Ernestown Wind Park
Natural Heritage Assessment
Records Review

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ERNESTOWN
Wind Park Inc.

Contents

1.0 Introduction

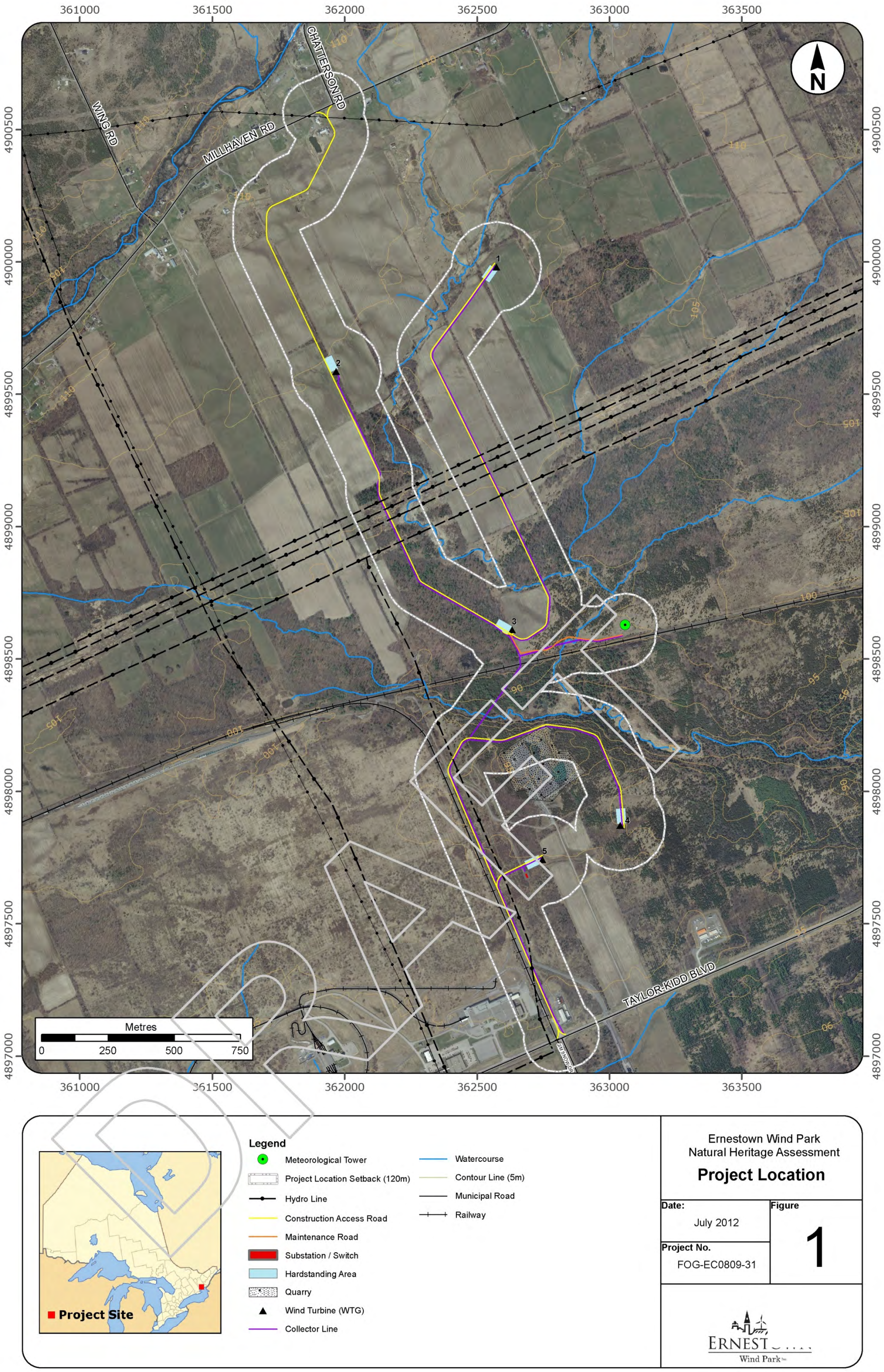
Ernestown Windpark Inc., as general partner of Ernestown Windpark LP, is proposing to develop a wind energy generation facility named Ernestown Wind Park (the Project), located in the Loyalist Township, Ontario, to generate clean renewable energy for connection to the public grid. This project will promote a long-term, low-impact energy that will complement Ontario's goals of clean and sustainable electricity generation, while impacting economic growth in the rural community.

