Appendix B1: Summary of Potential Environmental Effects and the Environmental Effects Monitoring Plan during Construction

Environmental Feature	Potential Adverse Effect	Performance Objective	Mitigation Strategy	Net Effects	Monitoring Plan and Contingency Measures
Heritage and Archaeological Resources					
Protected Properties and Cultural Heritage Resources	• None.	• N/A	• N/A	• None	• N/A
Archaeological Resources	• Potential to discover artifacts during the construction phase.	• Minimize potential for disturbance.	• The buildable area will be staked and flagged so that no construction occurs outside the assessed area. • Should archaeological materials be encountered during excavation and construction activities, all construction/excavation activities in the vicinity of the find would be stopped immediately. • The Site Engineer and Construction Manager would be advised by the Construction Contractor of the find. • A licensed archaeologist would be called to investigate the find. • If the find is significant and warrants further investigation, MTCS must be notified and activities in that area cannot resume until the site is cleared by MTCS. • Appropriate local Aboriginal communities would be contacted if the find is significant. • If human remains are found, MTCS and Cemeteries Branch must be notified immediately, and work must stop until the area is cleared by the Cemeteries Registrar. • If human remains are encountered or suspected of being encountered, all work in the vicinity will stop immediately, the OPP or local police will be notified to conduct an investigation and MTCS, local Aboriginal communities and the Registrar of Cemeteries will also be notified.	• None	• N/A
Natural Heritage Resources					
Significant Natural Heritage Features					
Provincial Parks and Conservation Reserves	• None.	• N/A	• N/A	• None.	• N/A
Significant Wetlands	• No direct loss of wetland habitat or function. • Localized dust generation, soil erosion and sedimentation, root zone damage to edge trees (soil compaction), changes to wetland hydrology either by increasing or decreasing surficial runoff and disturbance to wetland wildlife. • During construction, there will be increased traffic and the potential for accidental spills.	• No spills. • Minimize disturbance to wetlands.	• Excavation of soils for the purpose of underground collector system installation will occur at the minimum distance of 5 m from the wetland boundary, as appropriate. For construction on private lands, no construction is proposed within 5 m of any significant wetland feature. Should any disturbance occur to vegetation within 5 m of a wetland due to construction, the disturbed area will be seeded with species native to the ecoregion to establish the 5 m buffer. • Proposed mitigation for each significant wetland feature can be found in the NHA/EIS, Section 5.4. • Where possible, and as appropriate, access roads will be constructed at or near existing grade to maintain surface flow contributions. • Prior to construction, the limits of vegetation clearing within the agricultural fields will be staked and flagged in the field. The Construction Contractor will ensure that no construction disturbance occurs beyond the staked limits. • Proper storage of fuel and chemicals will minimize the risk of spills and contamination of the surrounding environment.	• Minimal.	• Detailed mitigation measures for the Project are provided in the *NHA/EIS* and the *NHA/EIS Addendum*. • In terms of accidental spills or releases to the environment, standard containment facilities and emergency response materials would be maintained on-site as required. • Refuelling, equipment maintenance, and other potentially contaminating activities would occur in designated areas, and as appropriate, spills would be reported immediately to the MOE Spills Action Centre.

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			• Although the risk of a chemical or fuel spill are low, emergency spill plans will be established and implemented immediately if an accidental spill occurs. • The MOE will be contacted, as appropriate, in the event a spill occurs. • Mitigation measures for spills include: o All trucks or other road vehicles would be refueled and maintained off site, where practicable; o Refuelling and lubrication of other construction equipment would not be allowed within 30 m of a waterway, wetland, or drainage systems; o Regular inspections of hydraulic and fuel systems on machinery should be done, and leaks would be repaired immediately upon detection or the equipment removed from site; o Spill kits containing absorbent materials would be kept on hand; and o Implement best management practices and develop an emergency spill response plan. • Mitigation measures for waste include: o Recyclable materials should be stored separately for recycling; o There would be no burning of waste generated at the site; o There would be no on-site disposal of wastes; o Domestic waste from site offices including food waste should be stored in closed steel containers for removal and disposal; o Non-recyclable non-hazardous construction waste should be removed from site on an as required basis for disposal at an approved waste disposal site; o Hazardous wastes will be stored in a secure area in labelled containers; o Liquid wastes such as oils and lubricants should be stored in a labelled tank or drum for disposal or recycle; and o All wastes will be removed by hauler appropriately licensed to manage the wastes. • See 'Surface Water, Fish and Fish Habitat' for mitigation measures related to erosion and sedimentation.		
