should you have any questions.

Yours truly,

A handwritten signature in black ink, appearing to read "David MacPherson".

David MacPherson, C.E.T.
Public Works Manager
DM/ka

Encl.

February 2, 2016

Mr. David MacPherson C.E.T.
Manager of Public Works
Loyalist Township
263 Main Street, P.O. Box 70
Odessa, ON K0H 2H0

Dear Mr. MacPherson:

Project No:

**Regarding: Review of Traffic Management Plan
Amherst Island Wind Energy Project**

We have completed our review of the report entitled “Amherst Island Wind Energy Project, Traffic Management Plan” prepared by Stantec and dated November, 2015. Our comments are as follows:

General Comments

1. The report lacks details to complete the review, and accordingly, the following comments are not being provided under Section 36 of the RUA. The report does not meet the requirements for a Traffic and Construction Management Plan as set out in Condition 40 (a) of the Road Use Agreement (RUA). Specifically, of the 15 items identified to be addressed, in our view only two have been satisfactorily addressed (40.a.ii – Proposed Haul Routes; 40.a.xv – plan to mitigate impacts on ferry operations – *not required*), and only three others are partially addressed (40.a.vi, 40.a.vii, and 40.a.x).
2. The report is lacking in detail. Specifically:
 - a. The description of existing roads is too broad – only sight distances on Stella Road are identified as an issue. Consultant needs to provide more detail regarding haul routes. For example:
 - i. Front Road through Stella is narrow and sight lines are marginal.
 - ii. South Shore Road is “winding and narrow.”
 - iii. Dump Road north of 2nd Concession is single lane width.
 - iv. Is Marshall 40 Foot Road a public road? If so, is Algonquin Power assuming ownership of this road? Will it be gated? Will the public no longer have access? There is a Conservation Area here that needs public access.
 - v. The report should identify any horizontal curvature concerns for two-way traffic on the narrow roads.

- vi. Widths of the roads and right-of-ways should be indicated.
 - b. The phrase “*there will be some relatively minor road and intersection improvements required*” is too vague. More detail regarding location and extent of improvements is required before we can judge adequacy of Traffic Management Plan, including depths of removals, new granular and restoration details, drainage details, cross sections, temporary fence placements, etc. Furthermore, the report mentions that improvements will be removed after the construction period. It may not be desirable to remove all of these improvements following construction. These should be reviewed with the Municipality prior to removal.
 - c. More detail regarding the location, design and construction procedures for the underground collection system is required. Is this construction reflected in the traffic management plans?
 - d. Detail regarding the Public Information Strategy is required.
 - e. Statements are made regarding the size of turbine components and the need for escort vehicles, but there is no detail regarding how the delivery of turbine components will impact other traffic – please clarify. Will one lane of traffic be maintained? How long should traffic, including school buses or farm equipment, expect to be delayed? How will bus routes be addressed? Have pedestrians and persons walking to the school in Stella been considered?
3. Text in the Traffic Management Plan (TMP), and the Wildlife Management Plan (WMP) (as well as the Road Use Agreement), refer to a total of 26 turbines, but the figures show 27 – which is correct?

Specific Comments

4. Section 1.0 Introduction and 2.0 Local Context and Key Transportation Issues
- a. Last paragraph – page 1.1 - *The routes use sections of every public road on the island with the exception of...* - not every public road is used – proponent should commit to use of roads highlighted on Figures 2 & 3 only. This text should be revised.
 - b. Figures 2 & 3 seem to indicate that the intersection of Stella Road and South Shore Road will not be used – that construction traffic will use the access roads to sites S37, S27 and S02. This is important and should be confirmed in the text.
 - c. The first paragraph in Section 2.0 is incorrect – the Township has advised that the 2011 population was 405, and very few houses have been built since this date.
 - d. The second paragraph in Section 2.0 indicates class times at the school – it should also be noted that the school is used at a community centre outside of school zones, and this should be considered.

