Table 5-1: Environmental Impact Study - Summary of Effects and Mitigation Measures

Significant Natural Feature	Distance to:	Potential Negative Effect by Project Phase*	Mitigation Measures	Net Residual Effects	Contingency Measures	Further Study or Post-Construction Monitoring
		Erosion – Project activities will result in portions of the Project Location and stockpiled material being exposed to erosion processes, including wind and surface run-off (C, D).	• To minimize land disturbance, the construction envelope will be clearly demarcated and kept as small as possible. • Develop and implement an erosion control plan. • Stabilize soil upon completion of work activities to prevent its erosion and transport. • Cover stockpiled material in order to prevent its erosion and transport. • To minimize land disturbance, the construction envelope will be clearly demarcated and kept as small as possible. • Develop and implement an erosion control plan. • Soils from excavations would be reused elsewhere on the property with landowner permission or removed for use as fill material or landfill cover. • The Project also does not require deep excavations for foundations that would involve extensive dewatering. A mitigation plan would be in place to prevent stormwater runoff from entering open excavations.	Erosion effects are not anticipated during operations phase as Project Location will be planted with a permanent vegetation groundcover on all disturbed areas. There is low potential for residual effect if mitigation measures applied.	Any gaps or holes in silt barriers must be repaired. Remove any silt accumulations or backfill eroded areas. Replant or reseed vegetation if necessary.	General inspection of BMPs will be applied during construction. No monitoring of erosion during operations phase is required as negative effects are not anticipated during this phase.
		Short-term Hydrological Changes – Potential short term changes to surface water hydrology and drainage to/ from natural feature (C, D). Potential increase in surface water runoff due to grading or ditching associated with access roads, soil compaction and/or the removal of vegetation (C).	• Limits of construction work to be staked in the field. • The proposed preparation activities will be designed and implemented so as not to alter historic drainage patterns and will not significantly alter the elevations throughout the Project Location. • Where possible, and as appropriate, access roads should be constructed at or near existing grade to maintain surface flow contributions to the woodland. • Access roads to be constructed at grade using permeable materials. • Ensure temporary and permanent access and infrastructure roads mimic pre-construction surface flow regimes. • The Project Location will be stabilized with permanent vegetation ground cover which will attenuate run-off. • Install drainage features such as ditching or equalization culverts beneath access roads to ensure that there is no pooling or disruption of surface water flow so as to maintain site drainage. • Flow retention features will be used in ditches to mitigate increases in surface water runoff (e.g., straw bales or rock-fill flow checks). • Plant vegetation buffers alongside the access road. • As appropriate, access roads should be constructed at or near existing grade to maintain surface flow contributions to the wetlands. • Access roads to be constructed at grade using permeable materials to allow groundwater recharge.	Short term measures will avoid any impacts to adjacent natural features or municipal drains. Short-term maintenance of existing local drainage patterns will ensure no offsite changes natural feature or municipal drainage system. Use of gravel roads and planting site with permanent vegetation groundcover to establish a cultural meadow condition will improve attenuation of run-off over existing agricultural land use condition.	Based on site-specific conditions, contingency measures may include installation of additional culverts or planting of vegetation.	Construction monitoring and inspection of standard site control measures. Visual assessment of soil compaction will be made post-construction (noted by rutting left by heavy machinery or flattened areas beneath areas where stockpiling occurred) and restoration efforts implemented, as required, by utilizing soil loosening methods. The land grading of the Project location will be reverted back to its earlier state during the decommissioning stage.

Table 5-1: Environmental Impact Study - Summary of Effects and Mitigation Measures

Significant Natural Feature	Distance to:	Potential Negative Effect by Project Phase*	Mitigation Measures	Net Residual Effects	Contingency Measures	Further Study or Post-Construction Monitoring
Significant Amphibian Wetland Breeding Habitat **Fenceline** ABW8 0 m ABW9 30 m ABW17 0 m **Road** ABW6 110 m ABW8 69 m ABW9 72 m ABW17 40 m **Collector Line*** ABW6 98 m (O) ABW8 67 m (U) ABW9 18 m (O) 114 m (U) ABW17 0 m (O)		**Disturbance to Habitat and Wildlife –** Project activities will result in the direct loss of two amphibian wetland breeding habitat (ABW8 and ABW17). Habitat and sensory disturbance to animal species inhabiting the natural feature (C, O, D). Modification of habitat due to overhead or collector line installation (ABW9); however, no loss of habitat is associated with collector lines.	• Seasonally adjust construction and decommissioning activities to minimize impacts to amphibians between the months of March to June. • Pre-construction surveys will be undertaken to confirm habitat use by amphibians within the natural features. • Construct silt barriers around periphery of the buildable areas. • Where the separation distance between the Project footprint and the natural feature is less than 30 m, feature boundaries should be well demarcated using clearly visible material (e.g., flagging tape and painted stakes) such that all construction activities and personnel are excluded from these areas. • The construction workforce will be made aware that there is a potential for wildlife occurring on the Project Location and instructed to take measures for avoiding wildlife whenever possible. • Noise abatement devices will be utilized on construction and support equipment present on the site with the objective of keeping the noise level within the acceptable construction noise standards and help maintain air quality. • Vehicle speeds will be restricted to 15 km/hr or less on the Project site and speed limit signage posted.	Due to the separation distances between the Project Location and the natural features (with the exception of select features), and avoidance of direct effects, no net adverse effects are anticipated. Direct habitat loss of some amphibian wetland features will occur; however, due to the presence of alternative suitable habitat, no net effects to the local population are anticipated.	Timing restrictions will be in effect to avoid sensitive breeding periods. However, if breeding animals are encountered, appropriate construction buffers would be established. Buffer sizes would vary depending on the species and would be determined in consultation with the OMNR and Environment Canada. Construction crews will be monitored and advised if they have worked beyond the marked boundaries of work areas. If necessary, these sites will be replanted.	Because feature-specific amphibian call surveys could not be completed during the evaluation of significance, pre-construction amphibian surveys will be conducted in all candidate amphibian wetland breeding habitat identified in Figure 3-6. These surveys will take place in April and May of 2013. If ABW8 and ABW17 are deemed to be significant after the 2013 pre-construction surveys then these habitats will be artificially replaced in the immediate vicinity (as close to the original habitat area as possible). Construction monitoring and inspection of standard site control measures Post-construction monitoring will involve the following: ***Methods*** • Surveys to determine species diversity and species density. ***Location*** • All significant amphibian woodland breeding habitat identified. ***Frequency*** • Seasonally (April through June). ***Reporting*** • Yearly (for a minimum of three years).

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Significant Natural Feature	Distance to:	Potential Negative Effect by Project Phase*	Mitigation Measures	Net Residual Effects	Contingency Measures	Further Study or Post-Construction Monitoring
		Emissions – Air Potential for air emissions from construction vehicles, machinery and equipment and impacts to air quality (C, O, D).	• Maintain vehicles, machinery and equipment in good repair, equipped with emission controls, as applicable. • Work shall be carried out in compliance with the Canadian Environmental Protection Act (CEPA), and applicable air emission regulations and by-laws.	Some emissions will be generated during Project activities with no net adverse effect to significant natural features.	Replace or repair mufflers and emission control system.	Monitoring of emissions during construction and decommissioning will be undertaken under BMPs. No monitoring of dust during operations phase is required as negative effects on natural feature are not anticipated.
		Leaks or Spills – Potential for leak or spill of petroleum products and other deleterious substances from vehicles and machinery to contaminate the soil in the natural feature (C, O, D).	• Excess material will be removed from the site. • Excess material will either be removed from the site or graded into the road allowance shoulder. • No refuelling or maintenance of vehicles in, or adjacent to the municipal road allowance. • No refuelling or maintenance of vehicles within 30 m of the natural feature. • Ensure that absorbent materials are available on Project Location in the event that a spill of deleterious substances should occur. All spills and leaks of deleterious substances must be immediately contained and cleaned up in accordance with Provincial regulatory requirements and reported immediately to the Ontario Spills Action Centre (1-800-268-6060). • Maintain log book of any spills and mitigation measures.	Low potential for residual effect if mitigation measures applied.	Follow-up inspection and monitoring in the event of an accidental spill. Remedial actions will be required if negative effects to natural features are recognized.	General inspection of BMPs will be applied during construction. Monitoring of leaks or spills during operations phase will be undertaken under BMPs. In the event of a reportable spill during operations any monitoring requirements will be specified by MOE.
		Dust – Potential for the release of dust and soil particles into natural feature (C, D).	• Use controlled work procedures in order to eliminate release of dust from construction works. • Minimize activities with potential to release airborne particulates during windy and prolonged dry periods. • Stabilize areas of stockpiled or exposed soils. • Cover or otherwise contain loose materials that have potential to release airborne particulates during their transport, installation or removal e.g. by tarping, mulching, re-vegetating or watering in order to create a crusted surface. • Minimize vehicle traffic on exposed soils and stabilize high traffic areas with clean gravel surface layer or other suitable cover material. • Restore disturbed areas as soon as possible to minimize the duration of soil exposure. • Avoid work involving the movement of soil during weather which is excessively windy. • A crushed stone-tracking pad will be installed at the site access to reduce tracking of sediment onto adjacent roadways during construction activities. Street sweeping and cleaning will be scheduled as necessary, should the adjacent roadway become dirty. • As necessary, suppress releases of dust using approved materials e.g., water mist or non-chloride based materials during construction and decommissioning activities.	Some fugitive dust during preparation from Project activities will be generated. Site preparation activities will be temporary and short (months) duration. No effects from dust are anticipated in operations phase. No adverse effects on natural features are anticipated with implementation of mitigation measures.	Dust controls measures will be implement. If the release of dust and soil particles into a natural feature is observed, then remedial actions will be taken, such as properly covering all loose material which has the potential to release airborne particulates.	General inspection of BMPs will be applied during construction. Visual monitoring of dust generation will occur during the construction phase. No monitoring of dust during operations phase is required as negative effects on natural features are not anticipated during this phase.