Areas of Natural and Scientific Interest	• Degradation and erosion of soils, loss of landscape form and potential changes to hydrological drainage patterns. • Short-term, localized dust generation, soil erosion and	• Minimize disturbance to ANSIs. • No spills.	• Prior to construction, the limits of vegetation clearing within the agricultural fields will be staked and flagged in the field. The Construction Contractor will ensure that no construction disturbance occurs beyond the staked limits. • Proper storage of fuel and chemicals will minimize the risk of spills and contamination of the surrounding	• Minimal.	• Detailed mitigation measures for the Project are provided in the *NHA/EIS* and the *NHA/EIS Addendum*. • In terms of accidental spills or releases to the environment, standard containment facilities and emergency response materials would be maintained on-site as required.

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	sedimentation. • The use of construction equipment creates the potential for negative effects related to chemical and/or fuel spills.		environment. • Although the risk of a chemical or fuel spill are low, emergency spill plans will be established and implemented immediately if an accidental spill occurs. • The MOE will be contacted, as appropriate, in the event a spill occurs. • The limit of the 'buildable areas' for Turbines 335, 339, 340 and 341 and their associated infrastructure (roads, collector lines/data cables, and temporary crane paths and construction pads) will be staked and flagged prior to construction. • Access roads will be constructed at grade for Turbines 340 and 341 and within the offshore sand bar areas. • Excavation of soils for the purpose of turbine and underground collector system installation will be filled as quickly as practicable to grade. Excess soil will be re-used on site as feasible and applicable. Where there is a risk of soil migration into a nearby watercourse, excavated soils will be stockpiled, stabilized and silt-fencing will be installed as appropriate. • Power and data cable trenches within the offshore sand bar trenches will be bedded with sand or similar and backfilled with native soils or appropriate fill material, and if appropriate, clay plugs will be installed every 30 m. • Photographs will be taken prior to construction activities to document the shape of the sand bar areas. Upon competition of construction, the photographs will be used as a guide to assist in re-shaping the areas disturbed by temporary construction. • After turbines have been assembled, the temporary turbine construction area will be restored to pre-existing conditions and the offshore sand bars will be re-shaped to resemble the pre-construction form and function as soon as practical. The pre-existing conditions at each turbine site are agricultural and thus, will be converted back into agricultural production. • Proposed mitigation for each wetland feature can be found in the *NHA/EIS*, Section 5.4. • See 'Surface Water, Fish and Fish Habitat'. • See mitigation measures for spills under 'Significant Wetlands'. • See mitigation measures for waste under 'Significant Wetlands'.		• Refuelling, equipment maintenance, and other potentially contaminating activities would occur in designated areas, and as appropriate spills would be reported immediately to the MOE Spills Action Centre.
Significant Woodlands	• Short-term, localized dust generation, soil erosion and sedimentation, root zone damage to edge trees and disturbance to wildlife. • Soil migration associated with excavation, soil compaction from heavy equipment, potential	• Minimize disturbance to woodlands. • No spills.	• Prior to construction, the limits of vegetation clearing within the agricultural fields will be staked and flagged in the field. The Construction Contractor will ensure that no construction disturbance occurs beyond the staked limits. • Proper storage of fuel and chemicals will minimize the risk of spills and contamination of the surrounding environment. • Although the risk of a chemical or fuel spill are low,	• Minimal	• Detailed mitigation measures for the Project are provided in the *NHA/EIS* and the *NHA/EIS Addendum*. • In terms of accidental spills or releases to the environment, standard containment facilities and emergency response materials would be maintained on-site as required. • Refuelling, equipment maintenance, and other potentially contaminating activities would occur in

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	changes in hydrological low/drainage. • Trenching, which is required to install the underground collector system, has the potential to injure roots that might extend from trees located along the edge of the woodland boundary.		emergency spill plans will be established and implemented immediately if an accidental spill occurs. • The MOE will be contacted, as appropriate, in the event a spill occurs. • Excavation of soils for the purpose of underground collector system installation will occur at the minimum distance of 5 m from the significant woodland boundary (drip line). • See mitigation measures for spills under 'Significant Wetlands'. • See mitigation measures for waste under 'Significant Wetlands'. • See 'Surface Water, Fish and Fish Habitat'. • Mitigation measures for vegetation removal as outlined in Section 5.3.3 in the *NHA/EIS*.		designated areas, and as appropriate spills would be reported immediately to the MOE Spills Action Centre.