5. Section 3.0 Review of Island Road and Traffic

- a. Comment regarding only two cyclists observed on a Thursday in September is not relevant and not representative cyclist volumes in summer.
- b. Comment regarding pedestrian activity near school is too vague; consultant should have observed pedestrian and cyclist activity at beginning and end of day.
- c. Potential for impact during special events noted but offers no mitigation. It is recommended that the Proponent confirm the special events that are to occur on the Island during the proposed construction, and identify in the report with proposed mitigation measures.
- d. In the description of the highest hourly volumes, there should be some indication of how many hours in a day these volumes are expected and over how many days.

6. Section 5.0 Traffic Management Plan

- a. Why is section of Stella Road from 3rd Concession to South Shore Road left off list of “active” routes?
- b. More detail is required regarding traffic communication plan. Signs will be erected not less than one week before any lane closures or detours – perhaps there should be a limit such as not more than three weeks?
- c. Section 5.3 references Figure 2 – location plan, and truck routes on Figures 3 & 4 – these should reference Figures 1, 2 and 3 respectively.
- d. This statement appears at the top of page 5.10 - *The improvements do not include upgrading the existing road structure, nor doing extensive road repairs along the delivery routes.* – Is this true, has the capacity of existing roads been confirmed by geotechnical study?
- e. On Page 5.10, it indicates that illumination will be provided at “key points” – what are these key points?
- f. On Page 5.10, under the discussion of informing drivers of conflicts/considerations along route specific basis – should hazard signage also be provided along the routes for any such conflicts/considerations?
- g. Page 5.11, 1st paragraph - clarify how the Travel Logix SafePace Cruiser will be used? Can it provide speed data?
- h. Page 5.11, 2nd paragraph – how frequently will traffic be monitored. Proponent should commit to submission of weekly reports. The report should also indicate that the proponent shall make adjustments if identified as required based on proponent and municipality review of these reports.
- i. Section 5.4 on Page 5.11 identifies timing restrictions for construction traffic – what are the timing restrictions proposed? These should be detailed in the report.
- j. Section 5.7 discusses erecting temporary signage, however, it should also clearly state that the proponent will be responsible for maintaining this signage in accordance with Book 7 (e.g. any signage that is moved, falls, or becomes worn and

no longer conforms to Book 7 requirements should be replaced, and accordingly, the proponent should be required to monitor and maintain the signage – this section only states that the proponent will monitor for “ineffective” or “damaged” signs).

- k. Section 5.9 on page 5.13 indicates that vehicles related to construction will be parked on access roads or at sites “where possible” – this suggests that there may be some construction personnel parking vehicles in the municipal ROW. Typically, construction management reports indicate, if this is to occur, where it will be permitted to occur, for the municipality’s review. It is recommended that the proponent clarify if any construction personnel will be parking any vehicles within any of the Municipal ROW, and if so, where this is proposed to occur.
- l. Section 5.10 on page 5.13 suggests limited efforts on the part of the proponent to implement dust control measures. It is suggested that this section be revised to clarify that the proponent will be responsible for monitoring and implementing measures to control dust on a continuous basis, and particularly at the end of each work week, and in advance of festivals/events on the island. The 2013 Construction Plan Report clearly indicated that dust control would include “maintain adequate control of dust on sites in close proximity to residences”, “ensure dust generation is monitored and controlled in areas of sensitive land use” and “consult with local authorities prior to application of dust suppressants on public access roads”. More details of the commitments for dust control is desired in this section, including the previous commitments from the 2013 report mitigations. The proponent should also include confirmation of the particular dust suppressants to be used.
- m. It’s recommended that Figure 1 include a legend, particularly identifying the line types used and the annotation with the letters “J” and “S.”
- n. In Figure 2, it’s shown that S13, S18, S26 and S30 are accessed using Marshall 40 Foot Road – are the construction vehicles expected to backtrack on their path to return to the dock? What happens at South Shore Road and the access road to S02? Do the vehicles not use South Shore Road to Stella 40 Foot Road? This should be clarified.
- o. What constitutes a heavy load that will follow the paths on Figure 2 as compared to the paths provided on Figure 3?

