

#### **4.0 Amendments to the Records Review**

The study area initially examined for the Adelaide Wind Energy Centre Records Review Report extended beyond the previously proposed project area to help compensate for any later changes in the project's layout. Upon review of the changes to the project's layout, all project areas of the current layout were previously studied and included with the Records Review submission to the MNR. Thus, there are no new habitats of seasonal concentrations of animals, rare vegetation communities or specialized habitats for wildlife, species of conservation concern, or other natural features that need to be amended in the NHA.

## 5.0 Amendments to the Site Investigation

By reviewing the changes made to the Adelaide Wind Energy Centre layout since its NHA confirmation, it has been verified that these alterations have only led to changes in distance between project components and natural features as well as the removal of three natural features (WOD-033, WOD-054, WOD-056) and one wildlife habitat (CAS-005) for Carey's sedge (*Carex careyana*) from the project area. These changes have not resulted in any new features being included in the project area. Since there are no new features that need to be studied, it has been determined that further site investigation is unnecessary.

Given the changes in project location, described and mapped above, NRSI has identified that there are several instances where the project location is now closer to natural features that had been identified as being within 120m of the project location. Each of these specific instances has been outlined below (Table 2), including feature identification number, feature type, and comparison of distances from project location to natural feature between the presented layouts.

In addition, NRSI biologists have also reviewed the potential for additional generalized candidate wildlife habitat that may be present within 120m of the updated project location. Due to the small changes in the distances between project components and natural features, no addendums to generalized habitats were identified.

**Table 2. Updated Distances between Project Components and Natural Features in the Adelaide Wind Energy Centre**

Feature ID	Feature Type	Distances from NHA Submission (m)	New Layout Distances (m)	Amendment to the EOS and/or EIS Required? (Y/N)
WOD-003 BMA-014	Woodland Bat Maternity Colony	WT – 21 AR – 4 OL – 16 UL – 4 SI - >120	WT – 18 AR – 0 OL – >120 UL – 1 SI – >120	No - EOS completed with NHA. Distances did not change enough to warrant amendment to the EIS.
WOD-004 BMA-001	Woodland Bat Maternity Colony	WT – 100 AR – 4 OL – >120 UL – 4 SI - >120	WT – 65 AR – 4 OL – >120 UL – 30 SI – >120	No - EOS completed with NHA. Distances did not change enough to warrant amendment to the EIS.
WOD-005 BMA-012	Woodland Bat Maternity Colony	WT – 19 AR – 4 OL – >120 UL – 4 SI - >120	WT – 18 AR – 0 OL – >120 UL – 0 SI – >120	No - EOS completed with NHA. Distances did not change enough to warrant amendment to the EIS.
WOD-006	Woodland	WT – >120 AR – 4 OL – >120 UL – 4 SI - >120	WT – >120 AR – 20 OL – >120 UL – 20 SI – >120	No - EOS completed with NHA. Distances did not change enough to warrant amendment to the EIS.
WOD-007 BMA-011	Woodland Bat Maternity Colony	WT – 19 AR – 4 OL – >120 UL – 4 SI - >120	WT – 15 AR – 4 OL – 26 UL – 4 SI – >120	No - EOS completed with NHA. Distances did not change enough to warrant amendment to the EIS.
WOD-008	Woodland	WT – 21 AR – 10 OL – >120 UL – 10 SI - >120	WT – 13 AR – 2 OL – >120 UL – 2 SI – >120	No - EOS completed with NHA. Distances did not change enough to warrant amendment to the EIS.
WOD-009 BMA-005 AWO-004	Woodland Bat Maternity Colony Amphibian Breeding Habitat (Woodland)	WT – 63 AR – 108 OL – >120 UL – 4 SI - >120	WT – 53 AR – 4 OL – >120 UL – 4 SI – >120	No - EOS completed with NHA. Distances did not change enough to warrant amendment to the EIS.
WOD-010 BMA-004 AWO-005 CAS-002	Woodland Bat Maternity Colony Amphibian Breeding Habitat (Woodland) Carey's Sedge Habitat	WT – 51 AR – 4 OL – >120 UL – 4 SI - >120	WT – 19 AR – 1 OL – >120 UL – 4 SI – >120	No - EOS completed with NHA. Distances did not change enough to warrant amendment to the EIS.
WOD-012	Woodland	WT – 65 AR – 100 OL – >120 UL – 100 SI - >120	WT – 61 AR – 58 OL – >120 UL – 58 SI – >120	No - EOS completed with NHA. Distances did not change enough to warrant amendment to the EIS.
WOD-013 BMA-017	Woodland Bat Maternity Colony	WT - 23 AR - 78 OL - >120 UL - 78	WT – 19 AR – 2 OL – >120 UL – 2	No - EOS completed with NHA. Distances did not change enough to warrant amendment to

