



# Kingston Field Naturalists

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March 5, 2013

Mr. Sean Fairfield  
Manager, Environmental Planning  
Algonquin Power Co.  
2845 Bristol Circle  
Oakville, ON L6H 7H7

RE: AMHERST ISLAND WIND ENERGY PROJECT

Dear Mr. Fairfield,

The Kingston Field Naturalists (KFN) are pleased that we are being given this opportunity to comment on the Natural Heritage Assessment and Environmental Impact Study Report of the Amherst Island Wind Energy Project.

As we have communicated with you previously, we are opposed to the construction of an industrial wind facility on Amherst Island because of the habitat fragmentation resulting from the construction of access road, because of the habitat loss from the damage to woodlots and wetlands and because of the bird and bat mortality during the operation of the turbines.

## Site investigation and Evaluation of significance

The report seeks to determine the ecological value of Amherst Island by identifying the significant wildlife habitats which are present on its territory. While the studies of the soils and of the birds appear to be thorough and accurate, we have found some gaps in this work.

As is pointed out in the report, the assessment of turtles is planned for later and hence does not appear in this work. We are aware of several sites where numbers of Midland Painted Turtle have been observed. We are perplexed that the report states that “No

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candidate significant wildlife habitat was present in or within 120 m of the project location for turtle nesting habitat” before the complete assessment has been carried out.

The study of butterflies is intrinsically flawed as these insects are known to vary in numbers by several orders of magnitude from year to year. The KFN have observed significant migration of Monarch during several different years on our property at the eastern end of Amherst. The KFN believe that there is evidence that parts of Amherst Island are significant migratory butterfly stopover areas.

No significant search for bats seems to have been conducted. The KFN have observed bats during two separate Bioblitz conducted on Amherst Island. The report states that for bats: “The location and characteristics of stopover habitats are generally unknown” and then, on the next page, “No known migratory stopover areas occur within the Study Area”. Considering the high mortality from wind turbines observed for bats on Wolfe Island, a greater effort to find these mammals on Amherst Island should have been undertaken as they are already under threat from white-nose syndrome.

Extensive work on birds is described in the report but even there, several species have been understudied. Two species, Cliff Swallow and Ospreys are dismissed as unimportant because they nest on artificial structures. In southern Ontario, these two species nest almost exclusively on man-made structures so it seems a poor reason to ignore them. This is especially serious because the KFN believe that Ospreys are in danger of being locally extirpated from Wolfe Island because of the mortality they experience from the wind turbines. Cliff Swallows have also been killed by turbines on Wolfe Island.

Common Loons are present in great numbers in the water surrounding Amherst Island. Over 100 loons have been seen on several occasions. These birds fly over the island in the morning at heights which put them in danger of collision with the turbines’ blades. Yet, there is no mention of Common Loon in the report except as an indicator species for marsh habitat.

Tree Swallows and Barn swallows have been studied using road survey techniques. However, there is evidence that large numbers of both of these species roost in the interior of the island. Even though several thousand swallows are reported, the KFN believe that this number still underestimates the numbers that are stopping on the island during migration.

When analyzing the abundance of short-eared owls near existing wind turbine project, the report makes an outrageously bad inference when it states: “Short-eared Owls have been recorded in significantly higher numbers during post-construction surveys than during pre-construction surveys”. The numbers of wintering owls on Amherst and Wolfe Island are highly variable, depending on the availability of prey, success at nesting in previous year and numerous other factors. To compare the number of owls during a single year before the turbines were erected on Wolfe Island to a single year after they became operational is simply bad science.

Our own intensive ongoing study of wintering raptors surveys on Wolfe Island, since the turbines became operational, has shown evidence of the displacement of Short-eared Owls from their significant wildlife habitat in a section of Wolfe where a high density of wind turbines exists. This was very notable during the 2011/12 winter with Short-eared Owls absent from the high-density turbine locations but present in good numbers in suitable habitat away from the turbines.

Shorebird numbers are consistently underestimated. The KFN gave permission to Stantec to survey shorebirds on what they (Stantec) identify as the best habitat for these species on Amherst Island, namely the gravel bar at the eastern end of the island. Stantec employees did observe large numbers of Dunlin during migration on the KFN property but this significant habitat is not included because it is considered to be outside of the project location. The KFN believe that this area should have been included because it hosts the large shorebird populations that make the whole of Amherst Island an Important Bird Area (IBA).

