



**NORTHLAND
POWER**

Burk's Falls East Solar Project
Stage 1 and 2 Archaeological Assessment
January 10, 2011



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**Stage 1 and 2 Archaeological Assessment
Burk's Falls East Solar Project
(FIT-F164P1F)
Lots 13-14, Concession 6
Township of Armour
District of Parry Sound, Ontario**

Prepared for

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The Ontario Ministry of Tourism and Culture

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Executive Summary:

Under a contract awarded in May of 2010, **Archaeological Research Associates Ltd. (ARA)** carried out a Stage 1 and 2 archaeological assessment of lands to be impacted by the proposed **Burk's Falls East Solar Project** on Lots 13-14, Concession 6, in the Township of Armour, District of Parry Sound, Ontario. This work was completed under contract to **Hatch Ltd.** in advance of a **Renewable Energy Approval (REA)** application.

The Stage 1 and 2 assessment was conducted in August, September and October of 2010 under licence #P007, PIF #P007-247-2010. Stage 1 research indicated a high potential for the presence of both Pre-Contact and Euro-Canadian archaeological sites in the study area. The Stage 2 assessment was carried out under optimal conditions after legal *Permission to Enter* (PTE) had been granted by the property owner. No archaeological materials were discovered during the assessment. Accordingly, it is recommended that the project be allowed to proceed without further heritage concerns.

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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 **Burk's Falls East Solar Project (FIT-F164P1F)** in the Township of Armour, District of Parry Sound, Ontario. This assessment was conducted in August, September and October of 2010 under licence #P-007, PIF #P007-247-2010. 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 (REA)** 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* (R.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 60 ha parcel of land located on the south side of Chetwynd Road, east of Leggetts Road and Highway 11. It is situated on Lots 13-14, Concession 6 in Armour Township, District of Parry Sound, Ontario (see Figures 1-3).

The southern third of the lands are traversed by a major tributary of the Magnetawan River, which is partly fed by three minor tributaries extending northerly into the central third of the study area. These minor tributaries have been deepened and widened in parts by local residents to facilitate the drainage of the surrounding farmlands. A grassed waterway also feeds into the westernmost minor tributary (see Appendix A). The Magnetawan River itself is located approximately 750 m west of the study area.

