

Ministry of Tourism,
Culture and Sport

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de la Culture et du Sport

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January 30, 2012

Penn Energy Renewables, Ltd.
1 Yonge St. Suite 1801
Toronto, ON M5E 1W7

Attn.: Kristina Rudzki

RE: Ridgefield Solar Farm

Part Lot 5, Concession 10, Geographic Township of Fenelon, City of Kawartha Lakes

FIT Application: FIT #FITFRZ1

FIT Contract: F-001549-SPV-130-505

MTC File HD000678

MTC PIF P025-223-2011

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).*

Archaeological Assessment Report Entitled, *Stage 1 and 2 Archaeological Assessment of the Penn Energy - Ridgefield Solar Project, Part Lot 5, Concession 10, Geographic Township of Fenelon, City of Kawartha Lakes (FIT - FITFRZI)*, dated December 20, 2011, received MTCS Toronto Office, December 23, 2011, recommends the following:

The presence of a single diagnostic artifact does not constitute a site or warrant further archaeological investigation as per Standard 1, Section 2.2 of the 2011 MTC Standards and Guidelines. As no other material was found, either associated with the artifact recovered or otherwise, it is therefore the recommendation of this report that full clearance of the subject property as outlined in this report be granted.

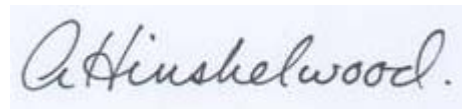
The Ministry is satisfied with these recommendations.

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,

A handwritten signature in cursive script that reads "A Hinshelwood." The signature is written in black ink on a light blue rectangular background.

Andrew Hinshelwood
Archaeology Review Officer

cc. L. Jackson
Northeastern Archaeological Associates
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 AND 2 ARCHAEOLOGICAL ASSESSMENT OF THE PENN
ENERGEY - RIDGEFIELD SOLAR PROJECT, PART LOT 5,
CONCESSION 10, GEOGRAPHIC TOWNSHIP OF FENELON, CITY OF
KAWARTHA LAKES.

FIT Application # FIT-FITFRZ1
FIT Contract F-001549-SPV-130-505

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

From:
Northeastern Archaeological Associates Ltd.
Licenced to: Dr. Lawrence Jackson (P-025)
PIF#: P-025-223-2011

December 20, 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 and the Renewable Energy Approval Regulation (O.Reg. 359/09), an archaeological assessment be conducted in part of Lot 5, Concession 10 in the Geographic Township of Fenelon, City of Kawartha Lakes, Ontario, at the location of the proposed 25 hectare Ridgefield Solar Energy Generation Facility. The property is located north of the Town of Lindsey on Kennedy Bay Road. 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 open hay/pasture fields with a small amount of barnyard and bordering forest. 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 and unploughable pasture areas in accordance with Ministry standards (MTC S&G, 2011). Testing was conducted under clear conditions in the Summer and Fall of 2011. This survey resulted in the recovery of a single groundstone tool. Concentrated survey did not locate any associated cultural material. 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

Project Director:	Dr. Lawrence Jackson (P-025)
Field Supervisor:	Marika Atfield (R-333)
Principal Researcher and Report Preparation:	Marika Atfield (R-333)
Field Assistants:	Justin Tighe (Northeastern Arch.) Myles Allen (Northeastern Arch.) Kris Martin (Northeastern Arch.) Tracy Yeo (Northeastern Arch., Alderville First Nation)

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 pre-approval Stage 1 to 2 archaeological assessment of the proposed Ridgefield Solar Generation Facility was awarded to Northeastern Archaeological Associates Limited by Penn Energy Renewables on March 22, 2011. The property in question consists of approximately 25 hectares of primarily ploughed crop fields with some forest and unploughable pasture on the south side of Sturgeon Lake (see Map 1). The majority of the property was recently in active use. The proposed development includes installation of solar arrays over the bulk of the open areas as shown in the development plan (Map 10.2). A brick farmhouse of late 19th century construction, barn and outbuildings are present within this parcel of land, but the project location boundary has been adjusted to allow a sufficient buffer around these buildings (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 the site.

3.0 Historical Context

The subject property is the former Township of Fenelon, Victoria County, Ontario. The 1881 Historic Atlas map for the area does not associate a name with the subject property or the majority of the surrounding parcels (see Map 10.4). (Belden & Co. 1881, Alexander Pub. 2000). The 1892 Rural Directory for Victoria County for the Township of Fenelon lists James Brien as the freeholder of lot 5 concession 10. This is consistent with the 1916 Fenelon map which shows a Jas O'Brien as the owner (Belden & Co. 1881, Alexander Pub. 2000). These are very probably the same person, as there is only a slight difference in the names.



2.3 Archaeological Context

The subject property is located in the Peterborough Drumlin Field physiographic region of southern Ontario (Chapman and Putnam 1973). The Peterborough Drumlin Field is a rolling till plain of about 1,750 square miles lying between the Oak Ridges Moraine and the shallow overburden on the Black River Limestone Plain. With the City of Peterborough as its geographic center, it includes about 3,000 drumlins as well as numerous drumlinoid hills and surface flutings of glacial drift cover. Trenton limestone underlies most of the area. Dominant area soils are Otonabee Loam and Bondhead Loam. Soils are generally stony due to uplifting of the calcareous lower horizon by ploughing. Locally, the subject property is in an area of drumlinized till plain, just south of the Dummer Moraine till plain, and east of a large glacial esker. (Chapman and Putnam 1973). Limestone bedrock is very close to the surface over much of the property and is visible on exposed slopes to the north, north-west, and south-east of the development area. This shallow horizon of broken limestone impeded ploughing in one open area of the development property. A brick farmhouse likely dating to the late 19th century, as well as a barn and associated outbuildings are present on the parcel but are excluded from the development area (Project Location Boundary, Map 10.2).

A search of the archaeological sites data base of the Ontario Ministry of Tourism and Culture by data co-ordinator Robert von Bitter on May 02, 2011 did not reveal the existence of any registered sites within a 2km radius of the subject property.

3.0 FIELD METHODS

This property is considered high potential according to the 2011 standards set out for Consultant Archaeologists by the Ministry of Tourism and Culture, due to its proximity to Sturgeon Lake, as well as its elevated topography and proximity to areas of historic development. In accordance with these standards, all testable portions of the property were surveyed at a high potential 5 meter test interval. Testing methodology and location/orientation of work photos is illustrated in Map 10.2

Approximately 88% of the development property was crop fields and pasture suitable for ploughing as per Standards 1-6, Sec 2.1.1 (MTC, 2011), and was therefore surface surveyed. Please refer to Images 9.7, 9.8, and 9.9.

Approximately 10% consisted of forest bordering the fields (Stand. 1.a. Sec. 2.1.2, MTC 2011), as well as an area of hay field/pasture which had not been cultivated in the recent past and was considered to be too heavily compacted and stony to be suitable for ploughing as per Standard 2.b. Sec. 2.1.2 (MTC, 2011). These areas were therefore assessed using test-pit survey. An enclosed barnyard directly south of the barns was also shovel tested due to its small size, high rock content and existing buried drainage tile (Stand.1.b.e., Sec 2.1.2, MTC 2011). All shovel tests were of a minimum diameter of 30cm, and were excavated into the first 5cm of sterile subsoil. Test-pits were examined for evidence of cultural features, stratigraphy, or signs of disturbance. Soil from test-pits was processed using 6mm mesh rocker screens. All units were backfilled. Images 9.1 and 9.2 shows testing in wooded areas while Image 9.3 shows testing in the open pasture and Image 9.4 shows the stony consistency of the soil in this area. Image



9.5 shows shovel testing within the enclosed barnyard; please note concrete platform and access well to drainage tile bed.

Pedestrian survey in the ploughed field west of the existing barn recovered a single groundstone tool (Image 9.10). Survey intervals were reduced to 1m, and an intensified surface survey was undertaken in a 20m radius around the find-spot as per Stand. 7, Sec. 2.1.1 (MTC, 2011). No additional material was recovered as a result of this intensified search. Please refer to Map 10.2 for the location of this find-spot.

The remaining 2% of the property was covered in surface water. This area, adjacent to the enclosed barnyard in the centre of the property was exempted from testing as per Stand. 2.a.i., Sect. 2.1 (MTC, 2011). Please refer to Image 9.6 for a photo of this area.

Field testing was conducted on July 29, August 2, 9, 10, and 12, and October 29 of 2011.

4.0 RECORD OF RECOVERED ARCHAEOLOGICAL MATERIALS

A single groundstone hand adze fragment (Image 9.10) of uncertain affinity was found during pedestrian survey of the field immediately west of the barn. No other cultural material was recovered on the property.

5.0 ANALYSIS AND CONCLUSIONS

Stage 2 archaeological testing of the subject property conducted in accordance with the Standards and Guidelines outlined by the Ministry of Tourism and Culture resulted in the recovery of a single diagnostic artifact. Subsequent surface survey at 1m intervals failed to locate any associated material. It is the conclusion of this report that the item recovered represents an isolated find spot.

6.0 RECOMMENDATIONS

The presence of a single diagnostic artifact does not constitute a site or warrant further archaeological investigation as per Standard 1, Section 2.2 of the 2011 MTC Standards and Guidelines. As no other material was found, either associated with the artifact recovered or otherwise, it is therefore the recommendation of this report that full clearance of the subject property as outlined in this report be granted.

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.

1881 **Illustrated Historical Atlas of the Counties of Northumberland and Durham, Ont.** Toronto.

2000 Millennium Edition with additions, Edited by E. Phelps, Alexander Publishing, Ancaster, ON.

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

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

MTC

2010, **Standards & Guidelines for Consultant Archaeologists.** Queens Printer for Ontario.

9.0 IMAGES



Image 9.1: Oriented SE, Test-Pit Survey in Forested Area Bordering North-West Field



Image 9.2: Oriented NW, Test-Pit Survey on Forested Slope Edge in South-East Portion of Property



Image 9.3: Oriented E, Test-Pit Survey in Hay Field/Pasture in Northern Half of Property



Image 9.4: Photo Showing Thin Sod Layer and Shallow Limestone Horizon in Test-Pit Area From Image 9.3



Image 9.5: Oriented N, Test-Pit Survey in Enclosed Barnyard in Central Portion of Property



Image 9.6: Oriented NW, Area of Permanent Surface Water in Central Portion of Property



