

## SECTION 5.1 – PROJECT LOCATION

**MUNICIPAL CONSULTATION FORM #1:** *The proposed project has extensive impact on Township infrastructure on Amherst Island and the mainland. The proponent has not provided enough detail in the design and operations plan or the construction plan to be able to assess this impact, and the municipality believes approval of the REA at this juncture is premature until the detail has been provided and assessed by the Township. The primary impact is on Island roads, which do not meet modern standards. Several kilometers of roads are identified as haul routes.*

**ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM:** The level of detail provided in the Design and Operation (DO) Report and the Construction Plan Report (CPR) meets the regulatory requirements and is consistent with other developers provide in a REA application.

**APAI COMMENT ON ALGONQUIN RESPONSE:** What “other developers provide in their REA application” is not pertinent to the discussion at hand. Furthermore, the level of detail provided in the DO and CPR do not meet regulatory requirements with regards to water taking, spills and the lack of a Response Plan.

### Water Taking:

According to Table 1 of the Environmental Protection Act, Ontario Regulation 359/09 Renewable Energy Approvals under Part V.0.1 of the Act, the Design and Management Report must contain the following with regards to any water takings:

- A. a description of the time period and duration of water takings expected to be associated with the operation of the facility,
- B. a description of the expected water takings, including rates, amounts and an assessment of the availability of water to meet the expected demand, and
- C. an assessment of and documentation showing the potential for the facility to interfere with existing uses of the water expected to be taken,

The Draft DO and CPR Report make no reference to the water takings that will be required for the operation of the on-island Cement Batch Plant.

The Algonquin response to the Loyalist Township Municipal Consultation Form questions 56 and 63 provides the following information:

- It is anticipated that water for the concrete will come either from Lake Ontario (if the water is suitable) or otherwise will be trucked from the mainland. The water will be stored on site in a water tank(s).

Clearly these two sentences do not address A, B, or C listed above as being a requirement of the REA process. Therefore Algonquin’s statement “The level of detail provided in the Design and Operation (DO) Report and the Construction Plan Report (CPR) meets the regulatory requirements” is in fact erroneous.

### Spills:

According to Table 1 of the Environmental Protection Act, Ontario Regulation 359/09 Renewable Energy Approvals under Part V.0.1 of the Act, the Design and Management Report must contain the following with regards to spills.

- A. a description of the processes in place to prevent spills,
- B. a description of the processes to prevent, eliminate or ameliorate any adverse effects in the event of a spill, and
- C. a description of the processes to restore the natural environment in the event of a spill.

The Algonquin Design and Operations Report provides the following “mitigation measures” to address potential spills:

- Standard containment facilities and emergency response materials (spill kits)
- Refuelling equipment maintenance and other potentially contaminating activities will occur in designated areas.
- In the event of a potential discharge of fluids associated with Project operation, the operation and maintenance contractor will immediately stop work and rectify the accidental spill.
- Once the spill is under control the contractor will remove contaminated soil and dispose of it in accordance with the current appropriate provincial legislation, such as Ontario Regulation 347, the General – Waste Management Regulation.
- The Emergency Response Plan will contain procedures for spill contingency and response plans, spill response training, notification procedures, and necessary cleanup materials and equipment.
- As per s. 13 of the Environmental Protection Act, all spills that could potentially have an adverse environmental effect, are outside the normal course of events, or are in excess of prescribed regulatory levels should be reported to the MOE’s Spills Action Centre.

The Environmental Protection Act, Ontario Regulation 359/09 Renewable Energy Approvals states that the Proponent must provide the information listed in items A, B and C above. Algonquin’s Emergency Response Plan, to be completed at some time in the future, does not meet the requirements of Reg. 359/09. Therefore Algonquin’s statement “The level of detail provided in the Design and Operation (DO) Report and the Construction Plan Report (CPR) meets the regulatory requirements” is in fact erroneous.

### Response Plan

According to Table 1 of the Environmental Protection Act, Ontario Regulation 359/09 Renewable Energy Approvals under Part V.0.1 of the Act, the Design and Management Report must contain a response plan. This plan is to include a description of the actions to be taken “to provide information regarding the activities occurring at the project location, including emergencies” while engaging in the renewable energy project to inform the public, aboriginal communities and municipalities, local roads boards and Local Services Boards with respect to

the project

Algonquin's Emergency Response Plan remains incomplete, and therefore does not meet the requirements of Reg. 359/09. Therefore Algonquin's statement "The level of detail provided in the Design and Operation (DO) Report and the Construction Plan Report (CPR) meets the regulatory requirements" is in fact erroneous.

**MUNICIPAL CONSULTATION FORM #2:** Ferry is side loaded and cannot accommodate construction traffic.

**ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM:** As mentioned publicly (Jan 29th, 2013 Township led town hall meeting) there may be a requirement to use the ferry for a short period during the initial stages of the island dock construction (see section 2.1 of the Construction Plan Report (CPR), however, after that period, the ferry will not be used for construction equipment, personnel or material transport.

**APAI COMMENT ON ALGONQUIN RESPONSE:** As the ferry holds a maximum of 34 automobiles and is the only means of transportation to and from the island, the potential "requirement to use the ferry for a short period" must be elaborated upon. Required information includes:

- Maximum number of construction vehicles per ferry load
- Time of use (perhaps Algonquin can utilize the ferry during the "off hours" of 2:00am to 6:00am in order to alleviate potential bottlenecks)
- Number of days / weeks / months access to the ferry will be required
- Type of construction vehicle that will require ferry access

**MUNICIPAL CONSULTATION FORM #3:** Mainland - presence of municipal water lines (in Hwy 33 and County Rd 26 road allowance)

**MUNICIPAL CONSULTATION FORM #4:** Island – many private well lines cross allowance from the Lake (probably south shore road)

**ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM:** Buried utilities (mainland and Island) - the required locate assessments will be conducted, as necessary, in order to identify location of buried utilities (electrical, water, etc.).

Algonquin has also obtained from the Township detailed information with respect to the location of the water lines on the mainland and will work with local authorities if infrastructure is placed near these lines. Private utilities within the road allowances will be avoided where possible and if they cannot be avoided, prudent industry practices will be utilized to prevent any damage or disruption of service. In the event that damage to the utilities does occur, the proponent will work diligently to restore the service.

**APAI COMMENT ON ALGONQUIN RESPONSE:** Water lines connecting homes to shore wells run beneath the public roads throughout the island. The island gravel roads are not designed for heavy construction traffic. Every spring the Township institutes a ½ load limit due to the state of the islands gravel roads. According to the HATCH Report attached to the Proposed Road Agreement, construction traffic will impact the majority of the island roads.

Therefore, water lines from shore wells will not be “avoidable”. As Algonquin is well aware of this situation, the “prudent industry practices that will be utilized to prevent any damage or disruption of service” must be provided for review, input.

Additionally, the knowledge that the Proponent is “working diligently to restore service” does not suffice. What penalties will be put in place should service be interrupted for more than a few hours, what compensation will be provided to the homeowner should service be interrupted for more than a few hours?

**MUNICIPAL CONSULTATION FORM #5:** *The proposed batching plant and main laydown area is in close proximity to the Township’s Amherst Island Fire Station and the Amherst Island Roads Garage and the proponent’s activities must respect and accommodate these operations.*

**ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM:** Noted - see response below (item MUNICIPAL CONSULTATION FORM #10, MUNICIPAL CONSULTATION FORM #11, MUNICIPAL CONSULTATION FORM #12)

**APAI COMMENT ON ALGONQUIN RESPONSE:** The Algonquin response to items 10, 11 and 12 does not address the Batch plant and laydown area.

#### **SECTION 5.2 – PROJECT ROADS**

**MUNICIPAL CONSULTATION FORM #7:** Proponent must acknowledge Island roads have evolved from carriage roads to roads that due to limited access to the island have not been developed to standard typical for the rest of Ontario

**ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM:** CPR Table 2.1 - The public roads will be examined to determine if any necessary road upgrades (i.e. load analysis determination and infrastructure improvements, rock anchoring) are required to ensure transportation of the equipment can be completed safely.

**APAI COMMENT ON ALGONQUIN RESPONSE:** As stated in the Loyalist Township Municipal Consultation Form:

- “The consultant’s reports, as presented, lack the detail that is necessary to provide informed comments and as is specifically stated by AECOM and CRCA, an approval of the project is premature until the full scope of the project with an appropriate level of detail is supplied enabling a proper assessment of impact on municipal infrastructure, the natural environment, cultural heritage, and land use compatibility.”

Algonquin provides no additional information, therefore it remains impossible to provide informed comments and project approval remains premature.

**MUNICIPAL CONSULTATION FORM #8:** Need to supply topographic and geotechnical investigations and detail necessary upgrades

**ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM:** The plans and drawings for the proposed upgrades to the Township roads will be provided to the Township.

**APAI COMMENT ON ALGONQUIN RESPONSE:** As stated in the Loyalist Township Municipal Consultation Form:

- “The consultant’s reports, as presented, lack the detail that is necessary to provide informed comments and as is specifically stated by AECOM and CRCA, an approval of the project is premature until the full scope of the project with an appropriate level of detail is supplied enabling a proper assessment of impact on municipal infrastructure, the natural environment, cultural heritage, and land use compatibility.”

Algonquin provides no additional information, therefore it remains impossible to provide informed comments and project approval remains premature.

**MUNICIPAL CONSULTATION FORM #10:** Island school – concerns by residents, Proponent has not adequately addressed issues related to the safety of pedestrian and cyclists accessing the school, particularly as this relates to children. The proponent has not considered distractions to school children due to construction and operation of the wind turbines in close proximity to the school

**MUNICIPAL CONSULTATION FORM #11:** Stella – narrow streets. Safe access to commercial and community facilities is a concern. Proposals to protect heritage features need to be further developed

**MUNICIPAL CONSULTATION FORM #12:** Proponent has not adequately developed emergency plans. Island network on west side is not well developed access is limited to one route. Blockages by oversized vehicles or due to rutting by heavy trucks will have serious consequences

**ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM:** Section 2.1.1 & Section 4 of the CPR stipulates that a Traffic Management Plan will be developed and will include mitigation measures for public safety, including children and to address traffic flow.

As publically indicated, emergency response and communication plans will also be a key component to be developed. Note: As stipulated at the Jan 29th, 2013 Township meeting these Plans (including but not limited to Emergency Response Plan and Communication Plan ) will be developed , in consultation with the Township to ensure emergency response services have adequate access at all times between all properties, the fire hall and the ferry dock through preferred and (occasionally) alternative routes.

**APAI COMMENT ON ALGONQUIN RESPONSE:** As stated in the Loyalist Township Municipal Consultation Form:

- “The consultant’s reports, as presented, lack the detail that is necessary to provide informed comments and as is specifically stated by AECOM and CRCA, an approval of the project is premature until the full scope of the project with an appropriate level of detail is supplied enabling a proper assessment of impact on municipal infrastructure, the natural environment, cultural heritage, and land use compatibility.”

Algonquin provides no additional information with regards to a Traffic Management Plan or the Emergency Response Plan, therefore it remains impossible to provide informed comments and

project approval remains premature.

Additionally, according to Table 1 of the Environmental Protection Act, Ontario Regulation 359/09 Renewable Energy Approvals under Part V.0.1 of the Act, the Design and Management Report must contain a response plan. The lack of a Response Plan clearly indicates that the Algonquin REA Report does not meet the minimum requirements under Reg. 359/09.

Furthermore, the HATCH Road Report indicates the proposed “Public Road Used to Access Project Infrastructure” which includes two dead end roads, Art McGuinn Road and Third Concession. How does Algonquin plan to “ensure emergency response services have adequate access at all times between all properties, the fire hall and the ferry dock through preferred and (occasionally) alternative routes” when there is a single point of access for the homeowners who live along these roads?

Many heritage structures are built close to roads especially in the village of Stella. Algonquin has not specified how it intends to prevent damage to these structures as a result of constant heavy industrial traffic. When questioned at the March 2013 public meeting about how damage could be avoided, a company representative responded that the trucks would drive very, very slowly. Apart from this condescending answer, Algonquin has not provided any specific information about damage prevention nor has it addressed the possibility that such damage cannot be prevented.

The four properties on Amherst Island that are protected under section 29 of the Ontario Heritage Act include Trinity United Church, Pentland Cemetery, Neilson's Store Museum and Cultural Centre and recently designated stone fences. The proponent has acknowledged that there is a risk of "destruction" through damage to the structural integrity of each one of these protected properties. Avoidance of protected properties is the only mitigation strategy that will ensure these properties are protected.

**MUNICIPAL CONSULTATION FORM #13:** Drainage is a concern. Island is relatively flat water conveyed long distances by sheet flow, Interrupting sheet flow with new accesses to wind turbines sites or with upgrades to Township roads may concentrate or redirect flow to deficient watercourses. This issue has to be addressed.

**ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM:** Additional surface water assessment for the installation of culverts will be undertaken to ensure conveyance of surface run off is not impeded by access roads. See DO report section 4.8 –

The Project is not anticipated to require significant alteration to surface water runoff, or to involve the storage of surface water. As the Subject Property is of limited topographic relief, erosion of excavated materials and changes to storm water runoff is not anticipated. If required a Storm water Management Plan would be implemented for the substation property. The Storm water Management Plan, will be designed in compliance with the “Storm water Management Planning and Design Manual” (MOE, 2003) and Cataraqui Region Conservation Authority (CRCA) requirements. .

Project Description Report (PDR) Section 4.3.6:

Construction and Decommissioning - During construction and decommissioning, proper grading would be conducted and mitigation measure implemented to reduce potential for runoff at the work areas.

**APAI COMMENT ON ALGONQUIN RESPONSE:** As stated in the Loyalist Township Municipal Consultation Form:

- “The consultant’s reports, as presented, lack the detail that is necessary to provide informed comments and as is specifically stated by AECOM and CRCA, an approval of the project is premature until the full scope of the project with an appropriate level of detail is supplied enabling a proper assessment of impact on municipal infrastructure, the natural environment, cultural heritage, and land use compatibility.”

Algonquin provides no additional information, therefore it remains impossible to provide informed comments and project approval remains premature.

**MUNICIPAL CONSULTATION FORM #15:** Proponent has to conduct studies to show that resident’s water supplies will not be interrupted. Changes to aquifers as a result of foundation excavations or damage to shore wells and connecting piping has to be addressed

**ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM:** There should be no impact (on drinking water / to groundwater) as a result of the project. Before excavation commences, a geotechnical study is completed at all potential sites for ground water depth as well as to determine necessary parameters required for foundation design. If water is encountered at any time, good construction practices will be used such as minimizing the length of time that the excavation is open and monitoring seepage during excavation. Concrete used during the building process becomes inert once it is cured and should cause no damage to the water table.

**APAI COMMENT ON ALGONQUIN RESPONSE:** To simply state the “there should be no impact (on drinking water / to groundwater) is an inadequate response. The information provided above does not address the issue raised with regards to the potential impact on neighboring wells. As stated in the Loyalist Township Municipal Consultation Form:

- “The consultant’s reports, as presented, lack the detail that is necessary to provide informed comments and as is specifically stated by AECOM and CRCA, an approval of the project is premature until the full scope of the project with an appropriate level of detail is supplied enabling a proper assessment of impact on municipal infrastructure, the natural environment, cultural heritage, and land use compatibility.”

Algonquin provides no additional information, therefore it remains impossible to provide informed comments and project approval remains premature.

**MUNICIPAL CONSULTATION FORM #16:** Proponent volunteered a Construction Environment Management Plan but details of this are significantly deficient

**ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM:** As indicated in the CPR (see section 4.0



for list of additional plans) this document will be developed with the contractor. The details of the information will be presented to the Township for review prior to construction

**APAI COMMENT ON ALGONQUIN RESPONSE:** As stated in the Loyalist Township Municipal Consultation Form:

- “The consultant’s reports, as presented, lack the detail that is necessary to provide informed comments and as is specifically stated by AECOM and CRCA, an approval of the project is premature until the full scope of the project with an appropriate level of detail is supplied enabling a proper assessment of impact on municipal infrastructure, the natural environment, cultural heritage, and land use compatibility.”

Algonquin provides no additional information, therefore it remains impossible to provide informed comments and project approval remains premature.

**MUNICIPAL CONSULTATION FORM #17:** Proponent should finalize the number of wind turbines locations and haul routes before REA is approved

**ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM:** Noted. The REA application submitted is for the construction of all 36 turbine locations despite the understanding that only 33 turbines will be erected.

**APAI COMMENT ON ALGONQUIN RESPONSE:** As stated in the Loyalist Township Municipal Consultation Form:

- “The consultant’s reports, as presented, lack the detail that is necessary to provide informed comments and as is specifically stated by AECOM and CRCA, an approval of the project is premature until the full scope of the project with an appropriate level of detail is supplied enabling a proper assessment of impact on municipal infrastructure, the natural environment, cultural heritage, and land use compatibility.”

Algonquin provides no additional information, therefore it remains impossible to provide informed comments and project approval remains premature.

**MUNICIPAL CONSULTATION FORM #18** Proponent should commit to a communications plan that is satisfactory to the Township

**ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM::** Noted - see response above (item MUNICIPAL CONSULTATION FORM #10, MUNICIPAL CONSULTATION FORM #11, MUNICIPAL CONSULTATION FORM #12)

**APAI COMMENT ON ALGONQUIN RESPONSE:** As stated in the Loyalist Township Municipal Consultation Form:

- “The consultant’s reports, as presented, lack the detail that is necessary to provide informed comments and as is specifically stated by AECOM and CRCA, an approval of the project is premature until the full scope of the project with an appropriate level of



detail is supplied enabling a proper assessment of impact on municipal infrastructure, the natural environment, cultural heritage, and land use compatibility.”

Algonquin provides no additional information with regards to a Communication Plan, therefore it remains impossible to provide informed comments and project approval remains premature.

Additionally, according to Table 1 of the Environmental Protection Act, Ontario Regulation 359/09 Renewable Energy Approvals under Part V.0.1 of the Act, the Design and Management Report must contain a response plan. The lack of a Response Plan clearly indicates that the Algonquin REA Report does not meet the minimum requirements under Reg. 359/09.

**MUNICIPAL CONSULTATION FORM #19:** Traffic Management Plan – no details have been provided except to say it will be developed

**ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM:** Noted - see response above (item MUNICIPAL CONSULTATION FORM #10, MUNICIPAL CONSULTATION FORM #11, MUNICIPAL CONSULTATION FORM #12)

**APAI COMMENT ON ALGONQUIN RESPONSE:** As stated in the Loyalist Township Municipal Consultation Form:

- “The consultant’s reports, as presented, lack the detail that is necessary to provide informed comments and as is specifically stated by AECOM and CRCA, an approval of the project is premature until the full scope of the project with an appropriate level of detail is supplied enabling a proper assessment of impact on municipal infrastructure, the natural environment, cultural heritage, and land use compatibility.”

Algonquin provides no additional information with regards to a Traffic Management Plan, therefore it remains impossible to provide informed comments and project approval remains premature.

## **SECTION 5.2 – MUNICIPAL OR LOCAL AUTHORITY SERVICE CONNECTIONS**

**MUNICIPAL CONSULTATION FORM #20:** Municipality has a water line along Hwy 33 allowance (north side) traveling westerly to County Road 26 (Jim Snow drive) then travels north on County Rd 26 to County Rd 23 (Taylor Kidd) – construction plan shall be provided to the satisfaction of the Township to ensure Township’s water line is protected (as built information is available from the municipality)

**ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM:** Noted. Utility locates required prior to digging. Buried utilities (mainland and Island) - the required locate assessments must be conducted in order to identify location of buried utilities (electrical, water, etc.). All efforts will be made to avoid these locations; Algonquin has also obtained from the Township detailed information with respect to the location of the water lines. We will work with the road allowance owner (either MTO or the County) in designing the work avoid impacts to utilities with existing easements. However, if they cannot be avoided then proponent must provide temporary mitigation for the affected utility users in coordination with the utility Owner.

**APAI COMMENT ON ALGONQUIN RESPONSE:** As mentioned in item 3 above, water lines connecting homes to shore wells run beneath the public roads throughout the island. The island gravel roads are not designed for heavy construction traffic. Every spring the Township institutes a ½ load limit due to the state of the islands gravel roads. According to the HATCH Report attached to the Proposed Road Agreement, construction traffic will impact the majority of the island roads.

Therefore, water lines from shore wells will not be “avoidable”, it will be impossible to design the “work to avoid impacts to utilities within existing easements”.

What temporary mitigation measures will be provided to the affected utility users as they are for the most part the owners of their shore well lines?

#### **SECTION 5.4 – FACILITY OTHER**

**MUNICIPAL CONSULTATION FORM #21:** Substation & O&M building landscaping- proponent should be required to prepare a landscape plan to minimize visual intrusion. Plan should be prepared by a landscape architect to the satisfaction of the Township. Plan shall use distance and vegetation as buffers, in particular to screen any fencing and outdoor storage. Lighting shall be minimized and focused to the ground utilizing full cutoff device

**ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM:** DO report Appendix C - The operation and maintenance building construction and finishes would be chosen to be compatible with the rural setting of the General Project Area and other buildings in the locale. The substation and switching station may be surrounded by berms, fencing or trees to mitigate the visual impact of the site.

CPR Table 2.1 Operation and Maintenance building added text - A landscape plan will be developed and submitted to the Township for consideration and minimum lighting requirements for the building will be assessed taking into consideration safety requirements with the intention of reducing the visual impact.

**APAI COMMENT ON ALGONQUIN RESPONSE:** As stated in the Loyalist Township Municipal Consultation Form:

- “The consultant’s reports, as presented, lack the detail that is necessary to provide informed comments and as is specifically stated by AECOM and CRCA, an approval of the project is premature until the full scope of the project with an appropriate level of detail is supplied enabling a proper assessment of impact on municipal infrastructure, the natural environment, cultural heritage, and land use compatibility.”

Algonquin provides no additional information with regards to a Landscape Plan, therefore it remains impossible to provide informed comments and project approval remains premature.

The substation and Operations and Maintenance Building are huge and out of scale with the environment and architecture of anything but a large industrial landscape.

Algonquin's suggestion that it could effectively landscape around these buildings with berms, trees or fences to make them "compatible" with the rural setting ...and other buildings in the

locale" is not believable . Until Algonquin provides a specific, detailed plan it must be assumed that the heritage landscape of Amherst Island will be blighted by these facilities.