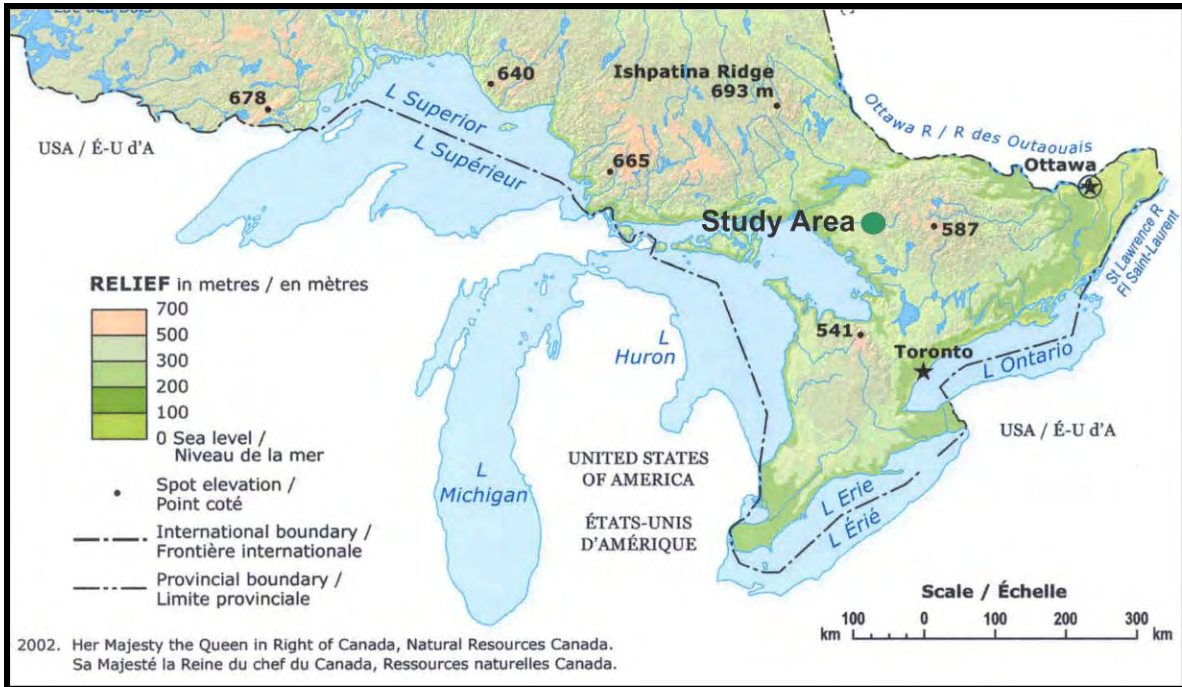


Figure 1: Location of Study Area in the Province of Ontario

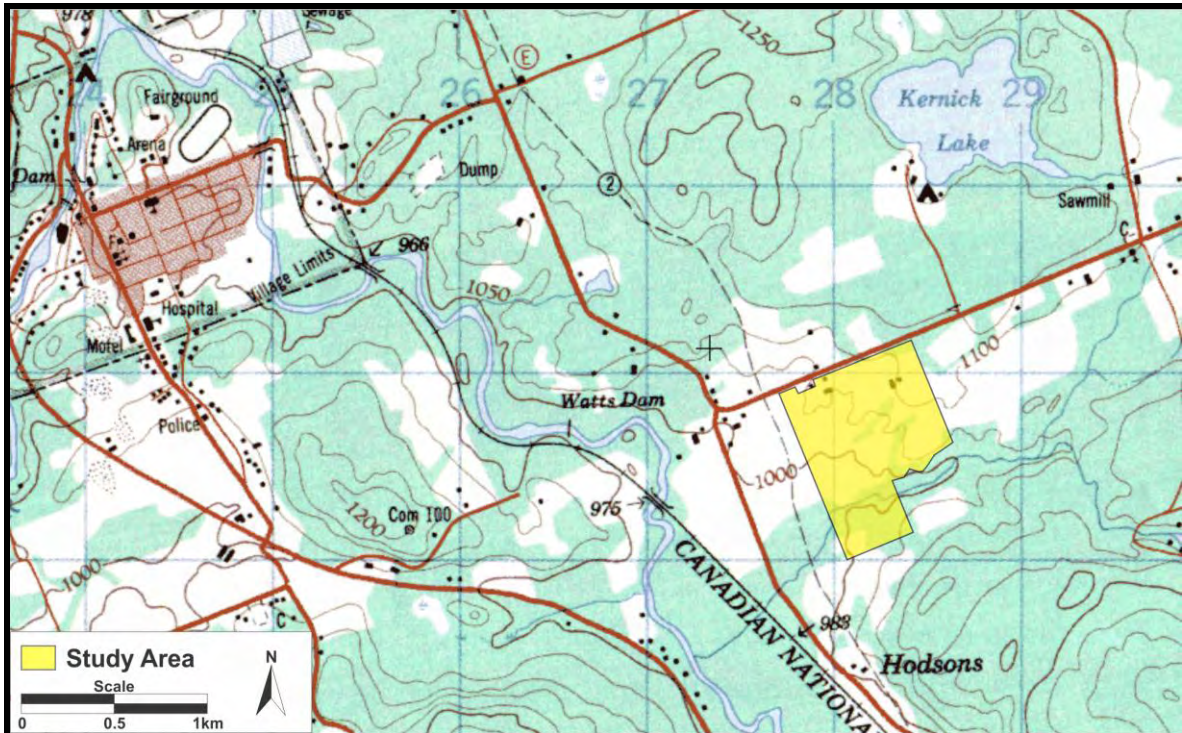


Figure 2: Location of Study Area in the District of Parry Sound

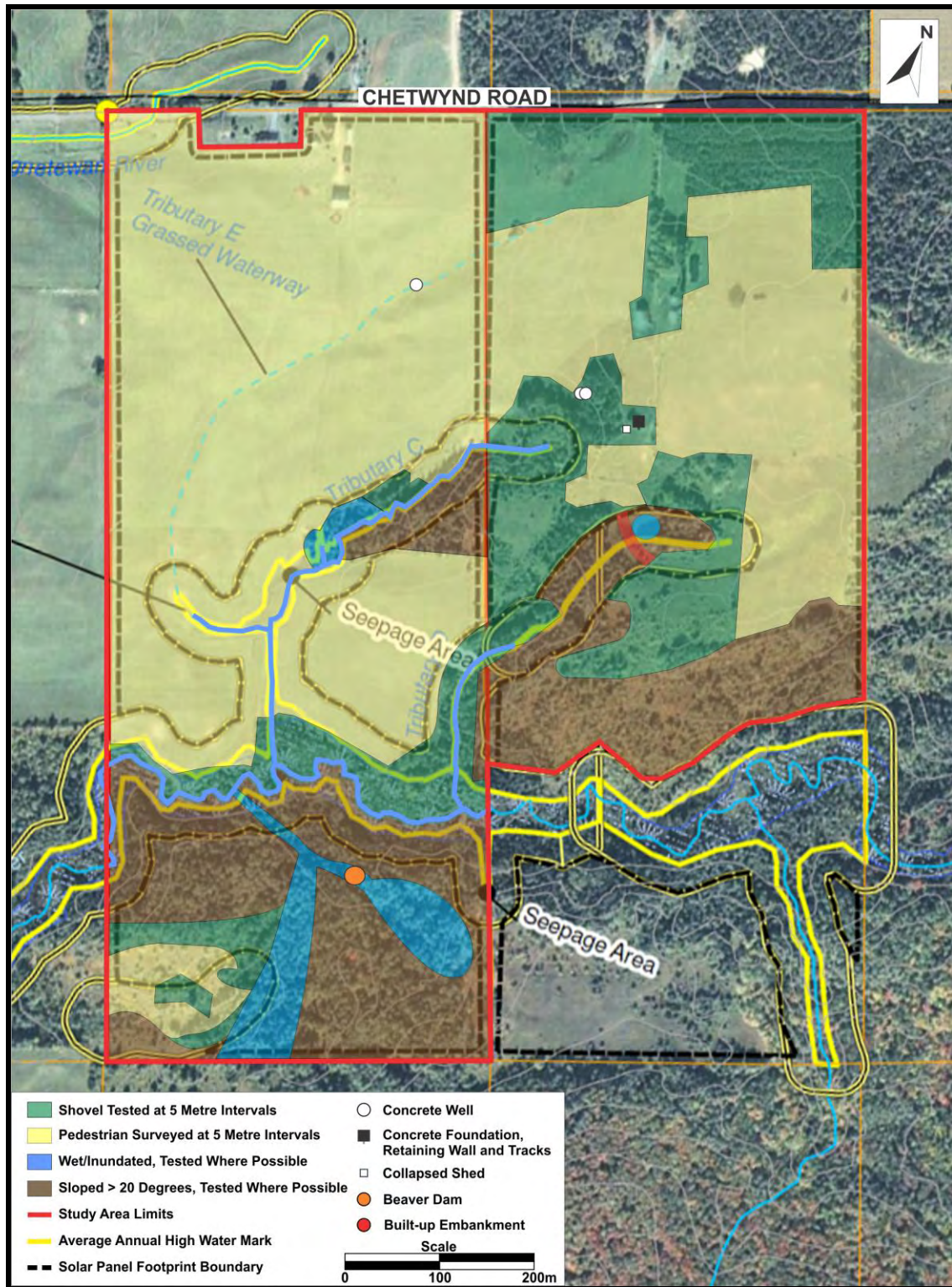


Figure 3: Study Area in Detail

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, which is a transitional zone between the southern Deciduous Forest and the northern Boreal Forest. Vegetation here consists of a mixture of coniferous trees and deciduous trees, as well as many species of ferns, fungi, shrubs and mosses. The most prominent conifers are eastern white pine, red pine, eastern hemlock and white cedar, while deciduous trees are best represented by yellow birch, sugar and red maple, basswood and red oak. Other species more commonly occurring in the north are also present, including white and black spruce, jack pine, aspen and white birch (Ontario Ministry of Natural Resources 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 (Mason 1981:60).

Physiographically, the study area lies within the Grenville Province of the Precambrian Canadian Shield (Davidson 1989:37) in the soil region known as the Number 11 Strip (Chapman and Putnam 1984:Figure 19). This narrow strip extends from Gravenhurst to North Bay and was once just below the shoreline of proglacial Lake Algonquin. Deep soils developed from the fine sand, silt and clay deposited by ancient streams and deltas, ideal for farming and contrasting sharply with the bare rock ridges of the adjacent high ground (Chapman and Putnam 1984:214-215). The soils in the study area consist of Wendigo Loamy Sand, St. Peter Gravelly Sandy Loam and Muck, while soil complexes include Wendigo Fine Sandy Loam-St. Peter Gravelly Sandy Loam and Wendigo Fine Sandy Loam-Magnetawan (Hoffman, Wicklund and Richards 1962:Soil Map).

4.0 Previous Archaeological Research

An archival search was conducted using the Ontario Ministry of Tourism and Culture Archaeological Sites Database in order to determine the presence of any registered heritage resources located on or within a 4 km radius of the study area. It was found that there are four registered sites within these limits (see Table 1).

Table 1: Registered Archaeological Sites within 4 km of the Study Area

Borden No.	Site Name	Cultural Affiliation	Site Type
BiGv-2	Katrine Lumber Company	Euro-Canadian	Sawmill
BjGu-2	Stopper	Middle-Late Woodland	Rock Art

BjGu-6	Quartz	Pre-Contact/Euro-Canadian	Quarry
BjGu-7	Bonazza	Early Archaic	Findspot

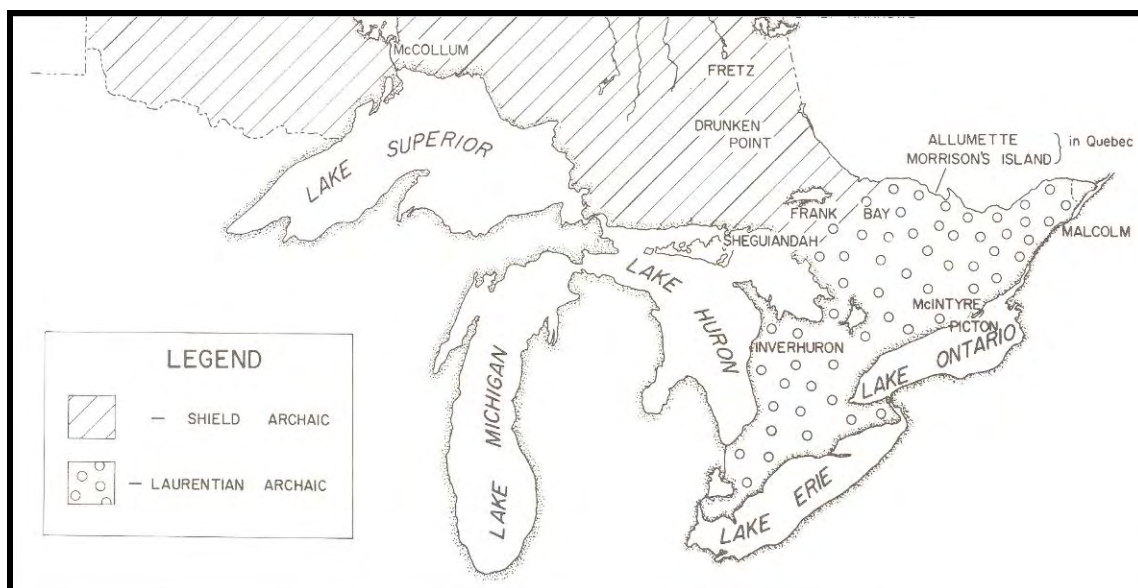
Of these sites, none are situated within the limits of the study area. The overall lack of sites in the area is most likely the result of a paucity of research in the area, as opposed to representing any meaningful settlement patterns.

5.0 Historic Land Use Summary

5.1 Pre-Contact Era

The first settlers of Ontario were the Palaeo-Indian people, who arrived after the retreat of the Wisconsinian glaciers around 9000 B.C. Palaeo-Indians first lived as hunter-gatherers in the boreal-like landscapes of southern Ontario, archaeologically identified by Clovis lithic forms and related industries (Ellis and Deller 1990:39-43). Northern Ontario, on the other hand, was virtually unoccupied due to the presence of the retreating glaciers and associated glacial lakes. For example, Lake Algonquin covered much of the eastern Georgian Bay littoral, and its eastern shoreline would have been situated near or perhaps over the study area itself (Karrow and Warner 1990:Figure 2.9). It is commonly accepted that much of northern Ontario was not inhabited until the arrival of the later Plano culture, and even this occupation was restricted to lands north and northwest of Lake Superior and on Manitoulin Island (Wright 1972a:10-18). Because of the low biotic productivity of the environment at this time, which would have resembled the modern sub-arctic, it is believed that human groups ranged over very wide territories in order to live sustainably (Wright 1972a:18; Ellis and Deller 1990:52). Although traditionally conceptualized as 'big game hunters' (living on caribou and other Pleistocene megafauna), Palaeo-Indian lifeways are poorly understood and their sites are often only attested by stone tools and manufacture debris.