Feature ID	Feature Type	Distances from NHA Submission (m)	New Layout Distances (m)	Amendment to the EOS and/or EIS Required? (Y/N)
		SI - >120	SI - >120	the EIS.
WOD-014 BMA-019	Woodland Bat Maternity Colony	WT - 22 AR - 4 OL - >120 UL - 4 SI - >120	WT - 15 AR - 2 OL - >120 UL - 2 SI - >120	No - EOS completed with NHA. Distances did not change enough to warrant amendment to the EIS.
WOD-015 BMA-006	Woodland Bat Maternity Colony	WT - 16 AR - 4 OL - >120 UL - 4 SI - >120	WT - 15 AR - 2 OL - >120 UL - 2 SI - >120	No - EOS completed with NHA. Distances did not change enough to warrant amendment to the EIS.
WOD-016 BMA-020	Woodland Bat Maternity Colony	WT - 21 AR - 54 OL - >120 UL - 54 SI - >120	WT - 17 AR - 2 OL - >120 UL - 2 SI - >120	No - EOS completed with NHA. Distances did not change enough to warrant amendment to the EIS.
WOD-017 BMA-003 AWO-002 CAS-003	Woodland Bat Maternity Colony Amphibian Breeding Habitat (Woodland) Carey's Sedge Habitat	WT - 77 AR - 115 OL - >120 UL - 115 SI - >120	WT - 65 AR - 50 OL - >120 UL - 50 SI - >120	No - EOS completed with NHA. Distances did not change enough to warrant amendment to the EIS.
WOD-025	Woodland	WT - 74 AR - 4 OL - >120 UL - 4 SI - >120	WT - 80 AR - 8 OL - >120 UL - 8 SI - >120	No - EOS completed with NHA. Distances did not change enough to warrant amendment to the EIS.
WOD-026 BMA-018 AWO-003	Woodland Bat Maternity Colony Amphibian Breeding Habitat (Woodland) Yellow Stargrass Habitat	WT - 97 AR - 4 OL - >120 UL - 4 SI - >120	WT - 104 AR - 1 OL - >120 UL - 1 SI - >120	No - EOS completed with NHA. Distances did not change enough to warrant amendment to the EIS.
WOD-027 BMA-018	Woodland Bat Maternity Colony	WT - 18 AR - 4 OL - >120 UL - 4 SI - >120	WT - 17 AR - 2 OL - >120 UL - 2 SI - >120	No - EOS completed with NHA. Distances did not change enough to warrant amendment to the EIS.
WOD-033 CAS-005	Woodland Carey's Sedge Habitat	WT - >120 AR - 2 OL - >120 UL - >120 SI - >120	WT - >120 AR - >120 OL - >120 UL - >120 SI - >120	No - natural feature is no longer in the project area.
WOD-034 WET-034 CAS-006	Woodland Wetland Carey's Sedge Habitat	WT - >120 AR - 97 OL - >120 UL - >120 SI - >120	WT - >120 AR - 104 OL - >120 UL - >120 SI - >120	No - EOS completed with NHA. Distances did not change enough to warrant amendment to the EIS.
WOD-036	Woodland	WT - >120 AR - 104 OL - >120 UL - >120	WT - >120 AR - 107 OL - >120 UL - >120	No - EOS completed with NHA. Distances did not change enough to warrant amendment to