**MUNICIPAL CONSULTATION FORM #23:** Emergency procedures/ plans- little information in this regard provided and the Township's emergency services department has not been consulted to date by the proponent. On this basis, a conservative approach has been taken to comment in terms of the construction phase, a Traffic Mgmt. plan was not provided and therefore comments in this regard at this time are premature

**MUNICIPAL CONSULTATION FORM #24:** Construction Plan Report does state that turbine delivery may cause interruptions/ delays in local traffic. The Townships emergency services department is requesting the opportunity for feedback on the traffic management plan and notes that any excessive delays or a delay resulting from equipment breakdown that blocks and road must be relayed to the emergency services dept. immediately. In terms of the proposed 1100 m2 or 1800m2 operations and maintenance building and the small storage shed until a detailed set of plans and location is available commenting is premature.

**ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM:** Section 2.1.1 & Section 4 of the CPR stipulates that a Traffic Management Plan will be developed and will include mitigation measures for public safety and to address traffic flow.

Emergency response and communication plans will be developed, in consultation with the Township to ensure emergency response services have adequate access at all times between all properties, the fire hall and the ferry dock.

**APAI COMMENT ON ALGONQUIN RESPONSE:** As stated in the Loyalist Township Municipal Consultation Form:

- "The consultant's reports, as presented, lack the detail that is necessary to provide informed comments and as is specifically stated by AECOM and CRCA, an approval of the project is premature until the full scope of the project with an appropriate level of detail is supplied enabling a proper assessment of impact on municipal infrastructure, the natural environment, cultural heritage, and land use compatibility."

Algonquin provides no additional information with regards to a Traffic Management Plan, Emergency Response and Communication Plan, therefore it remains impossible to provide informed comments and project approval remains premature.

Additionally, according to Table 1 of the Environmental Protection Act, Ontario Regulation 359/09 Renewable Energy Approvals under Part V.0.1 of the Act, the Design and Management Report must contain a response plan which includes a communication plan for emergencies. The lack of a Response Plan clearly indicates that the Algonquin REA Report does not meet the minimum requirements under Reg. 359/09.

**MUNICIPAL CONSULTATION FORM #25:** What type and quantity of materials will be kept in the storage building?

**ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM:** D&O report section 3.13 The shed building will house equipment and spare parts to be used during construction and operations of the Project and is anticipated to be a prefabricated engineered structure with a concrete foundation that will extend below the frost line. At this time the exact equipment that could be stored small storage shed is unknown. Note that if requested, an up to date list of any hazardous or flammable materials stored in the shed can be provided to the emergency services representatives.

**APAI COMMENT ON ALGONQUIN RESPONSE:** According to the paragraph above, “At this time the exact equipment that could be store in small storage shed is unknown.” As stated in the Loyalist Township Municipal Consultation Form:

- “The consultant’s reports, as presented, lack the detail that is necessary to provide informed comments and as is specifically stated by AECOM and CRCA, an approval of the project is premature until the full scope of the project with an appropriate level of detail is supplied enabling a proper assessment of impact on municipal infrastructure, the natural environment, cultural heritage, and land use compatibility.”

Algonquin provides no additional information, therefore it remains impossible to provide informed comments and project approval remains premature

**MUNICIPAL CONSULTATION FORM #26:** Section 3.12 of the D&O report reference hazardous materials and lubricant storage. What are the hazardous materials and quantities that will be stored? What are the type and quantity of lubricants?

**ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM:** D&O report Storage section 4.5.1 Waste Management references lubricating and hydraulic oil, grease, solvents would be stored in the Operation and Maintenance building. The quantities are unknown at this time, but more information will be available at the time of preparing the Emergency Response Plan.

**APAI COMMENT ON ALGONQUIN RESPONSE:** Algonquin states that “more information will be available at the time of preparing the Emergency Response Plan”. As stated in the Loyalist Township Municipal Consultation Form:

- “The consultant’s reports, as presented, lack the detail that is necessary to provide informed comments and as is specifically stated by AECOM and CRCA, an approval of the project is premature until the full scope of the project with an appropriate level of detail is supplied enabling a proper assessment of impact on municipal infrastructure, the natural environment, cultural heritage, and land use compatibility.”

The lack of an Emergency Response and Communication Plan ensures that it remains impossible to provide informed comments and project approval remains premature.

**MUNICIPAL CONSULTATION FORM #27:** The fire prevention officer (Derrick Ethridge) should be consulted to ensure that the maintenance and storage portions of the building comply with part IV of the Ontario Fire Code

**ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM:** Operation and Maintenance building

will be required to submit a building permit application providing detail information illustrating compliance with required provincial building codes [need to discuss]

**APAI COMMENT ON ALGONQUIN RESPONSE:** According to the paragraph above, Algonquin “will be required to submit a building permit application”. As stated in the Loyalist Township Municipal Consultation Form:

- “The consultant’s reports, as presented, lack the detail that is necessary to provide informed comments and as is specifically stated by AECOM and CRCA, an approval of the project is premature until the full scope of the project with an appropriate level of detail is supplied enabling a proper assessment of impact on municipal infrastructure, the natural environment, cultural heritage, and land use compatibility.”

Algonquin provides no additional information with regards to a Traffic Management Plan, Emergency Response and Communication Plan, therefore it remains impossible to provide informed comments and project approval remains premature.

**MUNICIPAL CONSULTATION FORM #28:** Recommendation to have this building monitored at all times would greatly enhance the emergency services ability to respond to emergency facilities

**ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM:** D& O report sections 3.7, 3.12, 4.12 – the project will be monitored 24 hour a day.

**APAI COMMENT ON ALGONQUIN RESPONSE:** Section 3.7 of the D & O report states that the “substation will be operated, monitored and controlled 24 hrs. per day via a telecommunications system.”

Section 3.12 states “The windfarm will be operated, monitored and controlled 24 hrs per day. To facilitate this monitoring, fiber optic data cable and / or wireless technology would be used.

There is no section 4.12 in the D & O report.

Therefore, section 3.7, 3.12 and 4.12 of the D&O report do not address the question – will the operation and maintenance building be monitored 24 hrs per day?

**MUNICIPAL CONSULTATION FORM #29:** Section 3.13 of the D&O report deals with a storage shed. It states a gravel floor, therefore a list of what is to be stored in this building is required (difficult to contain liquid spills on gravel floor)

**ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM::** See response above (item MUNICIPAL CONSULTATION FORM #25)

**APAI COMMENT ON ALGONQUIN RESPONSE:** Item 25 above indicates the storage shed will have a concrete foundation. Please confirm.

**MUNICIPAL CONSULTATION FORM #30:** Emergency services dept. indicates they do not have the equipment or the training to respond to emergencies on the towers and the proponent will be

responsible for addressing such occurrences

**ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM:** Noted - discussions will be held with local emergency subject matter experts

**APAI COMMENT ON ALGONQUIN RESPONSE:** A “discussion with local emergency subject matter experts” does not provide information on how Algonquin will respond to emergencies on the towers.

**MUNICIPAL CONSULTATION FORM #33:** All components of the proponent wind installation shall be monitored on a 24 hour per 7 day basis and a person should be on duty at all times

**ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM:** D& O report sections 3.7, 3.12, 4.12 – the project will be monitored 24 hours a day 7 days a week however, personnel will only be on-site during normal business hours.

**APAI COMMENT ON ALGONQUIN RESPONSE:** Section 3.7 of the D & O report states that the “substation will be operated, monitored and controlled 24 hrs. per day via a telecommunications system.”

Section 3.12 states “The windfarm will be operated, monitored and controlled 24 hrs per day. To facilitate this monitoring, fiber optic data cable and / or wireless technology would be used.

There is no section 4.12 in the D & O report.

**MUNICIPAL CONSULTATION FORM #34:** No details on emergency mgmt. procedures or safety protocols so comments are premature

**ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM:** See response above (item MUNICIPAL CONSULTATION FORM #10, MUNICIPAL CONSULTATION FORM #11, MUNICIPAL CONSULTATION FORM #12)

**APAI COMMENT ON ALGONQUIN RESPONSE:** As stated in the Loyalist Township Municipal Consultation Form:

- “The consultant’s reports, as presented, lack the detail that is necessary to provide informed comments and as is specifically stated by AECOM and CRCA, an approval of the project is premature until the full scope of the project with an appropriate level of detail is supplied enabling a proper assessment of impact on municipal infrastructure, the natural environment, cultural heritage, and land use compatibility.”

Algonquin provides no additional information with regards to a Emergency Response Plan, therefore it remains impossible to provide informed comments and project approval remains premature.

Additionally, according to Table 1 of the Environmental Protection Act, Ontario Regulation 359/09 Renewable Energy Approvals under Part V.0.1 of the Act, the Design and Management

Report must contain a response plan. The lack of a Response Plan clearly indicates that the Algonquin REA Report does not meet the minimum requirements under Reg. 359/09.

**MUNICIPAL CONSULTATION FORM #37:** No municipal fire hydrants, water works or sanitary sewers on island. ON mainland township has water line on county rd. 26 and county rd. 12 and on why 33 m placement of any infrastructure near township water lines must be submitted to the township for review and approval

**ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM:** Buried utilities (mainland and Island) - the required locate assessments must be conducted in order to identify location of buried utilities (electrical, water, etc.). Algonquin has also obtained from the Township detailed information with respect to the location of the water lines on the mainland and will work with local authorities if infrastructure is placed near these lines. Private utilities within the road allowances will be avoided where possible and if they cannot be avoided, prudent industry practices will be utilized to prevent any damage or disruption of service. In the event that damage to the utilities does occur, the proponent will work diligently to restore the service.

**APAI COMMENT ON ALGONQUIN RESPONSE:** As mentioned in items 3 and 20 above, water lines connecting homes to shore wells run beneath the public roads throughout the island. The island gravel roads are not designed for heavy construction traffic. Every spring the Township institutes a ½ load limit due to the state of the islands gravel roads. According to the HATCH Report attached to the Proposed Road Agreement, construction traffic will impact the majority of the island roads.

Therefore, water lines from shore wells will not be “avoidable”. As Algonquin is well aware of this situation, the “prudent industry practices that will be utilized to prevent any damage or disruption of service” must be provided for review, input.

Additionally, the knowledge that the Proponent is “working diligently to restore service” does not suffice. What penalties will be put in place should service be interrupted for more than a few hours, what compensation will be provided to the homeowner should service be interrupted for more than a few hours?

**MUNICIPAL CONSULTATION FORM #38:** Township requests the in the Construction Plan report in table 2.1 that the following text be added: Proposed locations and construction details for junction box installations within municipal road allowances will be submitted to the local authority for consideration for approval in advance of construction

**ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM:** Infrastructure work (including placement in road allowances) – as discussed with Township previously as disclosed publicly and the plan will be to provide further detailed information to their office for review and approval prior to construction.

**APAI COMMENT ON ALGONQUIN RESPONSE:** The paragraph above states that further detailed information will be forthcoming. As stated in the Loyalist Township Municipal Consultation Form:

- “The consultant’s reports, as presented, lack the detail that is necessary to provide



informed comments and as is specifically stated by AECOM and CRCA, an approval of the project is premature until the full scope of the project with an appropriate level of detail is supplied enabling a proper assessment of impact on municipal infrastructure, the natural environment, cultural heritage, and land use compatibility.”

Algonquin provides no additional information, therefore it remains impossible to provide informed comments and project approval remains premature.

**MUNICIPAL CONSULTATION FORM #40:** Office and maintenance structure of 1100m<sup>2</sup> or 1800m<sup>2</sup> is proposed but little to no details has been provided as to what materials and activities will occur in the building. Give lack of details a conservative approach has been taken in the building assessment. Island considered being a remote for firefighting purposes under the Ontario Building Code. Proponent is strongly encouraged to examine the requirements of sentence 3.2.5.7 (1) of division B of the code which states “an adequate supply for firefighting shall for every building.” An assessment will be required by a professional engineer with suitable qualifications. Any upgrade alteration or full placement is subject to Townships fill/alteration by-law. Township also has a tree by-law, noise by-law, entrance by-law, sign by-law and half load by-law which must be followed

**ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM:** The Proponent will be required to submit a building permit application providing detailed information about the Operation and Maintenance building illustrating compliance with required provincial building codes and local by-laws

**APAI COMMENT ON ALGONQUIN RESPONSE:** Algonquin “will submit a building permit”. As stated in the Loyalist Township Municipal Consultation Form:

- “The consultant’s reports, as presented, lack the detail that is necessary to provide informed comments and as is specifically stated by AECOM and CRCA, an approval of the project is premature until the full scope of the project with an appropriate level of detail is supplied enabling a proper assessment of impact on municipal infrastructure, the natural environment, cultural heritage, and land use compatibility.”

Algonquin provides no additional information, therefore it remains impossible to provide informed comments and project approval remains premature.

**MUNICIPAL CONSULTATION FORM #42:** Township is in concurrence with the CRCA review of the NHA that there are outstanding items that should be addressed before it can be concluded that the proposal can proceed without causing substantial harm to the significant wildlife on the island. REA at this time is premature and the proponent should be required to follow the strategy as articulated in section 4 of the peer review.

**ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM:** The project Natural Heritage Assessment was completed as per the requirements of the Ministry of Natural Resources (MNR) (confirmation letter received from the MNR on December 14, 2012). The Natural Heritage Assessment included comprehensive field studies of vegetation, woodlands, wetlands, wildlife, and wildlife habitat. The Environmental Impact Study identified impact to significant natural heritage features from construction and operation of the facility. Mitigation measures are detailed in this report.

#### **APAI COMMENT ON ALGONQUIN RESPONSE:**

Below is a list of some of the issues / concerns arising from our review of the NHA/EIS

- No reasonable rationale for the lack of site investigations along the Amherst Island Roads that will experience 18 months of construction traffic
- The following site investigations were conducted prior to ELC evaluations which are designed to instruct the decision making process as to which areas to search for SWH
  - Woodland Area Sensitive Bird Breeding Habitat
  - Waterfowl Nesting Area
  - Marsh Breeding Bird Habitat
  - Turtle Nesting Area
  - Amphibian Breeding (Wetland and Woodland)
  - Waterfowl Stopover and Staging Area (Aquatic and Terrestrial)
- The following site investigations were based on erroneous criteria
  - Migratory Landbird (erroneously restricted search to woodlands > than 10 ha. in size)
  - Waterfowl Nesting Area (total of 1 hr of field studies erroneously restricted search to wetlands with standing water)
  - Woodland Area Sensitive Bird Breeding Habitat (erroneously restricted search to woodlands > 10 ha. in size with > 4 ha. interior habitat)
  - Marsh Breeding Bird Habitat (Although the following ELC communities are spread throughout the island (54 CUM ELC communities, 32 MAM communities and 31 SW communities) all field studies were restricted to Long Point Marsh)
  - Turtle Nesting Area (Although there are 32 MAM ELC communities spread throughout the island all field studies were restricted to Long Point Marsh)
  - Amphibian Breeding - Woodland (erroneously restricted the 8 hours of field studies to wetlands with standing water)
  - Amphibian Breeding – Wetland (erroneously restricted the 8 hours of field searches to marsh habitat greater than 1 ha. in size)
- The following site investigations were conducted at the wrong time of the year:
  - Butterfly Migration (field studies undertaken in wrong month)
  - Turtle Nesting (field studies undertaken in wrong month)

**MUNICIPAL CONSULTATION FORM #43:** Heritage assessment – is incomplete with approx. 50- 100 houses, barns, and outbuildings that are not inventoried and assessed. Of particular concern are the communities of Stella and Emerald. In Stella there are over 25 buildings within 10 m of a road that is only 12 m wide many of the buildings are very old and clearly potentially impacted by construction. The examination of Stella needs more detail to be provided in the list of heritage features and their heritage attributes to be able to assess impact on these elements including buildings and trees. Township requests that the Draft Heritage Assessment be updated to include these properties.

**MUNICIPAL CONSULTATION FORM #44:** No consideration was given to looking at the entire island as a culture heritage landscape. Proponent should be requested to revisit this concern

**MUNICIPAL CONSULTATION FORM #45:** There is potential for significant impacts on heritage attributes of Stella. The heritage assessment study should be revised to consider alternative haul routes to avoid the hamlet of Stella, or as a second less preferred alternative as detailed discussion on how to minimize impacts as currently anticipated in Stella.

**MUNICIPAL CONSULTATION FORM #46:** Construction impacts discussed in the assessment appear to be limited to the potential for shock waves from blasting. There is no discussion of tree cutting, road alteration, rebuilding or corner alteration, vibration from repeated heavy truck trips or oversized loads or vibration from hoe ramming. The impact must be updated to take into account all construction activities.

**MUNICIPAL CONSULTATION FORM #47:** Consultant did not consult with local residents in preparing this report and key historic books and reports were not reviewed. The literature review must be updated.

**MUNICIPAL CONSULTATION FORM #48:** Location of proposed operations and maintenance building near Pentland cemetery represents an inappropriate intrusion into a heritage area and this site should be eliminated

**MUNICIPAL CONSULTATION FORM #49:** Heritage buildings and structures (such as stone fences) need an evaluation pre construction, during construction, and post construction and in the case of the dry stone fences, the evaluation needs to be completed by a heritage mason with experience in dry stone fences

**MUNICIPAL CONSULTATION FORM #50:** The Designated Property Assessment only identified three properties, but a fourth property (consisting of nine dry stone fences) should be included, as the Township is in the designation process under the Ontario Heritage Act.

**ALGONQUIN RESPONSE TO THE MUNICIPAL CONSULTATION FORM:** The draft Heritage assessment report has been reviewed by the Ministry of Tourism, Culture and Sport (MTCS) and the agency has been provided a letter of confirmation on April 17, 2013 indicating they are satisfied that the heritage assessment process (including project related impacts and recommendations for monitoring and mitigation) and reporting are consistent with the applicable heritage assessment requirements established in s. 23 of O. Reg. 359/09.

The draft Heritage Assessment Report was revised to consider, as appropriate, comments received from municipal/township authorities, the Ontario Heritage Trust, the local Heritage Committee, and comments received when a third party heritage planner drove the island with local residents on March 5th and 6th to identify heritage resources and was available at the final public open houses. In April 2013, this updated Heritage Assessment Report was reviewed by the Ministry of Tourism, Culture and Sport (MTCS) and the agency has provided a letter of confirmation indicating they are satisfied that the heritage assessment process (including project related impacts and recommendations for monitoring and mitigation) and reporting are consistent with the applicable heritage assessment requirements established in s. 23 of O. Reg. 359/09.

The updated Heritage Assessment Report, and confirmation letter from the MTCS, was included in the Renewable Energy Approval (REA) package, for the proposed Project, which was submitted to the Ministry of the Environment (MOE) in April 2013.

The updated Heritage Assessment Report (and all other reports submitted as part of the REA application) will be made available to the public via the MOE's Environmental Bill of Rights Environmental Registry (<http://www.ebr.gov.on.ca>) and on the Project website once the MOE has started their review of the REA application. We will notify you when the reports are available for review.

Some of the revisions made to the Heritage Assessment report include: additional information provided in consideration of the dry stone walls, clarification that the Village of Stella Cultural Heritage Landscape is comprised of many individual Built Heritage Resources, removal of potential Operations and Maintenance building along Front Road (near the Pentland Cemetery), and additional historical information about some resources including the Village of Stella.

Regarding the Village of Emerald, a number of structures and features located in the former village of Emerald were identified as Built Heritage Resources as part of the Heritage Assessment including the building at 12405 Front Road, 12515 Front Road, 12525 Front Road, 20 Emerald 40 Foot Road, and the nearby old extant remains of the shipping yard. In addition the assessment discussed the decline of Emerald as the central community on Amherst Island with the rise of the Stella as the primary shipping port and commercial centre for the island.

Note:

(i) At the time of writing, the Loyalist Township Municipal Heritage Committee was reviewing a number of dry stone walls on Amherst Island as heritage resources that could potentially be designated in the future (Sova, 2012, pers. comm.). A number of these dry stone walls are visible from public property and their presence has been noted in the descriptions of individual cultural heritage resources, where associated, and accounted for in assessment of potential impacts.

Although private property was not accessed as part of the visual survey for the heritage assessment, archaeological field staff undertaking Stage 2 Archaeological Assessment of all Project component locations were aware of the potential of encountering dry stone walls, or extant portions of dry stone walls. No further walls were recorded within close proximity to proposed Project components.

(ii) The company will continue to assess traffic routes in order to determine the optimum planning strategy considering all constraints and issues. A 50m buffer zone will be implemented from any buildings in Stella where possible and otherwise, vibration monitoring will be done to ensure there is no damage to the buildings in the village as outlined in the Heritage Assessment Report.

#### **APAI COMMENT ON ALGONQUIN RESPONSE:**

#43 - Algonquin insists that it has complied with regulatory requirements. It has not. It was not the intention of the drafters of the regulations to accept information that is distorted, inaccurate, misleading or inadequate. While Algonquin appears to have made a few, modest amendments to its original draft heritage assessment report, the most substantial issues that were raised by the municipality and the APAI have been ignored.

Algonquin has submitted an inadequate document to the MTCS. The MTCS should revisit its letter of confirmation, taking into consideration that the concerns of the Municipality and the APAI that were largely ignored in the document submitted to the MTCS.

The level of detail provided in the Draft Heritage and Archaeological Assessments was not consistent with that provided by Stantec in the case of the Ostrander Point Project.

Algonquin does not appear to address the incomplete inventory and assessment of Amherst Island's heritage buildings and structures. The proponent has added buildings in Stella and Emerald. However, nothing is mentioned of heritage buildings outside those villages, or the need for an assessment of the entire Island as a cultural heritage landscape. Algonquin has made no concessions that would affect their ability to do whatever they want on Amherst Island.

The revised documents need to be released to the public and a third public meeting held to consult with the community and the Township before posting to the EBR takes place.

#44 - Most seriously, the draft Heritage Assessment Report neglected to consider Amherst Island as a "Cultural Heritage Landscape" as defined in the Provincial Policy Statement 2005 (PPS) issued under the Planning Act. *A Cultural Heritage Landscape is a defined geographical area of heritage significance that has been modified by human activities and is valued by a community. It involves a grouping(s) of individual heritage features such as structures, spaces, archaeological sites and natural elements, which together form a significant type of heritage form distinctive from that of its constituent elements or parts.*

In s.241 of Algonquin's response to the Municipality's remarks on the draft Heritage assessment report, it states "Amherst Island as a whole was not determined to be a Cultural Heritage Landscape". In fact, there was no mention or consideration of Cultural Heritage Landscape in Algonquin's draft report, and there is no evidence that Algonquin even considered this possibility (a possibility so contrary to its interests).

Further, the MTCS and the MOE should be apprised of the fact that the Heritage Canada Foundation (HCF) has named Amherst Island one of the "Ten Most Endangered Places in Canada". Heritage Canada Foundation's assessment of Amherst Island stands in stark contrast to Algonquin's self-interested assessment of the same place.