Table 5-1: Environmental Impact Study - Summary of Effects and Mitigation Measures

Significant Natural Feature	Distance to:	Potential Negative Effect by Project Phase*	Mitigation Measures	Net Residual Effects	Contingency Measures	Further Study or Post-Construction Monitoring
		Erosion – Project activities will result in portions of the Project Location and stockpiled material being exposed to erosion processes, including wind and surface run-off (C, D).	• To minimize land disturbance, the construction envelope will be clearly demarcated and kept as small as possible. • Develop and implement an erosion control plan. • Stabilize soil upon completion of work activities to prevent its erosion and transport. • Cover stockpiled material in order to prevent its erosion and transport. • To minimize land disturbance, the construction envelope will be clearly demarcated and kept as small as possible. • Develop and implement an erosion control plan. • Soils from excavations would be reused elsewhere on the property with landowner permission or removed for use as fill material or landfill cover. • The Project also does not require deep excavations for foundations that would involve extensive dewatering. A mitigation plan would be in place to prevent stormwater runoff from entering open excavations.	Erosion effects are not anticipated during operations phase as Project Location will be planted with a permanent vegetation groundcover on all disturbed areas. There is low potential for residual effect if mitigation measures applied.	Any gaps or holes in silt barriers must be repaired. Remove any silt accumulations or backfill eroded areas. Replant or reseed vegetation if necessary.	General inspection of BMPs will be applied during construction. No monitoring of erosion during operations phase is required as negative effects are not anticipated during this phase.
		Short-term Hydrological Changes – Potential short term changes to surface water hydrology and drainage to/from natural feature (C, D). Potential increase in surface water runoff due to grading or ditching associated with access roads, soil compaction and/or the removal of vegetation (C).	• Limits of construction work to be staked in the field. • The proposed preparation activities will be designed and implemented so as not to alter historic drainage patterns and will not significantly alter the elevations throughout the Project Location. • Where possible, and as appropriate, access roads should be constructed at or near existing grade to maintain surface flow contributions to the woodland. • Access roads to be constructed at grade using permeable materials. • Ensure temporary and permanent access and infrastructure roads mimic pre-construction surface flow regimes. • The Project Location will be stabilized with permanent vegetation ground cover which will attenuate run-off. • Install drainage features such as ditching or equalization culverts beneath access roads to ensure that there is no pooling or disruption of surface water flow so as to maintain site drainage. • Flow retention features will be used in ditches to mitigate increases in surface water runoff (e.g. straw bales or rock-fill flow checks). • Plant vegetation buffers alongside the access road. • As appropriate, access roads should be constructed at or near existing grade to maintain surface flow contributions to the wetlands. • Access roads to be constructed at grade using permeable materials to allow groundwater recharge.	Short term measures will avoid any impacts to adjacent natural features or municipal drains. Short-term maintenance of existing local drainage patterns will ensure no offsite changes natural feature or municipal drainage system. Use of gravel roads and planting site with permanent vegetation groundcover to establish a cultural meadow condition will improve attenuation of run-off over existing agricultural land use condition.	Based on site-specific conditions, contingency measures may include installation of additional culverts or planting of vegetation.	Construction monitoring and inspection of standard site control measures. Visual assessment of soil compaction will be made post-construction (noted by rutting left by heavy machinery or flattened areas beneath areas where stockpiling occurred) and restoration efforts implemented, as required, by utilizing soil loosening methods. The land grading of the Project location will be reverted back to its earlier state during the decommissioning stage.

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Significant Natural Feature	Distance to:	Potential Negative Effect by Project Phase*	Mitigation Measures	Net Residual Effects	Contingency Measures	Further Study or Post-Construction Monitoring
Significant Marsh Breeding Bird Habitat MB1 MB1 MB1	**Fenceline** 30 m **Road** 72 m **Collector Line*** 0 m (O) 114 m (U)	**Disturbance to Habitat and Wildlife –** There will be no encroachment on this feature. Habitat and sensory disturbance to animal species inhabiting the natural feature (C, O, D). Modification of habitat due to overhead or underground collector line installation (MBB1); however, no loss of habitat is associated with collector lines.	• Seasonally adjust construction and decommissioning activities to minimize impacts to birds. • Avoid clearing vegetation during periods of vulnerability for breeding birds (May 1 to August 1). Construction may occur on cleared lands during this time period provided that no additional vegetation must be cleared. • Construct silt barriers around periphery of the buildable areas. • Where the separation distance between the Project footprint and the natural feature is less than 30 m, feature boundaries should be well demarcated using clearly visible material (e.g., flagging tape and painted stakes) such that all construction activities and personnel are excluded from these areas. • Vegetation removal within marsh areas shall not be permitted. • The construction workforce will be made aware that there is a potential for wildlife occurring on the Project Location and instructed to take measures for avoiding wildlife whenever possible. • Noise abatement devices will be utilized on construction and support equipment present on the site with the objective of keeping the noise level within the acceptable construction noise standards and help maintain air quality. • Vehicle speeds will be restricted to 15 km/hr or less on the Project site and speed limit signage posted.	Due to the separation distances between the Project Location and the natural features, and avoidance of direct effects, no net adverse effects are anticipated.	Timing restrictions will be in effect to avoid sensitive breeding periods. However, if breeding animals are encountered, appropriate construction buffers would be established. Buffer sizes would vary depending on the species and would be determined in consultation with the OMNR and Environment Canada. Construction crews will be monitored and advised if they have worked beyond the marked boundaries of work areas. If necessary, these sites will be replanted. If species of conservation concern are encountered, work will cease until a trained biologist can state that the species is no longer present in the area.	Construction monitoring and inspection of standard site control measures. Post-construction monitoring will involve the following: ***Methods*** • Surveys to determine species diversity and species density. ***Location*** • All significant marsh breeding bird habitat identified. ***Frequency*** • Seasonally (May through June). ***Reporting*** • Yearly (for a minimum of three years).
		Emissions – Air Potential for air emissions from construction vehicles, machinery and equipment and impacts to air quality (C, O, D).	• Maintain vehicles, machinery and equipment in good repair, equipped with emission controls, as applicable. • Work shall be carried out in compliance with the Canadian Environmental Protection Act (CEPA), and applicable air emission regulations and by-laws.	Some emissions will be generated during Project activities with no net adverse effect to significant natural features.	Replace or repair mufflers and emission control system.	Monitoring of emissions during construction and decommissioning will be undertaken under BMPs. No monitoring of dust during operations phase is required as negative effects on natural feature are not anticipated.
		Leaks or Spills – Potential for leak or spill of petroleum products and other deleterious substances from vehicles and machinery to contaminate the soil in the natural feature (C, O, D).	• Implement BMPs and establish an emergency spill plan. • Excess material will be removed from the site. • No refuelling or maintenance of vehicles in, or adjacent to the municipal road allowance. • No refuelling or maintenance of vehicles within 30 m of the natural feature. • Ensure that absorbent materials are available on Project Location in the event that a spill of deleterious substances should occur. All spills and leaks of deleterious substances must be immediately contained and cleaned up in accordance with Provincial regulatory requirements and reported immediately to the Ontario Spills Action Centre (1-800-268-6060). • Maintain log book of any spills and mitigation measures.	Low potential for residual effect if mitigation measures applied.	Follow-up inspection and monitoring in the event of an accidental spill. Remedial actions will be required if negative effects to natural features are recognized.	General inspection of BMPs will be applied during construction. Monitoring of leaks or spills during operations phase will be undertaken under BMPs. In the event of a reportable spill during operations any monitoring requirements will be specified by MOE.

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Significant Natural Feature	Distance to:	Potential Negative Effect by Project Phase*	Mitigation Measures	Net Residual Effects	Contingency Measures	Further Study or Post-Construction Monitoring
		Dust – Potential for the release of dust and soil particles into natural feature (C, D).	• Use controlled work procedures in order to eliminate release of dust from construction works. • Minimize activities with potential to release airborne particulates during windy and prolonged dry periods. • Stabilize areas of stockpiled or exposed soils. • Cover or otherwise contain loose materials that have potential to release airborne particulates during their transport, installation or removal e.g., by tarping, mulching, re-vegetating or watering in order to create a crusted surface. • Minimize vehicle traffic on exposed soils and stabilize high traffic areas with clean gravel surface layer or other suitable cover material. • Restore disturbed areas as soon as possible to minimize the duration of soil exposure. • Avoid work involving the movement of soil during weather which is excessively windy. • A crushed stone-tracking pad will be installed at the site access to reduce tracking of sediment onto adjacent roadways during construction activities. Street sweeping and cleaning will be scheduled as necessary, should the adjacent roadway become dirty. • As necessary, suppress releases of dust using approved materials e.g., water mist or non-chloride based materials during construction and decommissioning activities.	Some fugitive dust during preparation from Project activities will be generated. Site preparation activities will be temporary and short (months) duration. No effects from dust are anticipated in operations phase. No adverse effects on natural features are anticipated with implementation of mitigation measures.	Dust controls measures will be implement. If the release of dust and soil particles into a natural feature is observed, then remedial actions will be taken, such as properly covering all loose material which has the potential to release airborne particulates.	General inspection of BMPs will be applied during construction. Visual monitoring of dust generation will occur during the construction phase. No monitoring of dust during operations phase is required as negative effects on natural features are not anticipated during this phase.
		Erosion – Project activities will result in portions of the Project Location and stockpiled material being exposed to erosion processes, including wind and surface run-off (C, D).	• To minimize land disturbance, the construction envelope will be clearly demarcated and kept as small as possible. • Develop and implement an erosion control plan. • Stabilize soil upon completion of work activities to prevent its erosion and transport. • Cover stockpiled material in order to prevent its erosion and transport. • To minimize land disturbance, the construction envelope will be clearly demarcated and kept as small as possible. • Develop and implement an erosion control plan. • Soils from excavations would be reused elsewhere on the property with landowner permission or removed for use as fill material or landfill cover. • The Project also does not require deep excavations for foundations that would involve extensive dewatering. A mitigation plan would be in place to prevent stormwater runoff from entering open excavations.	Erosion effects are not anticipated during operations phase as Project Location will be planted with a permanent vegetation groundcover on all disturbed areas. There is low potential for residual effect if mitigation measures applied.	Any gaps or holes in silt barriers must be repaired. Remove any silt accumulations or backfill eroded areas. Replant or reseed vegetation if necessary.	General inspection of BMPs will be applied during construction. No monitoring of erosion during operations phase is required as negative effects are not anticipated during this phase.

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Significant Natural Feature	Distance to:	Potential Negative Effect by Project Phase*	Mitigation Measures	Net Residual Effects	Contingency Measures	Further Study or Post-Construction Monitoring
		Short-term Hydrological Changes – Potential short term changes to surface water hydrology and drainage to/ from natural feature (C, D). Potential increase in surface water runoff due to grading or ditching associated with access roads, soil compaction and/or the removal of vegetation (C).	• Limits of construction work to be staked in the field. • The proposed preparation activities will be designed and implemented so as not to alter historic drainage patterns and will not significantly alter the elevations throughout the Project Location. • Where possible, and as appropriate, access roads should be constructed at or near existing grade to maintain surface flow contributions to the woodland. • Access roads to be constructed at grade using permeable materials. • Ensure temporary and permanent access and infrastructure roads mimic pre-construction surface flow regimes. • The Project Location will be stabilized with permanent vegetation ground cover which will attenuate run-off. • Install drainage features such as ditching or equalization culverts beneath access roads to ensure that there is no pooling or disruption of surface water flow so as to maintain site drainage. • Flow retention features will be used in ditches to mitigate increases in surface water runoff (e.g., straw bales or rock-fill flow checks). • Plant vegetation buffers alongside the access road. • As appropriate, access roads should be constructed at or near existing grade to maintain surface flow contributions to the wetlands. • Access roads to be constructed at grade using permeable materials to allow groundwater recharge.	Short term measures will avoid any impacts to adjacent natural features or municipal drains. Short-term maintenance of existing local drainage patterns will ensure no offsite changes natural feature or municipal drainage system. Use of gravel roads and planting site with permanent vegetation groundcover to establish a cultural meadow condition will improve attenuation of run-off over existing agricultural land use condition.	Based on site-specific conditions, contingency measures may include installation of additional culverts or planting of vegetation.	Construction monitoring and inspection of standard site control measures. Visual assessment of soil compaction will be made post-construction (noted by rutting left by heavy machinery or flattened areas beneath areas where stockpiling occurred) and restoration efforts implemented, as required, by utilizing soil loosening methods. The land grading of the Project location will be reverted back to its earlier state during the decommissioning stage.

