

RE SMITHS FALLS 3 SOLAR PROJECT

Stage 1 and 2 Archaeological Assessment

August 24, 2011

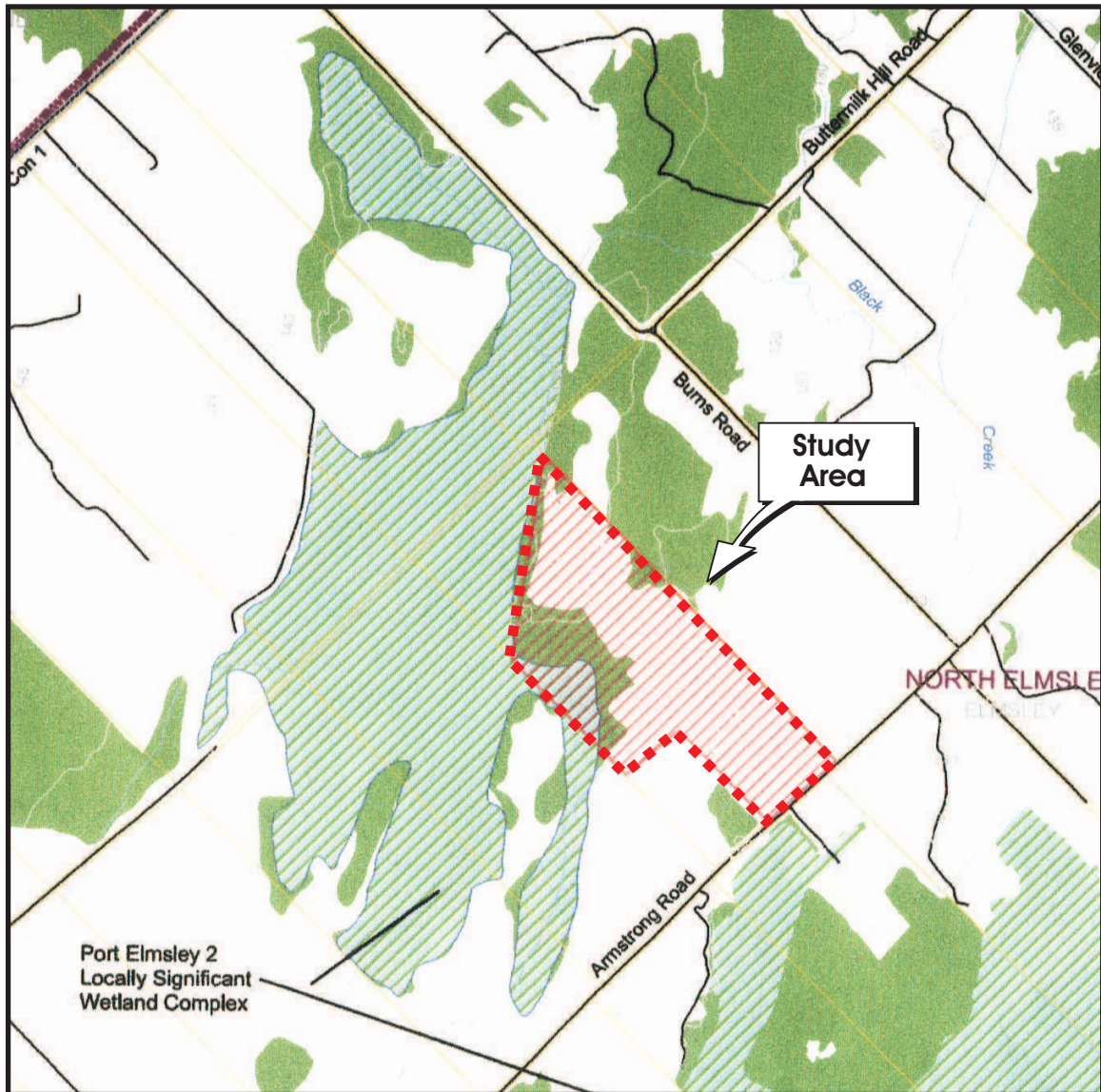
RECURRENT
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**Archaeological Assessment (Stages 1 and 2), RE Smiths
Falls 3, Part Lot 8, Concession 9, Drummond / North
Elmsley Township, Lanark County, Ontario**



