

ADELAIDE WIND ENERGY CENTRE
Natural Heritage Environmental Impact Study

Prepared for:
NextEra Energy Canada
5500 North Service Road, Suite 205
Burlington, ON, L7L 6W6

Project No. 1230

Date: April 2012



NATURAL RESOURCE SOLUTIONS INC.
Aquatic, Terrestrial and Wetland Biologists

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Natural Heritage Environmental Impact Study

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Report submitted on April 5, 2012



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1.0 Project Description

Natural Resource Solutions Inc. (NRSI) was retained in April 2011 by GL Garrad Hassan, on behalf of Kerwood Wind, Inc., a wholly-owned subsidiary of NextEra Energy Canada ULC, to conduct a natural environment resource assessment in accordance with the Renewable Energy Approval (REA) Regulation. This assessment includes a records review, site investigation, evaluation of significance, and impact assessment of any potentially significant natural features at a proposed 61.56MW wind energy generating facility in Middlesex County and Township of Adelaide Metcalfe, Ontario. The analysis of the natural heritage features and biological factors affecting the proposed site is one issue being considered. Other factors, such as water bodies, land ownership, social impacts, and cultural impacts are also being assessed by other team members, and will be addressed under separate covers as outlined by the REA Regulation.

The Adelaide Wind Energy Centre ('Adelaide'), proposed by Kerwood Wind Inc., is located in the geographic Township of Adelaide Metcalfe, approximately 13km northwest of the Town of Strathroy. The general project area is roughly bordered by Centre Road, Townsend Line, Sexton Road, and Napperton Drive. In addition, a transmission line is proposed to run north along Kerwood Road from Cuddy Drive north to Nairn Road. This transmission line is then proposed to continue eastward along Nairn Road to an existing 500kV line and substation located west of Petty Street. The Adelaide wind energy generating facility is proposed to consist of up to thirty-eight GE 1.6-100 (1.62 MW) turbines for a total installed capacity of up to 61.56 MW. The proposed GE 1.6-100 turbine is a 3-bladed, upwind, horizontal-axis turbine. The total rotor diameter of the turbine is 100 m, resulting in a swept area of 7,854 m², and is designed to operate at between 9.75 and 16.18 revolutions per minute (rpm). The turbine rotor and nacelle are mounted on top of an 80m tubular tower which is manufactured in sections from steel plate. Each turbine is mounted on a steel reinforced concrete foundation and equipped with a transformer, located outside the base of the tower.

As identified the REA Regulation, the proposed layout of these features is collectively referred to as the 'project location'. In accordance with Section 25 of the Renewable Energy Approval (REA) Regulation (O. Reg. 359/09 of the Environmental Protection Act), NRSI has conducted a thorough records review of available background resources

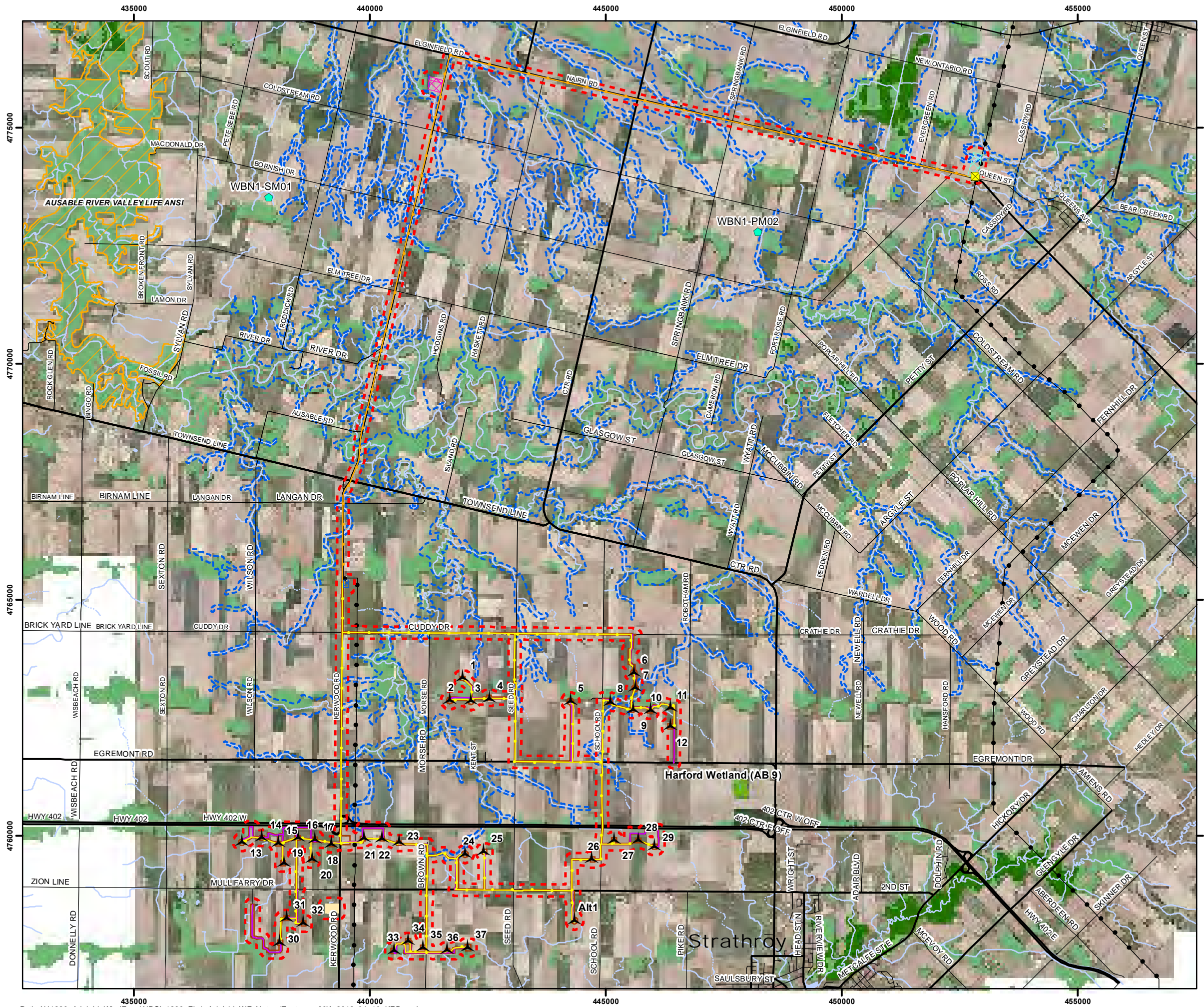
to identify any potentially significant natural features within 120m of the project location. This includes areas within 120m of turbine blade tip as well as any areas that may be used as temporary lay-down areas, crane pads, access roads, connector, distribution and transmission lines. For the purposes of this report, NRSI will refer to the areas within 120m of the project location as the 'project area'.

The project area is dominated by rotational agricultural crops of wheat, corn and soybeans. Other land uses, including hayfields and agricultural pasture, are also expected to be present within the project area. Natural features are generally small and isolated from other features; however, several large contiguous woodlands are present within the Adelaide project area. Habitats within the project area are expected to include woodlands, swamps, meadows, thickets, drainage ditches, ponds, creeks and hedgerows. See Figures 1 and 2 for maps of the project area and surrounding natural features.

As part of this project, NRSI has considered all aspects relating to provincially Threatened and Endangered species. However, since these species are addressed as part of the *Endangered Species Act (2007)*, they have not been discussed within any of these Natural Heritage Assessment reports. These species will be address in full detail, including a description and results of field assessments, potential impacts, and recommended mitigation measures, within the *Species At Risk Report* which will be submitted as part of the *Approval and Permitting Requirements Document (APRD)* to be submitted to the MNR under a separate cover, where necessary.


Figure 1

Adelaide Wind Energy Centre Project Area and Natural Features



Legend

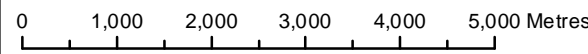
- Project Area (120m Buffer)
- Turbine
- Point of Common Coupling (PCC)
- MET Station
- Access Road
- Interconnection Line
- Collector System
- Project Location
- Staging Area
- Interconnection Facilities
- Substation
- Switching Yard
- Existing Transmission Line
- Railroad
- Primary Road
- Secondary Road
- Waterbody
- Intermittent Watercourse
- Permanent Watercourse
- Provincially Significant Wetland (PSW)
- Other Wetland
- Wooded
- ANSI, Life Science
- ANSI, Earth Science
- Regulation Limit (ABCA)



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Project: 1230 Date: April 10, 2012	NAD83 - UTM Zone 17 Scale: 1:80,000 (11x17")
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0 1,000 2,000 3,000 4,000 5,000 Metres



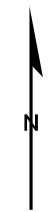
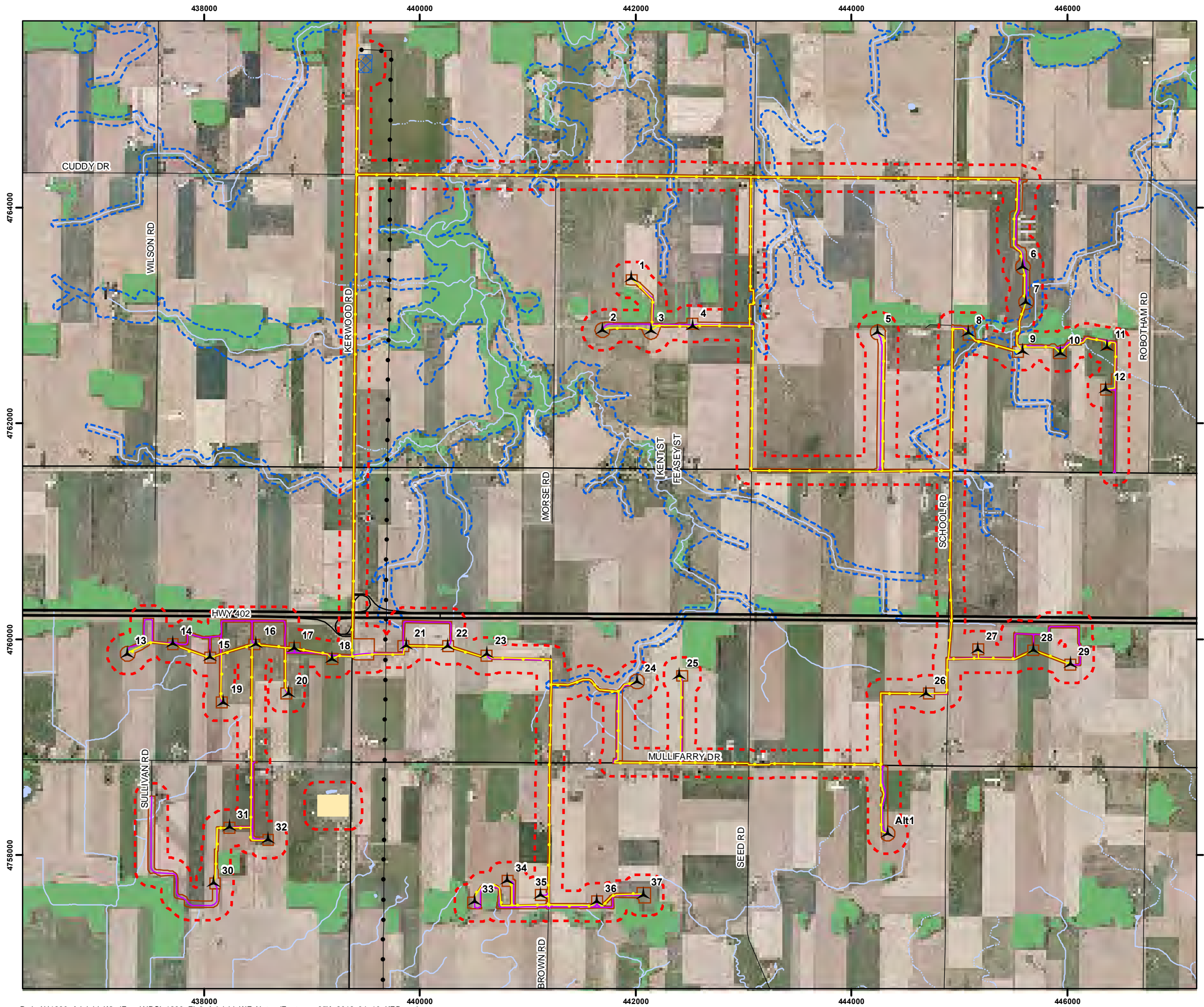



Figure 2

Adelaide Wind Energy Centre Project Area and Natural Features



- Legend**
- Project Area (120m Buffer)
 - Turbine
 - Point of Common Coupling (PCC)
 - MET Station
 - Access Road
 - Collector System
 - Interconnection Line
 - Project Location
 - Staging Area
 - Interconnection Facilities
 - Substation
 - Existing Transmission Line
 - Railroad
 - Highway
 - Primary Road
 - Secondary Road
 - Intermittent Watercourse
 - Permanent Watercourse
 - Waterbody
 - Provincially Significant Wetland (PSW)
 - Other Wetland
 - Wooded
 - ANSI, Life Science
 - ANSI, Earth Science
 - Regulation Limit (ABCA)



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Project: 1230 Date: April 10, 2012	NAD83 - UTM Zone 17 Scale: 1:35,000 (11x17")
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0 500 1,000 1,500 2,000 Metres

N

2.0 REA Requirements

Ontario Regulation (O. Reg.) 359/09 – *Renewable Energy Approvals Under Part V.0.1 of the Act*, (herein referred to as the REA Regulation) made under the *Environmental Protection Act* identifies the requirements for the development of renewable energy projects in Ontario. In accordance with the REA Regulation, the Adelaide Wind Energy Centre is classified as a Class 4 wind facility, and is required to complete a REA.

Section 38 of the REA Regulation specifies that no development activities shall be permitted within 120m of a significant natural feature unless an environmental impact study report is prepared in accordance with any procedures established by the Ministry of Natural Resources. As per Subsection 2, this report should:

1. Identify and assess any negative environmental effects of the project on a natural feature, provincial park or conservation reserve,
2. Identify mitigation measures in respect of any negative environmental effects mentioned in the subclause above,
3. Describe how the environmental effects monitoring plan...addresses any negative environmental effects mentioned in subclause 1, and
4. Describe how the construction plan report...addresses any negative environmental effects mentioned in subclause 1.

This Natural Heritage Assessment report has been organized and prepared to satisfy the requirements of the environmental impact study as outlined in the REA Regulation.

3.0 Summary of Records Review

In accordance with the REA Regulation, an area of at least 120m beyond the project location was examined for natural heritage features, including Areas of Natural and Scientific Interest (ANSI), wetlands, woodlands, valleylands, and wildlife habitat. Numerous agencies were contacted to compile a comprehensive records review, including the Ministry of Natural Resources (MNR) Renewable Energy Operations Team (REOT) and the Ausable Bayfield and St. Clair Region Conservation Authorities. NRSI also utilized numerous background review sources, such as the Biodiversity Explorer, Ontario Breeding Bird Atlas (OBBA), Ontario Herpetofauna Atlas, and the Atlas of the Mammals of Ontario. The comprehensive results of the records review have been summarized in Table 1 below.

Table 1. Summary of Records Review of the Adelaide Wind Energy Centre

Criteria	Result
1. Within 120m of a Provincial Park or Conservation Reserve	The Adelaide Wind Energy Centre project location is not within 120m of a Provincial Park or Conservation Reserve.
2. In a Natural Feature	The results of this records review indicate that project components (i.e. disturbance area, cabling, access roads etc...) of the Adelaide Wind Energy Centre overlap with 19 natural areas. These natural areas are woodlands that are expected to consist of deciduous forest with vegetation associations that are representative of this region of southwestern Ontario. The extent to which project locations overlap natural areas is variable and will be further examined and addressed in the site investigation phase of the project.
3. Within 50m of a ANSI-ES	No Earth Science (ES) ANSI features are located within 50m of the project location.
4. Within 120m of a Natural Feature	
a) ANSI-LS	No Life Science (LS) ANSI features are located within 120m of the project location.
b) Coastal Wetland	No coastal wetlands are present within 120m of the project location.
c) Northern Wetland	No northern wetlands are present within 120m of the project location.
d) Southern Wetland	No southern wetlands have been identified within 120m of the project location. Wetlands may be located within woodland boundaries.
e) Valleyland	No valleylands have been identified within 120m of the project location.
f) Wildlife Habitat	Sixty-five woodlands have been identified within 120m of the Adelaide Wind Energy Centre project location. These

Criteria	Result
	<p>woodlands have the potential to provide several types of candidate Suitable Wildlife Habitat (SWH).</p> <p>Several linear features, including treed fencerows and naturalized drains, have been identified within 120m of the project location. These features have the potential to act as SWH, specifically providing animal movement corridors and/or habitat for species of conservation concern.</p> <p>All of these wildlife habitats should be examined during the site investigation phase and/or the evaluation of significance phase of this project to identify other habitat features and identify the significance of each natural feature.</p>
g) Woodland	<p>Several woodlands have been identified during the records review process, including sixty-five woodlands within 120 m of the project location. Basemapping indicates that these woodlands range in size from 0.2ha to 137.2ha. These woodlands are expected to be primarily dominated by mid-aged to mature deciduous tree species; however young woodlands, treed plantations, or occasional coniferous woodlands may also be present within 120m of the project location.</p>

A full examination of the wide variety of potential wildlife habitats has been examined as part of this detailed records review. Each of the wildlife habitats considered during the site investigation, including its potential to occur within the Adelaide Wind Energy Centre has been provided in Table 2 below.

