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August 29, 2011

Penn Energy Renewables Ltd.
620 Righters Ferry Road
Bala Cynwyd
Pennsylvania USA 19004

RE: Penn Energy Van Dorp Solar Installation

**Lot 23, Concession 1, Municipality of Port Hope (Former Hope Township),
Northumberland County, Ontario**

FIT#: FLTV77L

IRIMS: HD00642

PIFs: P025-211-2011

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(s) 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 or the 2011 Standards and Guidelines for Consultant Archaeologists (whichever apply). Please note that the Ministry makes no representation or warranty as to the completeness, accuracy or quality of the Report(s).*

The report(s) recommends the following:

Report for PIF P025-211-2011, entitled "Stage 1 and 2 Archaeological Assessment of the Penn Energy - Van Dorp Solar Installation Lot 23, Concession 1 Municipality of Port Hope (Former Hope Township), Northumberland County, ON FIT - FLTV77L" Dated June 27, 2011, Received by MTC Toronto Office July 28, 2011, recommends:

1. Stage 2 survey of the subject property has been completed and does not, according to the 2010 Standards and Guidelines outlined by the Ministry of Tourism and Culture, require any further testing or protection. As a result, complete [archaeological] clearance of the subject property is the recommendation of this report. Any development must be conducted with consideration of the Legislation Compliance Requirements, as outlined in section 7.0, below.”

The Ministry is satisfied with the recommendation.

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,



Andrew Hinshelwood
Archaeology Review Officer

cc. L. J. Jackson
Northeastern Archaeological Associates Limited
PO Box 493
Port Hope, ON L1A 3Z4

** 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 TO 3 ARCHAEOLOGICAL ASSESSMENT OF THE PENN ENERGY –
VAN DORP SOLAR INSTALLATION, LOT 23, CONCESSION 1, MUNICIPALITY
OF PORT HOPE (FORMER HOPE TOWNSHIP), NORTHUMBERLAND COUNTY,
ONTARIO.

FIT Contract ID #: F-001573-3PV-130-505
FIT Application #: FIT-FLTV77L

Prepared For:

Penn Energy Renewables Ltd.

US Address:
620 Righters Ferry Road
Bala Cynwyd
PA 19004
Ph: 610-668-0300

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Toronto, Ontario
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Prepared By:

Northeastern Archaeological Associates Ltd.
Licenced to: Dr. Lawrence Jackson (P-025)
PIF#: P-025-211-2011

June 27, 2011

Northeastern Archaeological Associates Limited
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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 Ministry of Tourism and Culture, an archaeological assessment be conducted in part of Lot 23, Concession 1, Municipality of Port Hope (former Hope Township), Ontario, at the location of a proposed 12 hectare solar energy generation facility. This installation is to generate a maximum of 10 megawatts of power. The property is along the south edge of highway 401, northwest of the municipality of Port Hope, Ontario. 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 proximity to Lake Ontario, and to several known archaeological sites. All Stage 2 testing on this property therefore took place at a high potential (5 meter) interval. The proposed development lands consist of ploughed crop fields with dividing vegetative windrows. The project area of the property was therefore surface surveyed, and the windrows shovel tested, in accordance with Ministry standards. Testing was conducted under clear conditions in the spring of 2011. This survey resulted in the discovery of one chert flake. Concentrated Stage 2 survey around this find location did not result in the discovery of any additional materials that would suggest the presence of an archaeological resource. As per the MTC 2010 Standards and Guidelines for Consultant Archaeologists, this single find does not necessitate proceeding to Stage 3 excavation. Consequently, it is the recommendation of Northeastern Archaeological Associates Limited that the property's project area 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, Report Preparation
Justin Tighe	N/A	Field Technician, Report Preparation
Myles Allen	N/A	Field Technician
Kris Martin	N/A	Field Technician