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Significant Natural Feature	Distance to:	Potential Negative Effect by Project Phase*	Mitigation Measures	Net Residual Effects	Contingency Measures	Further Study or Post-Construction Monitoring
Significant Shrub/ Successional Breeding Bird Habitat	**Fenceline** SBB1 22 m SBB2 0 m SBB3 0 m SBB4 0 m **Road** SBB1 97 m SBB2 0 m SBB3 0 m SBB4 0 m **Collector Line*** SBB1 20 m (U) SBB2 0 m (O), 21 m (U) SBB3 93 m (U) SBB5 0 m (O)	**Disturbance to Habitat and Wildlife –** Removal of approximately 47.2 ha of shrub/successional breeding bird habitat will be removed (SBB2, SBB3, SBB4). There will be no encroachment on the remained of on significant habitat (SBB1, SBB5). Habitat and sensory disturbance to animal species inhabiting the natural feature (C, O, D). Direct loss of 1.7 ha of habitat from feature SBB1 (though an area greater than 30 ha remains and the habitat remains significant and functional). Modification of habitat due to overhead or underground collector line installation (MBB1); however, no loss of habitat is associated with collector lines.	• Avoid clearing vegetation during periods of vulnerability for breeding birds (May 1 to August 1). Construction may occur on cleared lands during this time period provided that no additional vegetation must be cleared. • Construct silt barrier around periphery of the buildable areas. • Where the separation distance between the Project footprint and the natural feature is less than 30 m, woodland boundaries should be well demarcated using clearly visible material (e.g., flagging tape and painted stakes) such that all construction activities and personnel are excluded from these areas. • Tree removal within woodland areas shall not be permitted with the exception of the 1.7 ha previously identified for removal. • The construction workforce will be made aware that there is a potential for wildlife occurring on the Project Location and instructed to take measures for avoiding wildlife whenever possible. • Noise abatement devices will be utilized on construction and support equipment present on the site with the objective of keeping the noise level within the acceptable construction noise standards and help maintain air quality. • Vehicle speeds will be restricted to 15 km/hr or less on the Project site and speed limit signage posted.	Direct habitat loss will occur totalling 57.6 ha. At minimum, a total of 266 ha of Shrub/Successional Breeding Bird Habitat remains in close proximity to the Project Location. Aerial photographs of nearby areas indicate even more habitat located in other areas not surveyed for the purposes of this Project. Due to the presence of alternative suitable habitat (266 ha), no net effects to the local population are anticipated. 76% of SBB2 and 18% SBB4 will be completely cleared, while a small portion (2%) of SBB3 will be cleared. The overall function and significance of features SBB3 and SBB4 will not be impacted.	Timing restrictions will be in effect to avoid sensitive breeding periods. However, if breeding animals are encountered, appropriate construction buffers would be established. Buffer sizes would vary depending on the species and would be determined in consultation with the OMNR and Environment Canada. Construction crews will be monitored and advised if they have worked beyond the marked boundaries of work areas. If necessary, these sites will be replanted. If species of conservation concern are encountered, work will cease until a trained biologist can state that the species is no longer present in the area.	Construction monitoring and inspection of standard site control measures. Should construction activities occur within 30 m of the woodland edge during the breeding bird season, surveys will be undertaken prior to construction to identify the presence/ absence of nesting birds within the woodland. Post-construction monitoring will involve the following: ***Methods*** • Point count surveys to determine species diversity and species density. ***Location*** • Select significant shrub/successional breeding bird areas as noted in the post-construction monitoring plan. ***Frequency*** • Seasonally (May through June). ***Reporting*** • Yearly (for a minimum of three years).
		Emissions – Air Potential for air emissions from construction vehicles, machinery and equipment and impacts to air quality (C, O, D).	• Maintain vehicles, machinery and equipment in good repair, equipped with emission controls, as applicable. • Work shall be carried out in compliance with the Canadian Environmental Protection Act (CEPA), and applicable air emission regulations and by-laws.	Some emissions will be generated during Project activities with no net adverse effect to significant natural features.	Replace or repair mufflers and emission control system.	Monitoring of emissions during construction and decommissioning will be undertaken under BMPs. No monitoring of dust during operations phase is required as negative effects on natural feature are not anticipated.

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		Leaks or Spills – Potential for leak or spill of petroleum products and other deleterious substances from vehicles and machinery to contaminate the soil in the natural feature (C, O, D).	• Implement BMPs and establish an emergency spill plan. • Excess material will be removed from the site. • No refuelling or maintenance of vehicles in, or adjacent to the municipal road allowance. • No refuelling or maintenance of vehicles within 30 m of the natural feature. • Ensure that absorbent materials are available on Project Location in the event that a spill of deleterious substances should occur. All spills and leaks of deleterious substances must be immediately contained and cleaned up in accordance with Provincial regulatory requirements and reported immediately to the Ontario Spills Action Centre (1-800-268-6060). • Maintain log book of any spills and mitigation measures.	Low potential for residual effect if mitigation measures applied.	Follow-up inspection and monitoring in the event of an accidental spill. Remedial actions will be required if negative effects to natural features are recognized.	General inspection of BMPs will be applied during construction. Monitoring of leaks or spills during operations phase will be undertaken under BMPs. In the event of a reportable spill during operations any monitoring requirements will be specified by MOE.
		Dust – Potential for the release of dust and soil particles into natural feature (C, D).	• Use controlled work procedures in order to eliminate release of dust from construction works. • Minimize activities with potential to release airborne particulates during windy and prolonged dry periods. • Stabilize areas of stockpiled or exposed soils. • Cover or otherwise contain loose materials that have potential to release airborne particulates during their transport, installation or removal e.g. by tarping, mulching, re-vegetating or watering in order to create a crusted surface. • Minimize vehicle traffic on exposed soils and stabilize high traffic areas with clean gravel surface layer or other suitable cover material. • Restore disturbed areas as soon as possible to minimize the duration of soil exposure. • Avoid work involving the movement of soil during weather which is excessively windy. • A crushed stone-tracking pad will be installed at the site access to reduce tracking of sediment onto adjacent roadways during construction activities. Street sweeping and cleaning will be scheduled as necessary, should the adjacent roadway become dirty. • As necessary, suppress releases of dust using approved materials e.g., water mist or non-chloride based materials during construction and decommissioning activities.	Some fugitive dust during preparation from Project activities will be generated. Site preparation activities will be temporary and short (months) duration. No effects from dust are anticipated in operations phase. No adverse effects on natural features are anticipated with implementation of mitigation measures.	Dust controls measures will be implement. I f the release of dust and soil particles into a natural feature is observed, then remedial actions will be taken, such as properly covering all loose material which has the potential to release airborne particulates.	General inspection of BMPs will be applied during construction. Visual monitoring of dust generation will occur during the construction phase. No monitoring of dust during operations phase is required as negative effects on natural features are not anticipated during this phase.
		Erosion – Project activities will result in portions of the Project Location and stockpiled material being exposed to erosion processes, including wind and surface run-off (C, D).	• To minimize land disturbance, the construction envelope will be clearly demarcated and kept as small as possible. • Develop and implement an erosion control plan. • Stabilize soil upon completion of work activities to prevent its erosion and transport. • Cover stockpiled material in order to prevent its erosion and transport. • To minimize land disturbance, the construction envelope will be clearly demarcated and kept as small as possible. • Develop and implement an erosion control plan. • Soils from excavations would be reused elsewhere on the property with landowner permission or removed for use as fill material or landfill cover. • The Project also does not require deep excavations for foundations that would involve extensive dewatering. A mitigation plan would be in place to prevent stormwater runoff from entering open excavations.	Erosion effects are not anticipated during operations phase as Project Location will be planted with a permanent vegetation groundcover on all disturbed areas. There is low potential for residual effect if mitigation measures applied.	Any gaps or holes in silt barriers must be repaired. Remove any silt accumulations or backfill eroded areas. Replant or reseed vegetation if necessary.	General inspection of BMPs will be applied during construction. No monitoring of erosion during operations phase is required as negative effects are not anticipated during this phase.

Table 5-1: Environmental Impact Study - Summary of Effects and Mitigation Measures

Significant Natural Feature	Distance to:	Potential Negative Effect by Project Phase*	Mitigation Measures	Net Residual Effects	Contingency Measures	Further Study or Post-Construction Monitoring
		Short-term Hydrological Changes – Potential short term changes to surface water hydrology and drainage to/ from natural feature (C, D). Potential increase in surface water runoff due to grading or ditching associated with access roads, soil compaction and/or the removal of vegetation (C).	• Limits of construction work to be staked in the field. • The proposed preparation activities will be designed and implemented so as not to alter historic drainage patterns and will not significantly alter the elevations throughout the Project Location. • Where possible, and as appropriate, access roads should be constructed at or near existing grade to maintain surface flow contributions to the woodland. • Access roads to be constructed at grade using permeable materials. • Ensure temporary and permanent access and infrastructure roads mimic pre-construction surface flow regimes. • The Project Location will be stabilized with permanent vegetation ground cover which will attenuate run-off. • Install drainage features such as ditching or equalization culverts beneath access roads to ensure that there is no pooling or disruption of surface water flow so as to maintain site drainage. • Flow retention features will be used in ditches to mitigate increases in surface water runoff (e.g., straw bales or rock-fill flow checks). • Plant vegetation buffers alongside the access road. • As appropriate, access roads should be constructed at or near existing grade to maintain surface flow contributions to the wetlands. • Access roads to be constructed at grade using permeable materials to allow groundwater recharge.	Short term measures will avoid any impacts to adjacent natural features or municipal drains. Short-term maintenance of existing local drainage patterns will ensure no offsite changes natural feature or municipal drainage system. Use of gravel roads and planting site with permanent vegetation groundcover to establish a cultural meadow condition will improve attenuation of run-off over existing agricultural land use condition.	Based on site-specific conditions, contingency measures may include installation of additional culverts or planting of vegetation.	Construction monitoring and inspection of standard site control measures. Visual assessment of soil compaction will be made post-construction (noted by rutting left by heavy machinery or flattened areas beneath areas where stockpiling occurred) and restoration efforts implemented, as required, by utilizing soil loosening methods. The land grading of the Project location will be reverted back to its earlier state during the decommissioning stage.
Significant Habitat for Species of Conservation Concern GS1 SO3 SO3 GS1 SO3 GS1	**Fenceline** 5 m 7 m **Road** 23 m 11 m **Collector Line*** 0 (O) 48 (U) 10 m (U)	**Disturbance to Habitat and Wildlife –** Habitat and sensory disturbance to animal species inhabiting the natural feature (C, O, D). Destruction of active nests and mortality of unfledged birds inhabiting the natural feature (C). Mortality of animal species inhabiting the natural feature during seasonal utilization of the feature (C).	• Avoid clearing vegetation during periods of vulnerability for breeding birds (May 1 to September 1 for open country breeding birds, May 1 to August 1 for all other breeding bird habitats). Construction may occur on cleared lands during this time period provided that no additional vegetation must be cleared. • Construct silt barrier around periphery of the buildable areas. • Where the separation distance between the Project footprint and the natural feature is less than 30 m, feature boundaries should be well demarcated using clearly visible material (e.g., flagging tape and painted stakes) such that all construction activities and personnel are excluded from these areas. • Tree removal within woodland areas shall not be permitted; however, pruning may be required. • A silt fence will be placed around active construction site to reduce potential mortality to wildlife moving to foraging areas. Silt fence will apply specifications to avoid any potential tangling by other wildlife that may travel along the perimeter of the Project Location (i.e. no reinforcement netting). This will temporarily limit access from some areas for wildlife trying to move across fields. • The construction workforce will be made aware that there is a potential for wildlife occurring on the Project Location and instructed to take measures for avoiding wildlife whenever possible. • Noise abatement devices will be utilized on construction and support equipment present on the site with the objective of keeping the noise level within the acceptable construction noise standards and help maintain air quality. • Vehicle speeds will be restricted to 15 km/hr or less on the Project site and speed limit signage posted. • Known occurrences of mortality will be reported to the MNR and work within the area will be stopped. A trained biologist will conduct an area survey to ensure that no other wildlife are present in the area before work will continue. If other individuals are located, all work in the immediate area will cease until those individuals leave the area and the area has been cleared by the on-site biologist.	Due to the separation distances between the Project Location and the natural features and avoidance of direct effects, no net adverse effects are anticipated.	Timing restrictions will be in effect to avoid sensitive breeding periods. However, if breeding animals are encountered, appropriate construction buffers would be established. Buffer sizes would vary depending on the species and would be determined in consultation with the OMNR and Environment Canada. Construction crews will be monitored and advised if they have worked beyond the marked boundaries of work areas. If necessary, these sites will be replanted. If species of conservation concern are encountered, work will cease until a trained biologist can state that the species is no longer present in the area.	Construction monitoring and inspection of standard site control measures. The EIS identified one significant Giant Swallowtail habitat feature (GS1) within 120 m of the Project Location. Post-construction monitoring of this species will include a search of host plants (Northern Prickly-ash) within GS1 for caterpillars. Searches for Giant Swallowtail larva should occur in September to most definitely correspond with the end of the flight schedule of this species in Ontario. In Ontario, two generations of Giant Swallowtails occur between May until September (Layberry *et al*., 2002). OMNR will be consulted prior to undertaking Giant Swallowtail surveys for

