

**Stage 1 and 2 Archaeological Assessment for
SunE Westbrook Solar Farm
Lots 4 &5, Concession 5,
Town of Westbrook, Township of Kingston,
Kingston and Frontenac County**

Development Project Designation # FIT reference # - FDNXGQE



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Project Information Number P052-329-2011

THE ARCHAEOLOGISTS INC.

Original Report
Report Filed: November, 10th, 2011

EXECUTIVE SUMMARY

The Archaeologists Inc. was contracted to conduct a Stage 1 and 2 Archaeological Assessment for SunE Westbrook Solar Farm, Lots 4 &5, Concession 5, Town of Westbrook, Township of Kingston, Kingston and Frontenac County, Ontario. The proponent is seeking a Renewable energy Approval according to Ontario Regulation 359/09 issued under the Environmental Protection act, Sections 20, 21 and 22. The assessment was done in advance of a solar farm project.

A Stage 1 background study of the subject property was conducted to provide information about the property's geography, history, previous archaeological fieldwork and current land condition in order to evaluate and document in detail the property's archaeological potential and to recommend appropriate strategies for Stage 2 survey. A Stage 2 property assessment was conducted to document all archaeological resources on the property, to determine whether the property contains archaeological resources requiring further assessment, and to recommend next steps. The characteristics of the property dictated that the Stage 2 survey be conducted by test pit survey.

The Stage 1 background study found that the subject property exhibits potential for the recovery of archaeological resources of cultural heritage value and concluded that the property requires a Stage 2 assessment. The Stage 2 property assessment, which consisted of a systematic test pit survey, did not result in the identification of archaeological resources.

The Stage 1 background study concluded that the property exhibits archaeological potential. The Stage 2 property assessment did not identify any archaeological resources within the subject property. The report recommends that no further archaeological assessment of the property is required.

TABLE OF CONTENTS

Executive Summary	i
Table of Contents	ii
Project Personnel	iii
1.0 Project Context	1
1.1 Development Context	1
1.2 Historical Context	1
1.3 Archaeological Context	3
2.0 Field Methods	5
3.0 Record of Finds	7
4.0 Analysis and Conclusions	8
5.0 Recommendations	9
6.0 Advice on Compliance with Legislation	10
7.0 Bibliography and Sources	11
8.0 Images	12
9.0 Maps	13

PROJECT PERSONNEL

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INTRODUCTION

The *Ontario Heritage Act*, R.S.O. 1990 c. O.18, requires anyone wishing to carry out archaeological fieldwork in Ontario to have a license from the Ministry of Tourism and Culture (MTC). All licensees are to file a report with the MTC containing details of the fieldwork that has been done for each project. Following standards and guidelines set out by the MTC is a condition of a licence to conduct archaeological fieldwork in Ontario. *The Archaeologists Inc.* confirms that this report meets ministry report requirements as set out in the *2011 Standards and Guidelines for Consultant Archaeologists*, and is filed in fulfillment of the terms and conditions an archaeological license.

1.0 PROJECT CONTEXT (Section 7.5.5)

This section of the report will provide the context for the archaeological fieldwork, including the development, historical and archaeological context.

1.1 Development Context (Section 7.5.6, Standards 1-3)

Section 7.5.6, Standard 1

The Archaeologists Inc. was contracted to conduct a Stage 1 and 2 Archaeological Assessment for SunE Westbrook Solar Farm, Lots 4 &5, Concession 5, Town of Westbrook, Township of Kingston, Kingston and Frontenac County, Ontario. The project is seeking a Renewable Energy Approval according to Ontario Regulation 359/09 issued under the Environmental Protection Act, Sections 20, 21 and 22. The project has been awarded Feed-in-Tariff (FIT) contract number FIT- FDNXGQE. The entire project area is approximately 52.60 ha in size. The archaeological assessment was conducted in advance of the development as a condition of the above O. Reg.