Feature ID	Feature Type	Distances from NHA Submission (m)	New Layout Distances (m)	Amendment to the EOS and/or EIS Required? (Y/N)
		SI - >120	SI - >120	the EIS.
WOD-037 WET-037 CAS-007	Woodland Wetland Carey's Sedge Habitat	WT - >120 AR - 4 OL - >120 UL - >120 SI - >120	WT - >120 AR - 6 OL - >120 UL - >120 SI - >120	No - EOS completed with NHA. Distances did not change enough to warrant amendment to the EIS.
WOD-038	Woodland	WT - >120 AR - >120 OL - 92 UL - >120 SI - >120	WT - >120 AR - >120 OL - 75 UL - >120 SI - >120	No - EOS completed with NHA. Distances did not change enough to warrant amendment to the EIS.
WOD-039	Woodland	WT - >120 AR - >120 OL - 31 UL - >120 SI - >120	WT - >120 AR - >120 OL - Overlapping* UL - >120 SI - >120	Yes - additional mitigation measures are discussed in section 7.2 of this report.
WOD-040	Woodland	WT - >120 AR - >120 OL - 14 UL - >120 SI - >120	WT - >120 AR - >120 OL - Overlapping* UL - >120 SI - >120	Yes - additional mitigation measures are discussed in section 7.2 of this report.
WOD-041	Woodland	WT - >120 AR - >120 OL - 21 UL - >120 SI - >120	WT - >120 AR - >120 OL - Overlapping* UL - >120 SI - >120	Yes - additional mitigation measures are discussed in section 7.2 of this report.
WOD-042 WET-042	Woodland Wetland	WT - >120 AR - >120 OL - 15 UL - >120 SI - >120	WT - >120 AR - >120 OL - >0.1 UL - >120 SI - >120	No - mitigation measures for features 0-30m from a project component have already been outlined in the EIS (NRSI 2012) and these measures will be applied to this feature.
WOD-043	Woodland	WT - >120 AR - >120 OL - 83 UL - >120 SI - >120	WT - >120 AR - >120 OL - 8 UL - >120 SI - >120	No - EOS completed with NHA. Distances did not change enough to warrant amendment to the EIS.
WOD-044	Woodland	WT - >120 AR - >120 OL - 29 UL - >120 SI - >120	WT - >120 AR - >120 OL - 14 UL - >120 SI - >120	No - EOS completed with NHA. Distances did not change enough to warrant amendment to the EIS.
WOD-045	Woodland	WT - >120 AR - >120 OL - 18 UL - >120 SI - >120	WT - >120 AR - >120 OL - Overlapping* UL - >120 SI - >120	Yes - additional mitigation measures are discussed in section 7.2 of this report.
WOD-046	Woodland	WT - >120 AR - >120 OL - 21 UL - >120 SI - >120	WT - >120 AR - >120 OL - Overlapping* UL - >120 SI - >120	Yes - additional mitigation measures are discussed in section 7.2 of this report.
WOD-047	Woodland	WT - >120 AR - >120 OL - 20	WT - >120 AR - >120 OL - 2	No - EOS completed with NHA. Distances did not change enough to

Feature ID	Feature Type	Distances from NHA Submission (m)	New Layout Distances (m)	Amendment to the EOS and/or EIS Required? (Y/N)
		UL - >120 SI - >120	UL - >120 SI - >120	warrant amendment to the EIS.
WOD-048 VAL-048	Woodland Valleyland	WT - >120 AR - >120 OL - 46 UL - >120 SI - >120	WT - >120 AR - >120 OL - 2 UL - >120 SI - >120	No - EOS completed with NHA. Distances did not change enough to warrant amendment to the EIS.
WOD-049	Woodland	WT - >120 AR - >120 OL - 20 UL - >120 SI - >120	WT - >120 AR - >120 OL - 2 UL - >120 SI - >120	No - EOS completed with NHA. Distances did not change enough to warrant amendment to the EIS.
WOD-050	Woodland	WT - >120 AR - >120 OL - 12 UL - >120 SI - >120	WT - >120 AR - >120 OL - 2 UL - >120 SI - >120	No - EOS completed with NHA. Distances did not change enough to warrant amendment to the EIS.
WOD-051	Woodland	WT - >120 AR - >120 OL - 7 UL - >120 SI - >120	WT - >120 AR - >120 OL - 5 UL - >120 SI - >120	No - EOS completed with NHA. Distances did not change enough to warrant amendment to the EIS.
WOD-052	Woodland	WT - >120 AR - >120 OL - 17 UL - >120 SI - >120	WT - >120 AR - >120 OL - 2 UL - >120 SI - >120	No - EOS completed with NHA. Distances did not change enough to warrant amendment to the EIS.
WOD-053	Woodland	WT - >120 AR - >120 OL - >120 UL - >120 SI - 11.5	WT - >120 AR - >120 OL - >120 UL - >120 SI - 53	No - EOS completed with NHA. Distances did not change enough to warrant amendment to the EIS.
WOD-054	Woodland	WT - >120 AR - >120 OL - Overlapping UL - >120 SI - 16	WT - >120 AR - >120 OL - >120 UL - >120 SI - >120	No - natural feature is no longer in the project area.
WOD-056	Woodland	WT - >120 AR - >120 OL - 116 UL - >120 SI - >120	WT - >120 AR - >120 OL - >120 UL - >120 SI - >120	No - natural feature is no longer in the project area.
WOD-057	Woodland	WT - 78 AR - 4 OL - 4 UL - >120 SI - >120	WT - 71 AR - 2 OL - >120 UL - 2 SI - >120	No - EOS completed with NHA. Distances did not change enough to warrant amendment to the EIS.
RWA-002	Raptor Wintering Area	WT - >120 AR - >120 OL - 5 UL - >120	WT - >120 AR - >120 OL - Overlapping* UL - >120	Yes - additional mitigation measures are discussed in section 7.2 of this report.
RWA-003	Raptor Wintering Area	WT - >120 AR - >120 OL - 5 UL - >120	WT - >120 AR - >120 OL - Overlapping* UL - >120	Yes - additional mitigation measures are discussed in section 7.2 of this report.
RWA-004	Raptor Wintering	WT - >120	WT - >120	No - EOS completed with