Table 2. Summary of Wildlife Habitat within the Adelaide Wind Energy Centre

Wildlife Habitat	Present Within 120m of Project Location	Present Within Project Location	Site Investigation Required (Y/N)
Winter Deer Yards	No	No	No
Colonial-Nesting Bird Breeding Habitat (swallows)	Unknown	Unknown	Yes
Colonial-Nesting Bird Breeding Habitat (tree/shrub)	Unknown	Unknown	Yes
Colonial-Nesting Bird Breeding Habitat (ground)	Unknown	Unknown	Yes
Waterfowl Stopover and Staging Areas (terrestrial)	Unknown	Unknown	Yes
Waterfowl Stopover and Staging Areas (aquatic)	Unknown	Unknown	Yes
Waterfowl Nesting Habitat	Unknown	Unknown	Yes
Shorebird Migratory Stopover Areas	N/A	N/A	No

Wildlife Habitat	Present Within 120m of Project Location	Present Within Project Location	Site Investigation Required (Y/N)
Landbird (including songbird) Migratory Stopover Areas	N/A	N/A	No
Raptor Winter Feeding and Roosting Areas	Unknown	Unknown	Yes
Wild Turkey Winter Range	N/A	N/A	No
Turkey Vulture Summer Roosting Areas	N/A	N/A	No
Reptile Hibernacula (snakes)	Unknown	Unknown	Yes
Bat Hibernacula	Unknown	Unknown	Yes
Bat Maternity Colonies	Unknown	Unknown	Yes
Amphibian Breeding Habitat (woodland)	Unknown	Unknown	Yes
Amphibian Breeding Habitat (wetland)	Unknown	Unknown	Yes
Migratory Butterfly Stopover Areas	N/A	N/A	No
Alvars	Unknown	Unknown	Yes
Tall-grass Prairies	Unknown	Unknown	Yes
Savannahs	Unknown	Unknown	Yes
Rare Forest Types	Unknown	Unknown	Yes
Talus Slopes	Unknown	Unknown	Yes
Rock Barrens	Unknown	Unknown	Yes
Sand Barrens	Unknown	Unknown	Yes
Great Lakes Dunes	N/A	N/A	No
Forests Providing High Diversity of Habitats	N/A	N/A	No
Old-growth or Mature Forest Stands	Unknown	Unknown	Yes
Foraging Areas with Abundant Mast	N/A	N/A	No
Turtle Nesting Habitat	Unknown	Unknown	Yes
Turtle-Over-wintering Habitat	Unknown	Unknown	Yes
Woodland Raptor Nesting Habitat	Unknown	Unknown	Yes
Osprey Nesting/Bald Eagle, Foraging, and Perching Habitat	Unknown	Unknown	Yes
Moose Calving Areas	N/A	N/A	No
Mineral Licks	N/A	N/A	No
Mink, Otter, Marten, and Fisher Denning Sites	Unknown	Unknown	Yes (Only Mink)
Highly Diverse Areas	N/A	N/A	Yes
Cliffs	No	No	No
Seeps and Springs	Unknown	Unknown	Yes
Amphibian Movement Corridors	Unknown	Unknown	Yes
Marsh Bird Breeding Habitat	Unknown	Unknown	Yes
Woodland Area Sensitive Breeding Birds	Unknown	Unknown	Yes
Open Country Breeding Bird Habitat	Unknown	Unknown	Yes
Shrub/Early Successional Bird Breeding Habitat	Unknown	Unknown	Yes
Terrestrial Crayfish	Unknown	Unknown	Yes
Special Concern Species	Unknown	Unknown	Yes

Wildlife Habitat	Present Within 120m of Project Location	Present Within Project Location	Site Investigation Required (Y/N)
S1-S3, and SH Species and Communities	Unknown	Unknown	Yes

4.0 Site Investigation Summary

In accordance with the REA Regulation, NRSI biologists have completed a comprehensive site investigation of the Adelaide Wind Energy Centre project area. The results of the investigation have been discussed in detail within the *Adelaide Wind Energy Centre: Natural Heritage Site Investigation Report* (NRSI 2012a), and have been summarized in Table 3 below. This table summary includes woodlands, wetlands, valleylands, species of conservation concern and significant wildlife habitat, and whether each of these potential features or wildlife habitats require further consideration as part of the evaluation of significance.

Table 3. Summary of Natural Features and Wildlife Habitat Site Investigation for the Adelaide Wind Energy Centre

Feature ID	Feature Type	Distance to Closest Turbine (from blade tip) (m)	Distance to Other Project Infrastructure (m)	Evaluation of Significance Required (Y/N)
WOD-001	Woodland	16	4	Yes
WOD-002	Woodland	>120	Overlapping (directional drilling under woodland)	Yes
WOD-003	Woodland	21	4	Yes
WOD-004	Woodland	100	4	Yes
WOD-005	Woodland	19	4	Yes
WOD-006	Woodland	>120	4	Yes
WOD-007	Woodland	19	4	Yes
WOD-008	Woodland	21	10	Yes
WOD-009	Woodland	63	4	Yes
WOD-010	Woodland	51	4	Yes
WOD-011	Woodland	>120	4	Yes
WOD-012	Woodland	65	100	Yes
WOD-013	Woodland	23	78	Yes
WOD-014	Woodland	22	4	Yes
WOD-015	Woodland	16	4	Yes
WOD-016	Woodland	21	54	Yes
WOD-017	Woodland	77	115	Yes
WOD-018	Woodland	105	4	Yes
WOD-019	Woodland	>120	105	Yes
WOD-020	Woodland	>120	4	Yes
WOD-021	Woodland	>120	7	Yes
WOD-022	Woodland	>120	4	Yes
WOD-023	Woodland	>120	32	Yes

WOD-024	Woodland	>120	Overlapping (vegetation clearing for installation of overhead cable within existing road right of way)	Yes
WOD-025	Woodland	74	4	Yes
WOD-026	Woodland	97	4	Yes
WOD-027	Woodland	18	4	Yes
WOD-033	Woodland	>120	2	Yes
WOD-034	Woodland	>120	97	Yes
WOD-035	Woodland	>120	22	Yes
WOD-036	Woodland	>120	104	Yes
WOD-037	Woodland	>120	4	Yes
WOD-038	Woodland	>120	92	Yes
WOD-039	Woodland	>120	31	Yes
WOD-040	Woodland	>120	14	Yes
WOD-041	Woodland	>120	21	Yes
WOD-042	Woodland	>120	15	Yes
WOD-043	Woodland	>120	83	Yes
WOD-044	Woodland	>120	29	Yes
WOD-045	Woodland	>120	18	Yes
WOD-046	Woodland	>120	21	Yes
WOD-047	Woodland	>120	20	Yes
WOD-048	Woodland	>120	46	Yes
WOD-049	Woodland	>120	20	Yes
WOD-050	Woodland	>120	12	Yes
WOD-051	Woodland	>120	7	Yes
WOD-052	Woodland	>120	17	Yes
WOD-053	Woodland	>120	11.5	Yes
WOD-054	Woodland	>120	Overlapping (vegetation clearing for installation of overhead cable within existing road right of way)	Yes
WOD-055	Woodland	>120	16	Yes
WOD-056	Woodland	>120	116	Yes
WOD-057	Woodland	78	4	Yes
WET-001a	Wetland	40	65	Yes
WET-034	Wetland	>120	97	Yes
WET-037	Wetland	>120	4	Yes
WET-042	Wetland	>120	15	Yes
WET-049	Wetland	>120	20	Yes
VAL-020	Valleyland	>120	4	Yes
VAL-048	Valleyland	>120	46	Yes
RWA-002	Raptor Wintering Area	>120	5	Yes
RWA-003	Raptor Wintering Area	>120	5	Yes

RWA-004	Raptor Wintering Area	>120	5	Yes
SNH-001	Snake Hibernaculum	>120	63	Yes
SNH-002	Snake Hibernaculum	>120	18	Yes
SNH-003	Snake Hibernaculum	>120	103	No
SNH-004	Snake Hibernaculum	>120	7	No
BMA-001	Bat Maternity Colony	100	4	Yes
BMA-002	Bat Maternity Colony	105	4	Yes
BMA-003	Bat Maternity Colony	77	115	Yes
BMA-004	Bat Maternity Colony	51	4	Yes
BMA-005	Bat Maternity Colony	63	4	Yes
BMA-006	Bat Maternity Colony	16	4	Yes
BMA-011	Bat Maternity Colony	19	4	Yes
BMA-012	Bat Maternity Colony	19	4	Yes
BMA-014	Bat Maternity Colony	21	4	Yes
BMA-016	Bat Maternity Colony	16	4	Yes
BMA-017	Bat Maternity Colony	23	78	Yes
BMA-019	Bat Maternity Colony	22	4	Yes
BMA-020	Bat Maternity Colony	21	54	Yes
BMA-022	Bat Maternity Colony	21	10	No
AWO-001	Amphibian Breeding Habitat (Woodland)	40	65	Yes
AWO-002	Amphibian Breeding Habitat (Woodland)	77	115	Yes
AWO-004	Amphibian Breeding Habitat (Woodland)	63	4	Yes
AWO-005	Amphibian Breeding Habitat (Woodland)	51	4	Yes
CAS-001	Carey's Sedge	16	4	Yes
CAS-002	Carey's Sedge	51	4	Yes
CAS-003	Carey's Sedge	77	115	Yes

CAS-004	Carey's Sedge	105	4	Yes
CAS-005	Carey's Sedge	>120	2	Yes
CAS-006	Carey's Sedge	>120	97	Yes
CAS-007	Carey's Sedge	>120	4	Yes
YSG-001	Yellow Stargrass	16.9	>0.1	Yes
YSG-002	Yellow Stargrass	>120	56.5	Yes
Generalized Candidate Significant Wildlife Habitats				
Bat Maternity Colony	Not within 120m of infrastructure identified in Appendix D of the Natural Heritage Assessment guide that will have an operational impact on the habitats. Therefore these habitats will be carried forward to the Evaluation of Significance Report where they will be treated as significant.			Generalized
Rare Forest Type				Generalized
Amphibian Breeding Habitat (Woodland)				Generalized
Terrestrial Crayfish				Generalized
Woodland Raptor Nesting				Generalized
Red-headed Woodpecker				Generalized
Blue-ringed Dancer				Generalized
Double-striped Bluet				Generalized
Pronghorn Clubtail Bluet				Generalized
Woodland Bulrush				Generalized

5.0 Evaluation of Significance Summary

In accordance with the REA Regulation, NRSI biologists have completed a detailed evaluation of significance of all potentially significant natural features or wildlife habitats within 120m of the Adelaide Wind Energy Centre project area. The results of the investigation have been discussed in detail within the *Adelaide Wind Energy Centre: Natural Heritage Evaluation of Significance Report* (NRSI 2012b), and have been summarized in Table 4 below. This table summary includes the results of the evaluation of significance for the woodlands, wetlands, valleylands, species of conservation concern and significant wildlife habitat, and whether each of these features or wildlife habitats require detailed consideration as part of this Environmental Impact Study. All significant features (woodlands, wetlands, and valleylands) have been mapped on Figures 4 to 9. Significant wildlife habitat is mapped on Figures 10 to 15 and generalized significant wildlife habitat is mapped on Figures 16 to 21.

Table 4. Summary of Significant Natural Features and Wildlife Habitat within 120m of the Adelaide Wind Energy Centre