Table 5-1: Environmental Impact Study - Summary of Effects and Mitigation Measures

Significant Natural Feature	Distance to:	Potential Negative Effect by Project Phase*	Mitigation Measures	Net Residual Effects	Contingency Measures	Further Study or Post-Construction Monitoring
						further advice on survey methodology and efforts. Post-construction monitoring for SO3 will involve the following: ***Methods*** • Point count surveys to determine species presence and species abundance. ***Location*** • Feature SO3 only ***Frequency*** • Seasonally (December through March). ***Reporting*** Yearly (for a minimum of three years). Post-construction monitoring for GS1 will involve the following: ***Methods*** • Area searches to determine species presence and species abundance ***Location*** • Feature GS1 only ***Frequency*** • Seasonally (May to September). ***Reporting*** Yearly (for a minimum of three years).
		Emissions – Air Potential for air emissions from construction vehicles, machinery and equipment and impacts to air quality (C, O, D).	• Maintain vehicles, machinery and equipment in good repair, equipped with emission controls, as applicable. • Work shall be carried out in compliance with the Canadian Environmental Protection Act (CEPA), and applicable air emission regulations and by-laws.	Some emissions will be generated during Project activities with no net adverse effect to significant natural features.	Replace or repair mufflers and emission control system.	Monitoring of emissions during construction and decommissioning will be undertaken under BMPs. No monitoring of dust during operations phase is required as negative effects on natural feature are not anticipated.

Table 5-1: Environmental Impact Study - Summary of Effects and Mitigation Measures

Significant Natural Feature	Distance to:	Potential Negative Effect by Project Phase*	Mitigation Measures	Net Residual Effects	Contingency Measures	Further Study or Post-Construction Monitoring
		Leaks or Spills – Potential for leak or spill of petroleum products and other deleterious substances from vehicles and machinery to contaminate the soil in the natural feature (C, O, D).	• Implement BMPs and establish an emergency spill plan. • Excess material will be removed from the site. • No refuelling or maintenance of vehicles in, or adjacent to the municipal road allowance. • No refuelling or maintenance of vehicles within 30 m of the natural feature. • Ensure that absorbent materials are available on Project Location in the event that a spill of deleterious substances should occur. All spills and leaks of deleterious substances must be immediately contained and cleaned up in accordance with Provincial regulatory requirements and reported immediately to the Ontario Spills Action Centre (1-800-268-6060). • Maintain log book of any spills and mitigation measures.	Low potential for residual effect if mitigation measures applied.	Follow-up inspection and monitoring in the event of an accidental spill. Remedial actions will be required if negative effects to natural features are recognized.	General inspection of BMPs will be applied during construction. Monitoring of leaks or spills during operations phase will be undertaken under BMPs. In the event of a reportable spill during operations any monitoring requirements will be specified by MOE.
		Dust – Potential for the release of dust and soil particles into natural feature (C, D).	• Use controlled work procedures in order to eliminate release of dust from construction works. • Minimize activities with potential to release airborne particulates during windy and prolonged dry periods. • Stabilize areas of stockpiled or exposed soils. • Cover or otherwise contain loose materials that have potential to release airborne particulates during their transport, installation or removal e.g., by tarping, mulching, re-vegetating or watering in order to create a crusted surface. • Minimize vehicle traffic on exposed soils and stabilize high traffic areas with clean gravel surface layer or other suitable cover material. • Restore disturbed areas as soon as possible to minimize the duration of soil exposure. • Avoid work involving the movement of soil during weather which is excessively windy. • A crushed stone-tracking pad will be installed at the site access to reduce tracking of sediment onto adjacent roadways during construction activities. Street sweeping and cleaning will be scheduled as necessary, should the adjacent roadway become dirty. • As necessary, suppress releases of dust using approved materials e.g., water mist or non-chloride based materials during construction and decommissioning activities.	Some fugitive dust during preparation from Project activities will be generated. Site preparation activities will be temporary and short (months) duration. No effects from dust are anticipated in operations phase. No adverse effects on natural features are anticipated with implementation of mitigation measures.	Dust controls measures will be implement. If the release of dust and soil particles into a natural feature is observed, then remedial actions will be taken, such as properly covering all loose material which has the potential to release airborne particulates.	General inspection of BMPs will be applied during construction. Visual monitoring of dust generation will occur during the construction phase. No monitoring of dust during operations phase is required as negative effects on natural features are not anticipated during this phase.
		Erosion – Project activities will result in portions of the Project Location and stockpiled material being exposed to erosion processes, including wind and surface run-off (C, D).	• To minimize land disturbance, the construction envelope will be clearly demarcated and kept as small as possible. • Develop and implement an erosion control plan. • Stabilize soil upon completion of work activities to prevent its erosion and transport. • Cover stockpiled material in order to prevent its erosion and transport. • To minimize land disturbance, the construction envelope will be clearly demarcated and kept as small as possible. • Develop and implement an erosion control plan. • Soils from excavations would be reused elsewhere on the property with landowner permission or removed for use as fill material or landfill cover. • The Project also does not require deep excavations for foundations that would involve extensive dewatering. A mitigation plan would be in place to prevent stormwater runoff from entering open excavations.	Erosion effects are not anticipated during operations phase as Project Location will be planted with a permanent vegetation groundcover on all disturbed areas. There is low potential for residual effect if mitigation measures applied.	Any gaps or holes in silt barriers must be repaired. Remove any silt accumulations or backfill eroded areas. Replant or reseed vegetation if necessary.	General inspection of BMPs will be applied during construction. No monitoring of erosion during operations phase is required as negative effects are not anticipated during this phase.

Table 5-1: Environmental Impact Study - Summary of Effects and Mitigation Measures

Significant Natural Feature	Distance to:	Potential Negative Effect by Project Phase*	Mitigation Measures	Net Residual Effects	Contingency Measures	Further Study or Post-Construction Monitoring
		Short-term Hydrological Changes – Potential long- term changes to surface water hydrology and drainage due to natural feature loss (C, D). Potential increase in surface water runoff due to grading or ditching associated with access roads, soil compaction and/or the removal of vegetation (C).	• Limits of construction work to be staked in the field. • The proposed preparation activities will be designed and implemented so as not to alter historic drainage patterns and will not significantly alter the elevations throughout the Project Location. • Where possible, and as appropriate, access roads should be constructed at or near existing grade to maintain surface flow contributions to the woodland. • Access roads to be constructed at grade using permeable materials. • Ensure temporary and permanent access and infrastructure roads mimic pre-construction surface flow regimes. • The Project Location will be stabilized with permanent vegetation ground cover which will attenuate run-off. • Install drainage features such as ditching or equalization culverts beneath access roads to ensure that there is no pooling or disruption of surface water flow so as to maintain site drainage. • Flow retention features will be used in ditches to mitigate increases in surface water runoff (e.g. straw bales or rock-fill flow checks). • Plant vegetation buffers alongside the access road. • As appropriate, access roads should be constructed at or near existing grade to maintain surface flow contributions to the wetlands. • Access roads to be constructed at grade using permeable materials to allow groundwater recharge.	Short-term maintenance of existing local drainage patterns will ensure no offsite changes to natural feature or municipal drainage system. Use of gravel roads and planting site with permanent vegetation groundcover to establish a cultural meadow condition will improve attenuation of run-off over existing agricultural land use condition.	Based on site-specific conditions, contingency measures may include installation of additional culverts or planting of vegetation.	Construction monitoring and inspection of standard site control measures. Visual assessment of soil compaction will be made post-construction (noted by rutting left by heavy machinery or flattened areas beneath areas where stockpiling occurred) and restoration efforts implemented, as required, by utilizing soil loosening methods. The land grading of the Project location will be reverted back to its earlier state during the decommissioning stage.

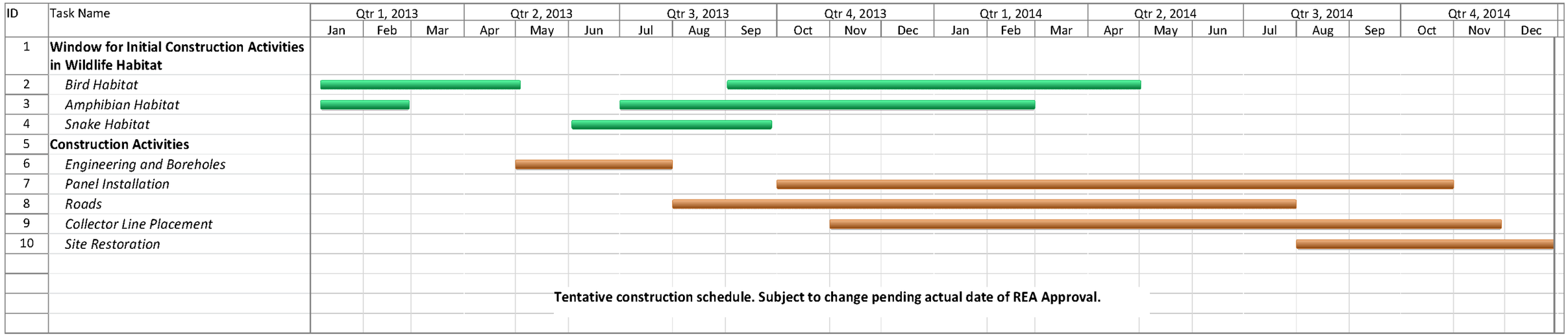
* O = Overhead Collector Line, U = Underground Collector Line
** C = Construction, O = Operation, D = Decommissioning

Table 5-2: Environmental Impact Study - Description of Natural Features Identified for Removal During Project Construction Phase