Section 7.5.6, Standard 2

There is no additional development-related information relevant to understanding the choice of fieldwork strategy or recommendations made in the report.

Section 7.5.6, Standard 3

Permission to access the study area to conduct all required archaeological fieldwork activities, including the recovery of artifacts was given by the landowner and their representative.

1.2 Historical Context (Section 7.5.7, Standards 1-2)

Section 7.5.7, Standard 1

In advance of the Stage 2 assessment, a Stage 1 background study of the subject property was conducted in order to document the property archaeological and land use history and present condition. Several sources were referenced to determine if features or characteristics indicating archaeological potential for pre-contact and post-contact resources exist.

Characteristics indicating archaeological potential include the near-by presence of previously identified archaeological sites, primary and secondary water sources, features indicating past water sources, accessible or inaccessible shoreline, pockets of well-drained sandy soil, distinctive land formations that might have been special or spiritual places, such as waterfalls, rock outcrops, caverns, mounds, and promontories and their bases, resource areas, (including food or medicinal plants, scarce raw materials, early Euro-Canadian industry), areas of early Euro-Canadian settlement, early historical transportation routes, property listed on a municipal register or designated under the *Ontario Heritage Act* or that is a federal, provincial or municipal historic landmark or site, and property that local histories or informants have identified with possible archaeological sites, historical events, activities, or occupations.

Archaeological potential can be determined not to be present for either the entire property or a part of it when the area under consideration has been subject to extensive and deep land alterations that have severely damaged the integrity of any archaeological resources. This is commonly referred to as 'disturbed' or 'disturbance', and may include: quarrying, major landscaping involving grading below topsoil, building footprints, and sewage and infrastructure development. Archaeological potential is not removed where there is documented potential for deeply buried intact archaeological resources beneath land alterations, or where it cannot be clearly demonstrated through background research and property inspection that there has been complete and intensive disturbance of an area. Where complete disturbance cannot be demonstrated in Stage 1, it will be necessary to undertake Stage 2 assessment.

The background study determined that the following features or characteristics indicate archaeological potential for the subject property: Although there were sites registered within the property limits or within 1 kilometre of the study area limits, there are two historic structures depicted on the atlas in 1878. One structure is set back from the road and are located within historic lot 5 concession 5. The property also has a tributary depicted on the atlas as running through the western section of the study area and it flows south into Collins Bay.

The Stage 1 background study indicates, that there is potential for the recovery of pre-contact and post-contact Euro-Canadian archaeological resources within the subject property. As it cannot be clearly demonstrated through the background study that there has been complete and intensive disturbance of the area, archaeological potential is not removed. There are areas within the subject property that have the potential for the recovery of archaeological resources.

Section 7.5.7, Standard 2

The Stage 2 property assessment of the subject property will employ the strategy of test pit survey, following the standards listed in Section 2.1.1 and 2.1.2 of the *2011 Standards and Guidelines for Consultant Archaeologists*. This is the appropriate strategies based on Stage 1 background study. To our knowledge there are no other reports containing relevant background information related to this development project.

1.3 Archaeological Context (Section 7.5.8, Standards 1-7)

Section 7.5.8, Standard 1

In order that an inventory of archaeological resources could be compiled for the study area, three sources of information were consulted: the site forms for registered sites housed at the Ministry of Tourism and Culture; published and unpublished documentary sources; and the files of *The Archaeologists Inc.*

In Ontario, information concerning archaeological sites is stored in the Ontario Archaeological Sites Database (O.A.S.D.), an inventory of the documented archaeological record in Ontario.

Information on the known archaeological sites in the vicinity of the study area was obtained from the Ministry of Tourism and Culture site database. There are no known archaeological sites located within the study area limits and no sites were registered within a one kilometre radius of the subject property.

Section 7.5.8, Standard 2

The condition of the subject property was woodland with overgrown brush. The study area lies within the Napanee Plain physiographic region (Chapman and Putnam 1984:186). This is a limestone plain of flat-to-undulating characteristics covering approximately 700 square miles. Limestones are mainly of the Gull River and Bobcaygeon Formation. The surfaces have been stripped of overburden due to glacial action.