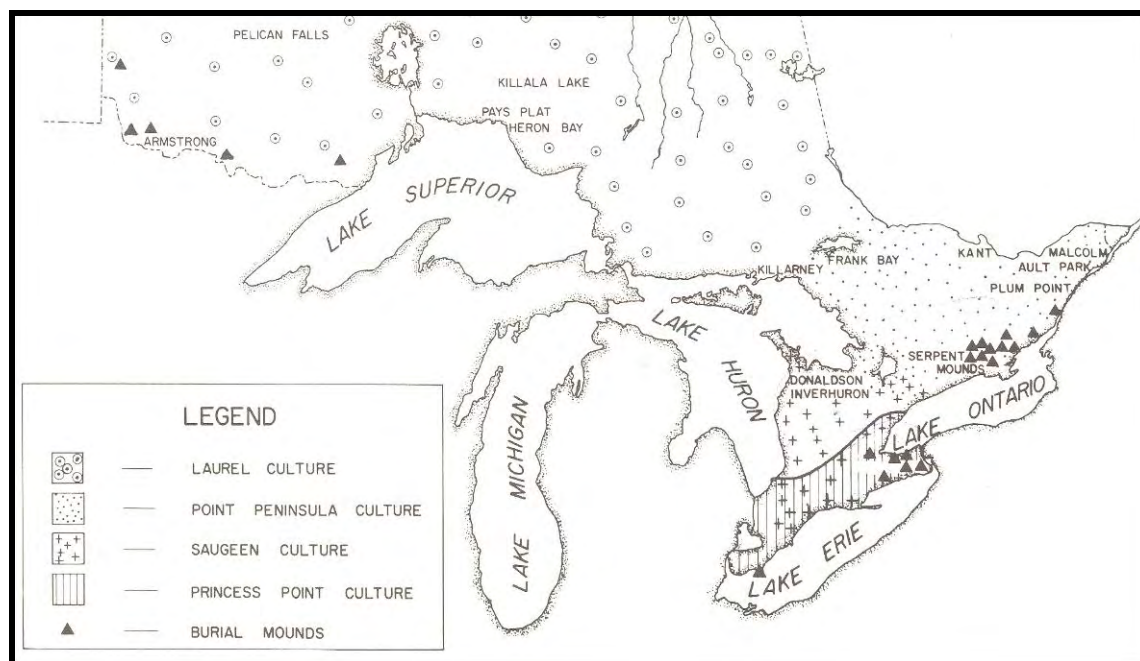
Beginning around 8000 B.C., the biotic productivity of the environment began to increase as the climate warmed and the watershed was colonized by deciduous forest. As a result, more opportunities arose for the exploitation of both animal and plant food sources. The resulting broad-based economy was the basis for the archaeological cultures that are referred to as 'Archaic' in both northern and southern Ontario (Wright 1972a:23-36; Ellis et al. 1990). During this period (roughly 8000 B.C. to 1000 B.C.) there was an explosion in the number and variety of raw materials, tool forms, site types, and the number of sites themselves. In the vicinity of the study area a 'buffer zone' of overlapping cultures can be seen, where northern traditions (e.g. the Shield Archaic) and southern traditions (e.g. the Laurentian Archaic) converged (see Figure 4).



**Figure 4: Map of Archaic Period Cultures
(Wright 1972a:Map 3)**

The Shield Archaic is believed to have developed out of the Plano culture and is marked by the appearance of copper tools and the likely manufacture of the birch bark canoe, whereas the Laurentian Archaic is characterized by polished stone tools, copper tools, dog burials and village cemeteries (Wright 1972:27-36). Late Archaic sites in southern Ontario often contain heavy wood-working tools, suggesting that people were building shelters (summer villages) in addition to transportation aids (Ellis et al. 1990:66-67). The success of Archaic lifeways in southern Ontario is attested to by abundant evidence of steady population increases over time. These increases set the stage for the final period of Pre-Contact occupation – the Woodland Period (Ellis et al. 1990:120).

The Woodland period began ca. 1000 B.C. in Ontario and is characterized by the first appearance of pottery and the development of multiple cultural complexes. Over the course of the Initial Woodland period (ca. 1000 B.C. to A.D. 1000) Ontario was home to the Meadowood, Laurel, Point Peninsula, Saugeen and Princess Point cultures (see Figure 5). The study area itself falls within the territory of the Point Peninsula culture (ca. 700 B.C. to A.D. 1000), which is characterized mainly by small camp sites and seasonal village sites that would have been repeatedly used over the years. Point Peninsula pottery was decorated with impressions on wet clay and appears to have been influenced by forms from northern Ontario and the Hopewell area to the south. Hopewell influences can also be seen in the adoption of burial mounds (e.g. the Serpent Mounds near Peterborough), which continued to be used until ca. A.D. 400 (Wright 1972a:44-51).



**Figure 5: Map of Initial Woodland Period Cultures
(Wright 1972a:Map 4)**

The first rudimentary evidence of maize (corn) horticulture appeared in southern Ontario during the transition to the Terminal Woodland (ca. A.D. 600 to 900) (Fox 1990:171). This allowed for population increases which in turn lead to larger settlement sizes, higher population density, and increased social complexity in the south, standing in marked contrast the more mobile hunter-gatherer groups in the north. The subsequent adoption of agriculture in northern Ontario would have been gradual, taking time to “transform a hunting people into a farming people” (Wright 1972a:51).

During the Terminal Woodland period (ca. A.D. 1000 to 1650), northern Ontario is commonly believed to have been occupied by the earliest manifestations of Algonkian-speaking peoples, organized in loosely affiliated bands identified in historic times under the broader groupings of the Ojibway, Cree and Algonquins (Wright 1972a:64, 91). The study area falls within the territory of the Eastern Algonkians, who developed alongside the Iroquoian-speaking Huron-Petun of southern Ontario and shared pottery traditions, pipe forms and possibly even ossuary burial practices (see Figure 6). However, differences are clearly apparent amongst their lithic traditions, bone tools, houses and in the high frequency of dog burials. Eastern Algonkians appear to have adopted corn horticulture in a ‘partial’ way, planting in the spring and returning only in the fall to harvest the remnants left by animals and insects (Wright 1972a:94-95).



**Figure 6: Map of Terminal Woodland Period Cultures
(Wright 1972a:Map 6)**

Essentially, the lifeways of the First Nations that were observed by the first Europeans to venture into the area were in place by the Terminal Woodland period. For example, by A.D. 1450 it is possible to differentiate between the archaeologically-represented groups that would become the Huron and the Neutral of the Early Contact period (Warrick 2000:446).

5.2 Early Contact

The first European to venture into what would become Ontario was Etienne Brulé, who was sent by Samuel de Champlain to visit the area and 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 (Gervais 2004:182). His journey of 1615 took him up the Ottawa and Mattawa Rivers to Lake Nipissing, after which he continued towards Lake Huron on the French River. The First Nations encountered by Champlain were many and varied, including both Iroquoian-speaking and Algonkian-speaking peoples (see Figure 7). Members of the former group include the Huron (Wendat), Petun (Tobacco) and “*la nation neutre*” (Neutrals), concentrated in what would become Simcoe County, in lands south of Georgian Bay, and in territories south and west of Lake Ontario, respectively (Lennox and Fitzgerald 1990; Ramsden 1990). People belonging to the second group, collectively known as the Anishinabeg, were much more widely dispersed. They included the “*Cheveux relevés*” (Odawa) along the southern Georgian Bay littoral and bands such as the Ouasouarini, Atchougue, Nipissiens, Sorciers and Missisaghe along the eastern littoral (Wright 1972a:91; Fox 1990:Figure 14.1). These latter bands are difficult to correlate into specific supra-tribal groups, and are often referred to as Ojibway (Chippewa), Cree or simply under the broad umbrella term “Algonquins” (for e.g. see Howell 1990:1). The Ouasouarini, or

Catfish People, were one particular band that the Europeans identified in the vicinity of Parry Sound (see Figure 7).

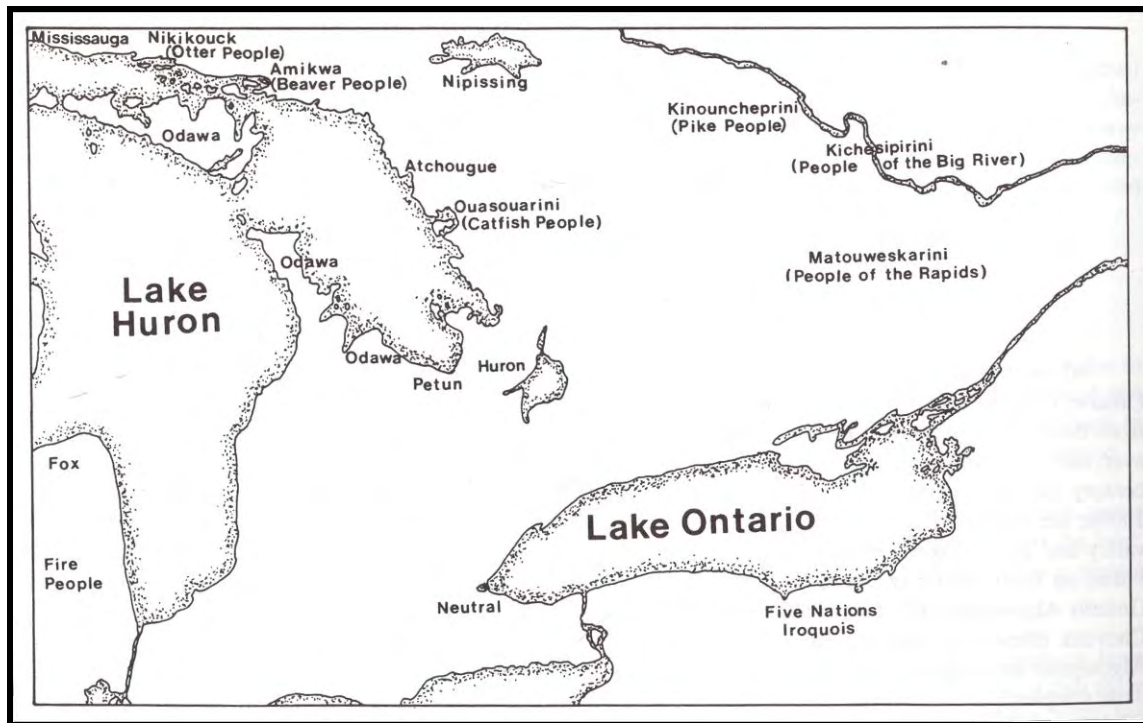


Figure 7: Northern Algonquian-Speaking Band Locations, Early 17th Century (Fox 1990:Figure 14.1)

