

**Stantec**

**PLATEAU WIND PROJECT**

**ENVIRONMENTAL SCREENING REPORT / ENVIRONMENTAL IMPACT STATEMENT**

## **Appendix H**

# **MOE Environmental Features Screening Checklist**

The screening criteria below are applied to every project being reviewed under the Ministry of the Environment's Environmental Screening Process as outlined in Ontario Regulation 116/01. For the purpose of completing the checklist, mitigation or impact management measures are not considered – these are applied during the subsequent step of determining a project's net effects. Responses to each question in the checklist are based upon the best available information at the time of writing.

**Table 1: MOE Environmental Features Screening Checklist (Ontario Regulation 116/01)**

Criterion: Will the project...		Yes	No	Additional / Supporting Information
<b>1. Surface and Ground Water</b>				
1.1	have negative effects on surface water quality, quantities, or flow?	✓		<ul style="list-style-type: none"> <li>limited works (e.g. stringing overhead power lines, access roads) are proposed within 30 metres of a watercourse</li> <li>the proposed development does not involve the storage or consumption of surface water</li> <li>the proposed development will not require significant alteration of surface runoff patterns</li> <li>surface water quality could be affected by sedimentation during construction of access roads and laying of underground power lines</li> </ul>
1.2	have negative effects on groundwater quality, quantity, or movement?	✓		<ul style="list-style-type: none"> <li>it is possible that some dewatering activities may be required when installing the tower foundations/footings</li> <li>withdrawal quantities should be below 50,000 l/d, however, if quantities withdrawn exceed this threshold, AIM will obtain a Permit to Take Water from the MOE</li> <li>the Project should not negatively affect groundwater quality or quantity</li> </ul>
1.3	cause significant sedimentation, soil erosion, or shoreline or riverbank erosion on or off-site?	✓		<ul style="list-style-type: none"> <li>limited shoreline works will be undertaken as part of the Project (see criterion 1.1)</li> <li>Project construction will require excavation and soil storage, the sites are of limited topographic relief and hence erosion of excavated or stored soil materials is not anticipated</li> <li>no significant sedimentation, soil erosion, or shoreline or riverbank erosion is anticipated</li> </ul>
1.4	cause potential negative effects on surface or ground water from accidental spills or releases to the environment?	✓		<ul style="list-style-type: none"> <li>undesirable materials on-site are limited to fuel, lubricating oils, and other fluids associated with turbine construction, maintenance and operation and could be spilled.</li> <li>large quantities of these materials are not contained within the turbine or on-site and do not represent a significant potential negative effect on the surface or groundwater in the event of accidental spills</li> <li>standard containment facilities and emergency response materials will be maintained on-site as required</li> </ul>
<b>2. Land-Use</b>				
2.1	have negative effects on residential, commercial, or institutional land-uses within 500 metres of the site?	✓		<ul style="list-style-type: none"> <li>lands for the access roads, electrical lines and turbines will be required for the lease period</li> <li>during the lease period these lands will be removed from their present use</li> </ul>

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Criterion: Will the project...	Yes	No	Additional / Supporting Information
2.2 be inconsistent with the Provincial Policy Statement ("PPS"), provincial land-use, or resource management plans?		✓	<ul style="list-style-type: none"> <li>although not directly applicable to the ESP, the Project will be planned in a manner that is consistent with the relevant policies of the PPS.</li> <li>the 2005 PPS contains policies that support the establishment of wind plants in rural and agricultural areas</li> <li>no effects on provincial land-use or resource management plans are anticipated</li> </ul>
2.3 be inconsistent with municipal land-use policies, plans, and zoning by-laws?		✓	<ul style="list-style-type: none"> <li>the Project will conform with the intent of the Grey County Official Plan, Melancthon Township Official Plan and the Municipality of Grey Highlands Official Plan (Amendment No. 10) for wind power development and is compatible with the area's surrounding rural and agricultural land-uses</li> <li>Project will be consistent with municipal land-use and zoning by-law requirements</li> <li>Zoning by-law amendments will be sought in all instances where required</li> <li>hazard lands may be used as part of the project's development</li> </ul>
2.4 use hazard lands or unstable lands subject to erosion?	✓		<ul style="list-style-type: none"> <li>there are open/closed landfills within the Study Area; therefore, there is the potential for negative impacts associated with contaminated lands</li> </ul>
2.5 have potential negative effects related to the remediation of contaminated land?	✓		
<b>3. Air and Noise</b>			
3.1 have negative effects on air quality due to emissions of oxides of nitrogen ("NO <sub>x</sub> "), sulphur dioxide ("SO <sub>2</sub> "), total suspended particulates ("TSP"), or other pollutants?	✓		<ul style="list-style-type: none"> <li>reciprocating engine equipment (e.g., excavators and haulage trucks) will be used during the construction phase of the Project</li> <li>operation of the wind farm will not result in negative effects on air quality since no emissions of NO<sub>x</sub>, SO<sub>2</sub>, TSP, or particulate matter are generated by the wind turbines</li> <li>emissions of carbon dioxide will be generated by construction equipment</li> </ul>
3.2 cause negative effects from the emission of greenhouse gases (carbon dioxide and methane)?	✓		
3.3 cause negative effects from the emission of dust or odour?	✓		<ul style="list-style-type: none"> <li>during construction dust will be generated – these emissions will be short in duration and limited to the lands surrounding the work areas.</li> </ul>
3.4 cause negative effects from the emission of noise?	✓		<ul style="list-style-type: none"> <li>mechanical and aerodynamic noise will be emitted from the wind turbines</li> <li>a detailed environmental noise impact assessment will be undertaken as per the MOE's document <i>Interpretation for Applying MOE NPC Technical Publications to Wind Turbine Generators</i> and according to the proposed MOE clarifications to this document as proposed in June 2008.</li> </ul>
<b>4. Natural Environment</b>			
4.1 cause negative effects on rare, threatened, or endangered ("VTE") species of flora or fauna or their habitat?	✓		<ul style="list-style-type: none"> <li>the Natural Heritage Information Centre has identified historical sitings of VTE species within the Study Area</li> <li>area habitats may support such species and disruption/alteration of the habitat could cause negative effects</li> </ul>
4.2 cause negative effects on protected natural areas such as areas of natural and scientific interest ("ANSI"), environmentally sensitive areas ("ESA") or other significant natural areas?	✓		<ul style="list-style-type: none"> <li>ANSI's and wetlands are within the study area</li> <li>No construction is proposed within these areas</li> </ul>