Feature ID	Feature Type	Distances from NHA Submission (m)	New Layout Distances (m)	Amendment to the EOS and/or EIS Required? (Y/N)
	Area	AR - >120 OL - 5 UL - >120	AR - >120 OL - 2 UL - >120	NHA. Distances did not change enough to warrant amendment to the EIS.
YSG-001	Yellow Stargrass Habitat	WT - 16.9 AR - Overlapping OL - >120 UL - Overlapping SI - >120	WT - 77 AR - Overlapping OL - >120 UL - Overlapping SI - >120	Yes - additional mitigation measures are discussed in section 7.2 of this report.
YSG-002	Yellow Stargrass Habitat	WT - >120 AR - 56.5 OL - >120 UL - 69 SI - >120	WT - >120 AR - 39 OL - >120 UL - 39 SI - >120	No - EOS completed with NHA. Distances did not change enough to warrant amendment to the EIS.

**Legend**

WT: Wind Turbine

AR: Access Road

OL: Overhead Line

UL: Underground Line

SI: Supporting Infrastructure (Laydown area, point of intersection or MET station)

EOS: Evaluation of Significance

EIS: Environmental Impact Study

\*The disturbance area was expanded to depict the surveyed road right-of-way (ROW). Vegetation removal will not occur outside of the ROW and will be kept to a minimum within the ROW, as previously described in the Natural Heritage Assessment. Additional mitigation measures are discussed in section 7.2 of this report to reflect the visual depiction of additional vegetation removal.

## **6.0 Amendments to the Evaluation of Significance**

As part of this addendum, NRSI biologists have reviewed the potential for changes to the Evaluation of Significance phase of this project. After examining the changes in distances between project components and natural features, it has been determined that there are no new natural features or wildlife habitats that potentially exist within 120m of the project location that were not previously studied and discussed in the approved NHA. Therefore, no additional features require evaluation of significance.

No additional Evaluation of Significance is required for the Adelaide Wind Energy Centre as a result of these minor modifications.



## 7.0 Amendments to the Environmental Impact Study

As part of the Adelaide Wind Energy Centre NHA addendum preparation, construction plans were reviewed and the changes to the presented project location have been summarized in Section 3.0. These proposed changes include minor modifications to several aspects of the project layout, including access roads as well as underground and overhead cabling. Although minor adjustments have been noted, the construction details as presented in the original Natural Heritage Environmental Impact Study (i.e. site preparation and servicing, construction, operation, decommissioning, and approach to impact assessment) still provide relevant information pertaining to the type, extent, duration, and details of the proposed construction activities associated with the Adelaide Wind Energy Centre.

For the purposes of this addendum, NRSI has reviewed three separate aspects relating to the potential for change to the EIS, as follows:

- Changes to Mitigation Measures (i.e. project location now closer to natural features)
- New Mitigation Measures (i.e. project location within 120m of a new feature)
- Changes to Monitoring Requirements

### 7.1 Changes to Mitigation Measures

NRSI biologists have reviewed the changes in project location, including the distances of the project location to the significant natural features, and have determined that the mitigation measures presented in the Natural Heritage Environmental Impact Study (NRSI 2012) are still suitable for the protection of the significant natural features from permanent and adverse impacts that may result from the development of the Adelaide Wind Energy Centre.

The addition of the MET station located west of turbine 31 will include additional underground cabling and access roads. Mitigation included in the EIS already covers the proposed construction activities associated with these project components. Likewise, with the expansion of the substation area for operation and maintenance buildings, mitigation included in the EIS already covers the proposed activities associated with the construction, operation, and decommissioning of buildings.

