

**Table 6: ENVIRONMENTAL EFFECTS OF PROPOSED WIND TURBINE**

Criteria	Environmental Effects	Mitigation	Cumulative Effects	Net Effect
<b>BIOPHYSICAL</b>				
<b>AQUATIC ENVIRONMENT AND WATER QUALITY</b>				
1. Potential for effects on water quality during construction of the Wind Turbine.	<ul style="list-style-type: none"> <li>Potential for increased sedimentation during construction</li> </ul>	<ul style="list-style-type: none"> <li>Do not place excavated soils near lake</li> </ul>	<ul style="list-style-type: none"> <li>None</li> </ul>	<ul style="list-style-type: none"> <li>No significant environmental effects are expected due to minimal potential for materials to enter water</li> </ul>
2. Potential for effects on aquatic habitat and fisheries from construction activities.	<ul style="list-style-type: none"> <li>No environmental effects expected</li> </ul>	<ul style="list-style-type: none"> <li>No cumulative effects are expected from the identified future projects</li> </ul>	<ul style="list-style-type: none"> <li>None</li> </ul>	<ul style="list-style-type: none"> <li>No significant environmental effects are expected since there will be no materials from wind turbines that can enter the water</li> </ul>
<b>NOISE</b>				
1. Potential for noise disturbances during construction of wind turbine.	<ul style="list-style-type: none"> <li>Minor, short term (e.g. less than 2 weeks) noise events from construction activity</li> </ul>	<ul style="list-style-type: none"> <li>No cumulative effects are expected from the identified future projects</li> </ul>	<ul style="list-style-type: none"> <li>None</li> </ul>	<ul style="list-style-type: none"> <li>No significant environmental effects are expected due to magnitude and duration of noise effects associated with construction</li> </ul>
2. Potential for noise disturbances during operation of wind turbine.	<ul style="list-style-type: none"> <li>Background noise levels will result in wind turbines being inaudible at nearby residences.</li> </ul>	<ul style="list-style-type: none"> <li>No cumulative effects are expected from the identified future projects</li> </ul>	<ul style="list-style-type: none"> <li>None</li> </ul>	<ul style="list-style-type: none"> <li>No significant environmental effects are expected due to magnitude of effects associated with the operation of the wind turbine.</li> </ul>
<b>SOILS</b>				
1. Potential for encountering contaminated soils.	<ul style="list-style-type: none"> <li>During excavation contaminated soils might be encountered</li> </ul>	<ul style="list-style-type: none"> <li>Once precise location of wind turbine has been defined, undertake soil sample exercise to determine quality of soils</li> <li>Dispose of soils in accordance with MOE guidelines</li> </ul>	<ul style="list-style-type: none"> <li>None</li> </ul>	<ul style="list-style-type: none"> <li>No significant environmental effects are expected since soils will be managed in a manner consistent with legislative requirements</li> </ul>

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<b>TERRESTRIAL VEGETATION</b>				
1. Potential for effects on the terrestrial vegetation during construction.	<ul style="list-style-type: none"> <li>The construction of the wind turbine will result in the loss of small amount of low quality vegetation</li> </ul>	<ul style="list-style-type: none"> <li>Minimal cumulative effects are expected from the identified future projects due to the quality of the terrestrial habitat</li> </ul>	<ul style="list-style-type: none"> <li>Limit movement of construction machinery to within boundaries of construction areas and rights-of-way.</li> </ul>	<ul style="list-style-type: none"> <li>No significant environmental effects are expected due to the magnitude of effects</li> </ul>
<b>TERRESTRIAL WILDLIFE (Including Birds)</b>				
1. Potential for effects on wildlife during construction.	<ul style="list-style-type: none"> <li>The construction of the wind turbine will result in the temporary loss of some low quality vegetation which serves as feeding habitat for some birds</li> </ul>	<ul style="list-style-type: none"> <li>Minimal cumulative effects are expected from the identified future projects due to the quality of the terrestrial habitat</li> </ul>	<ul style="list-style-type: none"> <li>Limit movement of construction machinery to within boundaries of construction areas and rights-of-way</li> </ul>	<ul style="list-style-type: none"> <li>No significant environmental effects are expected due to the short duration of the construction and the absence of significant habitat in the areas that will be disturbed by the construction.</li> </ul>
2. Potential for effects on terrestrial wildlife during operation.	<ul style="list-style-type: none"> <li>Turbines are not located close enough to nesting colonies to have any effect on breeding birds. Disturbance effects of operating turbines are largely limited to 250 m, and many birds show no disturbance effects. Migrating birds can fly closely past turbines in large numbers without mortality. Bird collisions with turbines are rare events, even in shoreline and harbour situations.</li> </ul>	<ul style="list-style-type: none"> <li>No cumulative effects are expected from the identified future projects</li> </ul>	<ul style="list-style-type: none"> <li>None</li> </ul>	<ul style="list-style-type: none"> <li>No significant environmental effects are expected due to the magnitude of effects based on experience with other turbines.</li> </ul>