Soils within the Napanee Plain are generally shallow (less than 30cm in thickness) and consist of clays with some Farmington Loam soils. The plain supported sugar maple, white elm, silver and red maple, white cedar, basswood, beech, white pine, hemlock, balsam fir, and white spruce.

Section 7.5.8, Standard 3

The Stage 2 archaeological fieldwork of the subject property was undertaken on October 20th – November 5th, 2011.

Section 7.5.8, Standard 4

No previous archaeological fieldwork has taken place within the limits of the project area. The Archaeologists Inc. is unaware of any previous archaeological fieldwork carried out immediately adjacent to the project area.

Section 7.5.8, Standard 5

We are unaware of previous findings and recommendations relevant to the current stage of work.

Section 7.5.8, Standard 6

There are no unusual physical features that may have affected fieldwork strategy decisions or the identification of artifacts or cultural features.

Section 7.5.8, Standard 7

There is no additional archaeological information that may be relevant to understanding the choice of fieldwork techniques or the recommendations of this report.

2.0 FIELD METHODS (Section 7.8.1, Standards 1-3)

This section of the report addresses Section 7.8.1 of the 2011 Standards and Guidelines for Consultant Archaeologists. It does not address Section 7.7.2 because no property inspection was done as a separate Stage 1.

Section 7.8.1, Standard 1

The entire project area was surveyed.

Section 7.8.1, Standard 2

As relevant, we provide detailed and explicit descriptions addressing Standards 2a, b and c. Standard 2d is not relevant.

Section 7.8.1, Standard 2a - The general standards for property survey under Section 2.1 of the *2011 Standards and Guidelines for Consultant Archaeologists* were addressed as follows:

- Section 2.1, S1 - The entire property was surveyed including lands immediately adjacent to built structures, when present.
- Section 2.1, S2a (land of no or low potential due to physical features such as permanently wet areas, exposed bedrock, and steep slopes) - n/a
- Section 2.1, S2b (no or low potential due to extensive and deep land alterations) - n/a
- Section 2.1, S2c (lands recommended not to require Stage 2 assessment by a previous Stage 1 report where the ministry has accepted that Stage 1 into the register) - n/a
- Section 2.1, S2d (lands designated for forest management activity w/o potential for impacts to archaeological sites, as determined through Stage 1 forest management plans process) - n/a
- Section 2.1, S2e (lands formally prohibited from alterations) - n/a
- Section 2.1, S2f (lands confirmed to be transferred to a public land holding body, etc) - n/a
- Section 2.1, S3 - The Stage 2 survey was conducted when weather and lighting conditions permitted excellent visibility of features.
- Section 2.1, S4 - No GPS recordings were taken as no artifacts were found during the Stage 2 assessment.
- Section 2.1, S5 - All field activities were mapped in reference to either fixed landmarks, survey stakes and development markers as appropriate. See report section *9.0 Maps*.
- Section 2.1, S6 - See report section *8.0 Images* for photo documentation of examples of field conditions encountered.
- Section 2.1, S7 - n/a

Section 7.8.1, Standard 2b -The subject property was subject to a systematic test pit survey appropriate to the characteristics of the property.

The test pit survey of the property followed the standards within Section 2.1.2 of the *2011 Standards and Guidelines for Consultant Archaeologists*. Test pit survey was only conducted where ploughing was not possible or viable, as per Standard 1. Test pits were spaced at maximum intervals of five metres and to within one metre of built structures, when present, or until test pits show evidence of recent ground disturbance. All test pits were at least 30 cm in diameter. Each test pit was excavated by hand, into the first five cm of subsoil and examined for stratigraphy, cultural features, or evidence of fill. No stratigraphy or cultural features were noted. Soils were screened through 6mm mesh. All test pits were backfilled.