7. Appendix B – Signage Placement Map

- a. It is recommended that all drawings identify the location of the school (as was done with the cemetery on Drawing No. C0033).
- b. It is recommended that additional drawings be developed showing the proposed TMP signage in the vicinity of the school on Front Road (which would include all of the proposed signage from C0033, C0034 and C0035 on one drawing, with details showing the driveway locations, existing regulatory signage, etc.) to appropriately coordinate the extent of signage in the vicinity of the school.
- c. The signage on drawings C0033, 0034 and 0035 are likely to overlap - it is recommended that additional drawings be developed for typical TMP signage to be implemented in the vicinity of one of the access roads, which would include all of the

proposed signage from these drawings, to coordinate how this signage will integrate in a typical implementation scenario.

- d. How have pedestrian traffic controls been considered for the proposed intersection/roadway improvements as well as other proposed construction works within the Township right-of-ways (e.g. collector system), and at the proposed access road entrances?
- e. On Drawing No. C0033 – the access road linetype used on the drawing does not appear to match that in the legend – it is recommended that this be confirmed.
- f. Drawing No. C0034 – will the speed reduction and advisory signage be long term or short term? This should be indicated on the drawing. Additionally, the use of “Keep Right” WB-6 should be considered for sharp horizontal curves in the road.
- g. Drawing No. C0035 – a lot of lane closures are shown. The anticipated implementation/sequencing and durations of the proposed TL-6 and TL-20A arrangements should be clarified and indicated on the drawing (e.g. are TL-6 anticipated to be short term or long term?). If TL-6 are to be long term duration, TC-1s should be coordinated (e.g. so as not to occur every block). Will the closures be implemented on/off, together, or separately? On what side of the road will lane closures be, will they alternate? The plan for shoulder and lane closures is not clear. The implementation should be clearly indicated on the drawing.
- h. All maps should clearly indicate that all signage locations are to conform to OTM Book 7, and should note that signage placement should be coordinated with driveway/accesses and other existing signage.
- i. Lay down areas, and site office/parking areas should be indicated on all drawings.

8. Appendix C – Wildlife Management Plan

- a. There is no mention of mitigation related to migratory birds or breeding birds from a transportation perspective. Some species can be affected by motor-vehicle collisions (i.e. crepuscular species such as nighthawk and whip-poor-will as well as raptors and owls). This should be considered, and identified in the report with timing restrictions. Mitigation for raptors and crepuscular species should include limiting construction to daylight hours (i.e. 7am to 7pm) to reduce chances of collision. These species can be frequently encountered hunting along roadsides or preening.
- b. As noted in Section 3.2, time of day restrictions for construction or construction related activities should be articulated in the morning and in the evening. For example, a timing restriction of 7am to 7pm avoids the sensitive morning and dusk periods for protected sensitive species.
- c. The wildlife mitigation plan needs to be compared against Natural Heritage Assessment and Environmental Impact Study. The mitigation report should include SWH or animal movement corridors identified within the NHA – these should be displayed on the figures along with mitigation recommendations.
- d. Documentation requirements for on-site inspections and monitoring should be defined in the report. Monitoring of installed reptile and amphibian barrier fences and

road mortality surveys are suggested to ensure recommended mitigation measures as outlined in the Wildlife Mitigation Plan are effective and reducing risks to wildlife. The Monitoring reports should identify that a record of wildlife encounters be kept to allow for an adaptive management approach.