Significant Valleylands	• Short-term, localized dust generation, soil erosion and sedimentation. • The use of construction equipment creates the potential for negative effects related to chemical and/or fuel spills.	• No erosion	• Prior to construction, the limits of vegetation clearing within the agricultural fields will be staked and flagged in the field. The Construction Contractor will ensure that no construction disturbance occurs beyond the staked limits. Proper storage of fuel and chemicals will minimize the risk of spills and contamination of the surrounding environment. • Although the risk of a chemical or fuel spill are low, emergency spill plans will be established and implemented immediately if an accidental spill occurs. • The MOE will be contacted, as appropriate, in the event a spill occurs. • See mitigation measures for spills under 'Significant Wetlands'. • See mitigation measures for waste under 'Significant Wetlands'. • See 'Surface Water, Fish and Fish Habitat'.	• Minimal	• Detailed mitigation measures for the Project are provided in the *NHA/EIS* and the *NHA/EIS Addendum*. • In terms of accidental spills or releases to the environment, standard containment facilities and emergency response materials would be maintained on-site as required. • Refuelling, equipment maintenance, and other potentially contaminating activities would occur in designated areas, and as appropriate spills would be reported immediately to the MOE Spills Action Centre.
Significant Wildlife and Wildlife Habitat	• Potential short term changes to surface water hydrology and drainage to/from the natural feature is a potential risk from construction activities. • Short-term, localized dust generation, soil erosion and sedimentation. • Short-term sensory disturbance to species using these areas, localized dust generation, soil erosion. • Short-term disturbance from construction activity, such as increased traffic, noise or dust may also result in avoidance of habitats. • Sedimentation and chemical or fuel spills. • Amphibians are at an increased risk from vehicle collisions in spring. • Snapping turtles are at an	• Minimize disturbance to wildlife and wildlife habitat.	• Prior to construction, the limits of vegetation clearing within the agricultural fields will be staked and flagged in the field. The Construction Contractor will ensure that no construction disturbance occurs beyond the staked limits. Proper storage of fuel and chemicals will minimize the risk of spills and contamination of the surrounding environment. • Although the risk of a chemical or fuel spill are low, emergency spill plans will be established and implemented immediately if an accidental spill occurs • The MOE will be contacted, as appropriate, in the event a spill occurs. Where the separation distance between significant wildlife areas and the Project site perimeter is 30 m or less, the significant wildlife areas will be well demarcated with fencing such that all construction activities and personnel are excluded from these areas. • To the extent practical, vegetation clearing will be completed prior to or after the breeding season for migratory birds (May 1st to July 31st). Should vegetation clearing be required, pre-construction surveys identifying presence/absence will be undertaken, and buffers will be placed around identified nests.	• Minimal	• Detailed mitigation measures for the Project are provided in the *NHA/EIS* and the *NHA/EIS Addendum*. • In terms of accidental spills or releases to the environment, standard containment facilities and emergency response materials would be maintained on-site as required. • Refuelling, equipment maintenance, and other potentially contaminating activities would occur in designated areas, and as appropriate spills would be reported immediately to the MOE Spills Action Centre. • Should vegetation clearing be required during the breeding bird season, prior to construction, surveys will be undertaken to identify the presence/absence of nesting birds. If a nest is located, a designated buffer will be marked off to ensure no construction activity will be allowed while the nest is active. The radius of the buffer widths vary and will be determined in consultation with Environment Canada and the MNR. • Should construction activities occur within 30 m of the woodland or wetland edge during breeding bird season (May 1st to July 31st), surveys will be

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	increased risk from vehicle collisions.		• Should construction activities occur within 30 m of the woodland or wetland edge during breeding bird season, pre-construction surveys will identify presence/absence of nesting birds within 50 m of the woodland or wetland, and a designated buffer will mark off no construction areas where nests are found. • As practical, adjust timing of construction and decommissioning activities to minimize impacts to wildlife. • After turbines have been assembled, the temporary turbine construction area will be restored to pre-existing conditions (agricultural production) as soon as practical. Additional mitigation for colonial nesting sites includes implementing a 1,000 m buffer around the colony during all construction activities conducted during the breeding season. No construction shall be permitted within the buffer for