Polygon No.	ELC Vegetation Community Code	Description	Total Size (ha)	Significant Wildlife Habitat (Yes/No)	Species Diversity	Presence of Species of Conservation Concern (Yes/No)
1-C	CUT1-1	This Is a sumac cultural thicket community. Dominant species includes Staghorn Sumac and Red-osier Dogwood. White Elm, Bur Oak, White Ash, and various species of grasses and asters are also present. This represents a typical agricultural regenerative community.	0.8	No	Moderate	No
1-J	CGL-2	This is an unnatural site consisting of manicured constructed parkland.	<1.0	No	Low	No
3B	CUT1-7*	This is a Red-osier Dogwood cultural thicket existing as an inclusion within a dry-moist old field meadow (CUM1-1).	0.5	No	Moderate	No
12A-1	SWD3	This is a maple mineral deciduous swamp ecosite. The eastern half lies adjacent to open agricultural fields, and it is this portion that is to be removed during construction and solar panel installation.	~1.0	Yes ABF10	Moderate	No
12A-3	THDR1	This dry- fresh calcareous bedrock deciduous thicket is dominated by Common Lilac located adjacent to an open agricultural field. Evidence of disturbance, as rubble and garbage litter the ground.	1.0	No	Moderate	No
12A-4	FOC4-1	This is a fresh- moist White Cedar coniferous forest stand located adjacent to an open agricultural field.	0.8	No	Moderate	No
14A-F	FOC4-1	This is a very small fresh- moist White Cedar coniferous forest stand located between a cultural meadow community and polygon 14A-O.	0.3	No	Moderate	No
14A-L	MAM2-5	This is a narrow-leaved sedge mineral meadow marsh with the majority of its area located within a cultural meadow.	0.5	No	Moderate	No
14A-O	CUS1-2	This is a White Cedar- Green Ash cultural savannah located adjacent to two large cultural meadows, and 14A-F	1.1	No	Moderate	No
17L	SWT2-2	This is a small willow mineral thicket swamp dominated by willow species, Red-osier Dogwood, with White Meadowsweet. Few White Elm and Trembling Aspen are present, along with a grass-dominated groundcover.	0.3	No	Moderate	No
20-I	CUT1-4	This Gray Dogwood cultural thicket community is a typical example of regenerative agricultural land.	1.7	Yes SBB1	Moderate	No

*ELC type not included in 1st publication of ELC for Southern Ontario
None of these ELC vegetation communities considered rare in Ontario

Table 5-3: Tentative Construction Schedule



APPENDIX C

CORRESPONDENCE WITH OMNR

Ministry of
Natural Resources
Peterborough District Office
300 Water Street
1st Floor, South Tower
Peterborough, ON K9J 8M5
Telephone: (705) 755-2001
Facsimile: (705) 755-3125

Ministère des
Richesses naturelles
Le bureau du district de Peterborough
C.P. 7000, 300 rue Water
Peterborough, ON K9J 8M5
Telephone: (705) 755-2001
Facsimile: (705) 755-3125

Ontario

August 4, 2011

Samsung Renewable Energy Inc.
55 Standish Court, 9th Floor
Mississauga, ON L5R 4B2
Attention: Mr. Simon Kim, Deputy General Manager

Dear Mr. Kim:

Re: MNR's Comments Request for Records for Sol-Luce Kingston Solar PV Energy Project

This letter is in response to the request for information regarding natural heritage features for the proposed Sol-Luce Kingston Solar PV Energy Project in accordance with the Records Review phase of the Natural Heritage Assessment as outlined tin the Renewable Energy Approvals (REA) process (Ontario Regulation 359/09).

According to MNR's known and available records, we offer the following comments with respect to the presence of natural heritage features in and around the property boundary as displayed in Sol-Luce Kingston Phase 2 – Project Boundary Figure 2 dated July 2011 prepared by AMEC. Please note that any changes to the project location should be promptly brought to our attention.

MNR suggests that you review the Natural Heritage Assessment Guide for Renewable Energy Projects (NHAG), and the Significant Wildlife Habitat Technical Guide, early in your planning process to ensure that project related field work and data collection meets the appropriate standards and requirements. Additionally, please review the MNR's Approval Permitting and Requirements Document (APRD) to assess if additional permitting or authorizations under other MNR administered legislation, including the Endangered Species Act, are required to facilitate the construction and operation of the proposed solar facility.

Wetlands

The Millhaven Creek Provincially Significant Wetland, associated with Odessa Lake, may overlap the 120 metre buffer from the project boundary. Additionally there are several unevaluated wetland features associated with Odessa Lake and Glenvale Creek and its tributaries throughout the project boundary.

The REA Regulation defines wetlands as lands that are seasonally or permanently covered by shallow water and display the presence of particular soils and vegetation, other than land that is being used for agricultural purposes and no longer exhibits wetland characteristics. When conducting site investigations for wetlands, applicants must verify the boundaries of any wetlands identified through the records review, and establish the presence of any additional wetlands and their boundaries.

Areas of Natural and Scientific Interest (ANSI)

There are no known Areas of Natural and Scientific Interest, either Life or Earth Science within the project boundary or 120 metres thereof.

Please note that MNR assesses ANSIs as being provincially, regionally or locally significant. To date, more than 500 have been confirmed across the province. When conducting site investigations for ANSIs, applicants must verify the boundaries of all ANSIs identified through the records review. With the exception of specified provincial plan areas only ANSIs confirmed by MNR as provincially significant are afforded protection through the REA Regulation. Applicants are not required to identify additional ANSIs during the site investigation.

Woodland

Woodlands are scattered throughout the project boundary and the 120 metre buffer. Site investigation for woodlands involves confirming that woodlands identified through the records review meet the criteria in the definition of woodland as outlined in the REA Regulation and verifying their boundaries. Any previously un-assessed treed areas which meet the criteria for a woodland must be identified and their boundaries established. MNR recommends referring to the Natural Heritage Reference Manual for procedures and criteria to determine whether the woodland is significant. Additionally, the woodland features within the project location and 120 metres thereof should be considered for wildlife habitat.

Wildlife Habitat

Two large alvars are present within the project boundary. Please note that alvars are considered a rare vegetation community and or specialised habitat for wildlife through the Significant Habitat Technical Guide (SWHTG). We have additionally included a map outlining the locations of the aforementioned Alvars for your reference. Please contact our office directly should you require the digital shapefiles.

The Renewable Energy Approval Regulation defines "natural feature" as among other features, wildlife habitat MNR recommends that you review the Significant Wildlife Habitat Technical Guide (SWHTG) and the NHAG early in the site investigation planning process to ensure that the wildlife habitats identified and described within the guide are appropriately captured through the NHA process. Additionally, those wildlife habitats may be considered as candidate significant wildlife habitat and may require further evaluation through evaluation of significance if required.

Fish and Fish Habitat

Glenvale Creek and its tributaries traverse the project boundary and 120 meter thereof. MNR recommends that fish, fish habitat, thermal regimes and stream locations should be verified through the site investigation process where required to support addition permitting and authorizations required as part of your project development and operation activities. While this is may not be a requirement of the Ontario Regulation 359/09, a permit under other legislation may be required to proceed with the development of the proposed facility.

Provincial Parks and Conservation Reserves

There are no Provincial Parks or Conservation Reserves within proximity to the project boundary.

Where a project location is proposed within the setback of a natural feature which is inside a provincial park or conservation reserve, the park superintendent or conservation reserve manager should be contacted prior to undertaking site investigations, as a permit may be required. Applicants proposing projects within the setback of a provincial park or conservation reserve will also have to address the potential negative environmental effects to the Provincial Park or conservation reserve itself, through an Environmental Impact Study. Applicants should consider discussing the features, functions and values of the protected area, as well as any field work required to complete an EIS during the site investigation stage.

Natural features in Specified Provincial Plan Areas – Oak Ridges Moraine & Greenbelt Plan

The project boundary is not located within the Oak Ridges Moraine Plan Area or the Greenbelt Plan's Protected Countryside Area.

Project locations which are proposed in the Oak Ridges Moraine Plan Area or the Greenbelt Plan's Protected Countryside Area require the identification of additional natural features during the records review, including sand barrens, savannahs, tallgrass prairies, and alvars. When conducting site investigations for natural features in the Oak Ridges Moraine Plan Area or the Greenbelt Plan's Protected Countryside Area, applicants must also verify the boundaries of any sand barrens, savannahs, tallgrass prairies, and alvars identified through the records review and establish any additional instances of these natural features and their boundaries. Applicants should note that although the site investigation must consider these additional natural features throughout the Greenbelt Plan's Protected Countryside Area, their development prohibitions and setbacks apply only to the Natural Heritage System of the Protected Countryside Area.

Oil, Gas and Salt Resources

There are no known petroleum wells within the project boundary or 120 metres thereof. However, we suggest you consult the Oil, Gas and Salt Library to confirm there are none of these resources within the general area and the project boundary. Please visit the online library at the following link: http://www.ogsrlibrary.com/

Species at Risk

A review of our available data records and our best available information indicates that Loggerhead Shrike (Endangered), Least Bittern (Threatened), Eastern Musk Turtle (Stinkpot) (Threatened), Bobolink (Threatened) and Black Tern (Special Concern) are known to occur in the immediate area of the study site. In addition, Eastern Hog-nosed Snake (Threatened), Northern Map Turtle (Special Concern), King Rail (Endangered), Whip-poor-will (Threatened), Short-eared Owl (Special Concern) and Snapping Turtle (Special Concern) are known to occur in the general area. Although no other threatened or endangered species or their habitat have been documented in the area of the proposed project, these features may be present and this list should not be considered complete.

Please note that Species listed as extirpated, endangered or threatened on the Species at Risk in Ontario (SARO) List are protected under the Endangered Species Act, 2007 (ESA). Section 9(1) of the ESA prohibits a person from killing, harming, harassing, capturing or taking a member of a species listed as endangered, threatened or extirpated on the SARO list. Section 10(1) of the ESA prohibits the damage or destruction of habitat of a species listed as endangered or threatened on the SARO list. Considerations for Species at Risk and any associated permits which may be required through the Endangered Species Act are administered through a separate process from the Renewable Energy Approval process.

MNR recommends conducting a preliminary site assessment to determine if species at risk or their habitat are likely to occur on the subject property or in the general surrounding area. This assessment is primarily a review of currently available information (e.g. from MNR, municipalities, conservation authorities) including species distributions and habitat requirements at all life stages. However, preliminary field work may be necessary at this stage to confirm some of the available information. If a preliminary site assessment determines that no species at risk or their habitat are present on the subject property, then no further assessment may be necessary. If a preliminary site assessment determines that species at risk or their habitat may be present on the subject property, then we recommend completing a detailed site assessment that includes additional field investigations at the appropriate time of year by a qualified individual. MNR also recommends you fully evaluate your proposed project/activities for potential impacts to species at risk or their habitat to ensure that your proposed project activities will not contravene the ESA, 2007.

As noted above, Loggerhead Shrikes are known to occur in the immediate area of the subject location. Please see attached map for known Loggerhead Shrike habitat. This habitat is protected under the Endangered Species Act, 2007, section 10 (1) states, '*no person shall damage or destroy the habitat of, a species that is listed on the Species at Risk in Ontario List as an endangered or threatened species'*. Please refer to the

enclosed Electronic Intellectual Property and User Licence Agreement regarding the proper use of the sensitive data included in the attached map (including Alvar locations), as this information is intended for your reference only and should be treated as confidential and not released.

MNR should be contacted immediately if the assessment described above determines that species at risk or their habitat is present and may be impacted by on site activities. Activities should be modified to avoid any negative impacts to species at risk or their habitat until further discussions with MNR can occur regarding opportunities for avoidance or permitting requirements. Should you have any questions please contact the Peterborough District Species at Risk Biologist at 705-755-2001.

If any species at risk are found please contact Kate Pitt Species at Risk Biologist, Peterborough District at 705-755-3104. Requirements of the ESA, 2007 with respect to renewable energy projects can be found in MNR's Approvals and Permitting Requirements (APRD) document. MNR also recommends that planning for site investigation should take place well in advance of the appropriate season and draft monitoring protocols or procedures should be submitted to MNR for review to ensure that work is completed in accordance with MNR guidelines or procedures or requirements.