The HCF refers to Amherst Island's "Cultural and Heritage Landscape, Site of Proposed Wind Turbine Plant". Note that the HCF found Amherst Island, as a whole, to be endangered by the proposed wind plant.

The Heritage Canada Foundation also notes the following: "because the island is only accessible by ferry, the pastoral features that have contributed to its value as a cultural and heritage landscape have been preserved over time."

It continues, "As well as the existence of significant historic structures, the island's clearly defined geographic areas and landscape reflect the original settlement, including the roads, farm lot layout, farmsteads and villages - remnants of early Irish-Scottish settlement- most of

which have remained almost unchanged for the past 100 years."

The Heritage Canada Foundation also refers to Amherst Island as "an important natural landscape", citing its location on the Atlantic Migratory Flyway, its' international recognition for concentrations of wintering raptors, and Amherst Island Owl Woods, and the fact that the Island is an Important Bird Area (IBA) of Global Significance.

Heritage Canada's assessment of Amherst Island clearly fits the definition of "Cultural Heritage Landscape" as defined in the PPS, 2005.

#### #45 Impact on Stella

There has been clarification to add that the village of Stella Cultural Heritage Landscape is comprised of many built Heritage Resources. Also, Algonquin promises that a 50- meter buffer zone will be implemented from any building WHERE POSSIBLE (APAI emphasis).

The clarification referred to is a simple correction to the inadequate inventory of heritage buildings in Stella in the draft Heritage Assessment Report. The promise of a 50-meter buffer zone is meaningless in that it will only be imposed "where possible". Algonquin ignores the Municipality's call to consider alternative haul roads to avoid construction traffic through Stella. It should be noted that some of Stella's most significant heritage buildings are located hard on the Front Road, that runs through the village, and which Algonquin intends to use. These essential heritage buildings are within 50 meters of the road.

The only way to protect the Cultural Heritage Landscape of Stella is to prohibit Algonquin's industrial traffic from traveling through the village.

#46 - Algonquin appears to ignore municipal concerns that construction impacts do not cover tree cutting, road alteration, vibration from heavy trucks or hoe ramming.

#47- municipal concern that there was no consultation with local residents, and that key historic resources were not Identified and assessed.

Algonquin ignored APAI's criticism that the bibliography of the draft Heritage Assessment report contains insignificant resources and ignores scholarly literature. Based on Algonquin's comments, it appears that these errors and omissions have not been corrected in the "updated" report they have submitted.

It should be noted that the March 2013 discussions between the "third party" heritage consultant and local residents, was instigated by Island residents, anxious to explain what was overlooked. Apart from that there was no consultation with local residents and landowners about their property or Island history early on in the process.

As a result the site plan and construction plan for the project have been developed without

consideration of the protected properties, cultural landscapes and built heritage resources of Amherst Island. As a result, makes no effort to avoid heritage resources but rather places them at grave risk.

#### #48 Pentland Cemetery

In Algonquin's only concession to historic concerns, it agreed to remove the option of placing the Operations and Maintenance building across from Pentland Cemetery. This is noted.

Algonquin ignores Island oral tradition regarding Aboriginal graves situated outside the Pentland Cemetery gates, between the cemetery and the road and the likelihood of graves being destroyed or disturbed as a result of excavations for cabling. This is contrary to legislative provisions protecting burial sites.

#### #49 Protected Properties and Built Heritage Resources

While Algonquin says that fences and heritage buildings will be evaluated throughout the process, there is no mention, let alone guarantee, that Algonquin will protect the fences or leave them undisturbed. Certainly there is nothing to suggest that the proponent will put the integrity of heritage structures before its own interests or convenience.

The four properties on Amherst Island that are protected under section 29 of the Ontario Heritage Act include Trinity United Church, Pentland Cemetery, Neilson's Store Museum and Cultural Centre and recently designated stone fences. The proponent has acknowledged that there is a risk of "destruction" through damage to the structural integrity of each one of these protected properties. Avoidance of protected properties is the only mitigation strategy that will ensure these properties are protected.

#### GENERAL REMARKS

The total impact of Wind Energy Plant and its construction on Amherst Island is not clearly or adequately described in the reports submitted by Algonquin with its application for REA approval. The draft Heritage report must be revisited and reviewed by the MTCS and MOE in light of this inadequacy. Also, in the absence of detailed plans, Algonquin fails to provide assurance or evidence that harm can be avoided or mitigated.

The proponents ask that the municipality, the people of Amherst Island, and the provincial government trust that they will, at a future time, provide plans to mitigate the impact of their development.

We have nothing more than vague assurances. This "don't worry, be happy" response is unacceptable and an insult. The reality we face is that the impact of the wind turbine plant on Amherst Island will be catastrophic.

**The ministry must consider the total impact of this project in light of what it now knows about the unique cultural and natural heritage of Amherst Island.**

**MUNICIPAL CONSULTATION FORM #51:** Batch plant is in proximity to Glenwood Cemetery and there concern regarding dust and vibration



**ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM:** The proposed batch plant location will be greater than 800 m from the Glenwood Cemetery. It is believed that the dust control measures mentioned in the CPR will mitigate impacts to the Glenwood Cemetery.

**APAI COMMENT ON ALGONQUIN RESPONSE:** The CPR mitigation measures for dust include the following :

- Applying dust suppressants (e.g. water, calcium chloride)
- Maintain adequate control of dust on sites in close proximity to residences
- Enforce speed limits for trucks on site as appropriate
- Re-vegetate exposed soils as soon as possible
- As appropriate, protect stockpiles of friable material with a barrier or windscreen
- Consult with local authorities prior to application of dust suppressants (i.e. water) on public access roads
- Ensure dust generation is monitored and controlled in areas of sensitive land use.

As none of the dust control measures listed above are applicable to the batch plant, there are in effect no mitigation measures in place to protect Glenwood Cemetery from corrosive cement dust.

#### **ADDITIONNAL COMMENTS 2. BATCH PLANT**

**MUNICIPAL CONSULTATION FORM #56:** Batch plant – siting is very problematic and little information has been provided in terms of adverse effects resulting from fugitive emissions like noise, dust, etc. The proposed location is 23pprox.... 750m form island school (building) with play area even closer and 23pprox.... 750-800 m from a non-participating house. Township requests Ministry require proponent to reconsider the location and the function be analyzed doing a series of studies to address land use compatibility concerns consistent with the MoE D6 methodology. Proponent does not indicated the proposed water source for plant and does not discuss how water will be controlled

**ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM:** It is anticipated that water for the concrete will come either from Lake Ontario (if the water is suitable) or otherwise will be trucked from the mainland. The water will be stored on site in a water tank(s). The proponent will complete an emission summary and dispersion modeling report (ESDM) for the batch plant which will be submitted to the MOE for approval before operation of the batch plant can commence.

**APAI COMMENT ON ALGONQUIN RESPONSE:** Algonquin “will complete an emission summary and dispersion modeling report”. As stated in the Loyalist Township Municipal Consultation Form:

- “The consultant’s reports, as presented, lack the detail that is necessary to provide informed comments and as is specifically stated by AECOM and CRCA, an approval of the project is premature until the full scope of the project with an appropriate level of detail is supplied enabling a proper assessment of impact on municipal infrastructure, the natural environment, cultural heritage, and land use compatibility.”

Algonquin provides no additional information, therefore it remains impossible to provide informed comments and project approval remains premature.

<b>ADDITIONNAL COMMENTS 3. LAYDOWN AREAS</b>
<p><b>MUNICIPAL CONSULTATION FORM #57:</b> Laydown areas – two areas proposed on island with the southernmost relatively close to non-participating house. The proposed operation of this area should be examined in detail to minimize impact during construction phase</p> <p><b>ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM:</b> It is not expected that operations at the laydown areas will have a significant impact on the neighbouring residence. As outlined Appendix B to the CPR, several plans will be prepared prior to construction which will address mitigation of impacts from construction operations.</p> <p><b><u>APAI COMMENT ON ALGONQUIN RESPONSE:</u></b> As stated in the Loyalist Township Municipal Consultation Form:</p> <ul style="list-style-type: none"> <li>• “The consultant’s reports, as presented, lack the detail that is necessary to provide informed comments and as is specifically stated by AECOM and CRCA, an approval of the project is premature until the full scope of the project with an appropriate level of detail is supplied enabling a proper assessment of impact on municipal infrastructure, the natural environment, cultural heritage, and land use compatibility.”</li> </ul> <p>Algonquin provides no additional information and no details as to the “several plans that will be prepared prior to construction”, therefore it remains impossible to provide informed comments and project approval remains premature.</p>
<b>ADDITIONNAL COMMENTS 4. CONSTRUCTION TIMING</b>
<p><b>MUNICIPAL CONSULTATION FORM #58:</b> Construction timing – during summer island population grows from 400 to 800 residents particularly on weekends and holidays. Construction activities on weekends should be reduced to address congestion and noise</p> <p><b>ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM:</b> Section 2.1.1 &amp; Section 4 of the CPR stipulates that a Traffic Management Plan (Plan) will be developed and will include mitigation measures for public safety and to address traffic flow, any future Plan would need to consider all seasons.</p> <p><b><u>APAI COMMENT ON ALGONQUIN RESPONSE:</u></b> As stated in the Loyalist Township Municipal Consultation Form:</p> <ul style="list-style-type: none"> <li>• “The consultant’s reports, as presented, lack the detail that is necessary to provide informed comments and as is specifically stated by AECOM and CRCA, an approval of the project is premature until the full scope of the project with an appropriate level of detail is supplied enabling a proper assessment of impact on municipal infrastructure, the natural environment, cultural heritage, and land use compatibility.”</li> </ul> <p>Algonquin provides no additional information and no Traffic Management Plan, therefore it remains impossible to provide informed comments and project approval remains premature.</p>
<b>ADDITIONNAL COMMENTS 5. SHADOW FLICKER</b>

**MUNICIPAL CONSULTATION FORM #59:** Shadow flicker –proponent prepared a report which has concluded that several sensitive receptors will be exposed potentially to shadow flicker over and above international standards set in countries like Germany and Denmark. Ministry is requested to evaluate this concern

**ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM:** The shadow flicker report was voluntarily prepared by the proponent and is not a regulatory requirement. It should be noted that the report presents a conservative estimate of the shadow flicker without consideration of terrain, vegetation or the location of windows.

**APAI COMMENT ON ALGONQUIN RESPONSE:**

Hatch Engineering finally produced a shadow-flicker assessment and found 48 homes (existing and potential) to be above the German limit and 9 above 50 h/y under the standard worst conditions. This is an unprecedented insult to a community and must be corrected with a new site plan.

The Hatch report was dated February 26<sup>th</sup> 2013, had been prepared by Dr. Moran, checked by Mr. Ilett, approved by Mr. Tsopelas of Algonquin Power and distributed to Mr. Lensink, Mr. Fairfield and Mr. Harrop of Algonquin Power. One wonders if any of these people had even looked at the report. The comparison of the numbers in the table of h/y for the German regulation (30 h/y) and the Danish guideline (10 h/y with cloud cover) is unfathomable!

**ADDITIONNAL COMMENTS 6. GROUNDWATER**

**MUNICIPAL CONSULTATION FORM #60:** *The construction plan has no mention of groundwater. Besides the comment made earlier in this report by reference to AECOM, what the writer finds problematic is that three (3) ground water studies have found some or all of this area to have a high vulnerability to contamination. These studies include the Loyalist Township Groundwater Study, 2001; the Western Cataraqui Region Groundwater Study, 2007; and the Cataraqui Source Protection Area's Assessment Report Water Characterization Report 2011.*

*The proponent notes the potential for spills and makes the point that any spills will be addressed quickly but the study fails to recognize the high vulnerability to groundwater contamination, particularly the existence of rock fissures/karstic formations.*

**ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM:** CPR Appendix B considers groundwater and spills.

**APAI COMMENT ON ALGONQUIN RESPONSE:** CPR Appendix B Groundwater – “Potential Effect”, states that Potential contamination from accidental spills is a concern. The Performance Objectives are to “manage the risk of accidental spills” and “no groundwater interference”. The “Mitigation Strategy” deals exclusively with groundwater potentially encountered at a building site during excavation. The “Monitoring Plan and Contingency Measures” provides the following:

- In terms of accidental spills or releases to the environment, standard containment facilities and emergency response materials would be maintained on site as required.

- Refueling, equipment maintenance and other potentially contaminating activities would occur in designated areas and as appropriate, spills would be reported immediately to the MOE Spills Action Centre.
- A detailed construction Emergency Response and Communication Plan will be prepared by the Construction contractor which will contain procedures for spill contingency and response plan, spills response training, notification procedures and necessary cleanup materials and equipment.

Again, the Emergency Response and Communication Plan is not provided, therefore cannot be evaluated, commented upon. Additionally, the spills contingency provisions noted above deal exclusively with with groundwater potentially encountered at a building site during excavation. As such, Algonquin has not addressed the issue raised in item 60.

**MUNICIPAL CONSULTATION FORM #61:** Groundwater - The proponent should be required to review and reference these documents, and to specifically articulate how and if the concerns can be mitigated further than already discussed.

**ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM:** See response below (item MUNICIPAL CONSULTATION FORM #62).

**APAI COMMENT ON ALGONQUIN RESPONSE:** See response to item 62 below.

**MUNICIPAL CONSULTATION FORM #62:** Proponent should also be required to do some groundwater assessment and monitoring to ensure wells in the area are not affected particularly as many wells are shallow

**ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM:** CPR Appendix B considers groundwater and spills.

**APAI COMMENT ON ALGONQUIN RESPONSE:** As detailed in item 60 above, CPR appendix B does not adequately consider groundwater and spills. Once again, as stated in the Loyalist Township Municipal Consultation Form:

- “The consultant’s reports, as presented, lack the detail that is necessary to provide informed comments and as is specifically stated by AECOM and CRCA, an approval of the project is premature until the full scope of the project with an appropriate level of detail is supplied enabling a proper assessment of impact on municipal infrastructure, the natural environment, cultural heritage, and land use compatibility.”

Algonquin provides no additional information regarding groundwater and spills, therefore it remains impossible to provide informed comments and project approval remains premature.

**MUNICIPAL CONSULTATION FORM #63:** Section 4.6 of the D&O report states that no groundwater or surface water supplies will be used by the facility, except perhaps well water for washroom purposes. The concerns that no mention in any study regarding water needs for batching plant (i.e. source being either surface or groundwater source) and the volume is needed. What is the water source and how is the site being controlled when mixing is occurring?

**ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM:** Refer to CPR . It is anticipated that water for the concrete will come either from Lake Ontario (if the water is suitable) or otherwise will be trucked from the mainland. The water will be stored on site in a water tank(s).

**APAI COMMENT ON ALGONQUIN RESPONSE:** In fact the CPR makes no reference to water taking for the batch plant. According to Table 1 of the Environmental Protection Act, Ontario Regulation 359/09 Renewable Energy Approvals under Part V.0.1 of the Act, the Design and Management Report must contain the following with regards to any water takings:

- A. a description of the time period and duration of water takings expected to be associated with the operation of the facility,
- B. a description of the expected water takings, including rates, amounts and an assessment of the availability of water to meet the expected demand, and
- C. an assessment of and documentation showing the potential for the facility to interfere with existing uses of the water expected to be taken,

The Algonquin Report does not address A, B, or C listed above as being a requirement of the REA process. Therefore Algonquin's Report does not meet the requirements of Reg. 359/09 and must be rejected as incomplete

#### **ADDITIONAL COMMENTS 7. DECOMMISSIONING**

**MUNICIPAL CONSULTATION FORM #64:** Decommissioning – island is remote and has significant logistical constraints which increase the cost of decommissioning. Township requests financial assurances (such as security posting) that will ensure decommissioning will occur and the Township wants the proponent to commit to a timing schedule for decommissioning i.e. to start within 6 months of nonoperation/ closing and take no more than one year to complete. Proponent should be aware that at the end of the life of the project the Townships position is that various components of wind energy system installation do not gain legal non-conforming entitlements under the Planning Act

**ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM:** The proponent is aware of the logistical constraints of the project location and when the project is no longer operational the proponent will be required to decommission the project in accordance with a Decommissioning Plan which will be prepared at that time and provided to the MOE for review and approval. It is also believed that there will be significant salvage value which will offset a majority of the decommissioning costs which will be borne solely by the proponent.

#### **APAI COMMENT ON ALGONQUIN RESPONSE:**

##### **Scrap Value of Decommissioned Wind Turbines for Windlectric Amherst Island Project**

Scrap values<sup>1</sup> as of July 22<sup>nd</sup>, 2013:

Steel: \$264/tonne (1000 kg)

Copper: \$6.28/ kg

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<sup>1</sup> Darin Horner – Lighting Dimension (Toronto)

### Steel

Weight of steel tower<sup>2</sup>: 300 tonnes;  
Weight of steel component of the nacelle: 50 tonnes (estimate);  
Total steel: 350 tonnes.

**Scrap value of steel: \$0.09M/turbine or \$3.0M total**

### Copper

Weight of copper in a turbine: 5.6 tonnes/MW<sup>3</sup> (includes cabling).  
Weight of copper in Siemens 2.3 MW turbine including cabling: 13 tonnes (estimate).

**Scrap value of Copper: \$0.08M/turbine or \$2.7M total**

### Neodymium

Weight of neodymium iron boride magnet in a turbine: 2 tonnes (estimate).  
Weight of neodymium: 0.5 tonnes (estimate)  
Cost of neodymium: \$75/kg<sup>4</sup>  
Cost of neodymium: \$0.04M/turbine or \$1.2M total

The problem: "The neodymium-iron-boron material decomposes peritectically — it changes composition — when heated to its melting point," says Chumbley, lead researcher on the project. "So it can't just be melted down and reused. But it's too valuable to throw away, so there are literally warehouses full of 55-gallon drums of the stuff waiting to be recycled."<sup>5</sup>

The future: The DOE Ames Lab is working on the problem: "Scientists at the U.S. Department of Energy's (DOE) Ames Laboratory are working to more effectively remove the neodymium, a rare earth element, from the mix of other materials in a magnet. Initial results show recycled materials maintain the properties that make rare-earth magnets useful."<sup>6</sup>

**Assume that the problem will be resolved and allow a total scrap value of \$0.6M**

**Conclusion: The scrap value of the Windlectric project is estimated to be \$6.3M**

This is in 2013 dollars.

## **AECOM / SECTION 1.1 PROJECT OVERVIEW**

**MUNICIPAL CONSULTATION FORM #65:** *Algonquin Commitment:* There is no Algonquin Commitment to the number of turbines or final locations.

**MUNICIPAL CONSULTATION FORM #67:** *Loyalist Township's Proposed Change to Algonquin Commitment:* REA approval is premature until proponent identifies final number and locations of

<sup>2</sup> Draft Road Use Report (Hatch, Oct. 24<sup>th</sup>, 2012)

<sup>3</sup> Ian Falconer, M.Sc. thesis, University of Exeter, 2009.

<sup>4</sup> As of July 2013 (<http://www.metal-pages.com/metalprices/neodymium/>)

<sup>5</sup> US Department of Energy news release (<http://www.eurekalert.org/features/doe/2001-07/dl-nlf060502.php>)

<sup>6</sup> News release Oct. 2012 (<https://www.ameslab.gov/news/news-releases/reclaiming-rare-earths>)

turbines

**MUNICIPAL CONSULTATION FORM #66:** *Algonquin Commitment:* There is no Algonquin Commitment to haul routes.

**MUNICIPAL CONSULTATION FORM #68:** *Loyalist Township's Proposed Change to Algonquin Commitment:* REA approval premature until proponent identifies final haul routes. Haul routes have not been provided in the public consultation material

**ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM:** The REA for this project is being sought to authorize the installation of all 36 turbines as described in the reports. The final hauling routing is not a requirement under the REA. Preliminary information has been provided to the Township and will be continued to be assessed in order to determine the optimum planning strategy considering all constraints and issues.

**APAI COMMENT ON ALGONQUIN RESPONSE:** The fact that a final hauling route is not required by the REA process is indicative of a flawed process. As stated in the Loyalist Township Municipal Consultation Form:

- “The consultant’s reports, as presented, lack the detail that is necessary to provide informed comments and as is specifically stated by AECOM and CRCA, an approval of the project is premature until the full scope of the project with an appropriate level of detail is supplied enabling a proper assessment of impact on municipal infrastructure, the natural environment, cultural heritage, and land use compatibility.”

Algonquin provides no additional information regarding groundwater and spills, therefore it remains impossible to provide informed comments and project approval remains premature.

#### **AECOM / PROJECT DESCRIPTION REPORT SECTION 2.4.3 MUNICIPAL**

**MUNICIPAL CONSULTATION FORM #69:** There is no Algonquin Commitment to a Road Use Agreement with the local municipality.

**MUNICIPAL CONSULTATION FORM #71:** *Loyalist Township's Proposed Change to Algonquin Commitment:* Include a Algonquin Commitment to enter into a Road Use Agreement with Township before any construction activity occurs: Agreement to incorporate Algonquin Commitments made at Jan 29, 2013 town hall meeting including

**MUNICIPAL CONSULTATION FORM #72:** *Loyalist Township's Proposed Change to Algonquin Commitment:* Island infrastructure must be maintained in same or better condition after project been constructed This would include all Township roads and road allowances, including traffic signage, drainage works, fences and mature trees and vegetation within road allowance

**MUNICIPAL CONSULTATION FORM #73:** *Loyalist Township's Proposed Change to Algonquin Commitment:* Include Algonquin Commitments relating to construction, operation and decommissioning

**MUNICIPAL CONSULTATION FORM #74:** *Loyalist Township's Proposed Change to Algonquin*



**Commitment:** Project will provide payment to Township to hire an independent engineering consultant to conduct the following:

- **MUNICIPAL CONSULTATION FORM #75:** *Loyalist Township's Proposed Change to Algonquin*  
**Commitment:** Advise Township on infrastructure engineering as it pertains to the project affecting roads, drainage, etc.
- **MUNICIPAL CONSULTATION FORM #76:** *Loyalist Township's Proposed Change to Algonquin*  
**Commitment:** Review and approve proposed project plans and drawings
- **MUNICIPAL CONSULTATION FORM #77:** *Loyalist Township's Proposed Change to Algonquin*  
**Commitment:** Conduct inspection during construction and advise township
- **MUNICIPAL CONSULTATION FORM #78:** *Loyalist Township's Proposed Change to Algonquin*  
**Commitment:** Review changes that arise during construction and advice regarding acceptance
- **MUNICIPAL CONSULTATION FORM #79:** *Loyalist Township's Proposed Change to Algonquin*  
**Commitment:** Participate in pre and post construction condition surveys, township review and consideration of approval of construction plans
- **MUNICIPAL CONSULTATION FORM #80:** *Loyalist Township's Proposed Change to Algonquin*  
**Commitment:** Commit to geotech review of existing roads and upgrades completed in advance of construction
- **MUNICIPAL CONSULTATION FORM #81:** *Loyalist Township's Proposed Change to Algonquin*  
**Commitment:** Commit to pre and post construction condition surveys

**ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM:** The company voluntarily submitted a draft Road User Agreement in 2012 and is currently in negotiation with the Township on the terms of the agreement.