Anishinabeg peoples were primarily seasonal hunters and had few fixed settlements, unlike the more sedentary Iroquoian-speaking Huron and Neutral of southern Ontario. Amongst the Neutral, for example, villages reached upwards of 5 ha in size (up to 2,500 inhabitants), with longhouses sometimes measuring over 100 m in length (Warrick 2000:447). The Algonkian-speaking peoples are known to have traded extensively with their Huron neighbours to the south, exchanging furs and meat for Huron corn and fish-nets (Wright 1972a:95). Early European maps, including those by Jean Boisseau from 1643 (see Figure 8) and Nicholas Sanson from 1656 (see Figure 9), clearly depict several different Algonkian-speaking bands, but provide limited additional information.

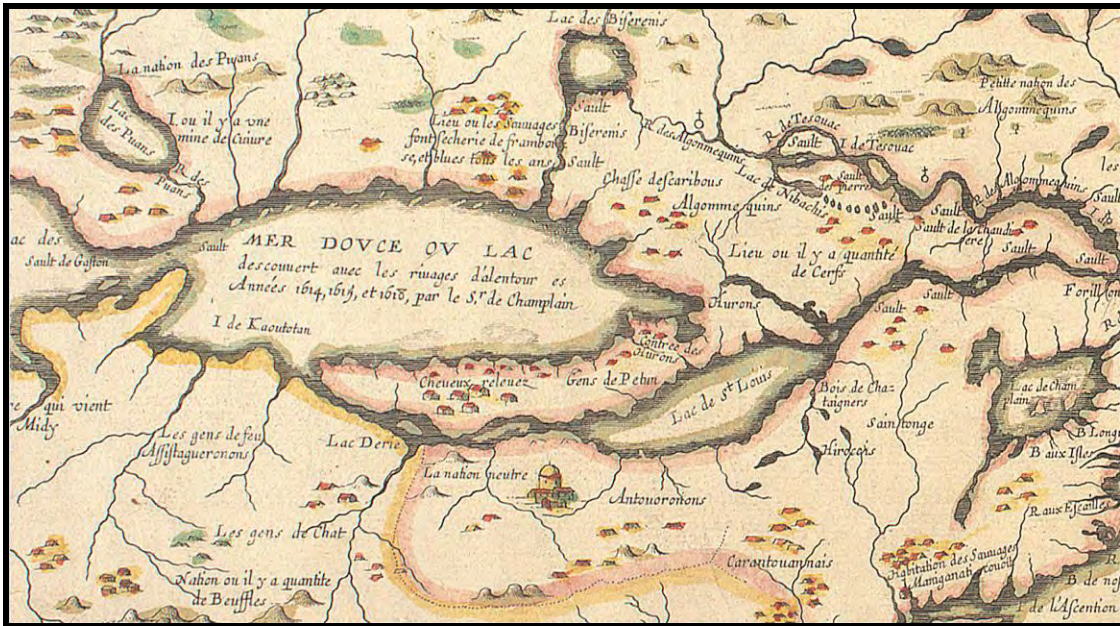


Figure 8: Detail of Jean Boisseau's *Description de la Nouvelle France* (1643) (McGill University 2005:W. H. Pugsley Collection)



Figure 9: Detail of Nicholas Sanson's *Le Canada, ou Nouvelle France* (1656) (McGill University 2005:W. H. Pugsley Collection)

The first half of the 17th century saw a marked increase in trading contacts between the First Nations and European colonists, especially in southern Ontario. These trading contacts, however, eventually 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, the Petun, and their Anishinabeg trading partners allied themselves with the French. In what would become New York State, the League of the Haudenosaunee (Iroquois), often referred to as the Five (later Six) Nations (which included the Mohawk, Cayuga, Onondaga, Oneida, Seneca, and later the Tuscarora Nations) allied themselves with the English. The advance of the Haudenosaunee ca. 1650 led to the demise of the Neutral as a distinct cultural entity (Lennox and Fitzgerald 1990:456) and to the dispersal of the Wendat and Petun nations to the east (Quebec) and west (near lake St. Claire) (Ramsden 1990:383-384). The northern Anishinabeg groups, being quite distant from the conflict, were not so adversely affected and continued on with their nomadic and low-impact existence.

Between 1686 and 1760, the French maintained several trading posts across northern Ontario and the Upper Great Lakes, offering many enticements to attract fur traders from the First Nations. Their attempts failed and the English (based in New York state) remained more prosperous. In 1754, hostilities over trade and territorial ambitions led to the *Seven Years War* (often called the *French and Indian War* in North America). The French surrendered to the English in 1760 and were forced to withdraw from Canada (Smith 2002:109).

Archaeological evidence of Algonquin-speaking peoples continues to be elusive in northern Ontario, particularly when compared to sites associated with the southern groups like the Haudenosaunee and Huron. In the Burk's Falls area, several projectile points were unearthed on the property of John Stoppers. It has been suggested that this location might have been a campground for Anishinabeg hunters and gatherers on their travels up and down the Magnetawan River, who would have portaged at the falls and may have exploited the hilly part of the property as a lookout (Howell 1990:1). Additional lithics have been recovered along North Creek near Sterling Falls; one of the waterways exploited by the Anishinabeg. It is likely that these bands would have travelled east to Algonquin Park in the spring for fishing, harvesting nuts and fruit, and acquiring birch bark, and they likely hunted larger game during the fall. Maple forests were also likely exploited for maple sugar (Howell 1990:1). This seasonal exploitation of resources appears to have continued until the turn of the 20th century.

5.3 *The Euro-Canadian Era*

The Constitutional 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. To this end, the acquisition of lands inhabited by the First Nations in what would

become southern Ontario was required. In 1792, the first legislature of Upper Canada created the Eastern, Midland, Home and Western Districts respectively. In 1796, an act of Parliament allowed Simcoe to divide Upper Canada into as many counties as he saw fit. The northern-most county established by Simcoe extended only as far as Lake Simcoe. The territory beyond, including what would become the District of Parry Sound, was identified as “Chippewa Hunting Country” (see Figure 10). These northern lands would be targeted for acquisition only decades later, after the southern border was populated and secured.



**Figure 10: Detail of Smyth’s *A Map of the Province of Upper Canada* (1800)
(Cartography Associates 2009:David Rumsey Collection)**

The lands that would form the bulk of what would become the District of Parry Sound were obtained as part of the Robinson Huron Treaty with the Ojibway (Chippewa) (Crown Treaty No. 61), entered into agreement on September 9, 1850 (Indian and Northern Affairs Canada 2008). Additional treaties include those for the timber rights to Reserve No. 16 on Parry Island on September 24, 1871 (Crown Treaty No. 164), the surrender of 92.5 acres of the Parry Island Reserve on July 18, 1900 (Crown Treaty No. 439), and the surrender of 22.5 acres of the Magnetawan Reserve in the Township of Wallbridge on November 26, 1901 (Crown Treaty No. 452) (Indian Treaties and Surrenders 1891:63; 1912:320-321, 343-45). Lands along the eastern

Georgian Bay littoral, including lands making up the District of Parry Sound, were again subjected to legal exchange with the Williams Treaty, entered into agreement on October 1, 1923. At the time of this treaty much of the land in question was already being used by the government, either for settlement or for the exploitation of natural resources, and many of the lands had been acquired in earlier, less binding treaties (Figure 11). An immense area of some 12,944,400 acres was involved, and numerous considerations were included to correct incidents, errors and crises that occurred in the earlier treaties from 1783 to 1923 (Indian and Northern Affairs Canada 2008).