The approvals process and requirements for renewable energy projects proposed under the Ontario Green Energy Act (2009) are outlined in the Ministry of Environment's (MOE) Renewable Energy Approval Regulation (O. Reg. 359/09) under the Environmental Protection Act, administered by the Ministry of the Environment (MOE). The MNR's Natural Heritage Assessment Guide (NHA Guide) for Renewable Energy Projects (OMNR 2011) was the primary document used to guide the requirements for completion of the NHA for the project.

This report, the Records Review Report, serves to collect and review any known or potential natural features within (a minimum) of 120m of the proposed project location. The REA Regulation requires that applicable renewable energy projects additionally complete the following technical studies and reports:

- **Site Investigation Report** - to validate or identify confirmed or additional natural features at or within 120m of the proposed project location;
- **Evaluation of Significance Report** - to determine the significance or provincial significance of natural features identified at or within 120m of the proposed project location; and,
- **Environmental Impact Study Report** - to assess, avoid and mitigate potential negative environmental effects to significant or provincially significant natural features at or within 120m of the proposed project location (if required).

Figure 1: Project Location



2.0 Records Review

A records review was conducted in accordance with part IV, Section 25 of the REA Regulation. A summary of the requirements and the according sections is listed in Table 1, below. The records review included a search of existing background information sources to identify any known or potential natural features within and 120m adjacent to the project location. This included features that had been previously designated (e.g. ANSI, PSW, ESA, Significant Woodland, etc.) through a formal planning or evaluation process as well as features that had no current designation.

Table 1: Records Review Information Source Summary

Item	Records to be Searched/Analyzed	Determination to be Made	Report Section
1	Records that relate to provincial parks and conservation reserves and that are maintained by the Ministry of Natural Resources.	Whether the project location is in a provincial park or conservation reserve or within 120m of a provincial park or conservation reserve	2.1
	Records that relate to natural features and that are maintained by,	Whether the project location is,	
2	I. The Ministry of Natural Resources,		2.2
3	II. The Crown in right of Canada,	i. In a natural feature,	2.1
4	III. A Conservation Authority, if the project location is in the area of jurisdiction of the conservation authority,		2.2
5	IV. Each local and upper-tier municipality in which the project location is situated,	ii. within 50 meters of an area of natural and scientific interest (earth science), or	2.2
6	V. The planning board of an area of jurisdiction of a planning board in which the project location is situated,		2.2
7	VI. The municipal planning authority of an area of jurisdiction of a municipal planning authority in which the project location is situated,	iii. within 120m of a natural feature that is not an area of natural and scientific interest (earth science).	2.2
8	VII. The local roads board of a local roads area in which the project location is situated,		2.1
9	VIII. The Local Services Board of a board area in which the project location is situated, and		2.1
10	IX. The Niagara Escarpment Commission, if the project location is in the area of the Niagara Escarpment Plan.		N/A

2.1 Methods

A study area was established for the records review which encompassed the subject lands as well as the surrounding area. This was done to account for instances where a natural feature extended beyond 120m of the project location boundary in order to provide sufficient information to evaluate the significance of the feature as well as to account for potential changes to project design or layout that may have occurred later in the project planning stages. The records searched, organizations contacted and description of records reviewed are summarized in Table 2.