The company will abide by municipal tree cutting/trimming bylaws as applicable. As discussed publicly the company is interested in entering into a Road Use Agreement which would mandate the following with further details to be negotiated with Loyalist Township:

(i) Island infrastructure must be maintained in the same or better condition after the Amherst Island Wind Project has been constructed.

(ii) The project will provide payment for Loyalist Township to hire an independent engineering consultant to conduct the following:

- Advise the Township on the infrastructure engineering as it pertains to the project affecting roads, drainage, etc.
- Review and approve proposed project plans and drawings.
- Conduct inspections during construction and advise Township.
- Participate in pre and post construction audits to be completed by the company.

**APAI COMMENT ON ALGONQUIN RESPONSE:** As stated in the Loyalist Township Municipal Consultation Form:

- “The consultant’s reports, as presented, lack the detail that is necessary to provide informed comments and as is specifically stated by AECOM and CRCA, an approval of the project is premature until the full scope of the project with an appropriate level of detail is supplied enabling a proper assessment of impact on municipal infrastructure, the natural environment, cultural heritage, and land use compatibility.”

Algonquin provides no additional information and no Road Use Agreement, therefore it remains impossible to provide informed comments and project approval remains premature.

- **MUNICIPAL CONSULTATION FORM #82:** *Loyalist Township’s Proposed Change to Algonquin Commitment:* Commit to financial securities and warranties

**ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM:** The negotiation of the Road Use Agreement will include Algonquin Commitments to provide security for the obligations under the agreement as well as providing a reasonable warranty for work completed under the agreement.

**APAI COMMENT ON ALGONQUIN RESPONSE:** Again, a plan / agreement that will be developed, no additional information is provided by Algonquin in this document.

- **MUNICIPAL CONSULTATION FORM #83:** *Loyalist Township’s Proposed Change to Algonquin Commitment:* Commit to interim maintenance –safe driving conditions will be maintained throughout construction, minimize mud and stone with prompt cleaning
- **MUNICIPAL CONSULTATION FORM #84:** *Loyalist Township’s Proposed Change to Algonquin Commitment:* Commit to communication –construction manager will be available for reporting issues
- **MUNICIPAL CONSULTATION FORM #85:** *Loyalist Township’s Proposed Change to Algonquin Commitment:* Recognize authority of township officials to order remedial work necessary to correct unexpected damage and to stop any work or activities that in the townships opinion present a reasonable risk of damage to Town ships infrastructure and/ or unacceptable disruption and/ or inconvenience to Township residents that were not previously contemplated by the approve plans

**ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM:** Details of the Agreement will be negotiated with the Township. All three of these issues have been contemplated during negotiations to date.

**APAI COMMENT ON ALGONQUIN RESPONSE:** As stated in the Loyalist Township Municipal Consultation Form:

- “The consultant’s reports, as presented, lack the detail that is necessary to provide informed comments and as is specifically stated by AECOM and CRCA, an approval of the project is premature until the full scope of the project with an appropriate level of

detail is supplied enabling a proper assessment of impact on municipal infrastructure, the natural environment, cultural heritage, and land use compatibility.”

Algonquin provides no additional information regarding the road use agreement, therefore it remains impossible to provide informed comments and project approval remains premature.

**MUNICIPAL CONSULTATION FORM #70:** Algonquin Commitment: If required, authorization from the Township/County as necessary for pruning or removal of trees within road allowances.

**MUNICIPAL CONSULTATION FORM #86:** *Loyalist Township’s Proposed Change to Algonquin Commitment:* Commit to compliance with municipal tree by-law and restoration of disturbed vegetative areas including shrubs to the satisfaction of Township (document Algonquin Commitment made at Jan 29th, 2013 meeting to retain a professional arborist)

**ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM:** As discussed publicly (Jan 29th 2013 Township led town hall meeting) - Tree trimming and removal, if required within road allowances, will be performed in accordance with the Loyalist Township’s Tree Bylaw and supervised by a professional arborist.

**APAI COMMENT ON ALGONQUIN RESPONSE:** There is no mention of the Township requirement of “restoration of disturbed vegetative areas including shrubs to the satisfaction of Township”.

#### **AECOM / SECTION 4.3.3 NOISE**

**MUNICIPAL CONSULTATION FORM #87:** *Algonquin Commitment:* During construction, noise would be generated by the operation of heavy equipment at each of the work areas and associated traffic on-site and on haul routes.

**MUNICIPAL CONSULTATION FORM #88:** *Loyalist Township’s Proposed Change to Algonquin Commitment:* Proponent should undertake a noise study to confirm that construction noise levels will be acceptable. This is particularly important for the school. The noise study should recommend mitigation measures.

**ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM:** The effects are anticipated to be short-term in duration and localized. Prudent industry practice will be followed to minimize potential effects arising from the construction activities, e.g. noise and dust.

**APAI COMMENT ON ALGONQUIN RESPONSE:** The HATCH report indicates an anticipated construction period of at least 18 months, hardly short term in duration. The same report indicates that the construction activities will take place over the majority of island roads, hardly localized. “Prudent industry practices” are not sufficient. As recommended by the Municipal Consultation Form, a noise study, providing realistic and effective mitigation measures is required.

#### **AECOM / SECTION 4.3.6 STORM WATER**

**MUNICIPAL CONSULTATION FORM #89:** *Algonquin Commitment:* During construction and decommissioning, proper grading would be conducted and mitigation measure implemented to reduce potential for runoff at the work areas.

**MUNICIPAL CONSULTATION FORM #90:** *Loyalist Township's Proposed Change to Algonquin*

**Commitment:** A drainage study is required to assess the effects of new development on drainage flows and patterns. Of particular importance will be the concentration of sheet flows at barriers (access roads) and culverts. Assessment of downstream drainage courses will be required to insure adequate capacity for post development flows.

**ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM:** Additional surface water assessment for the installation of culverts will be undertaken to ensure conveyance of surface run off is not impeded by access roads. See DO report section 4.8 - The Project is not anticipated to require significant alteration to surface water runoff, or to involve the storage of surface water. As the Subject Property is of limited topographic relief, erosion of excavated materials and changes to storm water runoff is not anticipated. If required a Storm water Management Plan would be implemented for the substation property. The Storm water Management Plan, will be designed in compliance with the "Storm water Management Planning and Design Manual" (MOE, 2003) and Cataraqui Region Conservation Authority (CRCA) requirements. .

Project Description Report (PDR) Section 4.3.6: Construction and Decommissioning - During construction and decommissioning, proper grading would be conducted and mitigation measure implemented to reduce potential for runoff at the work areas.

**APAI COMMENT ON ALGONQUIN RESPONSE:** While Algonquin states the "Project is not anticipated to require significant alteration to surface water runoff", this does not address the concern stated in item 89 or the township's proposed mitigation measure listed in item 90.

Algonquin's response once again references plans / assessments which will be undertaken in the future, (surface water assessment, Storm Water management Plan). As stated in the Loyalist Township Municipal Consultation Form:

- "The consultant's reports, as presented, lack the detail that is necessary to provide informed comments and as is specifically stated by AECOM and CRCA, an approval of the project is premature until the full scope of the project with an appropriate level of detail is supplied enabling a proper assessment of impact on municipal infrastructure, the natural environment, cultural heritage, and land use compatibility."

Algonquin provides no additional information regarding the road use agreement, therefore it remains impossible to provide informed comments and project approval remains premature

**AECOM / GENERAL (POSSIBLE ADDITIONS TO PROJECT DESCRIPTION REPORT) TOWNSHIP JAN 29<sup>TH</sup> 2013 MEETING**

**Algonquin Commitment:** Construction Plans / Construction Methods

**MUNICIPAL CONSULTATION FORM #94:** *Loyalist Township's Proposed Change to Algonquin*

**Commitment:** Commit to submission of construction plans for public consultation and consideration for approval by township

**ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM:** An approval process for the designs will be incorporated into the road use agreement which is being negotiated with the Township.

**APAI COMMENT ON ALGONQUIN RESPONSE:** Algonquin is not committing to public consultation as requested by Loyalist township, and once again is referencing plans which will be produced in the future.

- **MUNICIPAL CONSULTATION FORM #95:** *Loyalist Township's Proposed Change to Algonquin Commitment:* Detail required road improvements (permanent and temporary)
- **MUNICIPAL CONSULTATION FORM #96:** *Loyalist Township's Proposed Change to Algonquin Commitment:* Commit to retention of independent engineering by township at proponents expense
- **MUNICIPAL CONSULTATION FORM #97:** *Loyalist Township's Proposed Change to Algonquin Commitment:* Commit to road maintenance program during construction, indicate availability of road maintenance (i.e. graders)

**MUNICIPAL CONSULTATION FORM #98:** *Loyalist Township's Proposed Change to Algonquin Commitment:* Commit to construction methods to minimize traffic disruptions

**ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM:** See response above (item MUNICIPAL CONSULTATION FORM #85)

**APAI COMMENT ON ALGONQUIN RESPONSE:** The Algonquin response to item 85 is "Details of the Agreement will be negotiated with the Township. All three of these issues have been contemplated during negotiations to date."

As stated in the Loyalist Township Municipal Consultation Form:

- "The consultant's reports, as presented, lack the detail that is necessary to provide informed comments and as is specifically stated by AECOM and CRCA, an approval of the project is premature until the full scope of the project with an appropriate level of detail is supplied enabling a proper assessment of impact on municipal infrastructure, the natural environment, cultural heritage, and land use compatibility."

Algonquin provides no additional information regarding the road use agreement, therefore it remains impossible to provide informed comments and project approval remains premature.

**MUNICIPAL CONSULTATION FORM #93:** *Algonquin Commitment:* Consultation program, notices, complaint resolution.

**MUNICIPAL CONSULTATION FORM #100:** *Loyalist Township's Proposed Change to Algonquin Commitment:* Commit to weekly road updates, communication program, and advance warnings. Details of construction mgmt. and provide contact info. All to the satisfaction of Town ship

**ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM:** A public communications plan will be

prepared and provided to the Township for review prior to construction.

**APAI COMMENT ON ALGONQUIN RESPONSE:** As stated in the Loyalist Township Municipal Consultation Form:

- “The consultant’s reports, as presented, lack the detail that is necessary to provide informed comments and as is specifically stated by AECOM and CRCA, an approval of the project is premature until the full scope of the project with an appropriate level of detail is supplied enabling a proper assessment of impact on municipal infrastructure, the natural environment, cultural heritage, and land use compatibility.”

Algonquin provides no additional information regarding public communication plan, therefore it remains impossible to provide informed comments and project approval remains premature.

**MUNICIPAL CONSULTATION FORM #104:** *Algonquin Commitment:* Detailed geotechnical work will be conducted prior to Project construction.

**ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM:** A significant amount of geotechnical work has already been completed with approximately 20 boreholes across the island. Additional investigation will be required to ensure there is enough data to design the turbine foundations and other civil works.

**APAI COMMENT ON ALGONQUIN RESPONSE:** Again, “additional work will be required”. Algonquin has not provided any additional information as required in order to provide informed comments.

**MUNICIPAL CONSULTATION FORM #108:** *Loyalist Township’s Proposed Change to Algonquin Commitment:* Terms of reference for the geotech investigations and qualifications of the geotech specialist retained to carry out the investigations will be submitted to the road authority for consideration for approval

**MUNICIPAL CONSULTATION FORM #109:** *Loyalist Township’s Proposed Change to Algonquin Commitment:* Geotech investigations to include an assessment of the bearing capacity of existing roads to support proposed construction traffic and where capacity is not sufficient necessary improvements

**MUNICIPAL CONSULTATION FORM #110:** *Loyalist Township’s Proposed Change to Algonquin Commitment:* Post construction investigation by a geotech engineering required to ensure road structures are not susceptible to premature failure

**ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM:** Details of the Road Use Agreement are being negotiated with the Township and will include engineering qualification requirements. The Agreement will also include requirements for completion of post-construction remedial work as required.

**APAI COMMENT ON ALGONQUIN RESPONSE:** As stated in the Loyalist Township Municipal Consultation Form:

- “The consultant’s reports, as presented, lack the detail that is necessary to provide informed comments and as is specifically stated by AECOM and CRCA, an approval of the project is premature until the full scope of the project with an appropriate level of detail is supplied enabling a proper assessment of impact on municipal infrastructure, the natural environment, cultural heritage, and land use compatibility.”

Algonquin provides no additional information regarding the road use agreement, therefore it remains impossible to provide informed comments and project approval remains premature.

**MUNICIPAL CONSULTATION FORM #105:** *Algonquin Commitment:* Develop agreements with utility companies, if required, for the temporary relocation or adjusted location of utilities within the Project location or transportation routing (i.e. low slung electrical collector lines that impede the flow of equipment may need to be lifted).

**ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM:** The company is aware that infrastructure owned by the Loyalist Township or other private utilities may not be moved without appropriate approvals.

**MUNICIPAL CONSULTATION FORM #111:** *Loyalist Township’s Proposed Change to Algonquin Commitment:* Add “proposals for relocation of utilities within municipal road allowance will be submitted to road authority in writing for consideration of approval in advance of construction.”

**ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM:** Details of the Road Use Agreement are being negotiated with the Township and will include engineering qualification requirements. The Agreement will also include requirements for completion of post-construction remedial work as required

**APAI COMMENT ON ALGONQUIN RESPONSE:** As stated in the Loyalist Township Municipal Consultation Form:

- “The consultant’s reports, as presented, lack the detail that is necessary to provide informed comments and as is specifically stated by AECOM and CRCA, an approval of the project is premature until the full scope of the project with an appropriate level of detail is supplied enabling a proper assessment of impact on municipal infrastructure, the natural environment, cultural heritage, and land use compatibility.”

Algonquin provides no additional information regarding the road use agreement, therefore it remains impossible to provide informed comments and project approval remains premature.

#### **AECOM / DRAFT PROPERTY LINE SETBACK ASSESSMENT REPORT – Table 2.1 SITE PREPARATION**

**MUNICIPAL CONSULTATION FORM #113:** *Algonquin Commitment:* Trees that require trimming/removal would be conducted in compliance with the Township tree cutting by-law, if applicable.

**MUNICIPAL CONSULTATION FORM #116:** *Loyalist Township’s Proposed Change to Algonquin Commitment:* Add “Affected trees to be tagged in field and the municipality are to be satisfied that feasible alternatives to tree removal have been considered.”



**MUNICIPAL CONSULTATION FORM #117:** *Loyalist Township's Proposed Change to Algonquin*

*Commitment:* Add Algonquin Commitment to fence off stand of roadside vegetation so that it is not disturbed or commit to restoring disturbed areas with similar species.

**ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM:** CPR Table 2.1 – site completion and restoration - Removal of surplus material, equipment and debris. Following construction all temporary locations would be rehabilitated to pre-construction conditions. Any landscaping, re-vegetation or erosion control measures would be installed in accordance with detailed design.

**APAI COMMENT ON ALGONQUIN RESPONSE:** Items 113, 116 and 117 above pertain to construction activities and the Algonquin response deals with post construction activities, therefore not addressing the issues raised by the Township.

**MUNICIPAL CONSULTATION FORM #114:** *Algonquin Commitment:* Natural features requiring protection will be marked and silt fencing placed around them.

**MUNICIPAL CONSULTATION FORM #118:** *Loyalist Township's Proposed Change to Algonquin*

*Commitment:* Add "Nature features and protection will be detailed on construction drawings and the municipality and interested public will have an opportunity to review plans and confirm that all features have been identified and adequately protected."

**ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM:** The Township will have the opportunity to comment on plans relating to protection of nature features within the road allowances. This is currently contemplated as a part of the road use agreement and does not require amendment of the reports.

**APAI COMMENT ON ALGONQUIN RESPONSE:** As stated in the Loyalist Township Municipal Consultation Form:

- "The consultant's reports, as presented, lack the detail that is necessary to provide informed comments and as is specifically stated by AECOM and CRCA, an approval of the project is premature until the full scope of the project with an appropriate level of detail is supplied enabling a proper assessment of impact on municipal infrastructure, the natural environment, cultural heritage, and land use compatibility."

Algonquin provides no additional information regarding the road use agreement, therefore it remains impossible to provide informed comments and project approval remains premature.

**MUNICIPAL CONSULTATION FORM #115:** *Algonquin Commitment:* The public roads will be examined to determine if any necessary engineering road upgrades (i.e. load analysis determination and infrastructure improvements, rock anchoring) are required to ensure transportation of the equipment can be maintained safely.

**ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM:** Further assessment will be undertaken. As discussed publicly (Jan 29th 2013 Town hall meeting) - Tree trimming and removal, if required within road allowances, will be performed in accordance with the Loyalist Township's Tree Bylaw and

supervised by a professional arborist.

Details of the Road Use Agreement are being negotiated with the Township and will include a comprehensive pre-construction investigation into the current state of the roads to determine what upgrades will be necessary for construction

**APAI COMMENT ON ALGONQUIN RESPONSE:** As stated in the Loyalist Township Municipal Consultation Form:

- “The consultant’s reports, as presented, lack the detail that is necessary to provide informed comments and as is specifically stated by AECOM and CRCA, an approval of the project is premature until the full scope of the project with an appropriate level of detail is supplied enabling a proper assessment of impact on municipal infrastructure, the natural environment, cultural heritage, and land use compatibility.”

Algonquin provides no additional information regarding the road use agreement, therefore it remains impossible to provide informed comments and project approval remains premature.

**MUNICIPAL CONSULTATION FORM #119:** *Loyalist Township’s Proposed Change to Algonquin*

*Commitment:* Add “Proposed improvements will be detailed on construction drawings that will be provided to municipality for consideration for approval in advance of construction. Improvements may include, but are not limited to, vertical and/ or horizontal realignments, road pavement structure improvements, improvements at water crossings, etc.

**MUNICIPAL CONSULTATION FORM #120:** *Loyalist Township’s Proposed Change to Algonquin*

*Commitment:* Any measures used to compensate for inadequate bearing capacity, such as use of steel plates or other means of weight distribution on roadways (such as but not limited to culvert crossings) to be confirmed by geotech engineer.

**ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM:** An approval process for the designs will be incorporated into the road use agreement which is being negotiated with the Township.

**APAI COMMENT ON ALGONQUIN RESPONSE:** Again, Algonquin provides no additional information and references a road use agreement which is not finalized.

**MUNICIPAL CONSULTATION FORM #121:** *Loyalist Township’s Proposed Change to Algonquin*

*Commitment:* Location and protection of private services crossing public road allowances (i.e. pipes and electrical services for shore wells) to be identified and confirmed through public consultation

**ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM:** Private utilities within the road allowances will be avoided where possible and if they cannot be avoided, prudent industry practices will be utilized to prevent any damage or disruption of service. In the event that damage to the utilities does occur, the proponent will work diligently to restore the service and coordinate directly with the affected person.

**APAI COMMENT ON ALGONQUIN RESPONSE:** As mentioned in items 3, 20, 27 above, water

lines connecting homes to shore wells run beneath the public roads throughout the island. The island gravel roads are not designed for heavy construction traffic. Every spring the Township institutes a ½ load limit due to the state of the islands gravel roads. According to the HATCH Report attached to the Proposed Road Agreement, construction traffic will impact the majority of the island roads.

Therefore, water lines from shore wells will not be “avoidable”. As Algonquin is well aware of this situation, the “prudent industry practices that will be utilized to prevent any damage or disruption of service” must be provided for review, input.

Additionally, the knowledge that the Proponent is “working diligently to restore service” does not suffice. What penalties will be put in place should service be interrupted for more than a few hours, what compensation will be provided to the homeowner should service be interrupted for more than a few hours?

**ACCOM / DRAFT PROPERTY LINE SETBACK ASSESSMENT REPORT – TABLE 2.1 – CULVERT CONSTRUCTION**

**MUNICIPAL CONSULTATION FORM #125:** *Algonquin Commitment:* Install culverts along access roads and associated underground collector and data lines that cross watercourses.

**MUNICIPAL CONSULTATION FORM #128:** *Loyalist Township’s Proposed Change to Algonquin Commitment:* Add “Location and sizing of culverts to detail in drainage plan.”

**MUNICIPAL CONSULTATION FORM #129:** *Loyalist Township’s Proposed Change to Algonquin Commitment:* Temporary culvert lengthening and/ or ditch alignment at entrances off township or county roads to be detailed in drainage plan

**MUNICIPAL CONSULTATION FORM #126:** *Loyalist Township’s Proposed Change to Algonquin Commitment:* The culverts would be appropriately sized to meet flow conditions, embedded within the natural channel and backfilled with gravel to match the final grade of the access road. Other technical requirements may influence culvert size and materials.

**MUNICIPAL CONSULTATION FORM #130:** *Loyalist Township’s Proposed Change to Algonquin Commitment:* Add “Proposed location and sizing of culverts to be detailed in drainage plan. Drainage calculations required for culvert sizing. Adequacy of downstream drainage courses must be confirmed – pre and post development flows must be considered. Channelization of sheet flow due to new barriers (access roads and culverts for example) must be assessed and deficiencies of downstream capacity must be corrected.

**ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM:** Additional surface water assessment for the installation of culverts will be undertaken to ensure conveyance of surface run off is not impeded by access roads. See DO report section 4.8 - The Project is not anticipated to require significant alteration to surface water runoff, or to involve the storage of surface water. As the Subject Property is of limited topographic relief, erosion of excavated materials and changes to storm water runoff is not anticipated. If required a Storm water Management Plan would be implemented for the substation property. The Storm water Management Plan, will be designed in compliance with the “Storm water Management Planning and Design Manual” (MOE, 2003) and Cataraqui Region Conservation Authority (CRCA)

requirements. .

Project Description Report (PDR) Section 4.3.6:

Construction and Decommissioning - During construction and decommissioning, proper grading would be conducted and mitigation measure implemented to reduce potential for runoff at the work areas.

**APAI COMMENT ON ALGONQUIN RESPONSE:** While Algonquin states the “Project is not anticipated to require significant alteration to surface water runoff”, this does not address the concern stated in item 89 or the township’s proposed mitigation measure listed in item 90.

