

Ministry of Tourism and Culture

Culture Programs Unit
Programs and Services Branch
Culture Division
401 Bay Street, Suite 1700
Toronto, ON, M7A 0A7
Telephone: 416-212-8003
Facsimile: 416-314-7175
Email: Norbert.Stanchly@ontario.ca

Ministère du Tourisme et de la Culture

Unité des programmes culturels
Direction des programmes et des services
Division de culture
401, rue Bay, Bureau 1700
Toronto, ON, M7A 0A7
Téléphone: 416-212-8003
Télécopieur: 416-314-7175
Email: Norbert.Stanchly@ontario.ca



September 28, 2011

Penn Energy Renewables Ltd.

1 Yonge Street, Suite 1801

Toronto ON M5E 1W7

RE: Penn Energy – Roseplain Solar Generation Project, Town of Uxbridge, Ontario, OPA FIT Reference No. FIT-F7TMB91, MTC File HD00647, PIF # P025-222-2011

Dear Proponent:

This letter constitutes the Ministry of Tourism and Culture's written comments as required by s. 22(3)(a) of O. Reg. 359/09 under the *Environmental Protection Act* regarding archaeological assessments undertaken for the above project.

Based on the information contained in the report you have submitted for this project, the Ministry believes the archaeological assessment complies with the *Ontario Heritage Act's* licensing requirements, including the licence terms and conditions and the Ministry's 1993 Archaeological Assessment Technical Guidelines. Please note that the Ministry makes no representation or warranty as to the completeness, accuracy or quality of the Report.*

The report recommends the following:

6.0 Recommendations

Due to the lack of archaeological material present on this development property, it is the recommendation of this report that all tested areas of the property be granted full clearance for development in compliance with Section 7.0 below.

7.0 Advice on Compliance with Legislation

- a. This report is submitted to the Minister of Tourism and Culture as a condition of licensing in accordance with Part VI of the Ontario Heritage Act, R.S.O. 1990, c 0.18. The report is reviewed to ensure that it complies with the standards and guidelines that are issued by the Minister, and that the archaeological fieldwork and report recommendations ensure the conservation, protection and preservation of the cultural heritage of Ontario. When all matters relating to archaeological sites within the project area of a development proposal have been addressed to the satisfaction of the Ministry of Tourism and Culture, a letter will be issued by the ministry stating that there are no

further concerns with regard to alterations to archaeological sites by the proposed development.

- b. It is an offence under Sections 48 and 69 of the Ontario Heritage Act for any party other than a licensed archaeologist to make any alteration to a known archaeological site or to remove any artifact or other physical evidence of past human use or activity from the site, until such time as a licensed archaeologist has completed archaeological fieldwork on the site, submitted a report to the Minister stating that the site has no further cultural heritage value or interest , and the report has been filed in the Ontario Public Register of Archaeological Reports referred to in Section 65.1 of the Ontario Heritage Act.
- c. Should previously undocumented archaeological resources be discovered, they may be a new archaeological site and therefore subject to Section 48 (1) of the Ontario Heritage Act. The proponent or person discovering the archaeological resources must cease alteration of the site immediately and engage a licensed consultant archaeologist to carry out archaeological fieldwork, in compliance with Section 48 (1) of the Ontario Heritage Act.
- d. The Cemeteries Act, R.S.O. 1990 c. C.4 and the Funeral, Burial and Cremation Services Act, 2002, S.O. 2002, c.33 (when proclaimed in force) require that any person discovering human remains must notify the police or coroner and the Registrar of Cemeteries at the Ministry of Consumer Services.

The Ministry is satisfied with these recommendations.

This letter does not waive any requirements which you may have under the *Ontario Heritage Act*. A separate letter addressing archaeological licensing obligations under the Act will be sent to the archaeologist who completed the assessment and will be copied to you.

This letter does not constitute approval of the renewable energy project. Approvals of the project may be required under other statutes and regulations. It is your responsibility to obtain any necessary approvals or licences.

Please feel free to contact me if you have questions or require additional information.

Sincerely,

Norbert Stanchly
Archaeology Review Officer

cc. Lawrence Jackson, Northeastern Archaeological Associates Ltd.