Image 9.7: Oriented E, Pedestrian Survey of Field West of Barn



Image 9.8: Oriented N, Pedestrian Survey of Field North of Barn



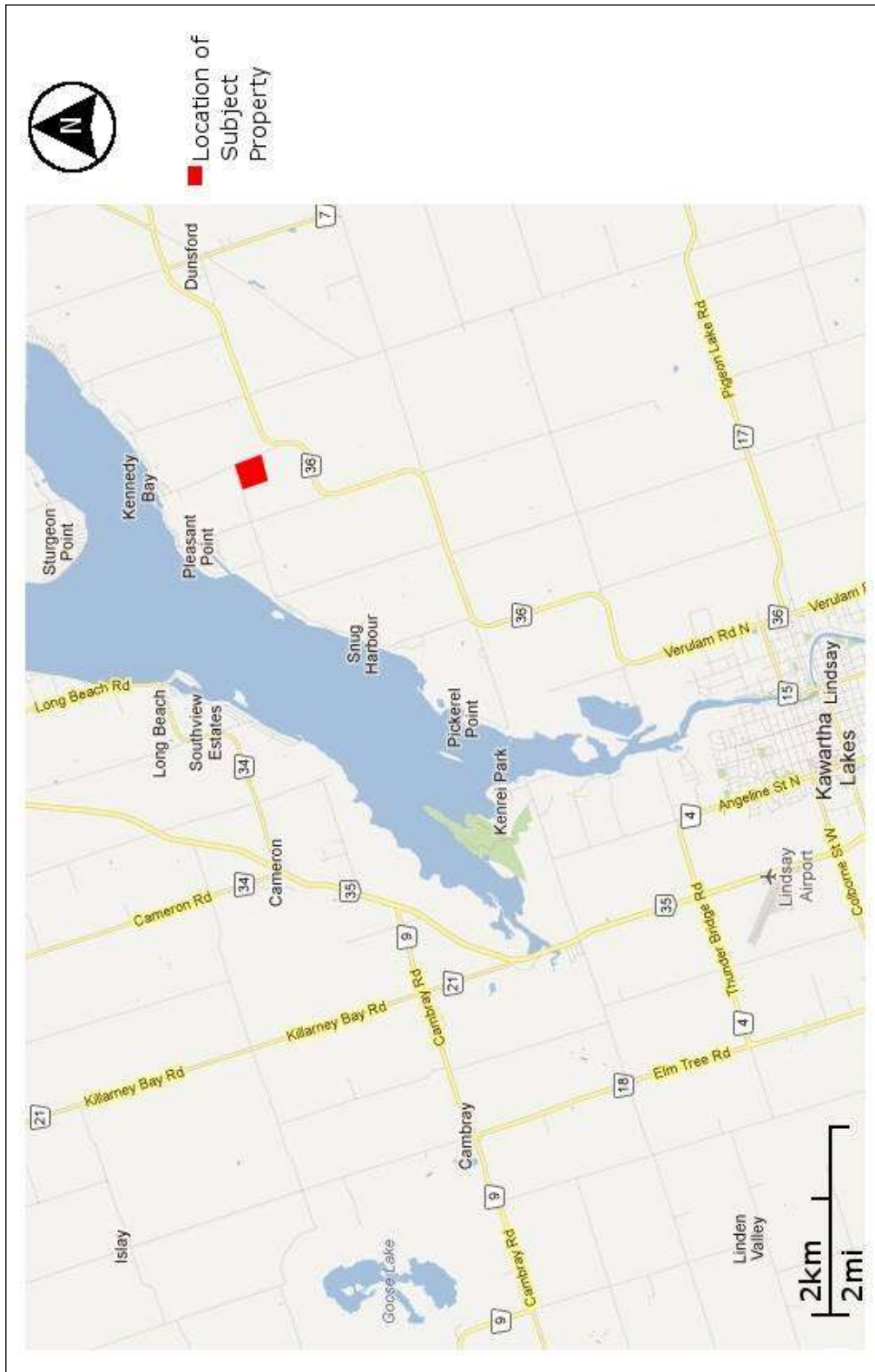
Image 9.9: Oriented NE, Pedestrian Survey of Field South of House