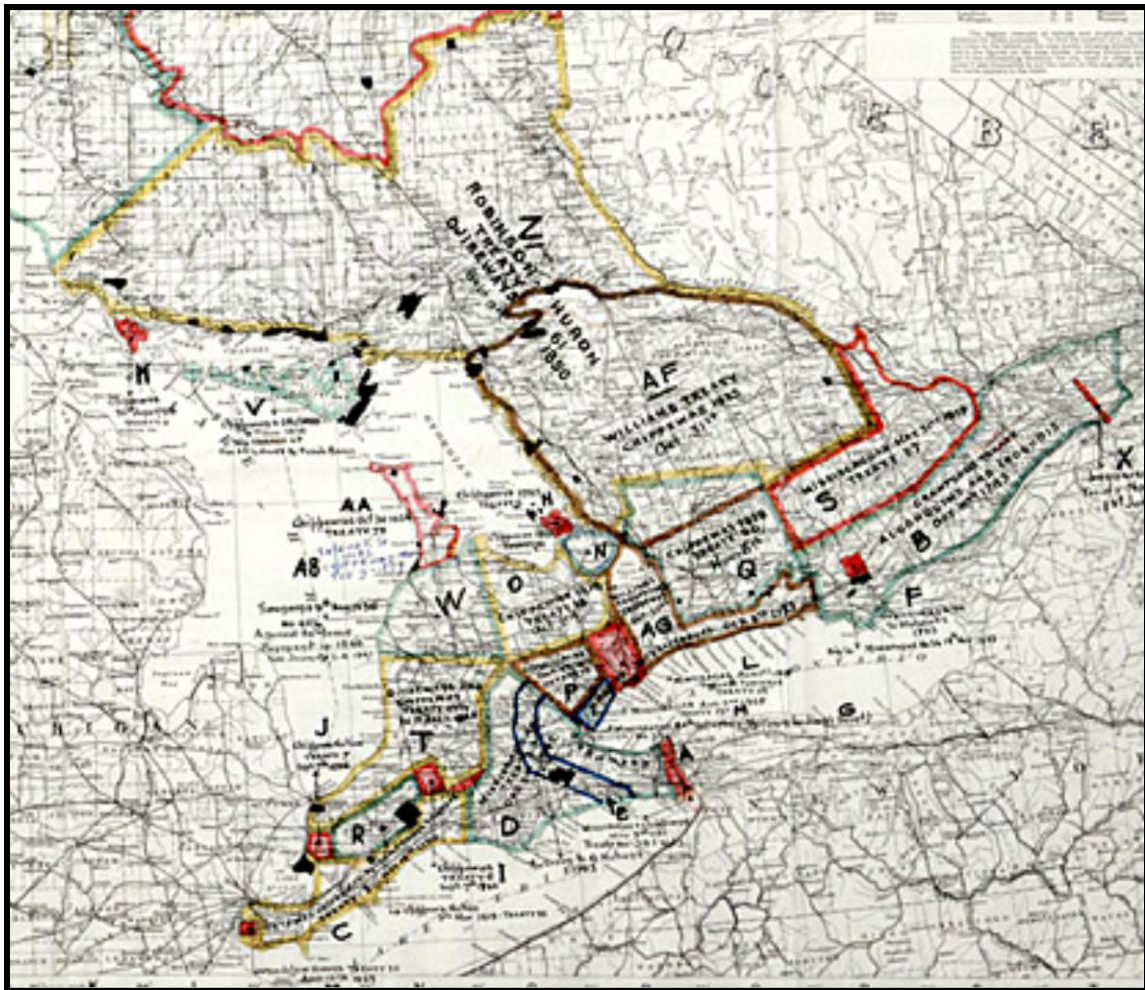


Figure 11: Detail of the Province of Ontario's *Map of the Province of Ontario* (1930) (Archives of Ontario 2009: The Treaty No. 9 Expedition of 1905-1906)

5.3.1 District of Parry Sound

The area that would become the District of Parry Sound was initially part of the Nassau District, Province of Quebec but was incorporated into the Home District in 1792 (see Figure 12). It was renamed once more in 1816, becoming the Newcastle District of Upper Canada (Firmin n.d.:4) (see Figure 13).

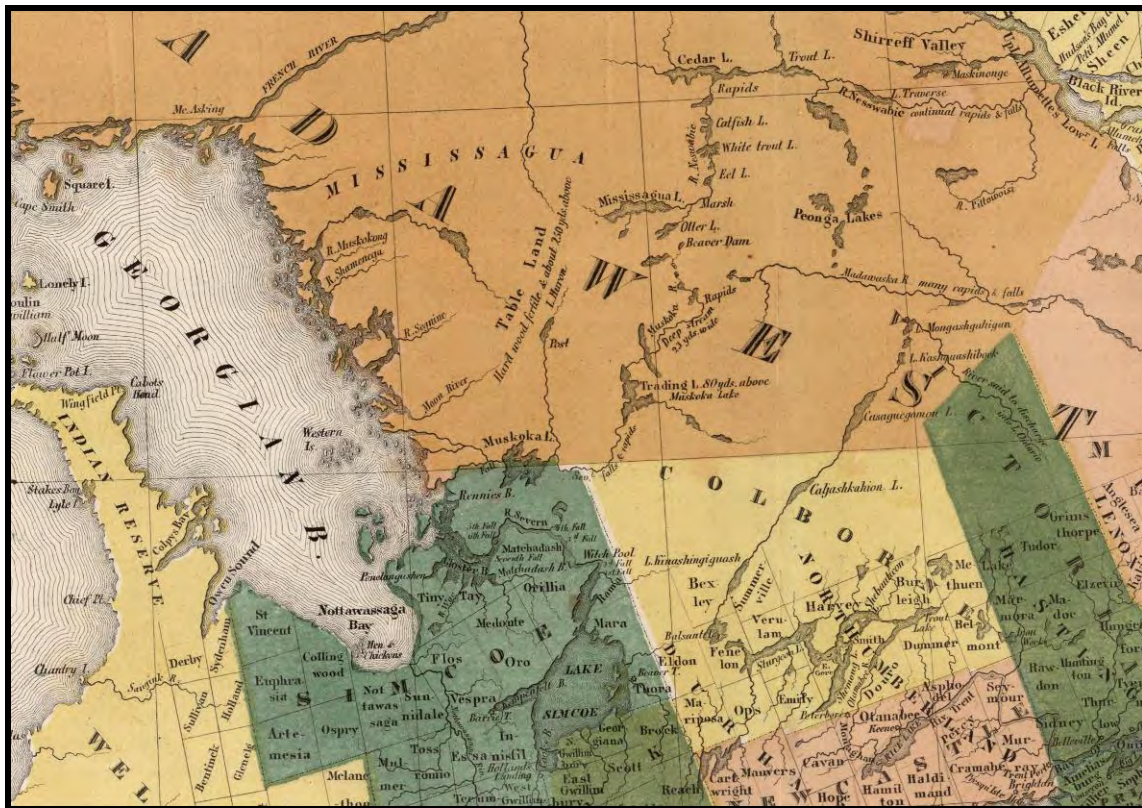


**Figure 12: Detail of John Purdy's *A Map of Cabotia* (1814)
(Cartography Associates 2009:David Rumsey Collection)**



**Figure 13: Detail of Henry S. Tanner's *Universal Atlas* (1836)
(Cartography Associates 2009:David Rumsey Collection)**

The earliest recorded survey of the area was conducted by Alexander Sherreff in 1829. Other early explorers of the Magnetawan River area included Thomas Wilcox, who canoed from the Ottawa downstream at some point between 1792 and 1816, and Lieutenant F.H. Baddeley of the Royal Engineers, who described the area as being occupied by trappers and wandering bands of Aborigines in 1835. In 1837 the Magnetawan River was surveyed by William Hawkins, and the tributaries of the river were documented by Alexander Murray in 1854. At this time the lands were still largely unsettled, judging from early maps depicting the area (see Figure 14). The Rosseau-Nipissing Road was explored by Vernon Wadsworth in 1864, A.P. Cockburn examined the lakes in 1865, and C.F. Miles noted in 1870 that lands around Doe Lake, southwest of the study area, were often utilized by bands of local Aborigines (Howell 1990:2).



**Figure 14: Detail of J. Calvin Smith's *Ontario, Canada* (1852)
(Cartography Associates 2009:David Rumsey Collection)**

The first settlers to arrive in the District of Parry Sound were J. Gibson and W. Gibson, who erected a saw mill along the Seguin River on the future site of Parry Sound in 1858. At this time the region was largely isolated, being accessible only by boat, and it was considered unfit for either agriculture or settlement. The Gibson's sold their mill to J. Beatty and W. Beatty & Co. in 1863, and this new group greatly contributed to the 'opening' of the area with the construction of the 'Waubuno' (a steamer which made weekly trips to Collingwood) and the facilitation of the construction of the road between Bracebridge and Parry Sound (McMurray 1871:125).

Prior to the official decision to open up the Parry Sound District for settlement, the area was initially set to become "one vast Indian reservation" (Page & Co. 1879:16). This idea did not last, however, and the land was instead offered to settlers by way of the Free Grants and Homesteads Act of 1868. The Act provided for the distribution of many northern properties to settlers, and those over 18 years of age were permitted to select 100 acres of land, with heads of families allowed to select a total of 200 acres. In addition to the Free Grant, settlers could also purchase an additional 100 acres at a price of 50 cents an acre. Settlement would involve clearing extensive forested areas and dealing with limited-to-no infrastructure (see Figure 15), but the price was certainly enticing to those of limited means (McMurray 1871:126). McMurray paints



Figure 16: Detail of Holwell’s *Map of Part of the Province of Ontario* (1871) (shaded areas represent Free Grant Lands) (McMurray 1871:Map)

The judicial District of Parry Sound itself, consisting of some 40 historic townships, was incorporated by the Provincial Parliament in 1870. Keith Johnston’s map of the *Dominion of Canada (Western Sheet)* clearly shows the size of the new district of Parry Sound, occupying some 9,200 km², dwarfing smaller districts and counties to the south (see Figure 17).