the duration of the heron breeding season (early May to early August). This mitigation measure is dependent on the outcome of pre-construction confirmation surveys as committed to the NHA/EIS. • To avoid impacts to wetland hydrology and maintain existing overland flows and continuous surface water conveyance to wetlands, crossings of water bodies and grassed waterways (drainage swales) will entail the installation of permanent and temporary culverts as to provide continued conveyance function. The culverts will be appropriately sized in consultation with the MVCA and/or DFO. All installation activities would conform to Ontario Provincial Standard Specification (OPSS) 421 – Construction Specification for Pipe Culvert Installation in Open Cut. Site specific refinement to the location of individual culverts may occur during detailed design to ensure proper placement and maintain conveyance flows, prevent pooling and maintain hydrology. • To prevent wildlife (i.e., turtles) from entering turbine excavation areas during construction and decommissioning activities, the edge of excavation areas will be fenced off where excavations are left overnight. Fencing of excavation sites will occur where turbines are located with 120 m of significant turtle nesting habitat (see Section 5.4 of the NHA/EIS for feature-specific mitigation measures). • Wildlife (i.e., turtles, snakes) found within the 'buildable areas' during construction activities will be safely relocated, as appropriate, in consultation with a qualified biologist to the nearest appropriate habitat. Construction in the specific area will not continue until the species has been relocated or the species has left the area on its own accord. • Turtle nests should not be touched as it can damage eggs; MNR will be contacted if turtle nests are identified in the construction area. Turtles should not be picked up by their tail, as it can fracture their spine. • During construction vehicle traffic shall primarily be restricted to daytime hours. Speed limit signage will		undertaken prior to construction to identify the presence/absence of nesting birds up to 50 m within the woodland or wetland. If a nest is located, a designated buffer will be marked off within which no construction activity will be allowed while the nest is active. The radius of the buffer widths vary and will be determined in consultation with Environment Canada and the MNR.

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			be erected and shall be restricted to 30 km/h or less, where appropriate. • Best management practices such as silt fencing, will be employed to minimize negative impacts on wildlife habitats and species that use them. Silt fencing will occur where buildable areas are located within 30 m of significant wildlife habitat (see Section 5.4 of the NHA/EIS for feature-specific mitigation measure). • When appropriate, contractors will be required to provide properly working machinery and equipment with adequate noise suppression devices that meet current government requirements.		
Other Natural Features	• Removal of vascular plants and portions of plant communities in hedgerows and the municipal road allowance. • Potential for loss of species diversity. • Impacts on wetland habitat if there are alterations to surface water availability or surface water flow. • Short-term disturbance to wildlife from construction activities, such as increased traffic, noise or dust, may result in avoidance of habitats. • Accidental spills and/or improper waste disposal.	• Minimize disturbance to natural features.	• Indirect impacts resulting from construction activities, such as dust generation, sedimentation and erosion are expected to be short-term, temporary in duration, and mitigable through the use of standard site control measures. • See “Significant Natural Heritage Features”. • See mitigation measures for spills under ‘Significant Wetlands’. • See mitigation measures for waste under ‘Significant Wetlands’ • Prior to construction, the limits of vegetation clearing within the agricultural fields will be staked and flagged in the field. The Construction Contractor will ensure that no construction disturbance occurs beyond the staked limits. • Proper storage of fuel and chemicals will minimize the risk of spills and contamination of the surrounding environment. • Although the risk of a chemical or fuel spill are low, emergency spill plans will be established and implemented immediately if an accidental spill occurs. • The MOE will be contacted, as appropriate, in the event a spill occurs. • Excavation of soils for the purpose of underground collector system installation will occur at the minimum distance of 5 m from the significant wetland boundary.	• Implementation of mitigation measures ensure anticipated adverse effects are minimized or avoided during construction.	• Detailed mitigation measures for the Project are provided in the *NHA/EIS* and the *NHA/EIS Addendum*. • In terms of accidental spills or releases to the environment, standard containment facilities and emergency response materials would be maintained on-site as required. • Refuelling, equipment maintenance, and other potentially contaminating activities would occur in designated areas, and as appropriate spills would be reported immediately to the MOE Spills Action Centre.