Mayer
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Cultural Heritage Assessments and Archaeological Mitigative Excavations

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ULC, Part Lot 8, Concession 9, Drummond / North Elmsley
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Archaeological Consulting Licence Number P040
Contract Information Form Number P040-338-2010
Corporate Project Number 10-021c

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Acknowledgments

Preparation of this report was facilitated by the assistance of the following individuals and their agencies:

- ***Kathleen Vukovics***, Hatch
- ***Bob Leah***, Recurrent Energy
- ***Robert von Bitter***, Archaeological Data Co-ordinator, Ontario Ministry of Tourism and Culture

Archaeological Assessment (Stages 1 and 2), RE Smiths Falls 3 ULC, Part Lot 8, Concession 9, Drummond / North Elmsley Township, Lanark County, Ontario

Introduction

Among other matters, the *Planning Act R.S.O. 1990*, establishes that the protection of features of archaeological interest is a matter of provincial concern. As such, an archaeological resource assessment (Stage 1 background research and Stage 2 general survey) was conducted as a standard condition of approval for FIT-FR19P5N, a proposed solar energy project. The property is identified as Part Lot 8, Concession 9, Drummond/North Elmsley Township, Lanark County, Ontario (Figure 1).

This assessment was conducted in order to determine if any direct and/or indirect impacts would occur by proposed construction activities on archaeological resources that might be present. Archaeological resources consist of artifacts (Aboriginal stone tools, pottery and subsistence remains as well as Euro-Canadian objects), subsurface settlement patterns and cultural features (post moulds, trash pits, privies, and wells), and sites (temporary camps and special purpose activity areas, plus more permanent settlements such as villages, homesteads, grist mills and industrial structures).

Stage 1 Background Research

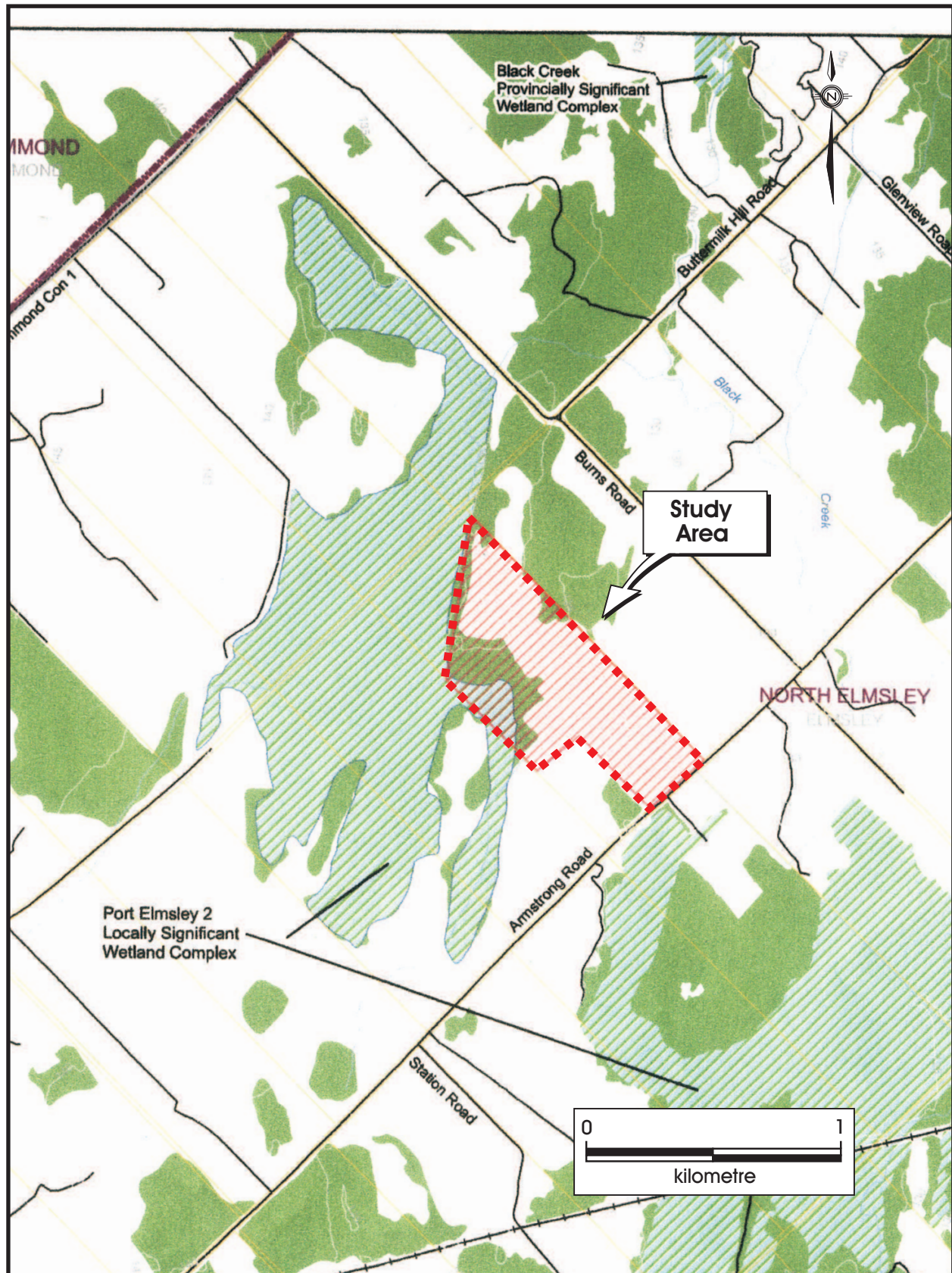
Stage 1 background research was conducted in order to complete the following tasks:

- amass all of the readily available information on any previous archaeological surveys in the area;
- determine the locations of any registered and unregistered sites; and
- develop an historical framework for assigning levels of potential significance to any new sites discovered during fieldwork.

The framework for assigning levels of potential archaeological significance is drawn from provincial guidelines (Weiler 1980). The necessary information includes the identification and evaluation of any feature that has one or more of the following attributes:

- *it has the potential through archaeological exploration, survey or fieldwork to provide answers to substantive questions (i.e. relate to particular times and places) about events and processes that occurred in the past and therefore add to our knowledge and appreciation of history;*
- *it has the potential through archaeological exploration, survey and fieldwork to contribute to testing the validity of general anthropological principles, cultural change and ecological adaptation, and therefore to the understanding and appreciation of our man-made heritage; or*
- *it is probable that various technical, methodological, and theoretical advances are likely to occur during archaeological investigation of a feature, alone or in association with other features, and therefore contribute to the development of better scientific means of understanding and appreciating our man-made heritage (Weiler 1980:8);*

Figure 1: Location of the Study Area.



Natural Environment

The study area is within the Smiths Falls Limestone Plain physiographic region (Chapman and Putnam 1984). This area contains a wide variety of surface soil types, from clays and light loams to sand and even gravel. A large portion of this area is Farmington type, a sandy loam that is level and moderately stony. A smaller area is Monteagle, a sandy loam with steeply sloping topography and exceedingly stony matrix. There is an unidentified creek adjacent to the study area to the north and the Healy MacPherson Drain to the west. The “Port Elmsley 2, Locally Significant Wetland Complex” is located to the west and south.

Potential for Archaeological Resources

Archaeological potential is defined as the likelihood of finding archaeological sites within a study area. For planning purposes, determining archaeological potential provides a preliminary indication that significant sites might be found within the study area, and consequently, that it may be necessary to allocate time and resources for archaeological survey and mitigation. In predicting the locations of archaeological sites, the *Primer on Archaeology, Land Use Planning and Development in Ontario* (Ministry of Tourism and Culture 1997:12-13) states that undisturbed lands, or those with minimal disturbance, such as cultivated fields, within 300 metres of a primary water source or 200 metres of a secondary or tertiary water source are considered to have archaeological potential. Other criteria can include location on elevated ground or near distinctive or unusual landforms, and the presence of well-drained sandy soils.