Section 7.8.1, Standard 2c - All areas of the subject property were surveyed at five metre intervals as there were no areas possessing different conditions other than those which determined the choice of test pit survey (e.g. no disturbed areas that were judgementally test pitted).

Section 7.8.1, Standard 3

100 % of property was test pit surveyed at five metre intervals. All portions of the property were surveyed. Standard survey intervals were maintained throughout the property.

3.0 RECORD OF FINDS (Section 7.8.2, Standards 1-3)

This section documents all finds discovered as a result of the Stage 1 and 2 archaeological assessment of the subject property.

Section 7.8.2, Standard 1

No archaeological resources or sites were identified in the Stage 2.

Section 7.8.2, Standard 2

An inventory of the documentary record generated in the field is provided in Table 1.

Table 1: Inventory of Documentary Record	
Document Type	Description
Field Notes	<ul style="list-style-type: none">• This report constitutes the field notes for this project
Photographs	<ul style="list-style-type: none">• 4 digital photographs
Maps	<ul style="list-style-type: none">• Figure 4 represent all of the maps generated in the field.

Section 7.8.2, Standard 3

Information detailing exact site locations on the property is not submitted because no sites or archaeological resources were identified in the Stage 2 assessment.

4.0 ANALYSIS AND CONCLUSIONS (Section 7.8.3, Standards 1-2)

Section 7.8.3, Standard 1

No archaeological sites were identified. Standard 2 is not addressed because no sites were identified.

5.0 RECOMMENDATIONS (Section 7.8.4, Standards 1-3)

Section 7.8.4, Standard 1

This standard is not applicable as no sites were identified.

Section 7.8.4, Standard 2

The report makes recommendations only regarding archaeological matters.

Section 7.8.4, Standard 3

The Stage 2 survey did not identify any archaeological sites requiring further assessment or mitigation of impacts and it is recommended that no further archaeological assessment of the property be required.

6.0 ADVICE ON COMPLIANCE WITH LEGISLATION (Section 7.5.9, Standards 1-2)

Section 7.5.9, Standard 1a

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.

Section 7.5.9, Standard 1b

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*.

Section 7.5.9, Standard 1c

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*.

Section 7.5.9, Standard 1d

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.

Section 7.5.9, Standard 2

Not applicable

7.0 BIBLIOGRAPHY AND SOURCES (Section 7.5.10, Standards 1)

Chapman, L.J. and F. Putnam

1984 *The Physiography of Southern Ontario, Ontario Geological Survey Special Volume 2*. Toronto: Government of Ontario, Ministry of Natural Resources.

Ministry of Tourism and Culture

2011 Standards and Guidelines for Consultant Archaeologists.

Toronto: J.H. Meacham & Co., 1878

The Illustrated historical atlas of the counties of Frontenac, Lennox and Addington, Ont.

8.0 IMAGES (Sections 7.5.11, 7.7.5, 7.8.6)

The images provided below address Standards 1 and 2 of Section 7.5.11, Standards 1 of Section 7.7.5, and Standards 1 of Section 7.8.6. All images provided are colour photographs, digital images or technical drawings that meet this standard.