Water Bodies and Aquatic Resources					
Groundwater	• Potential for dewatering in proposed construction areas for foundations, transformer pads, underground collector lines, data cabling and transmission lines. • Potential contamination from accidental spills. • Groundwater interference to local private and/or municipal water well supplies, function of identified groundwater discharge features, and pump water discharge back into the environment.	• No spills. • No groundwater interference.	• Establishment of a private water well monitoring program, as appropriate. • If it is determined that any changes in local well water quantities and/or quality is attributed to dewatering activities, actions will be taken to make available to those affected: (i) a supply of water equivalent in quantity and quality to their normal takings, or (ii) shall reduce the rate and amount of takings to prevent or alleviate the observed negative impact. • In the event that dewatering has permanently impacted a given well water supply, actions will be taken to restore that water supply to those who have been permanently affected. • A desktop-level analysis will determine the potential for proposed dewatering activities to detrimentally	• Minimal.	• In the event that interference is anticipated, a field program will be designed to monitor groundwater-surface water interactions, prior to, during and following construction activities. • If monitoring indicated potentially detrimental impacts to hydrogeological form and/or function actions must be taken to improve the situation, such as reducing the rate of, or shutting down, the dewatering activity as deemed necessary. • In terms of accidental spills or releases to the environment, standard containment facilities and emergency response materials would be maintained on-site as required. • Refuelling, equipment maintenance, and other potentially contaminating activities would occur in designated areas, and as appropriate spills would be reported immediately to the MOE Spills Action

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			impact the hydrogeological form and/or function of nearby groundwater sensitive surface water features. • In the event that interference is anticipated, a field program will be designed and implemented to monitor groundwater-surface water interactions of the identified surface water feature, prior to, during and following construction dewatering activity. • If monitoring results indicate that dewatering activities are causing potentially detrimental impacts to hydrogeological form and/or function of the surface water feature, actions must be taken to improve the situation with the options of reducing the rate of, or shutting down, the dewatering activity as deemed necessary. • If using sump/trash pumps, the inlet pump head for the dewatering system will be wrapped in filter fabric and surrounded with clear stone, or equivalent. • Discharged water will be directed through a filter bag or straw bale/filter fabric device or equivalent to reduce suspended solids. • An initial settling tank may be used to reduce the suspended solids in the discharge water prior to being released to the surface water receptor, if required. • All spills that could potentially have an adverse environmental effect, are outside normal course of events, or are in excess of the prescribed regulatory levels would be reported to MOE's Spills Action Centre as appropriate.		Centre.