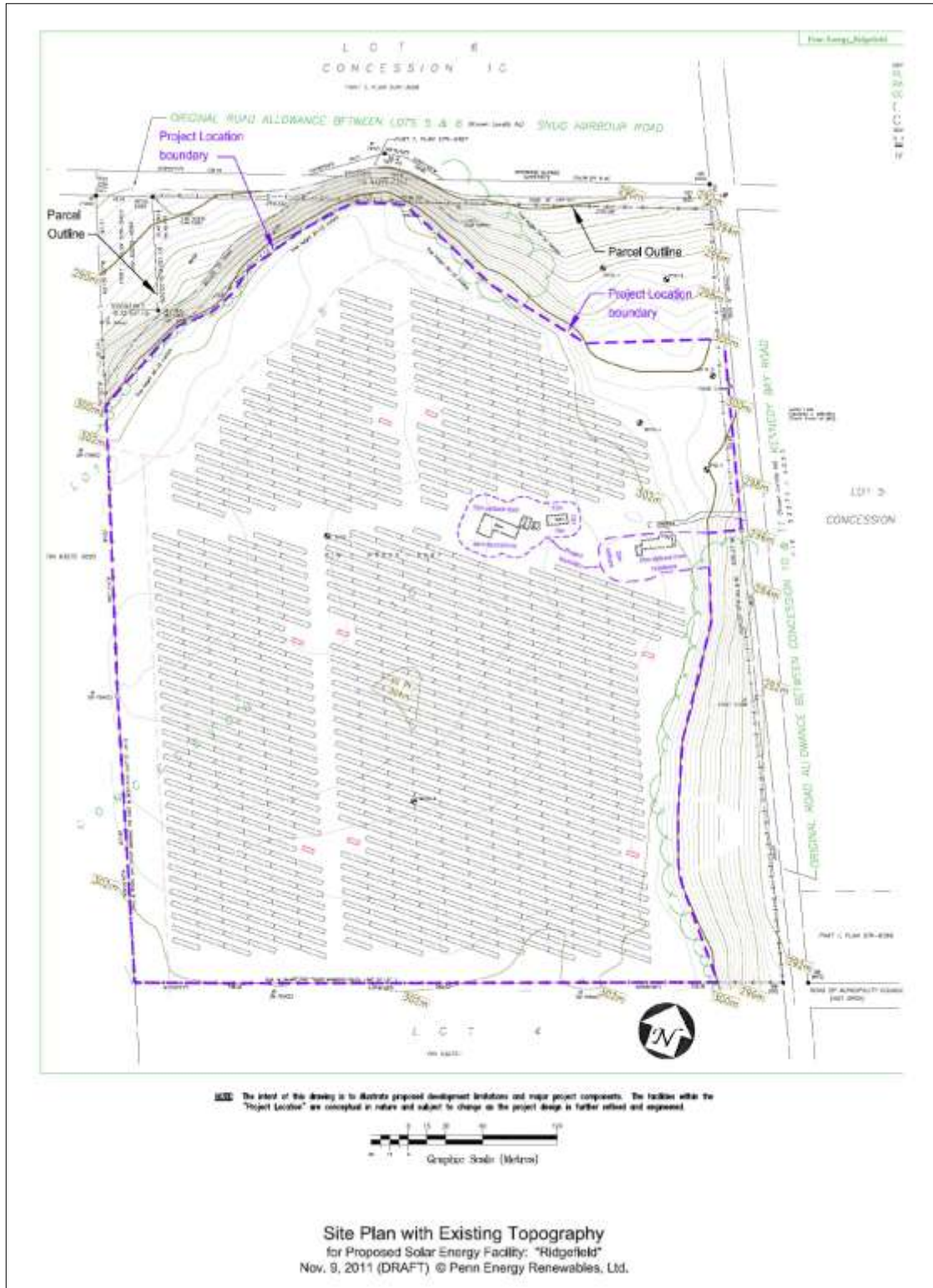
Image 9.10: Groundstone Adze Fragment Found in Field West of Barn



