

To: **Richmond County Planning Advisory Committee  
Richmond County Council**

From: **Planning Staff (EDPC)**

Date: **February 5, 2013**

Reference: **Application by Scotian WindFields Inc. to rezone a portion of a property in Martinique, Richmond County (PID 75194688) from General Development (GD-1) to Wind Development (WD-1) to allow for the construction of one wind turbine.**

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**Recommendation:**

That Council **approve** the rezoning of a 0.95 hectare portion of a property located in Martinique, Richmond County (PID 75194688) and owned by Magdalene Rose and Raymond Miller from General Development (GD-1) to Wind Development (WD-1).

**Summary of Proposal:**

Designation:	General Development	
Zoning:	General Development (GD-1)	
Area:	28.7 ha; 71.0 acres (Property)	
Site Visit:	December 18, 2012	
Height (H):	150 metres (492 feet)	
Rotor (R):	100 metres (328 feet)	
Setbacks		
Required:	From a Residence:	600 metres (1969 feet)
	Between Turbines (H):	Not Applicable
	From Property Lines (H):	150 metres (492 feet)
	Stream or Public Highway (2H):	300 metres (984 feet)

**Information:**

The applicant, Scotian WindFields Inc., has signed an option to lease agreement with the owners of the property (Magdalene Rose and Raymond Miller) located in Martinique. The applicant intends to install one 1.99 megawatt (MW) wind turbine on the property capable of producing an estimated 6100 megawatt hours (MWh) of electricity annually. The electricity will be produced and distributed under the Nova Scotia Community Feed-In Tariff (COMFIT) program. According to the applicant’s estimations, the electricity produced annually will be approximately equivalent to that consumed by 500-600 homes in Nova Scotia.

Currently the property is undeveloped and forested mostly by coniferous trees mixed with shrubby undergrowth. In the *Municipal Planning Strategy for the County of Richmond Addressing the Development of Wind Energy* and accompanying Land Use By-law, the property is designated General Development and zoned General Development (GD-1), as shown on the Rezoning Map (See page seven). The entire property is 28.7 hectares (71 acres) in area.



**Figure 1:** Proposed location of site access to turbine from Highway 206. Note Scotian WindFields' existing meteorological tower in background.

**Analysis:**

The *Municipal Planning Strategy for the County of Richmond Addressing the Development of Wind Energy* outlines criteria for amending the Land Use By-law to permit a rezoning from the General Development (GD-1) Zone to the Wind Development (WD-1) Zone. Policy R-8 establishes the Wind Development (WD-1) Zone in the Land Use By-law for development of utility scale and domestic scale wind turbines. Policy R-9 outlines three main subsections for Council's consideration when rezoning to the WD-1 Zone as follows: a) the adequacy of the area of land being rezoned in relation to the number of turbines being proposed; b) the potential for electromagnetic interference on radio, telecommunications or radar systems; and c) the proposal meets the setback and other requirements in the Land Use By-law.

The area of land to be rezoned is delineated by the applicant according to the requirements of the by-law, as shown on the Rezoning map on page seven. The circle of land to be rezoned is 0.95 hectares in area, which provides sufficient land for the construction and placement of a single turbine. The total area of the property is not great enough to allow future additional turbines to be placed on the lot given the minimum setback requirements from residences, property lines, roads, and watercourses.

The potential for electromagnetic interference on radio, telecommunications or radar systems was assessed by the applicant through written correspondence with relevant agencies. As part of their application for rezoning, Scotian WindFields submitted confirmations from Bell Mobility, the Department of National Defence, the Meteorological Service of Canada, NavCanada, Transport Canada, and the Canadian Coast Guard that they did not object to the proposed wind turbine.

The third criterion from Policy R-9 relates to the setback requirements and other requirements in the Land Use By-law (See Zoning Constraints map, page eight). It should here be noted that Scotian WindFields originally intended to install a smaller wind turbine model. This model would have been 120 metres in height and could have met all the setback requirements once the land was rezoned. However, since that time they gathered meteorological data demonstrating that the local wind regime is not as strong as originally expected on the subject property. To compensate, they proposed using a taller turbine to reach different wind currents. This taller turbine (the proposed 150 metre model) could not meet all the setback requirements. Accordingly, Scotian WindFields applied for variances from the required setbacks to place the turbine closer to the western lot line and one watercourse than would otherwise be permitted. The variances would allow the turbine to be located further from nearby residences, Highway 204, and the nearby Department of Transportation and Infrastructure Renewal garage. The details of these variances are explained below in the discussion regarding setbacks.

