

# **APPENDIX I HERITAGE RESOURCES**



**BLUE HILL WIND ENERGY PROJECT  
ENVIRONMENTAL IMPACT STATEMENT**

Appendix I Heritage Resources  
December 2017

## **Appendix I HERITAGE RESOURCES**

### **I.1 REFERRAL**

**BLUE HILL WIND ENERGY PROJECT  
ENVIRONMENTAL IMPACT STATEMENT**

Appendix I Heritage Resources  
December 2017



September 14, 2017

Our file: 17-1558

Ms. Lauren Stead  
Stantec Consulting Ltd.  
Agent for: **Algonquin Power**  
100 – 75 24<sup>th</sup> Street E  
SASKATOON SK S7K 0K3  
Email: lauren.stead@stantec.com

ORIGINAL E-MAILED  
Sept. 15/17

Dear Ms. Stead:

**RE: Algonquin Power – Blue Hill Wind Project:  
See Table 1 for 48 Locations;  
HERITAGE RESOURCE REVIEW**

Thank you for referring this project for heritage resource review.

In determining the need for, and scope of, Heritage Resource Impact Assessment (HRIA) pursuant to s.63 of *The Heritage Property Act*, the following factors were considered: the presence of previously recorded heritage sites, the area's overall heritage resource potential, the extent of previous land disturbance, and the scope of new proposed land development.

The proposed project is located on both cultivated land and undisturbed hummocky native prairie near seasonal water sources. The latter is a terrain type considered to have moderate to high potential for containing archaeological sites. Although none are presently in direct conflict with the development, there are a number of sites recorded nearby. As heritage resources may be adversely affected by this wind farm development, an HRIA study is required for those areas specified in Table 1.

The HRIA, including systematic surface survey and sub-surface test exploration, is a proponent responsibility. The study will first establish the presence of heritage sites within the project area and where suitable site avoidance measures (including right-of-way relocation) may be implemented. If heritage sites are located in unavoidable conflict with development, the study must also establish the content, structure and significance of those sites, and, on that basis, recommend both the need for and scope of any further study (including archaeological salvage excavation or other conservation action).

The HRIA must be carried out by qualified personnel under an approved investigation permit issued through this office. Normally, two days are required to process a heritage contractor's permit application.

If you have any questions regarding these heritage regulatory requirements, please contact Kim Cloutier at the above address or by calling 787-2848. Thank you again for referring this proposed development and for your cooperation in protecting the province's cultural heritage.

Sincerely,



Carlos Germann  
Director

cc: Kim Cloutier, Archaeologist, Heritage Conservation Branch, Ministry of Parks, Culture and Sport

Table 1: HRIA Requirements for 48 Heritage Sensitive Quarter Sections

Quarter Section	Infrastructure	HCB Requirement(s)	HCB Comments
SW-14-15-09-W3M	3 WTG New Access Road Collector Lines	<b>HRIA Required for WTG 23 buffer zone</b> No further concerns for WTG 18, SS-Main, Collector Lines and Access Roads	250 m buffer zone for WTG 23 impacts hummocky native prairie in SW and SE 14. Remainder is cultivated.
SW-21-15-09-W3M	1 WTG New Access Road Collector Line	No further concerns	Impacts cultivation and low wet areas
NW-06-16-09-W3M	Infrastructure Buffer	No further concerns	Impacts cultivation
SE-24-15-09-W3M	Infrastructure Buffer	No further concerns	Impacts cultivation and sloping wet areas
NE-20-15-09-W3M	1 WTG New Access Road Collector Line	No further concerns	Impacts cultivation
SE-06-16-09-W3M	Infrastructure Buffer	No further concerns	Impacts cultivation
SW-26-15-09-W3M	2 WTG New Access Road Collector Line	<b>HRIA Required for WTG 41 and 42 buffer zones</b> No further concerns	250 m WTG buffer zones impacts hummocky native prairie in SW&NW 26 and SE 27. Remainder