Please note, that in Ontario, species that may be at risk are reviewed by a team of experts known as the Committee on the Status of Species at Risk in Ontario (COSSARO). One of COSSARO's responsibilities is to maintain a list of species to be assessed in the *future*. We recommend that you consult the following link to ensure that you are aware of any species on the list for future assessment which may be present within your project boundary or the general area.
http://www.mnr.gov.on.ca/en/Business/Species/2ColumnSubPage/STDPROD_068707.html

Proposed Site Investigation Work Plan

MNR has additionally completed a review of the proposed site investigation work program, "Amec Workplan for Samsung Solar – July 2001f", as submitted via email on July 25, 2011.

In addition to those records listed within the propose work program, we highly recommend consulting with the Canadian Wildlife Services and Environment Canada to review any available records on bird migration, stopover or nesting in relation to Amherst Island and the proposed project location

Please review the MNR's Approval Permitting and Requirements Document (APRD) to assess if additional permitting or authorizations under other MNR administered legislation, including the Endangered Species Act are required to facilitate the construction and operation of the proposed solar power facility. This document is available online at
http://www.mnr.gov.on.ca/en/Business/Renewable/2ColumnSubPage/276843.html.

In order to appropriately assess the need for wildlife specific surveys, detailed mapping of land based habitat features should be completed and assessed as soon as possible. While MNR is in general agreement with the surveys presented in the proposed site investigation program, those field level surveys should be completed in habitat types appropriate to the given survey methodologies. For example, grassland bird surveys should be conducted in areas of suitable grassland habitat. Site specific mapping of survey routes or points, overlaid on a preliminary assessments of habitat types, would provide a better representation of the proposed survey methodologies and assist in our review. Additionally, survey methodologies should be presented in terms of their effort (i.e. number of point counts, survey spacing). Please consult with MNR's current technical guidelines with respect to survey methodologies for surveys focused on birds, bats and potential species at risk.

MNR suggests that you review the Natural Heritage Assessment Guide for Renewable Energy Projects (NHAG), and the Significant Wildlife Habitat Technical Guide, early in your planning process for the site

investigation methodology, to ensure that the field work and data collection meets the appropriate standards and requirements.

Field methodologies to assess the presence and density of bird species, should also include the identification and calculation of the density of breeding pairs, both by species and associated habitat types. In addition, while road side surveys may be a good indicator for some species or birds and raptors, we recommend that surveys within woodland areas also be completed to ensure that species associated with dense and interior habitats, such as some small owl species, be captured in your survey methodologies.

Please note that seasonal site investigations for reptile surveys should be conducted, and focused, to appropriate seasons and not be generalized to the entire spring, summer and fall survey periods. Surveys should be focused to emergence and pre hibernation periods and additionally with consideration to species ecology and life history requirements. We also recommend that survey periods commence before June as earlier and warmer springs may result in emergence of certain species during mid to late may.

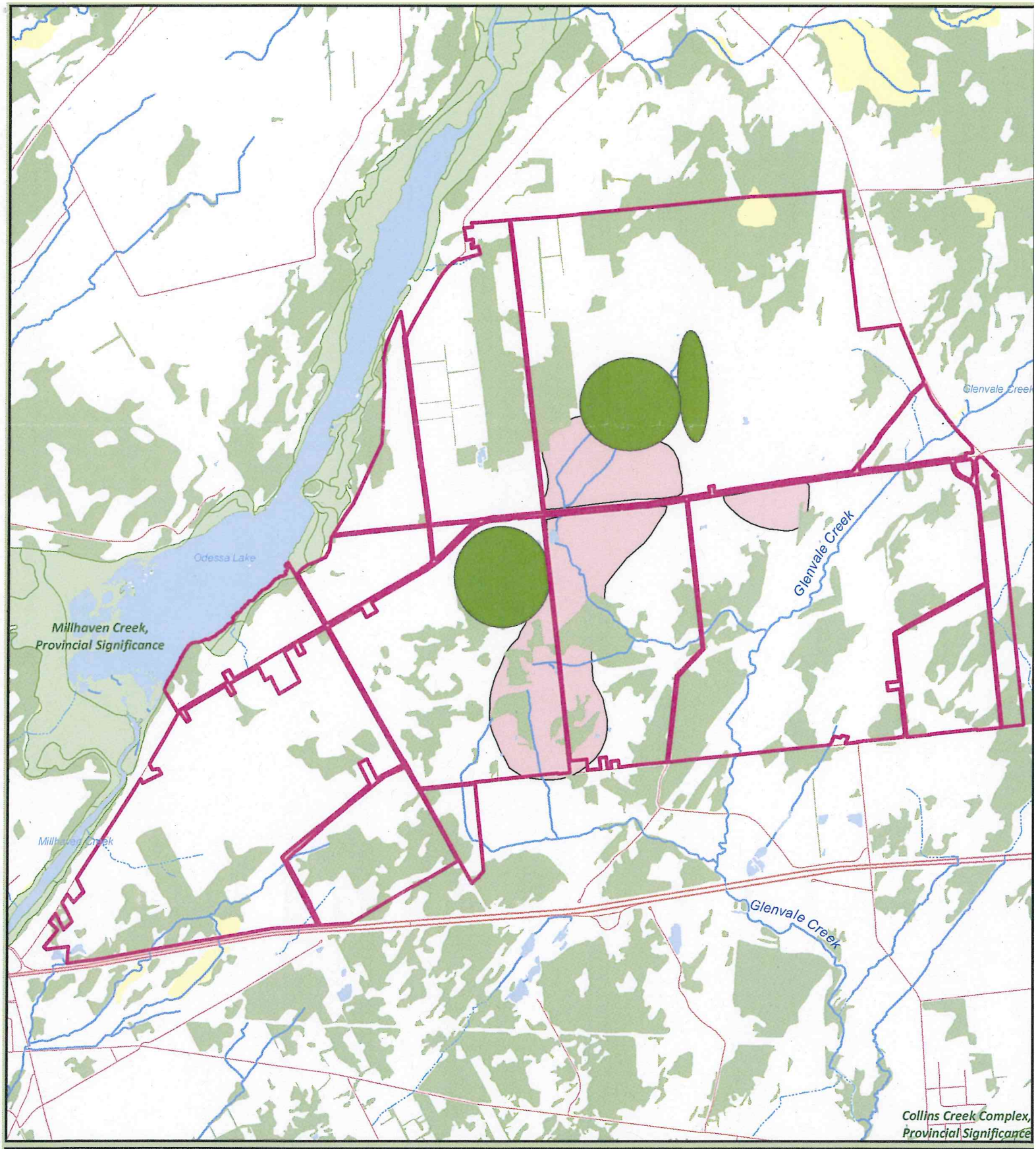
These comments are submitted for your reference in the development of upcoming field surveys and are in addition to those comments and recommendation shared during our meeting on July 26, 2011 at our office in Peterborough.

Sincerely,

Eric R. Prevost
Renewable Energy Planning Ecologist
Peterborough District MNR

Cc: Matthew Evans, Senior Biologist, Environmental Assessment Earth & Environmental, AMEC

Enclosed: Natural Heritage Features Map, Sol-Luce Kingston Solar Project
MNR's Bobolink Survey Methodology Protocol



Ontario Ministry of Natural Resources
Peterborough District

Natural Heritage Features

Sol-Luce Kingston Solar Project - Phase 2
Review Land Use Version 1.1

Legend

- Sol-Luce Kingston Project Location
- Shrike Habitat
- Permanent
- Intermittent
- Waterbodies
- Life Science ANSI
- Earth Science ANSI
- Wetlands - Evaluated
- Wetlands - Unevaluated
- Wooded Area
- Alvars
- Highways
- Other Roads

0 0.2 0.4 0.8 1.2 1.6 2 Kilometers

1:40,000

N W E S

Notes:
Produced by: Ministry of Natural Resources
Peterborough District GIS
This map is for illustrative purposes only. Do not consider it a precise indicator of routes, locations, nor as a guide to navigation. Data is from the Peterborough District NRVIS base and represents best intentions to maintain a digital dataset, however more recent information may exist on file. This map is for working purposes only and not intended for external distribution. This map may also contain errors or omissions.

Date: 2011-08-04

Ontario

Bobolink Survey Methodology

Conditions: Surveys need to be done under field conditions with no precipitation, no or low wind speed and good visibility. In the course of the surveys if a nest or probable nest is encountered, the surveyor is advised not to disturb it or search an area for nests. Surveys rely on observations of birds while walking along transects through the fields.

Qualifications: Observers should be familiar with Bobolink identification by sight and sound. This includes being able to separate males from females and knowledge of Bobolink and their behaviours during breeding to allow it to be categorized (e.g. singing male, pair in suitable habitat, carrying food or nesting material, foraging, territorial displays, recently fledged young). See the Ontario Breeding Bird Atlas for additional behaviour categories.

Pre-Survey: Set up parallel transects crossing the fields lengthwise at approximately 250 m intervals and locate point counts along the transects at 250 m intervals. The locations of point count along the transects may be staggered by up to 125 m to give the best surveying opportunities. Point counts should be located to give a good view of the surrounding fields. Create GPS locations for each point count. Materials needed for the survey include binoculars, notebook, GPS, compass, watch and camera.

Survey: Surveys should start at dawn and continue until no later than 9 am. The observer will walk the transect stopping at each point count. Undertake ten minutes of observations and listening at each point count. Record information on all Bobolink observed or heard, their sex, general location, direction, distance, behaviour and interactions with other Bobolink or other species. On transit between point counts, record any Bobolink observed or heard if not also seen on the point counts. Nest searches should be avoided.

Repeat visits: Complete at least three sets of point count surveys. These should take place between the last week of May and the first week of July with each survey separated by a week or more from previous surveys.

Habitat: Make notes on the general conditions of the fields at the locations where Bobolink are noted. These would include broad habitat descriptors (e.g. field, hedgerow, fence line), estimated height of the vegetation, general vegetation type (including predominate species if known), estimated percentage of grass versus broad-leaved plants, and presence of litter (i.e. thatch). It is best if the surveyor evaluates the locations from the transect or close to the transect rather than walking directly into the area where the Bobolink were found. Photos should be taken.

Ontario Ministry of Natural Resources, Draft, August 4, 2011

Ministry of
Natural Resources

Peterborough District
P.O. Box 7000, 300 Water Street
1st Floor, South Tower
Peterborough, ON K9J 8M5
Telephone: (705) 755-2001
Facsimile: (705) 755-3125

Ministère des
Richesses naturelles

Le bureau du district de Peterborough
C.P. 7000, 300 rue Water
Peterborough, ON K9J 8M5
Telephone: (705) 755- 2001
Facsimile: (705) 755-3125

Ontario

September 6, 2011

AMEC Earth and Environmental
160 Traders Blvd. East, Suite 110
Mississauga, ON, L4Z 3K7

Attention: Mr. Matthew Evans

Re: Bobolink occurrences at Sol-Luce Kingston Solar PV Energy Project and proposed archaeological surveys

Dear Mr. Evans:

Peterborough District MNR has completed a review of the potential impacts of the proposed archaeological surveys on Bobolink and its habitat. MNR has determined that carrying out archaeological surveys by ploughing the hayfields, pasturelands and Sod/Soy fields on the site associated with the above noted proposed solar energy project may contravene sections 9 (species protection) and/or 10 (habitat protection) of the *Endangered Species Act, 2007* (ESA). MNR recommends a less intrusive method of archaeological survey to minimize the negative impacts on Bobolink and its habitat. However, we recognize this option may depend on the requirements set out by the Ministry of Tourism and Culture. If ploughing must be undertaken for these sites, the archaeological surveys should be undertaken under the following conditions in order to reduce the likelihood of contravening the ESA:

1. Ploughed fields shall be reseeded with hay as soon as possible upon completion of the archaeological survey, and subsequently monitored to ensure hayfield habitat is re-established.