Algonquin’s response once again references plans / assessments which will be undertaken in the future, (surface water assessment, Storm Water management Plan). As stated in the Loyalist Township Municipal Consultation Form:

- “The consultant’s reports, as presented, lack the detail that is necessary to provide informed comments and as is specifically stated by AECOM and CRCA, an approval of the project is premature until the full scope of the project with an appropriate level of detail is supplied enabling a proper assessment of impact on municipal infrastructure, the natural environment, cultural heritage, and land use compatibility.”

Algonquin provides no additional information regarding the road use agreement, therefore it remains impossible to provide informed comments and project approval remains premature

**MUNICIPAL CONSULTATION FORM #127:** *Algonquin Commitment:* Collector and data cables will be installed below the culverts where associated with an access road crossing, with the design determined by the construction contractor in consultation with the CRCA as appropriate.

**MUNICIPAL CONSULTATION FORM #133:** *Loyalist Township’s Proposed Change to Algonquin Commitment:* Proposed locations for collector and data cable installations on municipal roads must be submitted to the road authority for consideration for approval in advance of construction. The road authority may require overhead installations at culvert crossings to avoid interferences with future culvert replacements/ repairs.

**ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM:** An approval process for the designs will be incorporated into the road use agreement which is being negotiated with the Township.

**APAI COMMENT ON ALGONQUIN RESPONSE:** Algonquin’s response once again references a plan / agreement which will be finalized in the future, (Road use agreement). As stated in the Loyalist Township Municipal Consultation Form:

- “The consultant’s reports, as presented, lack the detail that is necessary to provide informed comments and as is specifically stated by AECOM and CRCA, an approval of the project is premature until the full scope of the project with an appropriate level of detail is supplied enabling a proper assessment of impact on municipal infrastructure, the natural environment, cultural heritage, and land use compatibility.”

Algonquin provides no additional information regarding the road use agreement, therefore it remains impossible to provide informed comments and project approval remains premature.

**AECOM / DRAFT PROPERTY LINE SETBACK ASSESSMENT REPORT – TABLE 2.1 TURBINE FOUNDATIONS**

**MUNICIPAL CONSULTATION FORM #134:** *Algonquin Commitment:* Based on site specific conditions, blasting may be required to assist with excavations. If a significant amount of rock is encountered, the rock removed would be crushed in an on-site crusher and, as appropriate, used for backfill, laydown areas or spread in agreement with the landowner

**MUNICIPAL CONSULTATION FORM #135:** *Loyalist Township's Proposed Change to Algonquin Commitment:* Pre-construction condition surveys will be undertaken and vibration monitoring by a qualified firm will be undertaken at nearby residence and sensitive structures

**ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM:** The draft Heritage assessment report has been reviewed by the Ministry of Tourism, Culture and Sport (MTCS) and the agency has been provided a letter of confirmation on April 17, 2013 indicating they are satisfied that the heritage assessment process (including project related impacts and recommendations for monitoring and mitigation) and reporting are consistent with the applicable heritage assessment requirements established in s. 23 of O. Reg. 359/09.

Note that vibration monitoring has been recommended in the draft Heritage Assessment Report.

**APAI COMMENT ON ALGONQUIN RESPONSE:** As noted above, Algonquin insists that it has complied with regulatory requirements. It has not. It was not the intention of the drafters of the regulations to accept information that is distorted, inaccurate, misleading or inadequate. While Algonquin appears to have made a few, modest amendments to its original draft heritage assessment report, the most substantial issues that were raised by the municipality and the APAI have been ignored.

Algonquin has submitted an inadequate document to the MTCS. The MTCS should revisit its letter of confirmation, taking into consideration that the concerns of the Municipality and the APAI that were largely ignored in the document submitted to the MTCS.

Algonquin's Draft Heritage Assessment Report of November 2012 states:

- "In addition to direct impacts related to destruction, this assessment also evaluated the potential for indirect impacts resulting from the vibrations of construction and the transportation of Project components and personnel. Although the effect of traffic and construction vibrations on historic period structures is not fully understood, negative effects have been demonstrated on buildings with a setback of less than 40 m from the curbside (Crispino and D'Apuzzo, 2001; Ellis, 1987; Rainer, 1982; Wiss, 1981). The proximity of Project components to resources of protected properties was considered in this assessment, particularly those within 50 m."

Additionally while vibration monitoring has been recommend for some of the built heritage

resources found on the island, Algonquin assessed a total of 23 built heritage resources and four cultural heritage landscapes on Amherst Island for potential Project-related negative impacts.

The table below an overview of the proposed mitigation measures, some of which include vibration monitoring, however the vibration that will result from 18 months of construction activity on 75% of Amherst Island roads is not addressed. Additionally, there are over 100 heritage structures on the island that are not included in the Algonquin Report.

Address / Location	Algonquin Report / Project Components which may impact	Potential Impacts	Algonquin Report / Recommended Mitigation
3500 South Shore Road	Turbines S07, S14, S02, S27, S37  Proposed buried collector line runs along the South Shore Road allowance/ road, the centerline of which is 14 m from the nearest building on the property	Per Algonquin Report “there is the potential for indirect impacts resulting from construction Vibrations”	If construction 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. Construction should be monitored to ensure that PPV levels are not exceeded. All construction activities should cease, should levels be exceeded.
4125 South Shore Road	Turbines S02, S27, S37, S18, S14, S07  Proposed buried collector line runs along the South Shore Road allowance/ road, between 18 m and 29 m north of 4125 South Shore Road	Per Algonquin Report “there is the potential for indirect impacts resulting from construction Vibrations”	Given that the limits of the road RoW are between 11 m and 21 m north of the residence at 4125 South Shore Road, it is unlikely that construction within a 50 m bufferzone can be avoided. Maximum acceptable vibration levels, or peak particle velocity (PPV) levels, should be determined by a qualified engineer. Construction should be monitored to ensure that PPV levels are not exceeded. All construction activities should cease, should levels be exceeded
2750 Front Road	Turbines S30, S26, S18, and S13, S28, S12, S33  Proposed buried collector line is also located along the Front Road allowance in the vicinity of 2750 Front Road (Figure 4). The collector line RoW is located between 19 m and 36 m south of the nearest structure at 2750 Front Road	Per Algonquin Report “there is the potential for indirect impacts resulting from construction Vibrations”	The buried collector line will be located between 27 m and 34 m from the residence at 2750 Front Road, maximum acceptable vibration levels, or peak particle velocity (PPV) levels, should be determined by a qualified engineer. Construction should be monitored to ensure that PPV levels are not exceeded. All construction activities should cease, should levels be exceeded.
3190 Front Road	Turbines S30, S18, S13, S07, S14  The proposed buried collector line runs along the Front Road road allowance, between 2 m and 15m south of the dry stone fence and 16 m to 25 m south of the nearest structure	There is the potential for transportation of heavy machinery and Project components or any below-grade construction of the collector line to indirectly affect the structural integrity of narrowly set back structures and features, in particular the dry stone fencing	Given that construction cannot be avoided within a 50 m buffer zone of the structures at 3190 South Shore Road (the nearest structure is located between 16 m and 23 m north of the collector line RoW), maximum acceptable vibration levels, or peak particle velocity (PPV) levels, should be determined by a qualified engineer. Construction related to the buried collector line should be monitored to ensure that PPV levels are not exceeded. All construction activities should cease, should levels be exceeded.
12405 Front Road	Turbines S01, S29	No direct Project-related negative impacts are expected	No Project-related negative impacts of significant magnitude are expected in terms of: destruction; alteration; shadows; obstruction of views; or change in land-use. No mitigation is recommended.

12515 Front Road	Turbines S01, S29	No direct Project-related negative impacts are expected	No Project-related negative impacts of significant magnitude are expected in terms of: destruction; alteration; shadows; obstruction of views; or change in land-use. No mitigation is recommended.
12525 Front Road	Turbines S01, S29	No direct Project-related negative impacts are expected	No Project-related negative impacts of significant magnitude are expected in terms of: destruction; alteration; shadows; obstruction of views; or change in land-use. No mitigation is recommended.
12675 Front Road	Turbines S01, S29	No direct Project-related negative impacts are expected	No Project-related negative impacts of significant magnitude are expected in terms of: destruction; alteration; shadows; obstruction of views; or change in land-use. No mitigation is recommended.
12945 Front Road	Turbine S01	No direct Project-related negative impacts are expected	No Project-related negative impacts of significant magnitude are expected in terms of: destruction; alteration; shadows; obstruction of views; or change in land-use. No mitigation is recommended.
13555 Front Road		No direct Project-related negative impacts are expected	No Project-related negative impacts of significant magnitude are expected in terms of: destruction; alteration; shadows; obstruction of views; or change in land-use. No mitigation is recommended.
13895 Front Road		No direct Project-related negative impacts are expected	No Project-related negative impacts of significant magnitude are expected in terms of: destruction; alteration; shadows; obstruction of views; or change in land-use. No mitigation is recommended.
14005 Front Road		No direct Project-related negative impacts are expected	No Project-related negative impacts of significant magnitude are expected in terms of: destruction; alteration; shadows; obstruction of views; or change in land-use. No mitigation is recommended.
15095 Front Road		No direct Project-related negative impacts are expected	No Project-related negative impacts of significant magnitude are expected in terms of: destruction; alteration; shadows; obstruction of views; or change in land-use. No mitigation is recommended.
20 Emerald 40 Foot Road	Turbines S01, S29	No direct Project-related negative impacts are expected	No Project-related negative impacts of significant magnitude are expected in terms of: destruction; alteration; shadows; obstruction of views; or change in land-use. No mitigation is recommended.
Emerald 40 Foot Road & Second Concession Road, Irish dry stone wall	Turbines S08, S32, S17, S10  The centerlines for the proposed access road and collector line to S32 and S08 are located within 25 m of the dry stone wall, 5 m and 6 m directly south, at its closest point.	There is a potential for portions of the dry stone wall to be damaged by transportation of Project components or by the construction new Project infrastructure as a result of its narrow setback the road.	Based on the close proximity of the access road and collector line for turbines S32 and S08 to the stone wall, Project activities ( <i>i.e.</i> , transportation of machinery and Project components or construction of new infrastructure) cannot be avoided within 50 m of the dry stone wall. Prior to any construction activities within 50 m of the dry stone wall, the wall should be documented. Any damage resulting from the construction should be repaired to a pre-Project state immediately following construction.
3475 Second Concession Road	Turbines S05, S20, S16, S23, S04, S22, S31, S34	No direct Project-related negative impacts are expected with respect to destruction; however, there is the potential for construction vibrations resulting from the construction of the access road for S20 to have an	It is recommended that construction related to the access road to S20 be avoided within 50 m of structures at 3475 Second Concession Road. If construction 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. Construction should be monitored to ensure that PPV levels are not exceeded. All construction activities should cease, should levels be exceeded.



		indirect negative impact on the farmhouse given that the centerline for the access road is located 60 m to the east of the farmhouse	
4725 Second Concession Road	Turbines S25, S35, S23, S16, S32, S08	There is the potential for the construction of new Project infrastructure, particularly Below -grade infrastructure, to have and indirect impact as a result of construction vibrations	Given that the collector line RoW is located between 10 m and 18 m to the south of the farmhouse at 4725 Second Concession Road, construction within a 50 m bufferzone cannot be avoided. Maximum acceptable vibration levels, or peak particle velocity (PPV) levels, should be determined by a qualified engineer. Construction should be monitored to ensure that PPV levels are not exceeded. All construction activities should cease, should levels be exceeded.
5950 Second Concession Road	Turbines S32, S08, S10, S17	There is the potential for the construction of new Project infrastructure within 50 m (i.e., below-grade collector lines, access roads) to have and indirect impact, resulting from construction vibrations. This is particularly true with respect to the barn, located on the south side of the road on an area of shallow and exposed bedrock.	It is unlikely that construction can be avoided within 50 m of the barn associated with 5950 Second Concession Road. Maximum acceptable vibration levels, or peak particle velocity (PPV)
3775 Third Concession Road	Turbines S11, S03, S09, S35, S23, S16	No direct Project-related negative impacts are expected	No Project-related negative impacts of significant magnitude are expected in terms of: destruction; alteration; shadows; obstruction of views; or change in land-use. No mitigation is recommended.
Lighthouse		No direct Project-related negative impacts are expected	No Project-related negative impacts of significant magnitude are expected in terms of: destruction; alteration; shadows; obstruction of views; or change in land-use. No mitigation is recommended.
Village of Stella Cultural Heritage Landscape		There is a potential new construction related to road improvements, new access roads or below-grade collector lines to have an indirect negative impact on narrowly setback structures in the CHL, many of which are setback less than 5 m from the Front Road RoW	In the event that new construction is required for Project components, construction activities should be avoided within a 50 m buffer zone of structures within the CHL. In the event that construction within a 50 m buffer zone cannot be avoided, it is recommended that maximum acceptable vibration, or peak particle velocity (PPV), levels be determined by a qualified engineer prior to Project construction and that construction activities be monitored to ensure that maximum PPV levels are not exceeded. All construction activities should cease if levels are exceeded.
Catholic Cemetery	Turbines S01, S17	No direct Project-related negative impacts are expected	No Project-related negative impacts of significant magnitude are expected in terms of: destruction; alteration; shadows; obstruction of views; or change in land-use. No mitigation is recommended.
St. Paul's Presbyterian Church	Turbines S36, S36, S37, S21, S19, S27, S02	There is a potential for the church and stone vault to experience indirect negative impacts as a result of construction vibrations	Given that the centerline of the nearest proposed buried collector line runs approximately 58 m to the west of the church it is possible that the collector line may be installed within 50 m of the church or stone vault. It is recommended that construction of the proposed buried collector line be avoided within 50 m of the church building and stone vault. If construction 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. Construction should be monitored to ensure that PPV levels are not exceeded. All construction activities should cease, should levels be exceeded.
Ferry Landscape		There is a potential for temporary and permanent dock construction or shoreline modifications to require the removal of individual cultural heritage resources or features. This would have a negative impact on the integrity of the Ferry Landscape	The Ferry Landscape should be more thoroughly documented prior to any Project activities that might lessen the integrity of its resources, features and views. This documentation should include, at the very least, a complete inventory of components of the CHL, mapping of cultural heritage resource locations and where Project infrastructure may alter the landscape, and a photographic record of existing conditions and views.

#### **AECOM / DRAFT PROPERTY LINE SETBACK ASSESSMENT REPORT – TABLE 2.1 – COLLECTOR LINES & DATA CABLES**

**MUNICIPAL CONSULTATION FORM #136:** *Algonquin Commitment:* Underground lines are buried at a minimum depth of 1.2 m so that agricultural production can continue on the lands above the collector lines. The underground trench will be backfilled with sand.

**MUNICIPAL CONSULTATION FORM #138:** *Loyalist Township's Proposed Change to Algonquin Commitment:* Add "Proposed locations and construction details for collector and data cable installation within municipal road allowances will be submitted to the road authority for consideration for approval in advance of construction. The road authority may require alignments within existing travelled lanes, to avoid interference with ditch maintenance. Installations may require concrete encasements.

**MUNICIPAL CONSULTATION FORM #139:** *Loyalist Township's Proposed Change to Algonquin Commitment:* Proponent needs to identify how the road surface areas disturbed by the installation of electrical cables will be monitored and restored as necessary during the life of the project

**MUNICIPAL CONSULTATION FORM #137:** *Algonquin Commitment:* Where necessary, partially buried junction boxes will be placed at the junction where the collector line from the turbine meets the collector line in the road allowance.

**MUNICIPAL CONSULTATION FORM #140:** *Loyalist Township's Proposed Change to Algonquin Commitment:* Add "Proposed locations and construction details for junction box installations within municipal road allowances will be submitted to the road authority for consideration for approval in advance of construction.:

**ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM:** An approval process for the designs will be incorporated into the road use agreement which is being negotiated with the Township.

**APAI COMMENT ON ALGONQUIN RESPONSE:** Algonquin's response once again references a plan / agreement which will be finalized in the future, (Road use agreement). As stated in the Loyalist Township Municipal Consultation Form:

- "The consultant's reports, as presented, lack the detail that is necessary to provide informed comments and as is specifically stated by AECOM and CRCA, an approval of

the project is premature until the full scope of the project with an appropriate level of detail is supplied enabling a proper assessment of impact on municipal infrastructure, the natural environment, cultural heritage, and land use compatibility.”

Algonquin provides no additional information regarding the road use agreement, therefore it remains impossible to provide informed comments and project approval remains premature.

**AECOM / DRAFT PROPERTY LINE SETBACK ASSESSMENT REPORT – TABLE 2.1 SITE COMPLETION & RESTORATION**

**MUNICIPAL CONSULTATION FORM #141:** *Algonquin Commitment:* Following construction all temporary locations would be rehabilitated to preconstruction conditions.

**MUNICIPAL CONSULTATION FORM #142:** *Loyalist Township’s Proposed Change to Algonquin Commitment:* Add “Final restoration of municipal road allowance will be completed to the satisfaction of the road authority.”

**MUNICIPAL CONSULTATION FORM #143:** *Loyalist Township’s Proposed Change to Algonquin Commitment:* Add “Both interim repairs and final restoration of any disturbed areas requiring improvements will be addressed at timeframes that meet the needs of the Township.”

**APAI RESPONSE TO ALGONQUIN COMMENTS:** Algonquin provided no comments on this section.

**AECOM / DRAFT PROPERTY LINE SETBACK ASSESSMENT REPORT – SECTION 2.1 – TRAFFIC MANAGEMENT PLAN**

*Algonquin Commitment:* Section 2.1 is a brief description of a traffic management plan

*Loyalist Township’s Proposed Change to Algonquin Commitment:* Add “the traffic management plan will address issue related to:

- **MUNICIPAL CONSULTATION FORM #144:** Conflicts with pedestrian and bicycle traffic particularly in Stella
- **MUNICIPAL CONSULTATION FORM #145:** Disturbance of school functions due to heavy traffic noise in close proximity. The traffic plan should include an estimate of vehicles passing school, types of vehicles and distance of school from various haul routes and also a comparison with normal traffic levels and conditions in area
- **MUNICIPAL CONSULTATION FORM #146:** Safe access and transportation of students to school
- **MUNICIPAL CONSULTATION FORM #147:** Enforcement of speed limits
- **MUNICIPAL CONSULTATION FORM #148:** Interference with agriculture traffic, vehicular and livestock movement
- **MUNICIPAL CONSULTATION FORM #149:** Interference with ferry traffic
- **MUNICIPAL CONSULTATION FORM #150:** Interference with parking requirements on street, particularly in Stella

- **MUNICIPAL CONSULTATION FORM #151:** Impact on school bus schedule
- **MUNICIPAL CONSULTATION FORM #152:** Algonquin Commitment to education of all contractors (full time, contract, or occasional) on traffic management plan
- **MUNICIPAL CONSULTATION FORM #153:** Contractors working within the road allowance to carry adequate driver and vehicle insurance to the satisfaction of the Township
- **MUNICIPAL CONSULTATION FORM #154:** Mitigation of interference with emergency vehicles and emergency response team activity

**MUNICIPAL CONSULTATION FORM #155:** *Loyalist Township's Proposed Change to Algonquin Commitment:* The traffic management plan has to deal with impacts resulting from construction, operation, and decommissioning of the wind turbines and construction of underground cabling. The traffic management plan will be available for public review and must be acceptable to the road authority.

**APAI RESPONSE TO ALGONQUIN COMMENTS:** – Algonquin provided no comments on this section

#### **AECOM / DRAFT PROPERTY LINE SETBACK ASSESSMENT REPORT – SECTION 2.5 WASTE DISPOSAL**

#### **AECOM / SECTION 4 – CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN**

**MUNICIPAL CONSULTATION FORM #162:** *Algonquin Commitment:* Section 4.0 is a brief description of a Construction Environment Management Plan which includes the following components:

- Traffic Management Plan
- Hazardous and Non-Hazardous Waste Management Plan
- Health and Safety Plan
- Emergency Response and Communications Plan
- Training Plan
- Complaint Response Protocol

**MUNICIPAL CONSULTATION FORM #158:** *Loyalist Township's Proposed Change to Algonquin Commitment:* Add "The Construction Environmental Management Plan will be available for public review and must be acceptable to the municipal authority."

**MUNICIPAL CONSULTATION FORM #159:** *Loyalist Township's Proposed Change to Algonquin Commitment:* Add "dust, Noise, Lights and Vibration Management Plan"

- **MUNICIPAL CONSULTATION FORM #160:** *Loyalist Township's Proposed Change to Algonquin Commitment:* Address dust suppressants, truck speed, protecting stockpiles, vegetation per mitigation strategy
- **MUNICIPAL CONSULTATION FORM #161:** *Loyalist Township's Proposed Change to Algonquin Commitment:* Note Algonquin Commitment to regular construction hours

**ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM:** The Construction Environmental

Management Program referred to in Section 2.1.1 & Section 4 of the CPR will be made available for review by the public and Township and will address these issues.

**APAI COMMENT ON ALGONQUIN RESPONSE:** Algonquin's response once again references plans / agreements which will be finalized in the future, (Construction Environmental Management Program). As stated in the Loyalist Township Municipal Consultation Form:

- "The consultant's reports, as presented, lack the detail that is necessary to provide informed comments and as is specifically stated by AECOM and CRCA, an approval of the project is premature until the full scope of the project with an appropriate level of detail is supplied enabling a proper assessment of impact on municipal infrastructure, the natural environment, cultural heritage, and land use compatibility."

Algonquin provides no additional information regarding the Construction Environmental Management Program, therefore it remains impossible to provide informed comments and project approval remains premature.

**MUNICIPAL CONSULTATION FORM #163:** *Loyalist Township's Proposed Change to Algonquin*  
*Commitment:* Add "Protected Properties Protection Plan

- **MUNICIPAL CONSULTATION FORM #164:** *Loyalist Township's Proposed Change to Algonquin*  
*Commitment:* Propose vibration limits, define monitoring program and explain stop work orders
- **MUNICIPAL CONSULTATION FORM #165:** *Loyalist Township's Proposed Change to Algonquin*  
*Commitment:* Confirm that work will stop if vibration exceeds limit (not after damage has occurred)
- **MUNICIPAL CONSULTATION FORM #166:** *Loyalist Township's Proposed Change to Algonquin*  
*Commitment:* Define "qualified individual" as it relates to inspection of stone walls, indicate frequency of inspections
- **MUNICIPAL CONSULTATION FORM #167:** *Loyalist Township's Proposed Change to Algonquin*  
*Commitment:* Note Algonquin Commitment to retain a licensed archaeologist to monitor construction impacts

**ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM:** See the comments below relating specifically to mitigation techniques outlined in the Heritage Assessment Report and Protected Properties Report.