- e. The following applies for construction between Oct 31st and May 1st in areas near Environmentally Sensitive features, especially those containing wetlands which may contain amphibian and reptile breeding/hibernation habitat:
 - i. A map of the Environmentally Sensitive Areas should be provided within the Wildlife Mitigation Plan. Construction restriction timing windows should consider suitability for known species/habitat affected. Provide references/rationale for the recommended restriction period of October 31st to May 1st.
 - ii. Restricting works to outside of the May 1st to October 31st window does not avoid all sensitive timing windows for many amphibian species, some of which are active and can be found crossing roads (between upland and wetland habitat) as early as mid-to-late March. Reptiles such as snakes and turtles can also be found emerging in April.
 - iii. S03, S09, S11 & S36 and 3rd Concession are identified to be within proximity to wetland features as per Section 3.2.1 of the Wildlife Mitigation Plan. Identify within the Wildlife Mitigation Plan that these Turbine locations and their associated access roads are near the Nut Island Duck Club Marsh Provincially Significant Wetland (as per Figure 2 of the NHA). In addition, S36, S07 and S14 appear to be near Amherst to Long Point Bay Costal Provincially Significant Wetland as well as unevaluated wetland identified by MNRF as well as delineated by Stantec (as per Figure 2 of the NHA). Within Section 3.2.1, outline specific mitigation measures required for the protection of these wetland features and their associated wildlife.
 - iv. The report did not mention in-water works. Are there culvert crossings which require widenings or modifications, which will require dewatering? This should be identified, along with appropriate mitigation measures.
- f. A map showing locations for temporary speed limit signs and wild life crossing signs, along with natural heritage features, should be included.
- g. A map showing locations for barrier fencing should be included.
- h. As per comment No. e. iii. Above, Figures 2 and 3 should be revised to show all the wetlands known on the island (i.e. Nut Island Duck Club Marsh is not shown on the figures). This community is close to proposed Turbines S09, S03 and S11.
- i. The following comments pertain to Species at Risk as there is no mention of SAR within the Wildlife Mitigation Plan:
 - i. Were SAR bats investigated within the study area? Was MNRF consulted regarding SAR bats?
 - ii. Vegetation removal along access roads/existing roads could be in contravention of the Endangered Species Act should cavity trees be removed

within the maternity roosting season (June 1st to July 31st) as they may contain SAR bat species. This timing window is within the breeding bird timing window of April 1st to July 31st as recommended within Section 3.1 of the Wildlife Mitigation Plan. With respect to bats, should vegetation removal be kept outside the period of June 1st to July 31st, no further measures would be required. However, should a tree need to be removed within this period, a qualified Biologist should assess the tree for cavities as per MNRF's Bat and Bat Habitat Guidelines. Should a cavity tree be identified for removal within the roosting season, an exit survey will be required to confirm bat absence. Tree removal would then need to occur the following day.

- iii. The training session as described in Section 3.2.3 of the Wildlife Mitigation Plan should be updated to include identifying potential SAR and steps to follow in the event that SAR are encountered during activities.
- j. The Wildlife Mitigation Plan should be updated to identify that the training session should also include steps to follow in the event that wildlife is harmed during activities. This should include contact information for a rehabilitation centre, and the local MNRF (if Species at Risk). Staff should be made aware of legal obligations with respect to SAR.
- k. The Wildlife Mitigation Plan does not speak to impact mitigation related to construction of access roads. These impacts may not be as minor as road-widenings, etc. associated with access on existing roads.
- l. Owl woods is a known sanctuary for many owl species during the winter months. Depending on the species, these birds can be sensitive to noise – mitigation measures to reduce impacts on wintering Owls in Owl Woods should be outlined. For example, limiting construction to daylight hours outside of the winter months when Owls are present (i.e. late October to mid-March).

Reference Documents

The Traffic Management Plan makes reference to several other reports and these will need to be reviewed before we can sign off on Traffic Management Plan:

- Amherst Island Wind Energy Project, Construction Plan Report, Revised December 2013, Stantec Consulting Ltd.
- Construction plans for “minor improvements”. These should identify improvements that are to be removed on completion of wind turbine construction.
- Construction plans for underground cables.
- Public Information Strategy
- Amherst Island Wind Energy Project, Natural Heritage Assessment & Environmental Impact Study, 2012, Stantec Consulting Ltd.
- Grading and Stormwater Management Plan and Sedimentation and Erosion Control Plan

Closing

Vanessa Skelton, Transportation Engineer; Jessica Walker, Ecologist; and Guy Laporte, Senior Engineer, all of AECOM, have assisted in preparation of this letter.

Sincerely,
AECOM Canada Ltd.



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Project Engineer
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cc: