NORTHLAND POWER

Crosby Solar Project

Draft Stage 1 and 2 Archaeological Assessment Report

August 24, 2010

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Stage 1 and 2 Archaeological Assessment
Crosby Solar Project
(FIT – FFPBQ42)
Township of Rideau Lakes
United Counties of Leeds and Grenville, Ontario

Prepared for
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&
The Ontario Ministry of Tourism and Culture

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Project # P007-253
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The assessment was conducted in mid July and early August of 2010. Research indicated a high potential for the presence of both pre-Contact and Historic-era archaeological sites in the study area. In advance of field work, legal *Permission to Enter* (PTE) was granted by the property owner. During the study, 3 Historic-era findspots were identified. In consultations between ARA, the proponent, and MTC, it was determined that the findspots could be protected by avoidance and buffering. Accordingly, it is recommended that the project be allowed to proceed without further heritage concerns.

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Acknowledgements:

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1.0 Introduction

Under a contract awarded in May of 2010, **Archaeological Research Associates Ltd. (ARA)** carried out a Stage 1 and 2 archaeological assessment of the proposed **Crosby Solar Project** in the Township of Rideau Lakes, United Counties of Leeds and Grenville, Ontario. This assessment was conducted in mid July and early August of 2010 under licence# P-007, PIF # P007-253-2010. The work was completed under contract to **Hatch Ltd.** as a component of the screening process outlined in **Ontario Regulation 359/09**, which governs **Renewable Energy Approvals** under the provincial **Environmental Protection Act** (EPA). The archaeological assessment was carried out in order to:

- Identify any known archaeological sites that might be found near or within the study area;
- Empirically determine the presence of any unknown archaeological resources which may be extant within the study area; and
- If identified, suggest appropriate strategies for the protection and management of these sites.

The assessment was carried out in accordance with the provisions of the *Ontario Heritage Act* (A.S.O. 1990), and *Draft Standards and Guidelines for Consultant Archaeologists* (Ministry of Culture 2009). All records pertaining to this assessment are currently housed in a storage facility located at Archaeological Research Associates Ltd.'s office at 97 Gatewood Road in Kitchener, Ontario.

The Ministry of Tourism and Culture is asked to review the results and recommendations presented in this report.

2.0 Location

The study area is a 121 acre parcel of land, located west of Little Rideau Lake Road in Crosby North Ward, Township of Rideau Lakes, United Counties of Leeds and Grenville, Ontario (see Figures 1-3). Irregular in shape, it is historically described as being located on part Lot 2, Concession 3, of the Township of North Crosby, County of Leeds, Ontario.

The closest water source is an un-named stream which runs adjacent to the northwest corner of the study area before eventually draining into Stedman's Bay, some 550 metres north of the study area. Piper's Bay is located approximately 400 metres northwest of the study area.