No new mitigation measures are proposed for features that had already been identified as significant, but are now slightly closer to the project location.

## 7.2 New Mitigation Measures

Due to changes in the disturbance area for the transmission line along Kerwood Road and Nairn Road, it is possible that the transmission line may overlap with the boundaries of natural features within the surveyed road right-of-way. These natural features are identified in Table 2 of this report. With the inclusion of this mapping change and potential for additional vegetation removal, NRSI has provided new mitigation measures, shown in Table 3 below. These mitigation measures reflect that there will be less than 1% of a natural feature (woodlands and raptor wintering area habitat) that will be removed during the construction period, and the entirety of the removal will occur within the road right-of-way.

For yellow stargrass (*Hypoxis hirsuta*) habitat (YSG-001), it is possible that the permanent vegetation removal may result in disturbance to more than 1% of the wildlife habitat area. The overlap of this habitat with the project location will be approximately 0.44ha (3.6% of the total area), with the total habitat area being 12.1ha. This extent of impact is associated with the temporary construction activities, with permanent disturbance impacting considerably less habitat. This habitat was treated as significant in the Adelaide NHA (NRSI 2012). Pre-construction surveys were outlined in the NHA to confirm the significance of this habitat, however, additional mitigation measures are proposed below should pre-construction surveys confirm its significance.

**Table 3. New Mitigation Measures for the Adelaide Wind Energy Centre**

Feature ID	Distance to Project Location	Potential Negative Effects	Mitigation Measures	Objectives, Post-Construction and Contingency Plans
WOD-039 WOD-040 WOD-041 WOD-042 WOD-045 WOD-046	Overlapping	<ul style="list-style-type: none"> <li>• Vegetation removal</li> </ul>	<ul style="list-style-type: none"> <li>• Clearly delineate the construction area to avoid unnecessary and/or accidental vegetation removal</li> <li>• Avoid or minimize vegetation removal, wherever possible</li> <li>• Vegetation removal, if required, will occur entirely within the surveyed road right-of-way</li> <li>• Vegetation removal will directly impact less than 1% of total area of natural feature.</li> <li>• Identify and avoid or protect rare plant species and communities</li> <li>• Identify and avoid or protect critical areas/features of wildlife habitat</li> <li>• Restore areas where vegetation removal has occurred for the purposes of temporary construction activities as soon as possible after construction</li> </ul>	<p><b>Performance Objective:</b></p> <ul style="list-style-type: none"> <li>• Minimize the amount of vegetation removal</li> </ul> <p><b>Monitoring:</b></p> <ul style="list-style-type: none"> <li>• Upon review of final, surveyed, construction plans, a biologist will monitor all areas proposed for vegetation removal for rare plant species or potential wildlife habitat in advance of the vegetation removal.</li> </ul> <p><b>Contingency Measure:</b></p> <ul style="list-style-type: none"> <li>• If final construction plans show a permanent disturbance of more than 1% of the natural feature area, the Ministry of Natural Resources will be contacted and further mitigation measures may be implemented.</li> <li>• Should any rare species be observed, the Ministry of Natural Resources will be contacted and further mitigation plans may be implemented.</li> </ul>
		<ul style="list-style-type: none"> <li>• Sedimentation and erosion</li> </ul>	<ul style="list-style-type: none"> <li>• Implement a sediment and erosion control plan,</li> <li>• Install, monitor, and maintain erosion and sediment control measures (i.e. silt fences) around the construction area,</li> <li>• Minimize vegetation removal on slopes</li> </ul>	<p><b>Performance Objective</b></p> <ul style="list-style-type: none"> <li>• Minimize impacts to natural features and associated wildlife habitats</li> </ul> <p><b>Monitoring:</b></p> <ul style="list-style-type: none"> <li>• Regular construction monitoring of sediment and erosion control measures should occur in</li> </ul>