Based upon a published synthesis of Aboriginal cultural occupations (Wright 1968), Table 1 is a general outline of the cultural history of southwestern Ontario that is applicable to the study area. Ellis and Ferris (1990) provide greater detail of the distinctive characteristics of each time period and cultural group. The Ministry of Tourism and Culture archaeological database coordinator (von Bitter 2010) indicated that there are no previously registered archaeological sites within 2000 metres of the current study area.

Table 1: General Cultural Chronology for Eastern Ontario.

PERIOD	GROUP	TIME RANGE	COMMENTS
Early Paleo-Indian	Fluted Projectiles	9500 - 8500 B.C.	big game hunters
Late Paleo-Indian	Hi-Lo Projectiles	8500 - 7500 B.C.	small nomadic groups
Early Archaic	---	7800 - 6000 B.C.	nomadic hunters and gatherers
Middle Archaic	Laurentian	6000 - 2000 B.C.	territorial settlements
Late Archaic	Lamoka	2500 - 1700 B.C.	polished ground stone tools
“	Broadpoint	1800 - 1400 B.C.	---
“	Crawford Knoll	1500 - 500 B.C.	---
“	Glacial Kame	circa 1000 B.C.	burial ceremonialism
Early Woodland	Meadowood	1000 - 400 B.C.	introduction of pottery
“	Red Ochre	1000 - 500 B.C.	---
Middle Woodland	Point Peninsula	300B.C. to 700 A.D.	long distance trade networks
“	Sandbanks	A.D. 600 - 900	incipient agriculture
Late Woodland	Pickering	A.D. 800 - 1300	transition to village life
“	Uren	A.D. 1300 - 1350	large villages with palisades
“	Middleport	A.D. 1300 - 1400	wide distribution of ceramic styles
“	Huron/St. Lawrence Iroquios	A.D. 1400 - 1650	tribal warfare
Early Contact	Mississauga plus others	A.D. 1700 - 1875	tribal displacement
Late Contact	Euro-Canadian	A.D. 1800 - present	European settlement

Figure 2: Study Area, Facing Northeast

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Figure 3: Crew at Work East Side of Property, Facing South



Figure 4: Site Location on Historic Atlas



Over their thousands of years of occupation in the general region, Aboriginal people, have left behind, to a greater or lesser degree, physical evidence of their lifeway activities and settlements at many locations. The earliest possible human occupation was during the Paleo-Indian period (*circa* 9000 to 7000 B.C.) wherein small groups of nomadic peoples hunted big game along the shorelines of glacial lakes. These people were few in number and their small, temporary campsites are relatively rare.

People during the Archaic period (*circa* 7000 to 1000 B.C.) were still primarily nomadic hunters but also established territorial settlements, gathered seasonally available resources, and introduced burial ceremonialism. Late Archaic period sites are more numerous and can be quite large due to repeated annual visits.

Sites of the Woodland period (*circa* 1000 B.C. to A.D. 1650) are usually the most numerous because the population levels in southwestern Ontario had significantly increased. The manufacture of ceramic pottery vessels for storage and cooking was introduced along with the establishment of long distance trading networks, horticulture, warfare and large palisaded villages.

Sites of the Contact period (*circa* A.D. 1650 to 1900) include Aboriginal and Euro-Canadian residences and industries. Beldon's Illustrated Atlas of Lanark County indicates that in 1880, there was no recorded owner of the land encompassing the study area and no structures are shown. The absence of structures on this map, however, does not necessarily mean that one or more structures were not present at that time, earlier or later.

Based upon soil and topography suitable for human habitation, the proximity to water and the historic significance of the geographic region, the study area exhibits moderate to high potential for the discovery of pre-contact Aboriginal and Euro-Canadian archaeological resources.

Stage 2 General Survey

The Stage 2 general survey employed the both the shovel test pit method and the pedestrian survey method at a five-metre interval. Appropriate photographic documentation was taken during the survey. Permission was received to enter on the property and to remove artifacts as necessary. This survey was conducted on May 12 and 13, 17 and 18, 2010. Weather conditions were sunny and warm. There were no conditions detrimental to the recovery of artifacts.