Plate 1; Test pit survey of the subject property at a 5 metre interval



Plate 2; Test pit survey of the subject property at a 5 metre interval



Plate 3; looking north at a watercourse running through the property

9.0 MAPS (Section 7.5.12, 7.7.6, 7.8.7)

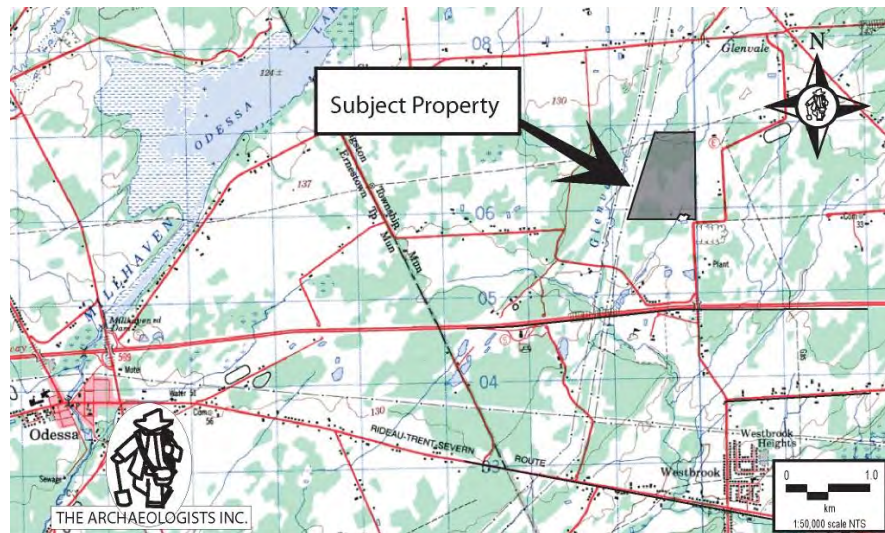


Figure 1; The location of the subject property on the NTS mapping

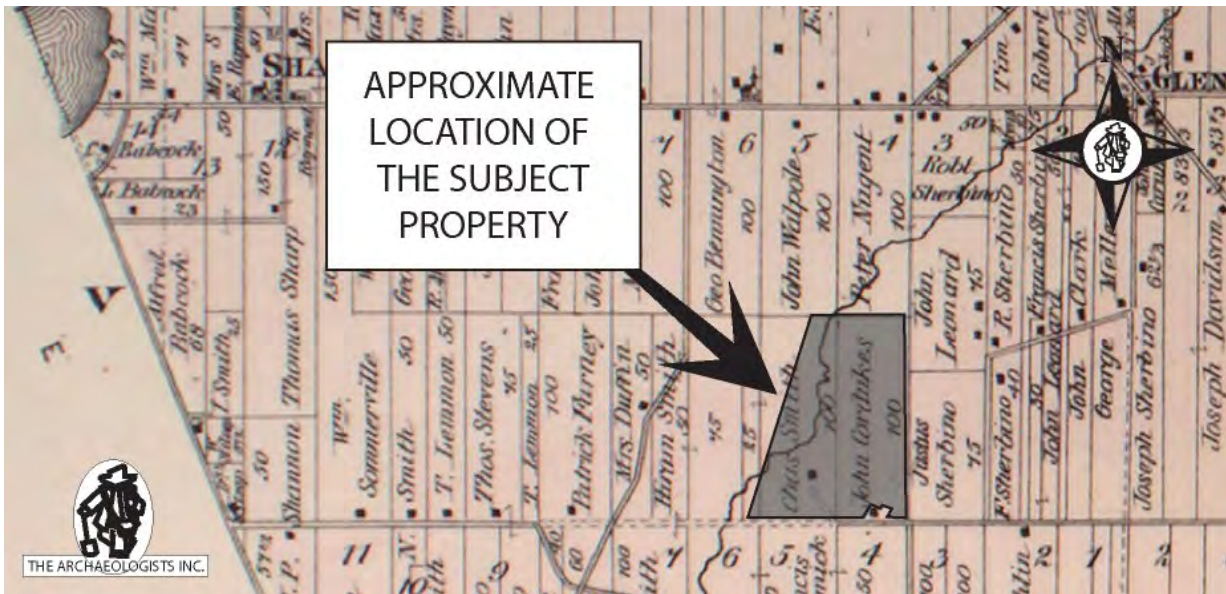


Figure 2; The location of the subject property on the 1879 Illustrated Historical Atlas

Stage 1 and 2 Archaeological Assessment for SunE Westbrook Solar Farm, Lots 4 & 5, Concession 5, Town of Westbrook, Township of Kingston, Kingston and Frontenac County, Ontario

