5. PROPERTY LINE ASSESSMENT

The following table lists the turbines that are less than hub height (80 metres for the GE 1.6 MW turbines and 85 metres for the GE 2.75 MW turbines) from adjacent non-participating lot lines. The distance between the turbine and the non-participating lot line is also given along with a description of the adjacent land use under assessment. Distances from the non-participating lot lines for each turbine must conform to blade length plus 10 metres; or 60 metres for the GE 1.6 MW turbines and 61.5 metres for the GE 2.75 MW turbines.

5.1 Summary of Adjacent Land Uses

There are no structures, including barns, stables or any other infrastructure, located within the blade length plus 10 metres distance requirement to any of the turbines described above. Adjacent land uses include small woodlots and agricultural land that is actively farmed or has been left fallow. Businesses and properties adjacent to the turbines include farming operations with annual field crops and vegetative cover crops.

5.2 Potential Adverse Impacts

Adverse impacts could include crop and vegetation damage, soil compaction, and damage to trees (turbine sites 1, 8, 11 and 23) in the unlikely event of a turbine collapse or ice throw. These are discussed in the Design and Operation Report. This could result in impacts to the farm businesses.

5.3 Preventative Measures

The turbines are to be designed by professional engineers and constructed following the methods outlined in Construction Plan Report. They will be serviced regularly and monitored by operations staff. Each turbine will contain shut down mechanisms in the case of severe weather events. In the unlikely event of turbine collapse the project owners would work with landowners to negotiate compensation terms. The REA submission package details best practices for soil compaction and vegetation loss/damage. Additional mitigation measures for woodlots, including vegetation damage and disturbance to related wildlife habitat, are outlined in the REA reports. With the above preventative measures and those outlined through the REA reports the turbine locations are justified.

Table 3 summarizes the property line assessment.