About one-third of the assessable part of the 25 hectare study area is a ploughed agricultural field, however, a portion of the property is wooded, while another area is wet and swampy. The hedgerow areas and the approximate 5 hectare wooded area were tested using the standard shovel test pit method. Each test pit was 30 centimetres in diameter and was dug to subsoil, which was approximately 20 to 30 centimetres below the surface. All soil was screened through 6 millimetre mesh to maximize the potential for artifact recovery and all test pits were backfilled upon completion. No artifacts were recovered during the test pit portion of the survey. The wet, marshy area was not assessed (see Figure 5).

Figure 5: Site Map Showing Stage 2 Results

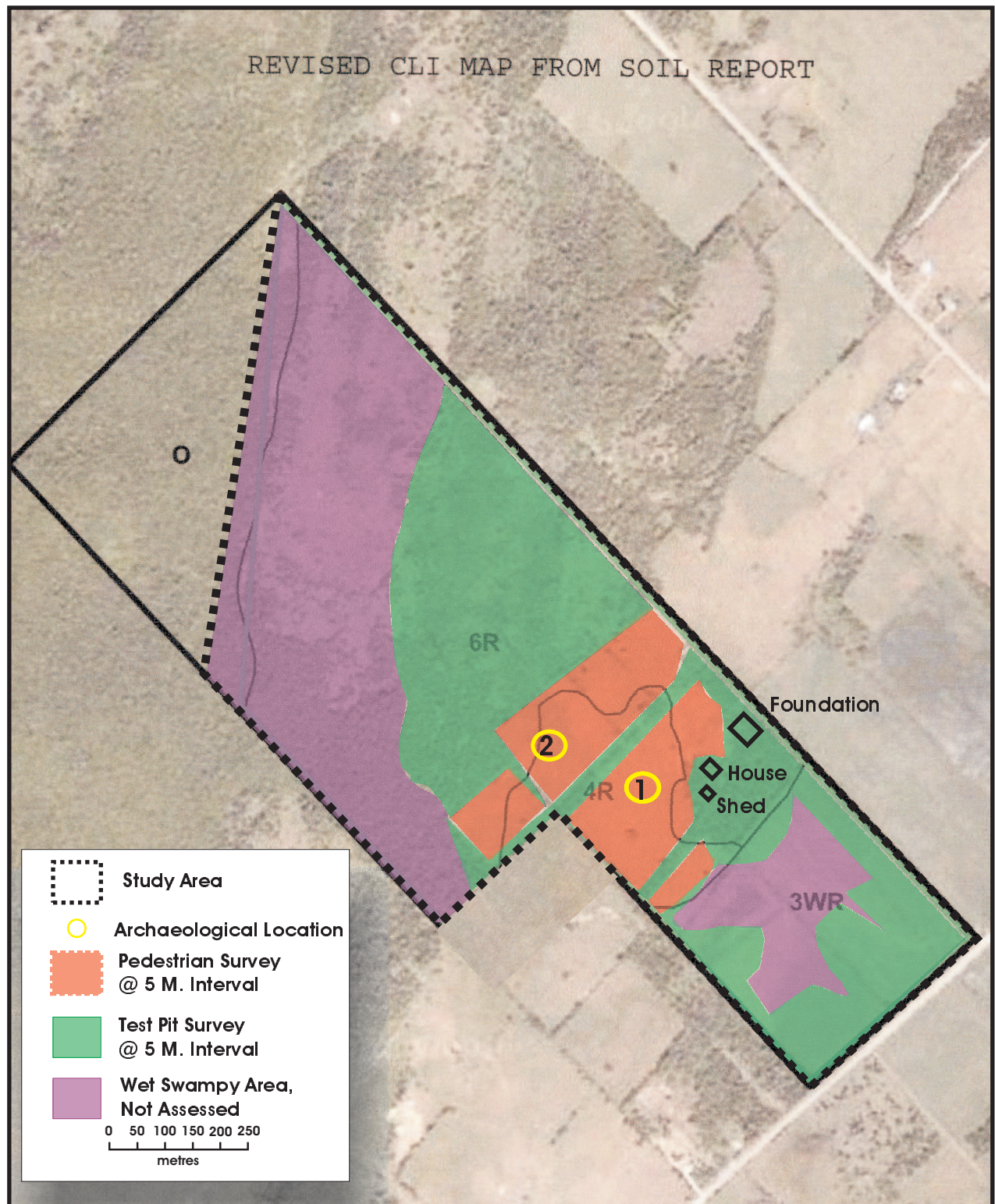


Figure 6: Marsh at North End of Property, Facing West

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Figure 7: Typical Test Pit



The remainder of the study area was assessed using the standard pedestrian transect method at a five-metre interval. The field had been ploughed the previous week and was well weathered with excellent visibility. Any artifacts recovered triggered an intensified survey at a one-metre interval in the immediate surrounding area.