**APAI COMMENT ON ALGONQUIN RESPONSE:** The comments below do not address the issues raised in items 164, 165, 166 and 167.

**MUNICIPAL CONSULTATION FORM #168:** *Loyalist Township's Proposed Change to Algonquin*  
*Commitment:* Add "Navigable Waters Traffic Management Plan"

- **MUNICIPAL CONSULTATION FORM #169:** *Loyalist Township's Proposed Change to Algonquin*

*Commitment:* Note Algonquin Commitment to limit construction traffic on ferry, including Algonquin Commitment to have construction workers leave vehicles on mainland

- **MUNICIPAL CONSULTATION FORM #170:** *Loyalist Township's Proposed Change to Algonquin Commitment:* Address interference between ferry movements and barge movements

**ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM:** A Marine Logistics Plan will be prepared and will address barge, ferry and other marine traffic in the channel between Amherst Island and the mainland.

Use of the Township operated ferry may be required to facilitate construction of the island dock, if required; use for this purpose will be negotiated with the Township. Once the dock is constructed, it is anticipated that the ferry will not be used for transportation of equipment, materials or personnel.

**APAI COMMENT ON ALGONQUIN RESPONSE:** Algonquin's response once again references plans / agreements which will be finalized in the future, (Marine Logistics Plan). As stated in the Loyalist Township Municipal Consultation Form:

- "The consultant's reports, as presented, lack the detail that is necessary to provide informed comments and as is specifically stated by AECOM and CRCA, an approval of the project is premature until the full scope of the project with an appropriate level of detail is supplied enabling a proper assessment of impact on municipal infrastructure, the natural environment, cultural heritage, and land use compatibility."

Algonquin provides no additional information regarding the Marine Logistics Plan, therefore it remains impossible to provide informed comments and project approval remains premature.

**MUNICIPAL CONSULTATION FORM #171:** *Loyalist Township's Proposed Change to Algonquin Commitment:* Add "Public Consultation Program"

- **MUNICIPAL CONSULTATION FORM #172:** *Loyalist Township's Proposed Change to Algonquin Commitment:* Commit to further consultation during detail design stage regarding Construction Environmental Plan, tree removals, impacts on schools, churches and other heritage features
- **MUNICIPAL CONSULTATION FORM #173:** *Loyalist Township's Proposed Change to Algonquin Commitment:* Define role of public liaison committee

**ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM:** Ongoing consultation with the Township will continue throughout the development and construction phases of the project. Feedback received from the public will continue to be reviewed and considered as planning of the project progresses.

**APAI COMMENT ON ALGONQUIN RESPONSE:** The public liaison committee role is not defined in the answer provided by Algonquin.

**MUNICIPAL CONSULTATION FORM #174:** *Loyalist Township's Proposed Change to Algonquin*

*Commitment: Add "Communications plans"*

- **MUNICIPAL CONSULTATION FORM #175:** *Loyalist Township's Proposed Change to Algonquin*  
*Commitment:* Summarize Algonquin Commitment to notifications, availability of representatives

**MUNICIPAL CONSULTATION FORM #176:** *Loyalist Township's Proposed Change to Algonquin*

*Commitment:* Traffic management plan - Address conflicts with pedestrians and cyclists

- **MUNICIPAL CONSULTATION FORM #177:** *Loyalist Township's Proposed Change to Algonquin*  
*Commitment:* Accommodate children walking to school
- **MUNICIPAL CONSULTATION FORM #178:** *Loyalist Township's Proposed Change to Algonquin*  
*Commitment:* Minimize distractions for children while at school
- **MUNICIPAL CONSULTATION FORM #179:** *Loyalist Township's Proposed Change to Algonquin*  
*Commitment:* Propose measures to minimize issues relating to narrow main street in Stella
- **MUNICIPAL CONSULTATION FORM #180:** *Loyalist Township's Proposed Change to Algonquin*  
*Commitment:* Propose measures to enforce speed limits

**MUNICIPAL CONSULTATION FORM #181:** *Loyalist Township's Proposed Change to Algonquin*

*Commitment:* For the Emergency Response Plan: Include the Algonquin Commitment to consultations and mock runs (made at Jan 29, 2013 meeting)

**MUNICIPAL CONSULTATION FORM #182:** *Loyalist Township's Proposed Change to Algonquin*

*Commitment:* The Complaint Response Protocol must include the means by which persons with authority to effect changes to construction activity (such as authority to stop work) can be contacted and Algonquin Commitments to response times

**MUNICIPAL CONSULTATION FORM #183:** *Loyalist Township's Proposed Change to Algonquin*

*Commitment:* Complaint Response Protocol to be submitted to the Township council and accepted on their satisfaction

**ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM:** It is anticipated that these issues will be addressed within a series of plans which will be prepared as a requirement of the Road Use Agreement. It is expected that an approval process and consultation Algonquin Commitment for the plans will be incorporated into the road use agreement which is currently being negotiated with the Township.

**APAI COMMENT ON ALGONQUIN RESPONSE:** Algonquin's response once again references plans / agreements which will be finalized in the future, (a series of plans which will be prepared as a requirement of the Road Use Agreement). As stated in the Loyalist Township Municipal Consultation Form:

- "The consultant's reports, as presented, lack the detail that is necessary to provide informed comments and as is specifically stated by AECOM and CRCA, an approval of the project is premature until the full scope of the project with an appropriate level of



detail is supplied enabling a proper assessment of impact on municipal infrastructure, the natural environment, cultural heritage, and land use compatibility.”

Algonquin provides no additional information regarding the Road Use Agreement, therefore it remains impossible to provide informed comments and project approval remains premature.

#### **AECON / DECOMMISSIONING PLAN REPORT - GENERAL**

**MUNICIPAL CONSULTATION FORM #187:** *Algonquin Commitment:* There is nothing in the Decommissioning Plan report Draft that addresses the financial ability of the proponent to carry out decommissioning activities.

**ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM:** It is believed that there is significant salvage value in the equipment and materials which will offset the cost of decommissioning.

Section 3.1 of the Decommissioning Plan Report references the Construction Plan Report as reference for mitigation measures and best management practices to be followed during decommissioning.

Section 3.2 of the Decommissioning Plan Report commits that a decommissioning plan will be completed in accordance with then current legislation and regulations prior to any decommissioning activities commencing.

#### **APAI COMMENT ON ALGONQUIN RESPONSE:**

As stated above in the APAI response to #64, the salvage value is negligible in consideration of the overall costs of decommissioning.

#### **Scrap Value of Decommissioned Wind Turbines for Windlectric Amherst Island Project**

Scrap values<sup>7</sup> as of July 22<sup>nd</sup>, 2013:

Steel: \$264/tonne (1000 kg)

Copper: \$6.28/ kg

#### **Steel**

Weight of steel tower<sup>8</sup>: 300 tonnes;

Weight of steel component of the nacelle: 50 tonnes (estimate);

Total steel: 350 tonnes.

Scrap value of steel: \$0.09M/turbine or \$3.0M total

#### **Copper**

Weight of copper in a turbine: 5.6 tonnes/MW<sup>9</sup> (includes cabling).

Weight of copper in Siemens 2.3 MW turbine including cabling: 13 tonnes (estimate).

<sup>7</sup> Darin Horner – Lighting Dimension (Toronto)

<sup>8</sup> Draft Road Use Report (Hatch, Oct. 24<sup>th</sup>, 2012)

<sup>9</sup> Ian Falconer, M.Sc. thesis, University of Exeter, 2009.

Scrap value of Copper: \$0.08M/turbine or \$2.7M total

#### Neodymium

Weight of neodymium iron boride magnet in a turbine: 2 tonnes (estimate).

Weight of neodymium: 0.5 tonnes (estimate)

Cost of neodymium: \$75/kg<sup>10</sup>

Cost of neodymium: \$0.04M/turbine or \$1.2M total

The problem: "The neodymium-iron-boron material decomposes peritectically — it changes composition — when heated to its melting point," says Chumbley, lead researcher on the project. "So it can't just be melted down and reused. But it's too valuable to throw away, so there are literally warehouses full of 55-gallon drums of the stuff waiting to be recycled."<sup>11</sup>

The future: The DOE Ames Lab is working on the problem: "Scientists at the U.S. Department of Energy's (DOE) Ames Laboratory are working to more effectively remove the neodymium, a rare earth element, from the mix of other materials in a magnet. Initial results show recycled materials maintain the properties that make rare-earth magnets useful."<sup>12</sup>

Assume that the problem will be resolved and allow a total scrap value of \$0.6M

Conclusion: The scrap value of the Windlectric project is estimated to be \$6.3M

This is in 2013 dollars.

#### **MUNICIPAL CONSULTATION FORM #189:** *Loyalist Township's Proposed Change to Algonquin*

*Commitment:* Add a chapter ( to decommissioning plan report) to identify the source of funding for decommissioning of the works should the owner becomes insolvent. Address the need for sufficient financial securities. Explain of determination of amount of sufficient financial securities

**ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM:** It is not anticipated that any form of financial security will be required for decommissioning activities. It is believed that there is significant salvage value in the equipment and materials which will offset the cost of decommissioning.

**APAI COMMENT ON ALGONQUIN RESPONSE:** While it is interesting to hear that Algonquin does not anticipate the requirement of a form of financial security to cover decommissioning activities, the Township clearly feels there is a need for such financial security. Looking at the information provided above, APAI concurs with the Township.

#### **AECOM – DESIGN AND OPERATIONS REPORT – SECTION 3.5 WATER CROSSINGS**

**MUNICIPAL CONSULTATION FORM #190:** *Algonquin Commitment:* "Culverts required for any water crossings are described in the Draft Water Assessment and Water Body Report"

<sup>10</sup> As of July 2013 (<http://www.metal-pages.com/metalprices/neodymium/>)

<sup>11</sup> US Department of Energy news release (<http://www.eurekalert.org/features/doe/2001-07/dl-nlf060502.php>)

<sup>12</sup> News release Oct. 2012 (<https://www.ameslab.gov/news/news-releases/reclaiming-rare-earths>)

**MUNICIPAL CONSULTATION FORM #191:** *Loyalist Township's Proposed Change to Algonquin*

*Commitment:* The draft water assessment and water body report has not been made available for review. The road authority is very concerned regarding the potential for concentration of sheet flow at barriers (i.e. new access roads) and culverts. A detailed drainage plan is required to confirm adequacy of downstream drainage courses.

**ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM:** Additional surface water assessment for the installation of culverts will be undertaken to ensure conveyance of surface run off is not impeded by access roads.

See DO report section 4.8 - The Project is not anticipated to require significant alteration to surface water runoff, or to involve the storage of surface water. As the Subject Property is of limited topographic relief, erosion of excavated materials and changes to storm water runoff is not anticipated. If required a Storm water Management Plan would be implemented for the substation property. The Storm water Management Plan, will be designed in compliance with the "Storm water Management Planning and Design Manual" (MOE, 2003) and Cataraqui Region Conservation Authority (CRCA) requirements. .

Project Description Report (PDR) Section 4.3.6:

Construction and Decommissioning - During construction and decommissioning, proper grading would be conducted and mitigation measure implemented to reduce potential for runoff at the work areas.

**APAI COMMENT ON ALGONQUIN RESPONSE:** While Algonquin states the "Project is not anticipated to require significant alteration to surface water runoff", this does not address the concern stated in item 89 and 191.

Algonquin's response once again references plans / assessments which will be undertaken in the future, (surface water assessment, Storm Water management Plan). As stated in the Loyalist Township Municipal Consultation Form:

- "The consultant's reports, as presented, lack the detail that is necessary to provide informed comments and as is specifically stated by AECOM and CRCA, an approval of the project is premature until the full scope of the project with an appropriate level of detail is supplied enabling a proper assessment of impact on municipal infrastructure, the natural environment, cultural heritage, and land use compatibility."

Algonquin provides no additional information regarding the road use agreement, therefore it remains impossible to provide informed comments and project approval remains premature

**AECOM – DESIGN AND OPERATIONS REPORT – SECTION 4.1 WASTE MANAGEMENT**

**MUNICIPAL CONSULTATION FORM #192:** *Algonquin Commitment:* There would be no on-site disposal of waste during the operation of the facility.

**MUNICIPAL CONSULTATION FORM #193:** *Loyalist Township's Proposed Change to Algonquin*

*Commitment:* It should be noted that there are no facilities for waste disposal of industrial waste on island. This statement should be expanded to "there would be no on island disposal of waste during the

operation of the facility”

**ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM:** Construction Plan Report (Section 2.5) was revised - There will be no long-term on-site storage of waste during the construction of the Project and final disposal of waste will be conducted by a third-party contractor at an MOE-approved facility. As requested by Loyalist Township no waste will be deposited at the Amherst Island waste disposal facility.

**AECOM – NOISE ASSESSMENT REPORT**

**MUNICIPAL CONSULTATION FORM #194:** *Algonquin Commitment:* The noise assessment report has not assessed the impact of construction traffic

**MUNICIPAL CONSULTATION FORM #195:** *Loyalist Township’s Proposed Change to Algonquin Commitment:* An assessment of noise impacts of construction activities is required

**ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM:** CPR Table B - Prudent industry practice will be followed to minimize potential effects arising from the construction activities, e.g. noise and dust.

**APAI COMMENT ON ALGONQUIN RESPONSE:** Algonquin’s answer does not address the Township’s concern; a noise assessment report addressing the impact of construction traffic is required.

**CRCA – SECTION 3.1 SPECIFIC OPPORTUNITIES FOR IMPROVEMENT**

**MUNICIPAL CONSULTATION FORM #200:** It is the opinion of CRCA staff that a NHA-EIS should contain a sufficient level of research, monitoring and discussion such that the conclusions are based on sound knowledge of the form and function of the features present. The following are suggestions for expanding the report such that a clearer assessment of the project can be made.

**ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM:** See specific responses below

**CRCA – SECTION 3.1.1. NATURAL HERITAGE ASSESSMENT COMPONENT**

**MUNICIPAL CONSULTATION FORM #201:** Records Review

- a. It is the understanding of CRCA staff that additional information is available that would expand the knowledge of the natural heritage features on the island particularly with respect to the avian and bat populations.
- b. It is recommended that the consultant meet with the Kingston Field Naturalists in order to determine where information gaps can be filled.

**ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM:** Algonquin has met with Kingston Field Naturalist (KFN) members as part of the records review and the Natural Heritage Assessment and Environmental Impact Study (NHA/EIS). Meetings have included a site visit of the island, including the KFN property at the eastern tip of Amherst Island. KFN provided natural heritage information from the KFN property, the Owl Woods property and other observations on the island (e.g. Short-eared Owl nesting records). It is Algonquin’s understanding that KFN had provided all natural heritage information they had documented from Amherst Island at the time the NHA/EIS was prepared.

Subsequent information from KFN, based on field investigations undertaken in the summer of 2012, has been obtained by Algonquin. The results of which were very similar to Algonquin’s 2011 field

investigations and do not change the conclusions in the NHA/EIS.

**APAI COMMENT ON ALGONQUIN RESPONSE:** To be more specific, below is the information provided by Algonquin in response to APAI's stated concern regarding the lack of consultation with the KFN. There occurred 3 occasions during which some "consultation" could have occurred prior to the December 2012 open house by which point the majority of the field studies were complete.

- May 20, 2011 – Meeting between Stantec and KFN on Amherst Island, including a tour of the Kingston Field Naturalists' Nature Reserve. Information regarding wildlife on Amherst Island is provided by KFN through discussion during the meeting. Stantec inquired to KFN if they could provide any additional information (or files) they felt important with respect to information they had on the island.
- May 24, 2011 - KFN members accompany Stantec field staff during surveys of the Kingston Field Naturalists' Nature Reserve.
- July 27, 2011 – KFN member accompanies Stantec field staff during surveys of the Owl Woods.

While Algonquin states that Kingston Field Naturalists (KFN) "Algonquin has met with Kingston Field Naturalist (KFN) members as part of the records review and the Natural Heritage Assessment and Environmental Impact Study (NHA/EIS)", any meetings that occurred clearly did not result in KFN input into field study design.

The two KFN members in attendance at the May 20, 2011 "meeting" were Kurt Hennige and Erwin Battala; two Stantec employees also attended. The "meeting" consisted of a two hour tour of the KFN property and was documented in the Field Notes provided as an attachment to the NHA/EIS.

KFN membership "accompanying" Stantec field staff on May 24, 2011 does not seem like an opportunity to "consult" on the natural heritage of Amherst Island. Additionally, a review of Table 4B (which provides time and date of all site investigations undertaken on Amherst Island) as well as review of the Field Notes provides no documentation of Stantec attendance on Amherst Island on 24 May 2011.

KFN membership "accompanying" Stantec field staff on 27 July, 2011 does not seem like an opportunity to "consult" on the natural heritage of Amherst Island. July 27, 2011 appears to be documented in the Field Notes under the "Barr" property, unfortunately, no time is noted.

The KFN has over 40 years of experience / documentation pertaining to the over 20 Species-of-Concern and the 9 Species-at-risk found on Amherst Island, to assume that a 2 hr "meeting" could adequately provide "all natural heritage information the KFN had documented from Amherst Island at the time the NHA/EIS was prepared" is ludicrous.

This lack of effective consultation contributed to the following inappropriately timed and erroneously located field studies:

- The following site investigations were based on erroneous criteria
  - Migratory Landbird (erroneously restricted search to woodlands > than 10 ha. in size)
  - Waterfowl Nesting Area (total of 1 hr of field studies erroneously restricted search to wetlands with standing water)
  - Woodland Area Sensitive Bird Breeding Habitat (erroneously restricted search to woodlands > 10 ha. in size with > 4 ha. interior habitat)
  - Marsh Breeding Bird Habitat (Although the following ELC communities are spread throughout the island (54 CUM ELC communities, 32 MAM communities and 31 SW communities) all field studies were restricted to Long Point Marsh)
  - Turtle Nesting Area (Although there are 32 MAM ELC communities spread throughout the island all field studies were restricted to Long Point Marsh)
  - Amphibian Breeding - Woodland (erroneously restricted the 8 hours of field studies to wetlands with standing water)
  - Amphibian Breeding – Wetland (erroneously restricted the 8 hours of field searches to marsh habitat greater than 1 ha. in size)
- The following site investigations were conducted at the wrong time of the year:
  - Butterfly Migration (field studies undertaken in wrong month)
  - Turtle Nesting (field studies undertaken in wrong month)

**MUNICIPAL CONSULTATION FORM #203:** Site investigations

a. The reliance on limited historical data and 2 years of monitoring results does not provide confidence in the findings.

b. Although monitoring was conducted over a period of 2 years, some features were studied for a very limited period of time and potentially missed optimal observation periods.

c. Alternative Site investigation Methods – There appears to be no reference to efforts to obtain landowner permission to access interior portions of properties that are not visible from the road side or beyond lands under an agreement. Some bias may exist based on where data was collected/observed from.

**ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM:** The level of effort undertaken with the field studies for the proposed Amherst Island wind energy project is very high compared with other Renewable Energy Approval projects. These studies likely represent the most extensive biological inventory of Amherst Island undertaken to date.

This level of study was more than sufficient to conduct the Evaluation of Significance, to identify potential impacts and to develop appropriate avoidance and mitigation measures. Surveys were all conducted during suitable timing windows. Level of effort in each individual candidate natural heritage feature was appropriate, based on the size of the feature and the type of survey undertaken.

Adjacent, non-optioned landowners were contacted to request property access. Given the extent of

property access from optioned lands and additional access from some non-optioned landowner's alternative site investigations were required in very few locations.

**APAI COMMENT ON ALGONQUIN RESPONSE:** Algonquin states that "surveys were conducted during suitable timing windows" however according to a review of the NHA/EIS the following were not conducted within a suitable timing window or within appropriate locale:

- The following site investigations were conducted prior to ELC evaluations which are designed to instruct the decision making process as to which areas to search for SWH
  - Woodland Area Sensitive Bird Breeding Habitat
  - Waterfowl Nesting Area
  - Marsh Breeding Bird Habitat
  - Turtle Nesting Area
  - Amphibian Breeding (Wetland and Woodland)
  - Waterfowl Stopover and Staging Area (Aquatic and Terrestrial)
- The following site investigations were based on erroneous criteria
  - Migratory Landbird (erroneously restricted search to woodlands > than 10 ha. in size)
  - Waterfowl Nesting Area (total of 1 hr of field studies erroneously restricted search to wetlands with standing water)
  - Woodland Area Sensitive Bird Breeding Habitat (erroneously restricted search to woodlands > 10 ha. in size with > 4 ha. interior habitat)
  - Marsh Breeding Bird Habitat (Although the following ELC communities are spread throughout the island (54 CUM ELC communities, 32 MAM communities and 31 SW communities) all field studies were restricted to Long Point Marsh)
  - Turtle Nesting Area (Although there are 32 MAM ELC communities spread throughout the island all field studies were restricted to Long Point Marsh)
  - Amphibian Breeding - Woodland (erroneously restricted the 8 hours of field studies to wetlands with standing water)
  - Amphibian Breeding - Wetland (erroneously restricted the 8 hours of field searches to marsh habitat greater than 1 ha. in size)
- The following site investigations were conducted at the wrong time of the year:
  - Butterfly Migration (field studies undertaken in wrong month)
  - Turtle Nesting (field studies undertaken in wrong month)

Additionally, Algonquin states "Adjacent, non-optioned landowners were contacted to request property access". APAI has only been able to locate two non-optioned property owners who were contacted for access. While not all non-optioned property owners have been contacted by APAI at this point, the intent is to have a matrix of all non-optioned property owners with the request for access information noted.

**MUNICIPAL CONSULTATION FORM #204: Results**

a. With respect to winter raptors:

i. The report generalizes the significant wildlife habitat to be broadly distributed without an assessment



of value within the area identified. “Higher concentrations observed in the western portion of the island along the 2<sup>nd</sup> concession road, south of Stella, along Front Road and between Marshall 40ft and Lower 40ft Road” (Section 4.2.3 – page 81). This statement indicates an ability to refine the habitat delineation such that tower locations can be assessed further. It is recommended that this information be displayed in order to represent how tower location has been influenced by habitat preferences within the general significant wildlife habitat area identified in the report.

ii. The report generalizes significant wildlife habitat to be broadly distributed it is noted in the report that several roost locations for short-eared owls were identified in the open grassland and while there was generally some shifting in ground roosting sites between surveys, some larger sites were relatively consistently used. This indicates an ability to refine the habitat delineation such that tower location can be assessed further. It is recommended that this information be displayed in order to represent how turbine location has been influenced by habitat preferences within the general habitat areas.

iii. Numbers of Northern Saw Whet Owls and Long Eared Owls were relatively low on Amherst Island in 2011/2012; as a result, it was acknowledged that roost sightings likely under-represented these species. Use of historical knowledge and signs of past use were substituted by the consultant. This is indicative of the issues related to a short sampling period whereby seasonal and yearly fluctuations cannot be assessed and general assumptions or extrapolations are made.

**ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM:** Significant Wildlife Habitat features identified in the NHA/EIS were delineated in accordance with REA requirements and MNR guidelines. MNR was consulted throughout the development of the NHA/EIS to ensure Significant Wildlife Habitat was evaluated and delineated in accordance with provincial policy.

As stated in the NHA/EIS, number of wintering Saw-whet Owls and Long-eared Owl in the winter of 2011/2012 were low when compared to other years. Regardless, Algonquin strongly believes the low numbers that year did not impede our ability to assess potential impacts to the species. It is noted that, given the project location is situated almost entirely in agricultural fields, potential impacts to roosting sites for Northern Saw-whet Owl and Long-eared Owl are anticipated to be minimal.

**APAI COMMENT ON ALGONQUIN RESPONSE:** Algonquin does not address the Township’s concerns in the above answer.

**MUNICIPAL CONSULTATION FORM #207:** Seasonal Concentration Areas – Migratory Butterfly Stopover Area – Data is not of a sufficient period. Item should be carried forward to an assessment of potential impacts within the Environmental impact Study.

**ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM:** The evaluation of significance for Migratory Butterfly Stopover Areas was conducted in accordance with MNR guidelines. The results of which did not find this type of significant wildlife habitat within 120m of the project location.

The extensive body of knowledge about impacts of wind power on wildlife, based on post-construction monitoring and research from across Ontario and North American, does not suggest impacts of wind turbines on migratory butterflies is of concern.

**APAI COMMENT ON ALGONQUIN RESPONSE:** Field studies to identify Butterfly Migratory

Stopover Areas occurred on August 16<sup>th</sup> (4 hrs.) and August 26<sup>th</sup> (2 hrs.) in conjunction with Swallow Staging Observations.

Below is a table which lists the Turbines with suitable ELC classified land within 150 meters of the turbine / Project component. A single “observation stop” is documented in the Field Notes, it occurred on August 16<sup>th</sup> (stop #6).

<b>Turbine within 150 meter of appropriate ELC</b>	<b>ELC Classification abutting</b>	<b>ELC Classification abutting</b>	<b>Comment</b>
S- 31	FOD7-2	CUT1-4	Potential stop #6 - Aug 16 / no stop Aug 26
S-07	FOD7-2	CUM1-1	No stop Aug 16 or 26
S14	FOD7-2	CUM1-1	No stop Aug 16 or 26
S26 / S18	FOD7	CUT1-4	No stop Aug 16 or 26
S04	FOD4	CUT1-4	No stop Aug 16 or 26
S04	FOD9	CUT1-4	No stop Aug 16 or 26
S01	FOD4	CUM1	No stop Aug 16 or 26
S03 / S35	FOD7-2	CUM1	No stop Aug 16 or 26

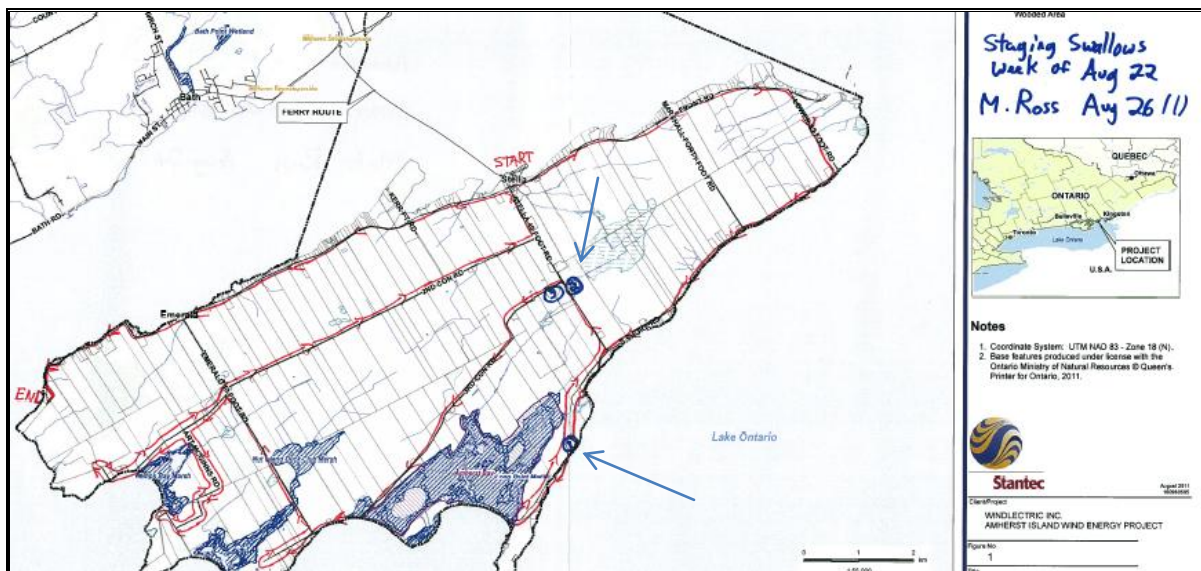
The Stantec field notes indicate two migratory butterfly surveys which occurred on August 16<sup>th</sup> (4hrs.) and August 2<sup>th</sup> (2 hrs.) in conjunction with Staging Swallow Surveys. Per KFN, Amherst Island’s microclimate means that Monarch Butterflies typically appear on the Island following a strong cold front, (mid-September to mid-October). Butterfly surveys conducted in August would not be expected to record many sightings.

Algonquin states above “The evaluation of significance for Migratory Butterfly Stopover Areas was conducted in accordance with MNR guidelines. The results of which did not find this type of significant wildlife habitat within 120m of the project location.”. Below are maps which seem to indicate otherwise.

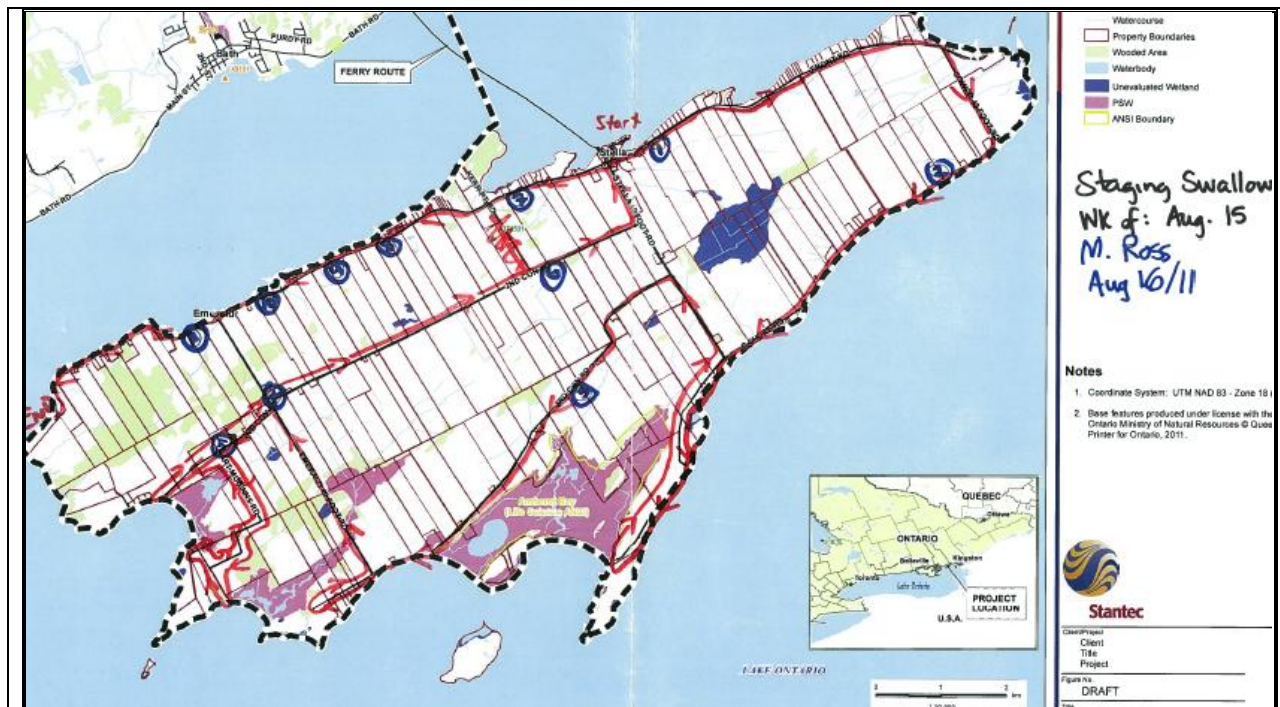
The first map is from the NHA/EIS Appendix A, Table 3.0; the cross hatching in the vicinity of turbine S33 indicates a Migratory Butterfly Stopover area.



Below is a scan of page 1533 of the NHA/EIS Report. This is a map of the area covered during the 26 Aug 2011 Staging Swallow / Butterfly surveys. The two arrows point to the stops on the survey, notably, nowhere near the Migratory Butterfly Stopover Area. Additionally, the three stops are not in the vicinity of the turbines which are listed in the table above as being located near potential Migratory Butterfly Areas.



Below is a scan of page 1529 of the NHA/EIS Report. This is a map of the area covered during the 16 Aug 2011 Staging Swallow / Butterfly surveys. Again, there are no stops in the vicinity of the Migratory Butterfly Stopover Area. Additionally, the stops are, for the most part, not in the vicinity of the turbines which are listed in the table above as being located near potential Migratory Butterfly Areas.



Algonquin has identified additional suitable habitat in the vicinity of Turbines S31, S07, S14, S26, S18, S04, S01, S03 and S35. However the only migratory butterfly survey that could have occurred in the vicinity of these turbines occurred in the vicinity of turbine S31 on August 16<sup>th</sup>, too early for effective migratory butterfly searches to be undertaken on Amherst Island.

Additional, appropriately timed searches must be undertaken in the Ecoregion 6E specified Candidate Significant Wildlife Habitat which was identified on Amherst Island.

### CRCA – SECTION 3.1.2 ENVIRONMENTAL IMPACT STUDY COMPONENT

**MUNICIPAL CONSULTATION FORM #210:** While habitat loss is limited, the Natural Heritage Assessment report presents the findings with respect to significant wildlife habitat in a general context and it is not possible to determine if individual towers are being located within areas of high wildlife use within the broadly identified area(s). The document contains reference to observations that imply that this information is available, however it is not demonstrated how this was used.

**ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM:** The project location has been sighted almost completely in agricultural fields with very limited encroachment into natural heritage features such as woodlands or wetlands; areas of high wildlife use.

The NHA/EIS also identifies and addresses wildlife use of the agricultural fields. Once mitigation measures have been put in place, impacts to these agricultural fields and their function as wildlife habitat from construction or decommissioning is expected to be minimal.

**APAI COMMENT ON ALGONQUIN RESPONSE:** While Algonquin states “The project location has



been sighted almost completely in agricultural fields with very limited encroachment into natural heritage features such as woodlands or wetlands; areas of high wildlife use”, in fact, of 36 woodlands listed in the NHA/IES report, 15 of these woodlands are located within 120 meters of Project component. A glance at figure 3.0 of Appendix A of the NHA/EIS indicated that there are 15 separate turbines that are within 120 meters of Project components.

Additionally, the Algonquin NHA/EIS report identified 20 unevaluated wetlands as being within 120 m of the Project Location. According to section 4.2.1 of the report these wetlands (with exception to Wetlands 6 & 7) are being treated as significant for the purposes of the NHA and Project siting. Notably, the Project location is located in Wetland Features 6 and 7 and within 20m of the remaining 18 wetlands. A glance at figure 3.0 of Appendix A of the NHA/EIS indicated that there are a minimum of 9 separate turbines that are within 120 meters of Project components.

**MUNICIPAL CONSULTATION FORM #212:** With respect to Short-eared owl impacts during construction, it is noted that low site fidelity between years was demonstrated in a 2009/2010 study (Keyes 2011). Reliance on a 2 year study is not considered to be strong enough to support the conclusion. Uncertainty is demonstrated in the proposal to conduct additional monitoring after the structures are built. Impacts should be understood and avoided/mitigated prior to construction.

**ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM:** The data collected by Keyes in 2009/2010 and by Algonquin in 2011, demonstrate that Short-eared Owls will breed in several areas of hay and/or pasture on the island. Additional survey work by KFN in 2012 further supports this conclusion. The Algonquin Commitment to conduct additional monitoring during construction is a precautionary mitigation measure, as there is potential for Short-eared Owls to breed wherever large patches of hay and/or pasture occur.

**APAI COMMENT ON ALGONQUIN RESPONSE:** As stated in the Municipal Consultation form, two years of data is not sufficient data upon which to draw Algonquin’s conclusions. The data collected by KFN indicates that Short-eared Owls will return to known nesting / roosting areas year after year.

**MUNICIPAL CONSULTATION FORM #213:** With respect to herptile species, the construction and decommissioning phases of the project will have the greatest influences. Vernal ponds and poorly drained depressions (although predominantly dry through the year) should be regarded.

**ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM:** Areas that could support breeding amphibians have been avoided. The two wetlands which the project will cross consist of reed canary grass and do not contain standing water that would support breeding amphibians.

**APAI COMMENT ON ALGONQUIN RESPONSE:** A review of the NHA/EIS indicates that many areas that can support breeding amphibians were not properly surveyed.

- The following site investigations were conducted prior to ELC evaluations which are designed to instruct the decision making process as to which areas to search for SWH
  - Turtle Nesting Area

- Amphibian Breeding (Wetland and Woodland)
- The following site investigations were based on erroneous criteria
  - Turtle Nesting Area (Although there are 32 MAM ELC communities spread throughout the island all field studies were restricted to Long Point Marsh)
  - Amphibian Breeding - Woodland (erroneously restricted the 8 hours of field studies to wetlands with standing water)
  - Amphibian Breeding – Wetland (erroneously restricted the 8 hours of field searches to marsh habitat greater than 1 ha. in size)
- The following site investigations were conducted at the wrong time of the year:
  - Turtle Nesting (field studies undertaken in wrong month)

**MUNICIPAL CONSULTATION FORM #214:** Operational Phase of the Project- Raptor Wintering Areas – the consultant notes that “fragmentation and disturbance of habitat as a result of wind energy projects were identified as a potential indirect effect to wintering raptors (Kingsley and Whittam, 2007). Noise levels during operation might also impact hunting raptors, in particular owl species which primarily hunt by sound. Potential results of these disturbances could range from behavioral changes, such as local avoidance of turbines, to abandonment of the wind power project area. Nevertheless, much of the data collected from wind power developments in Canada and elsewhere indicates that wind turbines have limited effects on raptor activity or abundance in the wind power area”.

Amherst Island is a unique feature, it is noted that out of 17 winter bird survey sites (Environment Canada 2006), Amherst Island ranked number 1 in raptor density. The consultant refers to Environment Canada’s comments that there are very few sites in Southern Ontario that provide suitable habitat. Amherst Island represents a small area; the proposed placement of the wind turbines provides limited relief from either the visual or physical presence of the towers as they are proposed to be distributed throughout the Island.

The consultant should have a greater regard for the potential displacement of species with the potential for displacement from the Island. In speaking with Kingston Field Naturalist members (pers. Comm, 2013) there does appear to be a displacement of Short-eared owls from the western end of Wolfe Island (where wind turbines are present) to the eastern end (no turbines present). Foraging activity has also been suggested to have shifted to adjacent islands (Simcoe Island). While this information is anecdotal, the potential displacement and avoidance by raptors on a small island with limited refuge areas with a recognized high density of raptors present is a concern.

Additionally as the natural heritage assessment does not identify which areas are of higher use within the general significant habitat identified. It is not possible to determine if the towers will cause the displacement and or fragmentation within the higher use areas.

The direct impacts of wind turbines (mortality) are also a concern. Raptor density is 2 times that of Wolfe Island (Environment Canada 2006). Turbine strikes are related to density (Environment Canada, Ministry of Natural Resources) therefore it is anticipated that mortality rates will exceed thresholds (provided the thresholds are similar to Wolfe Island).

**ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM:** Algonquin has undertaken extensive monitoring of wintering raptors and owls at the Wolfe Island Wind Plant and has a very sound understanding of the level of impact, including displacement, to raptors at this facility. Wintering raptors and owl continue to occur within the Wolfe Island Wind Plant project area, in proximity to operating turbines, in very high numbers.

Raptor mortality at Wolfe Island has been low during winter months, despite the concentrations of raptors at this time of year. For example, high numbers of Short-eared Owls have been observed within the project area, without any recorded mortality.

The Amherst Island Wind Energy Project NHA/EIS recognizes and considers the significance of Amherst Island to wintering raptors and owls. The NHA/EIS makes no attempt to be dismissive of potential impacts to raptors, such as disturbance impacts, but instead has assessed the impacts based on the best available research and studies on the impacts of wind turbines on raptors, which includes the post construction monitoring results from Wolfe Island.

**APAI COMMENT ON ALGONQUIN RESPONSE:** Algonquin's comment above does not address the issues raised in the Municipal Consultation Form.

**MUNICIPAL CONSULTATION FORM #215:** With respect to the Migratory Land Bird Stopover Area aspect, the consultant surmises that disturbance to stopover habitat, or potential barrier effects, are not anticipated to be significant. While some literature supports behavioral modifications (changes in flight path, height and speed) that do not impact bird migration, the cumulative impacts of multiple turbines across a migratory route (Amherst and Wolfe Islands combined) has not been studied.

The barrier effect of multiple wind energy project is a potential concern. The variability in location, height, design of other wind energy facilities does not allow for a comparison of impacts.

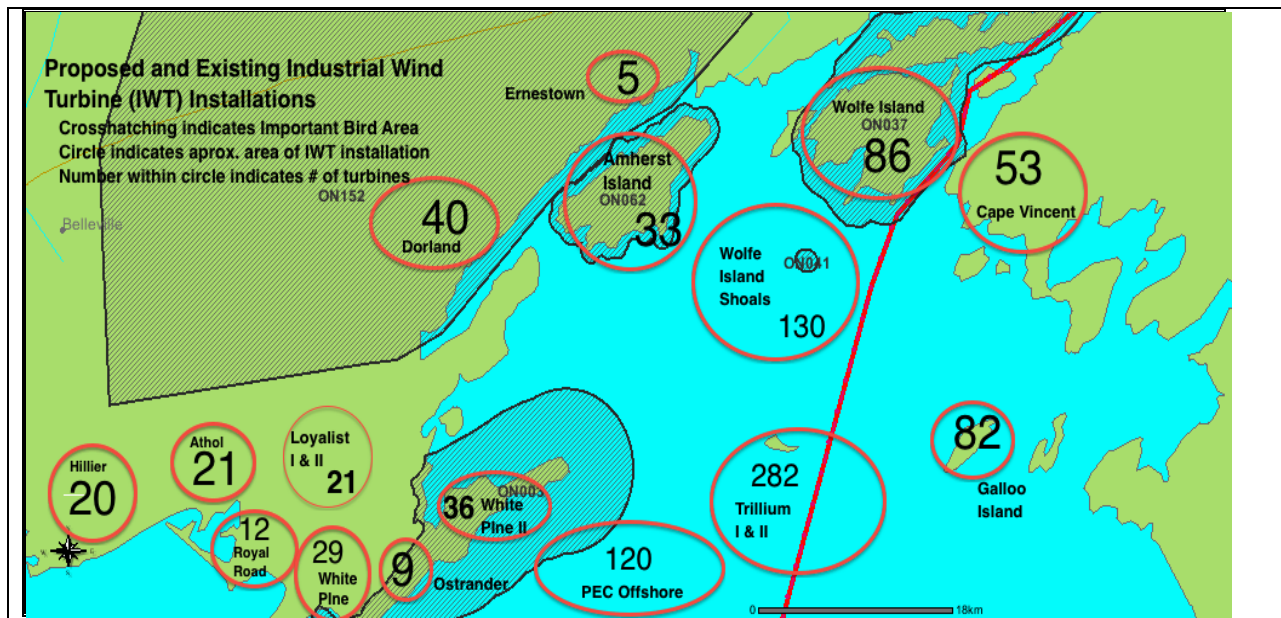
The statement that "overall, turbine within the Amherst Island Wind Energy Project have been sited outside of significant migratory land bird stopover areas" indicates that some may be positioned within significant migratory land bird stopover areas, this statement should be corrected or consideration made to demonstrate further that all turbines have been sited outside of significant migratory land bird stopover areas.

**ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM:** Some studies have shown barrier effect to some groups of birds (e.g. waterfowl) with closely spaced wind turbines. However, there is no evidence to suggest a barrier effect between wind farm projects that are kilometers apart (approx.. 10km in the case of Wolfe Island and Amherst Island).

All turbines have been sited outside of significant migratory landbird stopover areas, with the closest turbine sited 44m from blade tip.

**APAI COMMENT ON ALGONQUIN RESPONSE:** Below is a map of the proposed wind turbine installations in the immediate area. There is no suggestion that a barrier effect would result from proximity to a single Project, rather it is the sheer volume of turbines that is at issue.





**MUNICIPAL CONSULTATION FORM #216:** For Open Country Breeding Bird Habitat and Short eared owls, there are indications that localized avoidances occurs in some species. Short eared Owls are noted to be more vulnerable than other open country breeding birds. Due to this avoidance behavior it is possible that the distribution of wind turbines throughout the island could have resulting in their complete abandonment of the island.

Anecdotal information from the Kingston Field Naturalists (pers. Comm. 2013) indicates that short-eared owls may be shifting to areas on Wolfe Island where turbines are not present, and foraging patterns may have been influenced with use of Simcoe Island occurring in greater frequency (as noted above for raptor wintering areas). Amherst Island is small and isolated and therefore there are no adjacent islands or undisturbed areas. Impacts may be much greater than that experienced on Wolfe Island.

It is noted that species at risk have been excluded from the analysis. It is anticipated that the installation of the wind turbines would have some impact either indirect or direct on these (avian) species. It is understood that this is being addressed under a separate process, however its exclusion from comment within the EIS does not allow for review/comment.

**ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM:** As stated above, post-construction monitoring at the Wolfe Island Wind Plant have found that wintering Short-eared Owls continue to occur within the project area, in proximity to operating wind turbines. In addition to the wintering individuals, breeding Short-eared Owls have also been recorded on Wolfe Island during operation of the project (Keyes, 2011). Overall, the observations of Short-eared Owls on Wolfe Island do not support the suggestion that the Amherst Island Wind Energy Project could result in the complete abandonment of the island.