Table 2: Records Review Information Source Summary

Information Source	Data Description/Comments*
Ministry of Natural Resources	Correspondence with Peterborough MNR District Office (Eric Prevost), Sept. 8, 2010 Data from SOLRIS (OMNR, 2008), retrieved August 2012 Data from OBM (OMNR, 2011c), retrieved August 2012 Data from LIO (OMNR, 2011d), retrieved August 2012
Cataraqui Region Conservation Authority (CRCA)	Correspondence with Sukriti Agarwal, June 10, 2010
County of Lennox & Addington	County has no Official Plan or natural heritage mapping
Loyalist Township OP and Zoning By-law (2009)	Environmental protection areas and mapping
Ontario Regional Area Municipal Portal (2010)	No local services or road boards in municipality
Crown Land Use Policy Atlas (2010)	Provincial parks and conservation reserves
Special Policy Area maps (2010) Niagara Escarpment Plan maps; Oak Ridges Moraine	Conservation Plan maps; Greenbelt Plan Area maps; Ontario Renewable Energy Atlas (OMNR 2010a) Bat hibernacula and ANSI's
Important Bird Areas (IBA) Database (2009)	Seasonal bird concentration areas
Wildlife Species Atlases and Databases	Ontario Reptile and Amphibian Atlas (Ontario Nature 2011); Ontario Breeding Bird Atlas (Cadman et al 2007); Ontario Mammals Atlas (Dobbyn 1994)
Citizen Science Monitoring Program Databases	Frogwatch (2009); Turtle Talley (2009)
Significant Wildlife Habitat Technical Guide (SWHTG) - Appendix K and Appendix M (OMNR 2000)	Significant Sites for Waterfowl; Rare Vegetation Communities
Central Cataraqui Region Natural Heritage Study (CRCA 2006)	Woodlands; wetlands; valleylands; wildlife habitat; ANSI; riparian areas and fish habitat; ecological linkages and corridors
NHIC Biodiversity Explorer (2010)	Rare plant communities, rare species; wildlife concentration areas; natural areas
Google Earth (2009)	Satellite imagery of natural and cultural site features
Fisheries and Oceans Canada	Correspondence with Tracy Allen, Peterborough Office
Canadian Wildlife Services (CWS)	Environmental protection areas and mapping; Rare plant communities, rare species; wildlife concentration
First Base Solutions	High resolution ortho-rectified aerial photography (Spring 2006)

***** Full references are provided in Section 3.0

2.2 Results

The records review showed that the project location is within 120m of natural features. The project location does not fall within 50m of an ANSI (earth science) or 120m of a provincial park or conservation reserve. Natural features (designated and non-designated) identified from the records review that occur within the subject lands and 120m from the project location boundary are shown in Figure 2 and discussed below. Natural features that have the potential to occur on the subject lands, based on the findings from the records review, are also discussed.