**Figure 17: Detail of Keith Johnston's *Dominion of Canada* (1879)
(Cartography Associates 2009:David Rumsey Collection)**

5.3.2 Armour Township

Armour Township is bounded by Ryerson Township to the west, Strong Township to the north, Proudfoot Township to the east and Perry Township to the south. It encompasses 40,653 acres of land, and was first surveyed into farm lots in 1875 by Provincial Land Surveyor W. Beatty. Beatty himself comments on the quality of the soil and notes the presence of abundant wooded areas with maple, birch, beech, balsam and good quality pine. He also notes that “a little below the ‘forks’ of the Maganetawan at what is called Burk’s Falls, there is a good mill site, where it is expected that mills will shortly be built” (Kirkwood and Murphy 1878:115).

One of the first settlers to Armour Township was David Francis Burk, the eponymous founder of Burk’s Falls who came to the township ca. 1875 (see Section 5.3.3). The early settlers of Armour Township were drawn to the region both by land suitable for farming, logging and industry as

well as by the beautiful lakes; highly attractive for transportation and later tourism. In addition to Burk's Falls, other substantial communities developed at Berriedale, Chetwynd, Ely, Katrine and Orange Valley (Osborne 1981:7).

Most early settlers in Armour Township arrived via riverboat due to the lack of quality roads. One of the first riverboats, named 'Pioneer', made frequent runs between Magnetawan and Burk's Falls beginning in 1877. Other prominent riverboats included 'Emulator', 'Lady Katrine', 'Glenrosa' and 'Glenada', the latter two of which both ran from Burk's Falls beginning in 1891 and 1904, respectively (Barry 1978:16). Settlers would travel by train to Gravenhurst and by stage coach to Magnetawan, and then take one of these steamers deeper into the interior townships of Parry Sound (Howell 1990:11). The Muskoka Road, whose path roughly corresponded to that of the modern Highway 11, arrived in the region in 1878 and served to directly link the adjacent townships to the cities of southern Ontario (Howell 1990:9).

The first Armour Township Council meeting took place on May 28th, 1881 at Burk's Falls, and the first recorded petition was concerned with the passing of a Bylaw allowing cattle to run at large. The township's first election was held in January of 1882, the expenses of which amounted to \$13.24. In 1885 the Grand Trunk Railway passed through the township, and settlement accordingly increased exponentially. Many came to the township and took advantage of the Free Grant lands offered by the government. Armour had five schools by 1889, and up until May 12, 1890 both Burk's Falls and Armour Township shared a joint Council. On that day the Village of Burk's Falls separated to become its own municipality (Osborne 1981:7-8).

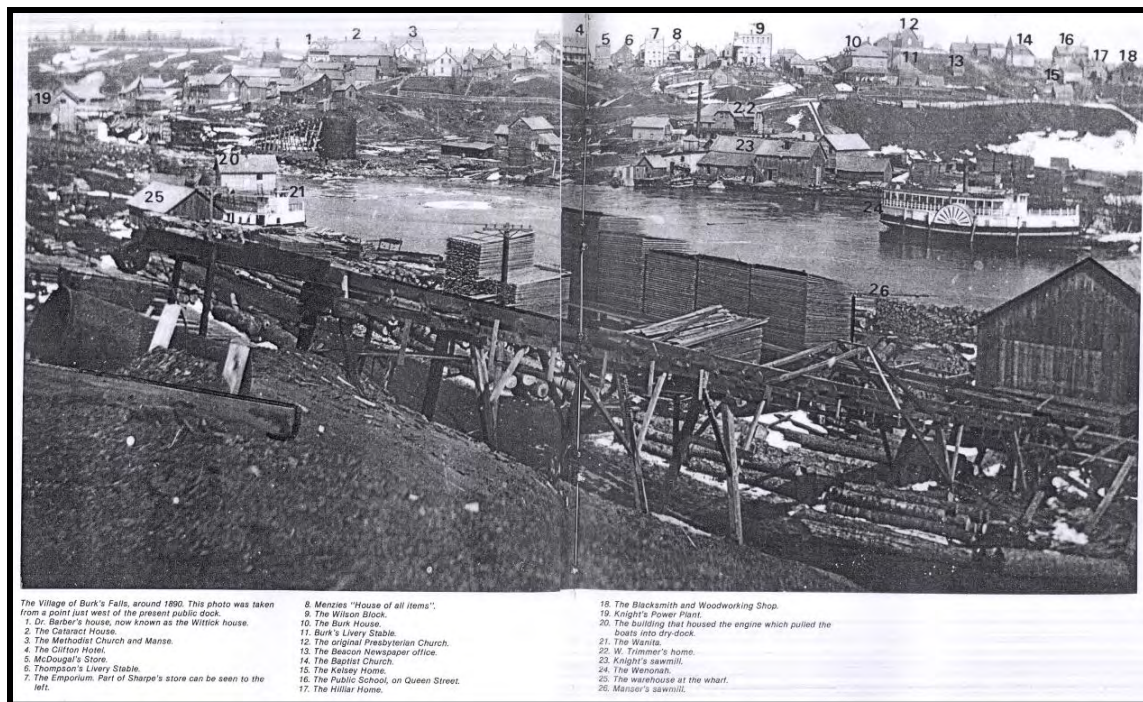
The study area, consisting of Lots 13-14, Concession 6, is situated near the centre of Armour Township, southeast of Burk's Falls and west of Chetwynd. These two settlements would have played a large role in the lives of historic settlers in the area.

5.3.3 Burk's Falls

In 1871, the sheriff of Parry Sound, Samuel Armstrong, stated that the area that would become Burk's Falls was "unknown except by trappers" (Howell 1990:9). In truth, settlement in Armour Township remained quite sparse prior to the arrival of the railway, as the main road ended to the south at Katrine. One of the first settlers was David Francis ('Frank') Burk, who beached his canoe between the forks of the Magnetawan River in the fall of 1875 in search of land to locate under the Free Grant Act. David, the son of D.F. Burk of Oshawa, returned with his wife Olive and daughter Ida to establish a farm in the spring of 1876 (Howell 1990:2-3). At that time there were still no proper roads to the area, but the government cleared the right-of-way from Katrine to Huston's Corner and built a bridge at Burk's Falls in 1879 (Howell 1990:9). Burk eventually built a timbered structure that served as a post office, residence, store, tavern and church, which was simply called the 'Burk House' and quickly became the nucleus of the growing village (Cotton 2004:96-97).

Other new arrivals included Matthew Simpson, who settled southeast of Burk, and Henry Knight, who staked his claim to the northwest. In 1879, 'Burk's Falls' was selected as the name of the settlement, elegantly decided by a coin toss between Burk and Knight (Howell 1990:2). In 1879, Page & Co. writers noted that the settlement had a good mill site, and "seems destined to develop into a thriving village" (1879:32). The Free Grant Act brought many people to the area who wanted their own farm land, but lumber harvesting remained the most prominent and successful industry of the area. Logs were cut with a cross-cut saw, limbs were trimmed and the logs were hauled by horse to the river bank for floating to the mills (Howell 1990:12).

As Burk's Falls began to grow additional hotels were built, including the 'Cataract House', H.W. Trimmer's hotel (possibly 'Hotel Central') and Dan Day's 'Day's Hotel' (Howell 1990:4; Cotton 2004:97). These hotels prospered considerably with the arrival of the Grant Trunk Railway in 1885, and James Sharpe built the Clifton House in 1887, which was greatly enlarged after its sale to Fred Brasher in 1889 (Cotton 2004:96-97). By 1890 there was a vast array of businesses in town, ranging from hotels, lawyers, printers and doctors to carpenters, shoemakers, bakers and butchers (see Figure 18).



**Figure 18: The Village of Burk's Falls ca. 1890
 (Barry 1978:56-57)**

Major industry soon developed at Burk's Falls as well. For example, the Magnetawan River Tannery Company opened in 1894 and provided work for nearly 40 early settlers, and the Knight Brothers mill yard and hardwood flooring factory were fully operational by the early 1900's (Barry 1978:37-39, 47). David Burk died on June 13, 1901, leaving his wife and family to carry on with the business for a few years before it was finally sold (Howell 1990:3).

Another boost to growth and settlement in the area came with the extension of the railroad to North Bay in 1901, which passed just outside of the eastern town limits. Local businessmen took advantage of the opportunity and incorporated the Magnetawan River Railway Company, which built extension lines down to the wharf of Burk's Falls, the tannery, the mill and the factory, providing a direct line to major cities like Toronto (Barry 1978:21). Settler influx increased considerably on account of these changes, and the combination of rails and rivers made the inland lakes and waterways more accessible for settlement. One of the best known and largest steamers of Burk's Falls was the *Armour*, built in 1906 by George Stickland (Barry 1978:22).

Disaster struck Burk's Falls in 1908 in the form of a devastating fire, which began in one of the lumber piles at the Knight Brothers' mill and quickly spread to the east. The Burk House, the Anglican church and other structures were consumed, and half the town was wiped out by the blaze. Some residents attempted to bury silverware and other valuables to protect them from the fire, but these proved to be fused and melted together upon retrieval after the fire (Barry 1978:63-64). Still, the community rebuilt and repaired the structures of Burk's Falls, and the settlement continued to develop and grow over the early 20th century. The bridge over the falls was replaced by the Galna Bridge in 1914, and around that time the first automobiles appeared in the town (Howell 1990:9). The Red Cross Hospital was begun in 1948, and had its grand opening on November 29, 1949 (Osborne 1981:11).