				<p>conjunction with other regular inspections of required mitigation measures.</p> <p><b>Contingency Measure:</b></p> <ul style="list-style-type: none"> <li>• Maintain or restore vegetated buffers, including riparian zones</li> </ul>
		<ul style="list-style-type: none"> <li>• Spills (i.e. oil, gasoline, grease, etc.)</li> </ul>	<ul style="list-style-type: none"> <li>• All maintenance activities, vehicle refueling or washing, and chemical storage will be located more than 30m from any significant natural feature.</li> <li>• Develop a spill response plan and train staff on appropriate procedures,</li> <li>• Keep emergency spill kits on site</li> </ul>	<p><b>Performance Objective:</b></p> <ul style="list-style-type: none"> <li>• Minimize impacts to natural features and associated wildlife habitats</li> </ul> <p><b>Monitoring:</b></p> <ul style="list-style-type: none"> <li>• None required</li> </ul> <p><b>Contingency Measure:</b></p> <ul style="list-style-type: none"> <li>• None required</li> </ul>
		<ul style="list-style-type: none"> <li>• Changes in soil moisture and compaction</li> </ul>	<ul style="list-style-type: none"> <li>• Implement infiltration techniques to the maximum extent possible,</li> <li>• Minimize paved surfaces and design roads to promote infiltration,</li> </ul>	<p><b>Performance Objective:</b></p> <ul style="list-style-type: none"> <li>• Minimize impact to soil moisture regime and vegetation species composition</li> </ul> <p>No monitoring or contingency plan required</p>
		<ul style="list-style-type: none"> <li>• Accidental damage to vegetation, including limbs and root zones</li> </ul>	<ul style="list-style-type: none"> <li>• Clearly delineate work area using erosion fencing, or similar barrier, to avoid accidental damage to species to be retained.</li> </ul>	<p><b>Performance Objective:</b></p> <ul style="list-style-type: none"> <li>• Minimize direct impacts on vegetation communities and protect rare/sensitive habitats,</li> </ul> <p><b>Monitoring:</b></p> <ul style="list-style-type: none"> <li>• None required</li> </ul> <p><b>Contingency Measure:</b></p> <ul style="list-style-type: none"> <li>• Any tree limbs or roots that are accidentally damaged by construction activities will be pruned using proper arboricultural techniques.</li> </ul>
YSG-001 <sup>1</sup>	Overlapping	<ul style="list-style-type: none"> <li>• Vegetation removal</li> </ul>	<ul style="list-style-type: none"> <li>• Clearly delineate the construction area to avoid unnecessary and/or accidental vegetation removal</li> </ul>	<p><b>Performance Objective:</b></p> <ul style="list-style-type: none"> <li>• Minimize the extent of vegetation</li> </ul>

			<ul style="list-style-type: none"> <li>• Avoid or minimize vegetation removal, wherever possible</li> <li>• Identify and avoid or protect rare plant species and communities</li> <li>• Identify, avoid, and protect critical areas/features of wildlife habitat, wherever possible</li> <li>• Restore areas where vegetation removal has occurred for the purposes of temporary construction activities as soon as possible after construction</li> <li>• Confirmed yellow stargrass plants will be transplanted to portions of the same habitat (that will not be impacted by development), or to another suitable habitat within the general project area, approved by the MNR</li> <li>• If permanent habitat removal will be more than 1% of the total wildlife habitat, habitat compensation will occur following an area ratio of 1:1.</li> </ul>	<p>removal and minimize impacts to yellow stargrass</p> <p><b>Monitoring:</b></p> <ul style="list-style-type: none"> <li>• Upon review of final, surveyed, construction plans, a biologist will monitor all areas proposed for vegetation removal for rare plant species or potential wildlife habitat in advance of the vegetation removal.</li> <li>• Any transplanted specimens will be monitored for success for 2 years after the completion of construction.</li> </ul> <p><b>Contingency Measure:</b></p> <ul style="list-style-type: none"> <li>• If final construction plans show a permanent disturbance of more than 1% of the wildlife habitat, habitat compensation will be implemented at an area ratio of 1:1,</li> <li>• If any transplanted yellow stargrass specimens are unsuccessful, the MNR will be consulted to determine the appropriate approach.</li> </ul>
		<ul style="list-style-type: none"> <li>• Sedimentation and erosion</li> </ul>	<ul style="list-style-type: none"> <li>• Implement a sediment and erosion control plan,</li> <li>• Install, monitor, and maintain erosion and sediment control measures (i.e. silt fences) around the construction area,</li> <li>• Minimize vegetation removal on slopes</li> </ul>	<p><b>Performance Objective</b></p> <ul style="list-style-type: none"> <li>• Minimize impacts to natural features</li> </ul> <p><b>Monitoring:</b></p> <ul style="list-style-type: none"> <li>• Regular construction monitoring of sediment and erosion control measures should occur in conjunction with other regular inspections of required mitigation measures.</li> </ul> <p><b>Contingency Measure:</b></p> <ul style="list-style-type: none"> <li>• Maintain or restore vegetated buffers, including riparian zones</li> </ul>
		<ul style="list-style-type: none"> <li>• Spills (i.e. oil, gasoline, grease,</li> </ul>	<ul style="list-style-type: none"> <li>• All maintenance activities, vehicle</li> </ul>	<p><b>Performance Objective:</b></p>