2.0 PROJECT CONTEXT

2.1 Development Context

In compliance with the Ontario Ministry of Tourism and Culture requirements regarding land development, a contract to carry out a Stage 1 and 2 archaeological assessment of the Penn Energy – Van Dorp Solar Installation, Lot 23, Concession 1, Municipality of Port Hope (former Hope Township), Northumberland County, Ontario was awarded to Northeastern Archaeological Associates Limited by Penn Energy Renewables Ltd. on March 23, 2011. The property in question consists of approximately 12 hectares of almost exclusively ploughed agricultural field immediately south of Highway 401, and north of the small town of Port Britain, Ontario (see Map 10.1). The proposed development includes installation of a 10 megawatt solar power generation facility. There is no finalized development plan available at this time, but a preliminary plan has been included in this report (Map 10.2). Permission to enter the property was granted by the proponent. 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 Hope, Ontario, first surveyed in the late 1700s (Belden & Co. 1878). It lies within the broad settlement area of the Town of Port Hope. This town was first settled in the late 1700s by traders and United Empire Loyalists. Early difficulties are noted in the district relating to acquiring goods such as flour; the nearest grist mill at the time being to the east, in the town of Kingston. This meant that settlement, though starting early, did not occur very quickly. The Crown Patent for the town was granted in 1797 to Elias Smith and Jonathan Walton, who agreed to build a grist mill and a saw mill there. The first store was opened in 1815 by Jeremiah Britton. In this early period, the town was known as Smith's Creek, and then Toronto, until a formal meeting in 1819 led to the official name of Port Hope. The Grand Trunk Railway and the Port Hope, Lindsay and Beaverton Railways were opened in 1857, allowing access to nearby towns, and increasing settlement in the area. By 1878, the town's population had reached 5,700 individuals. (Belden & Co. 1878).

The 1878 Historic Atlas map (see Map 10.3) for the area shows the property in Lot 23, Concession 1, as owned by George Best (Belden & Co. 1878), presumably after which the current Best Road to the east of the property is named. A house is shown on the lot to the south of the subject property, and several other houses are shown in the vicinity, but not on the property itself. Also shown on the map is a saw mill two lots to the west of the property, and a church about 1.5 km north.

2.3 Archaeological Context

The subject property is located in the Iroquois Plain physiographic region of southern Ontario (Chapman and Putnam 1973). The Iroquois Plain is the former near-shore lake bottom of glacial Lake Iroquois which formed in the Ontario basin after about 12,300 years B.P. and had drained by about 11,600 years B.P. Former Iroquois Plain landforms consist primarily of sand and clay plains deposited as near-shore sediments from drainage of the Oak Ridges moraine to the north. This area extends for 190 miles along the north shore of Lake Ontario, and reaches eight miles wide in some places. Soils are stony and well drained (Chapman and Putnam 1973). Locally, the property is in an area of drumlinized clay plains with till plains to the immediate east and west, and sand plains to the immediate north (see Map 10.2 for an aerial view of the property).

A search of the archaeological sites data base of the Ontario Ministry of Tourism and Culture by data co-ordinator Robert von Bitter on April 4, 2011 revealed the existence of 19 registered archaeological sites within a 2 km radius of the subject property. The table below describes these sites in detail. They are primarily located to the west of the subject property.