2. Since the birds have already been nesting the ploughing and reseeding shall take place after the breeding season, starting on September 15, 2011.

Bobolink habitat typically consists of mixed grass prairies, meadows, natural grasslands, and hayfields. These are non-forested, open grassland habitats, with a mixture of relatively tall grasses, some broad-leaved plants and a moderate amount of plant litter. Bobolink also nests in lightly grazed pastures, fallow and abandoned fields, shallow grassy marshes, beaver meadows and peat-lands. Most commonly, Bobolink are found in hayfields with a substantially higher proportion of cool season grasses, such as Timothy, Kentucky Bluegrass, Orchard Grass, and Smooth Brome, compared to forbs (i.e. broad-leaved flowering plants, such as clover or alfalfa). These hayfields provide grasses used for nesting, feeding, and seeking cover to escape from predators and poor weather conditions (i.e., excess cold, wind, rain, and sun).

Habitat patches >3ha are preferred, and Bobolink are most likely to nest in fields surrounded by other open habitats, as opposed to forested areas. Population densities are higher in larger, interconnected fields, which is considered higher quality habitat. Smaller fields have a greater edge to area ratio and lower probability of occupancy. However, the species will use smaller areas of habitat if they are part of a local system with other suitable patches nearby. Territory

size ranges from approximately 0.5-2.0ha, with higher densities (smaller territories) in higher quality habitat, and larger territories in lower quality habitat.

Any potential habitats located in areas where Bobolink densities have been recorded to be high (two highest density categories) according to the Ontario Breeding Bird Atlas will be considered occupied unless appropriate comprehensive surveys are conducted to support that Bobolink are not using the habitat. Where lower densities (four lower density categories) have recorded Bobolink, suitable habitat patches will be considered occupied if evidence suggests that Bobolink have used the patch in the past 10 years, unless appropriate comprehensive surveys are conducted to support that Bobolink are not using that habitat patch.

Please note that this assessment relates only to the potential impacts of the proposed archaeological surveys on Bobolink and its habitat. Should other species at risk be found on site, MNR should be contacted immediately for further direction.

Should you proceed with constructing/installing and operating solar panels on this site there is likelihood that constructing/installing and operating solar panels on this site will contravene section 9 and/or 10 of the ESA. The project will likely therefore require a permit issued by the Minister of Natural Resources in order to proceed.

In order to facilitate the commencement of archaeological assessment activities, we have provided the aforementioned advise and direction with specific reference to Bobolink. Please note, only the fields/properties identified in Appendix A, should be ploughed. The remaining fields are Loggerhead Shrike habitat, and as per my letter dated August 25, 2011, MNR requires additional information prior to assessing impact of archaeological studies on known Loggerhead Shrike nesting sites.

Should you have any questions about this information you can contact me at eric.prevost@ontario.ca or at (705) 755-3134.

Sincerely,

Eric Prevost

Renewable Energy Planning Ecologist
Ministry of Natural Resources, Peterborough District

Cc. Andrea Fleischhauer, A\Southern Region Renewable Energy Coordinator

Appendix A: Agricultural Fields to be Ploughed

Property #	Field #
23	F1
23	F2
23	F3
23	F4
23	F5
22	F6
21	F7
21	F8
21	F9
21	F10
21/22	F11
19	F12
19	F13
19	F14
19	F15
19	F16
20	F17
20	F18
20	F19
20	F20
20	F21
20	F22
20	F23
20	F24
19	F25
19	F26
19	F27
14b	F30
14b	F31
12	F36
12	F37
12	F38
12	F39
12	F40
12	F41
13	F42
14b	F46
14b	F47
14b	F48
14b	F50
14b	F51
3	F62
3	F63
3	F64
3	F65
4	F67
11b	F68
11a/11b	F69

11a	F70
11a/11b	F71
11b	F72
11a	F73
11a/11b	F74
10	F75
7	F76
7	F77
7	F78
7	F79
10	F80
9	F81
8	F82
8	F83
8	F84
8	F85
8	F86
6a	F87
6a	F88
6a	F89
6a	F90
6a	F91
6a	F92
6a	F93
8	F94
8	F95
6a	F99
6a	F100
13	F101

363500 364000 364500 365000 365500 366000 366500 367000 367500 368000 368500 369000 369500 370000 370500 371000 371500

4909500 4909000 4908500 4908000 4907500 4907000 4906500 4906000 4905500 4905000

Odessa Lake
Quabbin Road
Unity Road
Howes Road
Smith Road
Rock Road
Hwy 38
Mud Lake Road North (County Rd. 19)
Hwy 401
TransCanada Natural Gas Pipeline
Transmission Lines

7 4 3 6A 5 11B 11A 8 6B 14C 14B 14A 13 12 17 19 20 21 22 23

P:\EM\Projects\2011\TC111406 Samsung Solar REA\GIS\Terrestrial\Alvar_Shrike_MNRData_OverviewShrikeHabitat_and_Alvars_1.mxd

ALVAR and SHRIKE HABITAT

Approximate Study Property Boundary
Alvar Area (MNR)
Shrike Habitat / Nesting Area

0 100 200 400 600 800 1,000 Metres

Datum: NAD83
Projection: UTM Zone 18N

October 26, 2011

Cataraqui Region Conservation Authority
P.O. Box 160
Glenburnie, ON
K0H 1S0

(*Sent by e-mail only*)

Dear Cataraqui Region Conservation Authority

Re: Future Solar Power Development Site Between Mud Lake Road and Highway 38 – Natural Heritage Assessment

AMEC Environment and Infrastructure have been retained to undertake work on the site of a future solar power development to address natural science issues. The study area is located in the City of Kingston and Loyalist Township, between Mud Lake Road and Highway 38 (north of HWY 401). This study will examine both the aquatic and terrestrial environment within and immediately surrounding the development boundaries.

AMEC would like to take this opportunity to enquire if you hold any information with respect to terrestrial natural heritage features (vegetation, wildlife), and the location of potential Species at Risk within the study area described above. We have been conducting field reconnaissance since June 2011 to confirm existing data and to collect additional detailed information at the project site. Any additional information you may hold would greatly aid us in our understanding of the area and completion of a Natural Heritage Assessment.

We would be pleased to discuss this information and any questions you may have by email, phone, or in person. Please contact Matt Evans (Senior Biologist) at matt.evans@amec.com or at telephone number (416) 574- 7399.

Thank you for your assistance with this matter.

Kind Regards,

Erin Donkers, B.Sc.
Junior Botanist

AMEC Environment and Infrastructure, A Division of AMEC Americas Limited

c.c: Matt Evans, AMEC

October 27, 2011

Canada Wildlife Service
Environment Canada
4905 Dufferin Street
Downsview, ON
M3H 5T4

(*Sent by e-mail only*)

Dear Ms. Angela McConnell,

Re: Future Solar Power Development Site Between Mud Lake Road and Highway 38 – Natural Heritage Assessment

AMEC Environment and Infrastructure have been retained to undertake work on the site of a future solar power development to address natural science issues. The study area is located in the City of Kingston and Loyalist Township, between Mud Lake Road and Highway 38 (north of HWY 401). This study will examine both the aquatic and terrestrial environment within and immediately surrounding the development boundaries.

AMEC would like to take this opportunity to inquire if you hold any information with respect to habitat, wildlife and/or fisheries as well as the location of potential Species at Risk within the study area described above. We have been conducting field reconnaissance since June 2011 to confirm existing data and to collect additional detailed information at the project site. Any additional information you may hold would greatly aid us in our understanding of the area and completion of a Natural Heritage Assessment.

We would be pleased to discuss this information and any questions you may have by email, phone, or in person. Please contact Matt Evans (Senior Biologist) at matt.evans@amec.com or telephone number (416) 574- 7399.

Thank you for your assistance with this matter.

Kind Regards,

Erin Donkers, B.Sc.
Junior Botanist
AMEC Environment and Infrastructure,
A division of AMEC Americas Limited

Tel: (905) 568 2929 Fax: (905) 568 1686

c.c: Matt Evans, AMEC
c. c: Ken Tuininga

October 26, 2011

Kingston Field Naturalists
P.O. Box 831
Kingston, ON
K7L 4X6

(*Sent by e-mail only*)

Dear Gaye Beckwith (President),

Re: Future Solar Power Development Site Between Mud Lake Road and Highway 38 – Natural Heritage Assessment

AMEC Environment and Infrastructure have been retained to undertake work on the site of a future solar power development to address natural science issues. The study area is located in the City of Kingston and Loyalist Township, between Mud Lake Road and Highway 38 (north of HWY 401). This study will examine both the aquatic and terrestrial environment within and immediately surrounding the development boundaries.

AMEC would like to take this opportunity to enquire if you hold any information with respect to natural heritage features (vegetation, wildlife, and/or fisheries), and the location of potential Species at Risk within the study area described above. We have been conducting field reconnaissance since June 2011 to confirm existing data and to collect additional detailed information at the project site. Any additional information you may hold would greatly aid us in our understanding of the area and completion of a Natural Heritage Assessment.

We would be pleased to discuss this information and any questions you may have by email, phone, or in person. Please contact Matt Evans (Senior Biologist) at matt.evans@amec.com or telephone number (416) 574- 7399.

Thank you for your assistance with this matter.

Kind Regards,

Erin Donkers, B.Sc.
Junior Botanist
AMEC Environment and Infrastructure, A Division of AMEC Americas Limited

Tel: (905) 568 2929 Fax: (905) 568 1686

c.c: Matt Evans, AMEC

Communications for Kingston Solar LP

Date	Communication*
Year 2011	
July 11th	Email to OMNR (Eric Prevost) from Jeff Balsdon (AMEC).
July 13th	Email from OMNR (Eric Prevost) to Jeff Balsdon (AMEC).
July 14th	Meeting set-up by email (Jeff Balsdon [AMEC] to OMNR [Eric Prevost]).
July 25th	Sent OMNR (Eric Prevost) AMEC's proposed field work plan, as requested.
July 26th	Meeting in Peterborough - July 26th, 10:30 AM - 12:00 PM Matt Evans and Jeff Balsdon (AMEC) met with OMNR (Eric Prevost, Sarah Lewis, and Kate Pitt). Meeting involved initial discussions of project proposal and work plan and general info gathering from OMNR.
August 2, 3, 4th	Field Trip to Project Site by Matt Evans, Jeff Balsdon and Jon Pleizier (AMEC) - August 2, 3, 4 Conversed with farmer "John" on August 3rd, met him on his land.
August 9th	Email to OMNR (Eric Prevost) regarding ploughing fields for archeologists.
August 11th	Ken Brookes (AMEC) emailed the CRCA looking for Ecological Land Classification Geospatial Data Availability. CRCA (Travis York, CRCA Geomatics Technician) responded saying that none was available.
August 12th August 16th	Ken Brookes (AMEC) emailed the CRCA (Travis York, CRCA Geomatics Technician) asking for GIS layers on all significant habitat (i.e. woodlands, wetlands, valleylands, etc.).
August 19th	Matt Evans (AMEC) requested the 5-year histories of all fields and for access to non-participating lands within the 120 m areas from Andrew Moores (Samsung).
August 17th	Ken Brookes (AMEC) emailed OMNR (Eric Prevost) to obtain alvar layers.
August 24th	Letter of request to plough for archeology sent to OMNR (Eric Prevost).
Sept 6th	Formal response received from OMNR (Eric Prevost) regarding the letter of request to plough for archaeology. OMNR's email was replied to.
Sept 14th	Discussion with Andrew Moores (Samsung) about SAR and provision of land access from non-participating landowners for areas within 120 m of Project Location. OMNR (Eric Prevost and Kate Pitt) were emailed and called regarding SAR.
Sept 15th	SAR and alvar layers were received from OMNR (Shaun Walsh, GIS lab). Discussion with OMNR (Eric Prevost) about ESA permits for ploughing and for the overall Project. Andrew Moores and all of Samsung were emailed regarding conversation with OMNR. OMNR (Eric Prevost) was emailed about MTC and Test Pits.
Sept 16th	AMEC's Wildlife Report sent to OMNR for review and comments (Eric Prevost).