Results

Two locations, both containing Euro-Canadian artifacts, were recorded during the survey. Each of these locations was mapped and its position was recorded using a portable Global Positioning System device (Garmin Etrex) with an accuracy of better than 15 metres. Each GPS co-ordinate represents the approximate centre of the location scatter. Figure 5 shows the locations of each site within the study area. All artifacts encountered during the Stage 2 survey were recorded during the assessment and those that were collected are presented in a catalogue in Appendix A.

Location 1 (N 44° 55.828' W 076° 07.225')

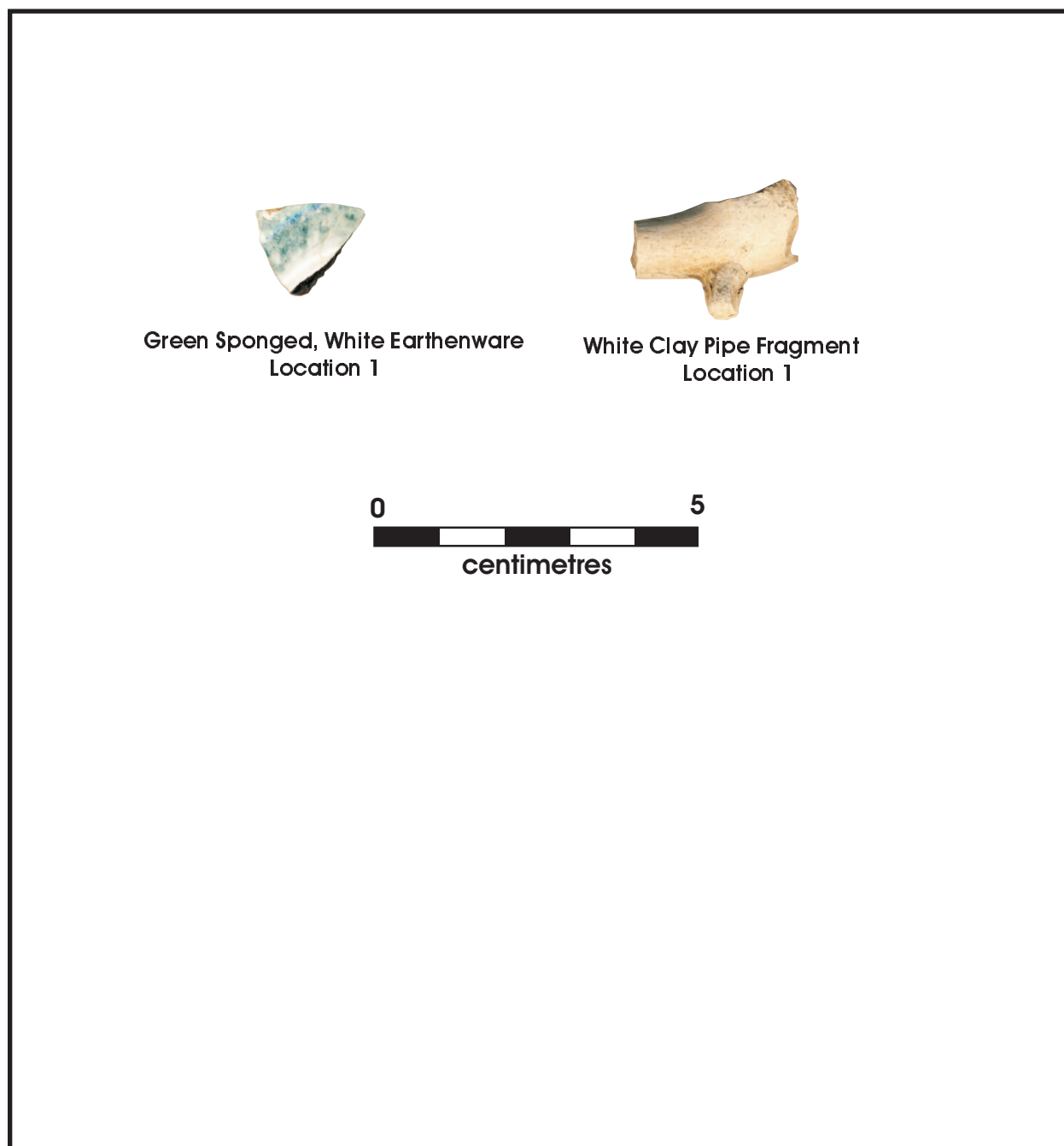
Location 1 is a diffuse (20 by 10 metre) historic scatter consisting of seven findspots. Artifacts include blue bottle glass, a white clay pipe fragment, creamware, green sponged white earthenware and plain white earthenware. Temporally diagnostic artifacts were collected and the remainder of artifacts were left *in situ* for recording during Stage 3 surface collection.