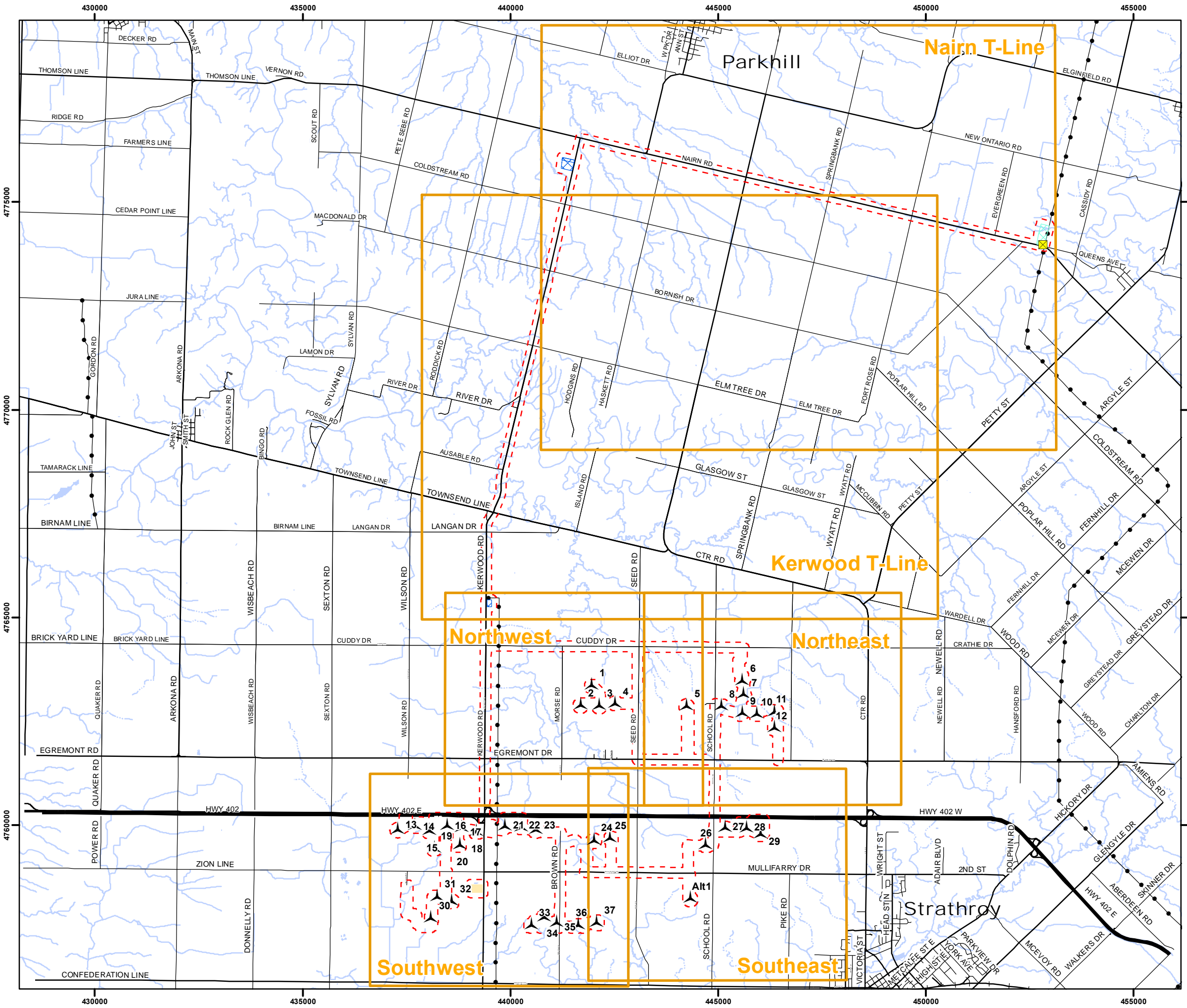
Feature ID	Feature Type	Distance to Closest Turbine (from blade tip)	Distance to Other Project Infrastructure	EIS Required (Y/N)
WOD-001	Woodland	16	4	Yes
WOD-002	Woodland	>120	Overlapping (horizontal directional drilling under woodland)	Yes
WOD-003	Woodland	21	4	Yes
WOD-004	Woodland	100	4	Yes
WOD-005	Woodland	19	4	Yes
WOD-006	Woodland	>120	4	Yes
WOD-007	Woodland	19	4	No
WOD-008	Woodland	21	10	Yes
WOD-009	Woodland	63	4	Yes
WOD-010	Woodland	51	4	Yes
WOD-011	Woodland	>120	4	Yes
WOD-012	Woodland	65	100	Yes
WOD-013	Woodland	23	78	Yes
WOD-014	Woodland	22	4	Yes
WOD-015	Woodland	16	4	Yes
WOD-016	Woodland	21	54	Yes
WOD-017	Woodland	77	115	Yes
WOD-018	Woodland	105	4	No
WOD-019	Woodland	>120	105	Yes
WOD-020	Woodland	>120	4	Yes
WOD-021	Woodland	>120	7	No
WOD-022	Woodland	>120	4	No

WOD-023	Woodland	>120	32	No
WOD-024	Woodland	>120	Overlapping (vegetation removal for installation of overhead cable along existing road right of way)	No
WOD-025	Woodland	74	4	No
WOD-026	Woodland	97	4	Yes
WOD-027	Woodland	18	4	Yes
WOD-033	Woodland	>120	2	Yes
WOD-034	Woodland	>120	97	No
WOD-035	Woodland	>120	22	Yes
WOD-036	Woodland	>120	104	Yes
WOD-037	Woodland	>120	4	Yes
WOD-038	Woodland	>120	92	Yes
WOD-039	Woodland	>120	31	No
WOD-040	Woodland	>120	14	Yes
WOD-041	Woodland	>120	21	Yes
WOD-042	Woodland	>120	15	Yes
WOD-043	Woodland	>120	83	Yes
WOD-044	Woodland	>120	29	Yes
WOD-045	Woodland	>120	18	Yes
WOD-046	Woodland	>120	21	Yes
WOD-047	Woodland	>120	20	Yes
WOD-048	Woodland	>120	46	Yes
WOD-049	Woodland	>120	20	Yes
WOD-050	Woodland	>120	12	Yes
WOD-051	Woodland	>120	7	Yes
WOD-052	Woodland	>120	17	Yes
WOD-053	Woodland	>120	11.5	Yes
WOD-054	Woodland	>120	Overlapping (vegetation removal for installation of overhead cable along existing road right of way)	No
WOD-055	Woodland	>120	16	Yes
WOD-056	Woodland	>120	116	Yes
WOD-057	Woodland	78	4	Yes
WET-001a	Wetland	40	65	Yes
WET-034	Wetland	>120	97	Yes
WET-037	Wetland	>120	4	Yes
WET-042	Wetland	>120	15	Yes
WET-049	Wetland	>120	20	Yes
VAL-020	Valleyland	>120	4	Yes
VAL-048	Valleyland	>120	46	Yes
RWA-002	Raptor Wintering Area	>120	5	Yes
RWA-003	Raptor Wintering Area	>120	5	Yes
RWA-004	Raptor Wintering Area	>120	5	Yes
SNH-001	Snake Hibernaculum	>120	63	No
SNH-002	Snake Hibernaculum	>120	18	No
BMA-001	Bat Maternity Colony	100	4	Yes
BMA-002	Bat Maternity Colony	105	4	Yes