Date	Communication*
Sept 20th	OMNR (Eric Prevost) was called regarding discrepancies in fields not available for ploughing but these fields do not appear to be in SAR habitat.
Sept 26th	Emailed Andrew Moores (Samsung) about accessing private lands + 5-year histories
Sept 27th	Response from OMNR (Eric Prevost) confirming the allowance of test pitting by MTC. The name and contact information for local SAR expert was provided by OMNR(Eric Prevost).
Sept 28th	OMNR (Eric Prevost) was emailed regarding potential compensatory requirements for Sol-luce, requesting information and a meeting.
Sept 29th	Meeting with landowners Brian and Grace Wilson while asking to access their land for ELC surveys. Discussed various things related to plants and birds on their property.
Oct 3rd	Emailed confirmation from OMNR (Eric Prevost) that the OMNR were in the process of working on potential compensatory requirements for Samsung Sol-luce. Matt Evans (AMEC) emailed him back thanking him and asking for a meeting when they are ready.
Oct 4th	OMNR (Eric Prevost) was emailed inquiring which ELC community table we should be referring to when conducting field surveys. Conference call with Andrew Hinshelwood (MTC) - with Barbara Slim and Shaun Austin (AMEC). Andrew Moore (Samsung) emailed regarding Property #8 and accessing private lands.
Oct 6th	Email sent to OMNR (Eric Prevost) regarding test pitting in SAR habitat - asking for a Letter of Advice. Email sent to OMNR (Eric Prevost) regarding other properties we want to plough (1, 2, 7 north, 14A south, 18). Email sent to OMNR (Eric Prevost) for confirmation about ploughing in the alvars.
Oct 12th	Email received from OMNR (Eric Prevost) confirming the allowance for AMEC to test pit.
Oct 14th	Phone message left by OMNR (Eric Prevost) regarding archaeologists' work. His message was returned by Matt Evans (AMEC).
Oct 21st	OMNR (Eric Prevost) called to say that they held an internal meeting today to discuss the Samsung Sol-luce SAR issue.
Oct 26th	Erin Donkers (AMEC) emailed the CRCA requesting information for the Records Review (the CRCA were contacted July 28th and they responded with a letter on August 8th providing some information and directing us to their 2006 Natural Heritage Study). Erin Donkers (AMEC) emailed the Kingston Field Naturalists for Records Review information. Matt Evans (AMEC) called SAR expert Kurt Hennige and left messages at both numbers (Kurt was also emailed on October 14th but it seemed as though the email address that OMNR had provided to us does not work).
Oct 27th	Erin Donkers (AMEC) emailed Canada Wildlife Service (CWS) requesting information for Records Review and Species at Risk.
Nov 1st	SAR expert Kurt Hennige returned Matt Evans' (AMEC) call

Date	Communication*
Nov 8th	Email/phone message received from OMRN (Eric Prevost) regarding wanting SAR forms. OMNR (Eric Prevost) was emailed back stating that the forms would be ready in the next day or two. A telephone message was left a message for Kurt Hennige regarding SAR
Nov 9th	Emails with local SAR expert Kurt Hennige
Nov 14th	CRCA, CWS, and Kingston Field Naturalists were emailed a second time, requesting information for the Records Review.
Nov 16th	Discussion with OMNR (Eric Prevost) regarding possible SAR meeting next week.
Nov 21st	Email sent to OMNR (Eric Prevost) inquiring about references to SAR in the NHA (specifically with respect to our field notes). Email response was received from Kingston Field Naturalists' President Gaye Beckwith stating no real concerns about the Project and stated that they are aware that the project is in potential SAR habitat.
Nov 22nd	Kingston Field Naturalists' President Gaye Beckwith was emailed again, suggesting that if they have any other information they should contact us (Matt Evans, AMEC). ESA Information Gathering forms were sent to OMNR (Eric Prevost); we received a confirmation email.
Nov 23rd	Discussion with OMNR (Eric Prevost) regarding ESA forms and setting up a meeting next week. Additional information was sent to OMNR (Eric Prevost), as per request.
Nov 24th	Numerous telephone and email discussions with OMNR (Eric Prevost) regarding ESA-SAR permitting and a meeting next week. Information was also sent via FTP site.
Nov 25, 28, 29, 30, Dec 1	Numerous telephone and email discussions with OMNR (Eric Prevost) regarding ESA-SAR permitting and a meeting next week (discussion of agenda and figures he wants us to bring). Additional information was sent via FTP site regarding SAR and field boundaries. Questions about the NHA (Nov 30).
Dec 2nd	Meeting with OMNR in Peterborough to discuss ESA.
Dec 3rd	Email and phone call to OMNR (Eric Prevost) regarding winter deer yards and forest PIF bird species.
Year 2012	
Jan 19th	OMNR (Eric Prevost) provided with an update on the NHA.
Jan 24, 25, 26th	Correspondence with OMNR (Eric Prevost) regarding SAR workshop and asking for a fast review of the NHA.
Jan 27, 28th	Correspondence with OMNR (Eric Prevost) regarding raptor wintering areas and surveys.

Date	Communication*
Jan 31st	OMNR (Eric Prevost) was sent an update on the project (status of the NHA and SAR forms, etc.). Jon Pleizier (AMEC) conducted a discussion with OMNR (Eric Prevost) regarding winter raptor area boundaries and winter raptor survey protocol.
Feb 1st	Jon Pleizier (AMEC) emailed OMNR (Eric Prevost) providing written details of winter raptor and Short-eared Owl surveys to be completed.
Feb 3rd	Jon Pleizier (AMEC) received email approval of raptor and Short-eared Owl survey protocol by OMNR (Eric Prevost). OMNR (Eric Prevost) also confirmed the definition of significant winter raptor habitat as well as the requirement for a minimum of three winter raptor. A minimum of three rounds of surveys must be completed, at which point OMNR will decide if further surveys are necessary.
Feb 3rd	Jon Pleizier (AMEC) spoke to Janice Scott on the telephone, compiler for the Amherst Island Christmas Bird Count (CBC). Janice confirmed the exclusion of the Sol-luce Study Area from the count circle. Also emailed Ron Weir, compiler of the Kingston CBC who also confirmed the exclusion of the Sol-luce Study Area from the count circle.
Feb 6th	Jon Pleizier (AMEC) emailed OMNR (Eric Prevost) regarding the definition of row cropping with regards to the evaluation of significant open country bird breeding habitat.
Feb 16th	Correspondence with OMNR (Eric Prevost) regarding SAR questions. Izabela Kalkowski (AMEC) sent an email to OMNR (Eric Prevost) inquiring about compensation strategies required for ESA permit applications.
Feb 22nd	Emails to OMNR (Eric Prevost) regarding scheduling the SAR workshop and regarding breeding season dates for SAR. Jon Pleizier (AMEC) emailed OMNR (Eric Prevost) regarding the need for additional winter raptor surveys following based on results of surveys completed between Feb 8th and 18th. OMNR (Eric Prevost) replied on Feb 27th to confirm that no additional surveys are needed. OMNR (Eric Prevost) replied to Izabela Kalkowski (AMEC) that her email has been forwarded to the OMNR SAR biologist.
Feb 23rd	Emails to OMNR (Eric Prevost) regarding wetland on P24.
Feb 24th	Emails and call to OMNR (Eric Prevost) regarding raptor surveys. Sent the Stantec baseline report and asked about the need for spring surveys.
Feb 27th	Emails to OMNR (Eric Prevost) regarding raptor surveys.
Feb 28th	Jon Pleizier (AMEC) exchanged emails with Dr. Erwin Batalla, a local resident, regarding Dr. Batalla's past observations of wintering raptor species along Unity Road.
Feb 28, 29th	Emails to OMNR (Eric Prevost) regarding scheduling the SAR workshop.
Mar 2nd	Matt Evans and Jon Pleizier (AMEC) call OMNR (Eric Prevost) – OMNR says that the recent raptor surveys conducted by AMEC are satisfactory and no further surveys are necessary (information had been sent previously). Conversation regarding SAR in grasslands (indicators) and the NHA/APRD/SAR report. OMNR (Eric Prevost) replied to an email from Feb 16th regarding SAR compensation strategies.

Date	Communication*
Mar 8th	Email to OMNR (Eric Prevost) asking about the spring surveys again and re-sent Stantec's baseline report.
Mar 8, 9th	Correspondence between Izabela Kalkowski (AMEC) and Mary Vincent (CWS) regarding the need for SARA permits. It was confirmed that SARA permits are not required for this project.
Mar 12th	OMNR (Eric Prevost) downloaded the Stantec report (see Feb 24th and Mar 8th).
Mar 14th	Email received from OMNR (Eric Prevost) stating that no spring surveys are necessary.
Mar 15th	Matt Evans (AMEC) replied to OMNR (Eric Prevost) to thank him. Email sent to CRCA regarding the corridor through P21/22/23/24.
Mar 19, 22nd	Correspondence with OMNR (Eric Prevost) about scheduling a SAR workshop in April.
Mar 22, 23rd	Voicemail from OMNR (Eric Prevost) and response by Matt Evans (AMEC) regarding scheduling a SAR workshop in April.
Mar 26th	Loyalist Township Meeting held. Talked to CRCA to discuss 30 m buffers and the fact that the Glenvale Creek floodplain is much wider than it appears to be. CRCA was informed that AMEC conducted the appropriate surveys in this area.
Mar 29th	Asked OMNR (Eric Prevost) about re-scheduling a SAR workshop for April 18 or 19th as Samsung is unavailable for a meeting on the 11th or 12th.
Mar 30th	Correspondence with OMNR (Eric Prevost) setting the date for the SAR workshop on April 19th at 1:00 pm. Discussed agenda.
April 10th	Emailed OMNR (Eric Prevost) to discuss the APRD.
April 17th	Phoned OMNR (Eric Prevost) to discuss agenda for meeting on the April 19th.
April 19th	Meeting with the OMNR in Peterborough to discuss the NHA.
May 3rd	Conference call with OMNR (Eric Prevost).
May 4th	First draft of the NHA sent to the OMNR for their review.
May 18th	Meeting with the OMNR in Peterborough to discuss the NHA and receive comments from their review.
May 23rd	Conference call with OMNR (Eric Prevost) to discuss more comments on the NHA.
June 1st	Revised NHA submitted to the OMNR (Eric Prevost).
June 6th	Received another round of revisions from the OMNR (Eric Prevost).
June 7th	Several email and phone call discussions were had with the OMNR (Eric Prevost) regarding the revisions received yesterday.

*Communication by Matt Evans (Senior Biologist, AMEC), unless otherwise specified.

APPENDIX D

RECORDS REVIEW