		for Access Road and Collector Line	is cultivated
NE-13-15-09-W3M	1 WTG New Access Road Collector Line	No further concerns	Impacts cultivation
NE-01-15-09-W3M	Infrastructure Buffer	No further concerns	Impacts cultivation and low wet area
SW-04-16-09-W3M	1 WTG New Access Road Collector Line	No further concerns	Collector line buffer zone impacts portions of native prairie but ploughed lines create minimal disturbance. Remainder in cultivation.
NE-33-15-09-W3M	1 WTG New Access Road Collector Line	No further concerns	Impacts cultivation
SE-30-15-08-W3M	1 Contingency WTG New Access Road Collector Line	No further concerns	Impacts cultivation
NW-03-16-09-W3M	Infrastructure Buffer	No further concerns	Impacts cultivation
NE-05-15-08-W3M	Infrastructure Buffer	No further concerns	Impacts cultivation
NW-04-16-09-W3M	2 WTG 1 Contingency WTG New Access Road Collector Lines	<b>HRIA Required for WTG 49 buffer zone</b> No further concerns for WTG 47 and C4, Access Roads and Collector Lines	250 m WTG buffer zone impacts hummocky native prairie adjacent to a seasonal water sources in NW&NE 4 and SW 9. Remainder is cultivated.
NW-14-15-09-W3M	Collector Line	No further concerns	Impacts sloping edge of a large landform (native prairie)
SW-03-16-09-W3M	Infrastructure Buffer	No further concerns	Impacts cultivation
SE-32-15-09-W3M	Infrastructure Buffer	No further concerns	Impacts cultivation
SE-07-16-09-W3M	1 Contingency WTG New Access Road Collector Lines	No further concerns	Impacts cultivation
SE-09-16-09-W3M	Infrastructure	No further concerns	Impacts cultivation

	Buffer		
NW-13-15-09-W3M	1 WTG New Access Road Collector Line	No further concerns	Impacts cultivation
NW-26-15-09-W3M	Infrastructure Buffer	<b>HRIA Required for WTG 42 buffer zone</b>	250 m buffer zone impacts hummocky native prairie
SW-33-15-09-W3M	Infrastructure Buffer	No further concerns	Collector line buffer zone impacts portions of hummocky native prairie but ploughed lines create minimal disturbance. Remainder is cultivated.
SE-05-16-09-W3M	Collector Line	No further concerns	Impacts cultivation and low wet areas
NE-14-15-09-W3M	Infrastructure Buffer	No further concerns	Impacts cultivation
SW-05-16-09-W3M	1 Contingency WTG New Access Road Collector Line	No further concerns	Impacts cultivation and low wet area
SE-14-15-09-W3M	1 WTG New Access Road Collector Line	No further concerns	Impacts cultivation
SE-21-15-09-W3M	Infrastructure Buffer	No further concerns	Impacts cultivation
NW-20-15-09-W3M	Infrastructure Buffer	No further concerns	Impacts cultivation
NE-04-16-09-W3M	2 WTG New Access Road Collector Line	No further concerns	Impacts cultivation
NE-21-15-09-W3M	1 WTG New Access Road Collector Line	<b>HRIA Required for WTG 38 and Access Road buffer zones (native prairie portions only).</b> No further concern for Collector Line.	Infrastructure buffer zones impact hummocky native prairie. Remainder is cultivated.
SE-28-15-09-W3M	Infrastructure Buffer	No further concerns	Collector line buffer zone impacts portions of hummocky native prairie but ploughed lines create



			minimal disturbance
SW-27-15-09-W3M	Infrastructure Buffer	No further concerns	Impacts cultivation. EbNt-4 located in this quarter section but is avoided by development.
SW-29-15-08-W3M	Infrastructure Buffer	No further concerns	Impacts cultivation and low wet area
SE-27-15-09-W3M	Infrastructure Buffer	<b>HRIA Required for WTG 41 buffer zone</b> No further concerns for Collector Line	250 m WTG buffer zone impacts hummocky native prairie. Remainder is cultivated.
NW-05-15-08-W3M	Infrastructure Buffer	No further concerns	Impacts cultivation
NW-05-16-09-W3M	Collector Line	No further concerns	Impacts cultivation
SW-23-15-09-W3M	Collector Line	No further concerns	Impacts cultivation
SW-28-15-09-W3M	Infrastructure Buffer	No further concerns	Impacts cultivation and low wet area
NW-21-15-09-W3M	1 WTG New Access Road Collector Line	No further concerns	Impacts cultivation and low wet area
NE-22-15-09-W3M	2 WTG 1 Contingency Substation New Access Road Collector Lines	<b>HRIA Required for WTG 40, SS-C1, and Access Road buffer zones (native prairie portions only).</b> No further concern for Collector Line.	Buffer zones impact portions of hummocky native prairie. Remainder is cultivated.
NE-32-15-09-W3M	Collector Line	No further concerns	Impacts cultivation
SE-05-15-08-W3M	Infrastructure Buffer	No further concerns	Impacts cultivation
SW-09-16-09-W3M	Infrastructure Buffer	<b>HRIA Required for WTG 49 buffer zone</b>	250 m buffer zone impacts hummocky native prairie
NE-06-16-09-W3M	1 Contingency WTG New Access Road Collector Line	No further concerns	Impacts cultivation and low wet area
NW-23-15-09-W3M	Collector Line	No further concerns	Collector line buffer zone impacts portions of hummocky native prairie but ploughed lines create minimal disturbance.