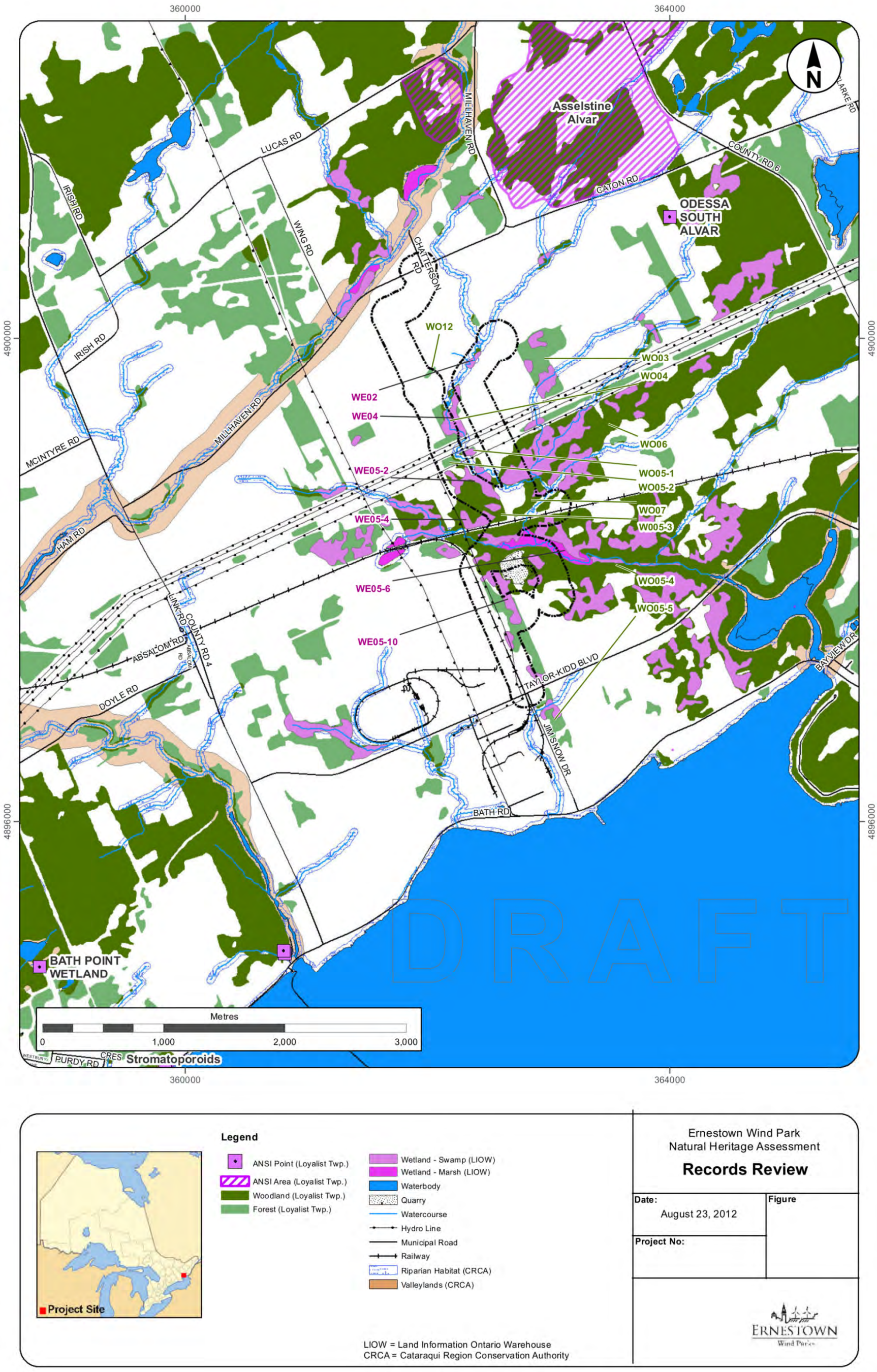
2.2.1 Woodlands

Deciduous and mixed woodlands occur within 120m of the project location. Some of the woodlands are designated Significant based on the mapping in the Central Cataraqui Region Natural Heritage Study (CCRNHS) (CRCA 2006). The study was led by the Cataraqui Region Conservation Authority (CCRA) in partnership with the local municipalities and the Ministry of Natural Resources.

Five evaluation criteria were used in the CCRNHS to identify significant woodlands were (1) size; (2) presence of interior habitat; (3) proximity to other significant natural features; (4) hydrologic values; and, (5) age. The evaluation of significance was based on a minimum standards method in which a woodland is considered significant if it meets one or more of the five criteria.

Some of the woodlands on and contiguous to the subject lands were designated significant due to their large forest patch size (>40ha), presence of interior habitat (>100m from forest edge) and hydrologic connectivity with streams (i.e. woodlands within 30m of a waterbody). Significant woodlands identified from the CCRNHS within Loyalist Township are shown in Figure 2.

Figure 2: Records Review



2.2.2 Wildlife Habitat

The CCRNHS included an evaluation of significant wildlife habitat throughout Loyalist Township based on existing information collected from a variety of organizations, agencies and reports. Wildlife habitat features addressed in the CCRNHS included seasonal concentrations of animals (i.e. colonial bird nesting sites, waterfowl migratory stopover areas, land bird migratory stopover areas, bat/snake hibernacula); raptor nesting habitat; rare vegetation communities; and, habitat of species of conservation concern.

Old field habitat was also discussed in the CCRNHS, however, these features were not considered permanent features on the landscape and therefore were not identified as part of the CCRNHS. Old field habitat was described as abandoned fallow agricultural lands that are overgrown with herbaceous and shrub species.

None of the significant wildlife habitat features that were identified and mapped in the CCRNHS occurred within 120m of the project location nor did any occur on the subject lands. However, known and candidate significant wildlife habitat (SWH) features that were identified based on other information sources used for the records review are discussed below.

2.2.2.1 Rare Vegetation Communities

A known provincially significant alvar (Asselstine Alvar ANSI) occurs approximately 450m northeast of the subject lands boundary. A comparison of this alvar community with communities on the subject lands using satellite imagery indicated that an open alvar community possibly existed in the northeast corner of the subject lands.