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Criterion: Will the project...	Yes	No	Additional / Supporting Information
4.3 cause negative effects on wetlands?	✓		<ul style="list-style-type: none"> <li>there are provincially and non-provincially significant wetlands identified within the study area</li> <li>no construction is proposed within provincially or non-provincially significant wetlands</li> </ul>
4.4 have negative effects on wildlife habitat, populations, corridors, or movement?	✓		<ul style="list-style-type: none"> <li>the installation of new electrical generation and transmission infrastructure within vegetated areas may potentially affect wildlife habitat</li> <li>following good planning practices will result in limited clearing associated with the Project</li> <li>the bulk of the project is located on rural/agricultural lands</li> </ul>
4.5 have negative effects on fish or their habitat, spawning, movement, or environmental conditions (e.g., water temperature, turbidity)?	✓		<ul style="list-style-type: none"> <li>limited in-water works are proposed to cross watercourses</li> <li>limited shoreline works will be undertaken as part of the Project (see criterion 1.3)</li> <li>mitigation measures developed in consultation with the DFO, MNR, and CAs will be utilized</li> </ul>
4.6 have negative effects on migratory birds, including effects on their habitat or staging areas?	✓		<ul style="list-style-type: none"> <li>there is potential to affect migratory birds due to collision with the turbine tower and/or blades (see also criterion 4.4)</li> </ul>
4.7 have negative effects on locally important or valued ecosystems or vegetation?	✓	✓	<ul style="list-style-type: none"> <li>turbine construction sites are not located within forested or naturally vegetated areas – they will be located on lands previously cleared for rural and agricultural land-uses and therefore there should be no negative effect on valued ecosystems or vegetation</li> </ul>
<b>5. Resources</b>			
5.1 result in inefficient (below 40 percent) use of a non-renewable resource?		✓	<ul style="list-style-type: none"> <li>the electricity created by the Project is generated from wind – a renewable resource</li> </ul>
5.2 have negative effects on the use of Canada Land Inventory Class 1-3 (i.e., prime agricultural lands), specialty crops, or locally significant agricultural lands?	✓		<ul style="list-style-type: none"> <li>the towers, access roads, and ancillary facilities will occupy areas of prime agricultural land</li> <li>the operation of the wind turbines will not negatively affect the use of adjoining prime agricultural lands, field crop production, or livestock pasturing, all of which can occur in close proximity to the wind turbines</li> <li>the 2005 PPS contains policies that support the establishment of wind plants in rural and agricultural areas</li> </ul>
5.3 have negative effects on existing agricultural production?	✓		<ul style="list-style-type: none"> <li>agricultural production on the lands occupied by the wind turbines, access roads, and ancillary facilities will be discontinued over the Project life</li> </ul>
5.4 have negative effects on the availability of mineral, aggregate, or petroleum resources?	✓		<ul style="list-style-type: none"> <li>there are no known petroleum resources within the study area</li> <li>there are mineral resources extractions operations within the study area</li> </ul>
5.5 have negative effects on the availability of forest resources?		✓	<ul style="list-style-type: none"> <li>construction of the wind turbines, access roads, and ancillary facilities will not affect any merchantable forest resources</li> </ul>
5.6 have negative effects on game and fishery resources, including negative effects caused by creating access to previously inaccessible areas?	✓		<ul style="list-style-type: none"> <li>the area is largely cleared for agriculture and there are no areas that could be deemed inaccessible</li> <li>there are fisheries resources that may be affected by the construction of the Project (e.g., possibility of limited drainage ditch crossings)</li> </ul>