When looking at significant habitat throughout Amherst Island, the report identifies individual woodlands and wetlands and rates them as significant based on established criteria. While this approach may be standard, the KFN believe that a more holistic approach should have been taken. By fragmenting the habitat, the value of Amherst Island as a whole as a raptor wintering site and as a migration stopover is diluted. A specific example of this is woodlands 25 and 26. These two woodlands are situated in the north-east of the island, directly where turbines S28 and S33 are planned. Because they are small and contain no mature trees, they are not judged significant and are not shown on later maps. Yet, Short-eared Owls have been observed to roost in these woodlands on several occasions. If Amherst Island had been considered as a whole, these and other woodlands and wetlands and open country areas would have been seen to constitute a habitat that is a mixture of hunting grounds, roosting grounds and breeding grounds where even a small woodland gets used.

To study migration across Amherst Island, Stantec used human observers carrying out daytime observation. This results in a fair estimate of the number of species of birds (more than 130) and bats that pass through the island but provides a very poor estimate of the total number of individuals. When preparing the environmental review report for the Ostrander Point Wind Energy Park in February 2009, Stantec included the results of an Acadia University Radar survey which revealed that over 70,000 and 160,000 birds migrate through that location in spring and fall respectively. The KFN does not understand why a similar study was not conducted for this much larger project which puts at risk a whole Important Bird Area.

## Environmental impact study

The KFN believe that road construction will lead to fragmentation which will degrade the environment. The report confirms that over 35 kilometers of roads will be constructed. These will double the amount of roads on Amherst Island. The island currently has large fields and many parts of the island are well away from any roads. Some small woodland that were deemed not significant will be destroyed and where existing roads are widened, the roadside habitat consisting of tall grass and well establish shrubs will also be destroyed.

The report states that:” To address any possible fragmentation effects of building access roads in this grassland habitat and an increase in traffic, the following measures will be implemented during operation or after decommissioning. Minimize maintenance vehicle traffic and human presence on access roads during grassland breeding bird season (May 1st to July 31st). Rehabilitate access roads back to grassland after decommissioning, in consultation with the landowners”. The KFN fail to understand how limiting traffic will alleviate fragmentation during operation of the facility.

The number of birds killed per turbine on Wolfe Island is one of the highest in North America. Especially, large birds like Osprey, Red-tailed Hawks and Turkey Vulture have experienced very high mortality rates. Throughout the report, this mortality is minimized and turbines are considered “a small contributor to overall bird mortality when compared to other anthropogenic structures”. This neglects to consider that the species that are killed by turbines are not the same that are killed by cats or that run into house windows. Ospreys are not killed by cats and do not fly into windows.

Bat mortality at Wolfe Island is not even reported in the report. There is no mention of measures that are known to reduce bat mortality in the report. Bats do not fly in high wind so it has been found that stopping turbines when wind is below a certain threshold will reduce mortality. It appears that the proponent is unwilling to commit to this inexpensive procedure to limit the impact on bats. All species of bats are currently threatened by the white-nose syndrome which will cause almost 100% fatalities in a colony.

The KFN could not find in this report any reason to believe that operation of 36 turbines on Amherst Island will not result in the same mortality that has occurred on Wolfe. This level of mortality will result in the local extinction of Ospreys, Red-tailed Hawks, Wilson Snipes, Eastern Meadowlarks and Bobolinks.

## Species at risk

Eastern Whip-poor-wills, Barn Swallows, Bobolinks and Eastern Meadowlarks are not discussed in this report. Stantec has told us that a separate report to MNR will be made

for these species. In the past environmental assessment of wind turbines, all bird species were discussed. While this new procedure may have been intended to limit the risk of revealing the location of species at risk, the KFN believe that it does not give the public a valid picture of the total impact of the turbines. After all, these species are the ones for which any mortality could lead to local extinction and have an impact on the province-wide population.

In fact, Amherst Island is a stronghold for Bobolinks. Kurt Hennige, a KFN member, has carried out surveys that indicate that about 1000 pairs of Bobolinks nest on Amherst. The mortality observed on Wolfe Island for this species will lead to a significant decline of the island population. The island will no longer be a source of Bobolinks for the rest of the province.

### Conclusion

The KFN believe that this report is incomplete and that further studies of birds and bats migration with radar, of turtle population and of butterfly migration are required.

The KFN believe that the environmental impact of this project has been grossly underestimated.

The KFN believe that a stronghold for two species at risk, Bobolinks and Eastern Meadowlarks, is at risk.

The KFN remain firmly opposed to this project.

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