* In no way will the Ministry be liable for any harm, damages, costs, expenses, losses, claims or actions that may result: (a) if the Report(s) or its recommendations are discovered to be inaccurate, incomplete, misleading or fraudulent; or (b) from the issuance of this letter. Further measures may need to be taken in the event that additional artifacts or archaeological sites are identified or the Report(s) is otherwise found to be inaccurate, incomplete, misleading or fraudulent.

STAGE 1 AND 2 ARCHAEOLOGICAL ASSESSMENT OF THE PENN ENERGY –
ROSEPLAIN SOLAR GENERATION PROJECT, LOT 22, CONCESSION 3, 5240
CONCESSION ROAD 4, RR1, TOWN OF UXBRIDGE, DURHAM REGION
(FORMER ONTARIO COUNTY), ONTARIO.

FIT Contract #: F-001557-SPV-130-505

FIT Application #: FIT-F7TMB91

REVISED COPY

Prepared For:

Penn Energy Renewables Ltd.

US Address:

620 Righters Ferry Road

Bala Cynwyd

PA 19004

Ph: 610-668-0300

Canadian Address:

1 Yonge Street, Suite 1801

Toronto, Ontario

M5E 1W7

Prepared By:

Northeastern Archaeological Associates Ltd.

Licenced to: Dr. Lawrence Jackson (P-025)

PIF#: P-025-222-2011

Original Report Submitted Aug. 16, 2011

Revised Report Submitted Sept. 18, 2011

Northeastern Archaeological Associates Limited

P.O. Box 493,

Port Hope, Ontario

L1A 3Z4

905-342-3250

EXECUTIVE SUMMARY

In the spring of 2011, Northeastern Archaeological Associates Limited was contacted by Penn Energy Renewables Ltd. requesting that, in compliance with the requirements outlined by the MTC, an archaeological assessment be conducted in part of Lot 22, Concession 3 in Uxbridge Township, Ontario, at the location of the proposed 36 hectare Class 3 Roseplain Solar Generation Facility. This installation is to generate 6.5 megawatts of power. The property is located southwest of the Town of Uxbridge on Concession Road 4. Stage 1 research conducted in relation to this property indicates that it is of high archaeological potential, as outlined by the *Ministry of Tourism and Culture*, due to its topography, proximity to water sources, and areas of historic development. All Stage 2 testing on this property therefore took place at high potential (5 meter) intervals. The proposed development lands consist of ploughed crop fields with dividing vegetative windrows and adjacent woodlots. The development area of the property was therefore surveyed using a combination of pedestrian survey in the open fields, and test-pit survey in the forested areas in accordance with Ministry standards (MTC S&G 2011). Testing was conducted under clear conditions in the spring of 2011. This survey did not result in the discovery of any archaeological resources. Consequently, it is the recommendation of Northeastern Archaeological Associates Limited that the development property be cleared for development. If any archaeological resources should be discovered during the course of development, all excavation must stop immediately and an archaeologist must be contacted.

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1.0 PROJECT PERSONNEL

Name	License Number	Position
Lawrence Jackson Ph. D.	P-025	Senior Archaeologist Project Director
Marika Atfield	R-333	Field Director
Justin Tighe	N/A	Field Technician
Myles Allen	N/A	Field Technician
Kris Martin	N/A	Field Technician

2.0 PROJECT CONTEXT

2.1 DEVELOPMENT CONTEXT

In compliance with the MTC requirements regarding land development, and the Renewable Energy Approval Regulation (O.Reg. 359/09), under the Environmental Protection Act (MOE), a contract to carry out a Stage 1 and 2 archaeological assessment of the Penn Energy – Roseplain Solar Generation Installation, Lot 22, Concession 3, 5240 Concession Road 4, RR1, Town of Uxbridge, Township of Uxbridge, Durham Region (Formerly Ontario County), Ontario was awarded to Northeastern Archaeological Associates Limited by Penn Energy on April 30, 2011. Please refer to Map 9.1 for Property Location. The property in question consists of approximately 36 hectares of ploughed crop fields with small areas of forest southwest of the Town of Uxbridge, Ontario (see Map 9.1). The proposed development includes installation of a yet to be determined number of solar panels as shown in the proposed development plan (Map 9.2). A finalized development plan was not available at the time of this report. All fieldwork was completed pre-purchase on May 18, 19, 24 and 31 of 2011. Permission to enter the property was granted by the proponents. This report represents a complete record of all activities conducted in relation to this property.