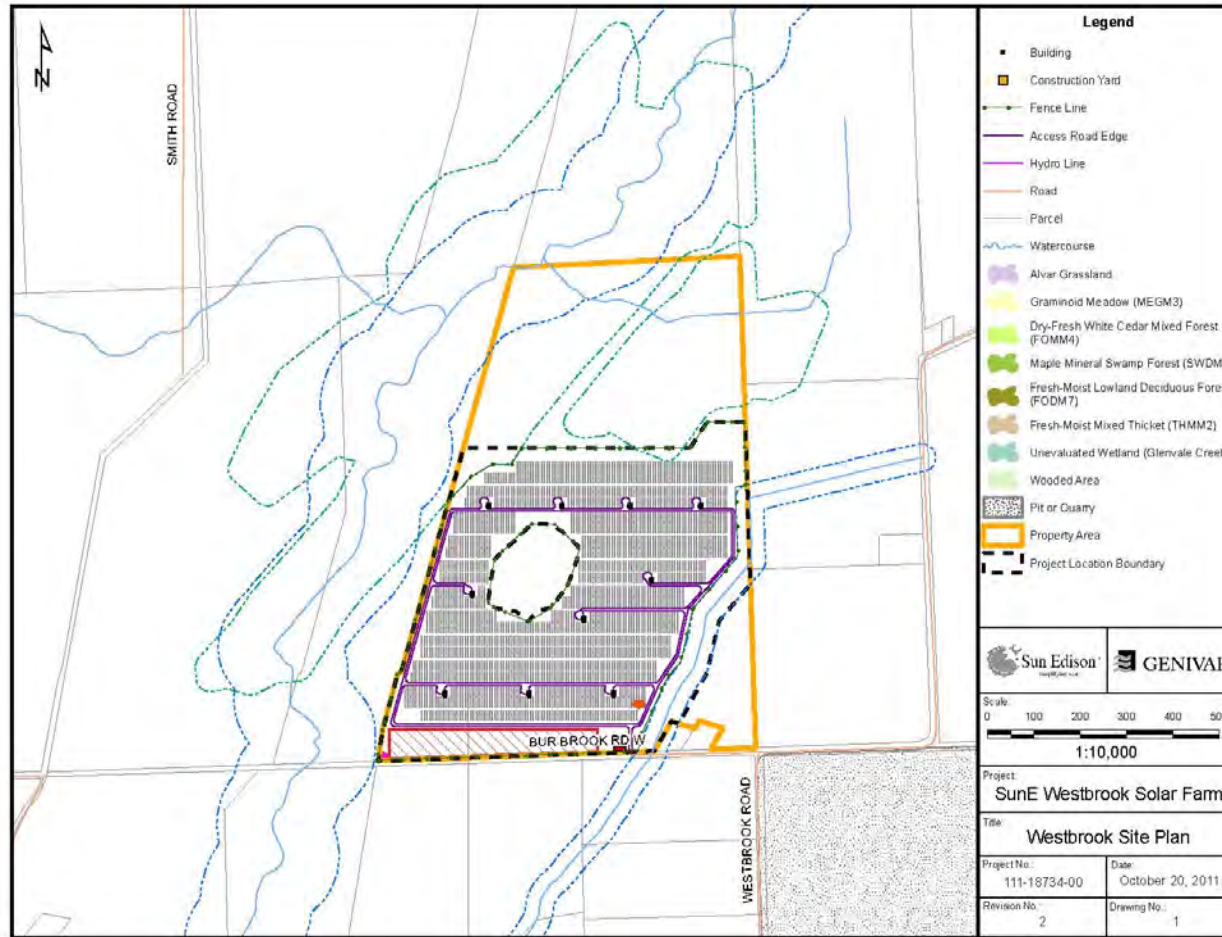


Figure 3; the subject property

Stage 1 and 2 Archaeological Assessment for SunE Westbrook Solar Farm, Lots 4 & 5, Concession 5, Town of Westbrook, Township of Kingston, Kingston and Frontenac County, Ontario