Borden	Name	Culture	Site Type	Collection	Reference
AIGo-3	N/A	Archaic	Findspot	Scraper Notched point	A. Roberts, 1978
AIGo-12	Nichols 2	Archaic	Informant	L. Nichols	A. Roberts, 1978
AIGo-17	Young	Woodland Iroquoian/ Pickering	Campsite	Austin collection	A. Roberts, 1978
AIGo-29	Auda	L. Woodland Pickering	NA	ROM	A. Roberts, 1980 Kapches, 1979 (2) Kapches, 1980
AIGo-31	NA	Indeterminate	Indeterminate	7 Flakes	A. Roberts, 1979
AIGo-32	N/A	Indeterminate	Indeterminate	Scraper, Blade, Flakes	A. Roberts, 1979
AIGo-33	N/A	Indeterminate	Indeterminate	Scraper	A. Roberts, 1979
AIGo-34	ENL 500W	Archaic	Indeterminate	600 artifacts: Flakes, point	A. Roberts, 1979
AIGo-35	N/A	Archaic	Indeterminate	600 artifacts: Point, flakes	A. Roberts, 1979
AIGo-37	N/A	Indeterminate	Indeterminate	3 flakes	A. Roberts, 1979
AIGo-38	N/A	Paleo-Indian	Indeterminate	Fluted point, point preform, flakes	A. Roberts, 1979
AIGo-39	N/A	Indeterminate	Indeterminate	Debitage, stone axe	A. Roberts, 1979
AIGo-40	N/A	Indeterminate	Indeterminate	Ceramics, flakes, scraper	A. Roberts, 1979
AIGo-41	N/A	Indeterminate	Indeterminate	Flakes, debitage	A. Roberts, 1979
AIGo-42	N/A	Indeterminate	Indeterminate	flake	A. Roberts, 1979
AIGo-43	N/A	Indeterminate	Indeterminate	flake	A. Roberts, 1979
AIGo-44	ENL 505	Indeterminate	Indeterminate	Flakes, debitage, scraper	A. Roberts, 1979
AIGo-47	N/A	Indeterminate	Indeterminate	Flake, point, core	A. Roberts, 1979
AIGo-9	Reeve	Indeterminate	Indeterminate Informant	Unknown	A. Roberts, 1978

3.0 FIELD METHODS

This property is considered to have high archaeological potential according to the 2011 standards set out for Consultant Archaeologists by the Ministry of Tourism and Culture, due to its proximity to Lake Ontario and to historic structures. In accordance with these standards, the property was surveyed at a 5 meter test interval. Shovel testing was carried out on about 5% of the subject property in the vegetative windrows separating ploughed agricultural fields (see Map 10.4). All shovel tests were excavated to sterile subsoil and all fill was screened through ¼ inch mesh rocker screens. All shovel tests were backfilled. The proponent has advised that a section of forest in the northwest corner of the property is to be left out of the development plan, as well as a treed area in the east-central portion of the property (see Map 10.4). These sections have therefore not been tested. The remainder of the property (about 90%) consisted of ploughed crop fields and was therefore surface surveyed. The northeastern crop field was determined to be of inadequate visibility following the initial surface survey. Re-disking of this field was requested at this time, and additional surface survey of this field at a 5 meter interval was subsequently completed. Stage 2 testing of the subject lands was conducted on the following dates in 2011: April 19, May 19 and 31, and June 1, 3, and 7.

4.0 RECORD OF RECOVERED ARCHAEOLOGICAL MATERIALS

Stage 2 testing at 5 meter intervals on the subject property led to the recovery of one chert flake (see Image 9.4). Additional information regarding the exact find location of this artifact is provided in the *Supplementary Documentation* page. Concentrated Stage 2 survey at 1 meter intervals for 10 meters in all directions around the find location of this artifact did not result in the discovery of any additional materials that would suggest the presence of an archaeological resource. An additional 1m² test unit placed over the find location to confirm these findings yielded no cultural material.

5.0 ANALYSIS AND CONCLUSIONS

Stage 2 archaeological testing of the subject property conducted using a high potential survey method, in accordance with the 2010 Standards and Guidelines outlined by the *Ministry of Tourism and Culture*, resulted in the excavation of some 250 shovel tests and surface survey of sections of four ploughed crop fields (see Map 10.4). This survey led to the recovery of a single non-diagnostic pre-contact artifact. Concentrated Stage 2 survey associated with this find location did not lead to the recovery of any additional materials that might suggest the presence of an archaeological resource. As per Section 2.2 of the MTC 2010 Standards and Guidelines for Consultant Archaeologists, a single non-diagnostic artifact does not meet the requirements to proceed to Stage 3 excavation.

6.0 RECOMMENDATIONS

Stage 2 survey of the subject property has been completed and does not, according to the 2010 Standards and Guidelines outlined by the *Ministry of Tourism and Culture*, require any further testing or protection. As a result, complete clearance of the subject property is the recommendation of this report. Any development must be conducted with consideration of the Legislation Compliance Requirements, as outlined in 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.

Kapches, M.