Open alvar ecosites are considered rare (S1, S2 or S2S3) vegetation communities in Ontario that often support rare wildlife species. Pending site investigations and evaluation criteria, the alvar is a candidate significant rare vegetation community.

2.2.2.2 Specialized Wildlife Habitat

Some woodlands on the subject lands are designated significant in the CCRNHS. Based on satellite imagery and the CCRNHS, one of the woodlands (that extends east of the subject lands boundary) contains interior habitat that could potentially support area-sensitive birds as well as woodland raptor nesting habitat.

2.2.2.3 Habitat for Species of Conservation Concern

The subject lands fall within the Napanee Limestone Plain Important Bird Area (IBA) which covers an area of approximately 110 km2 (IBA Canada 2009). The Napanee Limestone Plain is important for grassland and alvar bird populations and has been designated as nationally significant under the Threatened species and Congregatory species categories.

The Napanee Limestone Plain supports approximately 75% of Ontario’s population of breeding Loggerhead Shrikes, an endangered species. Henslow's Sparrow, also endangered, has been present regularly in low numbers throughout the plain, however, there have been no recent observation records for this rapidly declining, yet

reclusive species. Upland Sandpiper is also found on the plain in nationally significant numbers with close to 2% of the Canadian Upland Sandpiper breeding population.

Based on the information sources used during the records review (NHIC Biodiversity Explorer, correspondence with the local MNR office, Napanee Limestone Plain IBA report, satellite imagery, etc.), the subject lands potentially contain candidate SWH for species of conservation concern. This includes species that are listed as Special Concern or rare (S1-S3), which are declining in population, or are featured species in Ontario. Habitats of Species of Conservation Concern do not include habitats of Endangered or Threatened species protected under the Ontario Endangered Species Act.

Species of conservation concern identified from the records review are listed in Table 3. Based on MNR records, past occurrences of these species were located in proximity to the subject lands. Candidate SWH for Golden-winged warbler and Yellow-breasted Chat on the subject lands would include shrub/early-successional bird breeding habitat. Eastern milksnake is a generalist species that utilizes a wide range of habitat types. The large woodlands on the subject lands (designated significant woodlands in the CCRNHS) could also potentially contain breeding habitat for area-sensitive bird species.

2.2.2.4 Animal Movement Corridors

No animal movement corridors were identified within or near the Project Location in the records review.

Table 3: Record of Species of Conservation Concern in Proximity to Subject Lands

Common Name	Scientific Name	S-Rank	Provincial Status (COSSARO)
Golden-winged Warbler	*Vermivora chrysoptera*	S4	Special Concern
Yellow-breasted Chat	*Icteria virens*	S2	Special Concern
Eastern Milksnake	*Lampropeltis triangulum*	S3	Special Concern

S1 - Critically Imperiled
S2 - Imperiled
S3 - Vulnerable
Special Concern - A species with characteristics that makes it sensitive to human activities or natural event

2.3 Records Review conclusions

The records review showed that the project location is within 120m of natural features. The project location does not fall within 50m of an ANSI (earth science), within 120m of a provincial park or conservation reserve. No valleylands were identified within 120m of the project location through consultation of appropriate records.

Table 4: Records Review Findings

Natural Feature	Records Review	Source	Carried Forward to Site Investigation
Wetlands	Wetlands identified throughout subject lands	LIO, SOLRIS, First Base Solutions, OBM	6 (WE02, WE04, WE05-2, WE05-4, WE05-6, WE05-10)
Woodlands	Woodlands identified throughout subject lands	Loyalist Township, Cataraqui Regional Conservation Authority	10 (WO03, WO04, WO05-1, WO05-2, WO05-3, WO05-4, WO05-5, WO06, WO07, WO12)
Valleylands	No Valleylands identified on subject lands	Cataraqui Regional Conservation	0
Wildlife Habitat	No seasonal concentration areas; rare vegetation communities; specialized wildlife habitat; or habitat for species of conservation concern was identified for subject lands	Cataraqui Regional Conservation Authority	Multiple

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