		etc.)	refueling or washing, and chemical storage will be located more than 30m from any significant natural feature. <ul style="list-style-type: none"> <li>• Develop a spill response plan and train staff on appropriate procedures,</li> <li>• Keep emergency spill kits on site</li> </ul>	<ul style="list-style-type: none"> <li>• Minimize impacts to natural features and associated wildlife habitats</li> </ul> <p><b>Monitoring:</b></p> <ul style="list-style-type: none"> <li>• None required</li> </ul> <p><b>Contingency Measure:</b></p> <p>None required</p>
		<ul style="list-style-type: none"> <li>• Changes in soil moisture and compaction</li> </ul>	<ul style="list-style-type: none"> <li>• Implement infiltration techniques to the maximum extent possible,</li> <li>• Minimize paved surfaces and design roads to promote infiltration,</li> </ul>	<p><b>Performance Objective:</b></p> <ul style="list-style-type: none"> <li>• Minimize impact to soil moisture regime and vegetation species composition</li> </ul> <p>No monitoring or contingency plan required</p>
		<ul style="list-style-type: none"> <li>• Accidental damage to vegetation, including limbs and root zones</li> </ul>	<ul style="list-style-type: none"> <li>• Clearly delineate work area using erosion fencing, or similar barrier, to avoid accidental damage to species to be retained.</li> </ul>	<p><b>Performance Objective:</b></p> <ul style="list-style-type: none"> <li>• Minimize direct impacts on vegetation communities and protect rare/sensitive habitats,</li> </ul> <p><b>Monitoring:</b></p> <ul style="list-style-type: none"> <li>• None required</li> </ul> <p><b>Contingency Measure:</b></p> <p>Any tree limbs or roots that are accidentally damaged by construction activities will be pruned using proper arboricultural techniques.</p>
RWA-002 <sup>1</sup> RWA-003 <sup>1</sup>	Overlapping <sup>2</sup>	<ul style="list-style-type: none"> <li>• Vegetation Removal</li> </ul>	<ul style="list-style-type: none"> <li>• Avoid or minimize vegetation removal,</li> <li>• Any required vegetation removal will occur within the road right-of-way, and not along the habitat edge bordering potential foraging habitat.</li> </ul>	<p><b>Performance Objective:</b></p> <ul style="list-style-type: none"> <li>• Protection of raptor wintering area habitat, with emphasis on perching and foraging habitat.</li> <li>• Limit disturbance to raptors overwintering within the project area.</li> </ul>
		<ul style="list-style-type: none"> <li>• Accidental damage to vegetation, including tree limbs</li> </ul>	<ul style="list-style-type: none"> <li>• Clearly delineate work area using erosion fencing, or similar barrier, to avoid accidental vegetation damage within raptor wintering</li> </ul>	<p><b>Monitoring:</b></p> <ul style="list-style-type: none"> <li>• Conduct post-construction surveys of this wildlife habitat for 1 year after</li> </ul>

			areas	<p>construction, following pre-construction methods.</p> <ul style="list-style-type: none"> <li>• If behaviour surveys indicate that there is an avoidance effect or that the habitat is no longer significant, an additional 2 years of post-construction monitoring will occur following pre-construction methods.</li> </ul> <p><b>Contingency Measures:</b></p> <ul style="list-style-type: none"> <li>• MNR will be consulted to determine contingency measures</li> </ul>
		<ul style="list-style-type: none"> <li>• Noise disturbance and/or avoidance behaviour</li> </ul>	<ul style="list-style-type: none"> <li>• Use underground cabling or single-wooded overhead poles, wherever possible</li> </ul>	

<sup>1</sup> This habitat has been treated as significant, requiring pre-construction surveys. Mitigation measures, monitoring, and contingency plans are only required if pre-construction surveys confirm the significance of this habitat.

<sup>2</sup> The area which may undergo vegetation removal is along the existing road and not the woodland edge adjacent to foraging habitats, where raptor perching is more likely to occur.

### 7.3 Changes to Monitoring Requirements

Based on the changes in project location, additional monitoring requirements have been identified and outlined in Table 3 of this report. The additional monitoring requirements include vegetation inventories prior to any vegetation removal to ensure any rare species are documented and addressed appropriately in the event they are present within the area proposed for vegetation removal. NRSI has determined that the monitoring requirements identified in the Natural Heritage Environmental Impact Study, along with those identified above, are suitable for the monitoring of potential environmental effects of the proposed Adelaide Wind Energy Centre.