The minimum setback from all external property lines is the height of the turbine (150 metres). Scotian WindFields applied for a variance from this minimum property line setback to reduce the setback to 81 metres from the western property line (bordering undeveloped land owned by the Department of Natural Resources). Since the variance would allow the turbine to be located farther from neighbouring residences, Highway 206, and the nearby Department of Transportation and Infrastructure Renewal garage, Planning Staff determined to grant this variance. In accordance with the Municipal Government Act, all property owners within thirty (30) metres of the subject property were notified of the variance. This notification clearly stated the variance granted and the terms under which it could be appealed. The Department of Natural Resources (the landowner most directly affected by the variance) did not submit an appeal. While this variance does allow the turbine to be located closer to the property line (81 metres instead of 150), the turbine blades are only fifty (50) metres long, meaning that during operation no part of the turbine will extend over adjacent property. In their application, Scotian WindFields also note that they have attempted to contact the Department of Natural Resources in hopes of receiving written permission to reduce the setback from their property and have forwarded a project brief to the Manager of Acquisitions and Leases. However, they have received no response from the Department regarding the proposal.

The wind turbines must also be set back either sixty (60) metres or twice the height of the highest turbines (in this case 300 metres), whichever is greater, from any watercourses or public highway. Scotian WindFields have also applied for a variance from this requirement allowing the turbine to be located closer to a watercourse than otherwise required. The variance from the watercourse setback requirements would allow the turbine to be located 137 metres from the watercourse instead of 300 metres. Planning Staff reviewed this request and

granted the variance. Staff's decision was based on two factors: 1) that the variance would allow the turbine to be located farther from neighbouring residences, and 2) that the main concern regarding watercourses from an environmental standpoint is potential for erosion during the construction phase, and not so much the actual turbine location. As a result, Staff have come to consider the sixty (60) metre requirement as more important than the two times the height of the turbine standard. The variance decision was then circulated to all assessed property owners within thirty (30) metres of the subject site (See Variance Notification map, page nine) in accordance with the requirements of the *Nova Scotia Municipal Government Act*. This notification clearly stated the variance granted and the terms under which it could be appealed. William and Delores Callahan, owners of PID 75138974, appealed this decision to grant the variance. Their appeal was heard by Council on January 21, 2013, at which time Council determined to uphold the decision to grant the variance. As a side note to this variance appeal, the Land Use By-law only requires a setback of one time the turbine height (in this case 150 metres) from neighbouring property lines. Stricter setback requirements are only required if a residence is located on the neighbouring property. The proposed turbine site (with variances) was determined by Planning Staff to be 210 metres from the appellants' undeveloped property, well over the required 150 metres. The 150 metre property line setback from the appellants' property is illustrated on page ten.

Utility scale wind turbines must be located 600 metres from any dwellings with the exception of dwellings located on the same lot as the wind turbine. The closest dwelling to the nearest wind turbine is located approximately 750 metres from the turbine location (109 Rogers Road).

Utility scale wind turbines must be located a distance of two times the height of the turbine (in this case 300 metres) from the nearest road. The nearest road to the wind turbine is Highway 206, approximately 400 metres from the wind turbine location at its nearest point.

Finally, the WR-1 zone requires that the mean value of sound pressure level from a wind turbine not exceed 40 dB(A) or the existing background noise (whichever is greatest) at the nearest residence. According to the proponent's Sound Analysis the noise at the nearest buildings (109 Rogers Road) will be in the vicinity of 35.6 dB(A). (See Sound Analysis map, page eleven). Turbine noise would have to be higher than 40 dB(A) for the ambient noise level in this area to be relevant, and therefore the applicant assumed ambient noise to be 0.0 dB(A) in their calculations. The applicant's calculations are based on a 105 dB(A) sound output from the turbine (based on manufacturers' data for the specific wind turbine model). This sound output figure is based on wind speed of 8 m/s (about 16 knots or 29 km/h). While turbine noise would increase at higher wind speeds, so too would ambient noise. With this in mind, planning staff believe the applicant's analysis to be a reasonable approximation of noise levels during turbine operation.