2.2 HISTORICAL CONTEXT

The subject property is in the former Township of Uxbridge Ontario (Belden & Co. 1877). Uxbridge was first surveyed in the early 1800s, and by the late 1800s had reached a population of about 5000 individuals. Prior to the war of 1812, settlers consisted primarily of immigrants from the United States. In the north-east portion of the township, early settlers consisted primarily of Quakers from Pennsylvania, whereas in the south-west portion of the township, early settlers consisted primarily of immigrants from New York State. In the town of Uxbridge development of saw and grist mills was quick to commence despite the slow growth of the township up until the rebellion of 1837, at which time a number of institutions encouraged settlement (Belden & Co. 1878). The 1878 Historic Atlas map (See Map 9.4) for the area shows a single home on the subject property in the east end of the south half in a location matching the currently existing home which is to be retained. The names associated with these properties are shown as R. Collins for the north half, and A Davis for the south half (Belden & Co. 1878).

2.3 ARCHAEOLOGICAL CONTEXT

The subject property is located in the Oak Ridges Moraine physiographic region of southern Ontario, an interlobate moraine of variable width formed by the meeting of glaciers advancing from the north and south during the most recent glaciation period (Chapman and Putnam 1973). The Oak Ridges Moraine extends from the Niagara Escarpment to the Trent River, and forms the height of land separating the Georgian Bay and Lake Ontario drainages (Chapman and Putnam 1973). This region is characterized by knob-and basin hills composed of sand and gravel till containing large amounts of limestone from the Trenton and Black River Formations.

Locally, the property consists of low hills of sandy topsoil which have been largely cleared for crop use. All open fields are currently in use for the cultivation of various crops, primarily corn (See Images 9.1, 9.2, 9.3). Forests have been retained in the western and central portions of the property, as well as along the northern edge. These forests are of similar topography to the open fields and include stands of mature hardwoods as well as more dense areas of secondary growth such as sumac and juniper (See Images 9.4, 9.5).

A search of the archaeological sites data base at the Ontario Ministry of Tourism and Culture by data co-ordinator Robert von Bitter on May 10, 2011 did not reveal the presence of any archaeological sites within a 2km radius of the subject.

3.0 FIELD METHODS

This property is considered high potential according to the 2011 standards set out for Consultant Archaeologists by the MTC, due to its topography, the proximity to water sources, and its proximity to early historic settlement areas and roads. In accordance with these standards, all tested areas were surveyed at a 5 meter test interval (See Map 9.3).

The crop fields comprise approximately 70% of the subject property and were tested by high potential (5m interval) pedestrian survey as per Standard 1, Section 2.1.1 of the 2011 Standards and Guidelines for Consultant Archaeologists (MTC, 2011) (See Images 9.1, 9.2, 9.3). Fields were prepared and tested as per Standards 2-6 of Section 2.1.1. As no archaeological resources were recovered Standards 7-9 of Section 2.1.1 do not apply.

A hardwood woodlot stands in the western portion of the property as well as several other mixed forest areas in the center and north of the property. These forested areas comprise approximately 25% of the Subject property and were tested by high potential (5m interval) test-pitting survey as per Standard 1.a., Section 2.1.2 of the 2011 Standards and Guidelines (See Images 9.4, 9.5).

The remaining 5% of the subject property is occupied by an existing farmhouse. This home and its associated buildings and lawns are not part of the development property as illustrated in Map 9.2. This area was therefore not tested. Map 9.2 shows an aerial view of the property with the locations of the proposed solar arrays.