Surface Water, Fish and Fish Habitat	• Excavations, grading and other construction activities could affect quality of stormwater runoff • Erosion and sedimentation	• No spills. • No erosion or sedimentation	• Prior to proceeding with construction work, the Water Bodies/Assessment Report and any requisite water crossing permits would be referenced. • Implement runoff, erosion and sediment control measures. • Disturbed areas would be re-vegetated as soon as conditions allow. • Minimize disturbance of existing vegetation outside ditching and grassed slopes where re-grading is required. • Minimize time exposure of un-vegetated soils. • Steep slopes will be left undisturbed as much as possible. • Maximize length of overland flow through to points where stormwater leaves the site. • Complete an erosion assessment on all new and existing ditches to determine the need for additional erosion protection. • Top of bank barriers (e.g., silt fencing) would be put in place before any construction activity that is in proximity to watercourses. Silt fencing would be inspected regularly to ensure proper function, particularly during heavy rainfall events. • As appropriate, use in-line erosion control measures such as erosion blanket, rip rap, straw bale, rock flow	• Minor and short-lived.	• Erosion control measures would be inspected regularly to ensure proper function, particularly during heavy rainfall events. • Specific maintenance measures will be applied to sediment controls. • For foundation dewatering, if the amount of discharge exceeds 50,000 litres per day (in most instances, dewatering volumes would be expected to be less than 50,000 L per day): o The inlet pump head shall be surrounded with clear stone and filter fabric; o The discharge must be sampled each day that water is discharged and analyzed for total suspended solids (TSS). In the event that sampling results show that TSS in the discharge water exceeds 25 mg/L, the Proponent shall implement appropriate measures (settling tank or geosock or similar device) to mitigate these impacts; and o The Proponent shall regulate the discharge at such a rate that there is no flooding in the receiving water body or dissipate the discharge so that no soil erosion is caused

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Environmental Feature	Potential Adverse Effect	Performance Objective	Mitigation Strategy	Net Effects	Monitoring Plan and Contingency Measures
			checks and vegetated buffers, to mitigate high flow velocities and excessive erosion/sedimentation. • Stream banks would be stabilized and restored to their pre-construction condition as soon as possible after construction. • Any stockpiled materials would be stored and stabilized away from watercourses. • Sediment and erosion control measures would be left in place until all disturbed areas have been stabilized. • Work would be suspended if excessive flows of sediment discharges occur, and, any appropriate action will be immediately taken to reduce sediment loading. • Sediment laden water and runoff originating from construction areas will be treated using appropriate methods before it is permitted to enter any watercourse. • Installation of a second row of silt/sediment control fencing along the edge of the Project Location facing Kerry's Creek. • If siltation of a watercourse occurs, activities would cease immediately until the situation is rectified. • Mitigation measures outlined in permit requirements from Maitland Valley Conservation Authority will be followed. • Timing windows for in-water work would be determined through consultation with the MNR. • As appropriate, the Construction Contractor (or designate) would be on-site during installation of watercourse crossings to ensure compliance with specifications and site plans.		that impacts the receiving water body.
Air Quality and Environmental Noise					
Air Emissions	• Emissions from construction activities, including equipment and vehicles.	• Minimize duration and magnitude of emissions.	• Using multi-passenger vehicles to the extent practical. • Avoid idling vehicles. • Equipment and vehicles would be maintained in good working order with functioning mufflers and emission control systems as available. • Meet the emissions requirements of the MOE and/or MTO.	• Short-term in duration and highly localized.	• Adherence to Complaint Response Protocol.
Dust & Odour Emissions	• Dust emissions from construction activities and high winds.	• Minimize duration and magnitude of emissions. • Minimize disturbance to existing land uses.	• Applying dust suppressants (e.g. water, calcium chloride). • Maintain adequate control of dust on sites in close proximity to residences. • Enforce low speeds limits for trucks on site as appropriate. • Re-vegetate exposed soils as soon as possible. • As appropriate, protect stockpiles of friable material with a barrier or windscreen. • Consult with local authorities prior to application of dust suppressants on public access roads. • Ensure dust generation is monitored and controlled in areas of sensitive land use.	• Short-term and localized.	• Adherence to Complaint Response Protocol.
Noise	• Noise emitted from construction trucks and equipment	• Minimize noise emissions	• Equipment and vehicles would be maintained in good working condition to limit engine noise. • Avoid idling of vehicles.	• Short-term and localized.	• Adherence to Complaint Response Protocol.

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			• The Construction Contractor would be required to use noise abatement equipment, in good working order, on all heavy machinery used on the Project. • Generally limit construction activity to daylight hours.		
Land-use and Socio-Economic Resources					
Existing Land Uses	• Temporary increase in noise and dust levels.	• Minimize disturbance to existing land uses, including local businesses.	• Landowners would be compensated by the Proponent for agricultural land that would be taken out of production during the lifespan of the Project. • See 'Noise' and 'Dust & Odour Emissions'.	• Short-term in duration and temporary. • Minimized through the implementation of good site practices, transportation planning, and communication with the community.	• Adherence to Complaint Response Protocol.
Recreation Areas and Cultural Features	• Temporary increase in noise, dust and traffic volumes.	• Minimize disturbance to recreational areas and features	• See 'Noise', 'Dust & Odour Emissions', and 'Local Traffic'.	• Short term and intermittent.	• Adherence to Complaint Response Protocol.