1979 **AlGo-29: The Auda Site, Hope Twp., Ontario.** MCC, Toronto.

Kapches, M.

1979 **Ontario Heritage Foundation Survey Report.**

Kapches, M.

1980 **The Auda Site.** Report Submitted to Eldorado Nuclear Limited., Port Hope, Ontario.

Roberts, Arthur.

1978 **Field notes.** Simon Fraser University, Geography Dept., Burnaby B.C.

Roberts, Arthur.

1978 **Grant report.** On file MCC, Toronto.

Roberts, Arthur.

1979 **Ontario Heritage Foundation Site Survey Report.**

Roberts, Arthur.

1980 **ENL Wesleyville Archaeological Resource Survey.** Department of Geography: York University, Toronto.

9.0 IMAGES



Image 9.1: View north of surface survey in large south-western field.



Image 9.2: View northeast of shovel testing vegetative windrow separating two northern fields.

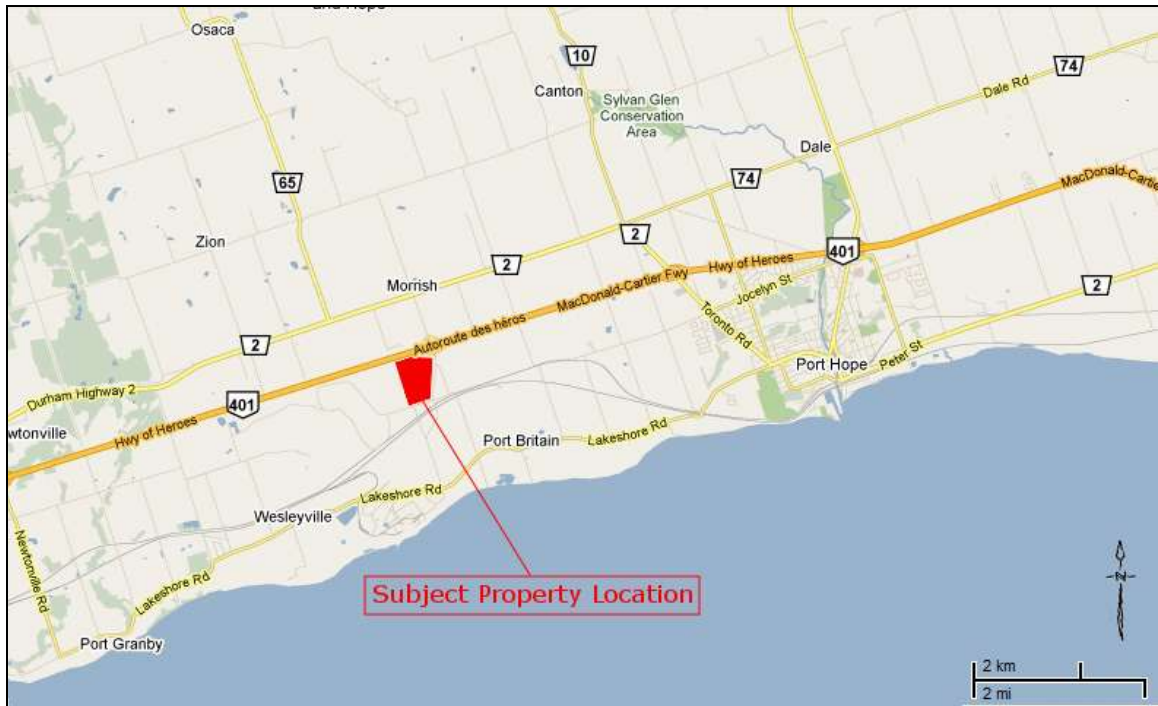


Image 9.3: View of rocks obstructing testing of vegetative windrow separating two southern fields.



Image 9.4: Chert flake recovered during Stage 2 testing of subject property.