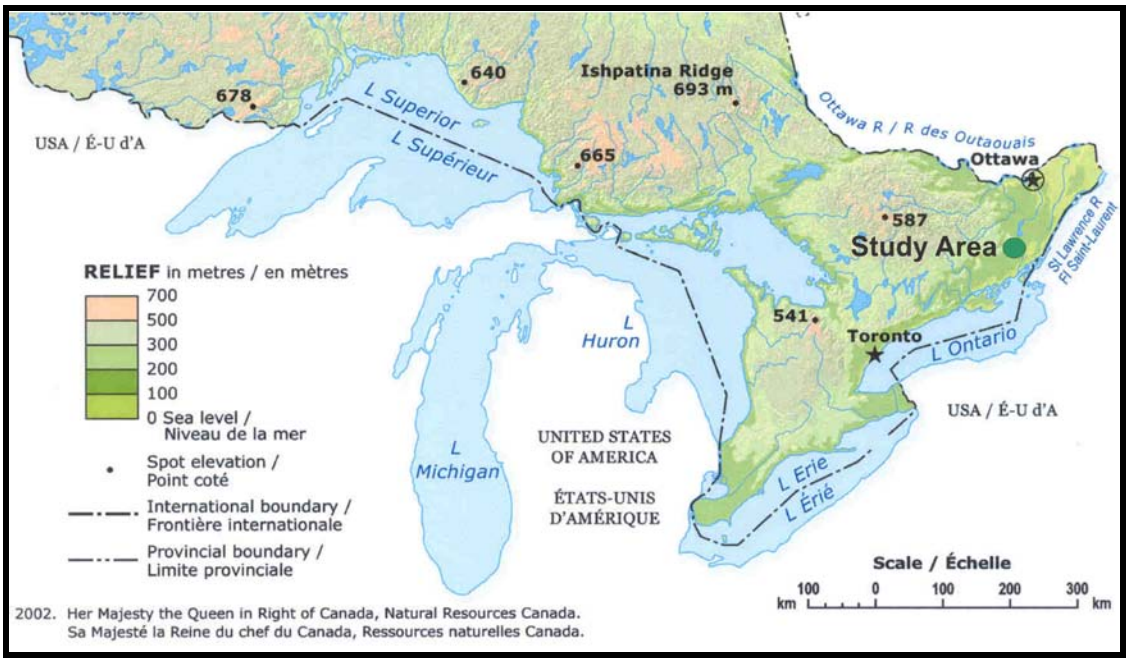


Figure 1: Location of Study Area in the Province of Ontario

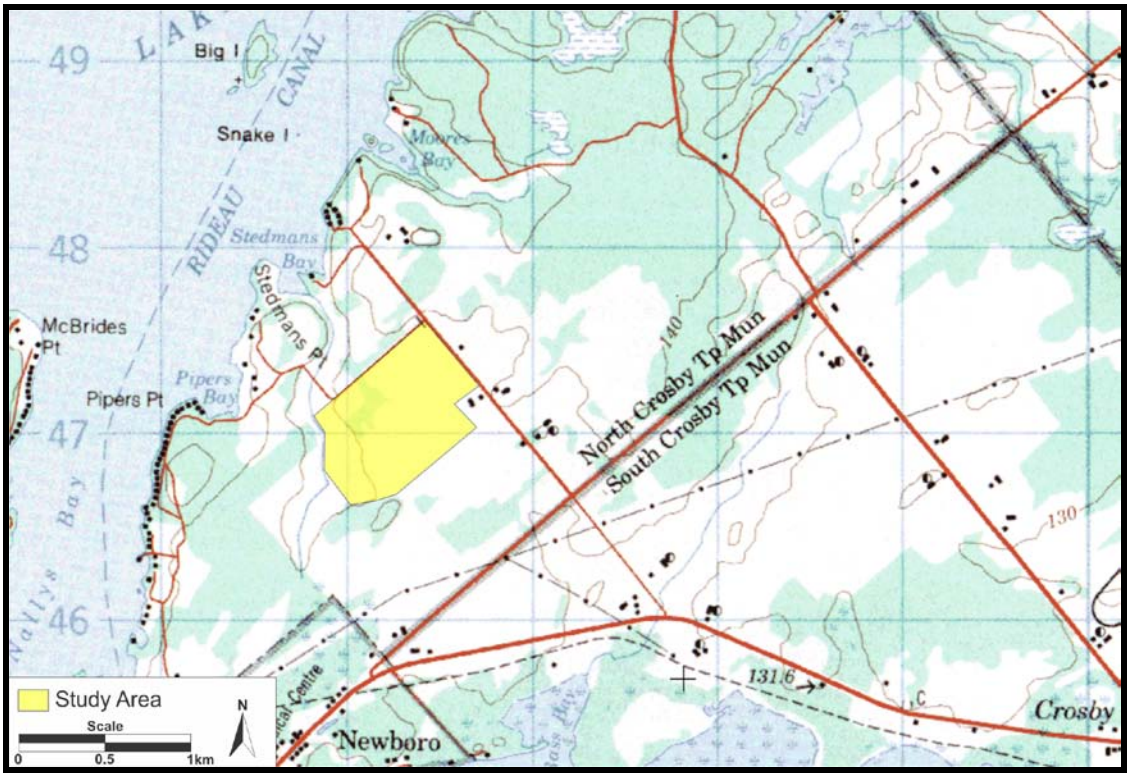


Figure 2: Location of Study Area in the Township of Rideau Lakes

Figure 3: Study Area in Detail

3.0 Geography

It has long been understood that environment plays a key role in determining site location, particularly in small societies with non-complex, subsistence-oriented economies. The local environment of the study area lies within the Great Lakes-St. Lawrence Forest. The Great Lakes-St. Lawrence Forest is a transitional zone between the southern deciduous forest and coniferous boreal forest. Vegetation here consists of a mixture of coniferous trees, such as eastern white pine, red pine, eastern hemlock and white cedar, and deciduous trees, such as yellow birch, sugar and red maple basswood and red oak (MNR 2009). In the upper Great Lakes region it is believed that the First Nations used some 500 plant species as food, food flavourings, drinks, medicines, building materials, fibres, dyes, and basketry (Mason 1981: 59). As such, it is clear that vegetation played an important role in the site selection processes employed by pre-Contact Aboriginal groups. Furthermore, this vegetation served as home and food for a wide range of game animals such as white tailed deer, turkey, passenger pigeon, cottontail rabbit, elk, muskrat, and beaver (Ibid:60).

Physiographically, the study area is located within the Smith's Falls Limestone Plain. This region contains the largest and most continuous tract of shallow soil over limestone in Southern Ontario. Bogs dominate many of the townships in the region, including the Township of Rideau Lakes (Chapman and Putnam 1984:197). The study area consists of limestone bedrock, granite knobs, clay flats and sand beds (Ibid:196). The soils of the area include Farmington sandy loam, Muck, Napanee clay, Rock Outcrop and Tennyson sandy loam (Gilespie, et al. 1968:Map).

4.0 Archaeological Potential

The archaeological potential of the study area was assessed using its soils, hydrology and landforms as considerations. Young et al. (1995) note that, "*either the number of streams and/or stream order is <u>always</u> a significant factor in the positive prediction of site presence"* (1995:23). They further note that certain types of landforms, such as moraines, seem to have been favoured by different groups throughout prehistory (Ibid:33). According to several researchers, such as Janusas (1988:1), "*The location of early settlements tended to be dominated by the proximity to reliable and potable water resources."* Site potential modeling studies (Peters 1986; Pihl 1986) have found that most prehistoric archaeological sites are located within 300 metres of remnant or extant water sources.

While many of these studies do not go into detail as to the basis for this pattern, Young et al. (1995) suggest that the presence of streams is a significant attractor for a host of plant, game, and fish species which in turn encourage human settlement in an area. Conversely, it must be understood that non-habitational sites (e.g. burials, lithic quarries, kill sites, etc.) may be located anywhere. Potential modeling appears to break down when it comes to these idiosyncratic sites,

many of which have more significance than their habitational counterparts as a result of their relative rarity.

With the development of integrated 'complex' economies in the Historic (or Euro-Canadian) era, settlement tended to become less dependent upon local resource production and more tied to wider economic networks. As such, proximity to transportation routes became the most significant predictor of site location. In the early Historic era (pre-1850), when transport by water was the norm, sites tended to be situated along major rivers and creeks - the 'highways' of their day. With the opening of the interior of the Province to settlement after about 1850, sites tended to be located along historically-surveyed roads.

Bearing these factors in mind, it is clear that the study area would have a high potential for containing pre-Contact sites; largely due its proximity to the small stream which runs adjacent to the northwest corner of the study area. The property's potential for Historic-era sites is similarly high given that Little Rideau Lake Road is a historically-surveyed thoroughfare.

5.0 Previous Archaeological Research

An archival search was conducted using the Ontario Ministry of Culture's Archaeological Sites Database in order to determine the presence of any registered heritage resources which might be located on or within a 2 kilometre radius of the study area. It was found that there are no registered sites within these limits. The overall lack of sites in the area is most likely the result of a paucity of research in the area, as opposed to representing any meaningful settlement patterns.

6.0 Historic Land Use Summary

The first settlers in the Region were the Paleo-Indian people who arrived after the retreat of the Wisconsinan glaciers, approximately 9,000 B.C. (Warrick 2004:83). For the next 1,500 years or so, the Paleo-Indians lived as hunter-gatherers in the boreal-like landscapes of southern Ontario. Because of the low biotic productivity of this environment, it is believed that human groups ranged over very wide territories in order to live sustainably (Ellis & Deller 1990:52). Traditionally, Paleo-Indians have been conceptualized as 'big game hunters' who lived on caribou and other Pleistocene megafauna. However, given the poor preservation of these sites (which are mostly understood only from stone tool and debris from their manufacture), much about the lifeways of these people remains unknown (Ibid.:38). In general, the impacts that humans left on their environment at these times were small (less than 200 square metres), ephemeral, and fleeting (Ibid.:51).

Beginning around 8,000 B.C., the biotic productivity of the environment began to increase as the climate warmed and the watershed was colonized by deciduous forest. As a result, more

opportunities arose for the exploitation of both animal and plant food sources. The resulting broad-based economy was the basis for the archaeological cultures that are referred to as 'Archaic'. During this period (roughly 8,000 B.C. – 800 B.C.), there was an explosion in the number and variety of raw materials, tool forms, site types, and the number of sites themselves. Because Archaic sites are more recent than Paleo-Indian ones, preservation tends to be better. Artifacts composed of bone, shell, and even wood are not unheard of. During the late Archaic period, heavy wood-working tools appear, suggesting that people were building shelters or other objects, such as transportation aids (Ellis et al. 1990:66-67). It is clear from the toolkits that have been unearthed that Archaic peoples had an encyclopaedic understanding of the environment that they inhabited. The number and density of the sites that have been found suggest that the environment was exploited in a successful and sustainable way over a considerable period of time. The success of Archaic lifeways is attested to by clear evidence of steady population increases over time. Eventually, these increases set the stage for the final period of Pre-Contact occupation – the Woodland Period (Ibid.).

The Terminal Archaic/Early Woodland transition for the Rideau Lakes area was characterized by the presence of the Broad Point Culture Phase. It is so named because the lithic assemblage consists of broad corner-removed stemmed broadpoints. Several sites around Rideau Lakes have been identified as belonging to the Broad Point Culture Phase. It has been suggested that the Broad Point Culture Phase gave way to the Meadowood Complex of the Early Woodland Period (800 B.C. – 0 A.D.), however, there are no known sites belonging to the Meadowood Complex in the area (Watson 1982:33).

The Middle Woodland period (roughly 0 A.D. - 500 A.D.) saw the emergence of the Point Peninsula Complex, stretching from south-central Ontario to Quebec (Ibid:157). The Wyght site near Rideau Lake is the only example of a Point Peninsula site near the study area. It is suggested that the people of this complex lived in large macroband sites on lakeshores and rivers during the spring, summer, and fall; probably with an emphasis on fishing. During the winter, they would disperse into microbands and live on stored food and occasional hunting (Ibid: 164).