Agricultural Lands and Operations	• Affect agricultural lands and operations • Displacement of prime agricultural land • Disturbance of agricultural soils • Adverse effects to artificial drainage • Impacts to livestock	• Minimize disturbance to agricultural lands and operations.	• Avoidance of existing agricultural lands and operations during siting. • Construction activities would be restricted to the delineated construction areas. • A wet soil shutdown practice would be implemented when agriculturally productive lands are impacted by heavy rainfalls. • Following the completion of construction, as appropriate, temporary workspaces would be graded and de-compacted (if required), the topsoil replaced, and the area left as close to pre-existing condition as possible. • Silt fence and straw bales (or appropriate substitutes) would be installed where appropriate. • Topsoil salvage and/or replacement should be avoided during heavy precipitation or extremely windy conditions. • Silt control fencing should be installed and maintained throughout construction and restoration until lands are fully stabilized. • Locations of crushed or severed tile drains would be recorded and flagged. • If a main drain, header tile, or large diameter tile is severed, a temporary repair should be made to maintain field drainage and prevent flooding of the work area and adjacent lands. • Severed tile drains that are not immediately repaired would be capped. After repair and prior to backfilling, the landowner would be invited to inspect the repair. • If flooding of adjacent agricultural land occurs as a result of a severed tile and subsequent soils are damaged or crops are lost, the impacted area would be rehabilitated as soon as possible. • Where necessary, a qualified drainage tile contractor would be retained to identify reasonable drainage solutions. • Disruption to drainage ditches, culverts, field entrances, and fences would be repaired appropriately. • Communication with livestock owners regarding the need to erect temporary fencing around workspaces, installation of gates and/or to move the livestock to different fields for short periods of time.	• Temporary and spatially limited. • As appropriate, temporary construction areas would be rehabilitated following construction and restored to agricultural use.	• Adherence to Complaint Response Protocol. • In areas where activity on agricultural land would be for the duration of the construction only, the Construction Contractor would monitor topsoil stripping to ensure that the correct depth of topsoil is removed and stockpiled in a manner that avoids mixing with subsoil material. • Silt fencing (or appropriate substitutes) would be inspected regularly to ensure proper function, particularly during heavy rainfall events. • Where there is potential for damage during construction, the operation of the drains would be monitored during the construction phase, immediately after final clean up, and after the spring thaw the following year. • All persistent drainage problem sites would be monitored quarterly for a one year period after repair.

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Mineral, Aggregate, and Petroleum Resources	• None anticipated.	• N/A	• Landowners would be compensated by the Proponent for land that would be taken out of production during the lifespan of the Project. • Additional studies to verify the location of known petroleum resources in proximity to Project components will be undertaken as part of the MNR's Approval, Permitting and Requirements Document (APRD) process. • Underground locates in the road allowance will be completed as needed prior to construction.	• Primary and Secondary Aggregate Deposits would be removed from future use (until the Project is decommissioned) where Project infrastructure overlays these deposits; however wind turbines are not considered permanent structures on the landscape. • No adverse net effects are anticipated to petroleum resources during construction of the Project.	• None required.
Game and Fishery Resources	• Sensory disturbance to game species from noise. • Impacts to Juvenile Coho Salmon and YOY Rainbow Trout from silt/sediment releases or construction-related activities.	• Minimize disturbance to game and fishery resources.	• It is anticipated that those who participate in outdoor recreation on Project lands would choose an alternate location for their recreation during times when construction would take place. • A second row of silt/sediment control fencing is proposed to be installed along the edge of the Project Location facing Kerry's Creek. • See 'Noise'. • See 'Surface Water, Fish and Fish Habitat'.	• Temporary and intermittent.	• None required.
Local Traffic	• Short-term, localized disturbance to traffic patterns, increases in traffic volume, and/or creation of potential traffic safety hazards.	• Minimize disturbance to local traffic.	• Implementation of a Traffic Management Plan from the Construction Contractor.	• Truck traffic would increase on some roads during turbine and other component deliveries, but would be restricted to predetermined routes and times to the greatest extent possible. • Potential for accidents along the haul routes and on-site. • Limited, short-term effect on traffic	• Adherence to Complaint Response Protocol.