			Remainder is cultivated.
NW-33-15-09-W3M	Collector Line	No further concerns	Collector line impacts portions of hummocky native prairie but ploughed lines create minimal disturbance. Remainder is cultivated.
SE-20-15-09-W3M	Infrastructure Buffer	No further concerns	Impacts cultivation

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**I.2 HERITAGE CLEARANCE LETTER**

**BLUE HILL WIND ENERGY PROJECT  
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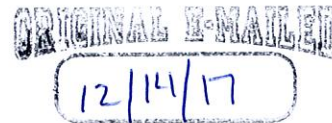
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Our file: 17-1558

Ms. Lauren Stead  
Stantec Consulting Ltd.  
Agent for: **Algonquin Power**  
100 – 75 24<sup>th</sup> Street E  
SASKATOON SK S7K 0K3  
Email: lauren.stead@stantec.com



Dear Ms. Stead:

**RE: Algonquin Power – Blue Hill Wind Project (Your file: 113254088);  
Heritage Resource Impact Assessment Review (Permit #17-188)**

Please be advised we received (December 7, 2017) the final report from Stantec Consulting Ltd. on the heritage resource impact assessment (HRIA) of this project completed under Investigation Permit #17-188.

Four new archaeological sites (EbNs-2, 3, and EbNt-5, 6) were discovered in the course of pedestrian survey and subsurface testing of the development area (Table 1 below). Two of these EbNs-2 and EbNt-6) are considered “sites of a special nature” (SSN) pursuant to s.64 of *The Heritage Property Act* and must be afforded special consideration.

Provided all four sites can be avoided in accordance with the buffer zones noted in Table 1, this office has no further concerns with the project proceeding as planned. Please note that the buffer zones must be established or marked in the field by a professional archaeologist prior to construction.

If EbNs-3 cannot be avoided as noted, mapping and detailed sub-surface testing is required prior to construction. Depending on these results, possible further investigation including salvage exaction and data recovery may also be required.

If either EbNs-2 and EbNt-6 cannot be avoided as noted, this must be contacted to determine appropriate next steps when “sites of a special nature” may be impacted.

Ms. Lauren Stead  
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On behalf of the Heritage Conservation Branch, please convey our appreciation to Algonquin Power for having commissioned this investigation, and for its continuing assistance and support in preserving Saskatchewan's archaeological heritage.

Sincerely,



Carlos Germann  
Director

Cc Kim Cloutier, Archaeologist, Heritage Conservation Branch

**Table 1: Requirements for Site Avoidance on Blue Hill Wind Project (File: 113254088)**

<b>Borden No.</b>	<b>Legal</b>	<b>Site Type</b>	<b>Buffer Zone Requirements</b>
EbNs-2	NW and SW 26-15-9-W3M	Multiple stone circle features; petroglyph (SSN)	<ul style="list-style-type: none"><li>• 200 m buffer zone for permanent Project infrastructure</li><li>• 100 m buffer zone for temporary construction activities</li></ul>
EbNs-3	SE 27-15-9-W3M	Recurrent stone circle features	<ul style="list-style-type: none"><li>• Staked 15 m buffer zone around the site</li></ul>
EbNt-5	NW 20-15-9-W3M	Single Feature	<ul style="list-style-type: none"><li>• Outside of project area; no further requirements</li></ul>
EbNt-6	NE and NW 4-16-9-W3M	Recurrent stone circle and cairn features (SSN)	<ul style="list-style-type: none"><li>• 200 m buffer zone for permanent Project infrastructure</li><li>• 100 m buffer zone for temporary construction activities</li></ul>