During the Middle to Late Woodland transition (ca. A.D. 400) the first rudimentary evidence of maize (corn) horticulture appears in Ontario. In Eastern Ontario, the Wyght site shows a cultural continuity from the Point Peninsula Complex to the later archaeological cultures (Ibid 187). During the Late Woodland Period (roughly A.D. 1000 to A.D. 1650) maize horticulture allowed for population increases which in turn lead to larger settlement sizes, higher population densities, and increased social complexity among the peoples involved. Beginning around A.D. 1000, early Iroquoians were living in small villages comprised of a number of longhouses, producing pottery with decorated incised rims, and using pipes to smoke tobacco. Essentially, the lifeways that were observed by the first Europeans to venture into the area were in place by this time. By 1450, it is possible to differentiate between the archaeologically-represented groups that would become the Huron, Neutral, and St. Lawrence Iroquois of the early Contact period (Ibid.:446).

By the Late Woodland Period, there is no evidence of settlement in the Rideau Lakes area. No villages have been found. The area was most likely used as a hunting ground by people living in the St. Lawrence Valley. It has been suggested that the Iroquoians overhunted the Rideau Lakes area, forcing Algonquian hunter-gatherers to hunt elsewhere (Watson 1982:49).

The Early Contact Period

Jacques Cartier was the first European to travel the St. Lawrence River in 1534. Here he encountered 300 St. Lawrence Iroquoians at the tip of the Gaspe Peninsula. Cartier travelled further up the St. Lawrence River the following year. He encountered two permanent settlements at the present locations of Quebec City and Montreal. Cartier's accounts of the people are the only accounts of the St. Lawrence Iroquois at the time of contact (Ibid: 385). When Samuel de Champlain came to the St. Lawrence in 1603 the St. Lawrence Iroquois had disappeared and the land was occupied by Algonquian speaking people (The Contact Period 2010). The disappearance of the St. Lawrence Iroquois has been attributed to the introduction of European disease and warfare with other Native groups. It has been suggested that the St. Lawrence Iroquois were attacked and dispersed by the New York Iroquois. (Jamieson 1990:403). The St. Lawrence Iroquois refugees proceeded to join with the Huron and Algonquians. A large population influx on Huron sites in the Trent Valley is indicated by a large number of St. Lawrence Iroquoian ceramics recovered solely from areas of village expansion (Ibid: 403).

The first European to venture into what would become southern Ontario was Etienne Brulé, who was sent by Samuel de Champlain to visit the area and to learn the language and customs of the First Nations there. Champlain himself made two trips to Ontario, first in 1613 and later from 1615 to 1616 (Vaugeois et al. 2004:182). The Iroquoian peoples encountered by Champlain included the Huron (or Wendat as they called themselves), the Petun, and "la nation neutre" (the Neutrals). While the former groups were concentrated in the northern part of Simcoe County and the Grey-Bruce region respectively, the Neutrals occupied the territory immediately west of Lake Ontario and across the Niagara Peninsula.

The first half of the 17th Century saw a marked increase in trading contacts between the First Nations and European colonists. It also led to increasing factionalism and tension between the First Nations as different groups vied for control of the lucrative fur trade. In what would become Ontario, the Wendat (Huron), the Petun (Tobacco), and their Anishnabeg trading partners allied themselves with the French. In what would become New York State, the League of the Haudenosaunee, often referred to as the Six Nations (which included the Mohawk, Cayuga, Onondaga, Oneida, Seneca, and Tuscarora Nations) allied themselves with the English. Interposed between the belligerents, the Neutral Nation declined to align itself with either group. Tensions boiled over in 1649. The resulting conflict led to demise of the Neutral Nation as a distinct cultural entity and the dispersal of the Wendat and Petun Nations (Lennox & Fitzgerald 1990:456, Ramsden 1990:384). The remnants of the latter settled in Quebec (the modern-day

community of Wendake), near Lake St. Claire (where they were known as the Wyandot), and in the area of Michilimackinac. Many were probably adopted into the nations of the Haudenosaunee (Ibid.). By 1651, most of southern Ontario was little more than the underpopulated hunting grounds of the Six Nations Iroquois (Lajeunesse 1960:xxxii).

The land tenure vacuum that was created by the dispersal of the Wendat and Neutral Nations allowed Algonkian-speaking Anishinabeg peoples to migrate to the north shores of Lake Erie and Lake Ontario by about AD 1700. Europeans called these people the "Mississaugas", mistaking the name of a single clan (the *Ma-se-sau-gee*) for that of the entire group (Smith 2002b: 107). At this time, Haudenosaunee settlements appear to have contracted back into New York state, possibly due to fur trade-related tensions between the League and their Anishnabeg neighbours (Warrick 2005:1).

The Historic Era

Throughout the 1700's and early 1800's, Anishnabeg peoples hunted, fished, gardened and camped across southern Ontario, but the footprint left by these people on the landscape they inhabited was exceedingly light. Archaeological sites dating to this time period are both rare and difficult to detect (Warrick 2005:1).

The Mississaugas had been stalwart allies of the French up to and including the 7 Years War. After 1760, they forged a new alliance with the English. This relationship endured the English defeat at the end of the American War of Independence (1775-1783) and set the tone for the refugee movement of the United Empire Loyalists and the Six Nations into Canada (Smith 2002b:109).

The Constitutional Act (sometimes called the Canada Act) of 1791 created the Provinces of Upper Canada and Lower Canada (Craig 1993:17). John Graves Simcoe, the first Lieutenant Governor of the Province, initiated several schemes to populate and protect the newly-created province as the ongoing threat of war with the United States required the borders to be populated quickly. A settlement strategy that relied on the creation of shoreline communities and effective transportation links between the settlements was employed. In 1792, the first legislature of Upper Canada changed the names of the Districts to Eastern, Midland, Home and Western respectively (Walker 1939:90).

County of Leeds

The first settlers of Leeds County were United Empire Loyalists who left the United States following the American Revolution. In anticipation of their arrival, Governor General Haldimand ordered new townships to be laid out along the St. Lawrence River. Samuel Holland,

the Surveyor General for Canada, was tasked with this responsibility. Holland delegated the work to several surveyors. Townships 6-8 would eventually become a part of Leeds County (Miles & Co. 1879:7).

After the creation of Upper and Lower Canada, new townships were surveyed and more settlers came to the area (Ibid.:7). In 1798, Johnstown District was created from the Eastern District. This new district encompassed the area of Leeds County (Ibid.: 8).

Township of North Crosby

The Township of North Crosby was surveyed by Rueben Sherwood in 1806 (McKenzie 1973:14). He did not encourage settlement of the land because much of it was unsuitable for cultivation. The first settler was George Hastings who came in 1819. By the following year, only 29 people had settled in North Crosby (Patterson 2006:3).

The settlement of North Crosby was slow until it was decided that the Rideau Canal would pass through. With the opening of the canal in 1832, the township received a population boost as many of the labourers who had worked on the canal decided to settle there. Over the next ten years, the population increased from 185 to 593 people (Ibid.:10).