## 8.0 Summary of Natural Heritage Addendum

In accordance with the REA Regulation, NRSI biologists have completed a comprehensive records review, site investigation, evaluation of significance, and EIS of the Adelaide Wind Energy Centre project area. Following the review of proposed adjustments to the project location (as discussed above), NRSI has re-considered all aspects of the Natural Heritage Assessment within this report to determine if there are new natural features, changes in distance to project location, or new mitigation measures or monitoring commitments required to ensure that potential permanent or adverse environmental impacts are mitigated or studied appropriately. The summary of the result of this review of changes to the project location are summarized in Table 4 below.

**Table 4. Summary of Natural Heritage Addendum for the Adelaide Wind Energy Centre**

Addendum Changes	Addendum Result
Significant Features	NRSI has not identified any additional significant natural features or wildlife habitats within the project area. There are 3 natural features (WOD-033, WOD-054, and WOD-056) that are no longer within the project area due to adjustments to the project's layout. As well, these changes resulted in one species of conservation concern (Carey's sedge) habitat no longer being within the project area.
Changes in Distances to Project Location	<p>The distances from the project location to candidate and significant natural features and wildlife habitats have changed due to minor adjustments to the project layout. These changes in distances to project location are associated with a total of 71 significant natural features.</p> <p>Changes in distances from the project location to significant natural features are shown in Table 2 of this report.</p>
Mitigation Measures	<p>Based on the minor adjustments of the project location, NRSI biologists have identified no additional significant features within 120m of the project location that require mitigation measures to be applied.</p> <p>Due to changes in distances between natural features and project components, additional mitigation measures have been proposed and are outlined in Table 3.</p> <p>All other mitigation measures, as seen in the Natural Heritage Environmental Impact Study (NRSI 2012) will provide the appropriate protection to ensure any permanent and adverse impacts are mitigated.</p>
Monitoring Commitments	<p>NRSI has identified that, based on the minor shifts in project location, the monitoring commitments outlined in the Natural Heritage Environmental Impact Study (NRSI 2012) are still appropriate to monitor any potentially adverse impacts of this project.</p> <p>An additional monitoring requirement has been proposed based on possible vegetation removal. This new monitoring commitment is outlined in Table 3.</p>

With this addendum, it is maintained that with the implementation of the planned mitigation measures, monitoring programs, and contingency plans as presented in the Adelaide Wind Energy Centre: Natural Heritage Environmental Impact Study (NRSI 2012), along with any additional mitigation measures and monitoring commitments provided above, there is unlikely to be any significant impacts to natural heritage features, including woodlands, wetlands, valleylands, or significant wildlife habitat.

## 9.0 References

### *Publications*

Natural Resource Solutions Inc. (NRSI). 2012. Adelaide Wind Energy Centre Natural Heritage Assessment. April 2012.

**Appendix I**  
Adelaide Wind Energy Centre NHA Letter of Confirmation

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August 20, 2012

Tom Bird  
NextEra Energy Canada  
5500 Service Road, Suite 205  
Burlington, ON L7L 6W6

**RE: Modifications to Adelaide Wind Energy Centre project location**

Dear Mr. Tom Bird,

The Ministry of Natural Resources (MNR) has received the document dated August 2012 which describes modifications to the Adelaide Wind Energy Centre project location made subsequent to MNR's letter confirming the Natural Heritage Assessment in respect of the project.

Upon review of the modifications, MNR is satisfied that the Natural Heritage Assessment requirements of Ontario Regulation 359/09 have been met. Please add this letter as an addendum to the confirmation letter issued April 12, 2012 for the Adelaide Wind Energy Centre project.

If you wish to discuss, please contact me at [amy.cameron@ontario.ca](mailto:amy.cameron@ontario.ca) or 705-875-7481.

Sincerely,

Sincerely,



Amy Cameron  
Coordinator  
Renewable Energy Operations Team  
Southern Region MNR

cc Emily Gryck, Renewable Energy Operations Team, Project Manager, MNR  
Erin Cotnam, Renewable Energy Operations Team, Project Manager, MNR  
Mitch Wilson, Aylmer District Manager, MNR  
Narren Santos, Environmental Approvals Access & Service Integration Branch, MOE  
Zeljko Romic, Environmental Approvals Access & Service Integration Branch, MOE

**Appendix II**  
Adelaide Wind Energy Centre layout submitted with NHA

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