Local Economy	• Increase in direct, indirect and induced employment over the operations period. • Local economic benefits from land lease payments, municipal taxes, etc. • Potential disruption to use and enjoyment of businesses.	• Create positive effects on local economy	• To the extent possible required goods and services would be sourced from qualified local suppliers where these items are available in sufficient quantity and quality and at competitive prices. • Implementation of a Traffic Management Plan by the Construction Contractor. • Disruptions from traffic would be short-term and are not expected to affect use of businesses.	• Positive income, employment, and fiscal benefits to the local area, including the County of Huron, the Township of ACW and participating landowners. • Local government would receive ongoing property tax income from the Project. • Participating landowners would receive land payments based on agreements with the Proponent. • A nominal increase in municipal services is possible. • Existing businesses within the local communities could benefit from the demands of the Project workforce during operations.	• Adherence to Complaint Response Protocol.
Existing Infrastructure					
Provincial and Local infrastructure	• Abnormal wear on roads. • Interference with local utilities • May be instances during maintenance activities where excess loads would require special traffic planning. Permits from the MTO may be required.	• Minimize disturbance to provincial, municipal, and other major infrastructure.	• Necessary permits would be obtained. • Implementation of a Traffic Management Plan by the Construction Contractor. • Consultation with municipalities regarding excess loads with potential to damage roads. • Agreements would be developed with the Township and County for use of the road allowance for routing of the collector and transmission lines and placement of the splice vaults.	• Potential for damage due to excess loads cannot be totally disqualified. • Limited, short-term effect on infrastructure.	• Pre and post construction road surveys would be conducted. • See 'Local Traffic' • Adherence to Complaint Response Protocol.

Appendix B1: Summary of Potential Environmental Effects and the Environmental Effects Monitoring Plan during Construction

Environmental Feature	Potential Adverse Effect	Performance Objective	Mitigation Strategy	Net Effects	Monitoring Plan and Contingency Measures
	• See 'Local Traffic'.		• In instances where above ground lines are required, and where appropriate, shared use with existing distribution lines would be negotiated, such that there would not be collector lines on both sides of the road.		
Navigable Waters	• Potential crossing of navigable waters	• Minimize disturbance to navigable waters.	• If navigable waters are found and are required to be crossed a permit would be required. • No person shall permit any tools, equipment, vehicles, temporary structures or parts used and maintained for the purpose of construction to remain in the water after completion of construction activities. • Where work causes debris or other material to accumulate on the bed or on the surface of such water, it shall be removed to the satisfaction of the Minister. • All vessels shall be permitted safe passage through the construction-site and assisted as required.	• Temporary.	• Adherence to Complaint Response Protocol.
Contaminated Lands					
Contaminated Lands	• Soil contamination and hazardous waste from existing landfills. • Potential for find contaminated sites and improperly decommissioned oil and gas wells or pipelines. • Potential effects related to any hazardous materials that may be present on the site or within the existing house and associated farm buildings that will be demolished in order for the construction of the substation property to proceed.	• Ensure proper disposal of waste.	• Prior to demolition on the substation property a designated substance survey would be completed. • Prepare a waste audit of all materials to be handled from the demolition and prepare a waste reduction work plan. • Following demolition, the land would be restored by removal of footings followed by grading and adding gravel or topsoil as necessary. • If previously unknown contaminated soils are uncovered, the Proponent would retain expert advice on assessing and developing a soil sampling, handling and remediation plan.	• None.	• None required.
Public Health and Safety					
Public Health and Safety	• Increased traffic, dust emissions, construction noise and unauthorized access of the public to the work sites.	• Ensure public health and safety.	• Implementing transportation planning and safety measures. • Detailed Traffic Management Plan and a detailed Health and Safety Plan would be prepared and implemented by the Construction Contractor. • An Emergency Response and Communications Plan would be developed in detail for the Project. • See 'Dust & Odour Emissions' and 'Noise'. • Land access would be controlled through signage and restricted to authorized personnel only.	• Minimal increased or new risk to public health and safety.	• Adherence to Complaint Response Protocol.