During the 1820's and 1830's, Britain strongly encouraged people from the British Isles to move into the area. During the War of 1812, when many of the militias of Eastern Upper Canada, where former Loyalists from the United States had settled, refused to fight against the American invaders. North Crosby had particular trouble keeping settlers. Johnstown District reported that 25 percent of immigrants to North Crosby moved on to another location within three years, a quarter of them moving to the United States (Ibid.:15). The 1850s and 1860s, however, saw more prosperity as new timber and stone houses were built in the township (Ibid.:38).

In 1997, South Crosby and North Crosby were united into one township again. Along with Bastard, South Burgess, South Elmsley and the towns of Smith Falls and Newboro, they formed the Township of Rideau Lakes (Township of Rideau Lakes 2010).

Lot 2, Concession 3

The Crown patented this land to Daniel McDonald in 1837. Daniel McGonigle, stepson of Daniel McDonald, was his heir. McGonigle owned a property at the east end of Lot 2, near the edge of the study area (see Figure 4). The land remained in the McDonald/McGonigle family until it was granted to Daniel McCarty in 1909 for $10,000. In 1977, the land was sold to William J. M. Brus.

Figure 4: Section from Miles & Co.'s *Counties of Leeds and Grenville (1879)*

7.0 Field Methods

Given that the study area was comprised of both ploughed lands and areas not under cultivation, it was necessary to utilize both the pedestrian survey method and the test pitting method.

In areas that were under cultivation (see Plate 1), the study area was assessed using the pedestrian survey method. In this strategy, crewmembers traversed the study area along parallel transects established at intervals of either 5 or 10 metres, depending upon the archaeological potential of the property. In this case, the subject property was felt to have a high archaeological potential and, as such, was surveyed at 5 metre intervals (see Plate 2). If cultural materials were encountered in the course of the survey, the transect interval would be closed to 1 metre and a close inspection of the ground would be conducted for 20 metres in all directions. All identified diagnostic artifacts and a representative sample of non-diagnostic artifacts are collected for analysis. All remaining artifacts are left *in situ* until a proper Stage 3 Controlled Surface Collection (CSC) can be performed.

In areas not under cultivation, Ministry of Tourism and Culture guidelines (Draft 2009) required that the study area be assessed using the test pitting method (sometimes referred to as shovel-testing). In this strategy, small regular 'test' pits, 30 cm in diameter, were hand-excavated down to the subsoil level at a prescribed interval of 5 metres (see Plate 3 and 5). All soil materials from each pit were screened through 6 mm mesh and examined for the presence of archaeological materials (see Plate 4). All test pits were backfilled upon completion. If cultural materials were encountered in the course of the survey, each positive test would be documented. Clustered test pits at a transect interval of 1 metre were excavated in areas of high artifact concentrations to further delimit the site. All artifacts recovered from test pits are collected for analysis.

Artifacts that may indicate the presence of significant cultural deposits include bone, charcoal, lithics (stone tools and refuse generated by their production and use), ceramics, glass, and metal. Archaeological features such as pits, foundations, and other non-portable remains may also be detected during a Stage 2 survey. Any archaeological materials encountered are flagged, mapped, photographed and collected for further analysis. Artifact locations are recorded on topographic maps, in field notes and at +/- 5 metres accuracy on a Garmin eTrex Legend, WAAS-enabled GPS (using the **WGS-84** coordinate system). Any artifacts recovered are sent to the ARA office at 97 Gatewood Road in Kitchener, Ontario for processing, cataloguing, analysis and curation. All project photographs, mapping materials, and field notes are stored at the same facility.

Plate 1: View of Soil Conditions at the Time of Survey

Plate 2: View of Crewmembers Conducting Pedestrian Survey at 5 Metre Intervals

Plate 3: View of Crewmembers Shovel Testing at 5 Metre Intervals

Plate 4: View of Crewmember Screening through 6mm Mesh

Plate 5: Typical Test Pit, Excavated to Subsoil

Plate 6: View of Exposed Bedrock

Plate 7: View of Sloped Landscape

8.0 Results and Recommendations

The Stage 2 archaeological assessment of the proposed Crosby Solar Project was carried out on July 20 to 21, and August 9 of 2010. Legal *Permission to Enter* (PTE) and recover artifacts on project lands was granted by the landowner. Key personnel involved during the assessment were P.J. Racher, Project Director; H.T. Brown, Field Director, and 7 additional crewmembers. Field conditions were excellent with a mixture of sunny and cloudy skies. Soil conditions were dry for screening (see Plates 2 and 3).

In the course of the assessment 2 small areas of exposed bedrock were identified in the study area (see Plate 6). A small portion of the western woodlot was found to be sloped greater than 20 degrees (see Plate 7). These locations were test pitted where possible. All other uncultivated areas were test pitted at 5 m intervals. All cultivated lands were pedestrian surveyed at 5 m intervals (see Figure 3).

During the Stage 2 archaeological assessment, 3 findspots which yielded archaeological materials were located. The following is a description of each:

Findspot 1

Description: A historic-era scatter, 20 x 20 m in size, consisting of 60+ surface artifacts. Of these, 21 were collected for analysis.
Location: Eastern edge of the study area, 25 m west of Little Rideau Lake Rd. and 130 m north of the standing house south of the study area.
GPS Co-ordinates: N 44° 40'18.2" W 076° 18'13.8"
Materials Identified: 60+ artifacts including ceramics, slate, and a pipe stem fragment.
Diagnostics: Flow blue whiteware, sponged refined white earthenware, late palette white earthenware, salt glazed coarse stoneware, blue transferware.
Flow blue refers to the technique of a bleeding blue transfer print which was introduced in the 1830s and gained popularity in the mid 19th Century. Floral pattern flow blue, such as the fragment found at Findspot 1 is dated more specifically to the last quarter of the 19th Century (Samford 1997:24). Blue sponged whiteware was a popular decoration between 1830 and 1885 (Carter, Refined Earthenwares, ND). Late palette coloured whitewares employed the use of vibrant colours as well as the use of black and red and are dated post 1830 (Carter, Refined Earthenwares, ND). Salt glazed coarse stoneware with brown albany slip interior is dated between 1840 and 1900 in North America (Hume 1976: 101). Blue transfers are commonly found on teaware in the early 19th century, and became a popular dinnerware decoration by the 1830s and continued to be produced throughout the 19th century (Kenyon 1985:46). The blue transfer example from Findspot 1 displayed a light blue colour, which was popular between 1833 and 1848 (Samford 1997: 20) (see Plate 8).
Cultural Affiliation: Euro-Canadian, mid to late 19th Century midden.
Recommendation: Avoidance if possible. Stage 3 Assessment otherwise.