Testing was conducted on May 18, 19, 24 and 31, 2011 on clear days with weather ranging from partially cloudy to sunny. All test-pits were of a minimum of 30cm, and were excavated into the first 5cm of subsoil. Soil was screened using 6mm mesh rocker screens. All units were examined for cultural features, stratigraphy, or signs of disturbance and then backfilled. Map 9.3 illustrates the Stage 2 methodology overlaid on a satellite image as well as the location and orientation of all photo associated with this report.

4.0 RECORD OF RECOVERED ARCHAEOLOGICAL MATERIALS

No material of cultural significance was recovered during Stage 2 survey of this development property.

5.0 ANALYSIS AND CONCLUSIONS

Stage 2 archaeological testing of the subject property conducted in accordance with the 2011 Standards and Guidelines outlined by the Ministry of Tourism and Culture did not result in the recovery of any archaeological material which might suggest the presence of a cultural resource on this development property.

6.0 RECOMMENDATIONS

Due to the lack of archaeological material present on this development property, it is the recommendation of this report that all tested areas of the property be granted full clearance for development in compliance with Section 7.0 below.

7.0 ADVICE ON COMPLIANCE WITH LEGISLATION

- a.** This report is submitted to the Minister of Tourism and Culture as a condition of licencing in accordance with Part VI of the *Ontario Heritage Act*, R.S.O. 1990, c 0.18. The report is reviewed to ensure that it complies with the standards and guidelines that are issued by the Minister, and that the archaeological fieldwork and report recommendations ensure the conservation, protection and preservation of the cultural heritage of Ontario. When all matters relating to archaeological sites within the project area of a development proposal have been addressed to the satisfaction of the Ministry of Tourism and Culture, a letter will be issued by the ministry stating that there are no further concerns with regard to alterations to archaeological sites by the proposed development.
- b.** It is an offence under Sections 48 and 69 of the *Ontario Heritage Act* for any party other than a licenced archaeologist to make any alteration to a known archaeological site or to remove any artifact or other physical evidence of past human use or activity from the site, until such time as a licensed archaeologist has completed archaeological fieldwork on the site, submitted a report to the Minister stating that the site has no further cultural heritage value or interest, and the report has been filed in the Ontario Public Register of Archaeology Reports referred to in Section 65.1 of the *Ontario Heritage Act*.
- c.** Should previously undocumented archaeological resources be discovered, they may be a new archaeological site and therefore subject to Section 48 (1) of the *Ontario Heritage Act*. The proponent or person discovering the archaeological resources must cease alteration of the site immediately and engage a licenced consultant archaeologist to carry out archaeological fieldwork, in compliance with Section 48 (1) of the *Ontario Heritage Act*.
- d.** The *Cemeteries Act*, R.S.O. 1990 c. C.4 and the *Funeral, Burial and Cremation Services Act*, 2002, S.O. 2002, c.33 (when proclaimed in force) require that any person discovering human remains must notify the police or coroner and the Registrar of Cemeteries at the Ministry of Consumer Services.

Archaeological sites recommended for further archaeological fieldwork or protection remain subject to Section 48 (1) of the *Ontario Heritage Act* and may not be altered, or have artifacts removed from them, except by a person holding an archaeological licence.

8.0 REFERENCES CITED

Belden, H. and Co.

1878 **Illustrated Historical Atlas of the Counties of Northumberland and Durham, Ont.** Toronto.

Chapman, L.J. and D.F. Putnam

1973 **The Physiography of Southern Ontario.** 2nd Edition, Toronto.

MTC

2011, **Standards and Guidelines for Consultant Archaeologists.**

9.0 IMAGES



Image 9.1: Oriented South, Pedestrian Survey of South-Western Field



Image 9.2: Oriented SW, Pedestrian Survey of North-Eastern Field



Image 9.3: Oriented South, Pedestrian Survey of Southern Field



Image 9.4: Oriented North, Test-Pit Survey in Western Woodlot



Image 9.5: Oriented NW, Test-Pit Survey of Forested Area in Central Portion of Property