BMA-003	Bat Maternity Colony	77	115	No
BMA-004	Bat Maternity Colony	51	4	No
BMA-005	Bat Maternity Colony	63	4	No
BMA-006	Bat Maternity Colony	16	4	Yes
BMA-011	Bat Maternity Colony	19	4	Yes
BMA-012	Bat Maternity Colony	19	4	Yes
BMA-014	Bat Maternity Colony	21	4	Yes
BMA-016	Bat Maternity Colony	16	4	Yes
BMA-017	Bat Maternity Colony	23	78	Yes
BMA-019	Bat Maternity Colony	22	4	Yes
BMA-020	Bat Maternity Colony	21	54	Yes
AWO-001	Amphibian Breeding Habitat (Woodland)	40	65	Yes
AWO-002	Amphibian Breeding Habitat (Woodland)	77	115	Yes
AWO-004	Amphibian Breeding Habitat (Woodland)	63	4	Yes
AWO-005	Amphibian Breeding Habitat (Woodland)	51	4	Yes
CAS-001	Carey's Sedge	16	4	Yes
CAS-002	Carey's Sedge	51	4	Yes
CAS-003	Carey's Sedge	77	115	Yes
CAS-004	Carey's Sedge	105	4	Yes
CAS-005	Carey's Sedge	>120	2	Yes
CAS-006	Carey's Sedge	>120	97	Yes
CAS-007	Carey's Sedge	>120	4	Yes
YSG-001	Yellow Stargrass	16.9	>0.1	Yes
YSG-002	Yellow Stargrass	>120	56.5	Yes
Generalized Candidate Significant Wildlife Habitat				
Bat Maternity Colony	Not within 120m of infrastructure identified in Appendix D of the Natural Heritage Assessment guide that will have an operational impact on the habitats. Therefore these habitats will be carried forward to the Environmental Impact Study Report where they will be treated as significant.			Generalized
Rare Forest Type				Generalized
Amphibian Breeding Habitat (Woodland)				Generalized
Terrestrial Crayfish				Generalized
Woodland Raptor Nesting				Generalized
Red-headed Woodpecker				Generalized
Blue-ringed Dancer				Generalized
Double-striped Bluet				Generalized
Pronghorn Clubtail Bluet				Generalized
Woodland Bulrush				Generalized

Figure 3

Adelaide Wind Energy Centre Key Map



Legend

- Map Extent
- Project Area (120m Buffer)
- Turbine
- Point of Common Coupling (PCC)
- Staging Area
- Interconnection Facilities
- Substation
- Existing Transmission Line
- Railroad
- Highway
- Primary Road
- Secondary Road
- Permanent Watercourse
- Intermittent Watercourse
- Waterbody



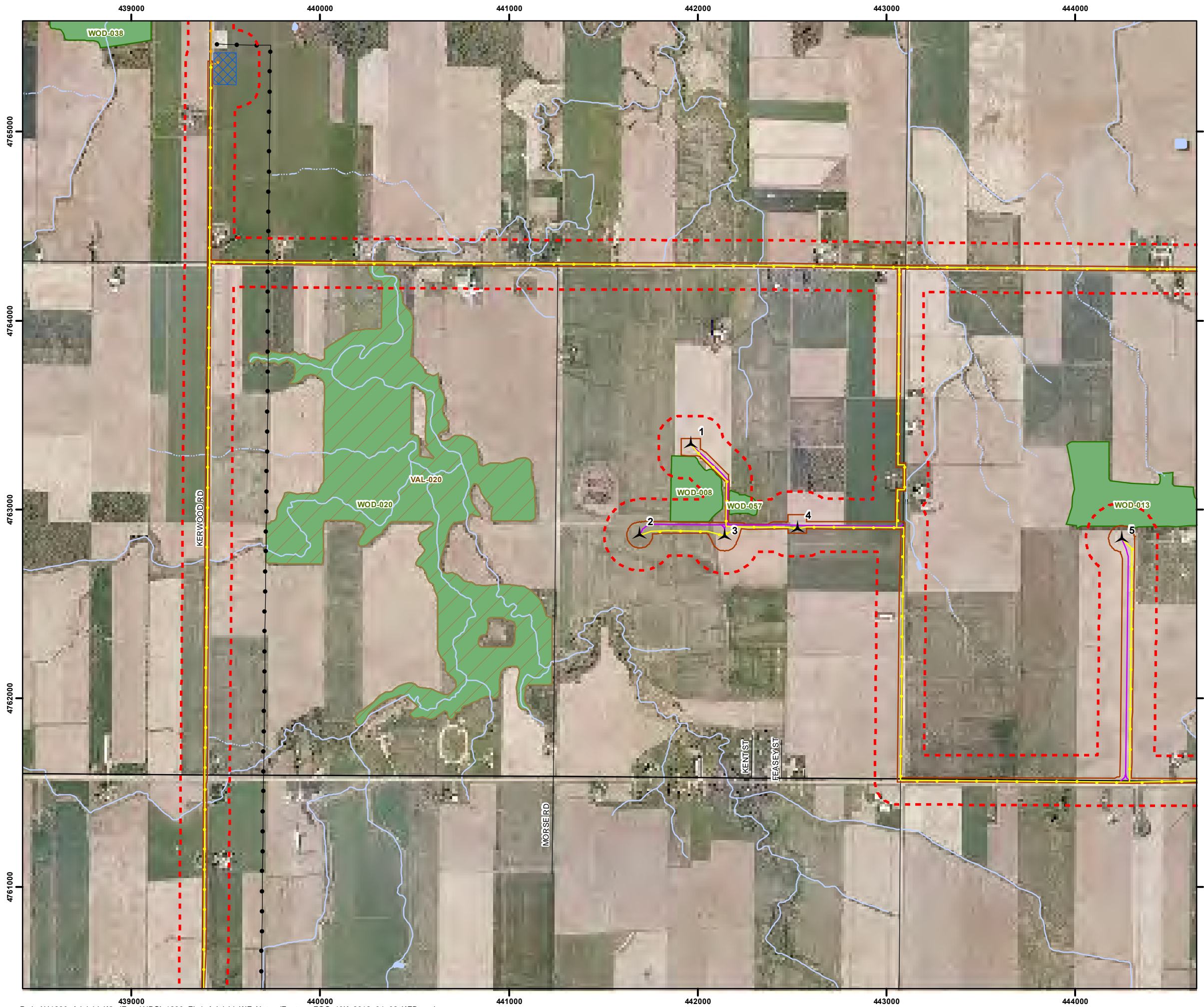
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Project: 1230 Date: April 2, 2012	NAD83 - UTM Zone 17 Scale: 1:90,000 (11x17")
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Figure 4