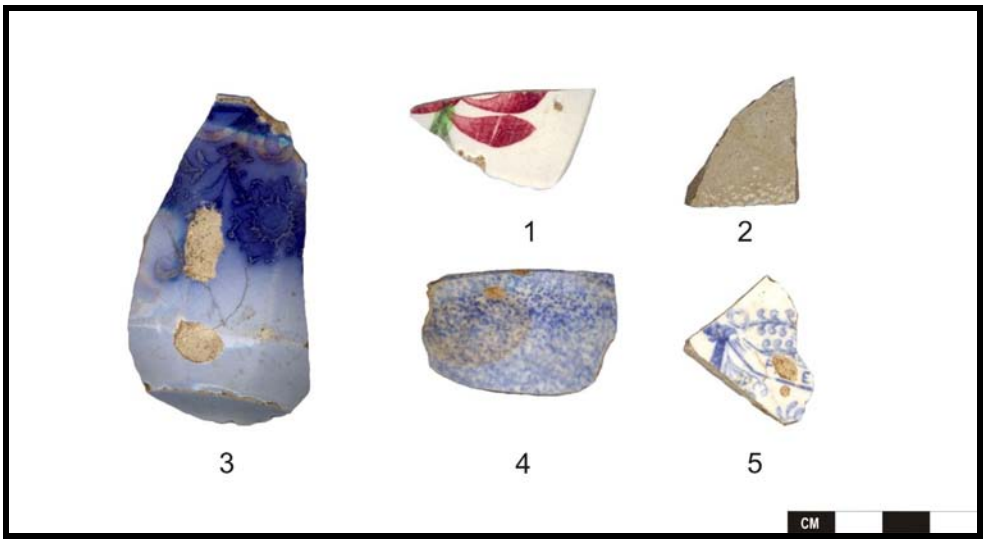


Plate 8: Sample of Diagnostic Artifacts from Findspot 1
(1: Late Palette Whiteware; 2: Salt Glazed Coarse Stoneware; 3: Flow Blue; 4: Spongeware; 5: Blue Transfer)

Findspot 2

Description: A historic-era scatter, 20 x 25 m in size, consisting of 55 surface artifacts. Of these, 18 were collected for analysis. A 6 x 6 m depression which had been filled with field stones was identified to the west of the scatter. There is an identifiable edge to stones which likely delimits an in-filled cellar.
Location: On a small knoll 80 m west of Little Rideau Lake Rd.
GPS Co-ordinates: N 44° 40'19.9" W 076° 18'19.0"
Materials Identified: 55 artifacts including ceramics, a wrought nail, and a porcelain door knob.
Diagnostics: Wrought nail, early and late palette painted whiteware, blue and green edged pearlware, red and black transfer whiteware.
Wrought nails refer to the rose headed nails which were hand-made by a blacksmith. These were used up until the 19th Century when machine cut nails were invented in the 1830s (Carter, Metals, ND). Early palette wares commonly employed one colour, such as blue and occasionally brown, yellow or green (Adams 1995: 103). Late palette colours tend to be more vibrant, and use a wider variety of polychromes with the addition of red and black (Carter, Refined Earthenwares, ND). Green and blue shell edged "bud" type pearlware, such as the fragments found at Findspot 2 are dated between 1813 and 1834 (Sussman 1977: 108). Red transfer printed whiteware were introduced in the 1830s and 1840s (Adams 1995: 103). Black transfers were available between 1785 and 1864, but remained popular between 1825 and 1838 (Samford 1997: 20).
Cultural Affiliation: Euro-Canadian Homestead, early to mid 19th Century.
Recommendation: Avoidance if possible. Stage 3 Assessment otherwise.

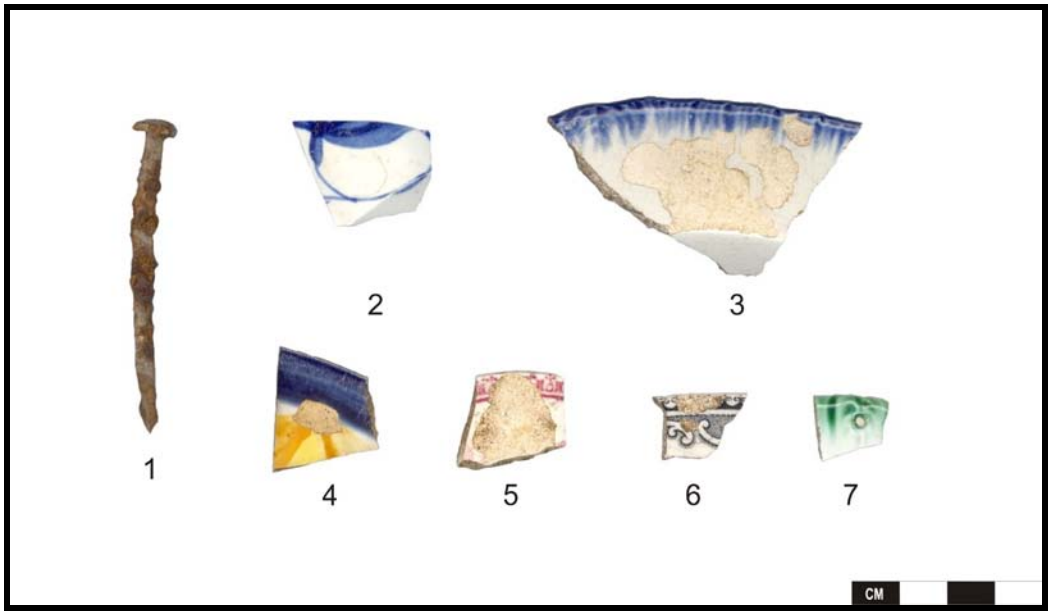


Plate 9: Sample of Diagnostic Artifacts from Findspot 2
(1: Wrought Nail; 2: Early Palette Whiteware; 3: Blue Edged Pearlware; 4: Late Palette Whiteware; 5: Red Transfer; 6: Black Transfer; 7: Green Edged Pearlware)

Findspot 3

Description: A historic-era scatter, 10 x 20 m in size, consisting of 35 surface artifacts. Of these, 16 artifacts were collected for analysis. Findspot 3 is likely a diffuse midden associated with the farmhouse located 15 m south of the findspot.
Location: Towards the southeast corner of the study area, 60 m west of Little Rideau Lake Rd. and 15 m north of the house which is still standing to the south of the study area.
GPS Co-ordinates: N 44° 40'14.9" W 076° 18'11.8"
Materials Identified: 35 artifacts including ceramics, glass, and a clay smoking pipe.
Diagnostics: Milk glass, vitrified white earthenware, bristol glaze stoneware, banded ware, blue spongeware, chinoiserie motif black transfer, clay smoking pipe with the initials GM.
Milk glass is sometimes referred to as opal glass and was manufactured by the addition of oxides, fluorides and phosphates. It is easily recognizable by its dense white colour. It is usually found in the form of toiletry bottles and is dated between 1870 and the mid. 20th Century (Lindsey 2010). Vitrified white earthenware is dated to the 1840s and gained popularity in the 1870s and 1880s (Adams 1995: 102) until its decline after the 1890s (Carter, Ironstone, ND). Bristol glazed stoneware was developed by the Powell family in 1835. This ware has a characteristic caramel coloured rim portion from the addition of iron oxides to the glaze. This ware is dated between 1835 and 1900 (Richardson, ND). Banded or annual wares found on both pearlware and whiteware, however the whiteware bodied annular ware is dated post 1810 (Carter, Refined Earthenwares, ND). Blue sponged whiteware, also known as spatter ware, was a popular decoration between 1830 and 1885 (Carter, Refined Earthenwares, ND). Chinoiserie motifs typically include honeycombs, key motifs, and fish roe and ranges in production date between 1783 and 1838 (Samford 1997: 8). A clay smoking pipe with the maker's initials GM embossed near the spur was also recovered. The pipe is English but as of yet the exact manufacturer has not been identified.
Cultural Affiliation: Euro-Canadian, 19th Century midden.
Recommendation: Avoidance if possible. Stage 3 Assessment otherwise.