5.3.4 The Community of Chetwynd

The community of Chetwynd, located just east of the study area between Pine Lake, Loon Lake and Three Mile Lake, had a scattered population during early Historic times. The principle post office was built by the Rumor family on Lot 18, Concession 6, and operated between 1884 and 1900. A mill was located at the west end of Loon Lake, which was established in 1923 and moved roughly a decade later to Proudfoot Township. Chetwynd was known as having two schools, a church and a cemetery (dating back to 1879), but no stores are documented in the extant records. A lumber mill opened on the east end of Loon Lake in 1936, but closed after one year. Pine Lake and Loon Lake were purchased privately, and consequently they never developed into major tourist attractions. The community continues to grow to this day, and its church and community centre play key roles in the everyday lives of this small community (Osborne 1981:35).

5.3.5 Lot 13, Concession 6

Page & Co.'s *Guide Book and Atlas of Muskoka and Parry Sound Districts* (1879) lists Joseph Marr as the owner for two properties on either side of Chetwynd Road: Lot 13, Concession 6 and Lot 13, Concession 7 (see Figure 19). The Marr household appear to be situated on the north side of the road, and therefore outside of the study area. According to land registry documents, the property was patented as a Free Grant to Phoebe Marr by the Crown in 1882 and subsequently deeded to John Watt in 1889 with a consideration of \$725. The property has stayed in the Watt family for generations and at the time of the assessment was still occupied by Watt family members (see Table 2).

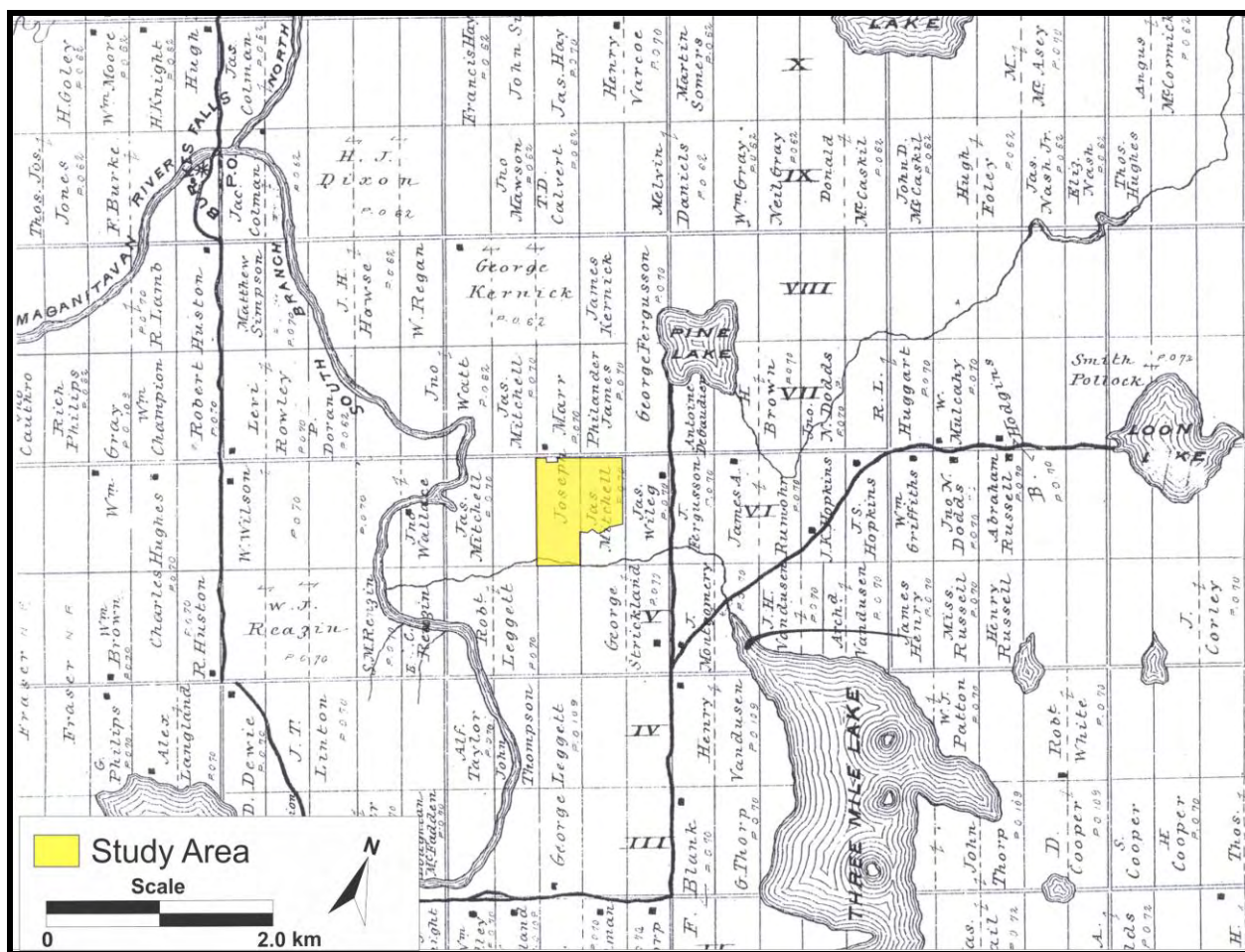


Figure 19: Detail of the Township of Armour Showing the Study Area (Page & Co. 1879)

Table 2: Land Transaction Summary for Lot 13, Concession 6

Date	Transaction	Grantor	Grantee	Acreage
June 7, 1882	Patent	Crown	Phoebe Marr	100
Nov 11, 1889	Deed	Phoebe Marr	John Watt	100
July 22, 1946	Grant	John Cameron Watt (Admin. of John Watt's Will)	John Cameron Watt	100
Jan 21, 1974	Deed	Edith Pearl Watt (Exec. of J.C. Watt's Will)	Edith Pearl Watt	100
Dec 15, 1976	Grant	Edith Pearl Watt	William John Watt	Part Lot (1)
Oct 30, 1992	Transfer	Edith Pearl Watt	Richard Allan Watt	Part Lot (all but 1)

5.3.6 Lot 14, Concession 6

Page & Co.'s *Guide Book and Atlas of Muskoka and Parry Sound Districts* (1879) lists James Mitchell as the owner of Lot 14, Concession 6, and no structures appear on the property. An investigation of relevant land registry records corroborates this, indicating that Lot 14 was patented to James Mitchell by the Crown in 1883 with a \$50 consideration (see Table 3). After two decades Mitchell sold the land to William E. Wildfong and Alfred N.W. Clare for \$2,500, who in turn sold it to Adam E. Ratz, George Staebler and George Wettlaufer five months later for \$3,000. After the death of George Staebler the land was granted to George Wettlaufer in 1918, and in 1936 it was subsequently granted to Sherman Brown with a \$500 consideration. Sherman retained the property until 1970, at which time it was granted to Albert Lester Brown with a consideration of \$2,500. Albert Lester Brown granted the land to the Heinrich family three years later, involving a mortgage of \$20,500. Judy Heinrich then granted the land to Beate Danielle Krugmann in 1981, involving a mortgage of \$80,000. In 2002 the land was transferred to William Arthur White.

Table 3: Land Transaction Summary for Lot 14, Concession 6

Date	Transaction	Grantor	Grantee	Acreage
Mar 16, 1883	Patent	Crown	James Mitchell	100
Aug 22, 1905	B & S	James Mitchell	William E. Wildfong & Alfred N.W. Clare	100
Jan 20, 1906	B & S	William E. Wildfong & Alfred N.W. Clare	Adam E. Ratz, George Staebler & George Wettlaufer	100
Aug 8, 1918	Grant	Adam E. Ratz and Noah Wildfang (exec. for Staebler and Wettlaufer)	George Wettlaufer	100
Oct 16, 1936	Grant	George Wettlaufer	Sherman Brown	100
Feb 26, 1970	Grant	Sherman Brown	Albert Lester Brown	100
June 11, 1973	Grant	Albert Lester Brown	John & Judy Heinrich	100
June 8, 1981	Grant	Judy Heinrich	Beate Danielle Krugmann	100
May 10, 2002	Transfer	Beate Danielle Krugmann	William Arthur White	100

6.0 Archaeological Potential

In addition to the relevant historical sources and the results of past excavations and surveys, the archaeological potential of a property can be assessed using its soils, hydrology and landforms as considerations. Throughout most of the Canadian Shield, there is considered to be a strong association between site locations and waterways. In particular, Pre-Contact Aboriginal sites are most commonly found along lakes where they are joined by navigable rivers and streams, and in those areas where the banks of creeks and rivers are sandy and well drained (Wright 1972b; Knight 1977). These areas are natural attractors for plant, game, and fish species, were valued for their proximity to transportation and communication routes, and had soils that were ideal for habitation and agricultural exploitation. The Ministry of Tourism and Culture (Ontario Ministry of Culture 2005:12-13) accordingly identifies properties with high potential for Aboriginal sites within 300 m of a primary water source (accessible lakes shores, rivers and large creeks) and 200 m of a secondary water source (smaller creeks, intermittent or seasonally wet streams, springs, marshes or swamps).