The artifacts recovered from this location indicate that the site may date to the early- to mid-1800's. Sponged white earthenware was produced between 1840 and 1880. Creamware is common in archaeological assemblages dating to between 1800 and 1830. This location may represent a significant archaeological resource and further investigations are recommended to determine the nature and extent of this site.

Location 2 (N 44° 55.888' W 076° 07.272')]

Location 2 consists of one piece of white earthenware and one piece of olive bottle glass. An intensified search turned up no further artifacts. Additional assessment or mitigative measures are not warranted for this site because it exhibits low information potential by provincial standards and precedents.

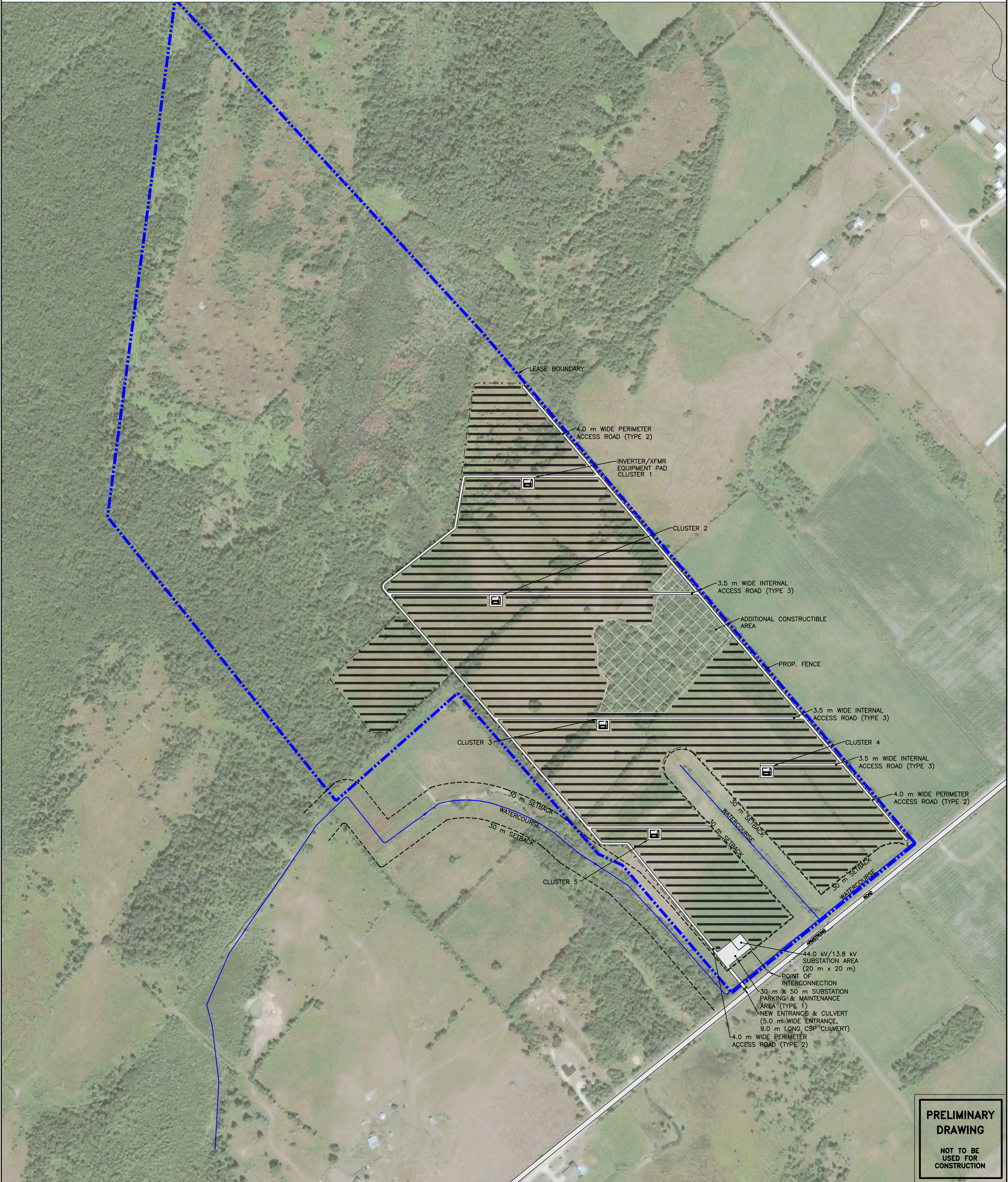
Figure 8: Select Artifacts Recovered During Survey