Plate 10: Sample of Diagnostic Artifacts from Findspot 3
(1: Milk Glass; 2: Vitrified White Earthenware; 3: Bristol Stoneware; 4: Banded Whiteware; 5: Blue Spongeware; 6: Chinoiserie Black Transfer)

In sum, Findspots 1-3 have the potential to be archaeologically significant. However, each of the sites lies well away from lands to be impacted by project activities. Accordingly, and in consultation with the proponent and MTC, it was agreed that the findspots could be protected by a combination of avoidance and a project buffer of 20m (see Appendix A). As a result, it is recommended that the project be allowed to proceed without further heritage concerns.

This report is filed with 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 will be reviewed to ensure that the licenced consultant archaeologist has met the terms and conditions of their archaeological licence, and that the archaeological fieldwork and report recommendations ensure the conservation, protection and preservation of the cultural heritage of Ontario.

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*. This condition

provides for the potential for deeply buried or enigmatic local site areas not typically identified in evaluations of potential.

The Cemeteries Act requires that any person discovering human remains must immediately notify the police or coroner and the Registrar of Cemeteries, Ministry of Small Business and Consumer Services. All work in the vicinity of the discovery will be suspended immediately. Other government staff may be contacted as appropriate; however, media contact should not be made in regard to the discovery.

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, except by a person holding an archaeological licence.

9.0 References Cited

Adams, Nick
1995 **Field Manual for Avocational Archaeologists in Ontario**, 2nd Ed. North York, Ontario: The Ontario Archaeological Society Inc.

Carter, Trevor
ND **The Artifacts of Historical Archaeology.** General Ceramics, Compiled by Trevor Carter. Courtesy of Dr. John Triggs, Historic Archaeologist, Wilfrid Laurier University.
1968 Nails taken from *Nail Chronology*, by Lee H. Nelson.

Chapman, L.J. and D.F. Putnam
1984 **The Physiography of Southern Ontario, 3rd Edition**. Toronto: Ontario Geological Survey, Special Volume 2.

Clow, H. Meribeth
1984 **Leeds and Grenville Bicentennial 1984.** Brockville; United Counties of Leeds and Grenville.

Craig, G.M.
1963 **Upper Canada: The Formative Years, 1784-1841.** Toronto: McClelland and Stewart Limited.

Ellis, C.J and D.B. Deller.
1990 ***Paleo-Indians*** in **The Archaeology of Southern Ontario to A.D. 1650** Edited by Chris J. Ellis and Neal Ferris, Occasional Publication of the London Chapter, OAS Number 5. London: Ontario Archaeological Society Inc., pp. 37-74.

Ellis, C.J., I.T. Kenyon, and M.W. Spence.
1990 ***The Archaic*** in **The Archaeology of Southern Ontario to A.D. 1650** Edited by Chris J. Ellis and Neal Ferris, Occasional Publication of the London Chapter, OAS Number 5. London: Ontario Archaeological Society Inc., pp. 65-124.

Gilespie, J.E., R.E. Wicklund and M.H. Miller
1968 **Soil Map of Leeds County, Ontario.** Report No. 41, West Sheet of the Ontario Soil Survey, Research Branch, Canada Department of Agriculture, Ottawa, Ontario.

Hume, Noel
1976 **A Guide to Artifacts of Colonial America**. New York: Alfred A. Knopf.

Jamieson, Bruce
1990 ***The St. Lawrence Iroquois*** in **The Archaeology of Southern Ontario to A.D. 1650** Edited by Chris J. Ellis and Neal Ferris, Occasional Publication of the London Chapter, OAS Number 5. London: Ontario Archaeological Society Inc., pp. 385-404.

Janusas, S.E.
1988 **The Cultural Implication of Drainage in the Municipality of Waterloo.** Kitchener: Regional Municipality of Waterloo.

Kenyon, Ian
1985 *A History of Ceramic Tableware in Ontario: 1780-1840* in **Arch Notes**, iss. 83-3. London, Ontario: Newsletter of The Ontario Archaeology Society Inc.

Lajeunesse, Ernest J.
1960 **The Windsor Border Region: Canada's Southernmost Frontier, A Collection of Documents.** Toronto: University of Toronto Press.

Lindsey, Bill
2010 **Historic Glass Bottle Identification and Information Website,** *The Socitey of Historical Archaeology***.** Located online at: http://www.sha.org/bottle/index.htm.

Mason, R.J.
1981 **Great Lakes Archaeology.** New York: Academic Press.

McKenzie, Ruth
1973 *Historical Sketch of Leeds and Grenville*. In the **Illustrated Historical Atlas of the Counties of Leeds and Grenville, Canada West**. H. F. Walling. Belleville: Mika Publishing

Miles & Co.
1879 **Counties of Leeds and Grenville.** Toronto: Miles & Co.

Ministry of Natural Resources
2009 **About Ontario's Forests.** Located online at: www.mnr.gov.on.ca/en/Business/Forests/2ColumnSubPage/STEL02_163390.html

Ontario Heritage Act
1990 **R.S.O., CHAPTER 18; R.R.O., Reg. 875**

Ontario Ministry of Tourism and Culture
2009 **Standards and Guidelines for Consultant Archaeologists**. Toronto: Ministry of Culture.

No Author
2010 **The Contact Period**. Accessed at: http://www.ontarioarchaeology.on.ca/summary/contact.php

Patterson, Neil A.
2006 **Historic of the Township of North Crosby and Westport.** Westport: The Corporation of the Township of Reidau Lakes and the Corporation of the Municipatily of Westport.

Peters, J.
1986 **Transmission Line Planning and Archaeological Research: A Model of Archaeological Potential for Southwestern Ontario**. *Archaeological Consulting in Ontario: Papers of the London Conference 1985*. W.A. Fox, ed. Occasional Papers of the London Chapter, OAS, Inc., No. 2:19-40.

Pihl, R.
1986 **Site Potential Modeling in Archaeological Consulting**. *Archaeological Consulting in Ontario: Papers of the London Conference 1985***.** W.A. Fox, ed. Occasional Papers of the London Chapter, OAS, Inc., No. 2:33-37.

Ramsden, Peter
1990 ***The Hurons: Archaeology and Culture History*** in **The Archaeology of Southern Ontario to A.D. 1650** Edited by Chris J. Ellis and Neal Ferris, Occasional Publication of the London Chapter, OAS Number 5. London: Ontario Archaeological Society Inc., pp. 361-384.

Richardson, Andrea
ND **St. Mary's University Archaeology Lab Ceramics Database** accessed at http://www.smu.ca/academic/arts/anthropology/ceramics/welcome.html

Samford, Patricia
1997 *Response to a Market: Dating English Underglaze Transfer-Printed Wares* in **The Journal of the Society for Historical Archaeology**, Volume 31, No. 2.

Smith, Donald B.
2002 ***Their Century and a Half on The Credit: The Mississaugas in Mississauga***. In **Mississauga: The First 10,000 Years** Edited by Frank A. Dieterman. Mississauga: The Mississauga Heritage Foundation., pp. 107-122.

Spence M.W., R.H. Pihl and C. Murphy.
1990 ***Cultural Complexes of the Early and Middle Woodland Periods*** in **The Archaeology of Southern Ontario to A.D. 1650** Edited by Chris J. Ellis and Neal Ferris, Occasional Publication of the London Chapter, OAS Number 5. London: Ontario Archaeological Society Inc., pp. 125-170.