The proposed rezoning must also be consistent with Policy I-6 of the Municipal Planning Strategy, which outlines criteria for an amendment to the Land Use By-law. The following is a synopsis of the criteria, as outlined in Appendix 'A.' To aid the assessment, letters were sent to applicable agencies as outlined by the Municipal Planning Strategy, requesting comments on whether the proposed development is "premature" or "inappropriate." As well, staff depended on the proponent's Environmental Impact Statement, Watercourse Assessment, and Archaeological Resource Impact Assessment (commissioned by the proponent for eligibility for the COMFIT program).

Planning Staff see no significant way in which the proposed rezoning would be premature or inappropriate by reason of "the financial capability of the Municipality to absorb any costs relating to the development."

All site access will be gained from Highway 206. Darren Blundon, Area Manager for the Inverness South/Richmond/Iona Office of Nova Scotia Transportation and Infrastructure Renewal confirmed in correspondence dated January 11, 2013 that the proposed access would be able to meet stopping sight distance requirements.

The final two sections of this policy relate to the potential for contamination of watercourses or private wells and creation of erosion or sedimentation as a result of the development. They also address the potential impact on protected wetlands or other sensitive habitat and on endangered species in the area of the proposed site. These are issues which were addressed in the proponent's Environmental Impact Statement conducted by Strum Environmental. The following is a summary of the relevant information.

The turbine structure itself will be located on the site such that wetlands or watercourses will not be impacted. The access road, however, will almost certainly cross wetland areas and/or watercourses. These crossings will require Wetland/Watercourse Alteration Permits from Nova Scotia Environment. In addition, one of the recommendations of the Environmental Impact Statement is that, "[c]onstruction, operational, and maintenance activities shall adhere to safe work practices and best management practices including a site specific erosion and sediment control plan."

With regard to private wells, based on analysis of the underlying geology and hydrogeology, the assessment notes that, "[t]here is no expected effect from the Project on the local or regional groundwater regime."

Of the ten species-at-risk recorded within 20 kilometres of the project site, suitable habitat for only one species (the Rusty Blackbird) is present on the subject property. Since the presence of the Rusty Blackbird has not been confirmed on the property, and the area of land to be cleared for the turbine is relatively small, the potential for impact on this species is considered low. It

should, however, be noted that the environmental impact assessment does recommend that the proponent carry out an avian field assessment to identify bird species and habitat present on the property, and to evaluate potential impacts the turbine might have on avian species in the surrounding area.