Table 3: Property Line Assessment Summary

Turbine	Turbine Type	Distance from Turbine to Property Line	Minimum Setback	Adjacent Land Use and Structures	Potential Adverse Impacts	Preventative Measures
1	2.75 MW	61.5 m	61.5 m	Deciduous woodlot No structures identified	Adverse impacts could include damage to trees in the unlikely event of a turbine collapse or ice throw.	The turbines are to be designed by professional engineers and constructed following the methods outlined in *Construction Plan Report*. They will be serviced regularly and monitored by operations staff. Each turbine will contain shut down mechanisms in the case of severe weather events. In the unlikely event of turbine collapse the project owners would work with landowners to negotiate compensation terms. The REA submission package details best practices for soil compaction and vegetation loss/damage. Additional mitigation measures for woodlots, including vegetation damage and disturbance to related wildlife habitat, are outlined in the REA reports.
2	2.75 MW	62.0 m	61.5 m	Agricultural Land Field Crops No structures identified	Adverse impacts could include crop and vegetation damage, and soil compaction in the unlikely event of a turbine collapse or ice throw.	The turbines are to be designed by professional engineers and constructed following the methods outlined in *Construction Plan Report*. They will be serviced regularly and monitored by operations staff. Each turbine will contain shut down mechanisms in the case of severe weather events. In the unlikely event of turbine collapse the project owners would work with landowners to negotiate compensation terms. The REA submission package details best practices for soil compaction and vegetation loss/damage.
5	2.75 MW	62.7 m	61.5 m	Agricultural Land Field Crops No structures identified	Adverse impacts could include crop and vegetation damage, and soil compaction in the unlikely event of a turbine collapse or ice throw.	The turbines are to be designed by professional engineers and constructed following the methods outlined in *Construction Plan Report*. They will be serviced regularly and monitored by operations staff. Each turbine will contain shut down mechanisms in the case of severe weather events. In the unlikely event of turbine collapse the project owners would work with landowners to negotiate compensation terms. The REA submission package details best practices for soil compaction and vegetation loss/damage.
6	2.75 MW	62.0 m	61.5 m	Agricultural Land Field Crop Fallow land No structures identified	Adverse impacts could include crop and vegetation damage, and soil compaction in the unlikely event of a turbine collapse or ice throw.	The turbines are to be designed by professional engineers and constructed following the methods outlined in *Construction Plan Report*. They will be serviced regularly and monitored by operations staff. Each turbine will contain shut down mechanisms in the case of severe weather events. In the unlikely event of turbine collapse the project owners would work with landowners to negotiate compensation terms. The REA submission package details best practices for soil compaction and vegetation loss/damage.
7	1.6 MW	61.5 m	60.0 m	Agricultural Land Field Crops No structures identified	Adverse impacts could include crop and vegetation damage, and soil compaction in the unlikely event of a turbine collapse or ice throw.	The turbines are to be designed by professional engineers and constructed following the methods outlined in *Construction Plan Report*. They will be serviced regularly and monitored by operations staff. Each turbine will contain shut down mechanisms in the case of severe weather events. In the unlikely event of turbine collapse the project owners would work with landowners to negotiate compensation terms. The REA submission package details best practices for soil compaction and vegetation loss/damage.
8	1.6 MW	61.6 m to the east / 64.1 m to the south	60.0 m	Agricultural Land Field Crops Small Woodlot No structures identified	Adverse impacts could include crop and vegetation damage, soil compaction, and damage to trees in the unlikely event of a turbine collapse or ice throw.	The turbines are to be designed by professional engineers and constructed following the methods outlined in *Construction Plan Report*. They will be serviced regularly and monitored by operations staff. Each turbine will contain shut down mechanisms in the case of severe weather events. In the unlikely event of turbine collapse the project owners would work with landowners to negotiate compensation terms. The REA submission package details best practices for soil compaction and vegetation loss/damage. Additional mitigation measures for woodlots, including vegetation damage and disturbance to related wildlife habitat, are outlined in the REA reports.
10	1.6 MW	62.9 m	60.0 m	Agricultural Land Field Crops No structures identified	Adverse impacts could include crop and vegetation damage, and soil compaction in the unlikely event of a turbine collapse or ice throw.	The turbines are to be designed by professional engineers and constructed following the methods outlined in *Construction Plan Report*. They will be serviced regularly and monitored by operations staff. Each turbine will contain shut down mechanisms in the case of severe weather events. In the unlikely event of turbine collapse the project owners would work with landowners to negotiate compensation terms. The REA submission package details best practices for soil compaction and vegetation loss/damage.
11	2.75 MW	73.0 m	61.5 m	Woodlot Agricultural Land Field Crops No structures identified	Adverse impacts could include crop and vegetation damage, soil compaction, and damage to trees in the unlikely event of a turbine collapse or ice throw.	The turbines are to be designed by professional engineers and constructed following the methods outlined in *Construction Plan Report*. They will be serviced regularly and monitored by operations staff. Each turbine will contain shut down mechanisms in the case of severe weather events. In the unlikely event of turbine collapse the project owners would work with landowners to negotiate compensation terms. The REA submission package details best practices for soil compaction and vegetation loss/damage. Additional mitigation measures for woodlots, including vegetation damage and disturbance to related wildlife habitat, are outlined in the REA reports.
12	2.75 MW	69.3 m	61.5 m	Agricultural Land Field Crops No structures identified	Adverse impacts could include crop and vegetation damage, and soil compaction in the unlikely event of a turbine collapse or ice throw.	The turbines are to be designed by professional engineers and constructed following the methods outlined in *Construction Plan Report*. They will be serviced regularly and monitored by operations staff. Each turbine will contain shut down mechanisms in the case of severe weather events. In the unlikely event of turbine collapse the project owners would work with landowners to negotiate compensation terms. The REA submission package details best practices for soil compaction and vegetation loss/damage.
14	2.75 MW	61.5 m	61.5 m	Agricultural Land Field Crops No structures identified	Adverse impacts could include crop and vegetation damage, and soil compaction in the unlikely event of a turbine collapse or ice throw.	The turbines are to be designed by professional engineers and constructed following the methods outlined in *Construction Plan Report*. They will be serviced regularly and monitored by operations staff. Each turbine will contain shut down mechanisms in the case of severe weather events. In the unlikely event of turbine collapse the project owners would work with landowners to negotiate compensation terms. The REA submission package details best practices for soil compaction and vegetation loss/ damage.