Impacts to species at risk are being addressed, including the threatened Bobolink, with MNR through the Species at Risk Report and, for some species (Meadowlark and Whip-poor-will), through an ESA permit. It is the direction of MNR to not include discussion of threatened or endangered species within NHA/EIS.

**APAI COMMENT ON ALGONQUIN RESPONSE:** The NHA/EIS states "Short-eared Owls would be

are expected to continue using sites adjacent to the access roads, as documented on other wind projects (i.e. Wolfe Island).” As there is no reference attached to this statement above, one can only speculate about its provenance. One would need to assume the Keyes report. A review of the Keyes report provides the following UTM coordinates on Wolfe Island for the 1 Short-eared Owl nest she located on Wolfe Island, 385960 E 4889663 N. Google maps indicates that this nest is approximately 100 meters from the access road, and the nearest turbine is located at a distance of over 550 meters.

Furthermore, what is being documented on Wolfe Island is evidence of displacement due to the industrial wind turbines. Following is a quote from the summary of a report detailing the results of a multiple year study of Short-eared Owls on Amherst and Wolfe Islands.

The results of standardized Short-eared Owl surveys during two winters on Amherst and Wolfe Islands, including all raptor observations, serve as a framework upon which to develop an understanding of current raptor abundance and distribution. Although preliminary, our results are evidence of the potential displacement effects of a large-scale wind-farm located in the area of the Wolfe Island Northwest Route, reflected in low numbers of Short-eared Owls and Red-tailed Hawks compared to other routes and historical records for the area.

#### **CRCA – SUMMARY OF ANTICIPATED CONCERNS**

##### **MUNICIPAL CONSULTATION FORM #221: Pre-siting**

Proper site selection plays a very important role in limiting the impact of wind farms on nature. In general, current knowledge indicates that there should be precautionary avoidance of locating wind farms in regional or international important bird or bat areas and/or migration routes (Everet, 2003). At a macro scale, raptor use of a site still appears to be one of the most important factors that can be easily measured and is generally related to risk of collision (Anderson et. al, 2004). Also within one wind farm, the impact can strongly differ between individual turbines clearly showing that site selection can play an important role in limiting the number of collision fatalities (Everaert, 2003). Birds may utilize specific areas more than other areas on the proposed wind plant site. Understanding those activity areas and modifying the project commensurately can be very valuable. Avoiding high use areas or areas used by species of special concern can be effective in minimizing impacts (Anderson et. al, Dec 1999). As is the case with birds, wind project siting is crucial to minimizing impacts to bats. Another mitigation measure to minimize potential impacts to bats is to avoid the siting of projects near open water. Open water is particularly important to bats, especially in arid areas as it not only provides drinking water but is a significant source of insect prey (AWEA, 2008).

**ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM:** Post-construction studies of wind power projects across Ontario have shown that risk of collision does not differ significantly between individual turbines with a project suggesting micro-siting of turbines within a project area has little influence on overall bird or bat mortality.

Impact of mortality to birds and bat are addressed through EEMP and Algonquin Commitments to implement mitigation should MNR’s mortality threshold be exceeded.

**APAI COMMENT ON ALGONQUIN RESPONSE:** Algonquin does not address the issues raised

above. Additionally, the Environmental Effects Monitoring Plan (EMP) is designed to monitor the negative impact of poorly sited turbines on the local flora and fauna. In contrast, the Loyalist Township Consultation Form is attempting to ensure the proper siting of turbines.

**MUNICIPAL CONSULTATION FORM #225: Poor Weather**

Poor weather conditions are known to occur. Amherst Island is located within Lake Ontario near the mainland shore, and snow squalls, heavy fog, and storm events can be experienced. The influence of these effects on migrating species that travel over Lake Ontario is unknown. Birds flying over Lake Ontario see Amherst Island as potentially the first land fall area. Wolfe Island is located closer to the mouth of the St. Lawrence River and therefore the expanse of open water is much less between the north and south shores of the Lake.

**ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM:** Mortality to birds is addressed through the EEMP.

**APAI COMMENT ON ALGONQUIN RESPONSE:** Algonquin does not address the issues raised above. Additionally, the Environmental Effects Monitoring Plan (EMP) is designed to monitor the negative impact of poorly sited turbines on the local flora and fauna. In contrast, the Loyalist Township Consultation Form is attempting to ensure the proper siting of turbines.

**MUNICIPAL CONSULTATION FORM #226: Displacement, Avoidance and Available Habitat**

Displacement and habitat availability can have an indirect effect on bird habitat and behavior. These indirect impacts are a concern identified by the MNR (MNR 2011), and include:

- Displacement from suitable habitat at any stage in their annual cycle (loss of feeding, breeding, or migratory stopover habitat or active avoidance of structures, human activity, noise, or infrastructure; and
- Quality of breeding habitat may also be diminished by fragmentation effects, predation, and parasitism.

Displacement effects have been shown to occur in some species, in response to wind turbine operation. It is possible from the general literature on disturbance in birds to identify some key species which are likely to be sensitive to disturbance caused both by wind farm construction and operation, such as raptors, divers or loons, ducks and waders. For the latter two groups disturbance effects have been recorded up to 800m from turbines (Gill et.al, 1996). Although much of the research is United Kingdom based, behavioral changes around turbines should be firmly understood with respect to the potential impacts to Amherst Island. Many studies conducted at Canadian wind energy projects are of short duration (3 years post construction) and may not be indicative of the long term effect. Displacement is poorly studied compared to the other types of impacts associated with wind energy projects (AWEA, 2008)

This general displacement or avoidance of turbines may also result in the fragmentation of habitats beyond the physical fragmentation as a result of roads and other facilities. As Amherst is a small island, it is possible that the displacement effects could be significant enough to result in the complete avoidance of the island. In particular the effects of avoidance can result in a significant loss of available habitat on Amherst Island (well beyond the physical occupation of the towers and related infrastructure).

**ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM:** Various studies have been conducted on avoidance impacts of birds to wind turbines. The general consensus from this body of knowledge is that wind turbines do not result in significant displacement impacts to local bird populations.

**APAI COMMENT ON ALGONQUIN RESPONSE:** Please provide studies for above statement.

**MUNICIPAL CONSULTATION FORM #228: Turbine Design**

While turbine design is cited to mitigate potential impacts to nesting and breeding species, the increased height can influence migration. Taller turbines reach higher above the ground, have much larger rotor swept areas and thus further overlap the normal flight heights of nocturnal migrating songbirds and bats (Morrison 2006; Barclay et al. 2007; Johnson et al. 2002, Manville 2009). In addition, the length of the blade changes the rotor swept area, thus potentially changing the opportunity for collisions (Howell 1997).

**ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM:** Mortality impact to migratory birds and bats are addressed through the EEMP with Algonquin Commitments to implement mitigation should mortality rates exceed the MNR's threshold which is not dependent on the physical parameters of the turbine. With the Algonquin Commitments to mitigation, significant impact to migratory birds or bats is not anticipated.

**APAI COMMENT ON ALGONQUIN RESPONSE:** Algonquin does not address the issues raised above. Additionally, the Environmental Effects Monitoring Plan (EMP) is designed to monitor the negative impact of poorly sited turbines on the local flora and fauna. In contrast, the Loyalist Township Consultation Form is attempting to ensure the proper siting of turbines.

**MUNICIPAL CONSULTATION FORM #229: Cumulative Impacts**

Because the cumulative impacts of all mortality factors on birds continue to increase as the human population climbs and resource demands grow, efforts by every industry are important to reverse avian mortality trends and to minimize bird deaths. However, as wind energy facilities become substantially more numerous, fatalities and thus the potential for biologically significant impacts to local population's increases (NAS 2007; Erickson et al. 2002; Manville 2009). The cumulative impacts of multiple wind energy projects within known significant wildlife areas (such as the eastern end of Lake Ontario) should be discussed.

**ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM:** Cumulative impacts are not a component of the NHA/EIS. Through the REA process, addressing cumulative impacts is the responsibility of the provincial government.

It is our understanding the cumulative impacts are reflected in MNR's thresholds for bird and bat mortality.

**APAI COMMENT ON ALGONQUIN RESPONSE:**

**CULTURAL HERITAGE / PROTECTED PROPERTIES**

**ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM:** The draft Heritage Assessment Report was revised to consider, as appropriate, comments received from municipal/township authorities, the Ontario Heritage Trust, the local Heritage Committee, and comments received when a third party heritage planner drove the island with local residents on March 5th and 6th to identify heritage resources and was available at the final public open houses. In April 2013, this updated Heritage Assessment Report was reviewed by the Ministry of Tourism, Culture and Sport (MTCS) and the agency has provided a letter of confirmation indicating they are satisfied that the heritage assessment process (including project related impacts and recommendations for monitoring and mitigation) and reporting

are consistent with the applicable heritage assessment requirements established in s. 23 of O. Reg. 359/09.

The updated Heritage Assessment Report, and confirmation letter from the MTCS, was included in the Renewable Energy Approval (REA) package, for the proposed Project, which was submitted to the Ministry of the Environment (MOE) in April 2013.

The updated Heritage Assessment Report (and all other reports submitted as part of the REA application) will be made available to the public via the MOE's Environmental Bill of Rights Environmental Registry (<http://www.ebr.gov.on.ca>) and on the Project website once the MOE has started their review of the REA application. We will notify you when the reports are available for review.

Some of the revisions made to the Heritage Assessment report include: additional information provided in consideration of the dry stone walls, clarification that the Village of Stella Cultural Heritage Landscape is comprised of many individual Built Heritage Resources, removal of potential Operations and Maintenance building along Front Road (near the Pentland Cemetery), and additional historical information about some resources including the Village of Stella.

**APAI COMMENT ON ALGONQUIN RESPONSE:** As the updated Heritage Assessment report has been published, why is not available for review now?

**MUNICIPAL CONSULTATION FORM #230:** Additional structures overlooked.

LOYALIST TOWNSHIP MUNICIPAL CONSULTATION FORM: The Committee is concerned that the existing inventory overlooks the heritage value of a number of additional structures located on the Island (possibly between 50 & 100), including houses, barns, monuments, outbuildings, and burial sites. Some of the missing inventory may have been considered as part of the Cultural Heritage Landscapes (CHL). It's the opinion of this committee that these attributes need to be inventoried as part of the CHL, and their impacts individually evaluated and considered

This is especially critical in the Village of Stella where the impact of the vehicular traffic will be significant, given the proximity of the buildings and trees, to the travelled roadway.

**ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM:** As stated in the report, a visual survey was conducted for extant buildings, outbuildings, or other built heritage remains. It was during this time that potential heritage resources, including both buildings and landscapes, were identified.

The study methodology has met the requirements of the MTCS and O. Reg. 359/09 standards. MTCS provided a confirmation letter agreeing to the results of the Heritage Assessment.

**APAI COMMENT ON ALGONQUIN RESPONSE:** Algonquin insists that it has complied with regulatory requirements. It has not. It was not the intention of the drafters of the regulations to accept information that is distorted, inaccurate, misleading or inadequate. While Algonquin appears to have made a few, modest amendments to its original draft heritage assessment report, the most substantial issues that were raised by the municipality and the APAI have been ignored.

Algonquin has submitted an inadequate document to the MTCS. The MTCS should revisit its

letter of confirmation, taking into consideration that the concerns of the Municipality and the APAI that were largely ignored in the document submitted to the MTCS.

**MUNICIPAL CONSULTATION FORM #231:** Minimal consultation undertaken

**LOYALIST TOWNSHIP MUNICIPAL CONSULTATION FORM:** Overall, there appears to have been only minimal consultation undertaken, prior to preparation of the draft report. Our committee, for example, was only approached after the report was prepared. While this opportunity has allowed us to somewhat feed into the analysis, regrettably we know of other interested individuals and/or groups, whose involvement was not actively pursued. This limited connection with the community is unfortunate given the amount of local knowledge and insight available on and around the Island.

**ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM:** Consultation met or exceeded the requirements of both MTCS and O. Reg. 359/09 standards. Algonquin consulted with municipal/ township authorities, the Ontario Heritage Trust, local historical societies, archival documents and secondary source material. In addition a third party heritage planner drove the island with local residents on March 5th and 6th to identify heritage resources and was available at the final public open houses.

**APAI COMMENT ON ALGONQUIN RESPONSE:** It is interesting that Algonquin continues to insist that it consulted with « municipal / township authorities, while those same authorities (the Loyalist Township Heritage Committee) state there was a lack of consultation...

**MUNICIPAL CONSULTATION FORM #233:** Inclusion of the fourth protected property (Irish stone fences)

**ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM:** The following discussion has been included in the Heritage Assessment Report which was submitted to the Ministry of the Environment as part of the Renewable Energy Approval Application.

“At the time of writing, the Loyalist Township Municipal Heritage Committee was reviewing a number of dry stone walls on Amherst Island as heritage resources that could potentially be designated in the future (Sova, 2012, pers. comm.). No Notice of Intent to Designate has been issued; however, the dry stone walls are identified specifically with the township’s OP as resources to be avoided (see Section 1.2). A number of these dry stone walls are visible from public property and their presence has been noted in the descriptions of individual cultural heritage resources, where associated, and accounted for in assessment of potential impacts. Although private property was not accessed as part of the visual survey for the heritage assessment, archaeological field staff undertaking Stage 2 Archaeological Assessment of all Project component locations were aware of the potential of encountering dry stone walls, or extant portions of dry stone walls. No further walls were recorded within close proximity to proposed Project components.”

**APAI COMMENT ON ALGONQUIN RESPONSE:** The above answer does not address the many heritage stone walls that line the roads that Algonquin proposes to travel for 18 months.

According to the Algonquin / Windlectric Construction Plan Report the various types of construction vehicles required to industrialize the island will include: pick-up trucks, SUVs, ATVs, tracked drill rig, trailer with water tank, dump trucks, oversized tractor trailer, flatbed trailer, small cranes, heavy lift cranes, mobile cranes, forklifts, all-terrain lifts, tractor scrapers,



compactors, excavators, dozers, backhoe, grader, roller, concrete trucks, concrete pump trucks, utility bucket truck, auguring truck, pole trailer, reel stand vehicles, conductor puller vehicles, tensioner vehicle, lineman trucks, gravel truck, front end loader, cars, service vehicles, Read-mix concrete trucks and trim dozer.

Clearly, Algonquin's statement "No further walls were recorded within close proximity to proposed Project components" is misguided at best.

**MUNICIPAL CONSULTATION FORM #234:** *The committee would like the Village of Emerald identified as a Cultural Heritage Landscape, rather than simply a couple of buildings within a settlement area. On this site, there is still in existence a mixture of buildings, including a church, a former store, a former cheese factory and to the south, a former school. The Committee feels these attributes justify reconsideration as a CHL.*

**ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM:** A number of structures and features located in the former village of Emerald were identified Built Heritage Resources as part of the Heritage Assessment including the building at 12405 Front Road, 12515 Front Road, 12525 Front Road, 20 Emerald 40 Foot Road, and the nearby old extant remains of the shipping yard. In addition the assessment discussed the decline of Emerald as the central community on Amherst Island with the rise of Stella as the primary shipping port and commercial centre for the island.

**APAI COMMENT ON ALGONQUIN RESPONSE:** Algonquin's response to the issue raised in item 234 does not address the requirement to identify the Village of Emerald as a Cultural Heritage Landscape.

**MUNICIPAL CONSULTATION FORM #236:** *Our concerns with respect to the anticipated impacts associated with construction begin with our observation that the range of impacts are not clearly identified, nor individually examined. For example, impacts associated with vibration arise from blasting, hoeramming and the anticipated volume of day trips associated with both truck traffic and other pieces of heavy equipment. To the committee, the focus of the reported impact assessment appears overly focussed on blasting type impacts, with little consideration being given to the anticipated impacts (i.e. noise and vibrations) associated with repeated truck movement*

**ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM:** Updated mitigation and monitoring methods have been presented in the Heritage Assessment Report which was submitted to the Ministry of the Environment as part of the Renewable Energy Approval Application to respond to concerns arising from the vibrations as a result of construction activity including the movement of large trucks. These include:

- Project activities should be avoided within 50 m of identified Built Heritage Resources (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.
- All Project activities should cease immediately if levels are exceeded until a solution can be determined.



Additional mitigation measures are recommended for the dry stone walls (BHRs 7 and 18).

With respect to noise, the Project has been sited to comply with the requirements of O. Reg. 359/09. A Noise Assessment was conducted by HATCH in compliance with the Ontario Ministry of Environment requirements published in the "Noise Guidelines for Wind Farms (October 2008)" and the requirements of the REA regulation O. Reg. 359/09. The final Noise Assessment Report will be reviewed by noise specialists at the MOE as part of the REA application review process. The draft Noise Assessment Report is available on the Project website.

**APAI COMMENT ON ALGONQUIN RESPONSE:** The above answer does not address the question of **noise resulting from construction traffic** which was the issue raised in item 236.

**MUNICIPAL CONSULTATION FORM #237:** *Many of the Island roads are essentially the same as they were in the early 1800s. They are a significant heritage feature worthy of recognition / protection and need to be included in the inventory and assessed. As written, the assessment would suggest that future land disturbances will be dealt with in the roads-use report, a report not expected to be finalized until just prior to construction. This timing is unacceptable and could result in action that could dramatically affect the heritage landscape of the island.*

**ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM:** The "Roads Use Report" is a separate document not related to the Renewable Energy Approval process. This report speaks to the use, condition and possible upgrades required to use these roads for the construction and operation of the project and preparation of this report will become a central covenant of the Road Use Agreement with the Municipality.

**APAI COMMENT ON ALGONQUIN RESPONSE:** Algonquin does not address the concerns stated in item 237 above.

**MUNICIPAL CONSULTATION FORM #238:** Village of Stella bypass for all construction traffic

**ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM:** The project design currently requires the use of the public roads which would include the use of the road through the village of Stella for passage of construction vehicles. However as the final design of the project continues to evolve the project team will continue to explore various options to minimize traffic through the village to the extent feasible.

**APAI COMMENT ON ALGONQUIN RESPONSE:** Algonquin Power is well aware of the fact that the only way to avoid traffic through Stella is to move the dock. Is Algonquin contemplating moving the dock location?

**MUNICIPAL CONSULTATION FORM #239:** Request for a "heritage stone mason" with experience to undertake the work on stone fences on an 'ongoing' basis

Prevention as well as monitor and repair.

**ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM:** With respect to the dry stone fences a number of mitigation and monitoring measures have been recommended including:

- 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.

**APAI COMMENT ON ALGONQUIN RESPONSE:** Algonquin's response does not address Loyalist Township's requirement regarding a heritage stonemason and ongoing work.

**MUNICIPAL CONSULTATION FORM #241:** Amherst Island as a Cultural Heritage Landscape

**ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM:** The Project Study Area was assessed for groupings of resources and environs that might potentially constitute cultural heritage landscapes as defined by the Ministry of Tourism Culture and Sport (*InfoSheet MUNICIPAL CONSULTATION FORM #2 Cultural Heritage Landscapes in Heritage Resources in the Land Use Planning Process: Cultural Heritage and Archaeology Policies of the Ontario Provincial Policy Statement, 2005*).

Four cultural heritage landscapes were identified in the Project Study Area, all of which are located on Amherst Island: CHL 1, the Village of Stella; CHL 2, the Catholic Cemetery; CHL 3, St. Paul's Presbyterian Church; and the Ferry Landscape, CHL 4. Amherst Island as a whole was not determined to be a Cultural Heritage Landscape.

**APAI COMMENT ON ALGONQUIN RESPONSE:**

There was no mention or consideration of a potential Cultural Heritage Landscape designation for Amherst Island in Algonquin's draft report, and there is no evidence that Algonquin even considered this possibility (a possibility so contrary to its interests).

Further, the MTCS and the MOE should be apprised of the fact that the Heritage Canada Foundation (HCF) has named Amherst Island one of the "Ten Most Endangered Places in Canada". Heritage Canada Foundation's assessment of Amherst Island stands in stark contrast to Algonquin's self-interested assessment of the same place.

The HCF refers to Amherst Island's "Cultural and Heritage Landscape, Site of Proposed Wind Turbine Plant". Note that the HCF found Amherst Island, as a whole, to be endangered by the proposed wind plant.

The Heritage Canada Foundation also notes the following: "because the island is only accessible by ferry, the pastoral features that have contributed to its value as a cultural and heritage landscape have been preserved over time."

It continues, "As well as the existence of significant historic structures, the island's clearly defined geographic areas and landscape reflect the original settlement, including the roads,

farm lot layout, farmsteads and villages - remnants of early Irish-Scottish settlement- most of which have remained almost unchanged for the past 100 years."

The Heritage Canada Foundation also refers to Amherst Island as "an important natural landscape", citing its location on the Atlantic Migratory Flyway, its' international recognition for concentrations of wintering raptors, and Amherst Island Owl Woods, and the fact that the Island is an Important Bird Area (IBA) of Global Significance.

Heritage Canada's assessment of Amherst Island clearly fits the definition of "Cultural Heritage Landscape" as defined in the PPS, 2005.

**MUNICIPAL CONSULTATION FORM #243: Impact on the Village of Bath**

**ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM:** The Village of Bath is situated outside of the boundaries of the Project Study Area. Therefore, it is beyond the scope of the study. However, a series of Visual Simulations were undertaken as part of the overall Project and included in the Heritage Assessment Report. One simulation was conducted from a vantage point in the Village of Bath. These simulations we also used to inform the assessment of potential visual impacts

**APAI COMMENT ON ALGONQUIN RESPONSE:** As the Algonquin REA reports define the Project Study Area as the entirety of Amherst Island, the response above makes absolutely no sense. Additionally, the HATCH Road report indicates that Algonquin proposes to route 18 months of construction traffic though the village of Stella.

**FOLLOWING SECTION MISSING FROM ALGONQUIN RESPONSE TO MUNICIPAL CONSULTATION FORM AND MUST BE ADDRESSED BY ALGONQUIN**

In conclusion the DHA:

The report fails to look at the Island and its heritage resources in its entirety. The Island as a whole is a CHL and should be assessed as such.

The report is lacking completeness in its inventory of the heritage resources on the Island. In our opinion, the assessment as written does not meet the standards set out by the Ministry of Tourism, Culture and Sport. The Heritage \Assessment needs to be updated to address these shortcomings and must be re-circulated to the public and the Township for additional comment before the final submission to the Province.

Where/when resources have been identified in the report, there needs to be a comprehensive assessment of the impacts related to the construction process, especially in the Village of Stella. Alternatives need to be put forward.

The Committee is prepared to work with the consultants to assist in identifying any missed heritage resources and further consider the impacts on these resources.