Adelaide Wind Energy Centre Significant Features - Northwest



- Legend**
- Project Area (120m Buffer)
 - Project Location
 - Turbine
 - Point of Common Coupling (PCC)
 - Access Road
 - Collector System
 - Transmission Line
 - Staging Area
 - Interconnection Facilities
 - Substation
 - Existing Transmission Line
 - Railroad
 - Highway
 - Primary Road
 - Secondary Road
 - Permanent Watercourse
 - Intermittent Watercourse
 - Waterbody
 - Woodlot (WOD)
 - Wetland (WET)
 - Valleyland (VAL)

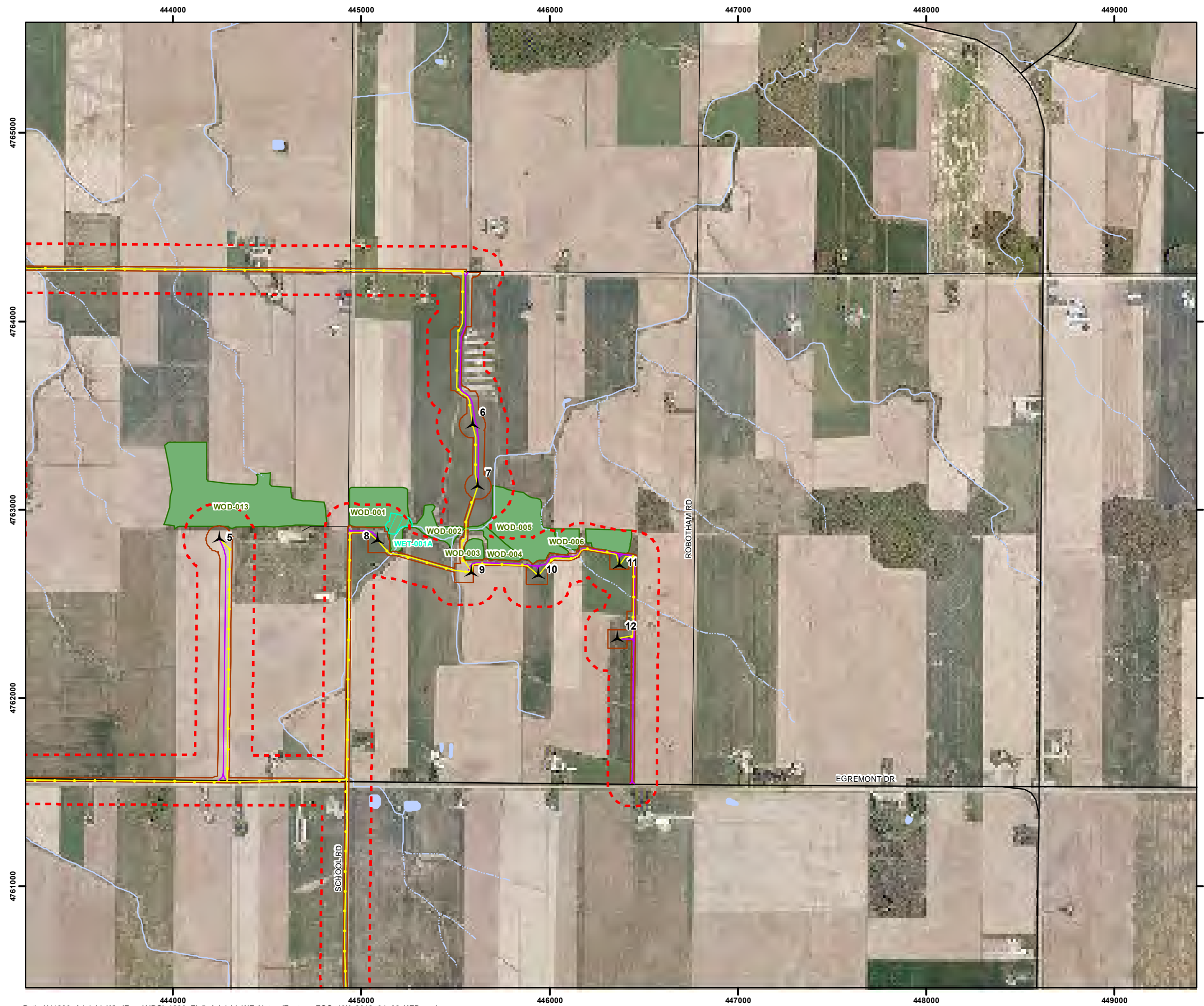


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Figure 5

Adelaide Wind Energy Centre Significant Features - Northeast



- Legend**
- Project Area (120m Buffer)
 - Project Location
 - Turbine
 - Point of Common Coupling (PCC)
 - Access Road
 - Collector System
 - Transmission Line
 - Staging Area
 - Interconnection Facilities
 - Substation
 - Existing Transmission Line
 - Railroad
 - Highway
 - Primary Road
 - Secondary Road
 - Permanent Watercourse
 - Intermittent Watercourse
 - Waterbody
 - Woodlot (WOD)
 - Wetland (WET)
 - Valleyland (VAL)



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0 200 400 600 800 1,000 Metres