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<b>SOCIO-ECONOMIC</b>				
<b>CULTURAL RESOURCES</b>				
<p>1. Potential for impacts for archaeological resources from the construction of the wind turbine.</p>	<ul style="list-style-type: none"> <li>• The proposed wind turbine would be sited on lands already disturbed or constructed of fill therefore it is expected that there will be no environmental effects on archaeological resources</li> </ul>	<ul style="list-style-type: none"> <li>• No cumulative effects are expected from the identified future projects</li> </ul>	<ul style="list-style-type: none"> <li>• In the unlikely event that archaeological resources are encountered during construction, the Ministry of Citizenship, Culture and Recreation will be immediately notified</li> </ul>	<ul style="list-style-type: none"> <li>• No significant environmental effects are expected due to the unlikely presence of archaeological resources.</li> </ul>
<p>2. Potential for impacts to built heritage resources from the construction of the wind turbine.</p>	<ul style="list-style-type: none"> <li>• There are no built heritage resources on the lands immediately surrounding the Ashbridges Bay or TEDCO sites that would be affected by the presence of a wind turbine.</li> <li>• At the R.L. Clark Site, the wind turbine will be in close proximity to the filtration plant and will be separated from the cultural area immediately to the east by parking lots, boat storage and Kipling Avenue.</li> </ul>	<ul style="list-style-type: none"> <li>• No cumulative effects are expected from the identified future projects</li> </ul>	<ul style="list-style-type: none"> <li>• None</li> </ul>	<ul style="list-style-type: none"> <li>• No significant environmental effects are expected due to the settings proposed for the wind turbine</li> </ul>
<b>PLANNED LAND USE</b>				
<p>1. Potential for effect on planned land use from the operation of the wind turbine.</p>	<ul style="list-style-type: none"> <li>• The development of the wind turbines at any of the sites can be done in a manner so that it does not preclude any planned land uses.</li> </ul>	<ul style="list-style-type: none"> <li>• No cumulative effects are expected from the identified future projects</li> </ul>	<ul style="list-style-type: none"> <li>• None</li> </ul>	<ul style="list-style-type: none"> <li>• No significant environmental effects are expected</li> </ul>

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<b>RECREATION</b>				
1. Potential for effect on recreational activities from the construction of the wind turbine.	<ul style="list-style-type: none"> <li>• During construction there will be some minor disruption to passive use of a portion of the R.L.Clark lands. The construction period is expected to last only 2 weeks and the effects will be localized such that effects will be minor.</li> <li>• During construction there will be some minor disruption to lands immediately north of Tommy Thompson Park and at the ABSTP. The construction period is expected to last only 2-3 weeks and the effects will be localized such that effects will be minor.</li> </ul>	<ul style="list-style-type: none"> <li>• No cumulative effects are expected from the identified future projects</li> </ul>	<ul style="list-style-type: none"> <li>• To the extent possible, store excavated materials away from recreation areas.</li> </ul>	<ul style="list-style-type: none"> <li>• No significant environmental effects are expected</li> </ul>
2. Potential for effect on recreational activities from the operation of the wind turbine.	<ul style="list-style-type: none"> <li>• The operation of a wind turbine is not expected to have negative impacts on recreation due to minimal noise disturbance and the ability for the turbine and recreation activities to coexist.</li> <li>• The wind turbine may create a destination thus providing a recreational opportunity.</li> </ul>	<ul style="list-style-type: none"> <li>• No cumulative effects are expected from the identified future projects</li> </ul>	<ul style="list-style-type: none"> <li>• None</li> </ul>	<ul style="list-style-type: none"> <li>• No significant environmental effects are expected</li> </ul>
<b>SAFETY</b>				
1. Potential for safety issues associated with construction	<ul style="list-style-type: none"> <li>• The construction of the wind turbine poses similar safety issues as the construction activities found elsewhere in urban areas. The construction period is, however, relatively short.</li> </ul>	<ul style="list-style-type: none"> <li>• No cumulative effects are expected from the identified future projects</li> </ul>	<ul style="list-style-type: none"> <li>• Site access will be limited during the installation of the wind turbine.</li> </ul>	<ul style="list-style-type: none"> <li>• No significant environmental effects are expected</li> </ul>