10.0 MAPS



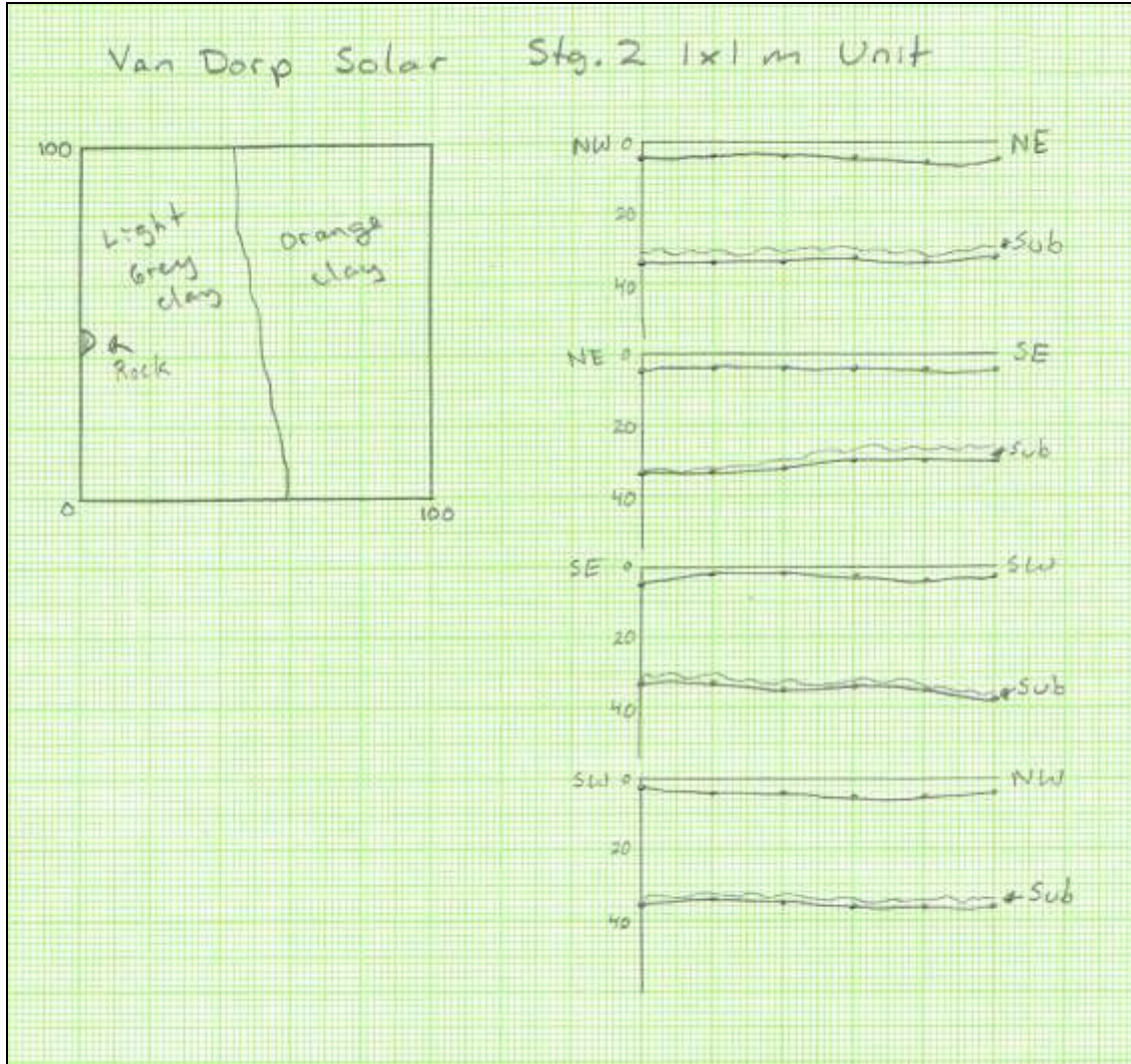
Map 10.1: Location of subject property north of the town of Port Britain, Ontario, and south of Highway 401.



Map 10.2: Aerial photo of subject property showing preliminary location of proposed solar arrays.



Map 10.4: Stage 2 methodology map showing relative test locations.



Map 10.5: Floor plan and profiles for Stage 2 test unit.