Sussman, Lynne.
1977 *Changes in Pearlware Dinnerware, 1780-1830.* **Historical Archaeology**.11: 105- 112.
Soil Research Institute

Township of Rideau Lakes
2010 **Heritage of the Township, North Crosby Ward.** Located online at: http://www.twprideaulakes.on.ca/heritage/northcrosby-ward.html

Vaugeois, D., R. Litalien, & K. Roth
2004 **Champlain; The Birth of French America**. Montreal: McGill-Queen's University Press.

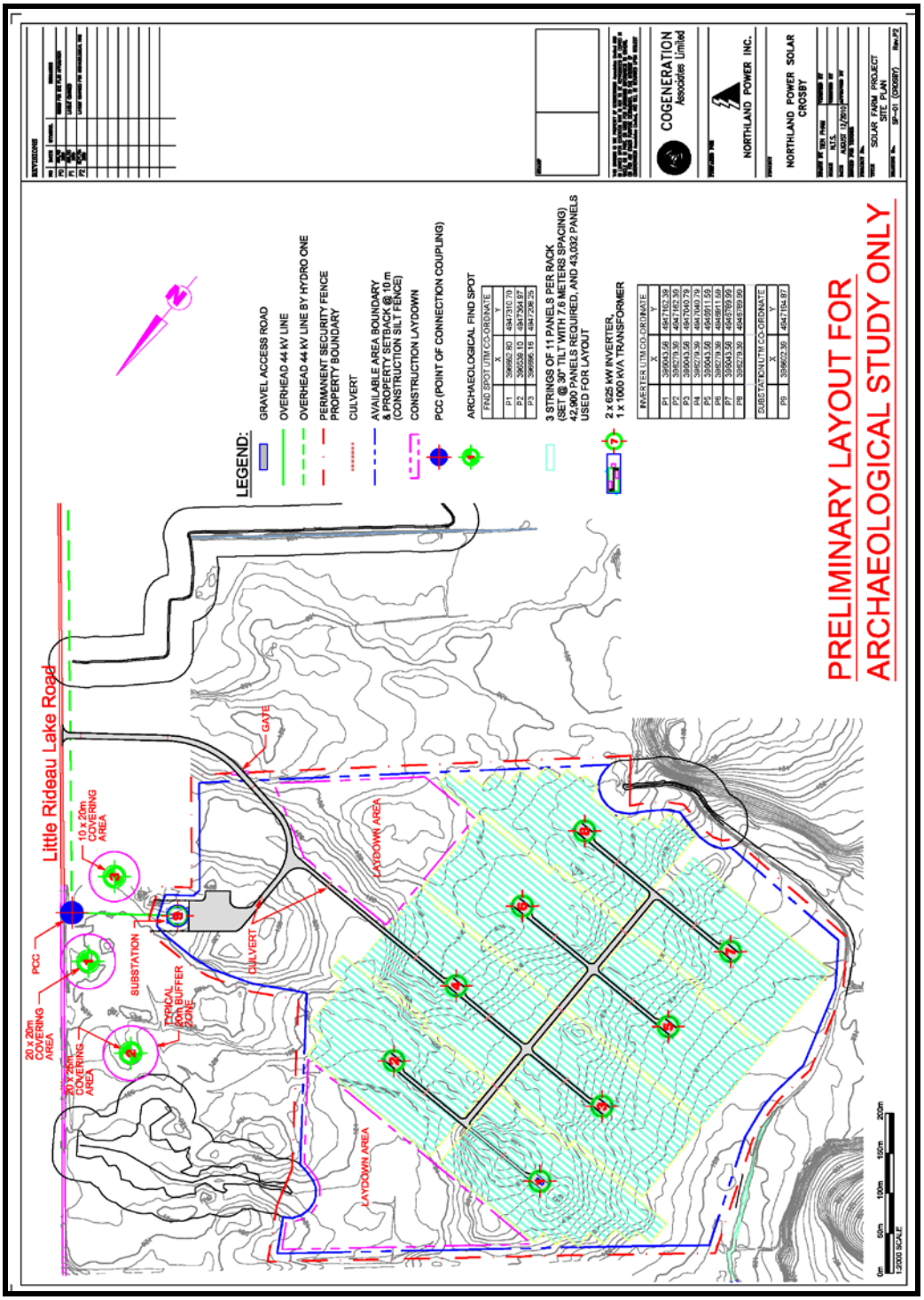
Walker, John A.
1939 ***Municipal Government in the County of Kent*** in **Kentiana: The Story of the Settlement and Development of the County of Kent.** Chatham: The Kent Historical Society, pp. 90-94.

Warrick, G.
2000 "The Precontact Iroquoian Occupation of Southern Ontario" in **Journal of World Prehistory**, Volume 14, Number 4, pp. 415-456.
2005 *Lessons from the Past* in **Grand Actions**, Volume 10, No. 3. Cambridge: The Grand River Conservation Authority, pp.2-4.

Watson, Gordon
1982 ***Prehistoric Peoples of the Rideau Waterway*** in **Archaeological Historical Symposium**: October 2-3, 1982, Rideau Ferry, Ontario, presented by the Central Region and the Ministry of Citizenship and Culture", F.C.L. Wyght, ed., Lombardy, Ontario, 1982, pp. 24-55.

Young, Penny M., Malcolm R. Horne, Colin D. Varley, P.J. Racher and Andrew J. Clish
1995 **A Biophysical Model for Prehistoric Archaeological Sites in Southern Ontario**. The Research and Development Branch, Ministry of Transportation, Ontario.

Appendix A: Project Drawing
Showing Proposed Property Impacts, Site Locations, and Protective Buffers