Criteria	Environmental Effects	Mitigation	Cumulative Effects	Net Effect
2. Potential for safety issues associated with operation	<ul style="list-style-type: none"> <li>There is potential for ice to accumulate on blades.</li> </ul>	<ul style="list-style-type: none"> <li>No cumulative effects are expected from the identified future projects</li> </ul>	<ul style="list-style-type: none"> <li>The turbine control system will perform a safe shutdown when senses icing conditions.</li> <li>Turbine will remain shutdown until operator can inspect blades. When restart is safe, signs will be posted to keep public back until confirmed no ice shedding.</li> </ul>	<ul style="list-style-type: none"> <li>No significant environmental effects are expected due to available mitigation.</li> </ul>
<b>VISUAL LANDSCAPE</b>				
1. Potential for visual effects from the construction of the wind turbine.	<ul style="list-style-type: none"> <li>As with all construction projects, there is a short term adverse effect on aesthetics during construction, however, the effects are of short duration and cover a small area.</li> </ul>	<ul style="list-style-type: none"> <li>No cumulative effects are expected from the identified future projects</li> </ul>	<ul style="list-style-type: none"> <li>None</li> </ul>	<ul style="list-style-type: none"> <li>No significant environmental effects are expected</li> </ul>
2. Potential for visual effects from the operation of the wind turbine.	<ul style="list-style-type: none"> <li>There is the potential for a change in views, however, the wind turbines are considered to be compatible with the surrounding land uses at the R.L. Clark Filtration Plant, ABSTP and the TEDCO lands.</li> </ul>	<ul style="list-style-type: none"> <li>No cumulative effects are expected from the identified future projects</li> </ul>	<ul style="list-style-type: none"> <li>None</li> </ul>	<ul style="list-style-type: none"> <li>No significant environmental effects are expected</li> </ul>

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<b>SOCIAL</b>				
<p>1. Potential for social effects from construction activities.</p>	<ul style="list-style-type: none"> <li>• During construction there will be a minor increase in trucks in area as construction equipment and turbine are brought in. This may cause some minor nuisance effects.</li> <li>• As discussed above there will be a short-term, temporary increase in noise during construction that may have a short-term negative effect on quality of life for residents in vicinity of the R.L. Clark Filtration plant, particularly those that use the plant site as a park.</li> <li>• Due to the industrial setting of the ABSTP site, no social effects are expected.</li> <li>• During construction, the users of the community gardens may experience disruption effects such as noise and dust. These effects, however, will be short in duration. Construction equipment and trucks are not expected to be a problem on Leslie Street due to its industrial setting.</li> </ul>	<ul style="list-style-type: none"> <li>• No cumulative effects are expected from the identified future projects</li> </ul>	<ul style="list-style-type: none"> <li>• To the extent practicable, the contractor should ensure operators are adhering to traffic laws and by-laws while operating in the vicinity of the construction site.</li> <li>• Construction should be completed as expediently as possible to minimize disruption in the community around the R.L. Clark Filtration plant</li> </ul>	<ul style="list-style-type: none"> <li>• No significant environmental effects are expected</li> </ul>
<p>2. Potential for social effects from the operation of the wind turbine.</p>	<ul style="list-style-type: none"> <li>• As noted above the ambient noise levels will be the dominant noise source in the community and as a result should not result in adverse social effects.</li> <li>• The operation of the wind turbine may result in positive societal effects as the public is enlightened on the possibilities for green energy within our communities.</li> <li>• While visual/aesthetic effects are subjective, literature suggests impacts not a significant concern once turbine is in place.</li> </ul>	<ul style="list-style-type: none"> <li>• No cumulative effects are expected from the identified future projects</li> </ul>	<ul style="list-style-type: none"> <li>• None</li> </ul>	<ul style="list-style-type: none"> <li>• No significant environmental effects are expected</li> </ul>