10.0 MAPS

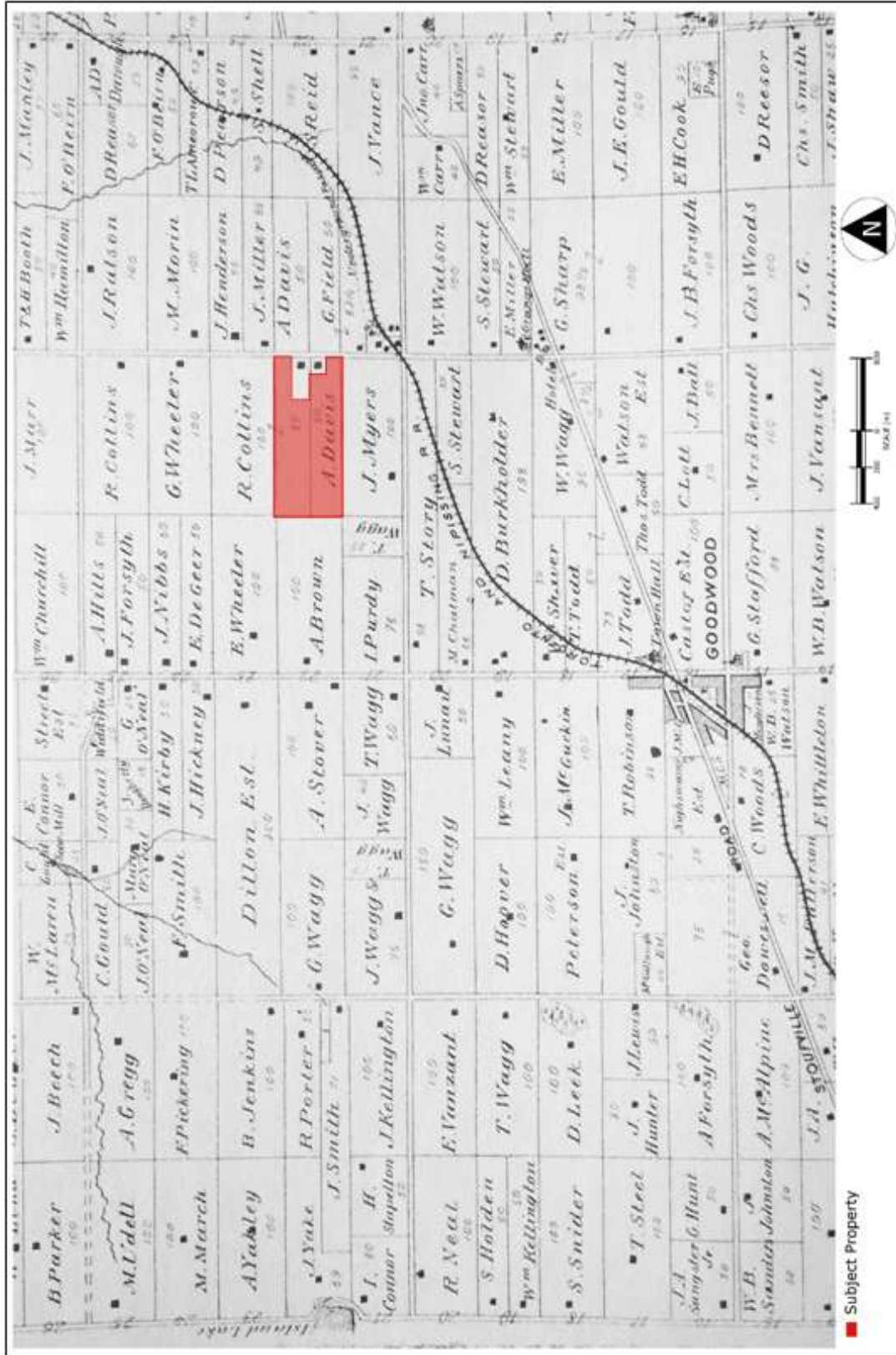




Map 9.2: Proposed Solar Array Layout (blue) and Property Boundary (pink), (Provided by Proponent)



Map 9.3: Aerial View of Subject Property with Survey Methodology and Report Photo Overlay



Map 9.4: Historical Atlas Map of Uxbridge Township Showing Location of Subject Property (Belden 1878)