10.0 MAPS



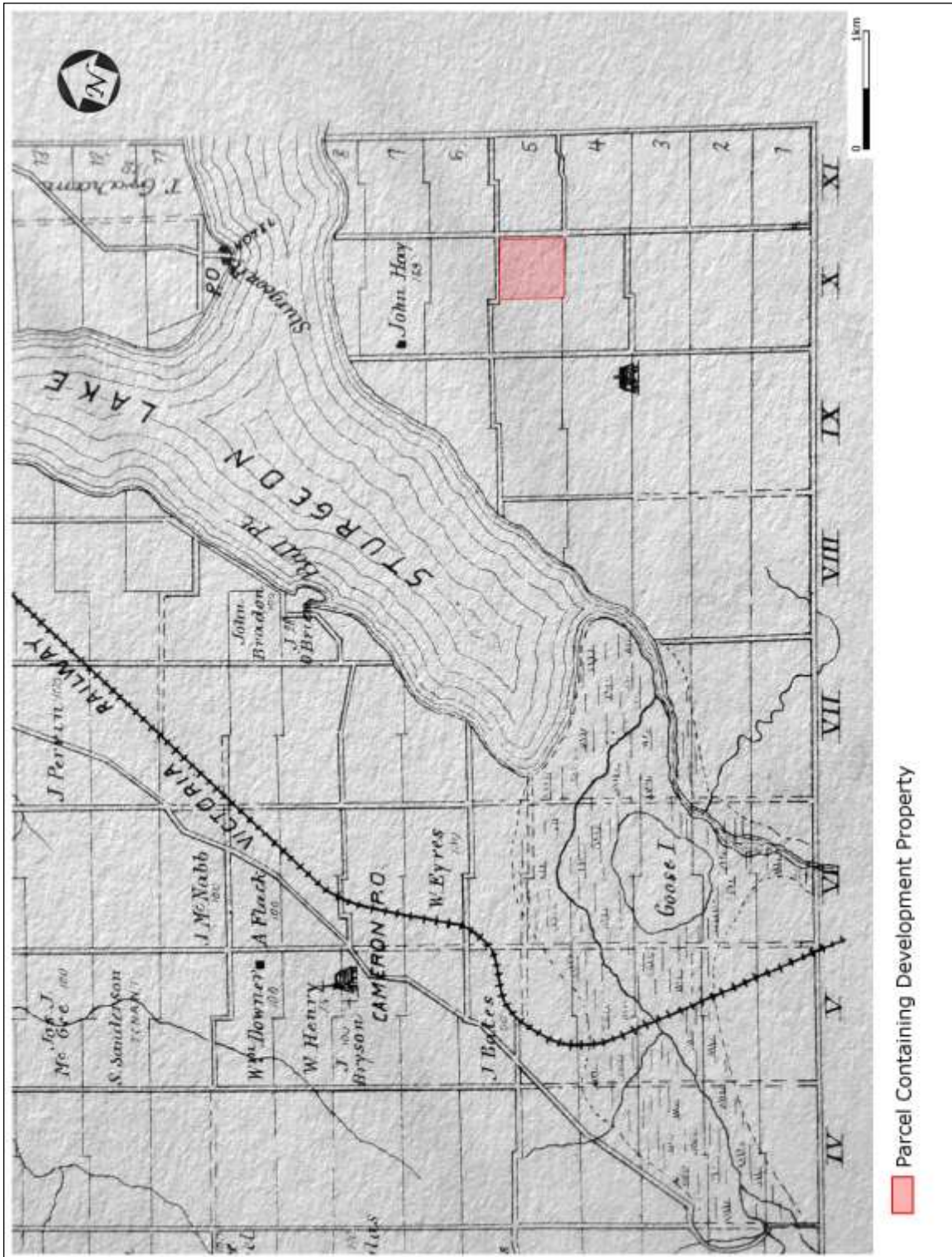
Map 10.1: Location of Subject Property



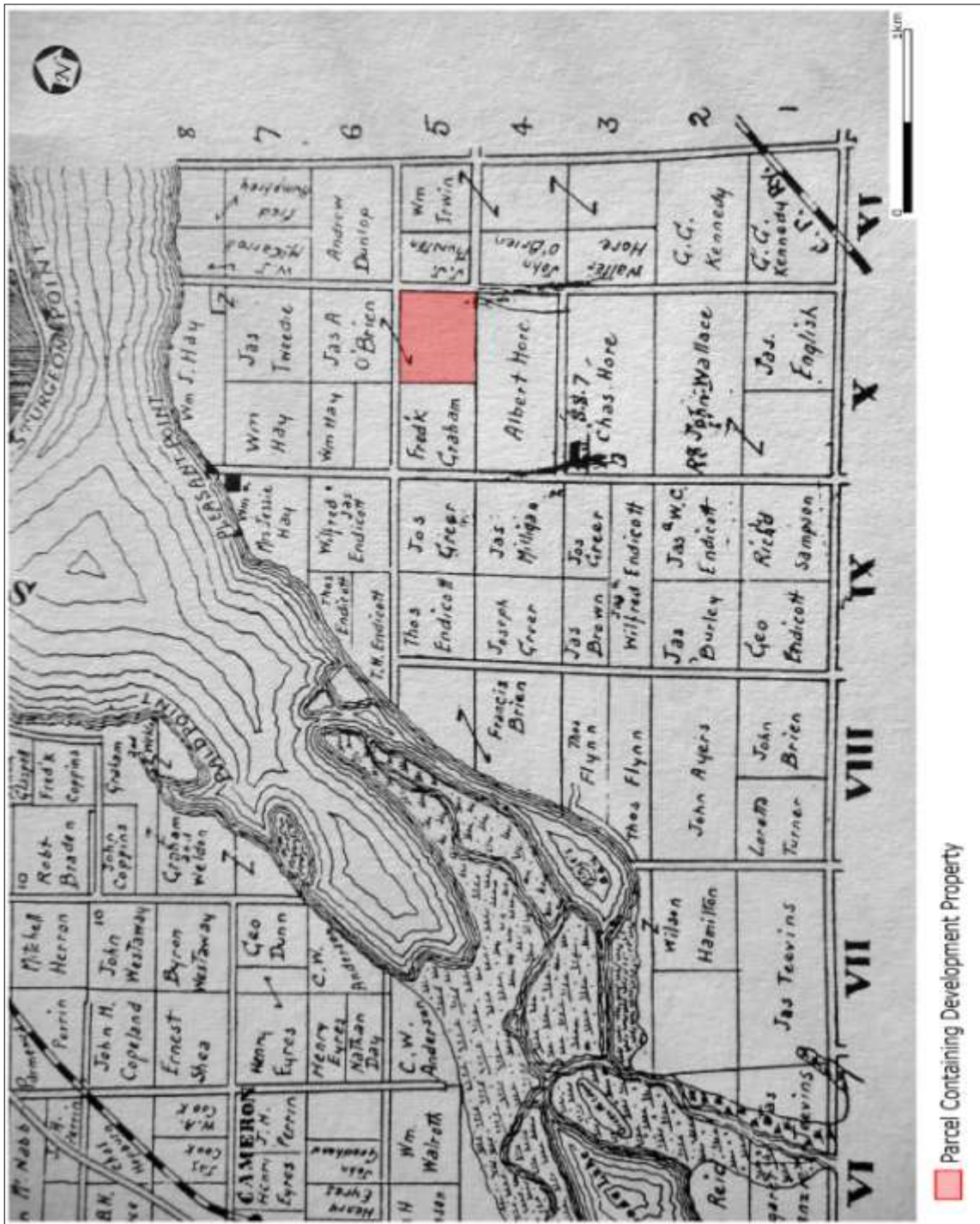
Map 10.2: Current Draft Plan of Solar Facility (Provided by Penn Energy Renewables, Ltd.)



Map 10.3: Stage 2 Methodology Overlaid on Draft Plan and Aerial Photo (Original Provided by Penn Energy Renewables, Ltd.)



Map 10.4: 1881 Historic Atlas Map Showing Location of Development Property (After Belden & Co. 1881, Alexander Pub. 2000)



Map 10.5: 1916 Historic Atlas Map Showing Location of Development Property (After Belden & Co. 1881, Alexander Pub. 2000)