RECOMMENDATIONS

The following recommendations are provided for consideration by Hatch and by the Ministry of Tourism and Culture:

1. Additional assessment or mitigative measures are warranted for Location 1 because it represents a potentially significant Euro-Canadian homestead site. This fieldwork will involve a Stage 3 investigation consisting of a controlled surface collection of artifacts and the hand-excavation of one-metre square units at an approximate 5-metre interval across the site
2. Additional assessment or mitigative measures are not warranted for location 2 because exhibits low information potential by provincial standards and precedents. The Ministry of Tourism and Culture is requested to issue a letter concurring with these recommendations.
3. The above recommendation is subject to concurrence by the Ministry of Tourism and Culture. It is an offence to destroy or alter an archaeological site without approval from the Ministry of Tourism and Culture. No landscaping, grading or other activities that may result in the destruction or disturbance of any of the archaeological sites documented in this report is permitted prior to the Ministry of Tourism and Culture's approval.
4. Although every reasonable effort was made to locate all archaeological resources, it is possible that some remain to be discovered within the study area. Should deeply buried archaeological material be found during construction, the Ministry of Tourism and Culture (416-314-7148) and Mayer Heritage Consultants Inc. in London (519-652-1818 or 800-465-9990) should be immediately notified.
5. As on virtually any property in southern Ontario, it is possible that Aboriginal or Euro-Canadian burials could be present within the study area. In the event that human remains are encountered during construction, the proponent should immediately contact the Ministry of Tourism and Culture, and the Cemeteries Regulation Unit of the Ontario Ministry of Consumer and Commercial Relations in Toronto (416-326-8392), as well as the appropriate municipal police, the local coroner, and Mayer Heritage Consultants Inc.
6. The licensee shall keep in safekeeping all artifacts and records of archaeological fieldwork carried out under this licence, except where those artifacts and records are transferred to by the licensee to Her Majesty the Queen in right of Ontario or the licensee is directed to deposit them in a public institution in accordance with subsection 66(1) of the Act.



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USED FOR
CONSTRUCTION

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von Bitter, Robert

2010 E-mail transmission from the Ministry of Tourism and Culture Archaeological Data

Co-ordinator regarding registered archaeological sites within 2,000 metres of the study area.

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Appendix A: Artifact Catalogue

CAT. NO	LOCATION	DESCRIPTION	FREQ.	COMMENTS
1000	3-1	white earthenware	1	plain
1001	3-1	white earthenware, sponged	1	green
1002	3-1	creamware	1	plain
1003	3-1	white clay pipe	1	shank fragment
1004	3-2	white earthenware	1	plain
1005	3-2	glass, bottle	1	olive