Appendix B: Artifact Registry

Record	Stage	Findspot	Date	Frequency	Material Code	Material	Group Code	Group	Class Code	Class Name	Object Code	Object Name	Datable Attribute Code	Datable Attribute Name	Comments	Fire Evidence
1	Stage 2	Findspot 1	20-Jul-10	1	46	Slate	20	Activities	20	Writing	538	Slate Board	2	Not Applicable	Beveled Edge	n
2	Stage 2	Findspot 1	20-Jul-10	1	11	Ceramic	21	Smoking	210	Pipes	410	White clay, plain stem	4	Unidentifiable		n
3	Stage 2	Findspot 1	20-Jul-10	2	11	Ceramic	10	Food Preparation/Consumption	100	Ceramic Cooking/Storage	4	Unidentifiable	13	Coarse Red EW - glazed	Brown glaze	n
4	Stage 2	Findspot 1	20-Jul-10	1	11	Ceramic	10	Food Preparation/Consumption	100	Ceramic Cooking/Storage	4	Unidentifiable	13	Coarse Red EW - glazed	Yellow inner glaze?	n
5	Stage 2	Findspot 1	20-Jul-10	2	11	Ceramic	10	Food Preparation/Consumption	100	Ceramic Cooking/Storage	4	Unidentifiable	191	Coarse Stoneware - albany slip int.	Grey body, salt glaze ext.	n
6	Stage 2	Findspot 1	20-Jul-10	1	11	Ceramic	10	Food Preparation/Consumption	102	Tableware	458	Tea Cup	141	Refined White EW - blue flow	Floral blue flow	n
7	Stage 2	Findspot 1	20-Jul-10	3	11	Ceramic	10	Food Preparation/Consumption	102	Tableware	4	Unidentifiable	133	Refined White EW - blue transfer	Unidentifiable patterns	n
8	Stage 2	Findspot 1	20-Jul-10	1	11	Ceramic	10	Food Preparation/Consumption	102	Tableware	4	Unidentifiable	142	Refined White EW - sponged	Blue sponge, tea cup or bowl?	n
9	Stage 2	Findspot 1	20-Jul-10	1	11	Ceramic	10	Food Preparation/Consumption	102	Tableware	4	Unidentifiable	133	Refined White EW - blue transfer	Blue transfer and moulded rim?	n
10	Stage 2	Findspot 1	20-Jul-10	1	11	Ceramic	10	Food Preparation/Consumption	4	Unidentifiable	4	Unidentifiable	134	Refined White EW - other transfer	Brown transfer, makers mark? Unidentifiable	n
11	Stage 2	Findspot 1	20-Jul-10	3	11	Ceramic	10	Food Preparation/Consumption	102	Tableware	4	Unidentifiable	137	Refined White EW - painted	Floral, purple/pink and green, tea ware?	n
12	Stage 2	Findspot 1	20-Jul-10	2	11	Ceramic	10	Food Preparation/Consumption	4	Unidentifiable	4	Unidentifiable	130	Refined White EW		n
13	Stage 2	Findspot 1	20-Jul-10	1	11	Ceramic	10	Food Preparation/Consumption	4	Unidentifiable	4	Unidentifiable	129	Pearlware or RWE?	Moulded edge, some pooling	n
14	Stage 2	Findspot 1	20-Jul-10	1	11	Ceramic	12	Architectural	120	Window Glass	229	Pane Glass	4	Unidentifiable	Clear, flat glass	n
15	Stage 2	Findspot 2	20-Jul-10	1	15	Metal	12	Architectural	121	Nails	316	Nails	410	Wrought	Sq. head	n
16	Stage 2	Findspot 2	20-Jul-10	2	11	Ceramic	10	Food Preparation/Consumption	102	Tableware	213	Flatware	113	Pearlware - edged	Blue feather edge, unscalloped, earlier example	n
17	Stage 2	Findspot 2	20-Jul-10	2	11	Ceramic	10	Food Preparation/Consumption	102	Tableware	213	Flatware	113	Pearlware - edged	Green scalloped feather edge	n
18	Stage 2	Findspot 2	20-Jul-10	3	11	Ceramic	10	Food Preparation/Consumption	102	Tableware	4	Unidentifiable	137	Refined White EW - painted	Blue floral paitned, tea ware?	n
19	Stage 2	Findspot 2	20-Jul-10	2	11	Ceramic	10	Food Preparation/Consumption	102	Tableware	4	Unidentifiable	137	Refined White EW - painted	Blue rim, orange and yellow paint. Unidentifiable pattern	n
20	Stage 2	Findspot 2	20-Jul-10	1	11	Ceramic	10	Food Preparation/Consumption	102	Tableware	4	Unidentifiable	137	Refined White EW - painted	Green floral	y
21	Stage 2	Findspot 2	20-Jul-10	1	11	Ceramic	10	Food Preparation/Consumption	4	Unidentifiable	4	Unidentifiable	137	Refined White EW - painted	Hand painted rim? Brown/green, tin glaze?	y
22	Stage 2	Findspot 2	20-Jul-10	3	11	Ceramic	10	Food Preparation/Consumption	102	Tableware	4	Unidentifiable	134	Refined White EW - other transfer	Black transfer, floral.	n
23	Stage 2	Findspot 2	20-Jul-10	1	11	Ceramic	10	Food Preparation/Consumption	102	Tableware	4	Unidentifiable	134	Refined White EW - other transfer	Red transfer on rim, Unidentifiable pattern	n
24	Stage 2	Findspot 2	20-Jul-10	1	11	Ceramic	10	Food Preparation/Consumption	100	Ceramic Cooking/Storage	4	Unidentifiable	190	Coarse Stoneware	Brown glazed int. and ext.	n
25	Stage 2	Findspot 2	20-Jul-10	1	11	Ceramic	12	Architectural	123	Door and Window Hardware	187	Door Knob	215	Porcelain	White Porcelain door knob	n
26	Stage 2	Findspot 3	20-Jul-10	1	11	Ceramic	21	Smoking	210	Pipes	509	White clay, bowl/stem juncture	5	Other	"G M"	n
27	Stage 2	Findspot 3	20-Jul-10	1	11	Ceramic	10	Food Preparation/Consumption	100	Ceramic Cooking/Storage	258	Hollowware	198	Coarse Stoneware - bristol	Brown glaze bristol top	n
28	Stage 2	Findspot 3	20-Jul-10	1	11	Ceramic	10	Food Preparation/Consumption	100	Ceramic Cooking/Storage	4	Unidentifiable	190	Coarse Stoneware	Bristol?	n
29	Stage 2	Findspot 3	20-Jul-10	1	11	Ceramic	10	Food Preparation/Consumption	100	Ceramic Cooking/Storage	4	Unidentifiable	12	Coarse Red EW - glazed	Shiny brown glaze	n
30	Stage 2	Findspot 3	20-Jul-10	1	11	Ceramic	10	Food Preparation/Consumption	4	Unidentifiable	4	Unidentifiable	17	Coarse EW - glazed	White bodied EW, white glaze	n
31	Stage 2	Findspot 3	20-Jul-10	1	11	Ceramic	10	Food Preparation/Consumption	102	Tableware	213	Flatware	155	Vitrified White EW		n
32	Stage 2	Findspot 3	20-Jul-10	1	11	Ceramic	10	Food Preparation/Consumption	4	Unidentifiable	4	Unidentifiable	130	Refined White EW		n
33	Stage 2	Findspot 3	20-Jul-10	1	11	Ceramic	10	Food Preparation/Consumption	102	Tableware	4	Unidentifiable	134	Refined White EW - other transfer	Black transfer, willow pattern	n
34	Stage 2	Findspot 3	20-Jul-10	1	11	Ceramic	10	Food Preparation/Consumption	102	Tableware	4	Unidentifiable	134	Refined White EW - other transfer	Black transfer, Unidentifiable pattern	n
35	Stage 2	Findspot 3	20-Jul-10	1	11	Ceramic	10	Food Preparation/Consumption	102	Tableware	4	Unidentifiable	142	Refined White EW - sponged	Blue sponged	n
36	Stage 2	Findspot 3	20-Jul-10	1	11	Ceramic	10	Food Preparation/Consumption	102	Tableware	4	Unidentifiable	139	Refined White EW - banded	Lt. blue/white bands	n
37	Stage 2	Findspot 3	20-Jul-10	1	12	Glass	10	Food Preparation/Consumption	107	Glass Beverage Containers	84	Wine Bottle	4	Unidentifiable	Drk. Olive	n
38	Stage 2	Findspot 3	20-Jul-10	1	12	Glass	4	Unidentifiable	109	Unspecified Glass Container	5	Other	301	Coloured Glass	Milk Glass Flatware	n
39	Stage 2	Findspot 3	20-Jul-10	1	12	Glass	18	Medicinal/Hygiene	180	Pharmaceutical	85	Toiletry/Perfume Bottle	4	Unidentifiable	Lavender glass	n
40	Stage 2	Findspot 3	20-Jul-10	1	12	Glass	10	Food Preparation/Consumption	105	Glass Tableware	480	Tumbler, fluted	4	Unidentifiable	Embossed, moulded? Makers mark "A "?	n
41	Stage 2	Findspot 3	20-Jul-10	1	12	Glass	4	Unidentifiable	109	Unspecified Glass Container	4	Unidentifiable	317	Unknown Moulded	Embossed, "...AT" Aqua panneled bottle	n