Table 3: Property Line Assessment Summary

Turbine	Turbine Type	Distance from Turbine to Property Line	Minimum Setback	Adjacent Land Use and Structures	Potential Adverse Impacts	Preventative Measures
15	1.6 MW	60.0 m	60.0 m	Agricultural Land Field Crops No structures identified	Adverse impacts could include crop and vegetation damage, and soil compaction in the unlikely event of a turbine collapse or ice throw.	The turbines are to be designed by professional engineers and constructed following the methods outlined in *Construction Plan Report*. They will be serviced regularly and monitored by operations staff. Each turbine will contain shut down mechanisms in the case of severe weather events. In the unlikely event of turbine collapse the project owners would work with landowners to negotiate compensation terms. The REA submission package details best practices for soil compaction and vegetation loss/ damage.
16	1.6 MW	77.0 m	60.0 m	Agricultural Land Field Crops No structures identified	Adverse impacts could include crop and vegetation damage, and soil compaction in the unlikely event of a turbine collapse or ice throw.	The turbines are to be designed by professional engineers and constructed following the methods outlined in *Construction Plan Report*. They will be serviced regularly and monitored by operations staff. Each turbine will contain shut down mechanisms in the case of severe weather events. In the unlikely event of turbine collapse the project owners would work with landowners to negotiate compensation terms. The REA submission package details best practices for soil compaction and vegetation loss/ damage.
17	1.6 MW	65.1 m to the east/ 65.4 m to the south	60.0 m	Agricultural Land Field Crops No structures identified	Adverse impacts could include crop and vegetation damage, and soil compaction in the unlikely event of a turbine collapse or ice throw.	The turbines are to be designed by professional engineers and constructed following the methods outlined in *Construction Plan Report*. They will be serviced regularly and monitored by operations staff. Each turbine will contain shut down mechanisms in the case of severe weather events. In the unlikely event of turbine collapse the project owners would work with landowners to negotiate compensation terms. The REA submission package details best practices for soil compaction and vegetation loss/ damage.
19	1.6 MW	61.3 m	60.0m	Agricultural Land Field Crops No structures identified	Adverse impacts could include crop and vegetation damage, and soil compaction in the unlikely event of a turbine collapse or ice throw.	The turbines are to be designed by professional engineers and constructed following the methods outlined in *Construction Plan Report*. They will be serviced regularly and monitored by operations staff. Each turbine will contain shut down mechanisms in the case of severe weather events. In the unlikely event of turbine collapse the project owners would work with landowners to negotiate compensation terms. The REA submission package details best practices for soil compaction and vegetation loss/ damage.
21	2.75 MW	62.1 m	61.5 m	Agricultural Land Field Crops No structures identified	Adverse impacts could include crop and vegetation damage, and soil compaction in the unlikely event of a turbine collapse or ice throw.	The turbines are to be designed by professional engineers and constructed following the methods outlined in *Construction Plan Report*. They will be serviced regularly and monitored by operations staff. Each turbine will contain shut down mechanisms in the case of severe weather events. In the unlikely event of turbine collapse the project owners would work with landowners to negotiate compensation terms. The REA submission package details best practices for soil compaction and vegetation loss/ damage.
23	2.75 MW	76.2 m	61.5m	Woodlots on both sides Beyond the woodlots on either side is agricultural land No structures identified	Adverse impacts could include crop and vegetation damage, soil compaction, and damage to trees in the unlikely event of a turbine collapse or ice throw.	The turbines are to be designed by professional engineers and constructed following the methods outlined in *Construction Plan Report*. They will be serviced regularly and monitored by operations staff. Each turbine will contain shut down mechanisms in the case of severe weather events. In the unlikely event of turbine collapse the project owners would work with landowners to negotiate compensation terms. The REA submission package details best practices for soil compaction and vegetation loss/ damage. Additional mitigation measures for woodlots, including vegetation damage and disturbance to related wildlife habitat, are outlined in the REA reports.
24	1.6 MW	60.2 m	60.0m	Agricultural Land Field Crops No structures identified	Adverse impacts could include crop and vegetation damage, and soil compaction in the unlikely event of a turbine collapse or ice throw.	The turbines are to be designed by professional engineers and constructed following the methods outlined in *Construction Plan Report*. They will be serviced regularly and monitored by operations staff. Each turbine will contain shut down mechanisms in the case of severe weather events. In the unlikely event of turbine collapse the project owners would work with landowners to negotiate compensation terms. The REA submission package details best practices for soil compaction and vegetation loss/ damage.
36	2.75 MW	79.4 m to the south/ 84.2 m to the west	61.5m	Agricultural Land Field Crops No structures identified	Adverse impacts could include crop and vegetation damage, and soil compaction in the unlikely event of a turbine collapse or ice throw.	The turbines are to be designed by professional engineers and constructed following the methods outlined in *Construction Plan Report*. They will be serviced regularly and monitored by operations staff. Each turbine will contain shut down mechanisms in the case of severe weather events. In the unlikely event of turbine collapse the project owners would work with landowners to negotiate compensation terms. The REA submission package details best practices for soil compaction and vegetation loss/ damage.