**6. Socio-Economic**

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Criterion: Will the project...	Yes	No	Additional / Supporting Information
6.1 have negative effects on neighbourhood or community character?	✓		<ul style="list-style-type: none"> <li>the proposed Project will introduce up to 18 industrial scale turbines into the area in addition to existing turbines associated with other wind projects</li> <li>the Project will change the present rural / agricultural/recreational community character of the area</li> </ul>
6.2 have negative effects on local businesses, institutions, or public facilities?		✓	<ul style="list-style-type: none"> <li>area businesses will benefit financially from construction activities and fulfilling operational supplies</li> <li>no significant negative effects to local businesses, institutions, and public facilities are expected as a result of the Project</li> </ul>
6.3 have negative effects on recreation, cottaging, or tourism?		✓	<ul style="list-style-type: none"> <li>the Project is sited on private rural / agricultural land that is outside the Niagara Escarpment Plan Area</li> <li>although some residents may be seasonal, there are no known cottaging areas within the study area</li> <li>wind farms could act as a catalyst to increase the benefits of tourism for the local area by drawing tourists into the area to see the turbines where they will require meals, gasoline, and/or other services</li> <li>no significant negative effects to recreation, cottaging or tourism are expected as a result of the Project</li> </ul>
6.4 have negative effects related to increases in the demands on community services and infrastructure?	✓		<ul style="list-style-type: none"> <li>operating personnel will be required to maintain the wind farm, therefore there will be a nominal demand on/for public services (e.g., housing, hospitals)</li> <li>the Project may require limited community services or infrastructure (e.g., emergency response)</li> </ul>
6.5 have negative effects on the economic base of a municipality or community?		✓	<ul style="list-style-type: none"> <li>through the Project, AIM will contribute new resources to the economic base of the community (e.g., through annual taxation) while creating minimal demand for municipal services</li> <li>to the extent possible, local goods and services will be procured during construction, operation and maintenance, and decommissioning of the Project where these are available in sufficient quantity and quality and at competitive prices – creating a positive economic effect</li> </ul>
6.6 have negative effects on local employment and labour supply?		✓	<ul style="list-style-type: none"> <li>to the extent possible local persons will be employed during the construction phase and to provide operational supplies – creating a positive effect for local labour and employment</li> </ul>
6.7 have negative effects related to traffic?	✓		<ul style="list-style-type: none"> <li>the transport of equipment and supplies during the construction phase will result in additional (temporary) road use and traffic to the Project sites carrying excess loads and large tower components</li> <li>numerous trucks trips will be required for equipment transportation during Project construction</li> <li>during operation supplies will be intermittently delivered to the Project as required</li> </ul>

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Criterion: Will the project...	Yes	No	Additional / Supporting Information
6.8 cause public concerns related to public health and safety?	✓		<ul style="list-style-type: none"> <li>• potential exists for accidents and malfunctions and thus there may be general public safety concerns with the new infrastructure</li> <li>• Health Canada's website notes that, based upon the available evidence, electric and magnetic fields are not associated with any known human health risks</li> <li>• the Project will not contribute green house gases or other atmospheric pollutants and thus no public health concerns have been identified related to air emissions</li> </ul>
<b>7. Heritage and Culture</b>			
7.1 have negative effects on heritage buildings, structures, or sites, archaeological resources, or cultural heritage landscapes?	✓		<ul style="list-style-type: none"> <li>• a Stage I Archaeological Assessment has been undertaken for the study area to identify any areas of moderate to high potential for archaeological resources</li> </ul>
7.2 have negative effects on scenic or aesthetically pleasing landscapes or views?	✓		<ul style="list-style-type: none"> <li>• the Project will occur at least 4-5 km from the Niagara Escarpment Plan Area</li> <li>• with a hub height of 80 metres the wind turbines will be seen from some distance and thus alter local/area landscapes and views</li> </ul>
<b>8. Aboriginal</b>			
8.1 cause negative effects on First Nations or other Aboriginal communities?	✓		<ul style="list-style-type: none"> <li>• there are three known First Nations communities within the general area (Six Nations of the Grand River, Saugeen First Nation, and Chippewas of Nawash Unceded First Nation).</li> </ul>
<b>9. Other</b>			
9.1 result in the creation of waste materials requiring disposal?	✓		<ul style="list-style-type: none"> <li>• construction wastes, such as excavated soils, equipment packaging and wrappings, and scraps, will be produced</li> <li>• the Project will generate waste associated with turbine construction, maintenance and operation, and decommissioning</li> </ul>
9.2 cause any other negative environmental effects not covered by the criteria outlined above?	✓		<ul style="list-style-type: none"> <li>• potential accidents and malfunctions for consideration may include seismicity, third party damage, aeronautical obstruction, and effects of the environment on the project (e.g., tornadoes and hail)</li> </ul>