Other factors attracting prehistoric settlement include the presence of elevated knolls and ridges, unique landforms (waterfalls, rocky outcrops, caverns) and valued natural resources (raw materials, concentrations of specific flora/fauna). 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 procurement/production and more tied to wider economic networks. As such, proximity to transportation routes (roads, canals, etc) became the most significant predictor of site location, especially for Euro-Canadian populations. 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 more commonly located along historically-surveyed roads. Positive potential for Historic archaeological materials can also be inferred by proximity to documented historic structures (churches, cemeteries, houses) and locations associated with historic events.

Based on the location, drainage, topography and land-use modelling it seems clear that the study area would, in its pristine state, have a high potential for the presence of both Pre-Contact and Historic-era sites. The study area exhibits high potential for Pre-Contact sites due to the fact that it is traversed by a major tributary of the Magnetawan River and several minor unnamed tributaries as well. These would have been significant site attractors. Similarly, the study area has a high potential for Euro-Canadian sites as a result of its proximity to Chetwynd Road, a historically-surveyed thoroughfare. In sum, the study area has the potential to yield sites which span Ontario's entire archaeological history.

7.0 Field Methods

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

In areas under cultivation that had been recently ploughed and contained well-weathered soils (see Plates 1-3), the archaeological assessment was carried out using the pedestrian survey method. In this strategy, crewmembers traversed the study area along parallel transects established at intervals of 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 m intervals (see Plates 4-6). If cultural materials were encountered in the course of the survey, the transect interval would be closed to 1 m and a close inspection of the ground would be conducted for 20 m in all directions. All diagnostic artifacts and a representative sample of non-diagnostic artifacts would then be collected for analysis. All remaining artifacts would be left *in situ* until a proper Stage 3 Controlled Surface Collection (CSC) could be carried out.

In areas not under cultivation, the assessment was conducted using the test pit survey method (sometimes referred to as shovel-testing). In this strategy, small regular 'test' pits, 30 cm in diameter, were hand-excavated down into the first 5 cm of subsoil at prescribed intervals across the study area (see Plates 7-8). The Ministry of Tourism and Culture's *Draft Standards and Guidelines for Consultant Archaeologists* (Ministry of Culture 2009:15) require that lands in northern Ontario or on Canadian Shield terrain be assessed according to the following standards:

- Test pitting is to be carried out at 5 m intervals for all lands within 50 m of any features with archaeological potential;
- Test pitting is to be carried out at 10 m intervals between 50 and 150 m of any features with archaeological potential.

Features with archaeological potential include:

- Previously-identified archaeological sites;
- Natural water sources;
- Elevated topography (e.g. drumlins, eskers, moraines, etc.);
- Pockets of well-drained sandy soils;
- Distinctive landforms that may have been attractive as spiritual sites (e.g. waterfalls, rock outcrops, caverns, mounds, etc.);
- Resource collection areas (e.g. raw material sources, migratory routes, prairie lands);
- Historic transportation routes;
- Historic settlements;

- Properties designated under the *Ontario Heritage Act*;
- Locations identified as archaeological sites by the local knowledgebase, oral history, etc.

Survey is not required on lands that:

- Lay beyond 150 m of any features with archaeological potential;
- Are permanently wet;
- Are steeply sloped (greater than 20°);
- Consist of nothing but exposed bedrock.

All uncultivated lands exhibiting archaeological potential were assessed according to these standards (see Figure 3). Soil from each test pit was screened through 6 mm mesh and examined for archaeological remains (see Plate 9). 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 m may be excavated in areas of high artifact concentrations to further delimit the site. All artifacts recovered from test pits are collected for analysis, and all test pits were backfilled upon completion.

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 m accuracy on a Garmin eTrex Legend, WAAS-enabled, GPS (using the **WGS-84** coordinate system). As part of the Stage 2 assessment, all field data was removed, with permission from the land owner. 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 Time of Survey in August 2010



Plate 2: View of Soil Conditions at Time of Survey in September 2010



Plate 3: View of Soil Conditions at Time of Survey in October 2010



Plate 4: Crewmembers Conducting Pedestrian Survey at 5 m Intervals in August 2010



Plate 5: Crewmembers Conducting Pedestrian Survey at 5 m Intervals in September 2010



Plate 6: Crewmembers Conducting Pedestrian Survey at 5 m Intervals in October 2010



Plate 7: View of Crewmember Test Pitting at 5 m Intervals



Plate 8: Typical Test Pit, Excavated to Subsoil



Plate 9: Crewmember Screening Through 6 mm Mesh

8.0 Results

The Stage 2 archaeological assessment of the proposed Burk's Falls East Solar Project was conducted on August 23rd-24th, September 27th-28th and October 12th 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; K.M. Brightwell, H.T. Brown and A.J. Wong, Field Directors; A. Ray, Assistant Field Director; and 7 additional crewmembers. Field conditions during the specified dates in August, September and October were excellent, with sunny skies, well-weathered soils in the ploughed lands, and dry soil for screening.

The pedestrian survey of the ploughed lands (60% of the study area) and the test pit survey of the uncultivated areas (40% of the study area) did not result in the discovery of any finds with significant cultural heritage value or interest. On Lot 13 a concrete well was discovered in the northeastern part of the ploughed lands, which measured 2.38 x 1.43 x 0.65 m (see Figure 3). The covering of the well bore the initials C.W. 1925, and was likely inscribed by the landowner John Cameron Watt (see Plate 10). Poured concrete blocks were observed on the northern side of the eastern woodlot of Lot 13, either discarded as waste or the collapsed remains of a modern retaining wall (see Plate 11). They do not appear to have any archaeological value, and test pits concentrated around the blocks did not produce any cultural artifacts. On Lot 14 seven other features were identified (see Figure 3). These include two circular concrete wells, a collapsed

wooden shed, a built-up embankment southwest of a small pond, a fieldstone retaining wall, a poured concrete foundation and a short segment of recycled train track (see Plates 12-18). The poured foundation measured 5 x 7 m and appears to have functioned as a support for the tracking, which runs over the edge of the foundation and possibly functioned as a loading ramp. All of these features are located near the northern end of the easternmost minor tributary, none of which had any significant archaeological value and appear to be associated with the modern occupation.



Plate 10: Detailed View of Cement Well Covering in Lot 13, Facing West



Plate 11: View of Randomly Distributed Concrete Blocks, Facing North



Plate 12: View of Two Cement Wells on Lot 14, Facing West



Plate 13: View of Collapsed Shed on Lot 14, Facing West



Plate 14: Built-Up Embankment and Small Pond, Facing North



Plate 15: View of Concrete Foundation Outline, Facing Southeast



Plate 16: View of Concrete Foundation Supporting Track Segment, Facing West



Plate 17: View of Retaining Wall and Track Segment, Facing East



Plate 18: View of Train Track Segment on Lot 14, Facing South

Approximately 25% of the study area was not fully surveyed due to the presence of lands that were permanently wet or sloped greater than 20° (see Figure 3). These areas were test pitted where possible. Wet areas were primarily associated with the minor and major tributaries of the Magnetawan River in the southern half of the study area (see Plates 19-20). Test pitting and visual assessment along the major and minor tributaries confirmed that the lands closest to the waterways were permanently waterlogged (see Plates 21-22). Wet/inundated areas were also present in the southern part of Lot 13, where a beaver dam had blocked a minor stream flowing into the major tributary and caused extensive flooding (see Plates 23-24). Lands sloped greater than 20° were present in Lot 13 along the south side of the central minor tributary and on the south side of the major tributary traversing the study area (see Plates 25-26). Sloped areas were also present in Lot 14 around the easternmost minor tributary and on the north side of the major tributary traversing the study area (see Plates 27-28).



Plate 19: View of Minor Tributary in Study Area, Facing North



Plate 20: View of Magnetawan River Tributary in Study Area, Facing East



Plate 21: View of Waterlogged Test Pit along Major Tributary



Plate 22: View of Waterlogged Conditions along Central Minor Tributary



Plate 23: View of Beaver Dam in Lot 13



Plate 24: View of Waterlogged Conditions Caused by Beaver Dam



Plate 25: View of Lands Sloped Greater than 20° in Lot 13



Plate 26: View of Lands Sloped Greater than 20° in Lot 13



Plate 27: View of Lands Sloped Greater than 20° in Lot 14



Plate 28: View of Lands Sloped Greater than 20° in Lot 14

9.0 Recommendations and Advice on Legislative Compliance

Over the course of the Stage 2 archaeological assessment, no materials with significant cultural heritage value or interest were recovered. Accordingly, **Archaeological Research Associates Ltd.** feels that no further archaeological study of the area would be productive. It is recommended that the project be released from further heritage concerns. A **Letter of Concurrence** with these recommendations is requested.

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.

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11.0 Appendix A: Map of the Burk's Falls East Solar Project Provided by Hatch Ltd.