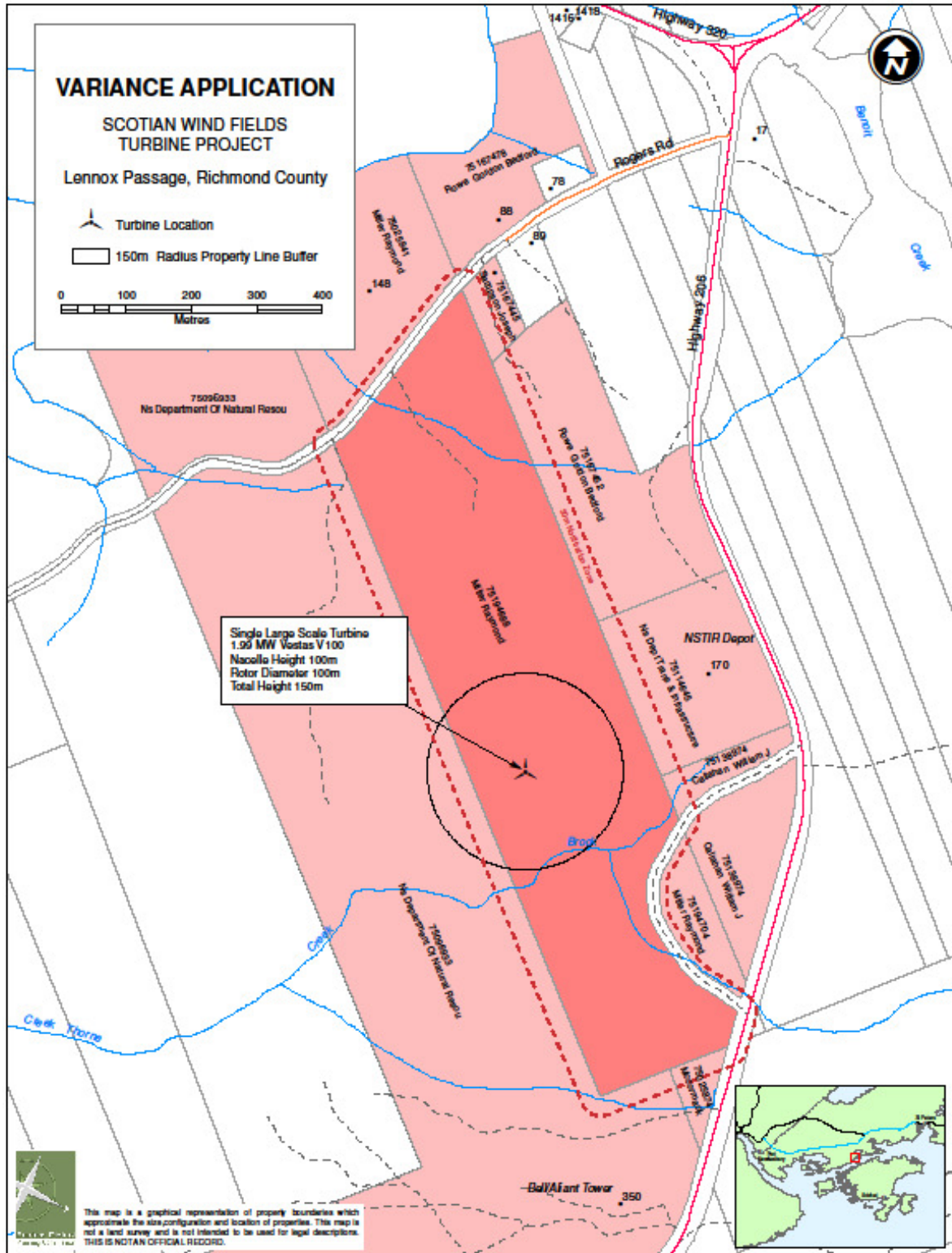
**Conclusions:**

Planning Staff are of the opinion that the proposal conforms with the intents of the *Municipal Planning Strategy for the County of Richmond Addressing the Development of Wind Energy* and associated Land Use By-law and with the requirements of all other Municipal By-laws and regulations. As such, they are of the opinion that the proposed rezoning meets the criteria and requirements of the Strategy (Appendix 'A'). They therefore recommend that Council **approve** the rezoning of a 0.95 hectare portion of a property, located in Martinique, Richmond County (PID 75194688) and owned by Magdalene Rose and Raymond Miller, from General Development (GD-1) to Wind Development (WD-1) to allow the construction of one wind turbine.