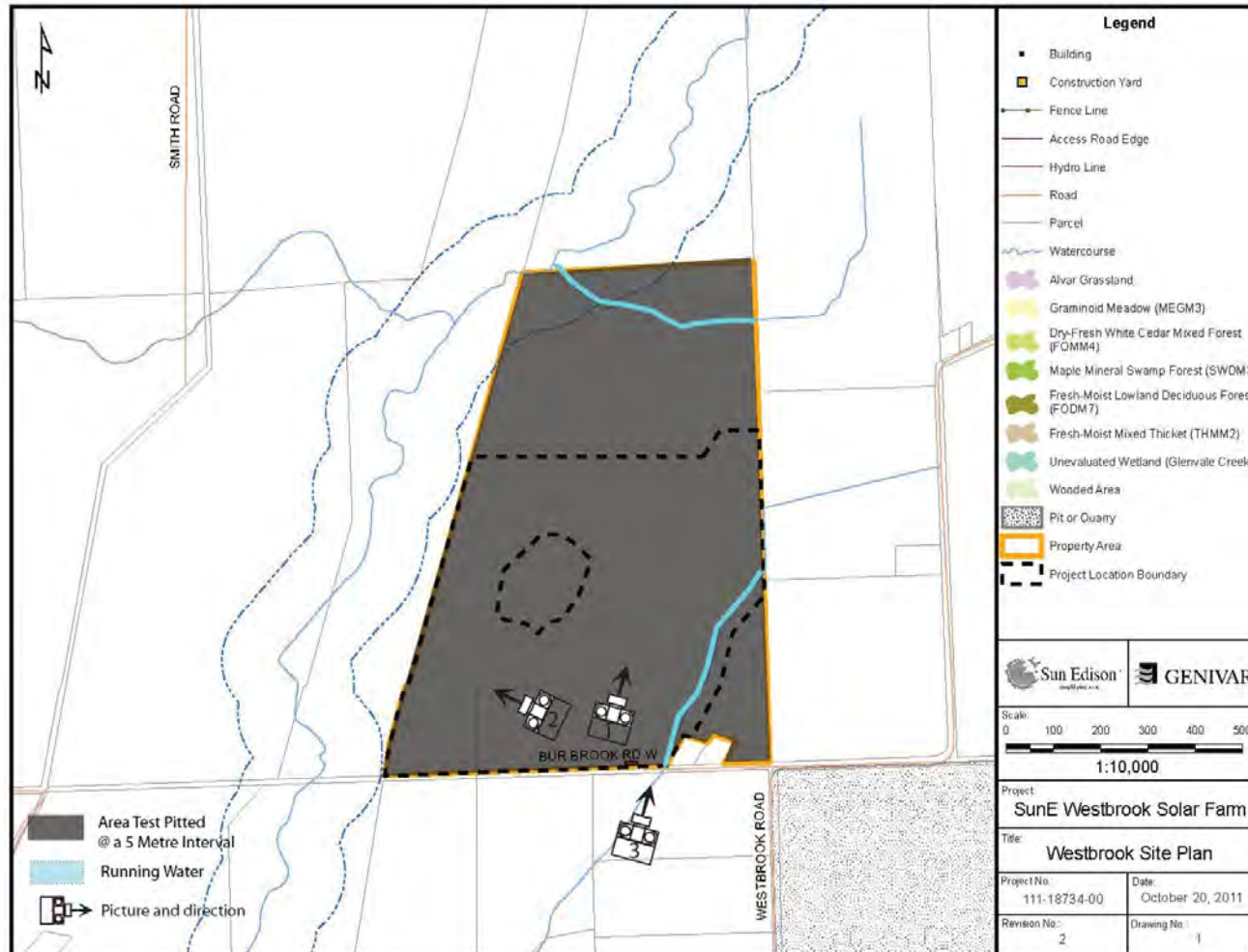


Figure 4; the assessment of the subject property