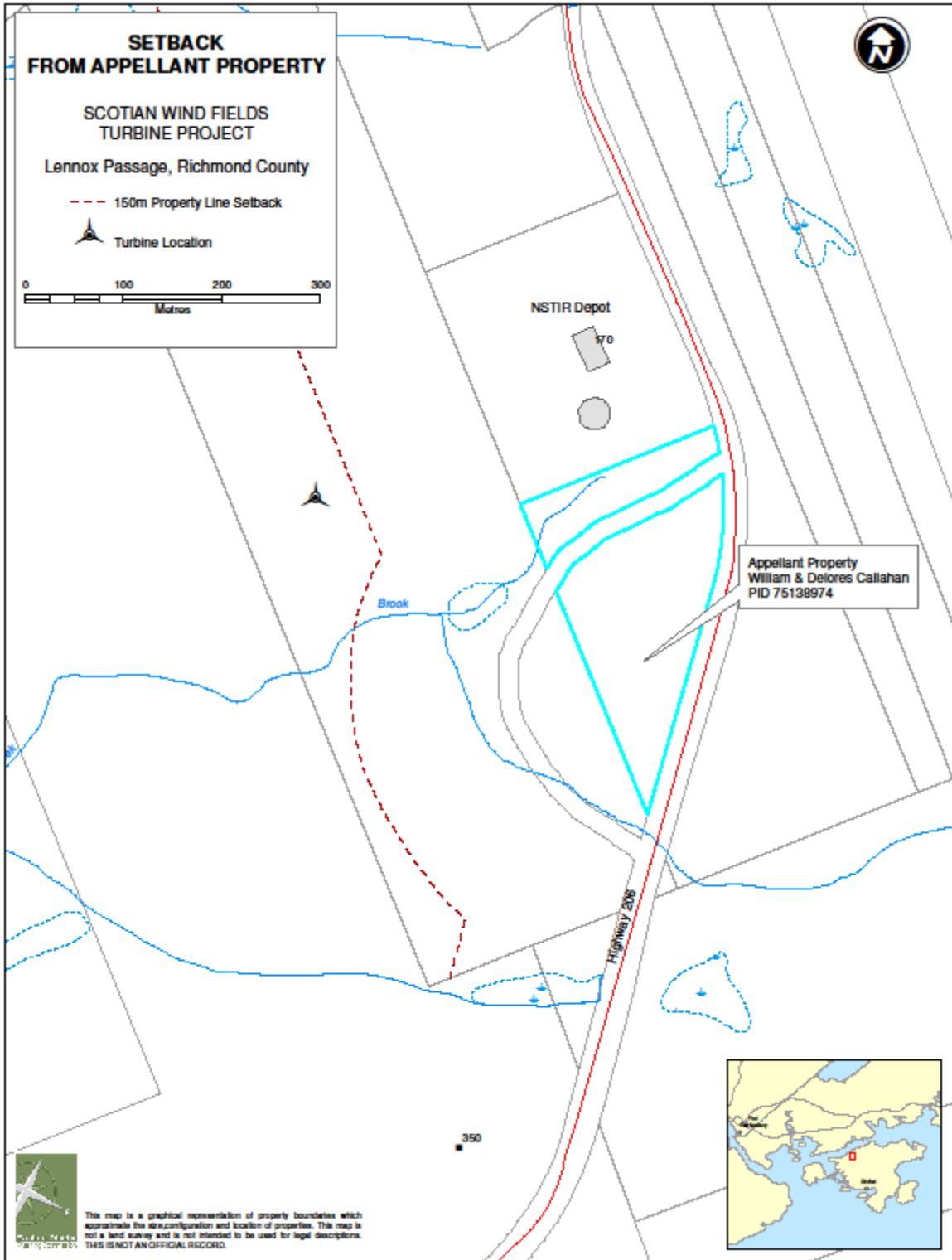




Map 3: Variance Notification



Map 4: Setback from Appellant Property





*Appendix 'A': Summary of Evaluation Criteria*

<b>POLICY R-9</b>	
In considering a proposal to rezone to the Wind Development Zone, it shall be the policy of Council to have regard for the following:	
<b>a)</b> the adequacy of the area of land being rezoned in relation to the number of turbines being proposed;	Complies (See Staff Report)
<b>b)</b> the potential for electromagnetic interference on radio, telecommunications or radar systems;	Complies (See Staff Report)
<b>c)</b> the proposal meets the setback and other requirements in the Land Use By-law;	Complies with variances (See Staff Report)
<b>d)</b> the proposal meets the implementation criteria listed in Policy I-6.	See Below
<b>POLICY I-6</b>	
In considering amendments to the Land Use By-law, in addition to all other criteria as set out in various policies of this Strategy, it shall be the policy of Council to have consideration of the following:	
<b>a)</b> That the proposal is in conformance with the intents of this Strategy and with the requirements of all other Municipal By-laws and regulations;	Complies (See Staff Report)
<b>b)</b> That the proposal is not premature or inappropriate by reason of the following:	
<b>i)</b> the financial capability of the Municipality to absorb any costs relating to the proposal;	Complies (See Staff Report)
<b>ii)</b> the intersection of any access road(s) with any public road and meeting the design and construction specifications of the authority having jurisdiction over public roads;	Complies (based on NSTIR comments – January 2, 2013)
<b>iii)</b> the potential for the contamination of abutting watercourses or private wells or the creation of erosion or sedimentation as a result of the development as determined by a qualified person from the appropriate government department;	Complies (See Staff Report)
<b>iv)</b> the potential impact on protected wetlands or other sensitive habitat and on endangered species in the area of the proposed site.	Complies (See Staff Report)